

South West Water, Bristol Water, and Bournemouth Water Drought Plan 2027

Appendix 2: Strategic Environmental Assessment
(SEA) Environmental Report

May 2026

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1 Introduction

1.1 Introduction

Water companies have a statutory obligation to produce a Drought Plan, which sets out how a company intends to manage water resources in response to drought events over a five-year period. South West Water (SWW), Bristol Water, and Bournemouth Water (SBB) are publishing their next Drought Plan in 2027.

In the development of a drought plan, water companies must follow the Environment Agency (EA) Water Company Drought Plan Guideline 2025¹, which sets out the framework and requirements for developing a drought plan in line with the government's objectives to deliver secure, reliable, sustainable and affordable supplies of water, including the need to value nature and connect people with the environment.

The supplementary EA guidance on 'Environmental assessment for water company drought planning' sets out the specific requirements for environmental assessments that need to be undertaken when developing a drought plan. Water companies must carry out an environmental assessment to determine the environmental sensitivity of drought option locations and likely impacts from the implementation of the proposed drought options.

Carrying out the Strategic Environmental Assessment (SEA) of the draft Drought Plan 2027 identifies the potential positive and negative environmental effects of the plan and enables improvements to the plan in terms of its environmental impacts. The SEA process allows for mitigation measures to be devised where necessary, and seeks to avoid or reduce adverse effects and enhance any sustainability opportunities. The SEA therefore is a tool used to inform decision-making for the development of the Drought Plan 2027.

A screening exercise determined that an SEA is required for the Drought Plan 2027 under the Environmental Assessment of Plans and Programmes Regulations 2004 ('SEA Regulations')², which require an assessment of the effects of certain plans and programmes on the environment.

Additional assessments have been undertaken to support the SEA, comprising Habitats Regulation Assessment (HRA), Water Framework Directive (WFD) assessment, and Invasive Non-Native Species (INNS) assessment. The findings of these assessments have been incorporated into the SEA as well as provided in technical appendices.

The draft Drought Plan 2027 and accompanying SEA Environmental Report (this document) are being published for a 10 week statutory consultation period, expected from May to July 2026. This will be shared with statutory consultation bodies including the EA, Natural England and Historic England, as well as being available to wider stakeholders and the public.

The purpose of this report is to present the results of the SEA of the draft SBB Drought Plan 2027. The detailed SEA assessments undertaken on the SBB Drought Plan options are provided in **Annex H - N**, and the assessment of the plan as a whole is included **Section 10**.

The supporting HRA, WFD and INNS assessment reports are presented in the respective technical appendices of this Environmental Report (**Annex O - Q**).

¹ Environment Agency (2025) *Water Company Drought Plan Guideline, 2025*. Available at: <https://www.gov.uk/government/publications/water-company-drought-plan-guideline-2025/water-company-drought-plan-guideline-2025>

² Legislation.gov.uk (2004) *The Environmental Assessment of Plans and Programmes Regulations 2004*. Available at: <https://www.legislation.gov.uk/ukxi/2004/1633/contents>

1.2 The SEA Process

The SEA Regulations require an assessment of the effects of certain plans and programmes on the environment. Under the SEA Regulations Part 2 (5), environmental assessment is required during preparation of a plan, prior to its adoption. Part 2 (5) (2) of the SEA Regulations states that a SEA is required for plans which are prepared for water management and set the framework for development consents. The SBB Drought Plan 2027 therefore requires an SEA during plan development.

Schedule 2 (6) of the SEA Regulations confirms that the list of topics to be considered in the assessment includes:

'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—

- | | |
|--------------------------|---|
| <i>(a) biodiversity;</i> | <i>(h) air;</i> |
| <i>(b) population;</i> | <i>(i) climatic factors;</i> |
| <i>(c) human health;</i> | <i>(j) material assets;</i> |
| <i>(d) fauna;</i> | <i>(k) cultural heritage, including architectural and archaeological heritage;</i> |
| <i>(e) flora;</i> | <i>(l) landscape; and</i> |
| <i>(f) soil;</i> | <i>(m) the inter-relationship between the issues referred to in sub-paragraphs (a) to (l).'</i> |
| <i>(g) water;</i> | |

Based upon these topics, 13 SEA objectives were developed which reflect the sustainability aspirations of SBB's Drought Plan 2027. The draft Drought Plan 2027 has been assessed against the SEA objectives to analyse their potential for significant effects against various receptors associated with each SEA topic. The SEA has been undertaken in alignment with the following guidance:

- *Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans*, UKWIR, 2021.
- *Environmental Assessment for Water Company Drought Planning*, EA, 2025.
- *Strategic Environmental Assessment and Sustainability Appraisal*, Ministry of Housing, Communities and Local Government, 2020.
- *A Practical Guide to the Strategic Environmental Assessment Directive*, Office of the Deputy Prime Minister, 2005.
- *Strategic Assessment: Advice from Practice*, Institute of Sustainability and Environmental Professionals (ISEP), 2026 (emerging guidance).

The SEA is integrated with other environmental assessments, including HRA, WFD and INNS. The findings of these assessments have been incorporated into the SEA. A summary of the process for each of these assessments is provided within **Section 7.3** on the environmental assessment methodology.

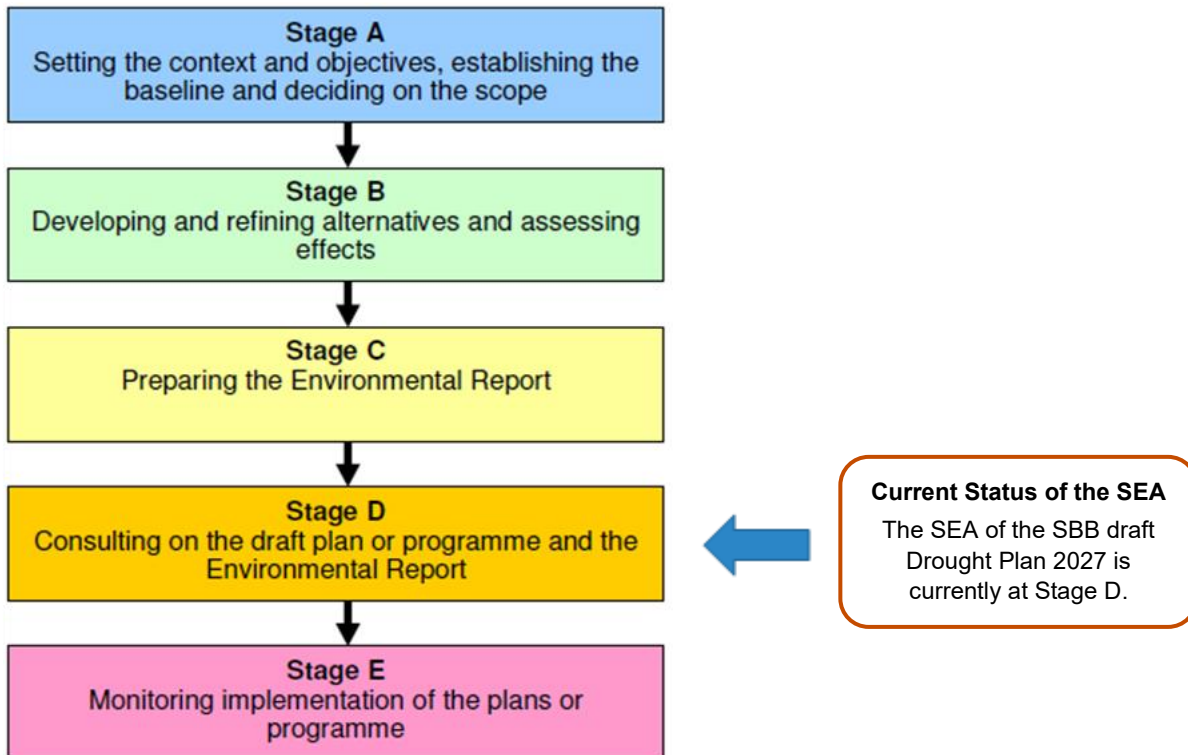
SBB falls under the West Country Water and Environment (WCWE) Regional Plan. The WCWE Draft Regional Plan has been reviewed to ensure the proposed approach to the SEA aligns with the Regional Plan.

It should be noted that the supply options which are identified for implementation at drought levels 2-3a will undergo further detailed assessment through the production of Environmental Assessment Reports (EARs) in line with the EA supplementary guidance on 'Environmental assessment for water company drought planning'. The EARs will build on the strategic findings of the SEA process and assess options in greater detail. The proposed methodology for the EARs is detailed in the EAR Methodology document

(100125254-MM-RP-EAR-017), which has also been published for consultation alongside the draft Drought Plan 2027. All EARs will follow the approach and format set out in the methodology document.

The SEA process and current stage is set out in **Figure 1.1** below. Further detail on the SEA process stages is included within **Annex E**.

Figure 1.1: SEA Process Stages



Source: A Practical Guide to the Strategic Environmental Assessment Directive, 2005³

The SEA aims to deliver compliance with legislative requirements and Drought Plan guidelines by assessing the potential sustainability impacts of various drought options within the SBB region. This informs decision-making for the development of the Drought Plan and helps shape the development of the plan. The SEA therefore provides environmental improvements to the Drought Plan and ensures resilience to drought over the five-year plan period.

1.3 Purpose of the Environmental Report

The purpose of the Environmental Report is to present the results of the SEA of the SBB draft Drought Plan 2027, including the potential positive and negative environmental effects of the plan. This includes option and plan-level assessments; in-combination and cumulative effects; mitigation and enhancement measures; and monitoring proposals.

The structure of the document is presented below.

SEA Environmental Report:

- Chapter 1 – Introduction to the SBB Drought Plan 2027, the SEA Process and Requirements;
- Chapter 2 – Description and Context of the SBB Drought Plan 2027;

³ DCLG (2005) 'A Practical Guide to the Strategic Environmental Assessment Directive', Pages 26 – 29. Available at: <https://www.gov.uk/government/publications/strategic-environmental-assessment-directive-guidance>

- Chapter 3 – Summary of the Scoping Stage Tasks and SEA Scoping Report Consultation;
 - Chapter 4 – Relationships with Other Policies Plans and Programmes Review;
 - Chapter 5 – Baseline Environmental Review;
 - Chapter 6 – Key Sustainability Issues and Opportunities;
 - Chapter 7 – Development of SEA Framework;
 - Chapter 8 – Environmental Assessment Methodology;
 - Chapter 9 – Assessment of the SBB Drought Plan 2027 Options;
 - Chapter 10 – Appraisal of the SBB Drought Plan 2027 and Decision Making;
 - Chapter 11 – Mitigation and Monitoring; and
 - Chapter 12 – Consultation and Next Steps.
-
- Annex A – Policy, Plans and Programmes Review
 - Annex B – Baseline Information
 - Annex C – Baseline Maps
 - Annex D – SEA Definition of Effects
 - Annex E – SEA Process Tasks
 - Annex F – SEA Quality Assurance (QA) Checklist
 - Annex G – SEA Scoping Report Consultation Log
 - Annex H – Colliford WRZ SEA Assessments
 - Annex I – Roadford WRZ SEA Assessments
 - Annex J – Wimbleball WRZ SEA Assessments
 - Annex K – Bristol WRZ SEA Assessments
 - Annex L – Bournemouth WRZ SEA Assessments
 - Annex M – Isles of Scilly WRZ SEA Assessments
 - Annex N – SBB Demand Options SEA Assessments
 - Annex O – HRA Technical Report
 - Annex P – WFD Assessment Technical Report
 - Annex Q – INNS Assessment Technical Report

1.4 Next Steps

Throughout the development of the Drought Plan 2027, consultation with the Environment Agency and Natural England has been ongoing to ensure the Plan meets expectations. Workshops were held throughout 2025, primarily to present early SEA, HRA, WFD and INNS assessment findings, but also to identify key regulator concerns and insights on specific options. The consultation process aims to address and minimise any gaps in information or the assessments to ensure all potential environmental effects have been considered with regard to the SBB Drought Plan 2027.

Consultation comments received to date have been considered within the development of the SBB Drought Plan. Further comments will be reviewed and the SEA updated where required.

Following adoption of the SBB Drought Plan 2027, an SEA Post-Adoption Statement will be produced which outlines how the SEA process has influenced the development of the SBB Drought Plan 2027; how consultation comments were taken into consideration within the SEA and the draft Drought Plan 2027; and how the significant impacts identified within the SEA will be monitored when the Drought Plan is implemented.

The SBB Drought Plan supply options identified for implementation at drought levels 2-3a will undergo further detailed environmental assessment in accordance with the EAR Methodology document

(100125254-MM-RP-EAR-017). The EARs will include detailed survey and modelling data, which will identify further targeted mitigation measures and a detailed monitoring programme to support the drought permit applications.

2 Description and Context of the Drought Plan

2.1 Background and Purpose

Droughts are infrequent natural events characterised by a prolonged period of low rainfall creating a shortage of water. Droughts can vary in duration, timing, location and severity, resulting in differing impacts on the environment and water supply.

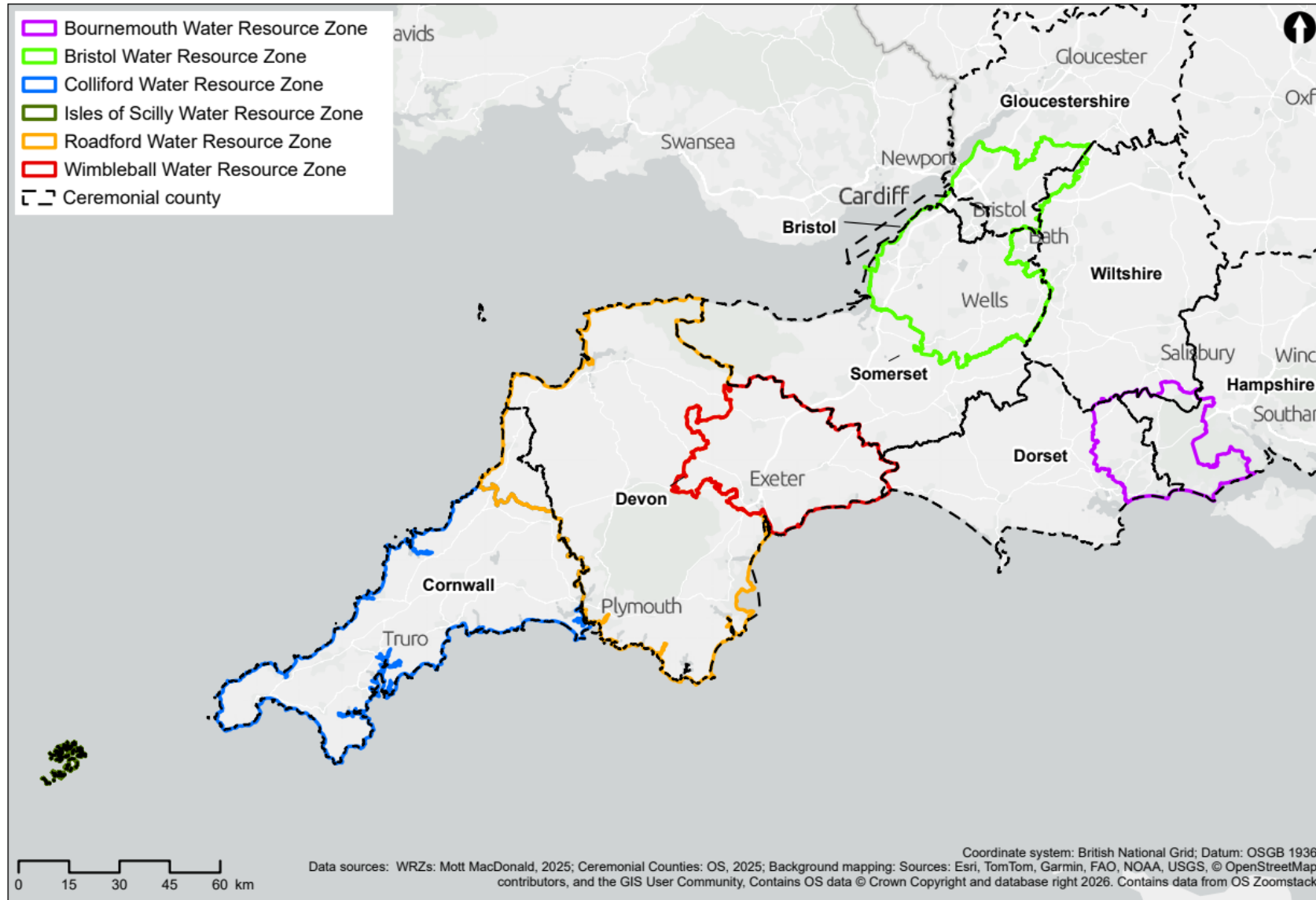
Water companies have a statutory obligation to produce a drought plan, which sets out how a company intends to manage water resources in response to drought events over a five-year period. New drought plans are prepared every five years, and SBB is due to publish its next drought plan in 2027, covering the period from 2027 to 2032. The new SBB Drought Plan 2027 is the subject of this SEA.

The SBB Drought Plan 2027 details how SBB will respond if droughts occur, by setting out possible actions and interventions to reduce the demand for water and options for increasing availability of water supplies. The SBB Drought Plan area covers Devon, Cornwall, the Isles of Scilly (IoS), Bristol, South Gloucestershire, North Somerset and Bournemouth, as well as parts of Somerset, Bath & North East Somerset, Dorset, Hampshire and Wiltshire. Overall, SBB provides drinking water to a population of 3.5 million.

The SBB supply area is split into six Water Resource Zones (WRZs). Three WRZs are operated in conjunction with one another to maximise water availability, these are Colliford, Roadford, and Wimbleball WRZ. Bournemouth WRZ, Bristol WRZ and the IoS WRZ operate independently and are geographically non-contiguous with the other WRZs. Water resources in the SBB supply area consist of three large reservoirs, a number of smaller reservoirs, river intakes, and some groundwater sources.

SBB's six WRZs are outlined in **Figure 2.1** below. The areas between SBB's WRZs are managed by other water companies, predominantly Wessex Water. Neighbouring water company Drought Plans are assessed as part of the cumulative effects in **Section 10** of this report.

Figure 2.1: SBB Drought Plan WRZs



SWW_DP25_GP_Figures | WRZs and County Boundaries | 13 Feb 2026

2.2 Drought Plan Objectives

SBB has developed the Drought Plan 2027 objectives to support the company in achieving its strategic priority on water resilience. SBB's overarching objectives of the Drought Plan are summarised as follows:

"The purpose of this Drought Plan is to explain our operational approach to how we will manage water resources and reduce the demand for water during periods of drought. The Drought Plan sets out possible actions and interventions that we might take, while seeking to provide the most benefit to our water supply position whilst having the least impact on our watercourses, waterbodies and their ecology.

Our Plan also details how we will communicate with the public and stakeholders in a clear and timely manner. This is particularly important as a drought develops, potentially becoming severe and of long duration.

The Plan will improve our operational resilience to drought through a variety of approaches, building from our learnings from South West Water during the drought in 2022. Our plan needs to achieve this in a sustainable way, minimising our impact on the environment whilst ensuring resilient water supplies to our customers."

The Drought Plan objectives set the framework for SBB's sustainability aspirations for the Drought Plan 2027. The SEA assessment framework was developed to reflect these objectives, such as minimising impact on watercourses, waterbodies and ecology, and development of resilient water supplies. Further detail on the development of the SEA assessment framework is set out in **Section 7**.

2.3 Options Development

2.3.1 Supply and Demand Options

The SBB Drought Plan 2027 includes supply 'drought permit' actions, 'drought order' actions, and 'operational' actions, and demand reduction actions.

Supply actions are implemented to increase water supplies in response to a drought, and demand reduction actions are implemented to reduce water use. Demand actions include measures such as leakage reductions, customer communications campaigns, promotion of water-saving devices, and water restrictions such as Temporary Use Bans. During a drought, demand actions will be deployed first at each stage of the drought, and supply actions will follow if needed, with actions that have the least effect on the environment being prioritised.

'Drought permit' and 'drought order' supply actions involve new or additional activities outside SBB's usual activities, such as increases in abstraction or reduction in compensation flow, which require authorisation from the Environment Agency or the government. 'Operational actions' are typically relatively minor activities which SBB can implement within their current operational activities without the need for additional approval from regulators or application for drought permits.

In most cases, operational actions do not require SEA, HRA, WFD and INNS assessments as they have not been identified as potentially causing harm to the environment or involve activities outside the norm of SBB activities, for example network optimisation or stopping transfers between WRZs. One action, R-07 has undergone SEA, HRA, WFD and INNS assessment due to potential environmental impacts.

The 'drought permit' and 'drought order' actions identified for inclusion within the Drought Plan have all undergone SEA, HRA, WFD and INNS assessment, as detailed in this report. The supply actions included in the Drought Plan 2027 which have been identified for implementation at earlier drought stages (2-3a) will also require further detailed assessment and EARs as part of readiness for drought permit applications. SBB has agreed with the regulators to provide a delivery programme for the EARs for consultation. The EARs will then be undertaken in line with the methodology document (100125254-MM-RP-EAR-017), which is also being consulted upon with the regulators.

2.3.2 Option Screening

SBB initially developed a long-list of possible supply and demand options, which were screened through an iterative process including engagement with regulators; internal SBB workshops; and early environmental screenings. A total of 58 options underwent high-level environmental screening to inform this process. The purpose of the high-level screening was to highlight major environmental constraints. A Red-Amber-Green (RAG) assessment approach against each of the identified SEA topics was used to identify options with high environmental risks, such as impacts on water quality, designated sites and wildlife. Options that were identified as 'high risk' were reviewed in workshops with SBB.

These drought options were refined down to a short-list taken forward for further SBB review and SEA, HRA, WFD and INNS assessments. Rationale for screened out options is provided in **Section 10.4.2**.

A total of 38 short-list supply options (comprising 33 'permit' options, one 'action', and four local EA agreements) and eight demand options have been assessed. These have undergone SEA using the methodology detailed in **Section 7.3** of this report as well as HRA, WFD and INNS assessment as set out in **Section 8.4** and the technical reports in **Annex 4**.

As development of the Drought Plan has progressed, the SEA, HRA, WFD and INNS assessors have worked closely with SBB option development teams to support decision-making and screen out options which were identified as having an unacceptable environmental impact. In addition, engagement with the Environment Agency and Natural England has been ongoing throughout the Drought Plan development. SBB has discussed the list of options with the regulators in order to receive feedback on the options and any additional constraints.

Furthermore, the results of the Stage 1 HRA, WFD and INNS assessments were presented to the Environment Agency and Natural England during workshops held in autumn 2025. Feedback on the assessment results and additional local knowledge from the regulators has been considered within the environmental assessments.

2.4 Plan Development

2.4.1 Preferred Plan

SBB used the findings of the various option assessments, including their own technical analysis of yields, triggers, engineering requirements, timeframes etc, the environmental assessment results to develop the preferred plan as well as knowledge from previous droughts in 2022 and 2025. In line with the EA's Water Company Drought Plan Guideline 2025, each drought option was assigned a drought level for implementation (1, 2, 3a or 3b) based on the expected environmental impact. This allows for sequencing the implementation of options from minor to major environmental impacts. At each drought level, demand options must be implemented before supply options at that level.

A total of 38 supply options and the eight demand options have been included in the preferred Drought Plan 2027. This built on learning from previous drought years and enabled the preparation of a robust plan which provides available options across the drought levels. For the Bournemouth, Bristol, Isles of Scilly, Roadford and Wimbleball WRZs, SBB has included all of the available supply options in the preferred draft Drought Plan 2027. Please see Section 2 of SBB's draft Drought Plan 2027 for more detail on the modelling approach taken by SBB.

The environmental effects of the options proposed at each drought level of the preferred plan have been assessed in the SEA, HRA, WFD and INNS assessments. This includes a detailed cumulative effects assessment of the draft Drought Plan 2027, which identifies potential effects from the interaction of options within the plan, as well as impacts from the implementation of the draft Drought Plan 2027 alongside other relevant plans or programmes. This assessment considers factors such as implementation periods and spatial distribution of the options and other plans. The results of the HRA, WFD and INNS cumulative effects assessments also fed into the SEA cumulative effects assessment.

There has been ongoing work on the drought options and levels, and as the results of environmental assessments have become available, the environmental impact category and associated confidence levels have been reviewed and updated where necessary. The drought levels reported on reflect the expected drought levels for options at the time of undertaking the assessments.

2.4.2 Alternative Plans

The SEA Regulations require the identification and assessment of 'reasonable alternative' plans to ensure the rationale for selection of the preferred plan is robust. The preferred draft Drought Plan 2027 includes every option available to SBB that has not been screened out as unsuitable.

A 'do nothing' approach is not a reasonable alternative to the preferred Drought Plan 2027 as there would not be a sufficient and sustainable supply of water during droughts. A continuation of SBB's previous Drought Plan 2022 is also not a reasonable alternative, as lessons have been learned since the drought of 2022/23⁴, with new water resource interventions and a revised drought planning approach that has been incorporated into the development of the draft Drought Plan 2027.

There are therefore not any other options to include as a reasonable alternative to the preferred plan. Therefore, the SEA takes the approach of assessing the environmental effects at each drought level, to establish how the environment would likely be affected as a drought worsens, and to support the decision-making in relation to assigning options to drought levels.

2.5 Drought Plan Options List

The list of drought supply actions and demand options which underwent SEA, HRA, WFD and INNS assessment as part of the Drought Plan 2027 development are set out in **Table 2.1** and **Table 2.2** respectively. These include the option identification number, name, type of option, and description. The list of operational actions identified for inclusion within the Drought Plan 2027 are listed in **Table 2.3**.

⁴ South West Water (2024) *Our draft Water Resources Management Plan: Appendix 9: Lessons from the 2022 Drought*. Available at: <https://www.southwestwater.co.uk/siteassets/documents/about-us/wrmp/revise-dwrmp/sww-dwrmp24-appendix-9-lessons-from-2022-drought.pdf>

Table 2.1: Drought Plan 2027 Permits, Drought Orders Local EA Agreements

Option ID	Option Name	Permit / Action	Option Description
C-03	River Fowey at Restormel - increase annual abstraction limit	Permit	Increase the annual abstraction licence limit in order to enable greater abstraction for winter pumped storage to Colliford Reservoir.
C-04a	Stannon Lake - increase daily abstraction limit	Permit	Increase the daily abstraction limit at Stannon Lake from 4 MI/d to 6 MI/d by installing temporary pumps and increase annual limit proportionally. Transfer to De Lank and Lowermoor WTW.
C-06	Colliford Reservoir - reduce compensation flow	Permit	Colliford not releasing compensation flows when making supply releases
C-07a	Park Lake - increase daily abstraction limit	Permit	Increase the daily abstraction limit at Park Lake from 8 MI/d to 14 MI/d. Also need to increase annual and rolling 5 year limit proportionally.
C-10	Drift Reservoir - reduce compensation flow	Permit	Reduce Drift Reservoir compensation flow by up to 50%
C-11	Hawk's Tor Pit - abstract from new source	Permit	Transfer 4 MI/d from Hawk's Tor Pit (former quarry) to Colliford Reservoir or local treatment works
C-17	Stithians Reservoir - reduce compensation flow	Permit	Reduce Stithians compensation release rate by up to 50%.
C-30	Siblyback Reservoir - reduce compensation flow	Permit	Siblyback not releasing compensation flows when making supply releases
C-37	River Cober at Wendron - increase annual licence limit	Permit	Increase of annual abstraction limit which is a key constraint on this licence.
C-40	Colliford Reservoir - reduce fish bank releases	Local EA agreement	Reduce or not provide / reserve reservoir storage for fish bank releases. Requirement on company undertaking not licence.
R-07	Slade Reservoir - abstract from new source	Action	Abstract from licensed but disused source. Install temporary pumps to abstract the water and transfer the abstracted water to Hore Down WTW
R-11	River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May	Permit	Abstract from the River Lyd and transfer into Roadford Reservoir during April and May via existing pipeline (extending currently licensed pumping season of Nov to Mar)
R-20	Avon Reservoir - reduce compensation flow	Permit	Reduce Avon Reservoir compensation flow by up to 50% for 1 – 4 months in late summer to autumn.
R-21	Burrator Reservoir - reduce compensation flow	Permit	Reduce the compensation flow at Burrator Reservoir by up to 50% for 1 – 4 months in late summer to autumn
R-22	Fernworthy Reservoir - reduce compensation flow	Permit	Reduce the compensation flow at Fernworthy Reservoir by up to 50% for 1 – 4 months in late summer to autumn.
R-23	Trenchford Reservoir - reduce compensation flow	Permit	Reduce the compensation at Trenchford Reservoir by up to 50% for 1 – 4 months in late summer to autumn
R-24	Meldon Reservoir - reduce compensation flow	Permit	Reduce the compensation flow at Meldon Reservoir by up to 50% for 1 – 4 months in late summer to autumn
R-25	Roadford Reservoir - reduce compensation flow	Permit	Roadford not releasing compensation flows when making supply releases.
R-26	Upper Tamar Lake - reduce compensation flow	Permit	Reduce the compensation flow at Upper Tamar Lake by up to 50% for 1 – 4 months in late summer to autumn
R-45	River Dart & Littlehempston boreholes - aggregate daily and annual licence limits	Permit	Aggregate daily and annual abstraction limits between Littlehempston boreholes and ranneys licence and River Dart at Littlehempston licence. Full licensed volume cannot be abstracted from boreholes due to hydraulic constraints, but licence is key constraint for river abstraction.

R-48	Roadford Reservoir - reduce fish bank releases	Local EA agreement	Reduce or not provide / reserve reservoir storage for fish bank releases. Requirement on company undertaking not licence.
W-03	Wimbleball Reservoir - reduce compensation flow	Permit	Wimbleball not releasing compensation flows when making supply releases.
W-06	Brampford Speke & Stoke Canon - abstract from new source	Drought Order	Abstract from licensed but disused borehole sources, releasing the abstracted water into the River Exe and abstracting this water at Pynes WTW. Would need discharge permits / modification to abstraction licence / ordinary drought order.
W-09	River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May	Permit	Extension of winter pumped storage season (November to March) to include April and May.
W-22	Wimbleball Reservoir - reduce fish bank releases	Permit	Reduce or not provide / reserve reservoir storage for fish bank releases.
BR-27a	Blagdon Reservoir - reduce compensation flow	Permit	Reduce the compensation flow at Blagdon Reservoir by up to 50%
BR-27b	Blagdon Reservoir - delay water bank releases	Local EA agreement	Delay of Blagdon Reservoir water bank releases until storage has recovered. Expectation that new licence will allow flexibility in timing when agreed with EA. Normally releases made in late summer
BR-28a	Reduction of Chew Valley Lake compensation release	Permit	Reduce the compensation flow at Chew Valley Lake by up to 50%
BR-28b	Chew Valley Lake - delay water bank releases	Local EA agreement	Delay of Chew Valley Lake water bank releases until storage has recovered. Expectation that new licence will allow flexibility in timing when agreed with EA. Normally releases made in late summer
BR-29	Chew Magna Reservoir - reduce compensation flow	Permit	Reduce the compensation flow at Chew Magna Reservoir by up to 50%
BR-30	Cheddar Ponds - reduce compensation flow	Permit	Reduce the compensation flow at Cheddar Ponds by up to 50%
BR-31a	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October	Permit	Extend pump storage season for River Axe at Brinscombe to Cheddar Reservoir from Nov-Apr to include October
BR-31b	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May	Permit	Extend pump storage season for River Axe at Brinscombe to Cheddar Reservoir from Nov-Apr to include May
BR-47	River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction	Permit	Abstraction for pre-treatment and transfer to Cheddar Reservoir licensed for Nov-Apr. Commissioning and priming treatment processes each year takes a few weeks as it requires river water to be optimised (so abstracted water cannot be discharged to reservoir until complete). Allowing abstraction during October for commissioning treatment process with discharge back to abstraction point would allow water to be discharged immediately into reservoir on 1st Nov. May also need to increase annual limit proportionally.
BN-04	River Stour at Longham - remove low flow constraint	Permit	Remove low flow constraint on River Stour at Longham, allowing increased abstraction. Current licence conditions: daily abstraction limit 68 MI/d, reduced to 44 MI/d when Throop gauge \leq 3.993 m ³ /s (~Q82).
BN-05	Stanbridge boreholes - increase daily abstraction limit	Permit	Increase daily abstraction above current licence limit of 12.5 MI/d to 17.5 MI/d with current infrastructure and without borehole 3.
BN-12	River Stour at Longham - increase weekly abstraction limit	Permit	River Stour at Longham licence change in April 2028 includes reduction in allowed weekly abstraction total - 310.22 to 222.72 MI/week. Permit to increase weekly limit.
IS-18	St Martins - increase abstraction from boreholes to greater than 20m ³ /d	Permit	Drop and resize pumps in existing boreholes to maximise DO above 20 m ³ /d.

Table 2.2: Drought Plan 2027 Demand Options

Option ID	Option Name	Option Description
D-01	Customer Communications	This option involves a number of Customer Communications measures, including: <ul style="list-style-type: none"> • D-01a - Customer communications Business as Usual (A customer comms campaign to educate and inform our customers in WRZs at risk of drought). • D-01b - Enhanced Customer Communications L1a (Enhanced media campaign focusing on the need to save water to protect the environment). • D-01c - Customer Communications L2 (Harder customer communications messaging having more frequency and targeted visibility in public spaces). • D-01d - Customer Communications L3 (Communication message tied into regional/national response). • D-01e - Targeted Customer Communications L1b (Focused and localised comms campaign for both HH and NHH).
D-02	Water Saving Devices	Promoting of water saving devices customers can request.
D-03	Reward through billing	Customer incentives schemes to reduce demand through bill incentives.
D-04	Customer-Side Leakage	This option involves a number of Customer-Side Leakage measures, including: <ul style="list-style-type: none"> • D-04a - Enhanced CSL (Accelerate CSL by contacting more properties and face to face contacts). • D-04b - Enhanced CSL (Accelerate CSL to fix leaks on properties lowering threshold for intervention). • D-04c - Enhanced CSL (Lowering threshold for intervention further and support to vulnerable customers). • D-04d - Enhanced CSL (Highlight urgency to action (aligned to national picture)).
D-05	Active Leakage Control	This option involves a number of Active Leakage Control measures, including: <ul style="list-style-type: none"> • D-05a - Enhanced ALC L1 (Increase activity through re-deployment of leakage gangs in areas of higher drought risk. Prioritisation model could be used. Further benefits when smart meter data and DI story model utilise /implemented). • D-05b - Enhanced ALC L2 (Escalation of ALC L1) • D-05c - Reprioritisation of ALC L1 (Reprioritise/optimize ALC to strategically target high loss areas and trunk mains). • D-05d - Reprioritisation of ALC L2 (Reprioritise/optimize ALC to strategically target high loss areas and trunk mains).
D-06	Pressure Management	Reduced pressure across network areas where feasible.
D-07	Temporary Use Bans	This option involves Temporary Use Ban (TUBs) including: <ul style="list-style-type: none"> • D-07a: TUBs (with exemptions) • D-07b: TUBs exemptions removed.
D-08	Non-Essential Use Bans	This option involves Non-Essential Use Bans (NEUBs) including: <ul style="list-style-type: none"> • D-08a: NEUBs (with exemptions). • D-08b: NEUBs with exemptions removed.

Table 2.3: Drought Plan 2027 Operational Actions

Option Ref	Action Name	Description	Reason for Not Requiring Individual Assessment
C-02	College WTW - booster pumping to support Wendron WTW supply area	Temporary booster pumping to allow College WTW to support Wendron supply area	This action includes network improvements or alterations only. Therefore, no change to abstraction is expected.
W-26	Wessex Water to reduce abstraction from Wimbleball Reservoir L1	Engagement with Wessex Water to discuss dry weather operation, including requesting reduction in their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
W-24	Colaton Raleigh boreholes – improved abstraction control	Accelerate existing scheme to install variable speed drives (VSD) on Colaton Raleigh boreholes abstraction pumps to be able to fully utilise abstraction licence more effectively.	This action involves smarter control and no significant change to current use.
W-27	Wessex Water to reduce abstraction from Wimbleball Reservoir L2	Engagement with Wessex Water to optimise use of reservoir storage in Drought Level 2, requesting further reduction of their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
W-28	Wessex Water to reduce abstraction from Wimbleball Reservoir L3a	Engagement with Wessex Water to optimise use of reservoir storage in Drought Level 3a, requesting further reduction of their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BR-10	Reduce bulk supplies within established agreement	Engagement with Wessex Water to discuss peak supply timing and dry weather operation, including ensuring treated water transfers from Bristol WRZ to Wessex WRZ are in line with the agreed profile.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BR-25	Reduce bulk supplies with temporary variation to established agreement L2	Engagement with Wessex Water to optimise transfers in Drought Level 2, including requesting reduction in the treated water transfers from Bristol WRZ to Wessex WRZ as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BR-54	Increase Cowbridge transfer from Wessex Water	Cowbridge raw water import (from Wessex) to Shipton Moyne WTW	This action involves importing water from third parties and therefore, no change to abstraction is expected.
BR-55	Reduce bulk supplies with temporary variation to established agreement L3a	Engagement with Wessex Water to optimise transfers in Drought Level 3a, including requesting reduction in the treated water transfers from Bristol WRZ to Wessex WRZ as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BN-14	Reduce supply of treated water to large industrial customer	Request a large industrial customer to reduce consumption to the minimum volume specified in their supply contract for prolonged dry weather and drought, or as far as feasible within their operating constraints.	This action involves reducing the supply agreement with a third party. Therefore, no increase in abstraction and no adverse effects are anticipated to occur within the SBB region.

IS-12	St Mary's - increase abstraction from boreholes within existing licence conditions	Within existing licences - preferential use of Rocky Hill BH - pump capacity is current constraint. Preferential use of Venns BH. Further review of Venns & Hales required as may only be limited benefit as impacted by pumping at Hales.	This action is within current licence conditions. Limited headroom on option so not significant change to current use.
IS-14	Tresco - increase abstraction from boreholes within existing licence conditions	Preferential use of 'Borehole by Lake'. Further review of Bridgefield BH required.	This action is within current licence conditions. Limited headroom on option so not significant change to current use.
IS-19	St Agnes - increase abstraction from boreholes, but remain less than 20 m ³ /d	Maximise DO by dropping/changing pumps and maximising yields within 20m ³ /d.	This action is within current licence conditions. Limited headroom on option so not significant change to current use.

3 Scoping Summary

3.1 Introduction

The scoping stage of the SEA process (see **Figure 1.1** above) sets the context and scope of the SEA and Environmental Report. Specifically, the scoping stage aimed to:

- Review relevant international, national and local policies, plans and programmes and their implications for the SBB Drought Plan 2027;
- Establish the baseline environmental and socio-economic information and key sustainability issues and opportunities for the SBB Drought Plan 2027 area;
- Set the context and objectives of the SEA;
- Decide on the scope for the SEA, ensuring that it covers all the likely significant environment effects of the SBB Drought Plan 2027; and
- Provide an opportunity to engage and collaborate with the statutory Consultation Bodies (Environment Agency, Natural England and Historic England).

Chapters 4, 5, 6, 7 and 8 of this Environmental Report provide a summary of the scoping information as presented in the SEA Scoping Report (Mott MacDonald, August 2025). The content has been updated following the Scoping Report consultation where relevant. The following chapters summarise the SEA scoping tasks, including the below activities (with full details presented in appendices, where noted below):

- Relevant policies, plans and programmes review (**Annex A**);
- Baseline information including future trends (**Annex B and C**);
- Key sustainability issues and opportunities;
- SEA Assessment Framework; and
- SEA Scoping Report consultation responses (**Annex G**).

3.2 SEA Screening

Water companies, as responsible authorities, must determine if their drought plan falls within the scope of the SEA Directive. SBB's Drought Plan 2027 was screened prior to scoping to determine whether a SEA of the Drought Plan is required. The decision tree in Section 3.2.1 of the UK Water Industry Research (UKWIR) guidance 'Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans'⁵ was used. The results of the screening exercise were as follows:

- The Drought Plan has been prepared and adopted by SBB who, under the SEA Directive, is considered an "authority";
- The Drought Plan is required by legislative provision, being a statutory document under the Water Act 2003, amending the Water Industry Act 1991;
- The Drought Plan has been prepared for water management during a drought;
- The area of jurisdiction for the Drought Plan would be considered greater than 'local level' and the options to be included within the plan are not within the meaning of 'small areas'. Drought Plans are not considered to be 'minor modifications' to the previous plan;
- A Drought Plan meets none of the exemption criteria e.g. required for national defence or civil emergency; and

⁵ UKWIR (2021) *Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans*. Available at: <https://ukwir.org/environmental-assessments-for-water-resources-planning>

- In light of the above SEA screening results, a SEA of the SBB Drought Plan 2027 was identified as being required.

3.3 Scoping Consultation

The SEA Scoping Report was issued for formal consultation for six weeks between 21st August and 3rd October 2025. During the consultation period, the Consultation Bodies had the opportunity to comment on the proposed scope and approach for the SEA. The comments received from the formal consultation process and the resulting updates made to the Environmental Report are detailed in **Annex G**.

4 Relationships with other Policies, Plans and Programmes

The SEA Regulations requires:

'an outline of the contents and main objectives of the plan and programme, and of its relationship with other relevant plans and programmes'

'the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation'

SEA Regulations Schedule 2(1) and (5)

4.1 Policies, Plans and Programmes Review

A review of the policies, plans, and programmes relevant to the Drought Plan 2027 has been undertaken. This review determined how the emerging Drought Plan may be affected by these external factors. Furthermore, the Drought Plan aims to support current relevant policies, plans, programmes and environmental protection legislation at international, national and local levels, as well as support, and where possible, strengthen the objectives of other local plans and strategies within the SBB area. This review therefore identified broader environmental protection objectives which the Drought Plan 2027 SEA Assessment Framework should align with.

Table 4.1 below lists current relevant policies, plans, and programmes which were considered during the SEA scoping stage. These plans, policies and programmes were reviewed regularly as the locations of the options were confirmed to ensure the plans, policies and programmes at sub-regional or local level remained relevant.

Annex A presents the review of plans, policies and programmes in full.

Table 4.1: Relevant International, National, and Regional Policies

Policies, Plans and Programmes Reviewed	
International	
<ul style="list-style-type: none"> ● Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979) ● Bonn Convention on the Conservation of Migratory Species of Wild Animals (1983) ● Convention on Biological Diversity (1992) ● Ramsar Convention - The Convention on Wetlands of International Importance (1971) ● UN Framework Convention on Climate Change (1992) 	<ul style="list-style-type: none"> ● Commitments arising from the World Summit on Sustainable Development, Johannesburg (2002) ● Paris Agreement (2015) ● Charter for the Protection and Management of Archaeological Heritage (1990) ● The World Heritage Convention (1972) ● Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention) (1998) ● Kyoto Protocol to the UN Framework Convention on Climate Change (1997)
European	
<ul style="list-style-type: none"> ● Ambient Air Quality Directive (2008/50/EC) ● Thematic Strategy on Air Pollution (2005) ● Establishing measures for the recovery of the stock of European eel 2007 (1100/2007) ● Our life insurance, our natural capital: an EU biodiversity strategy to 2020 (2011) ● Fresh Water Fish Directive (2006/44/EC) ● Directive on the Conservation of Wild Birds (79/409/EEC) (as amended) ● Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC) ● Directive on Animal health requirements for aquaculture animals and products thereof, and on the prevention and control of certain diseases in aquatic animals (2006/88/EC) ● Limiting Global Climate Change to 2 degrees Celsius - The way ahead for 2020 and beyond (2007) ● A Clean Planet for all: A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy (2018) ● Promotion of the use of energy and renewable sources Directive (2009/28/EC) ● Energy Act 2013 ● Mainstreaming sustainable development into EU policies: 2009 Review of the European Union Strategy for Sustainable Development ● European Commission Environmental Liability Directive (2004/35/EC) 	<ul style="list-style-type: none"> ● The Convention for the Protection of the Architectural Heritage of Europe (Granada Convention) (1985) ● The European Convention on the Protection of Archaeological Heritage (Valletta Convention) (1992) ● The European Landscape Convention (2006) ● The Environmental Noise Directive (2002/49/EC) ● European Soils Charter (2003) ● Thematic Strategy for Soil Protection (2006) ● The Nitrates Directive (91/676/EEC) ● The Water Framework Directive (WFD) (2000/60/EC) ● Urban Wastewater Treatment Directive (91/271/EEC) ● Drinking Water Directive (1998/83/EC) ● Directive on Bathing Water (76/160/EEC); and Directive 2006/7/EC repealing Directive 76/160/EEC (from 2014) ● Groundwater Directive (2006/118/EC) ● Marine Strategy Framework Directive (2008/56/EEC) ● Directive on the Assessment and Management of Flood Risks (2007/60/EC) ● Blueprint to Safeguard Europe's Water Resources (2012) ● Directive on the assessment of the effects of certain plans and programmes on the environment (2001/42/EC)

National	
<ul style="list-style-type: none"> ● The Eels (England & Wales) Regulations 2009 (as amended) ● Salmon and Freshwater Fisheries Act 1975 ● UK Post-2010 Biodiversity Framework, JNCC and Defra (2012) ● Making Space for Nature - A review of England's Wildlife Sites and Ecological Network (2010) ● Biodiversity 2020: A strategy for England's wildlife and ecosystem services, Defra (2011) ● The Conservation of Habitats and Species Regulations (2010) (as amended) ● The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations (2019) ● Delivering a healthy natural environment. Ecosystem approach action plan, Defra (2010) ● The Invasive Alien Species (Enforcement and Permitting) Order 2019 ● The Great Britain Invasive Non-Native Species Strategy, Defra (2015) ● A narrative for conserving freshwater and wetland habitats in England, Natural England (2016) ● Conservation 21 - Natural England's Conservation Strategy for the 21st Century, Natural England (2016) ● State of Natural Capital Annual Report 2020, Natural Capital Committee (2020) ● Standing Advice on Protected Species, Natural England (2016) ● Eel Management Plans for the United Kingdom - Overview for England and Wales, Defra (2010) ● Climate Change Act 2008 ● UK Climate Change Risk Assessment, Defra (2022) ● The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting, Defra (2023) ● National Planning Policy Framework (NPPF) (2024) ● Environmental Improvement Plan (EIP) (2023) ● Environment Act 2021 ● Securing the Future – Delivering the UK Sustainable Development Strategy (2005) ● The Natural Choice: Securing the Value of Nature, Defra (2011) ● Marine and Coastal Access Act (2009) ● The Wildlife and Countryside Act 1981 (as amended) 	<ul style="list-style-type: none"> ● Strategic Environmental Assessment, Sustainability Appraisal and the Historic Environment, Historic Environment (2016) ● The Setting of Heritage Assets, Historic Environment Good Practice Advice in Planning 3, Historic Environment (2017) ● Ancient Woodland and Veteran Trees: Protecting them from development, Forestry Commission and Natural England (2018) ● The National Framework for Water Resources 2025, Environment Agency (2025) ● Measuring environmental change: outcome indicator framework for the 25 Year Environment Plan (2019) ● Environmental Destination technical report: Understanding environmental water needs, Environment Agency (2025) ● Environmental targets consultation summary of responses and government response (2022) ● Our Waste, Our Resources: A Strategy for England, HM Government (2018) ● Safeguarding our Soils - A strategy for England, Defra (2009) ● Water Resources Act 1991 ● Water Industry Act 1991 ● Water Act 2003 (as amended) ● Preparing for a drier future: England's water infrastructure needs, National Infrastructure Commission (2018) ● Draft National Policy Statement for Water Resources Infrastructure, Defra (2018) ● Water for Life White Paper, Defra (2011) ● The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 (as amended) ● Protect groundwater and prevent groundwater pollution, Environment Agency (2017) ● The Environment Agency's Approach to Groundwater Protection (2023) ● The Environment Agency's approach to groundwater protection, Environment Agency (2018) ● The Groundwater (England and Wales) Regulations 2009 ● Flood and Water Management Act 2010 ● National Flood and Coastal Erosion Risk Management Strategy for England, Environment Agency (2020)

<ul style="list-style-type: none"> • Environment Protection Act 1990 • Countryside and Rights of Way (CROW) Act • Creating a better place: Our ambition to 2020, Environment Agency (2018) • UK National Ecosystem Assessment Follow-on (2014) • National Infrastructure Delivery Plan 2016–2021, Infrastructure and Projects Authority (HM Government) (2016) • Fixing the foundations: Creating a more prosperous nation, HM Government (2015) • Environment Act 1995 • The Environmental Damage (Prevention and Remediation) (England) Regulations 2015 • Environmental Assessment of Plans and Programmes Regulations 2004 • Department for Environment, Food and Rural Affairs Outcome Delivery Plan: 2021 to 2022, Defra (2021) • Planning (Listed Buildings and Conservation Areas) Act 1990 • The Ancient Monuments and Archaeological Areas Act 1979 • Climate Change and the Historic Environment, English Heritage (2008) • Levelling Up and Regeneration Act 2023 – Section 245 (Protected Landscapes) • Countryside and Rights of Way Act 2000 • Natural Environment and Rural Communities (NERC) Act 2006 • The Clean Growth Strategy, BEIS (2017) • Water Industry Strategic Environmental Requirements (WISER) (2022) • Water Industry National Environment Programme (WINEP) (2022) • Environmental Destination Technical Report, Environment Agency (2025) 	<ul style="list-style-type: none"> • The Flood and Coastal Erosion Risk Management Policy Statement, Defra (2020) • Flood risk assessments: climate change allowances, Environment Agency (2016) • The Water Resources Management Plan Regulations 2007 • Water Resources Planning Framework (2015-2065), Water UK (2016) • Water Supply (Water Quality) Regulations 2016 (as amended) • National Policy Statement for Wastewater (2012) • Climate change approaches in water resources planning – Overview of new methods, Environment Agency (2013) • Drought response: how is it managed in England, Environment Agency (2024) • Future Water: the Government’s water strategy for England, Defra (2008) • Water Resources Planning Guideline, Environment Agency (2023) • The Urban Waste Water Treatment (England and Wales) Regulations 1994 • The Nitrate Pollution Prevention Regulations 2015 • Managing Water Abstraction, Environment Agency (2021) • Marine Plans – South East Inshore, South Inshore, South Offshore, Marine Management Organisation • UK Marine Policy Statement (2011) • Chalk Stream Restoration Strategy 2021, CaBa (2021) • Water UK Net Zero 2030 Routemap (2020) • Water Resources Planning Guideline, Various (2023) • National Framework for Water Resources 2025: Water for Growth, Nature and a Resilient Future (2025) • Natural England Conservation Objective for Natura 2000 sites (2014)
<p>Regional and Local</p>	
<ul style="list-style-type: none"> • Site Improvement Plans for Natura 2000 sites: South West, Natural England (2012) • Local Development Plans (Various) • Public Rights of Way Improvement Plans (ROWIPs) (Various) • Local level Green Infrastructure Plans and Strategies (Various) • Local Flood Risk Management Strategies (Various) • Designated Landscape (formerly Areas of Outstanding Natural Beauty (AONB)) Management Plans (Various) 	<ul style="list-style-type: none"> • Cornwall and Isles of Scilly: Environmental Growth Strategy 2020-2065 (2021) • Cornwall and Isles of Scilly Nature Recovery Strategy (2024) • Long-term water resources environmental destination: Guidance for regional groups and water companies (2020) • West Country Water Resources (WCWR) [now West Country Water and Environment (WCWE)] Draft Regional Plan (2023) • Forward programme 2025-26, RAPID (2025) • South West Marine Plan, Marine Management Organisation (2021)

<ul style="list-style-type: none"> • National Character Area (NCA) Profiles, Natural England • Jurassic Coast World Heritage Partnership Plan 2020 – 2025, Dorset Council • South West River Basin Management Plan (2022) • National Natural Capital Atlas: Mapping Indicators, Natural England (2021) • South East River Basin Management Plan (2022) • Flood Risk Management Plans (FRMPs): South East FRMP (2021-2027); South West FRMP (2021-2027) • Catchment Abstraction Management Strategies (CAMS) (2023) • Wessex Water WRMP24 (2024) • Southern Water Draft WRMP24 (2025) • Thames Water WRMP24 (2024) • Severn Trent Water WRMP24 (2025) • Wessex Water Drought Plan 2022 (2022) • Southern Water Drought Plan 2022 (2025) • Thames Water Drought Plan 2022 (2022) • Severn Trent Water Drought Plan 2022-2027 (2022) • Wessex Water Drainage and Wastewater Management Plan (DWMP) (2023) • Southern Water Draft DWMP (2023) 	<ul style="list-style-type: none"> • South Marine Plan, Marine Management Organisation (2018) • Cornwall Climate Change Action Plan (2019) • Cornwall's Climate Emergency Development Plan Document (DPD) (2023) • Devon Carbon Plan (2022) • Draft Climate and Ecological Emergency Action Plan, Bournemouth, Christchurch and Poole Council (2021) • Towards a Climate Resilient Somerset – Somerset's Climate Emergency Strategy (2020) • Hampshire County Council Climate Change Strategy 2020-2025 (2018) • Wiltshire Draft Climate Strategy (2022) • One City Climate Strategy, Bristol One City partnership (2020) • Climate Emergency Action Plan, Bristol City Council (2021) • Our Action on Climate and Ecology, Bristol City Council (ongoing) • Carbon Neutral Cornwall Action Plan (2019) • Devon and Cornwall Area Drought Plan (2017) – [Withdrawn] • The South West River Basin District Flood Risk Management Plan (2022) • South West River Basin District & Eel Management plans for the United Kingdom – Severn River Basin District. • Natural England SSSI Management Plans
<p>South West Water, Bristol Water, and Bournemouth Water</p>	
<ul style="list-style-type: none"> • South West Water's Climate Change Adaptation Report (2022) • SWW Environment Policy (2019) • SWW & Bournemouth Water WRMP (2019) • SWW & Bournemouth Water Draft WRMP (2024) • Bristol Water WRMP24 • SWW Drought Plan (2022) • Bristol Water Drought Plan (2022) • Drought Plan: Isles of Scilly (2022) • South West Water & Bournemouth Water Business Plan 2025–2030 (2023) • Our Promise to the Planet: Carbon-busting Net Zero Plan, South West Water (n.d.) 	<ul style="list-style-type: none"> • West Country South Strategic Resource Options (SROs), Gate 1 Submission Documents (2021) • West Country South Strategic Resource Options (SROs), Gate 2 Submission Documents (2023) • Upstream Thinking Report (2020) • Business Plan 2020-2025 • Asset Management Policy (2022) • Pollution Incident Reduction Plan (2023) • Environment Plan to 2050 (2019) • Drinking Water Quality Strategy to 2050 (2023) • SWW DWMP (2023)

4.2 Identification of Key Policy Themes

The main themes, messages and objectives from the policies, plans and programmes review that are considered relevant to the SBB Drought Plan 2027 are presented below. The Drought Plan 2027 SEA assessment framework was developed to align with these themes (see **Section 7** for details of the framework).

The key policy themes identified from the review are as follows:

- Conserve flora and fauna and their habitats, including designated and non-designated sites.
- Conservation and wise use of wetlands and their resources.
- Protection of wild birds and their habitats.
- Support environmental and Biodiversity Net Gain (BNG).
- Integrate ecosystem service and natural capital principles.
- Halt overall biodiversity loss and support the protection, recovery and enhancement of biodiversity.
- Contribute to nature recovery and nature recovery networks and strategies.
- Creation of green infrastructure.
- Protection of landscape character and quality.
- Improve water quality and manage flow so all waters achieve 'good status' as set out in the Water Framework Directive.
- Prevent or limit inputs of pollutants into groundwater.
- Monitor and provide information to consumers on drinking water quality.
- Promote efficient use of water.
- Reduce and manage the risks of flooding through sustainable design.
- Reduce greenhouse gas emissions to support the transition to the UK Government's 2050 net zero target.
- Adapt to the impacts of climate change including drought, flooding and peak water demand conditions.
- Increase resource efficiency and reduce natural resource use and waste.
- Create a green economy and promote sustainable growth.
- Promote sustainable and healthy communities.
- Promote social inclusion and community participation.
- Protect cultural heritage assets including archaeology and built heritage.
- Protect best quality soils and agricultural land.
- Improve soil health.
- Support the UK Government's 25 Year Plan to Improve the Environment:
 - Using and managing land sustainably – including embedding an “environmental net gain” principle into development (as supported by the Environment Act 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; and
 - Securing clean, healthy and productive and biologically diverse seas and oceans.

5 Environmental Baseline

5.1 Introduction

Current environmental and socio-economic baseline information was collated and reviewed for the SBB Drought Plan 2027 area. The baseline under normal conditions has been reviewed, as well as the typical changes to each baseline topic under drought conditions.

The baseline was collected from published sources and is summarised in the sections below with the full baseline presented in **Annex B**. Maps showing key spatial baseline data are presented within **Annex C**.

This information forms an evidence base against which environmental issues or opportunities resulting from the SBB Drought Plan 2027 can be assessed. The baseline information is presented under the SEA Regulations topics as follows:

- Biodiversity, Flora, and Fauna;
- Water;
- Soil;
- Air;
- Climatic Factors;
- Population and Human Health;
- Historic Environment;
- Landscape; and
- Material Assets.

The SBB Drought Plan 2027 covers a large geographical area, and the baseline is therefore a high-level review of conditions within the region, rather than being location specific.

The SEA considers a baseline under 'normal' pre-drought conditions for the option assessments, as well as the expected baseline under drought conditions. This allows for the environmental assessments to consider an already-stressed environment prior to option implementation, and to ensure there is consideration for long-term post operational effects, as well as the length of time it would take for the area to return to a 'normal' pre-drought baseline.

5.2 Baseline Information

A summary of the baseline information collected for the SBB Drought Plan 2027 is presented below. A full review of the baseline information is included within **Annex B**.

5.2.1 Biodiversity, Flora, and Fauna

The SBB Drought Plan area is rich in habitat species and diversity, with priority species that include beavers, otters, dormice, cirl bunting, with several species in decline including the high brown and marsh fritillary butterflies, water vole and kittiwake. Priority habitats highly vary across the SBB regions, although deciduous woodland accounts for the highest proportion of priority habitat in the Drought Plan area.

There are a total of 790 designated sites across the SBB Drought Plan area. Roadford has the highest number of designated sites with a total of 250, followed by Bristol with 190, and Colliford with 161. In comparison, the IoS have the lowest number with only 29, however several of these affect the entirety of the island complex. There are also 30 Marine Conservation Zones (MCZs) associated with the SBB Drought Plan area, including 18 offshore MCZs off the coasts of Cornwall and Devon (Wimbleball, Roadford and Colliford WRZs) and nine MCZs along the shores of the IoS⁶. The waters in the South West

⁶ JNCC (2025) *Marine Protected Area Mapper*. Available at: <https://jncc.gov.uk/our-work/marine-protected-area-mapper/>

host a rich mix of coastal and marine habitats like intertidal mudflats, kelp beds and seagrass, hosting diverse species from large migratory fish to jellyfish, basking sharks, and large mammals such as seals and dolphins.

There are 18 Main Salmon Rivers that fall within the SBB Drought Plan area, of which eight are also designated as SACs where salmon populations must be maintained or restored to favourable conservation status. These rivers include Avon (Hants), Taw, Tavy, Teign, Dart, Erme, Yealm, and Camel⁷. There are also additional rivers within the SBB region which have breeding populations of salmon and sea trout, even though they are not Principal Salmon Rivers, such as tributaries of the Bristol Avon and the River Chew.

Drought Impact on Baseline

Reduced water availability can have a significant impact on biodiversity due to altering species compositions and affecting ecosystem processes from habitat loss and increased competition for resources⁸. Droughts can lead to lower river flows and groundwater levels, change in water quality, and habitat degradation, which could lead to significant adverse effects on the qualifying features of designated sites, which are protected for their ecological importance.

Drought can have varying detrimental impacts on fish stock/fisheries which can include delayed or restricted migration, loss of physical habitat, physio-chemical pressures including high water temperatures and low dissolved oxygen, and fish distress leading to outbreaks of disease⁹. Fish species that are most likely to be sensitive to these impacts are those that migrate to and from rivers from the sea, and cold water lacustrine species (salmon, sea trout, brown trout, eels, river and sea lamprey, and Allis and twaite shad). Freshwater species that undertake spawning migration within rivers (including barbel, dace, bream and pike) are also likely to be impacted by drought⁹.

5.2.2 Water

There are a total of 1,558 waterbodies within the SBB Drought Plan area (calculated using Moata), across three river basin districts (RBD) South West, South East, and the Severn (the latter now within the SBB's Bristol WRZ, following the transfer of Bristol Water into SBB). The largest proportion of these waterbodies are located within the South West RBD and consist of rivers, canals and surface water transfers.

For both the South West and the Severn RBDs, pollution from rural areas affect the highest proportions of waterbodies, followed by pollution from wastewater and physical modifications. For the South East RBD, pollution from rural areas and physical modifications affect the highest proportions of water bodies, followed by pollution from waste water. In the South West, South East and Severn river basins, agriculture, rural land management and the water industry are sectors that significantly contribute to water management issues.

Flood risk across the SBB Drought Plan area is diverse and can occur from a wide range of sources including rivers, sea, groundwater, reservoirs and surface water. Notable areas for flood risk from rivers, sea and surface water include areas around the Rivers Exe and Axe in Devon; the Hampshire River Avon; and the Severn Estuary and Bristol River Avon¹⁰.

⁷ CEFAS (2022) *Assessment of Salmon Stocks and Fisheries in England and Wales*. Available at: https://assets.publishing.service.gov.uk/media/6572ed7633b7f20012b720d6/SalmonReport-2022-background_Update_05.12.23_002_.pdf

⁸ UK Centre for Ecology and Hydrology (2022) *The impacts of drought on water quality and wildlife*. Available at: <https://www.ceh.ac.uk/news-and-media/blogs/impacts-drought-water-quality-and-wildlife#:~:text=Entire%20food%20webs%20are%20affected,quality%20and%20affecting%20freshwater%20ecosystems.>

⁹ Environment Agency (2023) *Review of the research and scientific understanding of drought: summary report*

¹⁰ Environment Agency (2025) *Check your long-term flood risk*. Available at: <https://check-long-term-flood-risk.service.gov.uk/map>

There are 186 bathing water sites in the SBB Drought Plan area, including the sites along Bournemouth and Bristol WRZs¹¹. Of these sites 79% have been classified as Excellent in the 2024 Bathing Water Quality assessment; 14% have been classified as Good and only 2% have been classified as sufficient. As described above, pollution from wastewater poses a significant risk to bathing water quality.

According to the EA's final classification for water stressed areas¹², Bournemouth and the IoS are two areas within SBB's coverage that are classed as seriously water stressed. The anticipated growth in population and the economy alongside the projected changes in climate will continue to place additional stress on water availability within the SBB Drought Plan area, highlighting the importance of managing water resources.

Drought Impact on Baseline

Drought can have varying and complex effects on water quality. Reduced water flows from droughts can lead to an increase in water temperatures and salinity, as well as a reduction in the dilution of pollutants. Higher water temperatures can lead to algal blooms which can produce toxins that are harmful to humans and animals, as well as reduce dissolved oxygen levels in the water which can impact aquatic life and water quality.

As well as declining surface water supplies, droughts can also have an impact on groundwater levels. The lack of rainfall can reduce the rate at which groundwater recharge occurs, leading to further decline in water resources.

5.2.3 Soils

The bedrock geology of the SBB Drought Plan area is varied and can be broadly split into two types: sedimentary bedrock and basement rocks. Sedimentary bedrock within the area include Chalk Group (Late Cretaceous), Portland Group (Jurassic sedimentary rocks), the Mercia Mudstone Group (Permian-Triassic sedimentary rocks), Sherwood Sandstone and Mercia Mudstone, as well as mudstones of the Cotswolds. The older bedrock consists of a range from Early Carboniferous to Early Palaeozoic rocks, with some sandstones, conglomerates and mudstones¹³.

The English Riviera UNESCO Global Geopark is situated in south Devon and covers the entire area of Torbay. This is an area of international geological significance, due to its 350-400 million year old Marine Devonian limestones of great historical importance¹⁴.

The South West has significant areas of peatland in the moors of Bodmin, Dartmoor and Exmoor, in the Colliford and Roadford WRZs. 45% of SBB's daily water supply originates from rain on Dartmoor's uplands where notable peat bogs are present¹⁵. These peat bogs help prevent flooding along with storing and releasing clean water into rivers and reservoirs.

The SBB Drought Plan area in the South West is dominated by two main soil types – freely draining, slightly acidic loamy soils; and slowly permeable, seasonally wet acidic loamy and clayey soils¹⁶.

¹¹ Defra and Environment Agency (2024) *Bathing waters data*. Available at: <https://environment.data.gov.uk/bwg/profiles/data.html?bw=ukk4305-25400.ukk4301-21700&appointedSewerageUndertaker=South%20West%20Water%20Limited>

¹² Environment Agency (2021) *Water Stressed Areas – Final Classification*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/998237/Water_stressed_areas_final_classification_2021.odt

¹³ British Geological Survey (2025) *BGS Geology Viewer*. Available at: <https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/>

¹⁴ UNESCO (2021) *English Riviera UNESCO Global Geopark*. Available at: <https://en.unesco.org/global-geoparks/english-riviera>

¹⁵ Dartmoor National Park Authority (2017) *The South West Peatland Project*. Available at: <https://www.dartmoor.gov.uk/wildlife-and-heritage/our-conservation-work/the-south-west-peatland-project>

¹⁶ Cranfield Soil and Agrifood Institute (n.d.) *Soilscapes*. Available at: <http://www.landis.org.uk/soilscapes/index.cfm>

The South West of England has been quarried for slate, granite and limestone, and the extractive industry has utilised sands and gravels to produce large quantities of China clay (kaolin). Cornwall and Dartmoor have had historical significance in metalliferous mining activities, and from prehistoric times up to the twentieth century these have been important sources of tin, copper and arsenic¹⁷. However, the prolific history of mineral extraction has led to legacy water quality issues as a result of these industrial activities. The geology of the South West does not contain sufficient water in most of the region to act as a source for drinking water, although some areas can be abstracted for small domestic supplies¹⁸.

The SBB Drought Plan area has a strong agricultural presence, particularly in the South West. The agricultural land classification of the SBB region is predominantly Grade 3 and Grade 4, each measuring approximately 23,921ha and approximately 5,102ha in the SBB Drought Plan area respectively, with pockets of urban and non-agricultural land (calculated using Moata).

Currently, there are approximately 125 authorised landfill sites and approximately 1,800 historic landfill sites across the SBB Drought Plan area (calculated using Moata).

Drought Impact on Baseline

Agricultural drought can arise due to lack of rainfall and moisture in soils, leading to a decline in crop production. Water shortages could also impede certain farming practices, such as spray irrigation as well as livestock rearing. Dryness of soils brought by droughts can lead to cracks and changes in soil structure, changing water infiltration, and could lead to increased surface water runoff.

Droughts can adversely affect the peatlands in the SBB Drought Plan area, which are important terrestrial carbon stores. As the soils dry, important peatland vegetation such as the Sphagnum moss struggle to survive, reducing the rate of peatland formation¹⁹.

Dryness of soils brought by droughts can lead to cracks and changes in soil structure and quality, changing water infiltration, and could lead to increased surface water runoff as certain types of soils become more water-repellent when dry (such as soils rich in organic matter), potentially increasing the risks of flash flooding.

5.2.4 Air

Air quality in the SBB Drought Plan area is varied and there are certain areas with higher concentrations of air pollutants, as typically associated with transport or business activities. In total there are 31 Air Quality Management Areas (AQMAs) within the SBB drought area. The Colliford WRZ has a total of nine AQMAs, the largest of which are located in or around Redruth, Truro, and St Austell. The Roadford and Bristol WRZs both have eight AQMAs, which are located predominantly in Newton Abbot, Plymouth, and Bristol city centre. Bournemouth and the Isles of Scilly WRZs do not contain any AQMAs²⁰.

Drought Impact on Baseline

Drier climates have the potential to worsen air quality, as soils dry and become desiccated, there is increased likelihood of dust particles being entrained into the air and atmosphere²¹. Furthermore, as biomass dries up, wildfire incidents are also more likely to occur, leading to the emission of particulate matter into the atmosphere.

¹⁷ British Geological Survey (2020) Regional geological summaries – South-west England. Available at: <https://www.bgs.ac.uk/download/regional-geological-summaries-south-west-england/>

¹⁸ British Geological Survey (2020) *Regional geological summaries – South-west England*. Available at: <https://www.bgs.ac.uk/download/regional-geological-summaries-south-west-england/>

¹⁹ Riston, J. P., Lees, K. J. et al. (2025) *Climate change impacts on blanket peatland in Great Britain*. *Journal of Applied Ecology*, 62, 701-714. <https://doi.org/10.1111/1365-2664.14864>

²⁰ Defra (2025) *UK Air AQMAs Interactive Map*. Available at: <https://uk-air.defra.gov.uk/aqma/maps/>

²¹ EPA (2025) *Climate Change Impacts on Air Quality*. Available at: <https://www.epa.gov/climateimpacts/climate-change-impacts-air-quality>

Fine particulate matters (PM_{2.5}) and dust have a greater likelihood of remaining suspended in the air and atmosphere due to the lack of rainfall. For example, a study in the US has shown that elevated ozone and PM_{2.5} – both of which have the potential to adversely impact human health – are attributed to the combined effects of drought on the deposition of pollutants, natural emissions (e.g. wildfires), and chemical reactions (e.g. higher temperatures enabling higher rates of forming biogenic volatile organic compounds)²².

5.2.5 Climatic Factors

Current observations indicate that UK temperatures are continuing to rise. Most recently, the year 2025 has broken historical climate records with provisional Met Office figures showing it has been both the warmest and sunniest year on record for England and Wales, with a mean temperature of 10.09°C²³. The year 2025 now joins 2022 and 2023 in the top three warmest years since 1884.

Annual precipitation has increased across the UK in the last few decades, with 2023 being the seventh wettest year in the series since 1836, seeing a 113% increase of the 1991-2020 average.²⁴ In 2025 to February 2026, the UK experienced rainfall that was 13% above the long-term average, with the south west of England and South Wales recording a total rainfall that was 149% higher than its average²⁵.

The Met Office UK Climate Projections (UKCP) were last updated in December 2018 (UKCP18)²⁶. The UKCP18 are largely the same as the previous 2009 projections where all areas of the UK are projected to be warmer, particularly during summer months. Rainfall is projected to vary seasonally and at a regional scale, however the UK is projected to have wetter winters and drier summers. The trend towards increasing extreme weather events as the climate warms may also give rise to high-intensity rainfall events during the summers.

Based on the 16 local authorities which fall within the SBB Drought Plan area²⁷, the total carbon dioxide (CO₂) emissions for 2023 across all sectors is estimated at 16,393 kilotonnes (ktCO₂), with the SBB regions emitting approximately 16,347ktCO₂ (not including land use, land-use change, and forestry (LULUCF))²⁸. The transport sector in the SBB region contributed the highest proportion of emissions to the total in 2023 at 47%, followed by the domestic and commercial sectors at 27% and 10% respectively.

Water companies in the UK, including SBB, have set a sector-wide aim of delivering a net zero water supply to the public by 2030. SBB aims to cut 100,000 tonnes in carbon emissions, by using 100% electric car and van fleet, 100% renewable energy, and a 15% reduction in leaks²⁹.

²² Wang, Y., Xie, Y. (2017) *Adverse effects of increasing drought on air quality via natural processes. Atmospheric Chemistry and Physics*, 17, 12827-12843. Available at: <https://doi.org/10.5194/acp-17-128272017>

²³ Met Office (2026) *2025 is double-record breaker: UK's warmest and sunniest year on record*. Available at: <https://www.metoffice.gov.uk/about-us/news-and-media/media-centre/weather-and-climate-news/2026/2025-is-double-record-breaker-uks-warmest-and-sunniest-year-on-record>

²⁴ Met Office (2024) *Temperature extremes and records most affected by UK's changing climate*. Available at: <https://www.metoffice.gov.uk/about-us/news-and-media/media-centre/weather-and-climate-news/2024/temperature-extremes-and-records-most-affected-by-uks-changing-climate>

²⁵ Met Office (2026) February & Winter weather stats: A regional breakdown. Available online at: <https://www.metoffice.gov.uk/blog/2026/met-office-february-and-winter-weather-stats-2025-26>

²⁶ Met Office (2018) *UK Climate Projections (UKCP)*. Available at: <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp>

²⁷ CO₂ emissions data covers the entirety of each local authority; however, it is acknowledged that not all of the relevant local authorities are located entirely within the SBB Drought Plan area. Therefore, at this stage of the SEA process the ktCO₂ values indicated in the baseline are to be taken as an approximation.

²⁸ BEIS (2025) *UK Local Authority Carbon Dioxide Emissions National Statistics: 2005 to 2023*. Available at: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissions-statistics-2005-to-20232023>

²⁹ South West Water (n.d) *Net Zero*. Available at: <https://www.southwestwater.co.uk/environment/projects/netzero>

At present, the water sector's primary sources of operational greenhouse gas emissions are CO₂ from grid electricity, methane (CH₄) and nitrous oxide (N₂O) emissions from wastewater and sludge treatment processes.

Drought Impact on Baseline

Periods of drought and high temperatures typically coincide. High temperatures due to climate change therefore may coincide with more frequent or prolonged periods of drought, however droughts can also extend into dry winter months and beyond.

Conversely, drought conditions can significantly increase the risk of flash flooding if followed by heavy rain. This is due to the soil becoming dry and compacted during drought conditions, causing the soil to become hydrophobic, leading to increased surface runoff. In addition, the drying out of peatlands can disrupt the carbon cycle, as the lowering of water tables can expose the soils to oxygen, promoting aerobic decomposition and releasing carbon dioxide to the atmosphere.

Drought events are more likely to increase chances of wildfires due to the increased amount of dry biomass available, increasing the emission of carbon into the atmosphere³⁰.

Droughts can also lead to significant impacts on energy consumption and carbon emissions. As temperatures increase, there will be an increase in demand for water for consumptive uses, as well as to keep power plants cool. This means more energy is required to pump the water to the systems, and as oil and gas currently remain as the UK's two major sources of energy³¹, this increase in energy demand could lead to an increase in carbon emissions. Hydropower supplies a relatively minor proportion of the UK's energy profile (0.3% in 2023³¹), although this power source can be adversely impacted by droughts due to decreased levels in reservoirs and rivers.

5.2.6 Population and Human Health

According to the 2024 mid-year population estimates data, approximately 3.8 million people live in the local authorities that SBB Drought Plan area serves, with the highest population located in Devon with approximately 840,000 people, followed by Somerset with approximately 590,000 people, and Cornwall with approximately 580,000 people³². Across the SBB area, approximately 1.8 million people had their water supplied by SWW, and 0.5 million by Bournemouth Water in 2022/23³³. The Bristol WRZ serves a population of approximately 1.2 million people across Bristol City, North Somerset, and areas of Bath & North East Somerset and South Gloucestershire³⁴.

Life expectancy for both men and women in the South West is higher than in England as a whole. The average life expectancy projections (2021 – 2023) for residents in the region is approximately 80.1 years for males (decreased by 0.4% compared to 2017-2019) and 84.0 years for females (decreased by 0.2% compared to 2017 – 2019)³⁵.

³⁰ Environment Agency (2023) *Review of the research and scientific understanding of drought: summary report*. Available at: [Review of the research and scientific understanding of drought: summary - GOV.UK](#)

³¹ Department for Energy Security & Net Zero (2024) *UK Energy in Brief 2024*. Available at: <https://assets.publishing.service.gov.uk>

³² Office for National Statistics (2025). *Dataset: Estimates of the population for England and Wales. Mid-2024*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/estimatesofthepopulationforenglandandwales>

³³ South West Water (2023). *Draft Water Resources Management Plan 2024*. Available at: <https://www.southwestwater.co.uk/siteassets/documents/about-us/wrmp/revise-dwrmp/sww-dwrmp-main-technical-report-v2.pdf>

³⁴ Bristol Water (2024). *Revised Draft Water Resources Management Plan 2024*. Available at: <https://www.bristolwater.co.uk/about-us/our-plans/water-resources/>

³⁵ Office for National Statistics (2024) *Life Expectancy for Local Areas of Great Britain*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/lifeexpectancyforlocalareasoftheuk/between2001to2003and2021to2023>

The Index of Multiple Deprivation (IMD) (2019) for the Lower Super Output Areas (LSOAs) within the region³⁶ are ranked from 1 to 10, with 1 being the most deprived and 10 being the least. Around 29% of the LSOAs in the SBB Drought Plan area have an IMD ranking of 8 or over (i.e. least deprived), 50% have a ranking between 4 and 7 and the remaining 21% are 3 or below (i.e. most deprived)³⁷.

The SBB Drought Plan area is a popular tourism region, with 2.4 million visits to the South West in 2024³⁸. It is expected that the influx of tourists during the summer months are drawn to the coastal areas and amenities of Devon, Cornwall and Bournemouth, as well as the lakes and reservoirs owned by SBB and managed by South West Lakes Trust (SWLT), which offer water sports, recreational activities and support wildlife. These include reservoirs such as Roadford, Wimbleball, Tottiford, Longham, Siblyback, and Upper Tamar Lake.

The South West contributes the second largest output of the UK fishing and aquaculture industry (10%), following Scotland (61%)³⁹. The region has three of the most significant fishing ports in England located in Newlyn, Plymouth and Brixham.

Drought Impact on Baseline

Droughts can cause various health effects on populations across the UK. Droughts can lead to a shortage in water availability and supply, causing stress to crucial industries that require water, e.g. irrigation for agricultural purposes. The UK Health Agency has identified both direct and indirect effects of drought on human health in the UK⁴⁰. At the more extreme level, failure in domestic water supply may lead to outbreaks of infectious diseases through water contamination and reduced hygiene⁴¹, or failed harvests leading to shortages in food supply.

Drought may also have adverse effects on the population's ability to undertake recreational and physical activities due to water availability, in particular the use of golf courses, fishing lakes and rivers, bathing waters, water sports, as well as access to nature. Drought can cause visible changes in the landscape which may have adverse effects on scenery and sense of place that could deter recreational users.

Recreational activities such as watering gardens and use of garden swimming pools, paddling pools or hot tubs may also be affected during droughts if Temporary Use Bans (TUB) (commonly known as 'hosepipe bans') are implemented.

5.2.7 Historic Environment

The Local Authorities in the SBB region hold a Historic Environment Record (HER) which is a database of archaeological sites, listed buildings and other historic buildings, and finds of historic objects. The SBB Drought Plan area is rich in heritage with 47,484 listed buildings, 4,004 scheduled monuments, 156 registered parks and gardens, five registered battlefields and two UNESCO world heritage sites (calculated using Moata). There is potential for unidentified heritage assets and archaeological remains to

³⁶ IMD data covers the entirety of each local authority; however, it is acknowledged that not all of the relevant local authorities are located entirely within the South West Water region boundary. Therefore, at this stage of the SEA process the percentages indicated are to be taken as an approximation.

³⁷ Ministry of Housing, Communities & Local Government (2019). *English Indices of Deprivation 2019*. Available at: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>

³⁸ Visit Britain (2024) *Inbound Nation, Region and County Data*. Available at: <https://www.visitbritain.org/research-insights/inbound-visits-and-spend-annual-regional#:~:text=The%20most%20visited%20England%20regions%20%28excluding%20London%29%20in,%283.4m%20visits%29%20and%20the%20South%20West%20%282.4m%20visits%29.>

³⁹ House of Commons (2021) *UK fisheries statistics*. Available at: <https://researchbriefings.files.parliament.uk/documents/SN02788/SN02788.pdf>

⁴⁰ GOV.UK (2024) *Heat summary - Chapter 11: drought and human health*. Available at: <https://www.gov.uk/guidance/heat-summary-chapter-11-drought-and-human-health#:~:text=Drought%20combined%20with%20heat%20stress,and%20worry%20about%20their%20communities.>

⁴¹ Health Protection Agency (2008). *Health Effects of Climate Change in the UK 2008*. Available at: <https://data.parliament.uk/DepositedPapers/Files/DEP2008-0556/DEP2008-0556.pdf>

be present within the region. There are also likely to be water-dependent heritage assets and water-sensitive historic environments within the SBB region that are sensitive to changes in water levels and water quality.

Landscapes can provide important settings for some heritage assets, for example, by providing scenic visual backdrops to assets such as listed buildings and scheduled monuments. Some heritage assets are also entire landscapes on their own, such as the Cornwall and West Devon Mining Landscape World Heritage Site and the Dorset and East Devon Jurassic Coast World Heritage Site.

Drought Impact on Baseline

Drought can have multiple impacts on the historic environment. Reduced water levels can impact the preservation of waterlogged archaeological and paleoenvironmental material. Drought can also affect ground stability and increase subsidence which can negatively affect historic structures and archaeological sites⁴². Conversely, drought may also allow for new historic features and archaeology to become visible which will aid further understanding of the historic environment.

5.2.8 Landscape

The landscape across the SBB Drought Plan area has a diverse and unique character and is known for its open and tranquil nature. Large areas consist of a mosaic of uninterrupted views, scattered settlements and mixed agriculture, and the relatively isolated landscape offers a rich habitat for both flora and fauna with complex geology with a strong contrast of landforms including granite hills, steep chalk ridges, plateaus and a rugged coastline with sandy beaches and coves out into the Atlantic Ocean.

There are two Green Belt areas situated within the SBB Drought Plan area; South and West Hampshire located within the Bournemouth WRZ, and Bath and Bristol located in the Bristol WRZ.

There are 33 National Character Areas (NCAs), 12 National Landscapes, and three National Parks (Dartmoor, Exmoor and New Forest) within the SBB Drought Plan area.

Heritage Coasts are established to conserve stretches of undeveloped coastline across England and are defined via agreement between the relevant maritime and local authorities as well as Natural England. There are 32 heritage coasts identified within the UK of which 18 are located within the SBB Drought Plan area⁴³.

The Cornwall and West Devon Mining Landscape Cultural Site 'Cornish Mining' UNESCO World Heritage Site is noted as having a global importance, designated for cultural landscape value. Which has helped shape the landscape and played an important role in developing today's society⁴⁴.

Drought Impact on Baseline

Drought can significantly impact landscapes due to reduced water levels in rivers and lakes, dry and scorched vegetation, and loss of habitat. This is likely to result in visible changes to the landscape, which may have adverse impacts on scenery and sense of place, which is likely to be felt more severely in areas that are designated for their landscape features.

5.2.9 Material Assets

The SBB Drought Plan area has a vast reaching transport network, connecting people, places and services both within the region and beyond to support the regional and national economy. Bristol WRZ is

⁴² Historic England (2025) *Climate Change Risks and Hazards*. Available at: <https://historicengland.org.uk/advice/climate-change/risks-and-hazards/>

⁴³ Natural England (2024). *Heritage Coasts (England) – Natural England Open Data Publication*. Available at: https://naturalengland-defra.opendata.arcgis.com/datasets/d9557885721d483dac138bdd0ab08c3e_0/explore?location=51.110587%2C-5.546402%2C8.55

⁴⁴ Cornish Mining World Heritage (n.d.) *Cornish Mining World Heritage*. Available at: <https://www.cornishmining.org.uk/about>

more highly connected by road than the rest of the SBB Drought Plan area, with the M4 Motorway connecting regions from the east (i.e. from London) to Bristol, the M5 Motorway providing connections to the north and the South West, and the M4 and M48 providing connections to Wales.

In 2021/2022, the total amount of local authority managed waste in England was 26.1 million tonnes, of which the South West region of England managed 2.7 million tonnes⁴⁵. Recycling and composting was the most common waste disposal method in the South West region, accounting for 49% of local authority managed waste. Incineration was the second most common waste disposal method, resulting in 44% of managed local authority waste⁴⁶.

Energy consumption in the UK has shifted since 2000, with fossil fuel use reaching a record low of 31.8% in 2024, since coal generation ceased in September 2024⁴⁶. In comparison, renewable generation has increased to record highs with renewable energy accounting for 16.2% of energy consumption in 2024. In 2024, gas remained the principal form of the UK's energy generation⁴⁶.

The South West is increasing the provision of low carbon energy in the UK, with floating offshore wind in the Celtic Sea, Hinkley Point C Nuclear Power Station, as well as other geothermal, hydrogen and green fuels already deployed or in development⁴⁷.

In 2022, England's material footprint⁴⁸ was an estimated 1,142 million tonnes (Mt). Of this, non-metallic minerals made up 43%, followed by biomass at 25% and fossil fuels at 22%. Raw material consumption in the England, excluding fossil fuels, has generally decreased overall between 2001 to 2021⁴⁹. However, levels had increased from 12.4 tonnes per capita in 2020 to 14.3 tonnes per capita in 2021.

Drought Impact on Baseline

Transport infrastructure in the UK can be significantly impacted by droughts. As soils dry, they can shrink and become cracked and unstable, leading to damaged roads and runways as well as allowing rails to become misaligned. Restrictions on water supply can delay the development of new infrastructure through reduced concrete production and manufacturing. Drainage systems can be clogged by dry soil and debris, leading to increased risk of surface water flooding and transport delays.

In terms of waste management, hotter and drier conditions can impact waste facilities. For example, organic material going into landfills during hotter periods increase the risk of landfill fire outbursts. Droughts can also increase demand for energy. Through an increase in demand for water for consumptive uses during hot weather as well as to keep power plants cool, and more energy being required to pump water to the systems.

5.3 Future Baseline

The SEA Regulations require that “the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the Plan or Programme” are identified.

Future trends feed into the development of key sustainability issues for incorporation into the SEA assessment framework (see key issues in **Section 6.1** and the SEA framework in **Section 7** below).

⁴⁵ Defra (2023) *Statistics on waste managed by local authorities in England in 2020/22*. Available at: <https://www.gov.uk/government/statistics/local-authority-collected-waste-management-annual-results-202122/local-authority-collected-waste-management-annual-results-202122>

⁴⁶ Department for Energy Security and Net Zero (2025) *Digest of UK Energy Statistics Annual data for UK, 2024*. Available at: https://assets.publishing.service.gov.uk/media/688b52e67b28774ca0437f09/DUKES_2025_Chapters_1-7.pdf

⁴⁷ University of Plymouth (2023) *Great South West leads UK Clean Energy Growth*. Available at: <https://www.plymouth.ac.uk/news/great-south-west-leads-uk-clean-energy-growth>

⁴⁸ The 'material footprint' is a measure of the global primary raw material extraction attributable to final domestic demand for goods and services

⁴⁹ Defra (2025) *J2: Raw material consumption*. Available at: <https://oifdata.defra.gov.uk/themes/resource-use-and-waste/J2/>

Prediction of future trends is complex because they depend on a wide range of global, national and regional factors and decision making. Key trends have been identified and from an initial review it is likely that the following trends will continue:

- **Biodiversity Flora and Fauna** - Habitats and species are likely to continue to be protected through UK legislation. England's wildlife habitats have become increasingly fragmented and isolated, leading to declines in the provision of some ecosystem services, and losses to species populations. Lawton (2010)⁵⁰ recognises that future climate change, demographic change, economic growth, new technologies, societal preferences and changes in policy and regulatory environments may all have profound consequences.

The State of Nature 2023⁵¹ report underlines the continued decline of biodiversity resulting from intensification of land management and impacts of overfishing in marine ecosystems. However, legislation such as the Environment Act 2021⁵² is expected to continue the protection of biodiversity by providing a framework for a legally binding target of net gain within the planning system. This includes implementing the locally-led Nature Recovery Network throughout England to support nature regeneration.

- **Water** - Water quality is likely to continue to be maintained and improved through legislation such as the WFD and statutory requirements for Drainage and Wastewater Management Plans (DWMPs). Bournemouth and the IoS are already water-stressed and are expected to remain so while Devon, Cornwall, and the Bristol Water region are not currently under serious water stress, projected economic and population growth will likely place further pressure on the region's water resources and water dependent environments.

There is potential for an increased need for wastewater treatment works and improved water quality as a result of WFD water quality standards combined with population increase.

- **Soils** - As the population increases it is likely that more brownfield land will be remediated and developed. There is potential for a loss of agricultural land through development pressures, but also intensification within agricultural land due to changing practices resulting in soil degradation. Dryness of soils brought on by droughts can lead to cracks and changes in soil structure, soil quality, and could lead to increased surface water runoff as certain types of soils become more water-repellent when dry (such as soils rich in organic matter), potentially increasing the risks of flash flooding. Damaged or degraded peatlands is expected to see continued protection and restoration through local and governmental programmes, which would lead to improved carbon retention.
- **Air** - New development, economic growth and tourism may lead to increased car journeys and congestion within the SBB area, leading to localised air quality effects. Public transport improvements, ongoing electrification of railways, national air quality targets, emissions standards for new vehicles, and a shift to electric vehicles should contribute to reducing future air quality impacts from motor vehicles. In addition to this, the prevalence of hybrid working following the Covid-19 pandemic is likely to continue to contribute to a decrease in traffic movements and so result in continued benefits to air quality.
- **Climatic factors** - The climate is expected to continue to change with annual average temperatures projected to increase, particularly in summer. Winters are projected to be wetter and summers drier. Annual mean temperatures are expected to increase by 1.8°C by 2050, with

⁵⁰Professor Sir John Lawton (2010) *Making Space for Nature: A review of England's Wildlife Sites and Ecological Network*. Available at: https://www.researchgate.net/profile/William-Sutherland-3/publication/268279426_Making_Space_for_Nature_A_Review_of_England's_Wildlife_Sites_and_Ecological_Network/links/5567846e08aeab77721eaa34/Making-Space-for-Nature-A-Review-of-Englands-Wildlife-Sites-and-Ecological-Network.pdf

⁵¹ GOV.UK (2023) Natural England – *State of Nature Report*. Available at: <https://naturalengland.blog.gov.uk/2023/09/29/state-of-nature/>

⁵² Legislation.gov.uk (2021) *Environment Act 2021*. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/contents>

annual mean temperatures in summer seeing a 2.4°C increase within the same time period. Climate change is projected to result in more extreme weather events, potentially causing or exacerbating periods of drought or flooding across the year, which alongside population and economic growth will impact water availability.

Carbon and other greenhouse gas emissions will continue to be emitted; however regulations and legislation will likely continue the reduction in emissions through commitments to net zero. Given the treatment of water is energy intensive, the water industry CO₂ emissions may increase and further contribute to climate change, depending on future decarbonisation of electricity supplies. The water industry in the UK is aiming to become net zero by 2030.

- **Population and Human Health** - Water available for consumptive use may be affected by climate change, whereby access to water is limited through more frequent droughts or floods. Population is projected to increase in the SBB Drought Plan area, mirroring that of the rest of the country. The national population has increased by 1.0% between 2022 and 2033⁵³, with the population in the South West experiencing the same increase. Life expectancy in the South West is also higher than the national average, meaning that the number of elderly residents is likely to increase. As such, water demand is expected to increase, and further pressure will be placed on water resources within the region.

When considering IMD, the number of LSOAs in the 10% least deprived areas in the South West increased between 2015 and 2019. This may suggest a trend that will continue over the next few years, with more areas within the South West moving into this bracket. Leading to a starker economic divide between areas within the region, which may also continue.

- **Historic Environment** – The number of assets that are at risk are increasing despite ongoing restoration work by Historic England. In 2024, a total of 124 historic buildings and places were saved but 155 additions were added to the Heritage at Risk register⁵⁴. Historic assets will likely continue to be protected through UK legislation. Development could however put pressure on heritage assets and their setting.
- **Landscape** – Landscapes and seascapes will continue to be shaped by conflicting pressures of climate change and increased development, which may affect the quality and character in the future.
- **Material Assets** – Regeneration, future investment and demand are likely to increase the number and quality of material assets such as housing, transport infrastructure, waste facilities, and community facilities. This is likely to be exacerbated with regional population growth and subsequent requirements for additional housing and related infrastructure to support a larger population. As a result, energy demand is also likely to continue to increase. With an overall warming climate, less gas for heating may be required during winters, but increases in demand for electricity-run air conditioning may be seen during summers. The shift to more renewable energy sources is predicted to continue to help meet government net zero energy targets.

⁵³ Office for National Statistics (2025). *Dataset: Estimates of the population for England and Wales. Mid-2024*. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/estimatesofthepopulationforenglandandwales>

⁵⁴ Historic England (2024) *Heritage at Risk*. Available at: <https://historicengland.org.uk/advice/heritage-at-risk/findings/>

6 Key Environmental Issues and Opportunities

The SEA Regulations require:

Consideration of ‘any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of particular environmental importance, such as areas designated pursuant to Council Directive 79/409/EEC on the conservation of wild birds (a) and the Habitats Directive’

SEA Regulations Schedule 2 (4) (2004)

6.1 Key Issues, Opportunities, and Scoping

A key stage in the scoping process was to determine what topics are relevant for the SBB Drought Plan 2027 SEA and what topics (if any) should be scoped out of the assessment. Topics have been scoped in based on the baseline situation and the potential for the Drought Plan to impact them (or to be impacted by the topic). This has been assessed by reviewing baseline conditions and current environmental issues for the SBB Drought Plan area and assessing the likelihood of a potential impact.

It was proposed in the SEA Scoping Report that air quality, landscape, and built infrastructure are scoped out of the SEA. The scoping underwent consultation in autumn 2025 and justification is presented in **Table 6.1** below.

Table 6.1: Scoped Out Topics

Topic	Scoped In/Out	Justification
Air Quality	Out	SBB shared the long list of options ahead of the SEA Framework being developed, therefore it was known that there would be limited / no construction works as the drought options need to be ‘permit ready’ for rapid implementation during a drought, and not require substantial additional work or consultation. There is unlikely to be any impact on air quality as a result of dust, emissions and/or pollutants from implementation of the drought options. Notable emissions from transport due to the options are also not anticipated. There are no options located within an AQMA. Greenhouse gas emissions are assessed under the Climatic Factors topic.
Landscape	Out	SBB shared the long list of options ahead of the SEA Framework being developed, therefore it was known that there would be limited / no construction works as the drought options need to be ‘permit ready’ for rapid implementation during a drought, and not require substantial additional work or consultation. Therefore, there are unlikely to be any major impacts on landscape designations from implementation of the drought options. Impacts on visual amenity, views and recreation associated with the drought options are assessed under the Population and Human Health topic.
Built Infrastructure	Out	SBB shared the long list of options ahead of the SEA Framework being developed, therefore it was known that there would be limited / no construction works as the drought options need to be ‘permit ready’ for rapid implementation during a drought, and not require substantial additional work or consultation. Therefore, there are unlikely to be any impacts on built assets and infrastructure.

The topics scoped in to the SEA are as follows:

- Biodiversity, Flora and Fauna;
- Water;
- Soils;
- Climatic Factors;
- Population and Human Health;
- Historic Environment; and
- Resources.

Following the scoping consultation, flood risk was added to the Water topic as a specific SEA objective within the assessment framework. See **Section 7.1** for further detail on the SEA objectives.

The proposed scoped in SEA topics are presented in **Table 6.2** below, which provides an overview of the key issues and opportunities relevant to the Drought Plan 2027 for each topic. This has been used to inform the development of the SEA objectives and assessment framework.

Table 6.2: Key Issues and Opportunities for Scoped in SEA Topics

SEA Topic	Issues	Opportunities
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> • The SBB Drought Plan area is rich in biodiversity, and includes national and internationally designated sites including SSSIs, NNRs, SPAs, SACs and Ramsar sites. • Risk of transfer and / or colonisation of Invasive Non-Native Species, as well as aiding growth and reproduction of certain species. • Increase in water supply permits could negatively impact reservoirs and downstream water-sensitive sites. • Potential changes in river flows could negatively impact river quality and quantity downstream, affecting priority and non-priority species and habitats. • Risk to designated salmon rivers and fisheries, as well as non-designated rivers which contain important fish populations such as Shad species, brown trout and sea trout. • Potential risk to downstream water-sensitive and/or Ground Water Dependent Terrestrial Ecosystem (GWDTE). • Blanket bog, wetland and marsh habitat rely on water, and options within the SBB Drought Plan, should ensure that it does not affect these areas through over abstraction. 	<ul style="list-style-type: none"> • The SBB Drought Plan area should ensure that there are no impacts on biodiversity and should look to enhance biodiversity where possible. • There are opportunities to include nature-based options or mitigation proposals in the Drought Plan which result in improvements to the natural environment and BNG through habitat creation or enhancement; support Nature Recovery Networks and Strategies; increase connectivity of ecological networks to increase species resilience, amongst others. • The SBB Drought Plan should: <ul style="list-style-type: none"> ○ Protect and conserve biodiversity; ○ Slow/halt habitat and species loss/decline; and ○ Support Environmental Improvement Plan targets
Water	<ul style="list-style-type: none"> • Bournemouth and the IoS are two areas within SBB’s drought area that are classed as seriously water stressed. • The significant water management issues which are most common in affecting the achievement of ‘Good’ are pollution from rural areas, pollution from wastewater, and physical modifications. There is potential for the options within the SBB Drought Plan to have a negative impact on water quality. • Risk of changes to river flows and groundwater levels, and associated reduction in dilution of pollutants. • There are a high number of bathing water sites in the SBB Drought Plan area, the majority of which have been classified as Excellent. Pollution from wastewater poses a significant risk to bathing water quality. 	<ul style="list-style-type: none"> • The SBB Drought Plan should avoid options which have a negative impact on water quality or ecology. • WFD will be considered during the optioneering process to contribute to the selection of options which could lead to WFD improvements or avoid WFD deterioration. • The Drought Plan should: <ul style="list-style-type: none"> ○ Ensure the protection, improvement and sustainable use of waterbodies; ○ Avoid, control or reduce water pollution; ○ Reduce or mitigate flood risk; ○ Support the maintenance or improvement of bathing water quality; and ○ Promote water efficiency and reduction in water consumption.

	<ul style="list-style-type: none"> • Diverse flood risk across the SBB Drought Plan area from rivers, sea, groundwater, reservoirs and surface water. In particular around the Rivers Exe and Axe; in Bournemouth around the River Avon area; and in Bristol, particularly near the Severn Estuary and along the River Avon. • Drought periods are likely to increase demand for water consumption. 	
Soils	<ul style="list-style-type: none"> • Agriculture has a dominant role in the landscape of the SBB Drought Plan area. Agriculture land of Grade 3 and 4 is the most common across the area. The SBB area is dominated by two main soil types – freely draining, slightly acidic loamy soils; and slowly permeable, seasonally wet acidic loamy and clayey soils. • The options within the SBB Drought Plan have the potential to result in a loss of agricultural land or through a reduction in water availability for agricultural processes. • Significant areas of peatland in the moors of Bodmin, Dartmoor and Exmoor. These are at risk of drying out, with significant ecological and climate impacts. • The SBB Drought Plan area has notable geological features of international importance including the Dorset and East Devon ('Jurassic') Coast UNESCO WHS and English Riviera UNESCO Global Geopark. These should be protected and enhanced where possible. 	<ul style="list-style-type: none"> • Soil is an important natural resource and as such the SBB Drought Plan should consider the impact of options on the soil stocks and avoid options which have significant negative effects. The options within the SBB Drought Plan should avoid impacts on agricultural land of Grade 1 and 2 if possible, and mitigation should be included where impacts are unavoidable. There are opportunities for the options to positively affect agriculture, for example options to increase raw water storage and supply. • The SBB Drought Plan should: <ul style="list-style-type: none"> ○ Promote regenerative agricultural practices; ○ Prioritise the implementation of catchment management solutions to help manage soils, increase soil health and reduce impacts of waterbodies; ○ Take measures to prevent soil erosion and degeneration of peat; ○ Reduce nutrient loads within surface water and groundwater bodies; and ○ Protect and enhance sites of geological importance.
Climatic Factors	<ul style="list-style-type: none"> • Proposals for pumping, transporting and treating water is likely to generate additional greenhouse gas emissions, which may lead to adverse impacts on air quality within the SBB Drought Plan area. • Drought options may exacerbate or be affected by flood risk, including risk of flash flooding following periods of drought. • Risk of existing baseline becoming vulnerable to the current and future effects of climate change (e.g. weather extremes). 	<ul style="list-style-type: none"> • The SBB Drought Plan has the opportunity to consider the impact of climate change within the option selection process. Measures to increase the resilience of the SBB Drought Plan area to a changing climate should be considered. • The SBB Drought Plan has the opportunity to address the impacts of climate change on demand for water and how much is available, and to increase the region's resilience to severe drought and other extreme events and stresses. • The SBB Drought Plan should: <ul style="list-style-type: none"> ○ Increase resilience to climate change, including the resilience of resources and the environment; ○ Reduce contributions to climate change; and ○ Ensure zero net emissions.

<p>Population and Human Health</p>	<ul style="list-style-type: none"> • The SBB Drought Plan area currently serves approximately 3.4 million people. The population of the area is expected to grow, which will likely place additional pressure on water supply. Economic growth and climate change will also add to this pressure. • Growth in tourism within this region will also contribute to stresses in water demand, particularly during summer months. • Health within the SBB Drought Plan area is generally good, however levels of deprivation vary with pockets of higher deprivation in Bristol city centre, Bournemouth town centre, and the more rural areas of Cornwall. • There is the potential for drought options to impact health and wellbeing of the local community due to reducing access to the natural environment for recreation and physical activity. Drought options may also affect visual amenity or enjoyment of scenic or protected landscapes within the SBB Drought Plan area. 	<ul style="list-style-type: none"> • The SBB Drought Plan has the opportunity to ensure a resilient and reliable water supply for customers, ensuring there is enough water for a growing population and to support economic growth. • Opportunity for the SBB to engage with the local community through the plan development. • Opportunities for recreation through enhancing access and the condition of the water environment, greenspaces or areas of the natural environment should be considered. • The SBB Drought Plan should ensure a sustainable water supply for customers. • The SBB Drought Plan should: <ul style="list-style-type: none"> ○ Prevent disturbance effects for the local community; ○ Enhance the natural environment for recreation and landscape purposes; ○ Improve access to the natural environment for all members of the community; and ○ Provide a resilient and reliable water supply for all customers, including business owners, farmers and fisheries.
<p>Historic Environment</p>	<ul style="list-style-type: none"> • The SBB Drought Plan area is rich in heritage and contains many listed buildings, scheduled monuments, and registered parks and gardens, amongst others. The region also contains two UNESCO World Heritage Sites, and hundreds of Heritage at Risk sites which are sensitive to environmental and human impacts. • Options within the SBB Drought Plan have the potential to, directly or indirectly, impact the historic environment through effects on the asset's fabric or setting, especially those historic assets that are water-dependent or water sensitive. 	<ul style="list-style-type: none"> • The SBB Drought Plan options should consider the historic environment and minimise any adverse effects. • The SBB Drought Plan should: <ul style="list-style-type: none"> ○ Protect archaeology; ○ Provide careful consideration to the operation of options to reduce effects on historic assets and their setting; and ○ Encourage public awareness of the historic environment.
<p>Resources</p>	<ul style="list-style-type: none"> • The SBB Drought Plan area contains significant water and wastewater treatment infrastructure. • There is a potential for the implementation of the SBB Drought Plan to increase the use of resources within the region and result in the generation of waste, which could put additional pressure on existing infrastructure. • Drought periods are likely to increase demand for water consumption. 	<ul style="list-style-type: none"> • The SBB Drought Plan has the opportunity to consider the use of resources within the option development and reduce the use of energy, materials and prevent waste generation. • The SBB Drought Plan should: <ul style="list-style-type: none"> ○ Promote water efficiency and reduction in water consumption; ○ Minimise the use of resources; and ○ Reduce the production of waste in line with Environmental Improvement Plan targets.

7 SEA Framework

7.1 SEA Objectives

A key part of the SEA process is the development of the SEA Framework. The SEA Framework comprises three elements: an overarching set of SEA objectives for each of the scoped-in topics; guide questions for the assessment; and definitions of effects for assigning the scale and significance of effects. The SEA Framework forms the basis for identifying and assessing the effects arising from the implementation of the Drought Plan 2027 and has been used to assess the Drought Plan options and the preferred and alternative plans.

The SEA Framework has been developed to align with SBB’s overarching objectives of the Drought Plan 2027, and was informed by the plans, policy and programmes review (**Section 4**); the environmental pre-drought and drought baseline information and expected future trends (**Section 5**); and identification of key issues relevant to the Drought Plan (**Section 6**). It has also been informed by a review of the SEA objectives used for the South West Water WRMP24 and previous drought plans for consistency, as well as those by other water companies in England.

The SEA objectives are shown in **Table 7.1** below. Whilst the SEA objectives are presented under discrete topics aligned with the SEA Regulations, there are some overlaps between objectives with similar sub-themes. The SEA objectives and guide questions have been developed to reduce duplication as far as possible to avoid ‘double counting’ impacts under multiple topics.

Table 7.1: SBB Drought Plan 2027 SEA Objectives

SEA Topics	Objective No.	SEA Objectives
Biodiversity, Flora and Fauna	1.1	Protect and enhance designated ecological sites.
	1.2	Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites.
	1.3	Reduce the spread or presence of INNS.
Water	2.1	Protect and enhance the quality of the water environment and water resources.
	2.2	Provide a sustainable water supply in times of drought.
	2.3	Reduce flood risk.
Soil	3	Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance.
Climatic Factors	4.1	Reduce embodied and operational carbon emissions.
	4.2	Increase resilience to climate change risks and hazards.
Historic Environment	5	Protect and enhance the historic environment, including archaeology.
Population and Human Health	6.1	Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity.
	6.2	Sustaining water supplies for the local economy, including tourism, business and agriculture.
Resources	7	Minimise resource use and waste production.

7.2 Assessment Guide Questions

Assessment guide questions have been produced for each of the SEA objectives. These form part of the assessment framework and are used to guide the SEA assessment to ensure that the same factors are considered by all assessors. **Table 7.2** below presents the assessment guide questions which for the option and plan-level assessments.

This is supported by the definition of effects outlined in **Section 7.3** below and presented in full in **Annex D**, which sets out how the scale and significance of effect is determined for each SEA objective.

The guide questions take into consideration the short, medium and long-term effects to support the assessment of each option. There are no construction activities or effects as part of the drought options. All effects will arise during the operation of each option (the length of which varies depending on drought triggers and levels), with potential longer-term effects if the option affects recovery rates.

The assessments therefore consider whether the option is likely to prolong the length of time it will take certain receptors such as waterbodies and ecological sites to return back to the 'normal' pre-drought baseline. This allows a detailed assessment which considers the effects of the option in operation, alongside longer-term effects on the environment.

Table 7.2: SEA Assessment Guide Questions

SEA Topic	SEA Objective	Assessment Guide Questions
Biodiversity, flora and fauna	1.1: Protect and enhance designated ecological sites. <i>[Informed by HRA for Habitats Sites.]</i>	<ul style="list-style-type: none"> • Is the option likely to affect the conservation status of any SPA, SACs, Ramsar sites, SSSI or locally designated sites and features for which they are notified? • Will the option affect the marine environment, habitats and species (including Marine Conservation Zones (MCZs) and Marine Protection Areas (MPAs))? • Will the option support the Environmental Improvement Plan targets and commitments for designated sites such as 70% of designated features in Marine Protected Areas (MPAs) to be in favourable condition by 2042?
	1.2: Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites.	<ul style="list-style-type: none"> • Will the option affect any habitats that support legally protected species or species of conservation concern? • Is the option likely to affect blanket bogs/peat, ancient woodland, priority habitats and/or protected and priority species? • Will the option affect aquatic and habitats and species? • Will the option affect downstream water-sensitive sites and/or Ground Water Dependent Terrestrial Ecosystem (GWDTE) (prior to the next major tributary)? • Is there potential for contribution to achieving 'favourable' conservation status or for creation of new priority habitats? • Is the option likely to have an effect on a current or future Nature Recovery Network? • Will the option support local Nature Recovery Strategies? • Will the option affect Shellfish Waters? • Will the option impact a reservoir which has valuable fish populations and/or water quality issues? • Will the option support the Environmental Improvement Plan targets and commitments for biodiversity such as halt the decline in species abundance by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042?
	1.3: Reduce the spread or presence of INNS. <i>[Informed by INNS assessment.]</i>	<ul style="list-style-type: none"> • Is there a possibility for INNS to be spread / introduced or for algal blooms to occur? • Will the option make conditions more favourable for INNS, resulting in changes to populations and reproduction of species? • Is there an opportunity to improve biodiversity value through removal of INNS?
Water	2.1: Protect and enhance the quality of the water environment and water resources. <i>[Informed by WFD assessment.]</i>	<ul style="list-style-type: none"> • Will the option affect surface water quality? • Will the option affect ground water quality? • Will the option affect raw water quality? • Is the option likely to contribute to or conflict with the achievement of WFD objectives? • Does the option reduce the presence of containments in waterbodies, and make more water available to the environment? • Will the option affect bathing waters?

SEA Topic	SEA Objective	Assessment Guide Questions
		<ul style="list-style-type: none"> • Will the option affect shellfish water protected areas? • Will the option slow the flow in upper catchments and reduce soil losses to river systems? • Will the option comply with flow targets? • Will the option support the Environmental Improvement Plan targets and commitments for water such as improving at least 75% of our waters to be close to their natural state as soon as is practicable and restoring 75% of our water bodies to good ecological status?
	2.2: Provide a sustainable water supply in times of drought.	<ul style="list-style-type: none"> • Does the option provide a sustainable water supply in a drought period? • Will the option reduce demand for water? • Will the option protect and enhance the environmental resilience of the water environment to climate change, flood risk and drought? • Will the option support the Environmental Improvement Plan target for reducing the use of public water supply in England per head of population by 20%?
	2.3: Reduce flood risk.	<ul style="list-style-type: none"> • Is the option vulnerable to flood risk? • Will the option result in an increase or decrease in flood risk? • Will the option affect flash flooding?
Soil	3: Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance.	<ul style="list-style-type: none"> • Will the option affect high grade agricultural land and have an impact on food production? • Will the option prevent soil erosion and retain soil stocks as a natural resource? • Will the option promote soil health? • Will the option involve use of brownfield or greenfield land? • Will the option prevent mineral sterilisation? • Will the option affect soil or sediment contamination or involve remediation? • Will the option restore peatland? • Is the option likely to affect geodiversity, including UNESCO sites and SSSIs of geological importance? • Will the option prevent nutrient loading in water bodies?
Climatic Factors	4.1: Reduce embodied and operational carbon emissions.	<ul style="list-style-type: none"> • Will the option result in emission of carbon or other greenhouse gas emissions? • Is there potential for the option to incorporate climate mitigation measures to reduce its carbon footprint, such as lower embodied carbon or incorporating renewable energy? • Will the option affect carbon sequestration?

SEA Topic	SEA Objective	Assessment Guide Questions
	4.2: Increase resilience to climate change risks and hazards.	<ul style="list-style-type: none"> Is the option vulnerable to climate change effects? Does the option include climate resilience measures? Will the option create catchment resilience to drought?
Historic Environment	5: Protect and enhance the historic environment, including archaeology.	<ul style="list-style-type: none"> Will the option affect designated or non-designated heritage assets, sites and features? Will the option affect the significance and/or setting of a heritage asset? Will the option affect archaeology (including areas of archaeological potential and unrecorded archaeology)? Will the option affect heritage assets at risk? Will the option affect conservation areas or historic landscape/townscape areas? Will the option avoid, minimise and mitigate adverse effects on the historic environment? Will the option enhance the significance of heritage assets including their settings? Will the option improve public access to, and understanding and enjoyment of, the historic environment?
Population and Human Health	6.1: Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity.	<ul style="list-style-type: none"> Will the option have an effect on active lifestyles, such as impacts on access to waterways and active travel through disruption to pedestrian and cycle routes? Will the option affect visual amenity and enjoyment of scenic or protected landscapes? Will the option result in reduced water levels or water quality in rivers or reservoirs which are used for recreational purposes? Does the option improve access to the natural environment for recreation, including those living within deprived areas? Will the option affect Public Rights of Way?
	6.2: Sustain water supplies for the local economy, including tourism, business and agriculture.	<ul style="list-style-type: none"> Will the option affect economic development and diversity? Will the option maintain or enhance tourism? Will the option support agriculture and heavy industry? Will the option affect business operations?
Resources	7. Minimise resource use and waste production.	<ul style="list-style-type: none"> Will the option minimise the use of resources? Will the option reduce the production of waste? Will the option reuse existing infrastructure? Will the option include sustainable design and/or the reuse of materials? Will the option support the Environmental Improvement Plan targets and commitments for resources and waste such as eliminate avoidable waste by 2050 and double resource productivity by 2050?

7.3 Definition of Effects

The SEA Framework includes the definition of effects which specifies how the scale and significance of effect is determined for each SEA objective. The definitions of major, moderate, minor positive and negative effects, as well as neutral and uncertain effects, are set out. Major and moderate positive and negative effects are classed as likely 'significant' effects on the environment, while minor effects are not regarded as significant.

The definitions of effects for the Biodiversity SEA objective are presented below in **Table 7.3** as an example. The definitions of effects for all SEA objectives which were used in the assessments are presented in full in **Annex D**.

Results from the HRA, WFD and INNS assessment contribute to the SEA definitions of effects for the SEA objectives for Biodiversity (objectives 1.1 and 1.3) and Water (objective 2.1). Numerous datasets are used for the assessment of each objective, which are also recorded in the definition of effects table.

Table 7.3: Definition of effects – Biodiversity objective example

Please see **Annex D** for the definition of effects for all SEA objectives.

Effect	Description	Definition of Effects – Biodiversity Objective
+++	Major Positive <i>[significant effect]</i>	<ul style="list-style-type: none"> • The option would result in a substantial and/or permanent enhancement on the quality of internationally designated sites or features for which they are notified based on a review of SACs, SPAs and Ramsar sites within 10km of the option or beyond if functionally linked (drawn from the HRA assessment), as well as MPA and MCZ within 10km or beyond if functionally linked. • The option would result in a substantial and/or permanent enhancement on the quality of SSSIs or features for which they are notified within 5km (or within SSSI Impact Risk Zone for a SSSI at any distance from the option). • The option would result in a large increase in the population of a protected or priority species. • The option would result in a substantial and/or permanent enhancement on priority habitats and/or principal salmon rivers. • The option would result in a substantial and/or permanent enhancement to water-sensitive sites such as groundwater-dependent terrestrial ecosystems (where located along rivers prior to the next major tributary), and/or reservoirs due to changes in flow or groundwater levels, water quality or habitat quality and availability. • The option would result in substantial beneficial changes in water flows / water quality, or large amounts of creation or enhancement of habitat, promoting a major increase in ecosystem structure, function or connectivity. • The option would result in a significant increase in water quantity/quality at designated shellfish waters. • The option would result in a major reduction in population or improvement in management of INNS (drawn from the INNS assessment).
++	Moderate Positive <i>[significant effect]</i>	<ul style="list-style-type: none"> • The option would result in a moderate and/or long-term enhancement on the quality of internationally designated sites or features for which they are notified based on a review of SACs, SPAs and Ramsar sites within 10km of the option or beyond if functionally linked (drawn from the HRA assessment), as well as MPA and MCZ within 10km or otherwise functionally linked • The option would result in a moderate and/or long-term enhancement on the quality of SSSIs or features for which they are notified within 5km (or within SSSI Impact Risk Zone for a SSSI at any distance from the option). • The option would result in a moderate increase in the population of a protected or priority species. • The option would result in a moderate and/or long-term enhancement on priority habitats and/or principal salmon rivers. • The option would result in a moderate/long-term enhancement to water-sensitive sites such as groundwater-dependent terrestrial ecosystems (where located along rivers prior to the next major tributary), and/or reservoirs due to changes in flow or groundwater levels, water quality or habitat quality and availability. • The option would result in moderate beneficial changes in water flows / water quality, or creation or enhancement of habitat, promoting a major increase in ecosystem structure, function or connectivity. • The option would result in a moderate increase in water quantity/quality at designated shellfish waters. • The option would result in a moderate reduction in population or improvement in management of INNS (drawn from the INNS assessment).

+	Minor Positive	<ul style="list-style-type: none"> • The option would result in a minor and/or short-term enhancement on the quality of internationally designated sites or features for which they are notified based on a review of SACs, SPAs and Ramsar sites within 10km of the option or beyond if functionally linked (drawn from the HRA assessment), as well as MPA and MCZ within 10km or otherwise functionally linked. • The option would result in a minor and/or short-term enhancement on the quality of SSSIs or features for which they are notified within 5km (or within SSSI Impact Risk Zone for a SSSI at any distance from the option). • The option would result in a minor increase in the population of a protected or priority species. • The option would result in a minor and/or short-term enhancement on priority habitats and/or principal salmon rivers. • The option would result in a minor and/or short-term enhancement to water-sensitive sites such as groundwater-dependent terrestrial ecosystems (where located along rivers prior to the next major tributary), and/or reservoirs due to changes in flow or groundwater levels, water quality or habitat quality and availability. • The option would result in minor beneficial changes in water flows / water quality, or creation or enhancement of habitat, promoting a major increase in ecosystem structure, function or connectivity. • The option would result in improvements to localised habitats sites such as LNRs. • The option would result in a minor increase in water quantity/quality at designated shellfish waters. • The option would result in a minor reduction in population or improvement in management of INNS (drawn from the INNS assessment).
0	Neutral	<ul style="list-style-type: none"> • The option would not result in any effects on designated or non-designated sites, and habitats and/or species. It would not have an effect on INNS.
-	Minor Negative	<ul style="list-style-type: none"> • The option would result in a minor and/or short-term adverse effect on the quality of internationally designated sites or features for which they are notified based on a review of SACs, SPAs and Ramsar sites within 10km of the option or beyond if functionally linked (drawn from the HRA assessment), as well as MPA and MCZ within 10km or functionally linked. • The option would result in a minor and/or short-term adverse effect on the quality of SSSIs or features for which they are notified within 5km (or within SSSI Impact Risk Zone). • The option would have minimal adverse impacts on recovery rates (back to pre-drought conditions), or the recovery capacity of ecological sites, species and habitats. • The option would result in a minor decrease in the population of a protected or priority species. • The option would result in a minor and/or short-term detrimental effects on priority habitats and/or principal salmon rivers. • The option would result in a minor and/or short-term adverse effects on water-sensitive sites such as groundwater-dependent terrestrial ecosystems (where located along rivers prior to the next major tributary), and/or reservoirs due to changes in flow or groundwater levels, water quality or habitat quality and availability. • The option would result in detrimental changes in flows / water quality, or small losses or degradation of habitat leading to a minor loss of ecosystem structure, function or connectivity. • The option would result adverse effects on localised habitats sites such as LNRs. • The option would result in a minor decrease in water quantity/quality at designated shellfish waters. • The option would result in a minor increase in population or spread of INNS (drawn from the INNS assessment).

--	Moderate Negative <i>[significant effect]</i>	<ul style="list-style-type: none"> • The option would result in a moderate and/or long-term adverse effect on the quality of internationally designated sites or features for which they are notified based on a review of SACs, SPAs and Ramsar sites within 10km of the option or beyond if functionally linked (drawn from the HRA assessment), as well as MPA and MCZ within 10km or functionally linked. • The option would result in a moderate and/or long-term adverse effect on the quality of SSSIs or features for which they are notified within 5km (or within SSSI Impact Risk Zone). • The option would have moderate (long-term) adverse impacts on recovery rates (back to pre-drought conditions), or the recovery capacity of ecological sites, species and habitats. • The option would result in a moderate decrease in the population of a protected or priority species. • The option would result in a moderate and/or long-term detrimental effects on priority habitats and/or principal salmon rivers. • The option would result in a moderate and/or long-term adverse effects on water-sensitive sites such as groundwater-dependent terrestrial ecosystems (where located along rivers prior to the next major tributary), and/or reservoirs due to changes in flow or groundwater levels, water quality or habitat quality and availability. • The option would result in long-term detrimental changes in flows / water quality, or small losses or degradation of habitat leading to a minor loss of ecosystem structure, function or connectivity. • The option would result in a moderate decrease in water quantity/quality at designated shellfish waters. • The option would result in a moderate increase in population or spread of INNS (drawn from the INNS assessment).
---	Major Negative <i>[significant effect]</i>	<ul style="list-style-type: none"> • The option would result in major, permanent adverse effects on the quality of internationally designated sites or features for which they are notified based on a review of SACs, SPAs and Ramsar sites within 10km of the option or beyond if functionally linked (drawn from the HRA assessment), as well as MPA and MCZ within 10km or functionally linked. • The option would result in a substantial and/or permanent adverse effect on the quality of SSSIs or features for which they are notified within 5km (or within SSSI Impact Risk Zone). • The option would have permanent adverse impacts on recovery rates (back to pre-drought conditions), or the recovery capacity of ecological sites, species and habitats. • The option would result in a major decrease or total loss of a population of a protected or priority species. • The option would result in major and/or permanent detrimental effects on priority habitats and/or principal salmon rivers. • The option would result in a major and/or permanent adverse effects on water-sensitive sites such as groundwater-dependent terrestrial ecosystems (where located along rivers prior to the next major tributary), and/or reservoirs due to changes in flow or groundwater levels, water quality or habitat quality and availability. • The option would result in significant detrimental changes in flows / water quality, or small losses or degradation of habitat leading to a minor loss of ecosystem structure, function or connectivity. • The option would result in a major decrease in water quantity/quality at designated shellfish waters. • The option would result in a major increase in population or spread of INNS (drawn from the INNS assessment).
?	Uncertain	<ul style="list-style-type: none"> • From the level of information available, the effect that the option would have on this objective is uncertain.

8 Environmental Assessment Methodology

8.1 Overview of Approach

The SEA provides a strategic-level assessment of the draft Drought Plan 2027. This assesses likely environmental risks and opportunities to inform the development of the plan. To determine the effects of the SBB Drought Plan 2027, the following tasks have been undertaken:

- Option-level environmental assessments for proposed supply and demand options for the Drought Plan 2027; and
- Plan-level environmental appraisal of the preferred plan and alternative plans, including cumulative and in-combination effects assessment.

All supply and demand options in the screened short-list of options (see **Section 2.3.2**) have undergone assessment using the SEA Framework as per the approach detailed in **Section 8.2** below. Each option has been assessed against the 13 SEA objectives using the SEA Framework guide questions and definition of effects to analyse their potential for significant effects associated with each SEA topic. Mitigation measures will be required for drought option implementation, and these are identified in the SEA as far as possible given the level of development and data available for the options.

The following technical environmental assessments have also been undertaken:

- HRA – Test of Likely Significance (ToLS) and Appropriate Assessment (AA);
- WFD – Levels 1 and 2; and
- INNS – screening and INNS Response Module (IRM).

The results of the HRA and INNS assessments have informed the SEA assessments for the biodiversity objectives, and the WFD assessment has informed the assessment for the water topic. See **Section 7** and **Annex D** for full details of the SEA Framework.

Using the environmental assessment findings along with other technical inputs, SBB has developed the preferred draft Drought Plan 2027. The potential cumulative effects of the preferred plan, as well as alternatives for each drought level (see **Section 2.4.2**), have been assessed. This identifies potential effects from the interaction of options within the Drought Plan itself, as well as impacts from the implementation of the Drought Plan alongside other relevant plans or programmes. The cumulative assessment considers factors such as implementation periods and spatial distribution of the Drought Plan options and other plans. The results of the HRA, WFD and INNS cumulative effects assessments also feed into the SEA cumulative effects assessment.

Residual risks for each option are subject to change in future, with further detailed modelling and surveys to be undertaken as part of the development of EARs for each option implemented at drought stages 2-3a. The SEA therefore takes a precautionary approach where adverse effects cannot currently be ruled out, which may be revised as further studies or targeted mitigation is developed at a site level. Any options taken forward in future for implementation at drought levels 2-3a will undergo further detailed review as part of the EAR production.

The SEA has been undertaken in accordance with the SEA Regulations, see **Annex F** for the SEA Quality Assurance checklist for compliance with the regulatory requirements. It has also been undertaken in alignment with the following guidance and best-practice:

- *Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans*, UKWIR, 2021.
- *Environmental Assessment for Water Company Drought Planning*, EA, 2025.

- *Strategic Assessment: Advice from Practice*, Institute of Sustainability and Environmental Professionals (ISEP), 2026.
- *Strategic Environmental Assessment and Sustainability Appraisal*, Ministry of Housing, Communities and Local Government, 2020.
- *A Practical Guide to the Strategic Environmental Assessment Directive*, Office of the Deputy Prime Minister, 2005.

8.2 SEA Option-Level Assessments

8.2.1 Assessment Methodology

The short-listed supply and demand options have been assessed using a consistent and robust methodology based on the SEA Framework to ensure the same factors are considered by all assessors. This involves assessing each option against the 13 SEA objectives, using the assessment criteria guide questions and definition of effects.

Each SEA objective has a defined eight-point scale of effects, using a qualitative scale of minor, moderate, major positive and negative effects as well as neutral and uncertain effects. When an option results in both positive and negative effects against different elements of a particular objective, these have not been combined or 'cancelled out', and both positive and negative effects are recorded in the assessments.

Each effect has a definition to provide a consistent approach to determining the scale of effect. The datasets reviewed for each objective are also listed in the definition of effects (see **Annex D**). These datasets are used to inform the potential for likely significant effects (prior to mitigation), for example, through reviewing proximity and potential pathways to sensitive receptors from the option, and then professional judgement used to consider factors such as the sensitivity of the environment, baseline conditions, length of time that the option would operate, time of year of operation, etc.

Mitigation measures to avoid or reduce adverse effects are then proposed, along with potential opportunities for improvement. Mitigation measures are included at a relatively high level and will be further expanded at a project-level during the more detailed EARs, where applicable, once further modelling and studies are complete. The 'residual effects' that remain against an SEA objective after mitigation is applied is then determined.

The assessed effects, mitigation measures, and residual effects for each SEA objective and the narrative justification are recorded in a matrix format, with one detailed matrix completed for every option.

The assessments have utilised the Moata Geospatial GIS platform, which maps numerous datasets from Natural England, Environment Agency and Historic England (amongst others) along with the option locations provided by SBB. This tool has been used during the assessment to provide information on the key environmental constraints and opportunities for each option. Where appropriate, other data sources that are not in GIS format have been used, such as plans and information from local councils.

All assessments have been based on option information provided by SBB, including option descriptions, locations and nature of works. Where option scopes or locations were updated during the development of the draft Drought Plan 2027, the option was reassessed and effects updated as needed.

8.2.2 SEA Assessment Scope

In addition to mapping the location of the options, effects across the wider area including downstream have been assessed. Depending on the nature and sensitivity of the receptor, different distances were used to identify potential receptors. This also drew on the supporting technical assessments. For example, the HRA scopes designated sites into the assessment (SAC, SPA, Ramsar sites) where they occur entirely or partly within the 10km threshold or where impact pathways link the option to more distant Habitats Sites, and this is also used for these sites within the SEA. Other receptors which are only likely

to experience effects at a closer range and/or are of a local rather than international importance used smaller buffer distances.

The assessment of effects extends beyond the SBB operational boundary, and includes receptors within neighbouring water companies where these fall within the relevant buffers.

The **geographical scope** of the SEA includes:

- SACs, SPA, Ramsar sites – 10km or further where impact pathways link the option to more distant Habitats Sites. The HRA is used to inform potential pathways and impacts on Habitats Sites.
- SSSIs – 5km or where impact pathways link the option to more distant SSSIs. Also whether the option is within a SSSI Impact Risk Zone and relates to the high-risk activities listed – these zones extend varying distances from SSSIs.
- Priority habitat, Ancient Woodland, County Wildlife Site, National and Local Nature Reserve – 500m.
- Water – The WFD assessment scopes in waterbodies based on activities associated with the option and the potential for direct connections which could be important (abstractions, discharges etc). These have been used in the SEA.
- Groundwater-dependent terrestrial ecosystems, Principal Salmon Rivers, Shellfish Waters, Bathing Waters – identify sensitive sites downstream of the option, until the next major tributary is reached (at which point, the potential impact from the option will be reduced due to the influx of water).
- Heritage Assets – 500m, with consideration of the nature of the option and the impact on setting.
- National Parks / National Landscapes – 500m. Beyond this, the closest National Park / National Landscape is identified, and professional judgement on impacts of options on the setting outside of National Parks / National Landscape is also assessed.
- Community facilities, religious worship, medical facilities, businesses, residential properties, greenspace, PRoW – 500m.

The assessments consider a baseline under 'normal' pre-drought conditions, as well as the expected baseline under drought conditions. This has allowed for the environmental assessments to consider an already stressed environment prior to option implementation, as well as impacts on the recovery rate for returning to a normal pre-drought baseline.

The implementation and operational effects of the drought options have been assessed. Due to the nature of drought planning, each option will have to be 'permit ready' i.e. ready to apply for an environmental permit for rapid implementation at the time of need. As a result, the Drought Plan 2027 options do not include notable construction activity or major infrastructure works.

The drought options will also only be utilised during the period of drought. The short-term effects are therefore based on the operation of the Drought Plan 2027 options, including any minor implementing works required.

Following operation of the option during a drought, medium and long-term effects have been considered. This is based on whether the options will prolong the length of time that it takes for certain receptors such as waterbodies to return back to the usual pre-drought baseline.

The **temporal scope** for the assessment is as follows:

- Short-term effects: Operation of the option during drought. The option's short-term effects are assumed to last as long as the option is operational, which will be based on the length of permit

granted (typically 6 months unless an extension is applied for). Operation time varies for each option, but may range from a few weeks, to several months or into subsequent years.

- Medium-term effects: Up to five years beyond the operation of the option, with consideration of any ongoing effects and impacts on recovery rates. For options utilised near the start of the 2027-2032 period, this covers the length of the Drought Plan 2027; for options in use at the end of this period, medium-term is five years after the option's operation.
- Long-term effects: Effects arising beyond five years after the operation of the option, for as long as the effects occur. Consideration of any ongoing effects and impacts on recovery rates.
- Season of implementation: Many options are implemented during an ongoing drought, when surface / groundwater levels are likely to be low, and the local environment already stressed. For winter / second season (i.e. the following year) options, effects might be quite different. These options would be implemented when water levels and the environment are likely to be under less pressure due to typically higher rainfall during the winter (even if overall the system remains in drought conditions due to lack of reservoir recharge etc).

The short, medium and long-term effects are incorporated into the SEA Framework in the definition of effects. This is reflected in the scale of effect identified for the SEA objectives and described in the narrative justification.

8.3 SEA Plan-Level Appraisal

The SEA assesses the potential effects of implementing all options in the draft Drought Plan 2027 ('intra-plan cumulative effects'). Cumulative effects within the plan arise from the interaction of all the plan's options, and the combined pressures that the plan as a whole could place on receptors. For example, multiple options implemented in close proximity, or adverse effects on a receptor across multiple SEA objectives, could give rise to more significant effects beyond the those of individual options.

The intra-plan cumulative effects assessment follows the same methodology and scope as the option-level assessments. The operational effects of the options are considered, alongside consideration of recovery periods. The length of time of implementation and season of implementation is considered as part of this. This process assesses the impacts of the Drought Plan 2027 as a whole.

As every available option (other than two options within the Colliford WRZ, which are less favoured versions of options within the plan) have been selected for the preferred Drought Plan 2027, there are no reasonable alternatives to the preferred plan (see **Section 2.4.2**). Therefore, the SEA takes the approach of assessing the environmental effects at each drought level, to establish how the environment would likely be affected as a drought worsens, and to support the decision-making in relation to assigning options to drought levels.

The intra-plan cumulative effects are assessed against the SEA objectives at each drought level (1, 2, 3a and 3b), with options in earlier drought levels remaining active throughout the later stages. Effects are identified based on the SEA Framework definitions. In addition, given the wide geographical area of the Drought Plan 2027, the intra-plan effects have been presented first by individual WRZs and then for SBB as a whole.

The effects of the plan arising from the interaction between the Drought Plan 2027 and external plans, programmes or strategies has also been assessed as part of the SEA. These 'external cumulative effects' occur where the implementation of the Drought Plan 2027 interacts with the objectives or proposals of relevant neighbouring or sectoral plans. The SEA considers whether the combined influences from multiple plans could result in significant environmental pressures or benefits that would not arise from the Drought Plan 2027 in isolation.

External cumulative effects of the Drought Plan 2027 with other relevant plans have been considered against the SEA assessment methodology. These include the following:

- Neighbouring water companies' WRMPs and Drought Plans;
- Regional Water Resources Plans;
- National Policy Statements and major National / Regional Infrastructure Projects;
- Relevant Local Development Plans;
- Minerals and Waste proposals;
- Canal & River Trust Management Plans; and
- Local Nature Recovery Strategies.

External cumulative effects are reviewed at a strategic level for relevant plans and programmes, and the sources and nature of likely cumulative effects identified.

8.4 Drought Levels and Environmental Impact

Defra guidance on Drought Planning¹ states that Drought Plans should demonstrate the actions that will be taken to manage drought at each level. It stipulates:

- Drought Level 1 actions (with a minor environmental impact) are implemented during prolonged dry weather.
- Drought Level 2 options (with a minor environmental impact) are implemented during drought.
- Drought Level 3a options (with a moderate to major environmental impact) are implemented during drought.
- Drought Level 3b options (with a major environmental impact) are implemented during a severe drought.

At each drought level, the guidance stipulates that demand options must first be implemented at each level, prior to the use of supply options. SBB has planned that relevant demand options would be active for 28 days prior to the implementation of supply options for that drought level.

The process of determining the sequencing of drought options as a result of environmental impact is an iterative process, with early findings from the environmental assessments supporting decision-making. As the SEA process and Drought Plan development take place concurrently to allow the SEA to inform the plan, the environmental impact of each option was not confirmed at the point of sequencing of the preferred Drought Plan options. SBB therefore used the early environmental screening results and the season of option implementation (with winter / second season options considered lower risk) to initially allocate a drought level to the options .

A total of 38 supply and eight demand options are included in the preferred Drought Plan 2027. All supply and demand options have an option-level SEA, and all supply options have undergone stage 1 assessment for HRA ToLS, WFD Level 1 and INNS RA (not required for demand options). Of these, 26 options have undergone stage 2 assessment (HRA AA, WFD Level 2 and INNS IRM). Due to programme constraints, 12 options identified for inclusion within the preferred draft Drought Plan 2027 have not yet had stage 2 assessments completed.

For options at drought levels 1, 2 or 3a, the stage 2 assessments could identify a more adverse environmental impact than initially anticipated during the stage 1 assessment, which would mean options have to be implemented at a later drought level. As such, it was considered imperative to ensure the options proposed for the earlier drought levels were fully assessed at stage 2 to ensure that they align with the Defra guidance in having only a minor (drought level 1 or 2) or moderate (drought level 3a) environmental impact. The options which will be implemented first, and therefore more likely to be used, were therefore prioritised for detailed stage 2 assessments.

Due to late stage changes to the preferred plan, two options which are expected to be implemented in drought levels 2 and 3a have not yet had stage 2 assessment. These are W-22 and IS-18. All other options within the preferred draft Drought Plan 2027 which are expected to be implemented in drought levels 1, 2 and 3a have undergone full stage 1 and 2 assessments. The 3b options within the

Bournemouth WRZ have also undergone full detailed assessment, as these are the only drought supply options identified within this WRZ.

All other 3b options, and the two options mentioned above, have not undergone stage 2 assessment at this stage. The guidance states that 3b options are those with a major environmental impact, so the results of any further assessment would either retain options at drought level 3b or potentially allow for earlier implementation. Consultation feedback will be taken into account with respect to the approach to assessing 3b options.

There has been ongoing work on the drought options and levels, and as the results of environmental assessments have become available, the environmental impact category and associated confidence levels have been reviewed and updated where necessary. The drought levels reported on reflect the expected drought levels for options at the time of undertaking the assessments.

It is possible that as a result of the findings of the more detailed assessments the sequencing of options within the plan may change. This would be supported by a revised plan-level assessment.

8.5 Other Environmental Assessments Methodology

8.5.1 Habitats Regulations Assessment

The HRA is a statutory requirement in its own right under the Conservation of Habitats and Species Regulations 2017, and also informs the SEA objective for biodiversity. The HRA assessment involves a two-step approach, including a screening process called the Test of Likely Significance (ToLS), and then Appropriate Assessment (AA).

Firstly, the screening is undertaken. For each drought supply option, screening information is reviewed for each feature of interest. Potential effects and impact pathways are identified to inform the assessment of any likely significant effects or adverse effects on integrity of designated sites.

A Zone of Influence (Zoi) threshold for Habitats Sites where they occur entirely or partly within a 10km threshold or where impact pathways link the option to more distant Habitats Sites was used. For example, Habitats Sites that are hydrologically connected to an option via surface or groundwater catchments.

This process allowed the identification of:

- Any Special Protection Area (SPA) / Special Area of Conservation (SAC) / potential Special Protection Area (pSPA) / candidate Special Area of Conservation (cSAC) / Ramsar sites, including any marine or marine elements, and functionally linked habitats which support the site.
- Zoi of potential effects resulting from the option (may extend some distance from the site).
- Any viable pathways from the option to the receptor (Habitats Sites or functionally linked habitat).
- The features of interest of the Habitats Sites.
- Conservation objectives of the Habitats Site, including any site sensitivities given within any supplementary advice, site improvement plan, or equivalent document published by Natural England.

Potential effects were scoped in, unless there was evidence to the contrary demonstrating that they would not occur e.g. there being no valid pathway, or the absence of the species in that area, at that time. In line with relevant case law, screening was undertaken in the absence of mitigation (including 'best practice' measures embedded into the option where these are intended for the avoidance of effects).

Significance of effect is considered against the scale and nature of the impact in relation to the particular feature or condition and its extent. A significant effect is one that would lead to a decline in the quality or status of the habitats or distribution, abundance etc of features of interest. Where potential significant effects were identified, the assessment has taken these effects through to Stage 2 AA. At this stage of plan development, the AA has been taken as far as possible based on the currently available information.

The HRA AA was undertaken using the following approach:

- Review sites identified at Stage 1 and confirm any additions or exclusions.
- Assessment of the construction and operation effects of the option.
- Assessment of the Habitats Sites' characteristics and identification of their conservation objectives.
- Identification of the aspects of the proposed options that may significantly impact the conservation objectives of the Habitats Sites.
- Includes mitigation measures to eliminate or reduce any effects identified in screening.

Following the assessment of the individual options, plan-level in-combination effects assessments were undertaken for the Drought Plan 2027.

Without detailed design information and targeted ecology survey data, it is not always possible to determine the exact scale and extent of the impact for the options and at a plan level, and uncertainty over the potential effects on the integrity of Habitats Sites at all drought levels remains. Mitigation to eliminate or reduce identified effects is proposed, however at this stage of plan development, it cannot be definitively concluded beyond scientific doubt that some of the Drought Plan options, both individually and in-combination with other options, and other projects or plans, would not have an adverse effect. Necessary future assessments and monitoring have been identified with the aim of alleviating the identified uncertainties, and option-specific EARs, where applicable, will be produced which will inform the overall impacts of each option and allow the HRA to be updated accordingly. Where, following production of the EARs, it still cannot be concluded that individual options will categorically not have an adverse effect on the integrity of Habitats Sites, these options should be removed from the Drought Plan to avoid significant environmental impacts.

The investigations and monitoring will be undertaken by SBB as part of their 'permit readiness' programme. The investigations will require more detail on the design and operational activities of the options included within the Drought Plan. To facilitate the EAR production, the investigations are very likely to need to gather new data and may require new research to be conducted in relation to the Habitats Sites.

See **Annex O** for full details of the HRA assessment.

8.5.2 Water Framework Directive Assessment

The WFD assessment is a statutory requirement in its own right under the Water Environment (England and Wales) Regulations 2017, and also feeds into the SEA objective on water quality. The All Company Working Group (ACWG) developed a consistent framework⁵⁵ for undertaking WFD assessments to demonstrate that options will not cause deterioration in status/potential of any WFD waterbodies. The assessment methodology also considers WFD future objectives to ensure the option would not preclude waterbodies from reaching good status/potential.

The option assessments have followed the ACWG WFD Assessment framework, which includes a Level 1 Basic Screening for Impact and a Level 2 Detailed Screening for Impact. The WFD process has been applied to the SBB Drought Plan 2027 supply options in line with the ACWG guidelines.

The first stage of WFD assessment was completed for all options. Level 1 assessment followed these steps:

- Identify affected waterbodies;
- Identify possible impacts;
- Apply 'embedded' mitigation measures; and

⁵⁵ ACWG (2020) *WFD: Consistent framework for undertaking no deterioration assessments*.

- Calculate screening score (using a 6-point scale) to ‘screen out’ waterbodies and options with no or very minor potential impacts from further assessment.

An additional RAG rating has been included as part of the Level 1 assessment of the SBB Drought Plan 2027 options to help inform plan development and identify key risks. A bespoke methodology has been designed to provide a relative risk rating of the drought options at the Level 1 stage through consideration of collated environmental information, which includes consideration of:

- The percentage flow reduction of the drought permit abstraction volume against the Q95 exceedance flow at the nearest surface watercourse flow station (preferably upstream where possible).
- Pathways for impact on downstream, freshwater designated sites (Sites of Special Scientific Interest, Special Protected Areas, Special Areas of Conservation and Ramsar sites).
- Pathways for impact on downstream, freshwater abstractions.
- Proximity of options to Source Protection Zones (included for groundwater abstraction-based options).
- Identification of existing pressures on ecology from low flows (using Reasons for Not Achieving Good Statuses for Fish, Macrophytes and Phytobenthos and Macroinvertebrates within the affected water bodies).

Using the collated environmental information, each option is assessed against the scoring criteria which defines the overall RAG rating of the option (see **Table 8.1**).

Table 8.1: RAG Rating Scoring Criteria

Indicator	Score Key	Justification
Groundwater or surface water abstraction-based option	2 = Surface water (SW) 1 = Groundwater (GW)	Surface water abstraction directly impact flow Groundwater abstraction may have a reduced impact on flow due to changes in aquifer storage or disconnection from watercourses in drought periods
% Flow Reduction (option vs Q95)	3 = >25% reduction 2 = 10-25% reduction 1 = <10% reduction	Crudely based on the abstraction impact bands used in the EA Environmental flow indicator (EFI) calculations.
Downstream designated sites in freshwater bodies	3 = Yes 2 = Yes but downstream of major tributary 1 = No designated sites downstream	Proximity of designated sites downstream of the option
Downstream abstractions in freshwater bodies	3 = Yes 2 = Yes but downstream of major tributary 1 = No abstractions downstream	Proximity of other abstractions downstream of the option.
Source protection zones (SPZs) (score 1 if SW abstraction)	2 = Yes 1 = No	For groundwater options only increased risk if option is located with SPZ of other abstractions
Fish Status	3 = Less than Good status with abstraction related REASONS for not achieving good (RNAG) 2 = Less than Good status for other reasons 1 = Good or High status	Identification of existing flow related pressure on fish, or whether fish may be more sensitive to changes in flow due to existing stresses from other sources (e.g. poor water quality)
Macrophytes + Phytobenthos Status	3 = Less than Good status with abstraction related RNAG 2 = Less than Good status for other reasons 1 = Good or High status	Identification of existing flow related pressure on macrophytes, or whether macrophytes may be more sensitive to changes in flow due to existing stresses from other sources (e.g. poor water quality)
Macroinvertebrates Status	3 = Less than Good status with abstraction related RNAG 2 = Less than Good status for other	Identification of existing flow related pressure on macroinvertebrates, or whether macroinvertebrates may be more sensitive to

Indicator	Score Key	Justification
	reasons 1 = Good or High status	changes in flow due to existing stresses from other sources (e.g. poor water quality)
Total	15-21 (Red)	Relative high risk of impact on WFD water bodies due to option
	13-14 (Amber)	Relative moderate risk of impact on WFD water bodies due to option
	8 – 12 (Green)	Relative low risk of impact on WFD water bodies due to option

The second stage of WFD assessment is more detailed. These Level 2 assessments have been completed for options that were screened in at Level 1. The Level 2 assessment includes the following steps:

- For each water body where a risk of deterioration has been identified in Level 1, a detailed assessment is undertaken on the potential for impacts on each WFD quality element, from each activity proposed as part of the option. Each activity is assessed against each WFD status element and a score (using the same criteria set out in the table above) is assigned using professional judgement.
- An assessment of confidence in the assessment is given (low, medium or high) for the WFD baseline data and around the design certainty. These confidence levels are assigned for each assessment, based on the quality and availability of physical data and design information for the option at the time of assessment (note, confidence/certainty is expected to be low during this initial assessment and will increase over time). For options where confidence levels are medium or low, the requirements for further data collection or design detail are outlined in order to raise this confidence level in the future.
- Further mitigation is also identified.
- A post-mitigation impact scope is also assigned based on professional judgement of the impact once the proposed further mitigation, or suitable alternative, has been included in the design.

Where waterbodies and option impacts have been identified, recommendations have been made for increasing the confidence in the assessment. This is expected to be through enhancing the level of detail available during the EAR process for permit-readiness.

Following the assessment of the individual options, plan-level in-combination and cumulative effects assessments were undertaken for the Drought Plan 2027.

See **Annex P** for full details of the WFD assessment.

8.5.3 Invasive Non-Native Species

The INNS assessment is a two-stage process, with an initial screening, and a more detailed risk assessment for the options which identify potential INNS risks. The results inform the INNS element of the SEA objective on biodiversity.

The Level 1 screening methodology is based on the concept of risk as the product of the frequency and severity of INNS being transferred as the result of the drought options. Therefore, the methodology involves an assessor determining a Frequency of Impact and Severity of Impact which are combined to give an overall Magnitude of Risk. All options were screened at INNS Level 1.

The tasks in the INNS assessment include: identify species present; identify relevant pathways; identify specific source pathway receptors; and assessment of risks.

For options determined as high risk for the potential spread of INNS, a mitigation options appraisal has been conducted. This involves reviewing known mitigation technologies and determining their effectiveness with regard to species type, transmission pathway and feasibility. Where existing INNS

assessments have been undertaken by SBB, these findings have been drawn upon as part of this process.

The INNS Level 2 assessment utilises the current version of SAI-RAT (v2.01) to further assess the INNS response to the proposed options. The SAI-RAT risk builds upon other assessment tools such as the Northumbrian Water Group (NWG) raw water transfer assessment tool, the Wessex Water asset assessment tool, and previous iterations of the tool to provide a standardised approach to quantifying the INNS risk associated with SROs. Detailed instructions for use of the tool are provided in the SAI-RAT – User Guide⁵⁶.

The SAI-RAT risk assessment tool is underpinned by a pathway-based methodology which requires source assets, raw water transfers (RWT) and receptor assets to be identified and assessed. Assets are considered as any discrete water body, property, facility, or package of land where INNS could spread to or from. RWTs are defined as the intentional and artificial movement of water between assets, which could enable the spread of viable INNS from a source to a transfer route and receptor.

Complex schemes could comprise a number of asset and RWT components, which can be assessed collectively within the tool. The tool also allows 'in-line closed assets' (e.g. raw water pumping stations located along RWTs), and 'secondary transfers' (RWTs connected to scheme components, but not created or altered by the scheme) to be included in assessments.

The tool takes the form of a Microsoft Excel spreadsheet, into which data and information about asset and RWT components are entered by the assessor. The tool generates 'likelihood' scores for each asset, which indicates the likelihood that INNS could be spread on or off the asset. The tool combines the RWT input data and asset likelihood scores to generate the following five outputs:

- i. The likelihood of INNS spread from the source.
- ii. The likelihood of INNS spread on/off the transfer route.
- iii. The severity of INNS impact upon the transfer route – indicates the cost of INNS spreading into recipient locations.
- iv. The severity of INNS impact upon the receptor – indicates the cost of INNS spreading into recipient locations.
- v. An overall inherent risk score – combining likelihood and severity scores. Inherent risk scores are presented as a percentage of the highest potential score, with a higher score indicating a higher INNS transfer risk.

The SAI-RAT INNS Response Module (IRM) provides a high-level, qualitative assessment of potential responses of 14 different broad taxonomic INNS groups in response to the following environmental changes:

- Changes in water quality
- Changes in flow velocity
- Changes in wetted area
- Changes in water depth

This assessment requires the identification of INNS present within habitats which may be affected, using open-source macroinvertebrate, macrophyte (aquatic plant) and fish data, as well as all records regardless of age. For the purposes of these assessments, a 'reach' in which a search for INNS was undertaken was defined as the border of the WFD waterbody in which the option was located.

The outputs of this assessment are presented in a table which provides a high-level description of the expected change to each broad taxonomic INNS group including the expected change in population

⁵⁶ APEM. (2024). *SRO Aquatic INNS Risk Assessment Tool (SAI-RAT). Version 2 Guidebook*. Environment Agency.

“Fitness” and the confidence in the overall assessment. The IRM does not predict likely INNS responses to water quality impacts, as they are complex, and highly species and location specific.

The IRM assessment for each drought option therefore followed process below:

1. For each option, aquatic habitats which could experience changes in water quality, flow velocity, wetted area or water depth relative to the option not being in place, were identified.
2. For each habitat, the likely direction of each of these four environmental parameters in response to the option, relative to it not being in place, was determined.
3. Aquatic and riparian INNS records were gathered for each habitat.
4. The IRM module within SAI-RAT v.2.01 was used to assess the likely response of each INNS group identified, within each habitat that may be affected.

Following the assessment of the individual options, plan-level in-combination effects assessments were undertaken for the Drought Plan 2027.

See **Annex Q** for full details of the INNS assessment.

8.6 Environmental Assessment Reports

Following the SEA, HRA, WFD and INNS assessments of the Drought Plan 2027, each drought option implemented at drought level 2 and 3a will have a highly detailed EAR. This will include extensive hydrological modelling and ecological surveys which will build upon the assessments undertaken to date in order to reach a state of ‘permit readiness’. An EAR methodology document (100125254-MM-RP-EAR-017) setting out the approach for EARs has been developed and is subject to consultation alongside this report.

The methodology document sets out the detail and structure which will be adhered to for every option which is required to have an EAR in the Drought Plan. Alongside this, SBB are setting out a timeline for undertaking the EAR work, which will be shared with the regulators. Some previously utilised drought options already have an EAR in place, which will be updated in line with the agreed methodology, while other drought options will need a newly produced EAR.

During the detailed assessment for EARs, if it is determined that options cannot be mitigated to a degree where effects are no longer adverse (either alone or in-combination with other plans or projects), these options will be discussed further with SBB and proposed to be removed from the plan. Where drought options are no longer progressed based on the detailed assessments, SBB will review the Drought Plan 2027 as a whole to establish whether it still meets the region’s needs.

8.7 Limitations of the Assessment

The SBB Drought Plan 2027 covers a substantial geographical area. Therefore, the baseline summarised in this report is a high-level review of conditions within the SBB WRZs, including any relevant assets beyond the WRZ boundaries, and an appropriate buffer outside of the SBB region.

The assessments have relied on published data and information from third party organisations in the production of this Environmental Report. The baseline information presented in this report is the most up-to-date information at the time of writing, however conditions described in this report may change over time.

The option assessments and cumulative effects assessments have been based on options information provided by SBB, which was digitised for Moata Geospatial by Mott MacDonald. The environmental assessments have been undertaken using the Moata Geospatial tool, which holds maps and data from publicly available sources such as Natural England, Environment Agency and Historic England, amongst others. Detailed local baseline data such as local (non-designated) wildlife sites, National Infrastructure Projects and minerals and waste allocations were included in the assessments where available. It is

noted that some information is not readily available as GIS datasets, and where appropriate other data sources have been used, such as plans and information from local councils.

A number of constraints were encountered during the environmental assessments. These included:

- Drought options have undergone continuous development through the production of the SBB Drought Plan 2027. The options outlined within this Environmental Report have been assessed as per the information available at the time of writing. It should also be noted that options are at varying levels of development and therefore, the data available to inform the option assessments varied in detail.
- Limitations regarding the availability of baseline information such as SBB and other unknown abstractions and monitoring data on the Isles of Scilly.
- 12 supply options out of the 38 identified for inclusion within the preferred Plan have not undergone Stage 2 assessment (HRA AA, WFD Level 2 and INNS IRM). Results from Stage 1 assessments (HRA ToLS, WFD Level 1 and INNS screening) have been used to inform the SEA findings, and a precautionary approach taken to potential impacts.
- There has been ongoing work on the drought options and levels, and as the results of environmental assessments have become available, the environmental impact category and associated confidence levels have been reviewed by SBB and updated where necessary.
- As the SEA process and plan-making to go hand-in-hand, the current drought planning guidance presents a challenge in using the environmental effects to determine the sequencing of drought options in the plan.

The HRA and WFD assessments have been undertaken to give preliminary results and identify key risks based on the currently available information. Detailed option or site-specific surveys and modelling data is not available at this strategic stage of plan development. This is a known limitation of undertaking HRA and WFD early in the option development process, however, is still a crucial step to understand potential constraints and opportunities to improve options.

The HRA and WFD findings will be updated in future as options progress beyond the SEA into detailed project-level assessment, in accordance with the EAR Methodology document (100125254-MM-RP-EAR-017). This will be presented in the EARs for the supply options implemented at drought levels 2-3a. The EARs will be based on further detailed studies, surveys and modelling covering a multi-year period as part of the process of being ready for drought permit applications. Where options cannot be mitigated to a degree where effects are no longer adverse, either alone or in-combination with other plans or projects, these options will be discussed further with SBB and proposed to be removed from the plan.

Please refer to the Technical Notes in **Annex O - Q** for additional limitations and assumptions for the supporting technical studies.

9 Drought Plan Options Assessment Results

9.1 Introduction

As outlined in **Chapter 8**, an SEA assessment was undertaken for each short-listed supply and demand drought option. This included undertaking option-level SEAs for 38 supply and eight demand options. The detailed assessments are presented by WRZ within **Annex H - N**.

All options have been assessed using the SEA Framework, comprising the SEA objectives, guide questions and definition of effects (see **Section 7** and **Annex D**) to determine the expected nature and scale of effects.

Summaries for the options within each WRZ are presented below, followed by the SBB-wide demand options.

9.2 Colliford WRZ Summary

The Colliford WRZ drought supply options comprise:

- C-03: River Fowey at Restormel - increase annual abstraction limit
- C-04a: Stannon Lake - increase daily abstraction limit
- C-06: Colliford Reservoir - reduce compensation flow
- C-07a: Park Lake - increase daily abstraction limit
- C-10: Drift Reservoir - reduce compensation flow
- C-11: Hawk’s Tor Pit - abstract from new source
- C-17: Stithians Reservoir - reduce compensation flow
- C-30: Siblyback Reservoir - reduce compensation flow
- C-37: River Cober at Wendron - increase annual licence limit
- C-40: Colliford Reservoir - reduce fish bank releases.

A summary of the effects identified when assessing the options against each SEA objective is presented in **Table 9.1** and discussed below. Please see **Annex H** for the full SEA findings for the Colliford WRZ options.

Table 9.1: Colliford WRZ SEA Results

Option Ref	Biodiversity			Water			Soil	Climate		Historic Env	Population & Human Health		Material Assets
	1.1	1.2	1.3	2.1	2.2	2.3		3	4.1		4.2	5	
C-03	-	-	--	--	--	+	-	-	-	0	-	+	0
C-04a	-	-	- +	-	--	0	-	-	-	0	-	- +	-
C-06	-	-- +	--	- +	-- +	0	-	0	-	0	- +	- +	0
C-07a	-	-	-	- +	--	0	-	-	-	0	+	0	0
C-10	0	- +	0	-- +	-- +	0	-	0	- +	-	- +	- +	0
C-11	--	- +	--	-	--	0	0	-	- +	-	- +	- +	0
C-17	0	- +	0	-- +	-- +	0	-	0	- +	-	- +	- +	0
C-30	-	-- +	-- +	-- +	-- +	0	-	-	-	0	- +	- +	0
C-37	-	-	--	-	--	+	-	-	-	0	-	- +	0
C-40	0	-- +	-	-- +	-- +	0	-	0	-	0	- +	- +	0

No major negative effects have been identified within the Colliford WRZ.

A moderate negative effect has been identified for option C-11 in relation to objective 1.1 '*Protect and enhance designated ecological sites*', and for options C-06, C-30 and C-40 in relation to 1.2 '*Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites*'. Five moderate negative effects have been identified in relation to objective 1.3 '*Reduce the spread of INNS*'. These effects on the biodiversity objectives are due to the options resulting in reduced water quantity and quality which may have potential effects on SSSIs in relation to option C-11; aquatic habitats and species which rely on a sustained level of water availability; and an increase in more viable habitat for INNS species in the associated waterbodies. Five moderate negative effects were also identified for the water objectives 2.1 '*Protect and enhance the quality of the water environment and water resources*', and for all options in relation to 2.2 '*Provide a sustainable water supply in times of drought*' due to potential reduction in water quality and effects on the Lower River Fowey, Upper River Fowey, the River Fowey Stannon Stream, the River Kennal, the Upper River Cober, the Lower River Cober, and the Loe waterbodies.

A minor negative effect has been identified for all other objectives, except for 2.3 '*Reduce flood risk*'. The majority of options have a minor negative effect against the three biodiversity objectives, 1.1, 1.2, and 1.3, and seven options were assessed as having minor negative effects in relation to objective 2.1. Minor negative effects are largely attributed to the possible reduction in water quality and quantity downstream of the option, resulting in possible effects on designated sites such as the River Camel SAC, adverse effects on aquatic habitats and species, and increased INNS populations.

For the soil objective 3 '*Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance*', all options other than C-11 were assessed as having minor negative effects due to possible degradation of soils.

Six options were assessed as a minor negative effect against objective 4.1 '*Reduce embodied and operational carbon emissions*', and all options in the WRZ were assessed as having minor negative effects in relation to objective 4.2 '*Increase resilience to climate change risks and hazards*', as well as one option (C-04a) for objective 7 '*Minimise resource use and waste production*'. The increased abstraction and reduction in flows within the river system could increase the effects of climate-related droughts and increase the operational energy and associated carbon emissions due to additional pumping and transfer of water.

For objective 5 '*Protect and enhance the historic environment, including archaeology*', three options were assessed as having a minor negative effect as a reduction in water quantity could impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions.

Visual amenity and recreation use such as fishing and kayaking associated with the River Fowey may be negatively impacted due to the reduction in water quantity and quality within the river system, resulting in several minor negative effects against objectives 6.1 '*Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity*' and 6.2 '*Sustain water supplies for the local economy, including tourism, business and agriculture*'.

No major or moderate positive effects have been identified in the Colliford WRZ.

Minor positive effects have been identified across two of the biodiversity objectives, with six options assessed as having a minor positive effect in relation to objective 1.2 and three options for objective 1.3. These effects are related to possible enhancements to habitats and species due to retaining water in the natural environment (within reservoirs), and a possible negative response of INNS species.

Minor positive effects have also been identified across all the water objectives, with seven options having minor positive effects in relation to objective 2.1, five for objective 2.2, and two (C-03 and C-37) for objective 2.3. These are related to possible improvements to water quality and quantity when water is retained within a reservoir, as well as a reduction in flood risk for some winter options.

Three options identified minor positive effects in relation to objective 4.2 due to improvements to climate resilience. For the population and human health objectives, seven options were assessed as having minor positive effects for objective 6.1, and all options except C-07a for objective 6.2. This is due to the options helping to sustain a level of water supply for businesses and agriculture during periods of drought, and possible enhancements to visual amenity and recreation.

A number of neutral effects were also identified due to the options not requiring construction works, having minimal impact of carbon emissions, minimal impact on flood risk, and resulting in a minimal risk to the historic environment. These were mainly identified for objectives 2.3, 4.1, 5 and 7, while objectives 1.1, 1.3, 3, and 6.2 had a smaller number of options with neutral effects.

9.3 Roadford WRZ Summary

The Roadford WRZ drought supply options comprise:

- R-07: Slade Reservoir - abstract from new source
- R-11: River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May
- R-20: Avon Reservoir - reduce compensation flow
- R-21: Burrator Reservoir - reduce compensation flow
- R-22: Fernworthy Reservoir - reduce compensation flow
- R-23: Trenchford Reservoir - reduce compensation flow
- R-24: Meldon Reservoir - reduce compensation flow
- R-25: Roadford Reservoir - reduce compensation flow
- R-26: Upper Tamar Lake - reduce compensation flow
- R-45: River Dart & Littlehempston boreholes - aggregate daily and annual licence limits
- R-48: Roadford Reservoir - reduce fish bank releases.

A summary of the effects identified when assessing the options against each SEA objective is presented in **Table 9.2** and discussed below. Please see **Annex I** for the full SEA findings for the Roadford WRZ options.

Table 9.2: Roadford WRZ SEA Results

Option Ref	Biodiversity			Water			Soil	Climate		Historic Env	Population & Human Health		Material Assets
	1.1	1.2	1.3	2.1	2.2	2.3	3	4.1	4.2	5	6.1	6.2	7
R-07	0	-	-	-	--	0	-	-	- +	-	-	- +	-
R-11	-	- +	-- +	--	-	+	-	-	- +	0	- +	- +	0
R-20	--	- +	0	- +	-- +	0	- +	0	- +	-	- +	- +	0
R-21	--	- +	0	-- +	-- +	0	- +	0	- +	-	- +	- +	0
R-22	-- +	- +	0	-- +	-- +	0	- +	0	- +	-	- +	- +	0
R-23	--	- +	0	-- +	-- +	0	- +	0	-	-	-- +	- +	0
R-24	--	-- +	0	-- +	-- +	0	- +	0	-	-	- +	- +	0
R-25	-	-- +	- +	-	-- +	0	-	0	-	-	-- +	- +	0
R-26	--	-- +	0	-- +	-- +	0	-	0	-	-	- +	- +	0
R-45	-	--	- +	--	--	0	-	-	-	0	-	- +	0
R-48	--	- +	0	- +	-- +	0	-	0	-	-	- +	- +	0

No major negative effects have been identified within the Roadford WRZ.

A moderate negative effect has been identified for all options other than R-07, R-11, R-25 and R-45 in relation to biodiversity objective 1.1 *'Protect and enhance designated ecological sites'*, with options R-24, R-25, R-26, and R-45 assessed as having moderate effects for objective 1.2 *'Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites'*. A moderate negative effect has been identified for R-11 in relation to objective 1.3 *'Reduce the spread or presence of INNS'*. These effects are due to the options resulting in reduced water quantity and quality which may have potential adverse effects on designated sites such as Dartmoor SAC and Tamar Estuaries Complex SPA; aquatic habitats and species which rely on a sustained level of water availability; as well as an increase in more viable habitat for INNS species in the associated waterbodies.

Moderate negative effects for all options other than R-07, R-20, R-25 and R-48 were also identified in relation to objective 2.1 *'Protect and enhance the quality of the water environment and water resources'*, and all options other than R-11 identified moderate negative effects for objective 2.2 *'Provide a sustainable water supply in times of drought'*. This is due to the potential reduction in water quality and effects on waterbodies such as the Rivers Tamar, Wolf, Lyd and Avon. A moderate negative effect has also been identified for options R-23 and R-25, in relation to objective 6.1 *'Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity'*. This is due to the potential effects that reduced water levels may have on National Landscapes and National Parks, as well as numerous green spaces.

A minor negative effect has been identified for all other objectives, other than 2.3 *'Reduce flood risk'*. All options were assessed as having minor negative effects for objectives 3 *'Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance'*, 4.2 *'Increase resilience to climate change risks and hazards'* and 6.2 *'Sustain water supplies for the local economy, including tourism, business and agriculture'*.

Multiple options were identified as having the potential for minor negative effects for objectives 1.2, 5 *'Protect and enhance the historic environment, including archaeology'* and 6.1 *Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity'*. Objectives 1.1, 1.3, 2.1, 2.2, 4.1 *'Reduce embodied and operational carbon emissions'*, and 7 *'Minimal resource use and waste production'* had fewer options identify minor negative effects, with three, four and one option assessed as having minor negative effects, respectively.

For these objectives, visual amenity, tourism, and recreation use such as fishing and kayaking associated with the affected rivers including the River Wolf and River Tamar may be negatively impacted due to the reduction in water quantity and quality within the river systems. The increased abstraction and reduction in flows within the river systems could potentially increase the effects of climate-related droughts and increase the operational energy and associated carbon emissions for options that require additional pumping and transfer of water. In addition, a reduction in water quantity could also impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions.

No major or moderate positive effects have been identified in the Roadford WRZ.

Minor positive effects have been identified for all options other than R-07 and R-45 in relation to objective 1.2. This is due to the potential for these options to support a sustained level of water within reservoirs during a drought, positively impacting habitats and species which rely on these water sources. Minor positive effects were also identified for options R-22 in relation to objective 1.1, and for R-11, R-25, and R-45 in relation to objective 1.3 due to the possible enhancements to the Fernworthy Reservoir CWS and changes to habitats preventing spread of INNS.

Minor positive effects were also identified for the majority of options in relation to objectives 2.1 and 2.2 due to the options retaining more water in the associated reservoirs, which may benefit water quality in these sources. Furthermore, temporarily reducing compensation flows and fish bank releases to retain more water in the reservoir may ensure a sustained level of some flow for a longer period as a drought continues. Additionally, option R-11 was also identified as having the potential to result in a positive effect

on objective 2.3 ‘Reduce flood risk’, due to this being a second season option, thereby reducing downstream flows during wetter periods. Minor positive effects were also identified for options R-20, R-21, R-22, R-23 and R-24 in relation to objectives 3 and 4.2 due to potentially supporting peatland and improving resilience to drought by reserving more water in reservoirs. Both population and human health objectives (6.1 and 6.2) also had minor positive effects identified for most options other than R-07 and R-45 for objective 6.1. These positive effects were due to all the options helping to sustain water supplies during drought which will benefit visual amenity and recreation, and support local businesses, tourism and agriculture which is especially important in the Roadford WRZ where there is a large increase in tourism in summer months.

A number of neutral effects have also been identified, mainly in relation to objectives 2.3, 4.1 and 7. This is due to the options having minimal impact on flood risk and not requiring any new infrastructure or construction. Seven options were also assessed as neutral in relation to objective 1.3, with objective 5 and 1.1 also assessed as having neutral effects for two and one options respectively.

9.4 Wimbleball WRZ Summary

The Wimbleball WRZ drought supply options comprise:

- W-03: Wimbleball Reservoir - reduce compensation flow
- W-06: Brampford Speke & Stoke Canon - abstract from new source
- W-09: River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May
- W-22: Wimbleball Reservoir - reduce fish bank releases.

A summary of the effects identified when assessing the options against each SEA objective is presented in **Table 9.3** below and discussed below. Please see **Annex J** for the full SEA findings for the Wimbleball WRZ options.

Table 9.3: Wimbleball WRZ SEA Results

Option Ref	Biodiversity			Water			Soil	Climate		Historic Env	Population & Human Health		Material Assets						
	1.1	1.2	1.3	2.1	2.2	2.3		4.1	4.2		5	6.1		6.2	7				
W-03	-	+	-	+	-	+	-	+	--	+	0	-	-	-	+	-	+	0	
W-06	-	+	-	+	-	-	-	--	0	--	-	-	+	-	+	+	+	-	
W-09	+	-	+	--	+	-	-	-	+	-	-	-	+	-	+	-	+	0	
W-22	-	+	-	+	0	--	+	--	+	0	-	+	0	-	-	--	+	-	+

No major negative effects have been identified within the Wimbleball WRZ.

A moderate negative effect has been identified in relation to objective 1.3 ‘Reduce the spread of INNS’ due to option W-09 creating more viable habitat for five INNS species in the River Exe. Moderate negative effects were also identified for option W-09 in relation to objective 2.1 ‘Protect and enhance the quality of the water environment and water resources’ and options W-03, W-06 and W-22 for objective 2.2 ‘Provide a sustainable water supply in times of drought’, due to potential reduction in water quality and effects on the River Exe and the River Haddeo.

A moderate negative effect was also identified for W-03 and W-06 in relation to objective 3 ‘Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance’ due to potential impacts on geological SSSIs and areas of peat. Option W-22 also has potential to result in a moderate negative effect on objective 6.1 ‘Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity’, due to potential effects on visual amenity and recreation within Exmoor National Park.

A minor negative effect has been identified for all other objectives, other than 2.3 *'Reduce flood risk'*. All four options were assessed as having minor negative effects for objectives 1.2 *'Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites'*, 4.2 *'Increase resilience to climate change risks and hazards'* and 5, *'Protect and enhance the historic environment, including archaeology'*. Three of the options identified minor negative effects for objectives 1.1 *'Protect and enhance designated ecological sites'*, 2.1, and 6.2 *'Sustain water supplies for the local economy, including tourism, business and agriculture'*. Minor negative effects are largely attributed to the possible reduction in water quality and quantity downstream of the option, resulting in possible effects on designated sites such as the Exe Estuary SSSI, adverse effects on aquatic habitats and species, increased INNS populations, and possible degradation of soils. Visual amenity, recreation use and tourism, such as fishing and water sports associated with the affected rivers such as the River Exe, and River Haddeo may be negatively impacted due to the reduction in water quantity and quality within the river systems. In addition, a reduction in water quantity could also impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions.

For objectives 1.3, 3, 4.1 *'Reduce embodied and operational carbon emissions'* and 6.1, two options were assessed as having minor negative effects. Finally, objectives 2.2 and 7 *'Minimal resource use and waste production'* each had one option identified with a minor negative effect. The increased abstraction and reduction in flows within the river systems could potentially increase the effects of climate-related droughts and increase the operational energy and associated carbon emissions due to entail minor works for pipeline installations and use of machinery and vehicles.

No major or moderate positive effects have been identified in the Wimbleball WRZ.

Minor positive effects have been identified across all options in relation to biodiversity objectives 1.1 and 1.2, while only W-03 and W-09 have identified a minor positive effect for objective 1.3. These effects are related to possible enhancements to designated sites due to retaining water in the natural environment (in reservoirs); benefits to habitats and species through making more water available in certain water sources; and a possible reduction in INNS species.

Minor positive effects have also been identified across the water objectives 2.1 and 2.2 for options W-03 and W-22, related to possible improvements to water quality when water is retained within a reservoir. Furthermore, temporarily reducing compensation flows and fish bank releases may ensure a sustained level of some flow downstream for a longer period as a drought continues.

Other minor positive effects were identified for options W-03 and W-22 in relation to the soil objective in relation to effects such as maintaining soil stability, and options W-06 and W-09 for climate objective 4.2 for improving resilience to drought. All options were assessed as having a minor positive effect on the two population and human health objectives, due to helping to sustain water supplies during drought which will benefit visual amenity and recreation, and support local businesses, tourism and agriculture.

A number of neutral effects were also identified, due to the options having minimal flood risk, not requiring construction works, having minimal impact on carbon emissions, and in the case of W-22, not increasing or decreasing the spread or population of INNS present.

9.5 Bristol WRZ Summary

The Bristol WRZ drought supply options comprise:

- BR-27a: Blagdon Reservoir - reduce compensation flow
- BR-27b: Blagdon Reservoir - delay water bank releases
- BR-28a: Reduction of Chew Valley Lake compensation release
- BR-28b: Chew Valley Lake - delay water bank releases
- BR-29: Chew Magna Reservoir - reduce compensation flow
- BR-30: Cheddar Ponds - reduce compensation flow

- BR-31a: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October
- BR-31b: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May
- BR-47: River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction.

A summary of the effects identified when assessing the options against each SEA objective is presented in **Table 9.4** and discussed below. Please see **Annex K** for the full SEA findings for the Bristol WRZ options.

Table 9.4: Bristol WRZ SEA Results

Option Ref	Biodiversity			Water			Soil 3	Climate			Historic Env 5	Population & Human Health		Material Assets 7			
	1.1	1.2	1.3	2.1	2.2	2.3		4.1	4.2	6.1		6.2					
BR-27a	-	+	-	+	-	+	0	-	0	-	-	-	+	-	+	0	
BR-27b	-	+	-	+	-	+	0	-	0	-	-	-	+	-	+	0	
BR-28a	-	+	-	+	-	+	0	-	0	-	-	-	+	-	+	0	
BR-28b	-	+	-	+	-	+	0	-	0	-	-	-	+	-	+	0	
BR-29	-	+	-	+	-	+	0	-	0	-	-	+	-	+	-	+	0
BR-30	-	+	-	+	-	+	0	-	0	-	-	-	-	+	-	+	0
BR-31a	-	+	-	+	-	+	0	-	-	+	0	-	+	-	+	0	
BR-31b	-	+	-	+	-	+	0	-	-	+	-	-	+	-	+	0	
BR-47	-	+	-	+	-	+	0	-	-	+	0	-	-	-	0	0	

No major negative effects have been identified within the Bristol WRZ.

A moderate negative effect has been identified for BR-30 in relation to biodiversity objective 1.2 ‘Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites’, and five options had a moderate negative effect identified in relation to objective 1.3 ‘Reduce the spread or presence of INNS’. For the water objectives, six options were assessed as having a moderate negative effect for objectives 2.1 ‘Protect and enhance the quality of the water environment and water resources’ and four options with a moderate negative effect for 2.2 ‘Provide a sustainable water supply in times of drought’. This is due to the potential for reduced compensation flows and water bank releases to reduce water quality and quantity downstream, which may affect aquatic habitats and species. Additionally, the changes in water levels may result in an increase in INNS populations. The reduced flows may also result in the deterioration of waterbodies and reduced water quality within rivers such as the Congresbury Yeo and River Chew.

Minor negative effects were identified for every option in relation to objective 1.1 ‘Protect and enhance designated ecological sites’. Additionally, minor negative effects were identified for all remaining options against objectives 1.2 and 1.3, for the reasons noted above. For the water objective 2.1, options BR-31a, BR-31b, and BR-47 were assessed as having minor negative effects. These options, plus BR-27b and BR-28b were also assessed as minor negative in relation to objective 2.2. Only one option, BR-47, was identified as having a minor negative effect in relation to objective 2.3 ‘Reduce flood risk’ due to the lower water levels potentially resulting in adverse effects from reduced flooding on the Somerset Levels Ramsar and SAC which are partially characterised by flooding in the winter months.

For objective 3 ‘Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance’, six options were assessed as having the potential for minor negative effects due to possible degradation of soils. For the climatic factors objectives, minor negative effects were identified for options BR-31a, BR-31b and BR-47 in relation to objective 4.1 ‘Reduce

embodied and operational carbon emissions, while all options were assessed as having minor negative effects on objective 4.2 *'Increase resilience to climate change risks and hazards'*. The increased abstraction and reduction in flows within the river systems could potentially increase the effects of climate-related droughts and increase the operational energy and associated carbon emissions due to additional pumping and transfer of water.

For objectives 5 *'Protect and enhance the historic environment, including archaeology'*, 6.1 *'Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity'* and 6.2 *'Sustain water supplies for the local economy, including tourism, business and agriculture'*, most options were identified as having minor negative effects against these objectives due to the possible reduction in water quality and quantity downstream of the option. A reduction in water quantity could also impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. In addition, visual amenity, recreational use and tourism activities such as fishing and kayaking associated with the affected rivers, including the River Axe, River Chew, and Congresbury Yeo, may be negatively impacted due to the reduction in water quantity and quality within the river systems.

No major or moderate positive effects have been identified in the Bristol WRZ.

Minor positive effects for all of the options have been identified across objectives 1.1 and 1.2, with three options, BR-28a, BR-28b, and BR-30, also having a minor positive effect for objective 1.3. The options may result in possible enhancements to designated sites, due to retaining water in the natural environment (within reservoirs). This may also lead to benefits to habitats and species through making more water available during times of drought. Options BR-28 and BR-30 may also lead to a possible reduction in INNS species.

The majority of options were assessed as having a minor positive effect in relation to objectives 2.1 and 2.2, in addition to moderate or major effects as noted above. A minor positive effect for BR-31a, BR-31b, and BR-27 has also been identified in relation to objective 2.3. These minor positive effects are related to possible improvements in water quality within reservoirs when the compensation flow or water bank release is reduced, which retains more water in the reservoir, as well as a reduction in flood risk for some winter options. Reducing reservoir releases will also help to maintain some level of compensation or water bank release for a longer period as drought conditions continue, compared to if the full releases were made.

Other minor positive effects were identified in relation to the population and human health objectives due to the majority of options helping to sustain water supplies to water-based businesses and agriculture during times of drought, enhancing the visual amenity and recreation activities related to reservoirs during drought. A minor positive effect has also been identified for options BR-31a, BR-31b and BR-47 in relation to objective 4.2. This is due to the options increasing climate resilience through reducing flood risk. A minor positive effect was identified for BR-29 in relation to objective 5 due to a beneficial impact to Chew Magna Reservoir which is identified as a historic asset.

A number of neutral effects were also identified for objectives 2.3, 3, 4.1, 5, 6.2 and all options for objective 7. These neutral effects are due to the options not requiring construction works, having minimal impact of carbon emissions, minimal impact on flood risk, and a minimal risk to historic environment assets.

9.6 Bournemouth WRZ Summary

The Bournemouth WRZ drought supply options comprise:

- BN-04: River Stour at Longham - remove low flow constraint
- BN-05: Stanbridge boreholes - increase daily abstraction limit
- BN-12: River Stour at Longham - increase weekly abstraction limit.

A summary of the effects identified when assessing the options against each SEA objective is presented in **Table 9.5** and discussed below. Please see **Annex L** for the full SEA findings for the Bournemouth WRZ options.

Table 9.5: Bournemouth WRZ SEA Results

Option Ref	Biodiversity				Water			Soil	Climate		Historic Env	Population & Human Health		Material Assets
	1.1	1.2	1.3		2.1	2.2	2.3	3	4.1	4.2	5	6.1	6.2	7
BN-04	-	-	--	+	--	--	0	-	-	-	-	-	+	0
BN-05	-	-	-	+	--	--	0	-	-	-	-	-	++	0
BN-12	-	-	--	+	--	--	0	-	-	-	-	-	++	0

No major negative effects have been identified within the Bournemouth WRZ.

For BN-04 and BN-12 a moderate negative effect has been identified for objective 1.3 ‘Reduce the spread or presence of INNS’ due to the change in flow resulting in a possible increase of INNS populations in existing areas, as well as a minor negative effect for BN-05 for this objective. A moderate negative effect has also been identified for all three options in relation to two water objectives, 2.1 ‘Protect and enhance the quality of the water environment and water resources’ and 2.2 ‘Provide a sustainable water supply in times of drought’. This relates to a reduction in water levels in the River Allen and Stour which may reduce water quality and prolong recovery periods, exacerbating impacts from drought.

Minor negative effects have been identified for all options in relation to all other objectives, other than objective 2.3 ‘Reduce flood risk’, 6.2 ‘Sustaining water supplies for the local economy, including tourism, business and agriculture’, and 7 ‘Minimise resource use and waste production’ which were either assessed as neutral or positive. The minor negative effects are largely attributed to the possible reduction in water quality and quantity downstream of the option, which may result in potential effects on designated sites such as the River Avon SAC, adverse effects on aquatic habitats and species, increased INNS populations, and possible degradation of soils. Visual amenity and recreation use, such as fishing and kayaking associated with the River Stour and River Allen, may be negatively affected due to the reduction in water quantity and quality within the river systems. The increased abstraction and reduction in flows within the river systems may also potentially increase the effects of climate-related droughts and increase the operational energy and associated carbon emissions. In addition, a reduction in water quantity could also impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions.

No major positive effects have been identified in the Bournemouth WRZ. Two options were assessed as having moderate positive effects for objective 6.2 ‘Sustaining water supplies for the local economy, including tourism, business and agriculture’, as well as a minor positive effect identified against this objective for BN-04. This is due to the options having a substantial deployable output benefit, which could provide a prolonged water supply to water-based tourism businesses in times of drought.

In addition to the negative effects resulting from INNS population growth in existing areas as noted above, a minor positive effect was also identified for all options for objective 1.3 due to a reduction in the spread of INNS from the reduction in wetted areas and water depth.

Neutral effects were identified for all options in relation to objectives 2.3 and 7, due to the options having minimal flood risk and not requiring construction works.

9.7 Isles of Scilly WRZ Summary

The Isles of Scilly WRZ drought supply options comprise:

- IS-18: St Martins - increase abstraction from boreholes to greater than 20m³/d.

A summary of the effects identified when assessing the options against each SEA objective is presented in **Table 9.6** and discussed below. Please see **Annex M** for the full SEA findings for the Isles of Scilly WRZ options.

Table 9.6: Isles of Scilly WRZ SEA Results

Option Ref	Biodiversity			Water			Soil	Climate		Historic Env	Population & Human Health		Material Assets
	1.1	1.2	1.3	2.1	2.2	2.3		3	4.1		4.2	5	
IS-18	0	-	0	-	--	0	-	-	-	-	0	+	0

No major negative effects have been identified within the Isles of Scilly WRZ.

Moderate negative effects have been identified in relation to objective 2.2 ‘Provide a sustainable water supply in times of drought’ as the option will reduce water availability in the natural system when groundwater levels are already anticipated to be low, compromising the resilience of the water environment.

A minor negative effect has been identified in relation to objectives 1.2 ‘Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites’, 2.1 ‘Protect and enhance the quality of the water environment and water resources’, 3 ‘Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance’, 4.1 ‘Reduce embodied and operational carbon emissions’, 4.2 ‘Increase resilience to climate change risks and hazards’ and 5 ‘Protect and enhance the historic environment, including archaeology’. Minor negative effects are largely attributed to the possible reduction in water quality and quantity as a result of the option, resulting in possible adverse effects on aquatic habitats and species, and possible degradation of soils. Further minor negative effects are likely to result due to an increase in operational energy use and associated carbon emissions due to the pumping and distribution of additional abstracted water. The reduction in groundwater levels may also increase the effects of climate-related droughts. In addition, a reduction in water quantity could also impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions.

No major or moderate positive effects have been identified in relation to IS-18.

Minor positive effects have been identified in relation to objective 6.2 ‘Sustaining water supplies for the local economy, including tourism, business and agriculture’. This is due to all the option helping to sustain a level of water supply during a drought period, which will benefit local businesses and tourism which is especially important on the Isles of Scilly where there is a substantial increase in tourism in summer months.

Neutral effects were identified for the remaining objectives, due to the option not resulting in the spread of INNS, having minimal impact on flood risk, not affecting health, wellbeing or visual amenity, and not requiring any new infrastructure or construction. Neutral effects were identified for objectives 1.1 ‘Protect and enhance designated ecological sites’, 1.3 ‘Reduce the spread of INNS’, 2.3 ‘Reduce flood risk’, 6.1 ‘Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity’ and 7 ‘Minimal resource use and waste production’.

9.8 Demand Options Summary

The SBB-wide demand options comprise:

- D-01: Customer Communications.
- D-02: Water Saving Devices.
- D-03: Reward Through Billing.
- D-04: Customer-Side Leakage.

- D-05: Active Leakage Control.
- D-06: Pressure Management.
- D-07: Temporary Use Bans.
- D-08: Non-Essential Use Bans.

A summary of the effects identified when assessing the options against each SEA objective is presented in **Table 9.7** and discussed below. Please see **Annex N** for the full SEA findings for the demand options.

Table 9.7: Demand Option SEA Results

Option Ref	Biodiversity			Water			Soil	Climate		Historic Env	Population & Human Health		Material Assets
	1.1	1.2	1.3	2.1	2.2	2.3		3	4.1		4.2	5	
D-01	0	0	0	0	+	0	0	0	0	0	+	0	0
D-02	0	0	0	0	+	0	0	-	0	0	+	0	0
D-03	0	0	0	0	+	0	0	0	0	0	+	0	0
D-04	0	0	0	+	+	0	0	-	0	0	+	0	-
D-05	0	-	0	+	++	0	-	-	0	0	-	0	-
D-06	0	0	0	0	+	0	0	0	0	0	0	-	0
D-07	0	0	0	+	++	0	0	0	0	0	--	-	0
D-08	0	0	0	+	++	0	0	0	0	0	-	--	0

No major negative effects have been identified for any of the demand options across the region.

A moderate negative effect has been identified for one option in relation to the population and human health objectives 6.1 ‘Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity’ and 6.2 ‘Sustaining water supplies for the local economy, including tourism, business and agriculture’. This is due to the implementation of Temporary Use Bans (TUBs) impacting household water use as well as visual amenity of gardens and green spaces, and NEUBs impacting businesses which can have knock on effects on the economy, tourism and agriculture.

Minor negative effects have been identified for option D-05 in relation to objective 1.2 ‘Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites and objective 3 ‘Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance’. This is due to the requirement of small-scale temporary construction works in order to identify and fix leaks, which may result in some nuisance and disturbance to the environment. Three options, D-02, D-04, and D-05, were assessed as having minor negative effects in relation to objective 4.1 ‘Reduce embodied and operational carbon emissions’, with options D-04 and D-05 also identifying minor negative effects for objective 7 ‘Minimise resource use and waste production’. This is due to options D-04 and D-05 requiring small-scale temporary construction works and D-02 resulting in increased emissions associated with delivering water efficiency devices.

No major positive effects have been identified for any of the demand options. Three moderate positive effects have been identified for objective 2.2 ‘Provide a sustainable water supply in times of drought’. This is due to Active Leakage Control, TUBs and NEUBs likely resulting in substantial water savings through requiring customers to use less water and resolving major leaks, therefore retaining more water in the environment and reducing pressure from abstractions.

Minor positive effects have been identified for the remaining options in relation to the water objective 2.2 ‘Protect and enhance the quality of the water environment and water resources’, with four options identifying positive effects in relation to objective 2.1 ‘Protect and enhance the quality of the water environment and water resources’. This is primarily related to those options retaining more water in the natural environment and promoting sustainable practices in conserving water. Four options also result in

minor positive effects in relation to objective 6.1 due to promoting water efficiency and helping customers to reduce their bills.

All of the objectives other than 2.2 and 6.1 have neutral effects identified for some of the options, with objectives 1.1 '*Protect and enhance designated ecological sites*', 1.3 '*Reduce the spread of INNS*', 2.3 '*Reduce flood risk*', 4.2 '*Increase resilience to climate change risks and hazards*', and 5 '*Protect and enhance the historic environment, including archaeology*' assessed as neutral for all options. This is due to the demand options having minimal impact on these environmental objectives.

10 Plan Appraisal

10.1 Preferred Plan and Alternatives

10.1.1 Preferred Plan Options

The preferred Drought Plan 2027 will improve SBB's operational resilience to drought through a variety of approaches, building from learnings from South West Water during the drought in 2022. SBB has undergone a process to identify suitable options for inclusion within the plan, with multiple options screened out for reasons such as environmental risk, length of time required to bring the option online, and water availability. As such, the options within the preferred Plan have been carefully selected to provide viable additional water resource across the SBB region in times of drought.

Table 10.1 presents the demand options, and supply (permit, drought order, local EA agreement and operational) actions within the preferred plan by drought level.

There has been ongoing work on the drought options and levels, and as the results of environmental assessments have become available, the environmental impact category and associated confidence levels have been reviewed and updated where necessary. The drought levels in **Table 10.2** and **Table 10.3** reflect the expected drought levels for options at the time of undertaking the assessments. Where there have been recent changes in drought level that cause variation with the preferred Drought Plan, these have been identified in the table below.

The operational actions (which did not require SEA assessment) are presented in **Table 10.4**, along with the rationale for not requiring individual assessment. The supply options and actions consist of individual options from the Bournemouth, Bristol, Colliford, Isles of Scilly, Roadford and Wimbleball WRZs, while the demand options are implemented across all WRZs.

Following the ongoing screening process, every available option has been selected for the Plan. Therefore, no alternatives to the preferred Plan are available for assessment as all of the other 'possible' options have been screened out at this stage. Therefore, the SEA takes the approach of assessing the environmental effects at each drought level, to establish how the environment would be affected as a drought worsens, and to support the decision-making in relation to assigning options to drought levels.

Table 10.1: Preferred Plan Demand Options and Supply Actions by Drought Level

Drought Level	Demand Options	Operational Actions	Supply Actions
<p>1 – prolonged dry weather (yellow)</p>	<p>D-01b: Enhanced Customer Comms - Enhanced media campaign focusing on the need to save water to protect the environment.</p> <p>D-01e: Targeted Customer Comms - Focused and localised comms campaign for both household and non-household.</p> <p>D-02: Water Saving Devices</p> <p>D-03: Reward Through Billing</p> <p>D-04a: Enhanced Customer Side Leakage - contacting more properties and face to face contacts.</p> <p>D-04b: Enhanced Customer Side Leakage - fix leaks on properties lowering threshold for intervention.</p> <p>D-05a: Enhanced Active Leakage Control - Increase activity through re-deployment of leakage gangs in areas of higher drought risk.</p> <p>D-05c: Reprioritisation of Active Leakage Control</p> <p>D-06: Pressure Management- Reduced pressure across network areas where feasible.</p>	<p>C-02: College WTW - booster pumping to support Wendron WTW supply area</p> <p>W-26: Wessex Water to reduce abstraction from Wimbleball Reservoir L1</p> <p>BR-10: Reduce bulk supplies within established agreement</p> <p>BN-14: Reduce supply of treated water to large industrial customer</p>	<p>BR-27b: Blagdon Reservoir - delay water bank releases</p> <p>BR-28b: Chew Valley Lake - delay water bank releases</p>
<p>2 – drought (amber)</p>	<p>D-01c: Customer Comms - Harder customer comms messaging having more frequency and targeted visibility in public spaces.</p> <p>D-04c: Enhanced Customer Side Leakage - Lowering threshold for intervention further and support to vulnerable customers.</p> <p>D-05b: Enhanced Active Leakage Control</p> <p>D-05d: Reprioritisation of Active Leakage Control</p>	<p>W-24: Colaton Raleigh boreholes - improved abstraction control</p> <p>W-27: Wessex Water to reduce abstraction from Wimbleball Reservoir L2</p> <p>BR-25: Reduce bulk supplies with temporary variation to established agreement L2</p> <p>BR-54: Increase Cowbridge transfer from Wessex Water</p>	<p>C-03: River Fowey at Restormel - increase annual abstraction limit</p> <p>C-07a: Park Lake - increase daily abstraction limit</p> <p>C-37: River Cober at Wendron - increase annual licence limit</p> <p>R-07: Slade Reservoir- abstract from new source</p>

Drought Level	Demand Options	Operational Actions	Supply Actions
	<p>D-07a: TUBs (with exemptions)</p>	<p>IS-12: St Mary's - increase abstraction from boreholes within existing licence conditions</p> <p>IS-14: Tresco - increase abstraction from boreholes within existing licence conditions</p> <p>IS-19: St Agnes - increase abstraction from boreholes, but remain less than 20 m³/d</p>	<p>R-11: River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May</p> <p>R-45: River Dart & Littlehempston boreholes - aggregate daily and annual licence limits</p> <p>W-03: Wimbleball Reservoir - reduce compensation flow</p> <p>W-06: Bramford Speke and Stoke Canon - abstract from new source.</p> <p>W-09: River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May</p> <p>W-22: Wimbleball Reservoir - reduce fish bank releases</p> <p>BR-47: River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction</p>
<p>3a – drought (amber)</p>	<p>D-01d: Customer Comms - Comms message tied into regional/national response.</p> <p>D-04d: Enhanced Customer Side Leakage - Highlight urgency to action (aligned to national picture).</p> <p>D-08a: Non-Essential Use Ban (with exemptions).</p>	<p>W-28: Wessex Water to reduce abstraction from Wimbleball Reservoir L3a</p> <p>BR-55: Reduce bulk supplies with temporary variation to established agreement L3a</p>	<p>C-04a: Stannon Lake - increase daily abstraction limit</p> <p>C-06: Colliford Reservoir - reduce compensation flow</p> <p>C-11: Hawk's Tor Pit - abstract from new source.</p> <p>C-30: Siblyback Reservoir - reduce compensation flow</p> <p>R-25: Roadford Reservoir - reduce compensation flow</p> <p>BR-27a: Blagdon Reservoir - reduce compensation flow</p> <p>BR-28a: Reduction of Chew Valley Lake compensation release</p> <p>BR-29: Chew Magna Reservoir - reduce compensation flow</p>

Drought Level	Demand Options	Operational Actions	Supply Actions
			BR-30: Cheddar Ponds - reduce compensation flow BR-31a: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October BR-31b: River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May BN-04: River Stour at Longham - remove low flow constraint BN-05: Stanbridge boreholes - increase daily abstraction limit BN-12: River Stour at Longham - increase weekly abstraction limit IS-18: St Martins - increase abstraction from boreholes to greater than 20m ³ /d
3b – severe drought (red)	D-07b: TUBs (exemptions removed) D-08b: NEUBs (exemptions removed)	N/A	C-10: Drift Reservoir - reduce compensation flow C-17: Stithians Reservoir - reduce compensation flow C-40: Colliford Reservoir - reduce fish bank releases R-20: Avon Reservoir - reduce compensation flow R-21: Burrator Reservoir - reduce compensation flow R-22: Fernworthy Reservoir - reduce compensation flow R-23: Trenchford Reservoir - reduce compensation flow R-24: Meldon Reservoir – reduce compensation flow R-26: Upper Tamar Lake - reduce compensation flow R-48: Roadford Reservoir - reduce fish bank releases

Table 10.2: Preferred Plan – Supply Options SEA Summary by WRZ and Drought Level

WRZ	Option Ref	Drought Level	Biodiversity			Water			Soil	Climate		Historic Env.	Population & Human Health		Material Assets			
			1.1	1.2	1.3	2.1	2.2	2.3		3	4.1		4.2	5		6.1	6.2	7
COL	C-03	2	-	-	--	--	--	+	-	-	-	0	-	+	0			
COL	C-07a	2	-	-	-	-	+	--	0	-	-	-	0	+	0			
COL	C-37	2	-	-	--	-	--	+	-	-	-	0	-	-	+			
COL	C-04a	3a	-	-	-	+	-	--	0	-	-	-	0	-	-	+		
COL	C-06	3a	-	--	+	--	-	+	--	+	0	-	0	-	+	-	+	
COL	C-11	3a (now 2)	--	-	+	--	-	--	0	0	-	-	+	-	-	+	-	+
COL	C-30	3a	-	--	+	--	+	--	+	0	-	-	-	0	-	+	-	+
COL	C-10	3b	0	-	+	0	--	+	--	+	0	-	-	+	-	+	-	+
COL	C-17	3b	0	-	+	0	--	+	--	+	0	-	-	+	-	+	-	+
COL	C-40	3b	0	--	+	-	--	+	--	+	0	-	0	-	-	+	-	+
ROA	R-07	2	0	-	-	-	--	--	0	-	-	-	+	-	-	-	-	+
ROA	R-11	2 (now 3a)	-	-	+	--	+	--	-	+	-	-	+	0	-	+	-	+
ROA	R-45	2	-	--	-	+	--	--	0	-	-	-	-	0	-	-	-	+
ROA	R-25	3a (now 2)	-	--	+	-	+	-	--	+	0	-	0	-	--	+	-	+
ROA	R-20	3b	--	-	+	0	-	+	--	+	0	-	-	+	-	+	-	+
ROA	R-21	3b	--	-	+	0	--	+	--	+	0	-	-	+	-	+	-	+
ROA	R-22	3b	--	+	-	+	0	--	+	--	+	0	-	-	+	-	-	+
ROA	R-23	3b	--	-	+	0	--	+	--	+	0	-	0	-	--	+	-	+
ROA	R-24	3b	--	--	+	0	--	+	--	+	0	-	0	-	-	+	-	+

WRZ	Option Ref	Drought Level	Biodiversity			Water			Soil	Climate		Historic Env.	Population & Human Health		Material Assets								
			1.1	1.2	1.3	2.1	2.2	2.3	3	4.1	4.2	5	6.1	6.2	7								
ROA	R-26	3b	--	--	+	0	--	+	--	+	0	-	0	-	-	-	+	-	+	0			
ROA	R-48	3b	--	-	+	0	-	+	--	+	0	-	0	-	-	-	+	-	+	0			
WIM	W-03	2	-	+	-	+	-	+	--	+	0	--	+	0	-	-	-	+	-	+	0		
WIM	W-06	2 (now 3a)	-	+	-	+	-	-	--	--	0	--	-	-	+	-	+	+	+	-			
WIM	W-09	2	+	-	+	--	+	-	-	-	+	-	-	-	+	-	+	-	+	0			
WIM	W-22	2 (now 3b)	-	+	-	+	0	--	+	--	+	0	-	+	0	-	-	--	+	-	+	0	
BRL	BR-27b	1	-	+	-	+	-	-	--	+	-	+	0	-	-	-	-	-	+	-	+	0	
BRL	BR-28b	1	-	+	-	+	--	+	--	+	-	+	0	-	-	-	-	-	+	-	+	0	
BRL	BR-47	2	-	+	-	+	--	--	-	-	+	-	+	0	-	-	+	0	-	0	0		
BRL	BR-27a	3a	-	+	-	+	-	-	--	+	--	+	0	-	0	-	-	-	-	+	-	+	0
BRL	BR-28a	3a	-	+	-	+	--	+	--	+	--	+	0	-	0	-	-	-	-	+	-	+	0
BRL	BR-29	3a	-	+	-	+	-	-	--	--	+	0	-	0	-	-	-	+	-	+	-	+	0
BRL	BR-30	3a	-	+	--	+	-	+	--	--	+	0	-	0	-	-	-	-	+	-	+	0	
BRL	BR-31a	3a	-	+	-	+	--	--	-	+	-	+	0	-	-	+	0	+	+	+	0		
BRL	BR-31b	3a	-	+	-	+	--	-	+	-	-	+	0	-	-	+	-	-	+	+	0		
BNW	BN-04	3b	-	-	-	--	+	--	--	--	0	-	-	-	-	-	-	-	+	0			
BNW	BN-05	3b (now 3a)	-	-	-	-	+	--	--	--	0	-	-	-	-	-	-	-	++	0			
BNW	BN-12	3b (now 3a)	-	-	-	--	+	--	--	--	0	-	-	-	-	-	-	-	++	0			
IOS	IS-18	3a	0	-	-	0	-	--	--	0	-	-	-	-	-	-	0	-	+	0			

Table 10.3: Preferred Plan – Demand Options SEA Summary

Option Ref	Drought Level	Biodiversity			Water			Soil	Climate		Historic Env.	Population & Human Health		Material Assets
		1.1	1.2	1.3	2.1	2.2	2.3		3	4.1		4.2	5	
D-01	1, 2, 3a	0	0	0	0	+	0	0	0	0	0	+	0	0
D-02	1	0	0	0	0	+	0	0	-	0	0	+	0	0
D-03	1	0	0	0	0	+	0	0	0	0	0	+	0	0
D-04	1, 2, 3a	0	0	0	+	+	0	0	-	0	0	+	0	-
D-05	1, 2	0	-	0	+	++	0	-	-	0	0	-	0	-
D-06	1	0	0	0	0	+	0	0	0	0	0	0	-	0
D-07	2, 3b	0	0	0	+	++	0	0	0	0	0	--	-	0
D-08	3a, 3b	0	0	0	+	++	0	0	0	0	0	-	--	0

Table 10.4: Preferred Plan – Drought Operational Actions

Option Ref	Drought Level	Operational Action Name	Description	Reason for Not Requiring Individual Assessment
C-02	1	College WTW - booster pumping to support Wendron WTW supply area	Temporary booster pumping to allow College WTW to support Wendron supply area	This action includes network improvements or alterations only. Therefore, no change to abstraction is expected.
W-26	1	Wessex Water to reduce abstraction from Wimbleball Reservoir L1	Engagement with Wessex Water to discuss dry weather operation, including requesting reduction in their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
W-24	2	Colaton Raleigh boreholes – improved abstraction control	Accelerate existing scheme to install variable speed drives (VSD) on Colaton Raleigh boreholes abstraction pumps to be able to fully utilise abstraction licence more effectively.	This action involves smarter control and no significant change to current use.
W-27	2	Wessex Water to reduce abstraction from Wimbleball Reservoir L2	Engagement with Wessex Water to optimise use of reservoir storage in Drought Level 2, requesting further reduction of their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
W-28	3a	Wessex Water to reduce abstraction from Wimbleball Reservoir L3a	Engagement with Wessex Water to optimise use of reservoir storage in Drought Level 3a, requesting further reduction of their abstraction from Wimbleball Reservoir as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BR-10	1	Reduce bulk supplies within established agreement	Engagement with Wessex Water to discuss peak supply timing and dry weather operation, including ensuring treated water transfers from Bristol WRZ to Wessex WRZ are in line with the agreed profile.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BR-25	2	Reduce bulk supplies with temporary variation to established agreement L2	Engagement with Wessex Water to optimise transfers in Drought Level 2, including requesting reduction in the treated water transfers from Bristol WRZ to Wessex WRZ as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BR-54	2	Increase Cowbridge transfer from Wessex Water	Engagement with Wessex Water to increase Cowbridge raw water import from Wessex Water to Shipton Moyne WTW.	This action involves importing water from third parties and therefore, no change to abstraction is expected.

BR-55	3a	Reduce bulk supplies with temporary variation to established agreement L3a	Engagement with Wessex Water to optimise transfers in Drought Level 3a, including requesting reduction in the treated water transfers from Bristol WRZ to Wessex WRZ as far as feasible within their operating constraints.	This action involves reducing the intercompany supply agreement with Wessex Water. Therefore, no adverse effects are anticipated to occur within the SBB region, and no change to abstraction is expected.
BN-14	1	Reduce supply of treated water to large industrial customer	Request a large industrial customer to reduce consumption to the minimum volume specified in their supply contract for prolonged dry weather and drought, or as far as feasible within their operating constraints.	This action involves reducing the supply agreement with a third party. Therefore, no increase in abstraction and no adverse effects are anticipated to occur within the SBB region.
IS-12	2 (now 1)	St Mary's - increase abstraction from boreholes within existing licence conditions	Within existing licences - preferential use of Rocky Hill BH - pump capacity is current constraint. Preferential use of Venns BH. Further review of Venns & Hales required as may only be limited benefit as impacted by pumping at Hales.	Limited headroom on option so not significant change to current use.
IS-14	2 (now 1)	Tresco - increase abstraction from boreholes within existing licence conditions	Preferential use of 'Borehole by Lake'. Further review of Bridgefield BH required.	This action is within current licence conditions. Limited headroom on option so not significant change to current use.
IS-19	2 (now 1)	St Agnes - increase abstraction from boreholes, but remain less than 20 m ³ /d	Maximise DO by dropping/changing pumps and maximising yields within 20m ³ /d.	This action is within current licence conditions. Limited headroom on option so not significant change to current use.

10.1.2 Intra-Plan Cumulative Effects Assessment

As described in **Section 2.4.2**, the preferred draft Drought Plan 2027 includes every option available to SBB that has not been screened out as unsuitable, so there are no additional options available to develop into reasonable alternative plans. The SEA therefore takes the approach of assessing the environmental effects at each drought level to establish how the environment would likely be affected as a drought worsens, and to support decision-making in relation to assigning options to drought levels.

To determine potential cumulative effects of the preferred Drought Plan 2027, an intra-plan cumulative effects assessment has been undertaken using the methodology set out in **Section 8.3**. The overall plan-level effects against each SEA objective are shown for the SBB region by drought level in **Table 10.5** below. This includes consideration of supply and demand options, as well as the actions.

The full intra-plan cumulative effects assessment is presented in **Table 10.6** which follows. The cumulative effects are presented by WRZ for each drought level, as well as for the entire SBB region. At each drought level, the demand options for that drought level will be implemented before any supply options. As drought levels increase, additional options are included, and it is expected that options implemented at less severe drought levels would still be in operation as the levels increase. Each WRZ does not have options or actions at every drought level, with results reported only at the drought levels applicable to that zone.

Table 10.5: SEA Summary of SBB-wide Intra-Plan Cumulative Effects by Drought Level

Plan Drought Level	Biodiversity			Water			Soil	Climate		Historic Env.	Population & Human Health		Material Assets								
	1.1	1.2	1.3	2.1	2.2	2.3		3	4.1		4.2	5		6.1	6.2	7					
Drought Level 1	0	0	0	-	+	-	+	0	0	-	0	0	-	+	+	0	0				
Drought Level 2	-	-	+	--	+	-	+	0	-	-	-	+	0	--	+	+	-	+	0		
Drought Level 3a	--	+	--	+	--	+	--	+	+	--	-	--	+	-	--	+	+	--	+	0	
Drought Level 3b	---	+	--	+	--	+	---	+	+	--	+	-	---	+	-	--	+	+	--	+	0

Table 10.6: Intra-Plan Cumulative Effects Assessment

Theme	SEA Objective	Effects
Biodiversity	1.1 Protect and enhance designated ecological sites.	<p>Colliford:</p> <p>Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 1.1 for the Colliford WRZ drought level 2 options which include C-03, C-37 and C-07a which are expected to be implemented during the second season (November to March). The HRA identified that two designated sites: the River Camel SAC, and the Falmouth Bay to St Austell Bay SPA is within the Zone of Influence (Zol) of these options. However, no cumulative effects were identified due to the distance between the designated sites and the options, lack of hydrological connectivity and the absence of functionally linked habitat with relevance to qualifying bird species. No cumulative effects were identified for any SSSIs, MCZs, NNRs or LNRs within the Colliford WRZ as a result of these options due to lack of hydrological connectivity. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.1 during drought level 3a which includes the addition of options C-11, C-04a, C-06 and C-30. C-11 and C-04a are anticipated to be implemented during the second season (November to March) alongside the Colliford drought level 2 options, while C-06 and C-30 are anticipated to be implemented during April to October. The HRA identified that the River Camel SAC is within the Zol of the drought level 3a options. The HRA AA identified that Option C-04a could result in potential likely significant effects to functionally linked habitat (the Stannon Stream). However, as none of the other options have been assessed as affecting the SAC, no cumulative effects were identified. The option level HRAs did not identify any other likely significant effects in relation to the Breney Common and Goss & Tregoss Moors SAC, Crowdy Marsh SAC, Phoenix United Mine & Crow's Nest SAC, and the Falmouth Bay to St. Austell Bay SPA. This is primarily due to the distance between the designated sites and the options, lack of hydrological connectivity and the absence of functionally linked habitat with relevance to qualifying bird species. There is a potential for negative cumulative effects to occur on numerous SSSIs located downstream of the options within the Colliford WRZ, due to the increased abstraction or reduction in water discharges, namely Mid Cornwall Moors SSSI, Draynes Wood SSSI, and Bodmin Moor, North SSSI. Cumulative negative effects may also occur on the Upper Fowey and Pont Pill MCZ which located downstream and hydrologically connected to options C-03 and C-30.</p> <p>Drought Level 3b: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.1 at drought level 3b, which includes the addition of options C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options may be in operation at the same time as C-06 and C-30. The HRA identified that no additional cumulative effects on designated sites will occur as a result of implementing drought stage 3b options to those already stated for previous drought levels. This is primarily due to the distance between the designated sites and the options and the lack of hydrological connectivity. No further cumulative effects have been identified on SSSIs, NNRs, LNRs and MCZs than those recorded for drought level 3a. Therefore, the level of effect has remained the same.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.1 during drought level 2, which includes options R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). Due to the level of uncertainty outlined within the individual HRA AAs for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and therefore the implementation of these options together has the potential to result in cumulative effects on the</p>

Theme	SEA Objective	Effects
		<p>Dartmoor SAC, due to the reduction in flow within the River Lyd and the River Dart downstream of the respective abstraction locations. The cumulative effects may result in the degradation of suitable Atlantic salmon migrations routes, changes to the environmental cues which trigger seasonal migrations, and a reduction in the dilution of contaminants. Therefore, leading to effects on salmon survival rates and reproductive success. No cumulative effects were identified for any SSSIs, MCZs, NNRs or LNRs within the Roadford WRZ as a result of these options due to lack of hydrological connectivity.</p> <p>Drought Level 3a: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.1 at drought level 3a. Drought Level 3a includes the addition of option R-25 only, which is expected to be implemented between April – October, alongside drought level 2 options R-07 and R-11. Due to the level of uncertainty outlined within the individual HRA AAs for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and therefore the implementation of R-11 and R-25 options together has the potential to result in additional cumulative effects on the Dartmoor SAC, due to the reduction in flow within the River Lyd and further downstream within the River Tamar, both of which are functionally linked to the SAC. Additional pressures on Dartmoor SAC could negatively affect migratory salmon populations. The options are not anticipated to effect any of the qualifying habitats within the Plymouth Sound & Estuaries SAC, however the reduction in flow may result in adverse effects on migrating and spawning Allis shad. No cumulative effects were identified for any SSSIs, MCZs, NNRs or LNRs within the Roadford WRZ as a result of these options due to lack of hydrological connectivity.</p> <p>Drought Level 3b: The plan is considered to have an overall major negative cumulative effect on SEA objective 1.1 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26 and R-48, in addition to the options implemented at previous drought levels. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time. Due to the level of uncertainty in the absence of individual AAs for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and therefore the implementation of these options together, and with those implemented in earlier drought levels, has the potential to exacerbate the effects on the Dartmoor SAC and the Plymouth Sound & Estuaries SAC effecting migration and spawning grounds for Atlantic salmon and Allis shad. The option level HRAs did not identify any other likely significant effects in relation to the South Dartmoor Woods SAC, or the South Hams SAC due to the distance and lack of hydrological connectivity. There is a potential for negative cumulative effects to occur on the Tamar-Tavy Estuary SSSI located downstream of Roadford Reservoir due to the reduction in water discharges as a result of options R-25 and R-48. Other negative cumulative effects may occur on the North Dartmoor SSSI due to the cumulative reduction in water discharges from Fernworthy Reservoir (R-22) and Meldon Reservoir (R-24). No cumulative effects were identified for any MCZs, NNRs or LNRs within the Roadford Reservoir.</p> <p>Wimbleball: Drought Level 2: This plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 1.1 in the Wimbleball WRZ. Options W-06 and W-09 are expected to be implemented between March and January, with W-09 also being implemented in April. W-22 may be implemented between April-December. The HRA identified that the Exe Estuary SPA and Ramsar, the Dawlish Warren SAC, the Culm Grasslands SAC, Exmoor Health SAC, and the Exmoor and Quantock Woodlands SAC are within the ZoI of these options, however no cumulative effects were identified for these sites. This is primarily due to the distance between the designated sites and the options, and the lack of hydrological connectivity. There is a potential for negative cumulative effects to occur on numerous SSSIs located downstream of the options within the Wimbleball WRZ, due to the increased abstraction or reduction in water discharges, namely Stoke Woods SSSI, and Exe Estuary SSSI. Positive cumulative effects have been identified for the South Exmoor SSSI due to the cumulative retention of water within the Wimbleball Reservoir. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant</p>

Theme	SEA Objective	Effects
		<p>change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending beneficial cumulative effects into the following drought level.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.1 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b and are planned to be implemented for only two weeks. Due to the level of uncertainty outlined within the individual HRA AAs for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and therefore the implementation of these options together has the potential to result in adverse cumulative effects on the Chew Valley Lake SPA, Severn Estuary SAC, SPA, and Ramsar, due to the reduction of water releases from the Blagdon and Chew Valley Lake. This may result in changes to downstream flows on the Congresbury Yeo and River Chew respectively. This potentially could result in changes in habitat for the qualifying features or conditions of the designated sites and therefore result in effects on prey availability during the sensitive overwintering period, and possible displacement of species. For the Severn Estuary, the options could result in degradation of suitable fish spawning habitat, changes to the environmental cues which trigger seasonal migrations, and a reduction in the dilution of contaminants. The option level HRAs did not identify any likely significant effects in relation to the North Somerset and Mendip Bats SAC due to the distance and lack of hydrological connectivity. No cumulative effects were identified for any SSSIs, NNRs or LNRs within the Bristol WRZ as a result of these options due to lack of hydrological connectivity. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 2: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.1 for the Bristol WRZ drought level 2. Drought level 2 includes option BR-47 only, however drought level 1 options are assumed to still be in operation at this time. As the Cheddar Reservoir is not functionally linked with the Chew Valley Lake SPA, the implementation of BR-47 is not anticipated to result in any additional cumulative effects at drought level 2, however, the potential from cumulative effects from drought level 1 options remain. Due to the level of uncertainty outlined within the individual AAs, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt. Therefore, the HRA identified that the implementation of option BR-47 may result in additional cumulative effects on the Severn Estuary SAC, SPA and Ramsar, as the River Axe is considered to be functionally linked to the Severn Estuary, providing an upstream migration route and spawning habitats for qualifying migratory fish species. Additional pressures on the overall SAC migratory fish populations are possible as a result, with potentially adverse effects on a third different functionally linked watercourse. These effects may displace the qualifying fish species from the River Axe, River Chew and Congresbury Yeo systems, jeopardising survival rates and reproductive success, as well as changes to habitat conditions and potentially prey availability. The option-level HRA did not identify any likely significant effects in relation to the North Somerset and Mendip Bats SAC, Mendip Woodlands SAC, or Mendip Limestone Grasslands SAC due to the distance, lack of hydrological connectivity, and location outside of the core sustenance zone of horseshoe bats. No cumulative effects were identified for any SSSIs, NNRs or LNRs within the Bristol WRZ as a result of these options due to lack of hydrological connectivity. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p>

Theme	SEA Objective	Effects
		<p>Drought Level 3a: The plan is considered to have both a major negative and minor positive cumulative effect on SEA objective 1.1 for the Bristol WRZ drought level 3a options which include BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All options are anticipated to be in operation between spring/summer to winter, expect BR-31a and BR-31b which will only be in operation in October and May, respectively. In addition, drought level 1 and 2 options may still be in operation at this time. The implementation of these drought level 3a options has the potential to further contribute to the cumulative effects on the Chew Valley Lake SPA and the Severn Estuary SAC, SPA and Ramsar. The implementation of these options would likely result in the reduction of flows in the River Axe, Cheddar Yeo, Congresbury Yeo and River Chew, all watercourses which are functionally linked to the Severn Estuary by providing upstream migration routes and spawning habitats for qualifying migratory fish species. This could also result in changes to habitat suitability and condition to the Severn Estuary SAC, SPA and Ramsar or within functionally linked habitat provided by Blagdon Lake, Chew Velly Lake, Chew Magna Reservoir, and Cheddar Reservoir, leading to changes prey availability and therefore potential species displacement. The option level HRAs did not identify any other likely significant effects in relation to the North Somerset and Mendip Bats SAC, Somerset Levels and Moors SPA and Ramsar, Mendip Woodlands SAC, or Mendip Limestone Grasslands SAC as a result of these options due to their distance, lack of hydrological connectivity, location outside of the core sustenance zone of horseshoe bats, and location outside of functionally linked land used by overwintering birds.</p> <p>Cumulative positive effects are likely to occur on SSSIs where water levels are retained in reservoirs and lakes such as Blagdon Lake SSSI, Chew Valley Lake SSSI, and Cheddar Reservoir SSSI. However, the cumulative reduction in water discharges is likely to negatively effects SSSIs located downstream of the reservoirs/lakes such as Yatton SSSI, Plaster's Green Meadows SSSI, and Barns Batch Spinney SSSI. No cumulative effects were identified for any NNRs or LNRs within the Bristol WRZ as a result of these options due to lack of hydrological connectivity. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Bournemouth:</p> <p>Drought Level 3b: This plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.1 for the Bournemouth WRZ, which include BN-04, BN-05, and BN-12. Due to the level of uncertainty outlined within the individual HRA AAs for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and therefore the implementation of these options together has the potential to result in additional cumulative effects on the River Avon SAC and the Solent and Dorset Coast SPA, due to the potential reduction in downstream flow and reduced dilution of contaminants. This may result in the degradation of suitable spawning habitat, changes to the environmental cues which trigger seasonal migrations, increase the risk of fish mortality and reduce prey availability within the designated site boundary, leading to displacement of qualifying features and jeopardising survival rates and reproductive success, such as Atlantic salmon. The option level HRAs did not identify any likely significant effects in relation to the Dorset Heaths SAC, Dorset Heathlands SPA, Dorset Heathlands Ramsar, Avon Valley SPA, Avon Valley Ramsar, Poole Harbour SPA and Poole Harbour Ramsar, due to the distance and lack of hydrological connectivity. There is a potential for negative cumulative effects to occur on the Moors River SSSI due to the increased cumulative abstraction from the River Stour as a result of BN-04 and BN-12. The reduced water levels could lead to potential associated impacts on the species which contribute to the SSSI's designation, including dragonfly fauna and several fish, bird and aquatic mammal species of conservation importance. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p>

		<p>Isles of Scilly:</p> <p>Drought level 3a: Option IS-18 is considered to have a neutral effect on designated ecological sites. As there is only one IoS option identified for inclusion within the Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to abstracting more water from the natural environment, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand:</p> <p>A neutral effect has been identified across all demand options at each drought stage in relation to objective 1.1. The demand options are intended to reduce water consumption across the SBB area, which will retain more water in the natural environment during a drought period. The options are not expected to enhance designated sites; however they may result in reduced adverse effects as they are intended to reduce or even avoid the need for drought permits through reducing demand and conserving water. As such, a minor positive cumulative effect has been identified for all drought levels.</p> <p>SBB:</p> <p>Drought Level 1: A neutral cumulative effect has been identified in relation to designated sites at drought level 1. Whilst there are minor negative and positive effects for two individual options in Bristol at this drought level, the impacts are localised and not significant. The actions and demand options are expected to act cumulatively to retain more water in the environment and reduce potential adverse impacts on designated sites. The plan as a whole has been assessed as having a neutral effect on this objective.</p> <p>Drought Level 2: A minor negative cumulative effect has been identified in relation to designated sites at drought level 2 for objective 1.1. There is a potential for these options to negatively affect several designated sites within the Bristol WRZ (Chew Valley Lake, and Severn Estuary SAC, SPA and Ramsar) and Roadford WRZ (Dartmoor SAC) due to the reduction in flow affecting qualifying fish species. A positive cumulative effect has also been identified due to the retention of water within the Wimbleball Reservoir, which may benefit a single SSSI in that WRZ. No cumulative effects were identified Colliford WRZ at drought level 2. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. The plan as a whole has been assessed as having a minor negative effect on this objective at drought level 2.</p> <p>Drought Level 3a: The implementation of the additional supply options at drought level 3a has the potential to further contribute to the adverse effects on designated sites within the SBB region, namely the Chew Valley Lake SPA, Severn Estuary SAC, SPA and Ramsar, and the Dartmoor SAC, due to the reduction in flow affecting qualifying fish species. Additional cumulative effects may also result on the Plymouth Sound & Estuaries SAC within the Roadford WRZ due to the implementation of R-25 alongside drought level 2 options. In addition to this, cumulative minor positive effects are likely to occur at SSSIs where water levels are retained in reservoirs and lakes in the Bristol WRZ. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 1.1 could last beyond the operation of the plan at drought level 3a, until full recovery is reached. The plan as a whole has been assessed as having a moderate negative and minor positive effect on this objective at drought level 3a.</p> <p>Drought Level 3b: A major negative cumulative effect has been identified in relation to designated sites at drought level 3b. The implementation of these additional options has the potential to further exacerbate the effects on designated sites within the SBB region, primarily the Dartmoor SAC and the Plymouth Sound & Estuaries SAC. Additional cumulative effects may also result on the River Avon SAC and the Solent and Dorset Coast SPA</p>
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		<p>within the Bournemouth WRZ due to the potential reduction in downstream flow and reduced dilution of contaminant, affecting qualifying fish species. The minor positive effect experienced at drought level 3a would also remain in place. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 1.1 could last beyond the operation of the plan at drought level 3b, until full recovery is reached. The plan as a whole has been assessed as having a mixed major negative and minor positive effect on this objective at drought level 3b.</p>
	<p>1.2 Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites.</p>	<p>Colliford: <i>Drought Level 2:</i> The plan is considered to have an overall minor negative cumulative effect on SEA objective 1.2 for the Colliford WRZ drought level 2 options which include C-03, C-37, and C-07a which are expected to be implemented during the second season (November to March). As mentioned within objective 1.1, a number of ecological sites have potential to be affected by the options. During operation changes in water quality and quantity due to increased abstraction and reduced dilution could negatively affect aquatic biodiversity. C-03 is located on the River Fowey and C-07a is located at Park Lake which is in the River Fowey catchment area. If both were to come into operation at the same time, there may be adverse cumulative effects on aquatic biodiversity downstream in the River Fowey. The River Fowey is also a Principal Salmon River. Increasing abstraction could have adverse effects on aquatic species and habitats, however as these options are expected to be implemented during the winter, water levels are not anticipated to be as low as summer months. As such, effects are reduced. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p><i>Drought Level 3a:</i> The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 1.2 during drought level 3a which include options C-11, C-04a, C-06, and C-30. C-11 and C-04a are anticipated to be implemented during the second season (November to March) alongside the Colliford drought level 2 options, and C-06, and C-30 are anticipated to be implemented during April to October. Increased abstraction of the River Fowey as a result of drought level 2 options C-03 and C-07a, alongside a reduction or not releasing compensation flows is likely to lower water levels within the river system and may prolong species and habitat recovery periods post-drought back to typical baseline conditions. The retention of water within reservoirs and lakes, such as C-30, is likely to result in beneficial effects for the aquatic species and habitat that rely on higher water levels.</p> <p><i>Drought Level 3b:</i> The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 1.2 for the Colliford WRZ drought level 3b, which include the addition of options C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. The implementation of C-40 alongside drought level 3a options C-06 and C-30 is likely to cumulatively lower water levels within the River Fowey system and may prolong species and habitat recovery periods post-drought back to typical baseline conditions. However, the retention of water within reservoirs and lakes associated with these option is likely to result in beneficial effects for the aquatic species and habitat that rely on higher water levels in these locations.</p> <p>Roadford: <i>Drought Level 2:</i> The plan is considered to have an overall minor negative cumulative effect on SEA objective 1.2 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). The increase in abstraction is likely to reduce water levels within the water environment across the Roadford region during a drought period. The increased abstraction could have adverse effects on aquatic species, such as salmon, and habitats which may already be under stress from low flows, resulting in prolonged recovery periods post-drought back to typical baseline conditions.</p>

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		<p>Drought Level 3a: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 1.2 for the Roadford WRZ drought level 3a. Drought Level 3a includes the addition of option R-25, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. Not releasing a compensation flow from Roadford reservoir when making supply releases would further reduce water levels in the River Wolf (post abstraction point), during times of low flow from drought conditions, which may result in adverse effects on certain species, such as Atlantic salmon and Allis shad. The reduced flow may prolong recovery periods post-drought back to typical baseline conditions. However, the option would likely maintain levels in Roadford Reservoir which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream.</p> <p>Drought Level 3b: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 1.2 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48. All options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside drought level 2 and 3a options. The reduction in compensation flows from multiple reservoirs in the WRZ is likely to reduce the water levels within the water environment across the Roadford region, in particular the River Wolf and the River Tamar. This may result in adverse effects on certain species, such as Atlantic salmon and Allis shad. The reduced flow may prolong recovery periods post-drought back to typical baseline conditions. However, the retention of water within reservoirs and lakes, is likely to result in beneficial effects for the aquatic species and habitat that rely on higher water levels.</p> <p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 1.2 in the Wimbleball WRZ. These options will reduce the water levels within the water environment across the Wimbleball region at a time when water levels would already likely be very low. This could have adverse effects on aquatic species, such as salmon, and habitats which may already be under stress from low flows, resulting in prolonged recovery periods post-drought back to typical baseline conditions. However, positive effects are likely to result due to options that retain more water within reservoirs and lakes. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending these cumulative effects into the following drought level.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 1.2 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b, which are planned to be implemented for only two weeks. Delaying late summer water bank releases from Blagdon Reservoir and Chew Valley Lake are likely to reduce water levels within the Congresbury Yeo and the River Chew. This is likely to result in adverse effects on habitats and species which are dependent on a sustained level of supply within the area due to the reduction in dilution, altering water quality. However, delaying this release ensures more water is retained within the reservoir / lake, which is likely to result in positive effects on aquatic biodiversity. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p>

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		<p>Drought Level 2: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 1.2 for the Bristol WRZ drought level 2. Drought Level 2 includes option BR-47, however drought level 1 options may still be in operation at this time. The increased abstraction in October is likely to reduce water levels within the River Axe at a time when the waterbody may still be recovering from a drought period. This is likely to result in adverse effects on the groundwater dependant ecosystems and may prolong recovery rates back to pre-drought conditions. However, this option also ensures that more water will be retained in Cheddar Reservoir, resulting in positive effects on the habitats and species which are dependent on a sustained level of supply within the reservoir. Drought action BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 3a: The plan is considered to have a both a moderate negative and minor positive effect on SEA objective 1.2 for the Bristol WRZ drought level 3a options which include the addition of BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All options are anticipated to be in operation between spring/summer to winter, except BR-31a, and BR-31b, which will only be in operation in October and May, respectively. In addition, drought level 1 and 2 options may still be in operation at this time. Reducing compensation flows from different reservoirs is likely to reduce water levels within the natural environment across the whole Bristol WRZ, and therefore result in adverse effects on aquatic species and habitats which may already be under stress from low flows. In particular if BR-28a and BR-29 were implemented concurrently; cumulative adverse effects are likely to occur within the River Chew. However, species and habitat which are dependent on a sustained level of supply within the reservoirs / lakes are likely to experience positive effects due to the retention of water during periods of drought. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Bournemouth:</p> <p>Drought Level 3b: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.2 for the Bournemouth WRZ, which include BN-04, BN-05, and BN-12. As mentioned within objective 1.1, a number of ecological sites have potential to be affected by the options. During operation, changes in water quality and quantity due to increased abstraction and reduced dilution could negatively affect habitats and species which are dependent on a sustained level of supply within the area. BN-04 and BN-12 are located on the River Stour and BN-05 is located adjacent to the River Allen. If all were to come into operation at the same time, adverse cumulative effects on aquatic biodiversity downstream in the River Stour and the Moors River (next major tributary downstream), and associated Moors River System SSSI may occur. The reduced water levels could lead to associated impacts on the species which contribute to the SSSI's designation, including dragonfly fauna and several fish, bird and aquatic mammal species of conservation importance. The River Stour is also a Principal Salmon River. Increasing abstraction during a time where river levels would already likely be very low could have adverse effects on aquatic species and habitats which may already be under stress from low flows. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Isles of Scilly:</p> <p>Drought Level 3a: A minor negative effect has been identified for IS-18 at drought level 3a, as abstraction could lead to reduced groundwater quality and quantity which could have adverse effects on aquatic biodiversity and habitats. As there is only one IoS option identified for inclusion within the</p>

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		<p>Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to abstracting more water from the natural environment, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand: The demand options are intended to reduce water consumption across the SBB area, which will retain more water in the natural environment during a drought period. The options are not expected to enhance biodiversity and habitats; however, they are expected to act cumulatively to reduce adverse effects as they are intended to reduce or even avoid the need for drought permits through reducing demand and conserving water. A minor negative effect has been identified in relation to option D-05, Active Leakage Control. This option may involve small amounts of construction work which may result in short-term temporary effects such as habitat loss, noise and pollution. Works are expected to be minor and localised, therefore cumulative effects are not anticipated. As such, a minor positive cumulative effect has been identified for all drought levels for objective 1.2.</p> <p>SBB: Drought Level 1: A neutral cumulative effect has been identified in relation to habitats and species at drought level 1 for objective 1.2. Although effects have been identified in the Bristol WRZ for two options, effects are expected to be minor and localised. The actions and demand options are expected to act cumulatively to retain more water in the environmental and reduce adverse impacts on habitats and species. The plan as a whole has been assessed as having a neutral effect on this objective at drought level 1.</p> <p>Drought Level 2: Cumulative effect has been identified in relation to habitats and species across the SBB region. If all of the level 2 options were implemented, habitats and species across the region may experience effects associated with reduced water quality and quantity, which may prolong the length of time for ecosystems to return to the usual baseline. Conversely, positive cumulative effects are likely to occur due to the retention of water within reservoirs and lakes across the SBB region which will benefit aquatic species and habitat that rely on higher water levels. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. Overall, a minor negative and minor positive effect has been identified for the plan as a whole at drought level 2.</p> <p>Drought Level 3a: implementation of further supply options at level 3a is likely to worsen adverse effects identified on the River Fowey within the Colliford region. Additional adverse cumulative effects are also likely to occur on the River Chew (Bristol WRZ) and the River Wolf (Roadford WRZ) due to the increased abstraction combined with a reduction in water discharges, which may prolong species and habitat recovery periods post-drought back to typical baseline conditions. Conversely, positive cumulative effects are likely to occur in some locations due to the retention of water within reservoirs and lakes across the SBB region which will benefit aquatic species and habitat that rely on higher water levels. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 1.2 could last beyond the operation of the plan at drought level 3a, until full recovery is reached. Overall, the plan as a whole has been assessed as having a moderate negative and minor positive effect on this objective.</p> <p>Drought Level 3b: Adverse effects experienced across the Colliford and Roadford regions, in particular the River Fowey, River Wolf, and the River Tamar, are anticipated to be worsened due to the implementation of further supply options at drought level 3b. This is likely to have adverse effects</p>

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		<p>on aquatic species and habitats which may already be under stress from low flows, resulting in prolonged recovery periods post-drought back to typical baseline conditions. In addition, if all the Bournemouth WRZ drought level 3b options were to come into operation simultaneously, cumulative adverse effects are likely to occur on the River Allen and River Stour. Conversely, positive cumulative effects are likely to occur due to the retention of water within reservoirs and lakes across the SBB region which will benefit aquatic species and habitat that rely on higher water levels. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 1.2 could last beyond the operation of the plan at drought level 3b, until full recovery is reached. When considering the plan as a whole, the overall implementation at drought level 3b has been assessed as a moderate negative and minor positive effect on this objective.</p>
	<p>1.3 Reduce the spread or presence of INNS.</p>	<p>Colliford:</p> <p>Drought Level 2: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.3 for the Colliford WRZ drought level 2 options which include C-03, C-37, and C-07a which are expected to be implemented during the second season (November to March). The INNS assessment identified that a cumulative implementation of C-03 and C-07a may increase wetted area and average depth of Colliford Reservoir, which may result in a positive population response for aquatic vegetation such as Canadian waterweed and Nuttall's waterweed. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have an overall major negative cumulative effect on SEA objective 2.1 during drought level 3a which includes the addition of options C-11, C-04a, C-06, and C-30. C-11 and C-04a are anticipated to be implemented during the second season (November to March) alongside the Colliford drought level 2 options, and C-06, and C-30 are anticipated to be implemented during April to October. The INNS assessment identified that the previous drought level 2 options combined with C-30 could lead to cumulative decrease in water quality, flow, wetted area and depth within the River Fowey. This is likely to in a positive population response for aquatic vegetation such as Himalayan Balsam, Rhododendron, Japanese Knotweed, and Monkey-flower. However, the specific population responses for other aquatic vegetation, bivalves, shrimp, snail and crayfish were identified as being unclear due to the contradicting effects of different physical impacts. The implementation of C-06 and C-11 alongside the drought level 2 options, are likely to result in a greater overall increase in water depth and wetted area within Colliford Reservoir, which may result in a positive population response for aquatic vegetation such as Canadian Waterweed and Nuttall's Waterweed, therefore facilitating the spread of INNS.</p> <p>Drought Level 3b: The plan is considered to have an overall major negative cumulative effect on SEA objective 1.3 at drought level 3b, which includes the addition of options C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options may be in operation at the same time as C-06, and C-30. The INNS assessment identified no further INNS interactions at drought level 3b for the River Fowey. The implementation of C-40 alongside the drought level 2 and 3a options may further exacerbate effects within Colliford Reservoir, causing a greater overall increase in wetted and depth. which may result in a positive population response for aquatic vegetation such as Canadian waterweed and Nuttall's waterweed. Therefore, facilitating the spread of INNS.</p>

		<p>Roadford:</p> <p>Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 1.3 during drought level 2, which includes options R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). The INNS assessment identified no cumulative effects on the relevant habitats because the drought level 2 options do not affect the same habitat locations.</p> <p>Drought Level 3a: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.3 at drought level 3a. Drought Level 3a includes the addition of option R-25, which is expected to be implemented between April – October, alongside drought level 2 options R-07 and R-11. The INNS assessment identified the potential for cumulative effects to occur within Roadford Reservoir due to options R-25 and R-11 interacting. However, as these options have not been fully assessed there is currently some uncertainty, meaning the extent of the effects cannot be determined at this stage.</p> <p>Drought Level 3b: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.3 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48, in addition to the options implemented at previous drought levels. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time. The INNS assessment identified the potential for cumulative effects to occur within Roadford Reservoir due to options R-25 and R-48 interacting with R-11, and the River Tamar due to options R-25 and R-26 affecting compensation flows. However, as these options have not been fully assessed there is currently some uncertainty, meaning the extent of the effects cannot be determined at this stage.</p> <p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have a moderate negative cumulative effect on SEA objective 1.3 in the Wimbleball WRZ. Options W-06 and W-09 are expected to be implemented between March and January, with W-09 also being implemented in April. W-22 may be implemented between April-December. The INNS assessment identified the potential for cumulative effects to occur within the Wimbleball Reservoir and the River Exe as a result of W-03 and W-09 being in operation at the same time. The INNS assessment identified the potential for cumulative effects to occur within Wimbleball Reservoir due to option W-03 and W-09 interacting together; River Haddeo due to options W-03 and W-22; and River Exe due to W-03, W-06 and W-09. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. Drought actions W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are expected to retain more water in Wimbleball reservoir, further reducing viable habitat for INNS in this location, although the extent of this effect is not certain. Drought action W-28 involves a greater reduction in the intercompany supply to Wessex Water at drought level 3a, further extending beneficial cumulative effects into the following drought level.</p> <p>Bristol:</p> <p>Drought Level 1: The Bristol WRZ drought level 1 options are BR-27b and BR-28b, which are expected to be implemented for only two weeks. For these options, the INNS assessment identified that the retention of water within the reservoirs and lakes will lead to a greater combined increase in wetted area and depth, resulting in a positive population response for aquatic vegetation such as Nuttall's pondweed. The INNS assessment identified no cumulative effects on the relevant habitats because BR-27b and BR-28b do not affect the same habitat locations. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water, and is not expected to have a cumulative impact on INNS. A minor negative effect on objective 1.3 is expected at drought level 1 for the Bristol WRZ.</p>
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Theme	SEA Objective	Effects
		<p>Drought Level 2: Drought level 2 includes the addition of option BR-47. The INNS assessment identified no cumulative effects on the relevant habitats because BR-47 do not affect the same habitat location as drought level 1 options. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water for immediate use. These actions are not expected to have a cumulative impact on INNS. A minor negative effect on objective 1.3 is expected at drought level 2 for the Bristol WRZ.</p> <p>Drought Level 3a: The plan is considered to have an overall moderate negative effect on objective 1.3 during drought level 3a, which includes the addition of options BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All of the 3a options are anticipated to be in operation between spring/summer to winter, except BR-31a and BR-31b which will only be in operation in October and May. The INNS assessment identified that there is a potential for cumulative effects to occur on Blagdon Reservoir and River Yeo as a result of BR-27b and BR-27a; Chew Valley Lake and River Chew as a result of BR-28b and BR-28a; and Cheddar Reservoir and River Axe as a result of BR-47, BR-31a and BR-31b. The retention of water within the reservoirs and lakes will lead to a positive population response for aquatic vegetation such as Nuttall's pondweed and Canadian pondweed. The increased cumulative abstraction from the river systems is likely to decrease water quality, flow, wetted area and depth, which may lead to a positive population response for riparian vegetation such as Himalayan balsam, therefore facilitating the spread of INNS. However, the specific population responses for other aquatic vegetation, bivalves, shrimp, snail and crayfish were identified as being unclear due to the contradicting effects of different physical impacts. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water, however no cumulative effect on INNS is anticipated.</p> <p>Bournemouth: Drought Level 3b: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 1.3 for the Bournemouth WRZ, which include BN-04, BN-05, and BN-12. The INNS assessment identified that cumulative effects may occur on the River Stour as a result of BN-04 and BN-05. The implementation of these options may result in a decrease in water quality, flow, wetted area and depth, which may result in a positive population response for riparian vegetation such as Himalayan Balsam, Giant Knotweed, Giant Hogweed and Orange Balsam, therefore facilitating the spread of INNS. No cumulative effects were identified for INNS at Longham Lakes. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Isles of Scilly: Drought level 3a: A neutral effect has been identified for IS-18; therefore a neutral cumulative effect has been identified at drought level 3a. The option is not expected to result in an increase or decrease in INNS populations. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions are not anticipated to result in any cumulative effects as levels of abstraction are not anticipated to be significant due to being within existing licence conditions.</p> <p>Demand: A neutral effect has been identified across all demand options at each drought stage in relation to objective 1.3. The demand options are intended to reduce water consumption across the SBB area, which will retain more water in the natural environment during a drought period. None of the</p>

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		<p>demand options are likely to affect INNS habitats, therefore, the spread of INNS is unlikely, and a neutral effect has been identified for all drought levels.</p> <p>SBB: Drought Level 1: A neutral cumulative effect has been identified in relation to INNS at drought level 1. Although effects have been identified in the Bristol WRZ, as this is the only WRZ with drought options at this stage, cumulative effects across the SBB region are not anticipated. The plan as a whole has been assessed as having a neutral effect on this objective.</p> <p>Drought Level 2: A moderate negative cumulative effect has been identified in relation to INNS at drought level 2. Negative effects on INNS were identified within the Wimbleball and Colliford WRZs due to an increase in wetted area in Colliford and Wimbleball Reservoirs which may facilitate the spread of INNS across the SBB region. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. This has been assessed as a moderate negative effect on this objective for the plan as a whole.</p> <p>Drought Level 3a: A moderate negative cumulative effect has been identified in relation to INNS at drought level 3a. Negative effects on INNS were identified within the Bristol, Colliford, and Roadford WRZs due to an increase in wetted area in reservoirs and decrease in wetted area and depth within river systems, which may facilitate the spread of INNS populations. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 1.3 could last beyond the operation of the plan at drought level 3a, until full recovery is reached. The plan as a whole has been assessed as having a moderate negative effect on this objective at drought level 3a.</p> <p>Drought Level 3b: A moderate negative cumulative effect has been identified in relation to INNS at drought level 3a. Negative effects on INNS were identified within the Bournemouth, Colliford and Roadford WRZs due to an increase in wetted area in reservoirs and decrease in wetted area and depth within river systems, which may facilitate the spread of INNS populations across the SBB region. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 1.3 could last beyond the operation of the plan at drought level 3b, until full recovery is reached. The plan as a whole has been assessed as having a moderate negative effect on this objective at drought level 3b.</p>
Water	2.1	<p>Protect and enhance the quality of the water environment and water resources.</p> <p>Colliford: Drought Level 2: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 2.1 for the Colliford WRZ drought level 2 options which include C-03, C-37, and C-07a which are expected to be implemented during the second season (November to March). The increased abstraction at Restormel and Park Lake has potential to result in cumulative negative effects on the River Fowey which could lead to WFD deterioration of the Lower River Fowey and FOWEY WFD waterbodies. However, as these options are expected to be implemented in the second season, effects are reduced. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.1 during drought level 3a which includes the addition of options C-11, C-04a, C-06, and C-30. C-11 and C-04a are anticipated to be implemented during the</p>

Theme	SEA Objective	Effects
		<p>second season (November to March) alongside the Colliford drought level 2 options, and C-06, and C-30 are anticipated to be implemented during April to October. The implementation of C-06 which involves reducing the compensation flow from Colliford Reservoir into the River Fowey and C-11 which involves increasing abstraction from Hawk's Tor Pit is likely to exacerbate cumulative negative effects experienced on the River Fowey and associated WFD waterbodies. However, C-06 also ensure that more water is retained in Colliford Reservoir and therefore positive cumulative effects due to providing a higher dilution potential for contaminants.</p> <p>Drought Level 3b: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.1 at drought level 3b, which includes the addition of options C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options may be in operation at the same time as C-06, and C-30. The cumulative reduction of water discharge combined with increased cumulative abstraction of these options is likely to result in cumulative negative effects experienced on the River Fowey which could lead to WFD deterioration of its associated WFD waterbodies, namely Lower River Fowey, Neot River, Fowey (Upper), and Fowey. However, these options also ensure that more water is retained in Colliford Reservoir and therefore positive cumulative effects are likely to result, due to providing a higher dilution potential for contaminants.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 2.1 during drought level 2, which includes options R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). The increase in abstraction as a result of these options is likely to reduce water levels within the environment across the Roadford region during a drought period or period of time when rainfall is not as plentiful. Increased abstraction during a drought period is likely to reduce water quantity and quality downstream and could potentially prolong recovery periods back to the usual baseline. The reduction in water is likely to reduce dilution potential for contaminants which could compromise associated WFD waterbody objectives in the Roadford WRZ. The WFD assessment identified no cumulative effects due to R-07, R-11 and R-45 having no overlapping water bodies.</p> <p>Drought Level 3a: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.1 at drought level 3a. Drought Level 3a includes the addition of option R-25, which is expected to be implemented between April – October, alongside drought level 2 options R-07 and R-11. The reduction in compensation flow from Roadford Reservoir (R-25), combined with the increased abstraction of River Lyd (R-11) is likely to reduce water levels within the environment across the Roadford region during a drought period or period when rainfall is not as plentiful, prolonging recovery periods back to the usual baseline. The WFD assessment identified no cumulative effects beyond that already described in the Level 1 assessments. However, these options are likely to help retain water within the Roadford Reservoir and therefore provide a higher dilution potential for contaminants, resulting in positive cumulative effects at this site.</p> <p>Drought Level 3b: The plan is considered to have both a major negative and moderate positive cumulative effect on SEA objective 2.1 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48, in addition to the options implemented at previous drought levels. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time. The cumulative increased abstraction combined with the reduction of water discharges likely to result in cumulative negative effects on multiple watercourse across the Roadford region such as the River Tamar and River Wolf. This could lead to exacerbated WFD deterioration of the associated WFD watercourses namely, Lower River Lyd, Tamar (River Lyd to River Inny), Thrusel, and Wolf. The reduction of existing discharge from Fernworthy Reservoir and Trenchford Reservoir may also result in cumulative negative effects on the TEIGN WFD waterbody. Conversely,</p>

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		<p>positive cumulative effects are likely to occur due to the retention of water levels within the various lakes and reservoirs across the Roadford WRZ, namely Roadford Reservoir, Avon Reservoir, Burrator Reservoir, Fernworthy Reservoir, Trenchford Reservoir, and Slade Reservoir.</p> <p>Wimbleball: Drought Level 2: This plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.1 in the Wimbleball WRZ. Options W-06 and W-09 are expected to be implemented between March and January, with W-09 also being implemented in April. W-22 may be implemented between April-December. The cumulative reduction of water discharge from Wimbleball Reservoir as a result of W-03 and W-22 alongside increased abstraction (W-09 and W-06) is likely to result in negative effects on the River Exe, which could lead to WFD deterioration of the associated WFD waterbodies; Exe (Creedy to Estuary), Exe (Culm to Creedy), and Exe (Barle to Culm). Conversely, positive cumulative effects are likely to occur due to the retention of water levels within Wimbleball Reservoir, due to providing a higher dilution potential for contaminants. Drought actions W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to enhance the positive cumulative effects within Wimbleball Reservoir due to the retention of more water in the reservoir. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending beneficial cumulative effects into the following drought level.</p> <p>Bristol: Drought Level 1: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.1 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b. Delaying late summer water bank releases from Blagdon Reservoir and Chew Valley Lake are likely to reduce water levels within the Congresbury Yeo and the River Chew during a drought period is likely to reduce water quantity and quality downstream and could potentially prolong recovery periods back to the usual baseline. However, these options will ensure water is retained in both Blagdon Lake and Chew Valley Lake and therefore positive cumulative effects have been identified due to providing a higher dilution potential for contaminants. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. Whilst the extent of the impact is not certain, this action is likely to further enhance the positive cumulative effects at Blagdon Lake and Chew Valley Lake due to retaining more water in the natural environment.</p> <p>Drought Level 2: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.1 for the Bristol WRZ drought level 2. Drought Level 2 includes the addition of option BR-47. BR-47 involves abstracting water from the River Axe for storage at Cheddar Reservoir. This option would be implemented in October, when more rain is anticipated, therefore adverse effects remain the same as drought level 1. Drought action BR-25 and BR-54 will also be in operation at drought level. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water for immediate use. Actions BR-25 and BR-54 are expected to further enhance the positive cumulative effects at Blagdon Lake and Chew Valley Lake due to retaining more water in the natural environment, although the extent of this impact is not certain.</p> <p>Drought Level 3a: The plan is considered to have both a major negative and minor positive cumulative effect on SEA objective 2.1 during drought level 3a, which includes the addition of options BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All of the 3a options are anticipated to be in operation between spring/summer to winter, except BR-31a and BR-31b which will only be in operation in October and May. There is a potential for cumulative negative effects to occur on the River Axe and Congresbury Yeo due to the increased cumulative abstraction. This could lead to the</p>

Theme	SEA Objective	Effects
		<p>deterioration of multiple WFD waterbodies associated with these rivers. Increased abstraction during a drought period is likely to reduce water quantity and quality downstream and could potentially prolong recovery periods back to the usual baseline. Positive cumulative effects are likely to occur due to the retention of water levels within the various lakes and reservoirs across the Bristol WRZ, namely Blagdon Reservoir, Chew Valley Lake, Cheddar Ponds, Chew Magna Reservoir, and Cheddar Reservoir. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. The drought actions are expected to act cumulatively with the supply options to further enhance positive effects at the reservoirs and lakes, due to increased retention of water at these locations.</p> <p>Bournemouth: <i>Drought Level 3b:</i> The plan is considered to have a moderate negative cumulative effect on SEA objective 2.1 for the Bournemouth WRZ, which include BN-04, BN-05, and BN-12. The increased abstraction on the River Stour at Longham as a result of BN-04 and BN-12 could lead to WFD deterioration of the Stour (Lower) and Christchurch Harbour WFD waterbodies. Increased abstraction during a drought period is likely to reduce water quantity and quality downstream and could potentially prolong recovery periods back to the usual baseline. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Isles of Scilly: <i>Drought Level 3a:</i> A minor negative effect has been identified for IS-18 at drought level 3a, as abstraction could lead to reduced groundwater quality as a result of reduced dilution. As there is only one IoS option identified for inclusion within the Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to abstracting more water from the natural environment, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand: The demand options are intended to reduce water consumption across the SBB area, which will retain more water in the natural environment during a drought period. Options D-04, D-05, D-07, and D-08 are introduced across drought levels 1-3b and are expected to result in greater water savings than the other drought options, helping to retain more water in the natural environment, increasing dilution potential and subsequently enhancing water quality. The other four options are not anticipated to enhance or reduce the quality of the water environment and resources and although they all help reduce water demand despite the yields from these options being low. A moderate positive cumulative effect has been identified for this objective across all drought levels.</p> <p>SBB: <i>Drought Level 1:</i> Minor negative cumulative effects across the SBB region may occur for this objective due to adverse impacts on rivers in the Bristol WRZ. In addition, the retention of more water in reservoirs, along with demand options and actions, are expected to act cumulatively to provide benefits to water quality in reservoirs due to the retention of more water in these locations. Overall, the plan as a whole has been assessed as having a mixed minor negative and minor positive effect on this objective.</p>

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		<p>Drought Level 2: Both moderate negative and minor positive cumulative effects have been identified in relation to water quality at drought level 2 across the SBB region. Increased abstraction on numerous rivers across the SBB region, namely River Axe, River Fowey and River Exe are likely to reduce water levels which may lead to WFD deterioration of associated waterbodies. However, drought level 2 options in Bristol and Colliford are to be implemented during the second season, effects are reduced. Positive cumulative effects are likely to occur due to the retention of water levels within Wimbleball Reservoir, due to providing a higher dilution potential for contaminants. At this drought level, recovery rates are not expected to be affected, and the identified effects would last for as long as the plan is operation at drought level 2. The plan as a whole has been assessed as having a mixed moderate negative and minor positive effect on this objective.</p> <p>Drought Level 3a: A split moderate negative and minor positive effects have been identified in relation to water quality at drought level 3a across the SBB region. The cumulative increased abstraction across the SBB region, namely River Axe and Congresbury Yeo (Bristol WRZ), River Fowey (Colliford WRZ), and River Lyd (Roadford WRZ), likely to reduce water quantity and quality downstream and could potentially prolong recovery periods back to the usual baseline. This would extend the identified effects for objective 2.1 beyond the operation of the plan at drought level 3a, until full recovery is reached. This abstraction combined with a reduction in water discharges is likely to exacerbate adverse effects within the River Fowey and the River Lyd, and associated WFD waterbodies. Positive cumulative effects are likely to occur within SBB due to the retention of water levels within the various lakes and reservoirs due to providing a higher dilution potential for contaminants. Overall, the plan has been assessed as having a mixed moderate negative and minor positive effect on this objective.</p> <p>Drought Level 3b: Both major negative and minor positive effects have identified in relation to water quality at drought level 3b across the SBB region. The increased abstraction across the SBB region, namely the River Stour (Bournemouth WRZ), the River Fowey (Colliford WRZ), the River Tamar and the River Wolf (Roadford WRZ), during a drought period is likely to reduce water quantity and quality and could potentially prolong recovery periods back to the usual baseline. This would extend the identified effects for objective 2.1 beyond the operation of the plan at drought level 3b, until full recovery is reached. This could also lead to WFD deterioration of associated WFD waterbodies. Positive cumulative effects are likely to occur within SBB due to the retention of water levels within the various lakes and reservoirs due to providing a higher dilution potential for contaminants. This has been assessed as a mixed major negative and minor positive effect on this objective for the plan as a whole.</p>
	<p>2.2 Provide a reliable water supply in times of drought.</p>	<p>Colliford:</p> <p>Drought Level 2: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 2.2 for the Colliford WRZ drought level 2 options which include C-03, C-37, and C-07a which are expected to be implemented during the second season (November to March). The options will provide additional water for use within the Colliford region following a drought period, however, may reduce water availability ahead of the drier summer months the following year, compromising the resilience of the water environment to climate change and drought. The options are not considered a sustainable source of water supply and may prolong recovery periods post-drought back to typical baseline conditions. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.2 during drought level 3a which includes the addition of options C-11, C-04a, C-06, and C-30. C-11 and C-04a are anticipated to be implemented during the second season (November to March) alongside the Colliford drought level 2 options, and C-06, and C-30 are anticipated to be implemented during April to October. The options will provide additional water for use within the Colliford region; however the options are not considered a sustainable source of water supply and may prolong recovery periods post-drought back to typical baseline conditions. Increased abstraction of the River Fowey</p>

Theme	SEA Objective	Effects
		<p>as a result of C-11, and drought level 2 options C-03 and C-07a, is likely to cumulative lower water levels within the river system and may prolong recovery periods post-drought back to typical baseline conditions. The minor positive effect relates to retaining more water in the reservoirs, which may prolong the length of time some level of water bank/compensation release may be available during a drought period.</p> <p>Drought Level 3b: The plan is considered to have both a major negative and minor positive cumulative effect on SEA objective 2.2 at drought level 3b, which includes the addition of options C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options may be in operation at the same time as C-06, and C-30. The options will provide additional water for use within the Colliford region; however, the options are not considered a sustainable source of water supply and may prolong recovery periods post-drought back to typical baseline conditions. The implementation of C-40 alongside drought level 3a options C-06 and C-30 is likely to cumulatively lower water levels within the River Fowey system and may prolong recovery periods post-drought back to typical baseline conditions. The minor positive effect relates to retaining more water in the reservoirs, which may prolong the length of time some level of water bank/compensation release may be available during a drought period.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 2.2 during drought level 2, which includes options R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). The increase in abstraction is likely to reduce water levels within the environment across the Roadford region during a drought period or period of time when rainfall is not as plentiful. The increased abstraction is not considered a sustainable source of water supply and may prolong recovery periods post-drought back to typical baseline conditions.</p> <p>Drought Level 3a: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 2.2 at drought level 3a. Drought Level 3a includes the addition of option R-25 only, which is expected to be implemented between April – October, alongside drought level 2 options R-07 and R-11. Not releasing a compensation flow from Roadford reservoir when making supply releases (R-25) would further reduce water levels in the River Wolf (post abstraction point), during times of low flow from drought conditions. The reduced flow may prolong recovery periods post-drought back to typical baseline conditions. However, minor positive effects have been identified in relation to maintaining water levels in Roadford Reservoir which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream.</p> <p>Drought Level 3b: The plan is considered to have both a major negative minor positive cumulative effect on SEA objective 2.2 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48, in addition to the options implemented at previous drought levels. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time. The reduction in compensation flows from multiple reservoirs in the WRZ is likely to reduce the water levels within the water environment across the Roadford region, which may prolong recovery periods post-drought back to typical baseline conditions. This is not considered a sustainable source of water supply. However, minor positive effects have been identified in relation to maintaining water levels in Roadford Reservoir which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream.</p>

		<p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 2.2 in the Wimbleball WRZ. These options will reduce the water levels within the water environment across the Wimbleball region which may prolong recovery periods post-drought back to typical baseline conditions. Options W-06 and W-09 are expected to be implemented between March and January, with W-09 also being implemented in April. W-22 may be implemented between April-December. As such, it is possible that all options may be implemented together which is not considered a sustainable water supply. However, minor positive effects have been identified in relation to maintaining water levels in Wimbleball Reservoir which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream. Drought actions W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to enhance the positive cumulative effects within Wimbleball Reservoir due to the retention of more water in the reservoir. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending beneficial cumulative effects into the following drought level.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 2.2 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b, which are expected to be implemented for only two weeks. The options will provide additional water for use within the Bournemouth region, However, delaying the late summer water bank release from Blagdon and Chew Valley Lake means that water levels in the Congresbury Yeo and River Chew would not receive a temporary boost, reducing overall resilience. Since these options would operate for only two weeks, the effects would be limited. The options are not considered a sustainable source of water supply and may prolong recovery periods post-drought back to typical baseline conditions. The minor positive effect relates to retaining more water in the reservoirs, which may prolong the length of time some level of water bank release may be available during a drought period. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 2: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 2.2 for the Bristol WRZ drought level 2. Drought Level 2 includes the addition of option BR-47. BR-47 involves abstracting water for storage at Cheddar Reservoir. This option would be implemented in October, when more rain is anticipated, therefore adverse effects remain the same as drought level 1. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 3a: The plan is considered to have both a major negative and minor positive cumulative effect on SEA objective 2.2 during drought level 3a, which includes the addition of options BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All of the 3a options are anticipated to be in operation between spring/summer to winter, except BR-31a and BR-31b which will only be in operation in October and May. All options will provide additional water for use within the Bristol region, however, there are likely to be negative cumulative effects within the WRZ if drought options are implemented simultaneously. The options are not considered a sustainable source of water supply and may prolong recovery periods post-drought back to typical baseline conditions. BR-28b, BR-28a, and BR-29 are likely to cumulatively reduce water levels within the River Chew, and BR-47, BR-31a and BR-31b are likely to cumulatively reduce water levels within the River Axe which may prolong river recovery periods post-drought back to typical baseline conditions. The minor positive effect relates to retaining more water in the reservoirs, which may prolong the length of time some level of water bank/compensation release may be available during a drought period. Drought action BR-55 will also be in operation at drought level</p>
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Theme	SEA Objective	Effects
		<p>3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Bournemouth: <i>Drought Level 3b:</i> The plan is considered to have a major negative cumulative effect on SEA objective 2.2 for the Bournemouth WRZ, which include BN-04, BN-05 and BN-12. The options will provide additional water for use within the Bournemouth region, however, as the options will be operational during drought periods, it may reduce water availability when levels are already low, compromising the resilience of the water environment to climate change and drought. The options are not considered a sustainable source of water supply, particularly as they would all be implemented during the summer months. The increased abstractions may prolong recovery periods post-drought back to typical baseline conditions. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment, thus supporting the resilience of other abstractions.</p> <p>Isles of Scilly: <i>Drought Level 3a:</i> A moderate negative effect has been identified for IS-18. The option will provide additional water for use within the IoS region during a drought period, however, may reduce water availability in the natural system when groundwater levels are already anticipated to be low. Plus, the additional abstraction may prolong recovery periods post-drought back to typical baseline conditions. As there is only one IoS option identified for inclusion within the Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to abstracting more water from the natural environment, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand: A positive effect has been identified across all demand options in relation to objective 2.2. Most of the options were assessed as having a minor positive effect, with options D-05, D-07 and D-08 assessed as moderate positive due to the potential for significant water savings. The options are expected to be implemented at all drought levels, with increasing action at each stage. ALC, TUBs and NEUBs in particular have been found to make a significant difference in overall water demand and will help to provide a sustainable water supply during drought. Therefore, a minor positive cumulative effect has been identified for drought level 1, and a moderate positive effect has been identified for the remaining drought levels which involve increasing action to reduce demand.</p> <p>SBB: <i>Drought Level 1:</i> A minor positive cumulative effect has been identified in relation to objective 2.2 at drought level 1, due to the implementation of demand measures which aim to reduce water consumption across the SBB region and support the provision of sustainable water supplies. Although localised negative effects were identified in the Bristol WRZ at drought level 1, cumulative effects across the SBB region are not anticipated. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 1. Overall, a mixed minor negative and minor positive effect has been determined for the plan as a whole.</p>

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		<p>Drought Level 2: Negative cumulative effects relate to increased abstraction and withholding water within reservoirs which is considered an unsustainable way of providing water supply. Positive cumulative effects relate to the implementation of additional demand measures including ALC and TUBs which will reduce consumption and retain more water in the natural environment. Additionally, positive effects were identified in relation to maintaining water levels in reservoirs which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. Overall, the plan as a whole has been assessed as having a mixed minor negative and moderate positive effect on this objective at drought level 2.</p> <p>Drought Level 3a: Split moderate negative and moderate positive effects have been identified at drought level 3a. Negative effects relate to increased abstraction and withholding water within reservoirs which is considered an unsustainable way of providing water supply. Effects are compounded as additional options are implemented, particularly those which are used at the same time over the summer months. Positive effects relate to the implementation of additional demand measures including ALC and TUBs which will reduce consumption and retain more water in the natural environment. Additionally, positive effects were identified in relation to maintaining water levels in reservoirs which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 3a. This has been assessed as a mixed moderate negative and moderate positive effect on this objective for the plan as a whole at drought level 3a.</p> <p>Drought Level 3b: Split major negative and moderate positive effects have been identified at drought level 3b. Negative effects relate to increased abstraction and withholding water within reservoirs which is considered an unsustainable way of providing water supply. Effects are compounded as additional options are implemented, particularly those which are used at the same time over the summer months. Positive effects relate to the implementation of additional demand measures including ALC and TUBs which will reduce consumption and retain more water in the natural environment. Additionally, positive effects were identified in relation to maintaining water levels in reservoirs which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 3b and would not affect objective 2.2 beyond this period. This has been assessed as a mixed major negative and moderate positive effect on this objective for the plan as a whole.</p>
	<p>2.3 Reduce flood risk</p>	<p>Colliford:</p> <p>Drought Level 2: The Colliford WRZ drought level 2 options include C-03, C-37, and C-07a, which are expected to be implemented during the second season (November to March). The increased abstraction from the River Cober and the River Fowey during the winter months is likely to reduce flood risk due to lowering water levels within the river system. However, these effects are anticipated to be localised and are not anticipated to be cumulative across the region. Similarly, the options are not expected to be adversely affected by flooding. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The drought level 3a options include C-11, C-04a, C-06, and C-30. C-11 and C-04a, which are anticipated to be implemented during the second season (November to March) alongside the Colliford drought level 2 options, and C-06, and C-30 are anticipated to be implemented during April to October. Increased abstraction of the River Fowey as a result of C-11, and drought level 2 options C-03 and C-07a, is</p>

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		<p>likely to reduce flood risk over winter due to lowering water levels within the river system. The implementation of C-06 and C-30 may help to mitigate against summer flash flooding within the River Fowey catchment. However, as the option will be implemented during a drought, when water levels are already expected to be low, effects are likely to be negligible and not anticipated to be cumulative across the region.</p> <p>Drought Level 3b: Drought level 3b includes the addition of options C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options may be in operation at the same time as C-06, and C-30. The implementation of C-40 alongside drought level 3a options C-06 and C-30 may help to mitigate the risk of flash flooding within the River Fowey catchment. However, as the option will be implemented during a drought, when water levels are already expected to be low, effects are likely to be negligible and not anticipated to be cumulative across the region.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 2.3 for the Roadford WRZ drought level 2 options which include R-07, R-11 which may be implemented over the summer and R-45 which is a second season option. The increase in abstraction is likely to reduce water levels within the water environment across the Roadford region. Although summer flash flooding may occur, the options will be implemented during a drought, period when water levels are already expected to be abnormally low. As such, these options are not expected to increase or decrease flood risk. Similarly, the options are not expected to be affected by flooding.</p> <p>Drought Level 3a: The plan is considered to have a neutral negative cumulative effect on SEA objective 2.3 for the Roadford WRZ drought level 3a. Drought Level 3a includes the addition of option R-25, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. A reduction in the compensation flow from Roadford Reservoir is likely to reduce water levels downstream, resulting in potential positive effects on flood risk. Although summer flash flooding may occur, the options will be implemented during a drought period when water levels are expected to be abnormally low. As such, the option is not expected to increase or decrease flood risk.</p> <p>Drought Level 3b: The plan is considered to have a neutral cumulative effect on SEA objective 2.3 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48. All options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside drought level 2 and 3a options. The reduction in compensation flows from multiple reservoirs in the WRZ is likely to reduce the water levels within rivers across the Roadford region. Although summer flash flooding may occur, the options will be implemented during a drought period when water levels are expected to be abnormally low. As such, the option is not expected to increase or decrease flood risk.</p> <p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have an overall neutral cumulative effect on SEA objective 2.3 in the Wimbleball WRZ. Options W-06 and W-09 are expected to be implemented between March and January, with W-09 also being implemented in April. W-22 may be implemented between April-December. Although summer flash flooding may occur, the options will be implemented during a drought period when water levels are expected to be abnormally low. As such, the option is not expected to increase or decrease flood risk. Similarly, the options are not expected to be affected by flooding. Drought actions W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves</p>

Theme	SEA Objective	Effects
		<p>smarter controls at Colaton Raleigh boreholes, with no significant change to current use. No further change to flood risk is expected from these actions.</p> <p>Bristol: <i>Drought Level 1:</i> The plan is considered to have a neutral cumulative effect on SEA objective 2.3 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b. These are planned to be implemented for only two weeks. Delaying late summer water bank release from Blagdon and Chew Valley Lake would further decrease river levels during a drought period. Therefore, the options are not expected to increase or decrease flood risk. Similarly, the options are not expected to be affected by flooding. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. This action is not anticipated to result in any cumulative effects on flood risk.</p> <p><i>Drought Level 2:</i> Drought Level 2 includes the addition of option BR-47. The early commissioning into October could reduce water levels within the River Axe, at a time when rainfall is likely to be high, potentially reducing flood risk. However, the option is located within the Somerset Levels Ramsar and SAC which is partially characterised by the flooding which occurs during winter months. If water levels are significantly reduced and flooding occurs less due to earlier abstraction, this Ramsar and SAC could be negatively affected. As all other options have been assessed as having neutral effects, the addition on BR-47 is unlikely to result in cumulative negative or positive effects. Drought action BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water for immediate use. These actions are not anticipated to result in any cumulative effects on flood risk.</p> <p><i>Drought Level 3a:</i> The Bristol WRZ drought level 3a options include BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b, in addition to the options identified at earlier drought stages. All options are anticipated to be in operation between spring/summer to winter, except for BR-31a and BR-31b which will only be in operation in October and May, respectively. There are likely to be positive cumulative effects on flood risk within the WRZ if drought options occurred simultaneously. BR-28b, BR-28a, and BR-29 are likely to cumulatively reduce water levels within the River Chew, and BR-47, BR-31a and BR-31b are likely to cumulatively reduce water levels within the River Axe which may improve resilience to flood risk if summer flash flooding occurred. However, these options will be implemented during a drought, when water levels are already expected to be low. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. This action is not anticipated to result in any cumulative effects on flood risk.</p> <p>Bournemouth: <i>Drought Level 3b:</i> This plan is considered to have overall neutral cumulative effect on SEA objective 2.3 for the Bournemouth region in relation to reducing flood risk during operation. As the options are expected to be implemented during the summer months and will only be in place for two weeks, they are unlikely to reduce flood risk. Similarly, the options are not expected to be affected by flooding. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. This action is not anticipated to result in any cumulative effects on flood risk.</p>

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		<p>Isles of Scilly: <i>Drought Level 3a:</i> A neutral effect has been identified for IS-18 which will be implemented at drought level 3a, therefore a neutral cumulative effect has been identified at drought level 3a. The option is not expected to increase or decrease flood risk. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions are not anticipated to result in any cumulative effects as levels of abstraction are not anticipated to be significant.</p> <p>Demand: A neutral effect has been identified across all demand options at each drought stage in relation to objective 2.3. The demand options are intended to reduce water consumption across the SBB, however, despite retaining water in the natural environment, these options are not expected to reduce or increase flood risk, especially as water levels are likely to already be low due to drought conditions. Therefore, a neutral cumulative effect has been identified for all drought levels.</p> <p>SBB: <i>Drought Level 1 & 2:</i> A neutral effect has been identified at drought levels 1 and 2 in relation to objective 2.3. The supply options are not expected to increase or decrease flood risk, particularly as options would most likely be implemented during the summer months where rainfall is lower and flood risk is decreased. Although localised flash flooding may pose a risk, the options are not expected to affect this. Similarly, the options themselves are unlikely to be affected by flooding.</p> <p><i>Drought Levels 3a & 3b:</i> At drought levels 3a and 3b, several options are likely to reduce flood risk over winter due to lowering water levels within the river system, which could reduce flood risk. There are also options implemented during these drought levels that may mitigate against summer flash flooding. Together, a minor positive cumulative effect has been identified. The supply options would generally reduce water levels beyond those experienced without the Drought Plan, and may extend the reduced flood risk beyond the plan’s operational period until baseline conditions are reached. Overall, the plan has been assessed as a minor positive effect on objective 2.3 at drought levels 3a and 3b.</p>
Soil	3	<p>Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance.</p> <p>Colliford: <i>Drought Level 2:</i> The plan is considered to have an overall minor negative cumulative effect on SEA objective 3 for the Colliford WRZ drought level 2 options which include C-03, C-37, and C-07a which are expected to be implemented during the second season (November to March). The increased abstraction at multiple abstraction sites along the River Fowey as a result of C-03 and C-07a could result in cumulative adverse effects potentially destabilising soils and causing subsidence on the riverbank due to a reduction in water levels. However, as these options are anticipated to be in operation during winter when water levels are generally higher, the level of effect is reduced. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p><i>Drought Level 3a:</i> The plan is considered to have an overall moderate negative cumulative effect on SEA objective 3 during drought level 3a which include options C-11, C-04a, C-06, and C-30. C-11 and C-04a, alongside the level 2 option. Options C-11 and C-04a are anticipated to be implemented during the second season (November to March), alongside the Colliford drought level 2 options. Increased abstractions at multiple locations along the river Fowey could result in destabilised soils and subsidence of riverbanks. As these options are anticipated to be in operation during winter when water levels are generally higher, the level of effect is reduced. However, this also means the river may be more vulnerable in</p>

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		<p>summer, as it begins the season with already reduced water levels. Options C-06 and C-30 (not releasing Colliford and Sibbyback compensation flows) are expected to be implemented in the summer, where river levels would already likely be low as a result of drought conditions. There are likely to be adverse cumulative effects on soils within the WRZ if drought options are implemented simultaneously.</p> <p>Drought Level 3b: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 3 for the Colliford WRZ drought level 3b options, which include C-10, C-17, and C-40, alongside the options identified at earlier drought levels. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options are in operation at the same time as C-06, and C-30. These options will reduce the water levels within the water environment across the Colliford region which may increase the risk of destabilising soils and subsidence on the riverbank. In particular, cumulative negative effects are likely to result on the River Fowey due to the reduction in Colliford and Sibbyback compensation flows as a result of C-06 and C-30, alongside not providing Colliford Fish Bank releases which will cumulatively lower water levels within the river system.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have an overall minor negative cumulative effect on SEA objective 3 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). The increase in abstraction is likely to reduce water levels within the water environment across the Roadford region which may increase the risk of destabilising soils and subsidence on the riverbank. Option R-07 also requires the installation of temporary pumps, therefore there is the potential for soils to be disturbed temporarily.</p> <p>Drought Level 3a: The plan is considered to have a minor negative cumulative effect on SEA objective 3 for the Roadford WRZ drought level 3a. Drought Level 3a includes the addition of R-25, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. A reduction in the compensation flow from Roadford Reservoir is likely to reduce water levels downstream which could potentially destabilise soils on the riverbanks, causing subsidence. A reduction in water levels will also be occurring at other areas within Roadford WRZ as a result of drought level 2 options still being in operation at the same time.</p> <p>Drought Level 3b: The plan is considered to have a moderate negative and minor positive cumulative effect on SEA objective 3 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48, in addition to the options identified for implementation at earlier drought stages. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside drought level 2 and 3a options. The reduction in compensation flows from multiple reservoirs in the WRZ is likely to reduce the water levels within the water environment across the Roadford region which may increase the risk of destabilising soils and subsidence on the riverbank. In particular, cumulative negative effects are likely to result on the River Wolf and River Tamar due to the reduction in Roadford compensation flow as a result of R-25, alongside not providing Roadford Fish Bank releases (R-48) which will cumulatively lower water levels within the river system. Minor positive effects were identified in relation to retaining more water in various reservoirs which support specific areas of peatland. As such, reducing compensation flows during a drought period may support these water-dependent habitats.</p> <p>Wimbleball:</p> <p>Drought Level 2: A moderate negative cumulative effect on SEA objective 3 has been identified for the Wimbleball WRZ. These options will reduce the water levels within the water environment across the Wimbleball region which may increase the risk of destabilising soils and subsidence on the</p>

Theme	SEA Objective	Effects
		<p>riverbank. In particular, cumulative negative effects are likely to result on the River Exe and the River Haddeo. Minor positive effects were identified in relation to options W-03 and W-22, in relation to retaining more water in Wimbleball Reservoir which supports an area of peatland, which are likely to act cumulatively to benefit the peatland. Drought actions W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to enhance the positive cumulative effects on peatland due to the retention of more water in Wimbleball Reservoir. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending beneficial cumulative effects into the following drought level.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have an overall minor negative cumulative effect on SEA objective 3 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b and are planned to be implemented for only two weeks. Delaying the late summer water bank release at Blagdon and Chew Valley Lake is likely to reduce water levels within the Congresbury Yeo and River Chew, respectively, lead to reduced soil stability. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 2: The plan is considered to have an overall minor negative cumulative effect on SEA objective 3 for the Bristol WRZ drought level 2. Drought Level 2 includes the addition of BR-47. An increase in abstraction in October could lead to reduced water levels downstream of the River Axe. This has the potential to destabilise soils on the riverbanks of the River Axe, causing subsidence. However, effects are reduced to these options being in operation during autumn when drought periods are less likely. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 3a: The plan is considered to have an overall moderate negative cumulative effect on SEA objective 3 for the Bristol WRZ drought level 3a options which include BR-27a, BR-28a, BR-29, BR-30, BR-31a and BR-31b, in addition to the options implemented at earlier drought stages. All options are anticipated to be in operation between spring/summer to winter, except BR-31a, and BR-31b which will only be in operation in October and May, respectively. There are likely to be adverse cumulative effects on soils within the WRZ if drought options are implemented simultaneously. BR-28b, BR-28a, and BR-29 are likely to cumulatively reduce water levels within the River Chew, and BR-47, BR-31a and BR-31b are likely to cumulatively reduce water levels within the River Axe, which may lead to destabilising soils and causing subsidence on the riverbank. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Bournemouth:</p> <p>Drought Level 3b: This plan is considered to have overall moderate negative cumulative effect on SEA objective 3 for the Bournemouth region. BN-04 and BN-12 are located on the River Stour and BN-05 is located adjacent to the River Allen, which is a tributary of the Stour. If all three options were to come into operation at the same time, adverse cumulative effects on soil stability downstream in the River Stour may occur due to the</p>

Theme	SEA Objective	Effects
		<p>reduction in water and moisture levels. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Isles of Scilly: Drought Level 3a: A minor negative effect has been identified for IS-18 at drought level 3a. Abstraction of groundwater could lead to possible decreases in the groundwater table which could potentially destabilise soils, causing subsidence. As there is only one IoS option identified for inclusion within the Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to abstracting more water from the natural environment, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand: A neutral effect has been identified across most of the demand options at each drought stage in relation to objective 3. The demand options help to reduce demand during periods of drought and therefore do not impact or enhance the functionality, quality, or quantity of soils. Option D-05 may result in temporary soil disturbance while leaks are repaired, however, disturbances would be localised, and soil would be reinstated. This option is expected to be implemented at drought level 1 and 2. As no other option poses any risk, cumulative effects are not likely for this objective, and a neutral cumulative effect has been identified for all drought levels.</p> <p>SBB: Drought Level 1: A neutral cumulative effect has been identified in relation to objective 3 at drought level 1. Although implementation of demand measures will retain more water in the natural environment, effects on soil moisture are not likely to be significant across the SBB region. Although negative effects were identified in the Bristol WRZ at drought level 1, cumulative effects across the SBB region are not anticipated. A neutral effect has been identified for the plan as a whole at this drought level.</p> <p>Drought Level 2: Negative cumulative effects relate to increased abstraction and withholding water within reservoirs which could potentially result in reduced soil moisture levels which could affect functionality and lead to may increase the risk of destabilising soils and subsidence riverbanks. Although moderate negative effects were identified in the Wimbleball WRZ due to possible cumulative effects on the banks of the River Exe and the River Haddeo, these are not expected to be cumulative across the whole region. Minor positive effects were identified in relation to options W-03 and W-22, due to retaining more water in Wimbleball reservoir which supports an area of peatland. As effects are expected to be localised to the reservoir, positive cumulative effects are not anticipated. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. Overall, the plan as a whole has been assessed as having a minor negative effect on this objective at drought level 2.</p> <p>Drought Level 3a: Negative effects relate to increased abstraction and withholding water within reservoirs which could potentially result in reduced soil moisture levels which could affect functionality and lead to may increase the risk of destabilising soils and subsidence riverbanks. Effects are compounded as additional options are implemented, particularly those which are used at the same time over the summer months. Minor positive</p>

Theme	SEA Objective	Effects
		<p>effects were identified in relation to options W-03 and W-22, due to retaining more water in Wimbleball reservoir which supports an area of peatland. As effects are expected to be localised to the reservoir, positive cumulative effects are not anticipated. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 3 could last beyond the operation of the plan at drought level 3a, until full recovery is reached. A moderate negative effect has been identified at drought level 3a for the plan as a whole.</p> <p>Drought Level 3b: Negative cumulative effects relate to increased abstraction and withholding water within reservoirs which could potentially result in reduced soil moisture levels which could affect functionality and lead to may increase the risk of destabilising soils and subsidence riverbanks. Effects are compounded as additional options are implemented, particularly those which are used at the same time over the summer months. Minor positive effects were identified in relation to options in the Wimbleball and Roadford WRZs, due to retaining more water in various reservoirs which supports areas of peatland. Due to the number of options this was identified for, effects on supporting peatland may be cumulative across the SBB region. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 3 could last beyond the operation of the plan at drought level 3b, until full recovery is reached. A mixed moderate negative and minor positive effect has been identified for the plan as a whole at drought level 3b.</p>
Climate	4.1	<p>Reduce embodied and operational carbon emissions.</p> <p>Colliford: Drought Level 2: The plan is considered to have an overall minor negative cumulative effect on SEA objective 4.1 for the Colliford WRZ drought level 2 options which include C-03, C-37, and C-07a, which are expected to be implemented during the second season (November to March). All these options will result in increased abstraction and distribution of water and will therefore likely result in an increase in operational energy use to treat and pump the additional water. As these options are all in operation at the same time, cumulative operational carbon effects are likely to occur within the Colliford region. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have an overall minor negative cumulative effect on SEA objective 4.1 during drought level 3a which include options C-11, C-04a, C-06, and C-30. C-11 and C-04 are mostly anticipated to be implemented during the second season (November to March) alongside the Colliford drought level 2 options. C-06, and C-30 are anticipated to be implemented between April and October. An increase in abstraction as part of C-11 and C-04a is likely to increase operational carbon required to treat and pump the additional water. As these options are in operation at the same time as drought level 2 options, cumulative carbon effects are likely to occur within the Colliford region.</p> <p>Drought Level 3b: The plan is considered to have an overall minor negative cumulative effect on SEA objective 4.1 for the Colliford WRZ drought level 3b, which include options C-10, C-17, and C-40, alongside the options implemented at earlier drought stages. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options are in operation at the same time as C-06, and C-30. As these options are in relation to reducing compensation flows, there is unlikely to be any cumulative effects on operational carbon emissions as a result of these options. However, there is the potential for them to be in place during the second season where they would be in operation alongside the Level 2 and Level 3a options.</p> <p>Roadford:</p>

Theme	SEA Objective	Effects
		<p>Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 4.1 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). All options are likely to increase energy demand and operational carbon emissions due to the additional pumping and transfer of water and R-07 will also entail minor works for pump installations. However, as none of these options will be in operation at the same time, therefore no cumulative effects are expected.</p> <p>Drought Level 3a: The plan is considered to have a neutral cumulative effect on SEA objective 4.1 for the Roadford WRZ drought level 3a. Drought Level 3a includes the addition of option R-25, which is due to be in operation between April – October. Option R-25 does not require any additional infrastructure, pumping or transfer of water during operation. Therefore, there is not expected to be an increase in operational or embodied carbon and as such no cumulative effects are expected.</p> <p>Drought Level 3b: The plan is considered to have a neutral cumulative effect on SEA objective 4.1 for the Roadford WRZ drought level 3b options which includes R-20, R-21, R-22, R-23, R-24, R-26, and R-48, alongside the options implemented at earlier drought stages. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time. No additional infrastructure, pumping or transfer of water is required for the operation of these options in drought level 3b.</p> <p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have a minor negative cumulative effect on SEA objective 4.1 in the Wimbleball WRZ which includes options W-03, W-06, W-09, and W-22. W-06 will entail minor works for temporary pipeline installations and increase in operational energy and carbon emissions, and W-09 is likely to result in an increase in operational carbon emissions due to the increased pumped storage. Both options will be in place between March and January and therefore may be in operation at the same time. W-03 will be implemented in April only and W-22 from April-December, however, neither of these options require any additional infrastructure or pumping/transfer of water. Given the temporary nature of these options, the effect is anticipated to be minor, however, an adverse cumulative effect is still anticipated. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. Drought action W-28 will be implemented at drought level 3a. No additional infrastructure, pumping or transfer of water is required for the operation of these options.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have an overall neutral cumulative effect on SEA objective 4.1 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b, which are planned to be implemented for only two weeks. No additional infrastructure, pumping or transfer of water is required for these options. Therefore, there is not expected to be an increase in operational or embodied carbon. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact on objective 4.1 is expected to be limited, the reduced transfer may result in lower operational energy use and carbon emissions.</p> <p>Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 4.1 for the Bristol WRZ drought level 2 which includes the addition of option BR-47. No additional infrastructure is required, however, the current permit to abstract water for pre-treatment before being transferred to Cheddar Reservoir is being extended to begin in October. Therefore, there will be additional transfer and pumping of water meaning some additional operational carbon may be produced as a result of this option. However, as neither of the Level 1 options occur in tandem with BR-47, and only BR-47 requires additional pumping, no cumulative negative effects are expected. Drought action BR-25 and BR-54 will also be</p>

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		<p>in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water for immediate use. While the extent of the impact on objective 4.1 is expected to be limited, the reduced transfer may result in lower operational energy use and carbon emissions, while the increased transfer under BR-54 may result in a slight increase in emissions.</p> <p>Drought Level 3a: The plan is considered to have an overall minor negative cumulative effect on SEA objective 4.1 for the Bristol WRZ drought level 3a options which include BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b, alongside the options implemented at earlier drought levels. All options are anticipated to be in operation between spring/summer to winter, except for BR-31a, and BR-31b, which will only be in operation in October and May, respectively. No additional infrastructure is required for any of the options, however options BR-31a and BR-31b will require additional pumping and transfer of water which may increase operational or embodied carbon. Additionally, as BR-31a and BR-47 are both expected to both be in operation in October for a month a small increase in emissions is likely. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact on objective 4.1 is expected to be limited, the reduced transfer may result in lower operational energy use and carbon emissions.</p> <p>Bournemouth:</p> <p>Drought Level 3b: This plan is considered to have an overall minor negative cumulative effect on SEA objective 4.1 for the Bournemouth WRZ. This is related to increased abstraction and therefore an increase in operational carbon required to treat and pump the additional water. If these options are in operation at the same time, cumulative effects on the carbon objective are likely to occur. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen operational carbon due to reduced requirement for water treatment and pumping.</p> <p>Isles of Scilly:</p> <p>Drought Level 3a: A minor negative effect has been identified for IS-18 which will be implemented at drought level 3a. The option is expected to increase operational energy use and associated carbon emissions. As there is only one IoS option identified for inclusion within the Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to a small increase in energy use, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand:</p> <p>Three of the demand options, D-02, D-04, and D-05, have been identified as having the potential for minor negative effects in relation to objective 4.1. This is due to the potential increase in emissions in relation to transport and minor construction works to fix leaks. As these options will be put in place from drought level 1, there is the potential for a negative cumulative effect. However, as these options are mitigatable, this effect is reduced. The other demand options are all neutral and are not likely to enhance or impact embodied and operational carbon emissions, however, overall, a minor negative cumulative effect has been identified at every drought level.</p>

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		<p>SBB:</p> <p>Drought Level 1: A minor negative cumulative effect has been identified in relation to objective 4.1 at drought level 1. Three of the demand options have been identified as having the potential for minor negative effects and will be in place from drought level 1. This is due to the potential increase in emissions in relation to transport and minor construction works to fix leaks across the SBB region. Overall, a minor negative effect has been identified for this objective at drought level 1.</p> <p>Drought Level 2: In addition to the demand options in operation from drought level 1, options within the Wimbleball and Colliford WRZs may result in a possible increase in carbon due to increased pumping and treatment of water which may increase operational carbon, alongside the need for additional temporary infrastructure which may increase embodied carbon. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. This has been assessed as a minor negative effect on this objective for the plan as a whole at drought level 2.</p> <p>Drought Level 3a: A minor negative cumulative effect has been identified in relation to objective 4.1 at drought level 3a. Further options within the Bristol, Colliford and Isles of Scilly WRZs were identified as resulting in a possible increase in carbon due to increased pumping and treatment of water which may increase operational carbon, alongside the need for additional temporary infrastructure which may increase embodied carbon. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 3a. The plan as a whole has been assessed as having a minor negative effect on this objective at drought level 3a.</p> <p>Drought Level 3b: In addition to the ongoing demand options, options within all WRZs other than Roadford were identified as resulting in a possible small increase in operational carbon due to increased pumping and treatment of water, alongside the need for additional temporary infrastructure which may increase embodied carbon. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 3b and would not affect objective 4.1 beyond this period. The plan as a whole has been assessed as having a minor negative effect on this objective at drought level 3b.</p>
	<p>4.2</p> <p>Increase resilience to climate change risks and hazards.</p>	<p>Colliford:</p> <p>Drought Level 2: The plan is considered to have an overall minor negative cumulative effect on SEA objective 4.2 for the Colliford WRZ drought level 2 options which include C-03, C-07a, and C-37, which are all expected to be implemented during the second season (November to March). The increase in abstraction may increase the risk of climate-related effects downstream due to the reduced water levels and flow. This has potential to reduce resilience to climate-related droughts throughout the water-system and could prolong recovery periods back to the usual baseline. However, as these options are anticipated to be in operation during winter when water levels are generally higher, the level of effect is reduced. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have an overall minor negative cumulative effect on SEA objective 4.2 during drought level 3a which includes options C-11, C-04a, C-06, and C-30. C-11 and C-04 are mostly anticipated to be implemented during the second season (November to March), alongside the Colliford drought level 2 options. C-06, and C-30 are anticipated to be implemented between April and October. Option C-11, and drought level 2 options C-03 and C-07a are likely to result in cumulative effects on River Fowey due to increased abstractions at multiple</p>

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		<p>locations along the river. As these options are anticipated to be in operation during winter when water levels are generally higher, the level of effect is reduced. However, this also could result in the river being more vulnerable in summer, if it begins the season with already reduced water levels. Effects on the River Fowey will be exacerbated if these options are followed by C-06 and C-30 (not releasing Colliford and Siblyback compensation flows) which are due to be implemented in the summer.</p> <p>Drought Level 3b: The plan is considered to have an overall moderate negative and minor positive cumulative effect on SEA objective 4.2 for the Colliford WRZ drought level 3b options which include the addition of C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options are in operation at the same time as any of the other options. This has potential to reduce resilience to climate-related droughts throughout the water-system and could prolong recovery periods back to the usual baseline. In particular, cumulative negative effects are likely to be present on the River Fowey, due to the reduction in Colliford and Siblyback compensation flows, alongside not providing Colliford Fish Bank releases which will cumulatively lower water levels within the river. There is also the potential for a minor positive cumulative effect as options C-10, C-17 and C-11 also all ensure additional water storage, meaning more water will be available during times of drought, improving climate resilience.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have a minor negative and minor positive cumulative effect on SEA objective 4.2 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). Increased abstraction during drought or post drought has potential to reduce resilience to climate-related droughts throughout the water-system and could prolong recovery periods back to the usual baseline. However, options R-07 and R-11 also involve increased water storage, which would ensure more water will be available during times of drought, improving climate resilience. Therefore, a minor positive effect has also been identified.</p> <p>Drought Level 3a: The plan is considered to have a minor positive and minor negative cumulative effect on SEA objective 4.2 for the Roadford WRZ drought level 3a options. Drought Level 3a includes the addition of option R-25, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. This option will not release compensation flows from Roadford Reservoir when making supply releases to the River Wolf, which, in addition to climate-related drought, could further deplete water levels within the river system in the short-term. This has potential to reduce resilience to climate-related droughts throughout the water-system and could prolong recovery periods back to the usual baseline. However, some options also involve increased water storage, which would ensure more water will be available during times of drought, improving resilience to climate-related drought. Therefore, a minor positive effect has also been identified.</p> <p>Drought Level 3b: The plan is considered to have a moderate negative and minor positive cumulative effect on SEA objective 4.2 for the Roadford WRZ drought level 3b options which include additional options R-20, R-21, R-22, R-23, R-24, R-26, and R-48. All options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside drought level 2 and 3a options. These options will reduce the water levels within the water environment across the Roadford region which may increase the risk of climate-related effects. In particular, cumulative negative effects are likely to be present on the River Tamar and River Wolf due to the reduction in Roadford Reservoir and Upper Tamar Lake compensation flows as a result of R-25 and R-26, alongside not providing Roadford Fish Bank releases which will cumulatively lower water levels within the rivers. However, some options also involve increased water storage, which would ensure more water will be available during times of drought, improving climate resilience. Therefore, a minor positive effect has also been identified.</p>

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		<p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have a minor negative and minor positive cumulative effect on SEA objective 4.2 in the Wimbleball WRZ. The abstraction of groundwater and not releasing compensation flows when making supply releases from Wimbleball Reservoir is likely to deplete water levels within the WRZ and could lead to increased effects of climate-related droughts. This has potential to reduce resilience throughout the water-system and could prolong recovery periods back to the usual baseline. All options within this WRZ may be implemented together which could exacerbate adverse effects. However, a minor positive effect has been identified in relation to W-06 and W-09 will help to improve resilience to drought due to providing available water supplies during drought periods and as both of these options will be implemented at the same time, a minor positive cumulative effect may also be seen. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in Wimbleball Reservoir. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending these cumulative effects into the following drought level.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have the potential for a minor negative cumulative effect on SEA objective 4.2 at drought level 1 which includes the implementation of options BR-27b and BR-28b, which are planned to be implemented for two weeks between September-November for BR-27b and May-November for BR-28b. Delaying late summer water bank releases may increase the risk of climate-related effects downstream due to the reduced water levels and flow and adversely effecting recovery rates, resulting in impacts to biodiversity, habitats, and water quality, and may disrupt ecosystems and water availability within the Bristol WRZ. Although these options are in place for a short period of time, if they are both implemented at the same time, a cumulative effect is possible. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment and supporting resilience of the water supply system.</p> <p>Drought Level 2: The plan is considered to have a minor negative cumulative effect on SEA objective 4.2 for the Bristol WRZ drought level 2 options. Which includes the addition of option BR-47. If water levels are low from drought events prior to abstraction, increasing abstraction for an additional month in October could exacerbate already low water levels, impacting factors downstream such as biodiversity, habitats, and water quality. Additionally, both BR-27b and BR-28b could be implemented during October as well as BR-30 and therefore, if all options were to be in operation at the same time, a cumulative effect is likely. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment and supporting resilience of the water supply system.</p> <p>Drought Level 3a: The plan is considered to have an overall mixed moderate negative and minor positive cumulative effect on SEA objective 4.2 for the Bristol WRZ drought level 3a options which include BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All options are anticipated to be in operation between spring/summer to winter, except BR-31a and BR-31b which will only be in operation in October and May, respectively. The reduction in compensation releases at Chew Valley Lake, Blagdon Reservoir, Chew Magna Reservoir and Cheddar Pounds is likely to cumulatively reduce water levels across the Bristol WRZ. This has potential to reduce resilience to climate-related droughts throughout the water-system and</p>

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		<p>could prolong recovery periods back to the usual baseline. However, BR-31a, BR-31b and BR-47 involve the Colliford pumped water storage scheme, which would ensure more water will be available during times of drought, improving climate resilience. Therefore, a minor positive effect has also been identified. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment and supporting resilience of the water supply system.</p> <p>Bournemouth: <i>Drought Level 3b:</i> This plan is considered to have an overall moderate negative cumulative effect on SEA objective 4.2 across the Bournemouth region which includes options BN-04, BN-05, and BN-12. Both BN-4 and BN-12 involve abstraction from the River Stour, resulting in a reduction in flows and potentially increasing the effects of climate-related droughts downstream. BN-05 involves increased abstraction from the River Allen which later joins the River Stour. The increased abstraction has the potential to adversely affect recovery rates back to pre-drought conditions, potentially impacting biodiversity, habitats and water quality, and may disrupt ecosystems and water availability across Bournemouth. All three options are in operation at the same time (July-August) and have the potential to impact the same watercourse, therefore, a minor cumulative effect is likely. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment, thereby increasing resilience in the system.</p> <p>Isles of Scilly: <i>Drought Level 3a:</i> A minor negative effect has been identified for IS-18 drought level 3a. The option has the potential to further deplete groundwater levels which could reduce resilience to the climate change-induced drought. As there is only one IoS option identified for inclusion within the Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to abstracting more water from the natural environment, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand: A neutral effect has been identified across all demand options at each drought stage in relation to objective 4.2. The demand options are intended to reduce water consumption across the SBB area, and therefore there is the potential for improved resilience of the natural environment to drought, as more water would be retained in the environment. However, the water savings are not expected to have a significant yield and therefore a neutral cumulative effect has been identified for all drought levels.</p> <p>SBB: <i>Drought Level 1:</i> A neutral cumulative effect has been identified in relation to objective 4.2 at drought level 1. The plan as a whole has been assessed as having a neutral effect on this objective.</p> <p><i>Drought Level 2:</i> Negative cumulative effects relate to increased abstraction during a drought period which could potentially reduce resilience to climate-related droughts throughout the water-system and could prolong recovery periods back to the usual baseline. Positive cumulative effects</p>

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		<p>relate some options which increase storage which may improve resilience to drought due to providing available water supplies during drought periods. Additionally, actions which reduce intercompany supply transfers will further retain water in the environmental and boost resilience. The options would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. Overall, a mixed minor negative effect and minor positive effect has been identified for the plan as a whole at drought level 2.</p> <p>Drought Level 3a: Negative cumulative effects relate to increased abstraction during a drought period which could potentially reduce resilience to climate-related droughts throughout the water-system and could prolong recovery periods back to the usual baseline. Effects are compounded as additional options are implemented, particularly those which are used at the same time over the summer months. Positive effects relate some options which increase storage which may improve resilience to drought due to providing available water supplies during drought periods. Additionally, actions which reduce intercompany supply transfers will further retain water in the environmental and boost resilience. The options would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 3a. The plan as a whole has been assessed as having a mixed moderate negative and minor positive effect on this objective at drought level 3a.</p> <p>Drought Level 3b: With the implementation of further supply options, negative effects relate to increased abstraction during a drought period which could potentially reduce resilience to climate-related droughts throughout the water-system and could prolong recovery periods back to the usual baseline. Effects are compounded as additional options are implemented, particularly those which are used at the same time over the summer months. Positive effects relate some options which increase storage which may improve resilience to drought due to providing available water supplies during drought periods. The options would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation and would not affect objective 4.2 beyond this period. Overall, the plan has been assessed as having a mixed major negative and minor positive effect on this objective.</p>
Historic Environment	5	<p>Protect and enhance the historic environment, including archaeology.</p> <p>Colliford: Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 5 for the Colliford WRZ drought level 2 options which include C-03, C-37 and C-07a, which are expected to be implemented during the second season (November to March). The options are unlikely to affect any designated or non-designated heritage asset. However, due to the potential reduction in groundwater and surface water levels from increased abstraction, there is potential for the option to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. Given the temporary nature of the options, the extent of this is unlikely to be significant. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have an overall neutral cumulative effect on SEA objective 5 during drought level 3a which includes the addition of options C-11, C-04a, C-06, and C-30. C-11 and C-04 are mostly anticipated to be implemented during the second season (November to March), alongside the Colliford drought level 2 options. C-06, and C-30 are anticipated to be implemented between April and October. C-11 has the potential to negatively impact the historic assets nearby the abstraction point. However, none of the other options at Level 2 or Level 3a are likely to affect any designated or non-designated heritage asset, therefore a cumulative effect has not been identified in relation to this issue. However, due to the potential reduction in groundwater and surface water levels from increased abstraction, there is potential for the option to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. Given the temporary nature of the options, the extent of this is unlikely to be significant.</p>

Theme	SEA Objective	Effects
		<p>Drought Level 3b: The plan is considered to have an overall minor negative cumulative effect on SEA objective 5 for the Colliford WRZ drought level 3b, which include the addition of options C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options are in operation at the same time as C-06, and C-30. Due to the number of options in operation, there is potential for the options to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions, due to the reduction in groundwater and surface water levels from increased abstraction.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have a neutral cumulative effect on SEA objective 5 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). There is the potential for the increased abstraction to negatively impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. However, as none of these options will be implemented at the same time, and only R-07 was identified as having a minor negative effect for historic environment, a cumulative effect has not been identified.</p> <p>Drought Level 3a: The plan is considered to have a minor negative cumulative effect on SEA objective 5 for the Roadford WRZ drought level 3a. Drought Level 3a includes the addition of option R-25, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. Both R-07 and R-25 were identified as having the potential for minor negative effects on the historic environment and there is the potential for the option to negatively impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. Therefore, with both these options in place at the same time, a cumulative effect is anticipated.</p> <p>Drought Level 3b: The plan is considered to have a minor negative cumulative effect on SEA objective 5 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48. All options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside the drought level 2 and 3a options. No works are required as part of this option and therefore designated or non-designated heritage asset is anticipated to be impacted by the operation of this option. However, due to the number of options in operation, there is the potential for a cumulative effect related to the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions.</p> <p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have a minor negative cumulative effect on SEA objective 5 in the Wimbleball WRZ. There is a potential for historic assets to be impacted such as the setting of a Grade II Listed park and garden due to their reduced river levels. There is also the potential for the options to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to lessen the potential adverse effects on buried archaeological and paleoenvironmental deposits due to retaining more water in Wimbleball Reservoir. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending these cumulative effects into the following drought level.</p>

		<p>Bristol:</p> <p>Drought Level 1: The plan is considered to have an overall neutral cumulative effect on SEA objective 5 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b, which are planned to be implemented for only two weeks at a time. Due to their temporary nature, these options are unlikely to effects on the designated historic environment. However, due to the potential reduction in surface water levels compared to if the option was not in operation, there is potential for the option to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. Given the temporary nature of the options, the extent of this is unlikely to be significant. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 2: The plan is considered to have an overall neutral effect on SEA objective 5 for the Bristol WRZ drought level 2. Drought Level 2 includes the addition of option BR-47. The option is unlikely to affect any designated or non-designated heritage asset. However, as with the level 2 options, there is potential for the option to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. Given the temporary nature of the options, the extent of this is unlikely to be significant. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 3a: The plan is considered to have a minor negative cumulative effect on SEA objective 5 for the Bristol WRZ drought level 3a options which includes the addition of options BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All options are anticipated to be in operation at the same time between spring/summer to winter, except for BR-31a and BR-31b which will only be in operation in October and May, respectively. The main period where all options other than BR-27b, BR-31a, BR-31b and BR-47 will be implemented is from June-November with some options beginning before this period. Due to the number of options in operation, there is potential for the options to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions, due to the reduction in surface water levels from increased abstraction.</p> <p>Positive effects were identified for B-29 due to the option retaining water within Chew Magna Reservoir, which is designated as a historic asset within the Historic Environment Records. As no other options identified any effects on this reservoir, a cumulative effect is not expected. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Bournemouth:</p> <p>Drought Level 3b: This plan is considered to have an overall neutral cumulative effect on SEA objective 5 in the Bournemouth region. The options are unlikely to affect any designated or non-designated heritage asset. However, due to the potential reduction in groundwater and surface water levels from increased abstraction, there is potential for the option to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. Given the temporary nature of the options, the extent of this is unlikely to be significant. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen any possible adverse effects relating to preservation of buried archaeological and paleoenvironmental deposits, due to the retention of more water in the natural environment.</p>
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Theme	SEA Objective	Effects
		<p>Isles of Scilly:</p> <p>Drought Level 3a: A minor negative effect has been identified for IS-18 which has been identified for implementation at drought level 3a. The option is unlikely to impact any historic environmental assets, however there is potential for the reduction in groundwater levels to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. As there is only one loS option identified for inclusion within the Drought Plan, no cumulative effects between supply options have been identified. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions may slightly worsen the adverse effects experienced in the WRZ due to abstracting more water from the natural environment, however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand:</p> <p>A neutral effect has been identified across all demand options at each drought stage in relation to objective 5. The demand options are intended to reduce water consumption across the SBB area and are unlikely interact with any historic environment assets or archaeology. Therefore, the options are not expected to enhance or impact the historic environment or archaeology and therefore, a neutral cumulative effect has been identified for all drought levels.</p> <p>SBB:</p> <p>Drought Level 1: A neutral cumulative effect has been identified in relation to objective 5 at drought level 1. The plan as a whole has been assessed as having a neutral effect on this objective.</p> <p>Drought Level 2: A neutral cumulative effect has been identified in relation to objective 5 at drought level 2. The supply and demand options and actions would not affect recovery rates for this objective. The stated effects would therefore last in the short-term for as long as the plan is in operation at drought level 2. The plan as a whole has been assessed as having a neutral effect on this objective at drought level 2.</p> <p>Drought Level 3a: Minor negative cumulative effects have been identified at drought level 3a. There is a potential for reduced flows to affect certain historic assets e.g. due to changes to the setting. There is also the potential for the options to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 5 could last beyond the operation of the plan at drought level 3a, until full recovery is reached. The plan as a whole has been assessed as having a minor negative effect on this objective at drought level 3a.</p> <p>Drought Level 3b: Minor negative cumulative effects have been identified at drought level 3b. There is a potential for reduced flows to affect certain historic assets e.g. due to changes to the setting. There is also the potential for the options to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions. The supply options could prolong recovery periods back to the usual baseline, as identified through the assessment of the SEA water objectives. Therefore, effects identified for objective 5 could last beyond the operation of the plan at drought level 3b, until full recovery is reached. Overall, the plan as a whole has been assessed as having a minor negative effect on this objective.</p>

Theme	SEA Objective	Effects
<p>Population and Human Health</p>	<p>6.1</p> <p>Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity.</p>	<p>Colliford:</p> <p>Drought Level 2: The plan is considered to have both an overall minor negative and minor positive cumulative effect on SEA objective 6.1 for the Colliford WRZ drought level 2 options which include C-03, C-37 and C-07a, which are expected to be implemented during the second season (November to March). All options are expected to deliver a continued water supply, which will benefit health and wellbeing in the local community. However, there is likely to be cumulative negative effects on recreation and visual amenity associated with the River Fowey as a result of C-03 and C-07a, due to the lowering of water levels within the river system which could impact water quality and availability. Parts of the Cornwall National Landscape are located along the River Fowey corridor, meaning any changes to river levels could influence the character and visual quality of this landscape. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have an overall moderate negative and minor positive cumulative effect on SEA objective 6.1 during level 3a which includes the addition of options C-11, C-04a, C-06 and C-30. C-11 and C-04 are mostly anticipated to be implemented during the second season (November to March), alongside the Colliford drought level 2 options. C-06, and C-30 are anticipated to be implemented between April and October. All options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. The operation of options C-06, C-30, and C-11, alongside drought level 2 options C-03 and C-07a is likely to result in cumulative negative effects on recreation and visual amenity associated with the River Fowey due to the cumulative direct abstraction from the river system or reduction in compensation flow from Colliford Reservoir and Siblyback Reservoir. Even if the options are not in operation at the time, the implementation of options one after another could result in reduced flow. Parts of the Cornwall National Landscape are located along the River Fowey corridor, meaning any changes to river levels could influence the character and visual quality of this landscape, especially as these options are anticipated to be operational during the summer months when water levels are already low.</p> <p>Drought Level 3b: The plan is considered to have an overall moderate negative and minor positive cumulative effect on SEA objective 6.1 for the Colliford WRZ drought level 3b options which include C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options are in operation at the same time as C-06, and C-30. All options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. The reduction of compensation flow (C-06) and not releasing fish bank releases (C-40) at Colliford Reservoir may result in positive cumulative effects on recreation associated with the reservoir due to the retention of water during a drought period. However, this is likely to result in cumulative negative effects on the River Fowey due to a reduction in water levels and therefore water quality and flow, which may impact visual amenity and recreation.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.1 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). All options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. However, recreation and visual amenity associated with the River Dart and River Lyd may be negatively affected locally due to the reduction in water levels as a result of these options.</p>

Theme	SEA Objective	Effects
		<p>Drought Level 3a: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.1 for the Roadford WRZ drought level 3a. Drought Level 3a includes the addition of option R-25, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. The options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. However, recreation and visual amenity associated with the River Wolf and River Tamar may be negatively affected due to the reduction in water levels as a result of not releasing the compensation flow from Roadford Reservoir. The abstraction point along the Tamar is also located within the Tamar Valley National Landscape, where the River Tamar is one of its defining features. Therefore, a reduction in water flow may also result in negative effects on the National Landscape.</p> <p>Drought Level 3b: The plan is considered to have both a moderate negative and minor positive cumulative effect on SEA objective 6.1 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside drought level 2 and 3a options. All options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. The implementation of R-26 and R-48 alongside R-25 is likely to result in cumulative negative effects on recreation and visual amenity associated with the River Wolf and River Tamar due to the cumulative reduction in water levels within the river systems. The abstraction point along the Tamar is also located within the Tamar Valley National Landscape, where the River Tamar is one of its defining features. Therefore, a reduction in water flow may also result in negative effects on the National Landscape.</p> <p>Wimbleball:</p> <p>Drought Level 3b: This plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.1 in the Wimbleball WRZ. All options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. The cumulative abstraction from the River Exe (W-06 and W-03) and not releasing compensation flow or Fish Bank Releases into the River Haddeo (W-09 and W-22) are likely to result in adverse effects on recreation and visual amenity associated with these two rivers due to a reduction in water levels and flow, while the retention of water in Wimbleball Reservoir would give rise to a cumulative positive effect. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to further enhance the positive cumulative effects on recreation and visual amenity experienced at Wimbleball Reservoir due to retaining more water in the natural environment.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.1 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b, which are planned to be implemented for only two weeks, between September – November and May – November, respectively. Both options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. There are likely to be cumulative negative effects on recreation and visual amenity associated the River Chew and Congresbury Yeo which may experience a reduction in water level. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p>

Theme	SEA Objective	Effects
		<p>Drought Level 2: The plan is considered to have an overall minor negative and minor positive cumulative effect on SEA objective 6.2 for the Bristol WRZ drought level 2 options which includes the addition of option BR-47. There is likely to be cumulative negative effects on recreation and visual amenity associated downstream of the River Axe due to a reduction in water levels and flow. Both Level 1 options could also be implemented in October and although water levels are not expected to be as low, if three options are in operation at the same time then a cumulative effect is possible. Minor positive effects relate to delivering a continued water supply in a drought period. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 3a: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.1 for the Bristol WRZ drought level 3a options which include the addition of options BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All 3b options are anticipated to be in operation between spring/summer to winter, expect BR-31a and BR-31b which will only be in operation in October and May, respectively. All options are expected to deliver a continued water supply during a drought situation, which will benefit health and wellbeing in the local community. Multiple options located on the same river that are predicted to be in operation simultaneously, such as BR-47 and BR-31a on the River Axe, and BR-28a and BR-29 on the River Chew. This is likely to result in negative cumulative effects on recreation and visual amenity due to a reduction in water levels and flow. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Bournemouth:</p> <p>Drought Level 3b: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.1. All options are expected to deliver a continued water supply during a drought situation. However, the increased abstractions are likely to lower water levels within the river systems, at a time where water levels are already anticipated to be low which may result in visual amenity effects and access to recreational activities such as fishing or swimming along the River Stour. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. While the extent of the impact is not certain, this action is likely to lessen visual amenity and recreational adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Isles of Scilly:</p> <p>Drought Level 3a: A neutral effect has been identified for both IS-18; therefore, a neutral cumulative effect has been identified at drought level 3a. The option is not expected to affect the health and wellbeing of the local community or affect visual amenity. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. This action is not anticipated to result in any cumulative effects as levels of abstraction are not anticipated to be significant.</p> <p>Demand:</p> <p>Positive effects were identified across demand options D-01, D-02, D-03 and D-04, which are expected to be implemented at drought levels 1-3a, with increasing action at each stage. For example, D-01, communications will involve enhanced customer communications at drought level 1, increasing to stronger, more frequent communications at level 2, and messaging tied into regional/national response at level 3a. Positive effects relate to customer benefits associated with saving water such as saving money through bills. The use of water saving devices and leak reduction</p>

Theme	SEA Objective	Effects
		<p>measures are also likely to have a long-term benefit beyond the Drought Plan implementation period. As such, a moderate positive cumulative effect has been identified across all drought levels. Minor negative effects were also identified for the remaining demand options, other than D-06, which was assessed as neutral, which are implemented at every drought stage. Negative effects relate to nuisance and restrictions on usual activity, particularly in relation to TUBs and NEUBs. Although these options may conserve the most water, they are considered the most restrictive and may cause discontent for customers. As such, a minor negative effect has been identified at drought level 1, with moderate negative effects identified across all remaining drought levels, following the implementation of TUBs and then NEUBs.</p> <p>SBB:</p> <p>Drought Level 1: Both minor negative and moderate positive cumulative effects have been identified in relation to objective 6.1 at drought level 1. This is solely in relation to the demand options which offer customer benefits associated with saving water such as saving money through bills. A minor negative effect has also been identified in relation the drought options due to nuisance and restrictions on usual activity, particularly in relation reducing water pressure throughout the system. The plan has been assessed as having a mixed minor negative and moderate positive effect on 6.1.</p> <p>Drought Level 2: There are likely to be adverse cumulative negative effects on recreation and visual amenity downstream of the abstraction sites on the River Axe, River Fowey, River Dart and River Lyd, due to the lowering of water levels within the river system which could impact water quality and availability. Parts of the Cornwall National Landscape are located along the River Fowey corridor, meaning any changes to river levels could influence the character and visual quality of this landscape. All options are anticipated to deliver a continued water supply during a drought period, which will benefit health and wellbeing in the local community. The effects associated with the demand options, as set out within drought level 1, are expected to remain throughout every drought stage. The plan as a whole has been assessed as having a moderate negative and moderate positive effect on this objective at drought level 2.</p> <p>Drought Level 3a: The cumulative abstraction alongside reduction in water discharges across the SBB region is likely to result in adverse effects on recreation and visual amenity on various rivers, namely River Axe, River Chew, River Fowey, River Wolf and River Tamar. National Landscapes within the SBB region may be negatively affected due to the reduction in river water levels during the summer months when water levels are already low, in particular where the river is one of the defining features, such as the River Tamar. Conversely, options are anticipated to deliver a continued water supply during a drought period, which will benefit health and wellbeing in the local community. Both the negative and positive effects associated with the demand options, as set out within drought level 1 are expected to remain throughout every drought stage. The plan as a whole has been assessed as having a moderate negative and moderate positive effect on this objective at drought level 3a.</p> <p>Drought Level 3b: Increased abstractions alongside reductions in water discharges across the SBB region is likely to lower water levels within the river systems, at a time where water levels are already anticipated to be low. This is likely to result in adverse effects on visual amenity effects and access to recreational activities on various rivers, namely River Stour, River Fowey, River Wolf and River Tamar. National Landscapes within the SBB region may be negatively affected due to the reduction in river water levels during the summer months when water levels are already low, in particular where the river is one of the defining features, such as the River Tamar. Conversely, options are anticipated to deliver a continued water supply during a drought period, which will benefit health and wellbeing in the local community. Further positive effects on visual amenity and access to recreation activities are likely to result from options that retain water in Colliford Reservoir and Roadford Reservoir. The effects associated with the demand options, as set out within drought level 1, are expected to remain throughout every drought stage. Overall, a mixed moderate negative and moderate positive effect has been identified for the plan as a whole at drought level 3b.</p>

Theme	SEA Objective	Effects
	<p>6.2 Sustaining water supplies for the local economy, including tourism, business and agriculture.</p>	<p>Colliford:</p> <p>Drought Level 2: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Colliford WRZ drought level 2 options which include C-03, C-37 and C-07a. These options are expected to be implemented during the second season (November to March). All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. C-07 is likely to reduce water levels within Park Lake Reservoir, but as this option is anticipated to be operational during winter, water levels are not expected to be as low as summer months therefore possible effects on tourism are reduced. There may be a potential for cumulative negative effects on tourism associated with the River Fowey as a result of C-03 and C-37, due to the lowering of water levels within the river system. However, as the options are anticipated to be operational during winter, effects may be reduced. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump. This action is not anticipated to result in any cumulative effects as no change to abstraction is expected.</p> <p>Drought Level 3a: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Colliford WRZ drought level 3a options which include the addition of C-11, C-04a, C-06, and C-30. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. The operation of C-06 and C-30, which may follow the operation of C-11, C-03 and C-07a is likely to result in cumulative negative effects on tourism associated with the River Fowey due to the cumulative direct abstraction from the river system or reduction in compensation flow from Colliford Reservoir and Siblyback Reservoir.</p> <p>Drought Level 3b: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Colliford WRZ drought level 3b options which include the addition of C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be implemented at any time. Therefore, it has been assumed that all drought 3b supply options are in operation at the same time as C-06, and C-30. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. The reduction of compensation flow (C-06) and not releasing fish bank releases (C-40) at Colliford Reservoir is likely to result in positive cumulative effects on tourism associated with the reservoir due to the retention of water during a drought period. However, this is likely to result in cumulative negative effects on the River Fowey due to a reduction in water levels and therefore water quality and flow. The effects of C-06, C-30 and C-40 on the River Fowey are anticipated to be exacerbated due to these options being in operation during the summer months where water levels are likely to be low.</p> <p>Roadford:</p> <p>Drought Level 2: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. However, tourism associated with the River Dart and River Lyd may be negatively affected due to the reduction in water levels.</p> <p>Drought Level 3a: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Roadford WRZ drought level 3a. Drought Level 3a includes the addition of option R-25, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. However, tourism associated with the River Wolf and River Tamar may be negatively affected due to the reduction in water levels as a result of not releasing the compensation flow at Roadford Reservoir.</p>

Theme	SEA Objective	Effects
		<p>Drought Level 3b: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48. All 3b options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside drought level 2 and 3a options. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. The implementation of R-26 and R-48 alongside R-25 is likely to result in cumulative negative effects on tourism associated with the River Wolf and River Tamar due to the cumulative reduction in water levels within the river systems.</p> <p>Wimbleball:</p> <p>Drought Level 2: This plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 in the Wimbleball WRZ. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. The cumulative abstraction from the River Exe (W-06 and W-03) and not releasing compensation flow or Fish Bank Releases into the River Haddeo (W-09 and W-22) are likely to result in adverse effects on tourism associated with these two rivers due to a reduction in water levels and flow within the river systems, while a positive cumulative effect is likely for tourism-based business at Wimbleball Reservoir due to the retention of water in the reservoir. Drought actions W-26 and W-27 involve reducing the intercompany supply agreement with Wessex Water, while W-24 involves smarter controls at Colaton Raleigh boreholes, with no significant change to current use. While the extent of the impact is not certain, W-26 and W-27 are likely to enhance the positive cumulative effects within Wimbleball Reservoir. Drought action W-28 involves a further reduction in the intercompany supply to Wessex Water at drought level 3a, further extending beneficial cumulative effects into the following drought level.</p> <p>Bristol:</p> <p>Drought Level 1: The plan is considered to have a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b, which are planned to be implemented for only two weeks, between September – November and May – November, respectively. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. However, tourism associated with the River Chew and Congresbury Yeo may be negatively affected due to the reduction in water levels. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 2: The plan is considered to have an overall split minor negative and minor positive cumulative effect on SEA objective 6.2 for the Bristol WRZ drought level 2. Drought level 2 includes the addition of option BR-47. Tourism associated with the River Axe may be affected by a reduction in water levels, however, as option BR-47 will only be in operation during October when rainfall is likely to be higher, effects are likely to be reduced. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. Drought actions BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water, for immediate use. While the extent of the impact is not certain, these actions are likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Drought Level 3a: The plan is considered to have both a minor negative and minor positive cumulative effect on SEA objective 6.2 for the Bristol WRZ drought level 3a options which include the addition of BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All 3b options are anticipated to be in operation between spring/summer to winter, except for BR-31a and BR-31b which will only be in operation in October and May, respectively. All</p>

Theme	SEA Objective	Effects
		<p>options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought. Multiple options are located on the same river and may be in operation simultaneously, such as BR-47 and BR-31a on the River Axe, and BR-28a and BR-29 on the River Chew. This may result in negative cumulative effects on tourism associated with these rivers due to a reduction in water levels. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. While the extent of the impact is not certain, this action is likely to lessen the adverse effects experienced in the WRZ due to retaining more water in the natural environment.</p> <p>Bournemouth: <i>Drought Level 3b:</i> The plan is considered to have an overall minor positive cumulative effect on SEA objective 6.2 in the Bournemouth region. All options are anticipated to deliver a sustained water supply to businesses in times of drought. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer, which will also support the positive cumulative effect due to retaining more water in the natural environment and sustaining water supplies.</p> <p>Isles of Scilly: <i>Drought Level 3a:</i> Option IS-18 likely to result in a minor positive effect as it will sustain water supplies during a drought period, which will benefit businesses and industries such as tourism (which gains significant tourist population in the summer months). Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions are expected to act cumulatively due to the increase in supply; however this abstraction involves small quantities and is not anticipated to be significant.</p> <p>Demand: Minor negative effects were identified the two demand options, D-06 (drought level 1) and D-07 (drought levels 2 and 3b), as well as a moderate negative effect for D-08 (drought levels 3a and 3b). Negative effects relate to nuisance and restrictions on usual business activity, particularly in relation to TUBs, NEUBs and reducing water pressure throughout the system. Although these options may conserve the most water, they are considered the most restrictive and may cause discontent for businesses and agriculture which rely on the water supply, especially during peak tourist season. As such, a neutral effect has been identified for drought level 1; a minor negative effect for drought level 2; and a moderate negative effect at drought levels 3a and 3b, when NEUBs are implemented.</p> <p>SBB: <i>Drought Level 1:</i> Both minor negative and positive effects were identified in the Bristol WRZ at drought level 1, in addition to pressure reductions to manage demand, however cumulative effects across the SBB region are not anticipated from these options. The plan as a whole has been assessed as having a neutral effect on this objective.</p> <p><i>Drought Level 2:</i> There are likely to be cumulative negative effects on tourism associated downstream of the abstraction sites on the River Axe, River Fowey, River Dart and River Lyd, due to the lowering of water levels within the river system which could impact water quality and availability. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought, resulting in positive effects.</p>

Theme	SEA Objective	Effects
		<p>The effects associated with the demand options would also remain at drought level 2, however as TUBs are predominantly a domestic measure, impacts on objective 6.2 are expected to be limited.</p> <p>Drought Level 3a: There are likely to be negative cumulative effects on tourism associated downstream of the abstraction sites on the River Chew, River Fowey, River Wolf and River Tamar, due to the cumulative increased abstraction combined with a reduction in water discharges resulting in a lowering of water levels within the river system, which could impact water quality and availability. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought, resulting in positive effects. Additional positive effects are likely to occur due to the retention of water within reservoirs across the SBB region which is likely to benefit tourism associated with these reservoirs. The demand options are expected to result in moderate adverse effects at drought level 3a due to the implementation of NEUBs, potentially causing nuisance and restrictions on usual business activity. Although these options may conserve the most water, they are considered the most restrictive and may cause discontent for businesses and agriculture which rely on the water supply, especially during peak tourist season. Overall, a mixed moderate negative and minor positive effect has been identified for the plan at drought level 3a.</p> <p>Drought Level 3b: There are likely to be negative cumulative effects on tourism associated downstream of the abstraction sites on the River Fowey, River Wolf and River Tamar, due to the increased abstraction combined with a reduction in water discharges resulting in a lowering of water levels within the river system, which could impact water quality and availability. All options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought, resulting in positive effects. Additional positive effects are likely to occur due to the retention of water within reservoirs across the SBB region which is likely to benefit tourism associated with these reservoirs. The demand options are expected to result in moderate adverse effects at drought level 3b, due to the reasons afore mentioned, which are likely to result in additional pressures on businesses. A mixed moderate negative and minor positive effect has been identified for the plan at drought level 3b.</p>
Material Assets	7	<p>Minimise resource use and waste production.</p> <p>Colliford:</p> <p>Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Colliford WRZ drought level 2 options which include C-03, C-37 and C-07a which are expected to be implemented during the second season (November to March). These options do not propose to use any additional infrastructure; therefore, it is not anticipated to result in any change in resource use. Drought action C-02 will also be in operation from drought level 1 which involves the installation of a temporary booster pump, however this is not anticipated to result in any cumulative effects due to the extremely small scale of resource use.</p> <p>Drought Level 3a: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Colliford WRZ drought level 3a options which include C-11, C-04a, C-06 and C-30. C-11 and C-04a are anticipated to be implemented during the second season (November to March) alongside the Colliford drought level 2 options, and C-06, and C-30 are anticipated to be implemented during April to October. C-04a requires the installation of temporary pumps to enable increased abstraction which will require an increase in energy, however no significant waste generation is anticipated during operation, and the temporary nature of the pumps means impacts are likely to be short-term and reversible. As no other options require any additional infrastructure; they are not anticipated to result in any cumulative change in resource use.</p> <p>Drought Level 3b: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Colliford WRZ drought level 3b options which include C-10, C-17, and C-40. C-10 is anticipated to be implemented during April to November, and C-17 and C-40 are expected to be</p>

Theme	SEA Objective	Effects
		<p>implemented at any time. Therefore, it has been assumed that all drought 3b supply options are in operation at the same time as C-06, and C-30. These options do not propose to use any additional infrastructure; therefore, it is not anticipated to result in any cumulative change in resource use.</p> <p>Roadford: Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Roadford WRZ drought level 2 options which include R-07 (implemented July – September), R-11 (implemented April – May), and R-45 (implemented October – November). Materials and increase in energy consumption are likely to be required for new temporary pumps associated with R-07. However, due to the temporary nature of works and locality of the option it is not anticipated for cumulative effects to occur across the WRZ.</p> <p>Drought Level 3a: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Roadford WRZ drought level 3a. Drought Level 3a includes option R-25 only, which is due to be in operation between April – October, alongside drought level 2 options R-07 and R-11. These options do not propose to use any additional infrastructure; therefore, it is not anticipated to result in any change in resource use.</p> <p>Drought Level 3b: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Roadford WRZ drought level 3b options which include R-20, R-21, R-22, R-23, R-24, R-26, and R-48. All options are anticipated to be in operation between April – November, apart from R-48 which could be in operation at any time, alongside drought level 2 and 3a options. These options do not propose to use any additional infrastructure; therefore, it is not anticipated to result in any change in resource use.</p> <p>Wimbleball: Drought Level 2: This plan is considered to have an overall neutral cumulative effect on SEA objective 7 in the Wimbleball WRZ. Materials and increase in energy consumption are likely to be required for new a temporary pipeline required for W-06. However, due to the temporary nature of works and locality of the option it is not anticipated for cumulative effects to occur across the WRZ. Drought actions W-24, W-26, and W-27 will be implemented at drought level 2, with W-26 also applying at drought level 1. Drought action W-28 will be implemented at drought level 3a. A No additional infrastructure, pumping or transfer of water is required for the operation of these options, and no cumulative effects will occur.</p> <p>Bristol: Drought Level 1: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Bristol WRZ drought level 1 options which include BR-27b and BR-28b and are planned to be implemented for only two weeks, between September – November and May – November, respectively. These options do not propose to use any additional infrastructure; therefore, it is not anticipated to result in any change in resource use. Drought action BR-10 will also be in operation at drought level 1 which involves reducing the intercompany supply agreement with Wessex Water. This action is not anticipated to result in any cumulative effects on resource use and waste.</p> <p>Drought Level 2: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Bristol WRZ drought level 2. Drought Level 2 includes option BR-47 only. As the option is anticipated to utilise existing infrastructure there is only anticipated to be a small increase in resource use associated due to the permit being extended to include October in abstraction. However, due to the temporary nature, this effect is not anticipated to be significant. Drought action BR-25 and BR-54 will also be in operation at drought level 2. BR-25 includes reducing the intercompany</p>

Theme	SEA Objective	Effects
		<p>supply agreement with Wessex Water and BR-54 involves increasing water transfer from Wessex Water. These actions are not anticipated to result in any cumulative effects on resource use and waste.</p> <p>Drought Level 3a: The plan is considered to have an overall neutral cumulative effect on SEA objective 7 for the Bristol WRZ drought level 3a options which include BR-27a, BR-28a, BR-29, BR-30, BR-31a, and BR-31b. All options are anticipated to be in operation between spring/summer to winter, expect BR-31a and BR-31b which will only be in operation in October and May, respectively. As these options are anticipated to utilise existing infrastructure there is only anticipated to be a small increase in resource use associated with options that involve extending abstraction permits (BR-31a and BR-31b). However, due to the temporary nature, this effect is not anticipated to be significant. Drought action BR-55 will also be in operation at drought level 3a which involves reducing the intercompany supply agreement with Wessex Water. This action is not anticipated to result in any cumulative effects on resource use and waste.</p> <p>Bournemouth: Drought Level 3b: This plan is considered to have an overall neutral cumulative effect on SEA objective 7 in the Bournemouth region. Options within the Bournemouth region do not propose to use any additional infrastructure, therefore it is not anticipated to result in any change in resource use. Drought action BN-14 will also be in operation from drought level 1 which involves reducing supply of treated water to a large industrial customer. This action is not anticipated to result in any cumulative effects as no change to resource use and waste is expected.</p> <p>Isles of Scilly: Drought Level 3a: A neutral effect has been identified for option IS-18 which has been identified for implementation at drought level 3a, therefore a neutral cumulative effect has been identified. The option does not propose to use any additional infrastructure. Drought actions IS-12, IS-14, and IS-19 will be in operation from drought level 2 which involves a very small increase in abstraction from boreholes within existing licence conditions. These actions are not anticipated to result in any cumulative effects as no new infrastructure is required.</p> <p>Demand: A neutral effect has been identified across all demand options at each drought stage in relation to objective 7. The demand options are intended to reduce water consumption across the SBB area, which may reduce the resources needed to pump, treat and transfer water around the region. However, savings are expected to be minimal. Minor negative effects were identified in relation to options D-04 and D-05, which are implemented at drought levels 1, 2 and 3a. These options involve identifying and fixing leaks, therefore may involve some resource use and waste production. Effects are anticipated to be very localised and could be mitigated though using recyclable materials and zero or low carbon equipment and vehicles. As such, a neutral cumulative effect has been identified across all demand options for all drought levels.</p> <p>SBB: All Drought Levels: Neutral cumulative effects have been identified across the whole SBB region for all drought stages. Generally, the preferred plan options do not require construction works and are unlikely to result in significant increase in resource use or waste production. A small number of options do require minor, temporary works, however effects are expected to be small-scale and localised and should not result in cumulative effects. The stated effects would therefore last in the short-term for as long as the plan is in operation and would not affect material assets, resource use or waste beyond this period. The plan as a whole has been assessed as having a neutral effect on this objective.</p>

10.1.3 Summary of Intra-Plan Cumulative Effects by Drought Level

This section summarises the above assessment of plan-level effects for the draft Drought Plan 2027 as a whole (as presented for SBB in **Table 10.6** above). The below summaries for the plan include supply and demand options as well as actions, across all WRZs.

Summary of effects for drought level 1

No major or moderate negative cumulative effects have been identified for the SBB region at drought level 1 for the draft Drought Plan 2027.

Minor negative effects have been identified for water objectives 2.1 '*Protect and enhance the quality of the water environment and resources*', and 2.2 '*Provide a reliable water supply in times of drought*' due to potential adverse impacts on rivers in the Bristol WRZ. Other minor negative effects have been identified for objective 4.1 '*Reduce embodied and operational carbon emissions*.' This is in relation to some of the demand options potentially resulting in increased operational carbon emissions associated with transport e.g. delivering water efficiency devices, and increased embodied carbon associated with fixing leaks. Minor negative effects have also been identified in relation to the population and human health objective 6.1 '*Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity*'. This also relates to the demand options, and the potential for nuisance to the community due to measures such as reducing water pressure throughout the system.

No major positive effects have been identified at drought level 1. A moderate positive effect has been identified in relation to objective 6.1, which is due to the potential for demand options to deliver customer benefits such as reduced bills.

Minor positive effects were identified in relation to objectives 2.1 and 2.2. The implementation of the demand options would result in more water being retained within reservoirs and the natural environment during a drought period, which supports a sustainable water supply.

All other objectives were assessed as neutral. As only two supply options within the Bristol WRZ are expected to be implemented at drought level 1, cumulative effects across the SBB region are limited.

Summary of effects for drought level 2

No major negative cumulative effects have been identified for the draft Drought Plan 2027 at drought level 2.

Moderate negative effects have been identified in relation to 1.3 '*Reduce the spread or presence of INNS*'. This is in relation to adverse effects on INNS within the Wimbleball and Colliford WRZs due to an increase in wetted area in Colliford and Wimbleball Reservoirs which may facilitate the spread of INNS. Moderate negative effects were also identified for Colliford, Roadford, Wimbleball and Bristol WRZs in relation to water objectives 2.1 '*Protect and enhance the quality of the water environment and water resources*' and 2.2 '*Provide a reliable water supply in times of drought*'. For objective 2.1, increased abstraction on numerous rivers across the SBB region, namely River Axe, River Fowey and River Exe, are likely to reduce water levels which may lead to reduced water quality and result in WFD deterioration of associated waterbodies. This may also prolong post-drought recovery periods. For objective 2.2, moderate negative effects also relate to increasing abstraction of water from the natural environment during a drought, which is not considered a sustainable water supply, in particular for Colliford and Roadford WRZs. Moderate negative effects have also been identified in relation to objective 6.1 '*Maintain and enhance the health and wellbeing of the local community, including recreation and visual amenity*'. This relates to the demand options and the potential for nuisance and disruption to people's lives due to measures such as TUBs.

Minor negative effects have been identified in relation to biodiversity objectives biodiversity objectives 1.1 '*Protect and enhance designated ecological sites*' and 1.2 '*Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites*'. There is a potential for the drought level 2 options to adversely affect designated sites within the Bristol WRZ (Chew Valley Lake,

and Severn Estuary SAC, SPA and Ramsar) and Roadford WRZ (Dartmoor SAC) due to the reduction in flow affecting qualifying fish species. If all of the level 2 options were implemented, habitats and species across the region may experience effects associated with reduced water quality and quantity, which may prolong the length of time for ecosystems to return to the usual baseline.

Further minor negative effects have been identified for objective 3 '*Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance*'. Increased abstraction has potential to reduce river levels, which may already be low due to drought conditions. This could potentially reduce the availability of water in surrounding soils, reducing functionality, and could destabilise soils along riverbanks. Objective 4.2 '*Increase resilience to climate change risks and hazards*' was also assessed as a minor negative effect due to increased abstraction during a drought period, which could potentially reduce resilience to climate-related droughts throughout the water system and could prolong recovery periods back to the usual baseline. Minor negative effects have also been identified in relation to the population and human health objective 6.2 '*Sustaining water supplies for the local economy, including tourism, business and agriculture*', due to potential for nuisance to businesses associated with demand reduction measures.

Moderate positive effects have been identified in relation to objective 2.2, rather than a minor positive effect at drought level 1. The implementation of the demand options including measures such as TUBs would result in more water being retained within the natural environment during a drought period, which supports a sustainable water supply. Additionally, positive effects were identified in relation to maintaining water levels in reservoirs which would retain a level of supply and may prolong the length of time a level of compensation flow is available downstream.

A minor positive effect has been identified in relation to objective 6.2 as all options are anticipated to deliver a sustained water supply to businesses, agriculture and tourism in times of drought, resulting in positive effects. Furthermore, minor positive effects have been identified for objectives 1.2 and 4.2. This is due to some of the options retaining more water in reservoirs, which could benefit habitats and species, water quality and could help build resilience to climate-related drought.

Neutral effects were identified for the remaining objectives as the options do not involve construction works and are not anticipated to increase or decrease flood risk.

The remaining negative and positive effects that were identified drought level 1 will continue at drought level 2.

Summary of effects for drought level 3a

At drought level 3a, effects are similar to those identified at drought level 2, with the following differences.

A moderate negative cumulative effect, rather than a minor negative effect has been identified in relation to biodiversity objectives 1.1 '*Protect and enhance designated ecological sites*' and 1.2 '*Protect and enhance ecology and biodiversity, including habitats and species of principal importance and water-sensitive sites*' for Colliford, Roadford, and Bristol WRZs. The implementation of the additional 3a options has the potential to further contribute to the adverse effects on designated sites within the SBB region, namely the Chew Valley Lake SPA, Severn Estuary SAC, SPA and Ramsar, and the Dartmoor SAC, due to the reduction in flow affecting qualifying fish species. Additional cumulative effects may also result on the Plymouth Sound & Estuaries SAC within the Roadford WRZ due to the implementation of R-25 alongside drought level 2 options.

Rather than minor negative effects, moderate negative effects were identified in relation to the soil for Colliford and Bristol WRZs, climate resilience and population and human health objectives (3 '*Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance*', 4.2 '*Increase resilience to climate change risks and hazards*' for Bristol WRZ, and 6.2 '*Sustaining water supplies for the local economy, including tourism, business and agriculture*' for Colliford WRZ). Effects are worsened due to the increased number of options being implemented as a drought situation develops, resulting in compounding adverse effects. Further increasing abstraction is likely to

result in worsened effects on the environment and may further prolong recovery periods back to the usual pre-drought baseline. For objective 6.2, the implementation of NEUBs is identified as potentially resulting in moderate adverse effects on businesses.

Rather than a neutral effect, a minor negative effect was identified for objective 5 '*Protect and enhance the historic environment, including archaeology*', due to the potential for reduced flows affecting certain historic assets. There is also the potential for the options to impact the preservation of buried archaeological and paleoenvironmental deposits that rely on water-saturated conditions.

Minor positive effects have been identified for objectives 1.1 and 2.3 '*Reduce flood risk*'. Positive cumulative effects are likely to occur, due to the retention of water within reservoirs and lakes across the SBB region which will benefit SSSIs that rely on higher water levels. The implementation of additional demand measures including NEUBs will also reduce consumption and retain more water in the natural environment. Several options are likely to reduce flood risk over winter due to lowering water levels within the river system, and there are also options implemented during these drought levels that may mitigate against summer flash flooding.

The remaining negative and positive effects that were identified drought level 2 will continue at drought level 3a.

Summary of effects for drought level 3b

At drought level 3b, effects are similar to those identified at drought level 3a, with the following differences.

In relation to objective 1.1 '*Protect and enhance designated ecological sites*', 2.1 '*Protect and enhance the quality of the water environment and water resources*', 2.2 '*Provide a reliable water supply in times of drought*' and 4.2 '*Increase resilience to climate change risks and hazards*', a major negative cumulative effect has been identified at drought level 3b, rather than moderate negative effects which were identified at 3a, in particular for Roadford WRZ. This relates to the continued abstraction of water from the natural environment as a drought develops, resulting in major cumulative effects on designated sites, particularly those which depend on rivers which may be affected by multiple options. Reducing water availability in the natural environment may also result in reduced water quality due to reduced dilution potential, with potential deterioration of WFD waterbodies. Increasing abstraction while reducing or pausing compensation flows is considered an unsustainable long-term approach to maintaining supply. These effects are compounded as additional options are implemented, especially those operating concurrently during the summer months., the addition of the 3b options may prolong recovery periods back to the usual pre-drought baseline and may reduce resilience within the natural environment to climate related drought.

Although a moderate negative remains in relation to objective 3 '*Protect and enhance the functionality, quantity and quality of soils, including the protection of sites of geological importance*', a minor positive effect was also identified at drought level 3b. This relates to some of the reservoirs being located near areas of peatland. As some of the options involve retaining more water in certain reservoirs, it is possible that this could enhance the functionality of these habitats, particularly during a period of drought.

The remaining negative and positive effects that were identified drought level 3a will continue at drought level 3b.

10.2 External Cumulative Effects Assessment

Potential external cumulative effects of the draft Drought Plan 2027 with other relevant plans, programmes and projects have been considered as per the methodology outlined in **Section 8.3**. These include the following:

- West Country Water and Environment (WCWE) Draft Regional Water Resources Plan (2023)¹;
- Neighbouring water companies' WRMPs and Drought Plans:
 - Wessex Water WRMP24²;
 - Southern Water WRMP24³;
 - Severn Trent Water WRMP24⁴;
 - Thames Water WRMP24⁵;
 - Wessex Water drought plan⁶;
 - Southern Water drought plan⁷;
 - Severn Trent Water drought plan⁸;
 - Thames Water drought plan⁹;
- National Policy Statements¹⁰ and National / Regional Infrastructure Projects¹¹;
- Relevant Local Development Plans;
- Minerals and Waste Proposals;
- Canal & River Trust Management Plans¹²;
- Local Nature Recovery Strategies; and
- Environment Agency Drought: How it is managed in England¹³.

10.2.1 WCWRG Draft Regional Water Resources Plan

Plan Summary

The WCWRG is one of five regional groups established to develop regional water resources plans in order to ensure the continuous provision of resilient, efficient and sustainable water supplies for the future. The draft Regional Water Resources Plan (RWRP) for the South West of England sets out the long-term water needs for the region up to 2050 and explores options to respond to those needs. The draft RWRP was produced for consultation in early 2023 and a final plan has not yet been published.

The draft RWRP provides an overview of potential supply and demand options that are being investigated in the West Country. Strategic regional solutions are options that generate new water resources and enable the new water resources to be used regionally. They involve more than one water company and will provide a significant (typically more than 10Ml/d) yield. Option types include effluent reuse, new and enhancement to existing reservoirs, abstraction from rivers and desalination.

¹ WCWRG (2023) *Draft Regional Plan*. Available at: [West Country Water and Environment](#)

² Wessex Water (2024) *Water Resource Management Plan*. Available at: [Water Resources Management Plan | Wessex Water](#)

³ Southern Water (2025) *Final Draft Water Resources Management Plan 2024*. Available at: [Water Resources Management Plan - Southern Water](#)

⁴ Severn Trent (2024) *Water Resources Management Plan 2024*. Available at: [WRMP24 final documents | Water resources management plan | Our plans | About us | Severn Trent Plc](#)

⁵ Thames Water (2024) *Water Resources Management Plan 2024*. Available at: [Water resources | Regulation | About us | Thames Water](#)

⁶ Wessex Water (2022) *Drought Plan*. Available at: [Drought Plan | Wessex Water](#)

⁷ Southern Water (2019) *Drought Plan*. Available at: [Drought Plan – Southern Water](#)

⁸ Severn Trent (2022) *Final Drought Plan*. Available at: [Drought plan | Our plans | About us | Severn Trent Plc](#)

⁹ Thames Water (2022) *Drought Plan*. Available at: [Our drought plan | Regulation | About us | Thames Water](#)

¹⁰ Planning Inspectorate (Revised 2025) *National Policy Statements*. Available at: [Nationally Significant Infrastructure Projects: National Policy Statements - GOV.UK](#)

¹¹ Planning Inspectorate (n.d) *Find a National Infrastructure Project*. Available at: [Project search](#)

¹² Canal and River Trust (n.d) *Ways to Save Water*. Available at: [Ways to save water | Canal & River Trust](#)

¹³ Environment Agency (2025) *Drought: how it is managed in England*. Available at: [Drought: how it is managed in England - GOV.UK](#)

Abstraction from rivers was not considered a preferred option in the draft RWRP, as the application of tighter environmental flow indicators on river abstractions means that for the majority of rivers in the West Country region, additional abstraction in summer may require further upstream support of the river. Feasible river abstractions should therefore be limited to abstraction of excess winter flows to refill storage reservoirs, a small number less environmentally sensitive under-utilised rivers, and rivers that are regulated by releases from an upstream reservoir. Desalination was also not preferred because desalination plants have a high carbon footprint and high maintenance costs when only operating intermittently to meet demands during times of water scarcity. In addition, they generate a highly saline waste stream which is difficult to dispose of.

External Cumulative Effects

Some of the SBB draft Drought Plan 2027 options do involve increased abstraction from rivers, which conflicts with the aims of the RWMP. However, the demand options would be implemented first, which supports the avoidance of abstracting water from the natural environment. Furthermore, as all of the Drought Plan options are expected to be temporary and only implemented during a drought period, no external cumulative effects have been identified.

10.2.2 Neighbouring water companies' WRMPs

Plan Summary

The neighbouring WRMPs including Wessex Water, Southern Water, Severn Trent Water and Thames Water have been considered for potential cumulative effects.

Wessex Water operates a single integrated WRZ and meets the majority of its demand through groundwater resources. Wimbleball is a key reservoir for Wessex Water's supply and is shared with SBB. Wessex Water's WRMP24 identified 86 feasible supply and demand options, with 11 of these options (eight supply and three demand) being taken forward to the preferred plan to meet the forecast deficit due to factors such as climate change. For this, the plan had to undergo several step changes in the regulatory planning requirements such as a move to 1 in 500 drought resilience by 2039, reducing abstraction where necessary from environmentally sensitive sources, particularly in the Chalk catchments by 2035, and meeting the industry's commitments to reduce the use of public water supply in England per head of population by 20% by 2038. The supply options in Wessex Water's WRMP24 consist of water treatment works (WTW) upgrades, increased utilisation of a reservoir, groundwater, drought permits, and water transfers.

The Southern Water region is divided into three sub-regional areas which are made up of 14 WRZs. The WRZs which abut the SBB boundary are Hampshire Southampton West and Hampshire Rural, which lie within the western sub-regional area. Water supply in the Hampshire Southampton West WRZ comes from 100% river sources, and the water supply in Hampshire Rural is from 100% groundwater. Option types included within the preferred WRMP24 include hard infrastructure, efficient use and management of water, green infrastructure, and response to regional events. There are 12 supply options within these WRZs assessed within the Southern Water draft WRMP24 SEA. Two of these options have significant effects post mitigation, which these relate to effects on population and human health following temporary use bans.

The Severn Trent Water region is divided into 15 WRZs covering the Heart of England from the Bristol Channel to the Humber and from Shropshire to the East Midlands. The WRZs which neighbour the SBB boundary are Forest and Stroud, and Strategic Grid. A total of 44 feasible options for the Strategic Grid WRZ, and one feasible option for the Forest and Stroud WRZ was assessed within the WRMP24 SEA. These options include water transfer, reservoir expansion, and WTW upgrades.

The Thames Water supply region extends from Cirencester in the west to Dartford in the east, and from Banbury in the north to Guildford in the south, and is divided into six WRZs. The WRZs which neighbour the SBB boundary are Swindon and Oxfordshire, and Kennet Valley. A total of 69 supply options were assessed within the draft WRMP24 SEA.

External Cumulative Effects

From a review of the publicly available information (note option locations are not typically publicly available), there are not anticipated to be any cumulative effects between the options in Southern Water, Severn Trent Water and Thames Water WRMP24, and SBB's Drought Plan. As Wessex Water does receive an import from SBB, there is potential that Wessex Water's WRMP24 could have adverse effects on the supply-demand balance in the SBB region. However, it is assumed that this transfer has been appropriately considered within SBB's forecast modelling.

Due to the approximate location and nature of the options presented, ongoing strategic communication is required between SBB and Wessex Water in relation to the development of the SRO options WIM18 and BNW7, as these water sources (Cheddar Two and Mendip Quarries) are outside of the SBB region.

10.2.3 Neighbouring water companies' Drought Plans

Plan Summary

The neighbouring Drought Plans including Wessex Water, Southern Water, Severn Trent Water and Thames Water have been considered for potential cumulative effects. These relate to the most recent adopted plans, as draft 2029 plans were not available at the time of writing.

The Wessex Water Drought Plan (2022) outlines a number of management actions that can be taken during periods of dry weather to maintain and improve water resources including:

- Water efficiency and metering;
- Leakage management; and
- Temporary use bans.

Further supply side actions have been identified for operation of stream support, transfers with neighbouring water companies including SBB, Thames Water, Veolia Water Projects, Southern Water and drought permits and orders.

The Southern Water Drought Plan (2019) allows water companies to introduce a wider range of temporary restrictions when resources are under pressure, including temporary bans, restrictions and permits, media campaigns to influence water use, leakage control, mains pressure reduction and management. Further operational responses include:

- Maximising abstraction from run-of-river sources;
- Maximising pumping from groundwater sources;
- Increasing company transfers from areas not at risk of drought;
- Inter-company bulk transfers including tankering (agreements with neighbouring water companies);
- Re-commissioning of unused sources;
- Enhancing abstraction at existing sources;
- Distribution network modifications;
- Construction of new satellite boreholes; and
- Wastewater recycling.

The Severn Trent Water Drought Plan (2022) outline the actions that will help to increase the supply of water within the region. As more extreme droughts were considered in this plan compared to the 2014 plan, the 2022 plan explores a wider range of potential drought sources, such as reservoirs and boreholes. Other supply options increase drought orders and permits.

The Thames Water Drought Plan (2022) comprise a total of 44 drought options (five demand options, nine supply options and 30 drought permit/order options). Most of the nine supply options are groundwater sources. Thames Water categorises the full range of supply measures into the following:

- Optimisation of existing sources
- Strategic drought water resource schemes
- Bulk supplies
- Drought permits / orders
- Recommissioning of disused sources
- *In extremis* / 'More before Level 4' measures

In extremis supply side management actions, also referred to as 'more before Level 4' actions, may be considered during a drought to mitigate the need for drought level 4 measures such as rota-cuts in an emergency situation.

External Cumulative Effects

Following a review of the neighbouring water company Drought Plans above, there is a potential for cumulative effects to occur with supply options in the Wessex Water Drought Plan due to both companies relying on Wimbleball Reservoir for water supply. This could lead to cumulative effects on biodiversity and the water environment due to a potential reduction in water levels within the reservoir, and increased cumulative abstraction from the River Exe. There are also bulk water supply arrangements (exports and imports) which may become more restricted during drought periods between Wessex Water and SBB, however as liaison with SBB was undertaken in the preparation of Wessex Water's Drought Plan and agreements are in place to discuss regional water resource positions, this is not anticipated to result in any cumulative effects.

Concurrent implementation TUBs and/or NEUBs by neighbouring water companies has the potential to result in adverse cumulative effects on population and human health, due to reduced visual amenity and access to recreational activities. Conversely, demand measures such as increased communications and water efficiency measures offer the potential for positive in-combination effects with neighbouring Drought Plans as drought management and communication messages may reinforce the need for increased water efficiency, metering and drought monitoring, resulting in increased demand savings and greater stakeholder desire to conserve water resources.

10.2.4 National Policy Statements and National Infrastructure Plans

Plan Summary

The following National Infrastructure Planning Applications have been identified within the SBB region.

Table 10.7: National Infrastructure Planning Applications

Council	Project Description	Licencing Authority	Status
Cornwall	A30 Chiverton to Charland Cross Scheme	Highways England	Decided
	A30 Temple to Higher Carblake Improvement	Highways England	Decided
	The Trelavour Lithium Project	Cornish Lithium G5 Limited	Pre-application
North Somerset	Portishead Branch Line - MetroWest Phase 1	North Somerset Council	Decided

External Cumulative Effects

At the time of writing, there are not anticipated to be any national or regional developments identified within National Policy Statements or National and Regional Infrastructure Plans that are anticipated to result in cumulative effects with the SBB Drought Plan. All of these nationally significant projects are

expected to undergo thorough environmental assessment to mitigate and manage any adverse effects in the South West region as part of the planning process.

10.2.5 Relevant Local Development Plans

Plan Summary

The following planning plans and web portals have been reviewed to determine any cumulative and in-combination effects, including:

- Cornwall Council Local Plan (2016) and online planning portal;
- East Devon District Council Emerging Local Development Plan (2020) and online planning portal;
- Exeter City Council Core Strategy (2012) and online planning portal;
- Mid Devon District Council Local Development Plan (2020) and online planning portal;
- North Devon and Torridge District Councils Joint Local Development Plan (2018) and North Devon District Council and Torridge District Council online planning portals;
- Plymouth and South West Devon Joint Local Plan (2019), Plymouth City Council, South Hams District Council and West Devon Borough Council online planning portals;
- Teignbridge District Council Local Plan (2014) and online planning portal;
- Dorset District Council's Draft Local Development Plan (2025) and online planning portal;
- Bournemouth, Christchurch and Poole Council Core Strategies; Bournemouth (2012), Christchurch (2014), and Poole (2018) and online planning portal;
- Somerset District Council's Draft Local Development Plan (2025);
- Bristol City Council Local Plan Review (2023); and
- Bath and Northeast Somerset Council Core Strategy (2014).

External Cumulative Effects

New residential development and an increase in population within the SBB region will increase demand on water resources. However, these plans and strategies require new developments to implement water management schemes and the use of sustainable drainage measures, which will help to reduce water demand and drainage issues.

There is potential for minor positive effects associated with improvements to health and wellbeing services as a result of new homes, and the substantial investment these projects would likely bring to the region. Any new residential developments are expected to undergo thorough environmental assessment to mitigate and manage any adverse effects in the South West region as part of the planning process.

10.2.6 Minerals and Waste Proposals

Plan Summary

Following the review of each Council's planning portals, potential minerals and waste sites have been identified across the region. Due to the nature of some planning portals not having an advanced search function or map, this list may not be exhaustive of all planning applications. The following plans have been reviewed to determine any cumulative and in-combination effects, including:

- Devon Minerals Plan 2011 – 2023¹⁴;
- Devon Waste Plan 2011 – 2031¹⁵;

¹⁴ Devon County Council (2014) *Devon Minerals Plan*. Available at: <https://www.devon.gov.uk/planning/planning-policies/minerals-and-waste-policy/devon-minerals-plan/>

¹⁵ Devon County Council (2014) *Devon Waste Plan*. Available at: <https://www.devon.gov.uk/planning/planning-policies/minerals-and-waste-policy/devon-waste-plan/>

- Cornwall minerals, waste and renewable energy policy forms part of the Cornwall Local Plan Strategic Policies document 2016¹⁶;
- Bristol Waste and Resource Management Strategy 2016¹⁷ ;
- Bournemouth, Christchurch, Poole and Dorset Waste Plan 2019¹⁸; and
- Bournemouth, Christchurch, Poole and Dorset Minerals Strategy 2014¹⁹.

External Cumulative Effects

New minerals and waste sites proposed within the SBB region have potential to result in cumulative effects with the Drought Plan. Effects such as surface and groundwater contamination may be worsened if in-combination with drought permits on the same waterbody, as dilution of contaminants would potentially be reduced.

Any new minerals and waste sites are expected to undergo thorough environmental assessment to mitigate and manage any adverse effects in the South West region as part of the planning process.

10.2.7 Canal & River Trust Management Plans

Plan Summary

The Canal & River Trust carries out essential maintenance on reservoirs across the UK to ensure the long-term integrity and secure water supply provided to the canal network. Further initiatives of the Trust include:

- Water saving aerator;
- Not leaving water running;
- Use most resource efficient equipment;
- Make sure there are no leaks;
- Minimise water use; and
- Recycle grey water.

Through a review of publicly available online information, it has been established that the Canal and River Trust are not responsible for any waterways within the SBB region, apart from the Kennet and Avon Canal, which links London with the Bristol Channel.

External Cumulative Effects

As the Canal and River Trust is not responsible for any waterways in the SBB region except for the Kennet and Avon Canal, the majority of the options within the draft SBB Drought Plan 2027 will not result in cumulative effects with the Canal & River Trust Management Plans. However, there is the potential for adverse cumulative effects for options BR-28a (reduction of Chew Valley Lake compensation release) and BR-28b (reduction of Chew Valley Lake water bank releases). These options are likely to reduce water levels downstream of the lake within the River Chew river system, which discharges into the River Avon at Keynsham. The River Avon and the Kennet and Avon Canal are linked; however, it is unknown at this stage how water levels in the River Avon may affect the canal.

¹⁶ Cornwall Council (2016) *Cornwall Local Plan Strategic Policies 2010 – 2030*. Available at:

<https://www.cornwall.gov.uk/media/ozhj5k0z/adopted-local-plan-strategic-policies-2016.pdf>

¹⁷ Bristol City Council (2016) *Towards a Zero Waste Bristol: Waste and Resource Management Strategy* Available at:

<https://www.bristol.gov.uk/files/documents/820-towards-a-zero-waste-bristol-waste-and-resource-management-strategy/file>

¹⁸ Dorset Council (2019) *2019 Waste Plan*. Available at: <https://www.dorsetcouncil.gov.uk/w/2019-waste-plan>

¹⁹ Dorset Council (2014) *Minerals Strategy*. Available at: <https://www.dorsetcouncil.gov.uk/documents/35024/283152/minerals-strategy-2014-chapters-1-8-compressed.pdf/9022e767-ff8a-d94b-14de-9c3a5279f961>

10.2.8 Local Nature Recovery Strategies

Plan Summary

Local Nature Recovery Strategies (LNRS) are legally required, England-wide spatial plans under the Environment Act 2021, designed to reverse biodiversity loss by mapping valuable habitats and identifying locations for creating, restoring, and connecting them. Within the SBB Drought Plan 2027 region, there are seven responsible authority-led LNRSs:

- Devon²⁰;
- Cornwall and Isles of Scilly²¹;
- Somerset²²;
- Dorset²³;
- Hampshire²⁴;
- West of England²⁵; and
- Gloucestershire²⁶.

Aquatic habitats are key habitats identified for action within the LNRS listed above. Each authority has their own prioritisations; however, they all aim to improve the ecological health of watercourses, lakes, ponds, wetlands, floodplains, and management of INNS.

External Cumulative Effects

The SBB Drought Plan 2027 options include increased abstraction from reservoirs and boreholes, extended pumping seasons from rivers, and reduced or omitted compensation and fish bank releases. These may temporarily result in negative cumulative effects on the LNRSs and their priorities for improving river flows, water quality, and maintaining nature-rich riparian zones. Lower flows and altered hydraulics could reduce habitat complexity, affect fish passage, and increase vulnerability to invasive species. These changes could negatively affect species diversity and habitat resilience, contrary to LNRS objectives. However, the Drought Plan 2027 also supports the LNRSs' aims to reduce flood risk and build resilience against drought, aligning with its climate adaptation priorities. Careful mitigation, such as ecological flow thresholds, seasonal restrictions and habitat monitoring, will be essential to minimise adverse impacts and align with LNRS goals.

10.2.9 Environment Agency Drought: how it is managed in England

Plan Summary

The EA is responsible for safeguarding water resources in England and protecting the environment, with water companies ultimately responsible for managing water supplies to meet the needs of customers.

²⁰ Devon County Council (2025) *Devon's Local Nature Recovery Strategy*. Available at: <https://www.devon.gov.uk/environment/wildlife/devons-local-nature-recovery-strategy>

²¹ Cornwall Council (2025) *Cornwall and Isles of Scilly Local Nature Recovery Strategy*. Available at: <https://letstalk.cornwall.gov.uk/nature-recovery-plan-overview>

²² Somerset Council (2025) *Somerset's Local Habitat Map*. Available at: <https://www.somerset.gov.uk/planning-buildings-and-land/somerset-s-local-habitat-map/>

²³ Dorset Council (2025) *Dorset's Local Habitat Map*. Available at: <https://www.dorsetcouncil.gov.uk/dorset-s-local-nature-recovery-strategy>

²⁴ Hampshire County Council (2025) *Local Nature Recovery Strategy for Hampshire*. Available at: <https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/hampshire-strategy>

²⁵ West of England Combined Authority (2025) *The Local Nature Recovery Strategy*. Available at: <https://www.westofengland-ca.gov.uk/what-we-do/environment/the-local-nature-recovery-strategy/>

²⁶ Gloucestershire Council (2025) *Local Nature Recovery Strategy*. Available at: https://experience.arcgis.com/experience/70f22d142e3e46dbaed5f35ddc972f7b#data_s=id%3Awidget_733_output_conf_ig_default_geocode_utility_8_0%3A0

'Drought: how it is managed in England' provides a strategic overview for how drought will be managed in England to minimise damage to the environmental and to secure essential public water supply. It sets out:

- The impacts of drought in England
- Who is involved in planning, managing and responding and how they all work together
- The actions the EA and others take to effectively manage droughts
- How the EA report on drought and communicate with others
- The EA's role in recovery and learning from drought events

The policy paper reiterates that it is statutory for all water companies to have a drought plan in place which describes the actions they will take in the event of a drought. The following measures have been identified as ways in which water companies can manage demand and ensure supplies remain resilient:

- Investing in new sources and supply mains;
- Maximising groundwater usage;
- Maximising river abstractions and groundwater abstractions, and conserving reservoir storage through drought permits and orders;
- Transferring bulk supplies between water companies;
- Using sources that can be activated to meet peak demands, such as the North London Artificial Recharge Scheme operated by Thames Water;
- Moving water between supply zones to balance risk;
- Planning capital investment for severe drought scenarios; and
- Working with other water companies and abstractors to identify new opportunities to share water.

Environment Agency Devon, Cornwall and Isles of Scilly Drought Plan (2025)

The EA have prepared area plans which sit alongside the Environment Agency Drought: how it is managed in England report. This Plan details how the EA manage dry weather and drought conditions in the Devon, Cornwall and Isles of Scilly region. The Plan outlines the characteristics and drought vulnerabilities within the region, the summary of monitoring, indicators and triggers in the region, actions to take at each drought stage, and communication and engagement tools.

External Cumulative Effects

Through the development of SBB's Drought Plan 2027, consultation with the EA has been ongoing to ensure the Plan meets expectations. This is in line with EA requirements. Mechanisms outlined in the EA policy paper and area plan offer the potential for positive in-combination effects with the SBB Drought Plan, as drought management and communication messages may reinforce the need for increased water efficiency, metering and drought monitoring, resulting in increased demand savings and greater stakeholder desire to conserve water resources.

10.3 Technical Assessments Key Findings

10.3.1 HRA Findings

A total of 38 options underwent HRA screening. Of these, 22 options were screened in for progression to Stage 2 AA, due to screening conclusions which could not rule out the potential for significant effects on Habitats Sites. It should be noted that due to programme constraints, some of these options have not yet undergone AA (see **Section 8.7** for more detail).

There was one instance of an overlap between effects in different WRZs, with the Exmoor Heaths SAC situated within the ZoI of options R-07, W-03 and W-09. For all of these options, findings of no LSE were

concluded due to the distances between options at the SAC, and the lack of hydrological connectivity. As such, no impact pathways are present and no in-combination effects are anticipated on this Habitats Site.

In-combination effects cannot be ruled out in the Bournemouth, Bristol or Roadford WRZs for the plan at all drought levels for which options are to be implemented. No intra-plan effects are anticipated in the Wimbleball WRZ, where all options are to be implemented at drought level 2. No in-combination effects are anticipated within the Colliford WRZ, although option C-04a alone may have adverse effects on the River Camel SAC.

10.3.2 WFD Findings

As part of the WFD assessment, 38 proposed options were assessed at Level 1. Of these, two options (C-07a and C-11) did not necessitate further assessment and present a very low risk of impacting WFD status and objectives.

The remaining 36 options did require further assessment, 24 of which have been assessed at Level 2 to date (see **Section 8.7** for more detail), and the remainder at Level 1 only. Of the 24 options assessed at Level 2, eight options presented minor and localised impacts without mitigation, while the remaining 16 require further investigations to inform mitigation design and to more accurately inform assessment of their impacts to the water environment.

A cumulative effects assessment was also undertaken and included all options within the preferred Plan, noting that some options do not have full Level 2 detail at this stage. The outcome of this assessment showed 33 water bodies across the region where more than one proposed drought option operates. Due to the activities of three drought options (W-03, W-06 and W-09), one of the 33 water bodies (Exe (Barle to Culm)) may have a potential increased WFD deterioration risk if all operate in combination.

10.3.3 INNS Findings

Within the Stage 1 screening, a total of 38 options were assessed across the different WRZ. Two options (C-11 and R-07) were identified as using a new temporary transfer using new/otherwise unused pathways and therefore required a Level 2 SAI-RAT assessment. A total of 37 options may impact surface waterbodies and therefore required an IRM assessment.

Within the IRM, a total of 27 surface waterbodies were identified which may be impacted by Drought Plan 2027 options. The INNS impacts vary by taxonomic group and habitat type but are generally characterised by mixed or uncertain ecological responses. Aquatic vegetation (e.g. Canadian waterweed (*Elodea canadensis*), Nuttall's waterweed (*Elodea nuttallii*)) may increase where wetted area and depth rise in reservoir habitats receiving more water. Riparian vegetation (e.g. Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed (*Fallopia japonica*)) often benefits from reduced flow velocity and reduced shading where wetted area declines, and conversely this group may be impacted negatively where wetted area and depth increases. Bivalves, shrimps, and snails may show negative responses where wetted area and depth decline.

The cumulative effects assessment identified a high risk for the Colliford WRZ at drought level 3a and 3b. Moderate cumulative effects were identified at drought level 2 for Colliford, with no cumulative effects identified at drought level 1. Moderate cumulative effects were identified at drought level 2, 3a and 3b for the Wimbleball WRZ, with no effects identified at drought level 1.

For Roadford WRZ, moderate cumulative effects were identified at drought level 3a and 3b, with no effects identified at earlier drought stages. For both Bournemouth and Bristol, moderate cumulative effects were identified at drought level 3b, with no effects identified at earlier drought stages. No cumulative effects were identified within the IoS WRZ.

10.4 Reasons for Selecting Preferred Plan

The preferred Drought Plan 2027 includes a selection of supply and demand options and actions across the SBB region. All available supply options that have not been screened out as unsuitable have been taken forward in the preferred Plan. This has ensured a robust Drought Plan 2027 which offers a number of supply options in every WRZ, should they be required during a drought or prolonged dry weather.

A 'do nothing' approach is not considered a reasonable alternative to the preferred Drought Plan 2027 as there would not be a sufficient and sustainable supply of water during droughts. A continuation of SBB's previous Drought Plan 2022 is also not a reasonable alternative, as lessons have been learned since the drought of 2022/23, with new water resource interventions and a revised drought planning approach that has been incorporated into the development of the draft Drought Plan 2027. There were therefore not any other options to include as a reasonable alternative to the preferred plan.

The SEA has instead taken the approach of assessing the environmental effects at each drought level to establish how the environment would likely be affected as a drought worsens, and to support the decision-making in relation to assigning options to drought levels.

As set out in **Section 8.4**, determining the sequencing of drought options as a result of environmental impact is an iterative process, with early findings from the environmental assessments supporting decision-making. SBB has planned that relevant demand options would be active for a minimum of two weeks prior to the implementation of supply options for that drought level. As per EA guidance, options assessed as having a minor environmental impact will be implemented first at drought levels 1 and 2, with options that have a moderate to major environmental impact implemented later at drought level 3a, followed by those with a major impact at drought level 3b.

As the SEA process and Drought Plan development take place concurrently to allow the SEA to inform the plan, the environmental impact of each option was not confirmed at the point of sequencing of the preferred Drought Plan options. SBB therefore used the early environmental screening results and the season of option implementation (with winter / second season options considered lower risk) to initially allocate a drought level to the options. As expected, as the drought levels increase, the environmental effects of the plan progressively worsen.

The SEA, HRA, WFD and INNS assessments have taken a precautionary approach due to the strategic scale of assessment at this stage. This means that where adverse effects cannot be fully ruled out based on the current data, these effects are reported for the option. However, it is anticipated that when the detailed monitoring and modelling analysis is undertaken during EAR production for options implemented at drought levels 2-3a, the increased level of detail will provide the certainty needed to revise down potential impacts. For example, some of the SEA objectives currently have a moderate negative effect identified at drought level 2 (which must only contain options with a minor environmental impact), but with further assessment, these are expected to be reduced to minor effects prior to implementation of options. SBB has reviewed all options which include a current moderate effect in the SEA at drought level 2, and has provided rationale for the reasons of a likely reduced impact with further analysis (refer to Section 6 of the Drought Plan). Should the EAR process not conclude a reduced level of effect, then it is expected that SBB will review the option and the implications on the plan as a whole.

Due to programme constraints and late stage changes to the preferred plan, some options identified for inclusion within the draft Drought Plan 2027 have not yet undergone stage 2 assessment (HRA AA, WFD Level 2 and INNS IRM). All options have undergone stage 1 assessment (HRA ToLS, WFD Level 1 and INNS risk assessment), and each has an option-level SEA. Care has been taken to ensure that the options which will be implemented first, and therefore more likely to be used, have undergone detailed stage 2 assessments. As such, the majority of the options within the preferred Plan which to be implemented in drought levels 1, 2 and 3a have undergone full stage 2 assessment, with two late additions not yet assessed at stage 2 (W-22 and IS-18).

The 3b options within the Bournemouth WRZ have also undergone full detailed assessment, as there are few feasible drought supply options identified within this WRZ. All other 3b options have not undergone stage 2 assessment, as these are least likely to be implemented and are already assumed to have a major environmental impact. As such, it was considered imperative to ensure the options within the earlier drought levels were fully assessed to ensure that they align with the guidance in having only a minor or moderate environmental impact.

The plan-making and SEA process is iterative, and it is possible there may be minor changes to which options are selected for each drought stage. This would be supported by a revised plan-level assessment.

10.5 How the SEA has Informed Selection of the Plan

10.5.1 SEA Influence on the Drought Plan

The SEA has informed the development of the draft Drought Plan 2027 in a number of ways, including selection and refinement of options; identification of mitigation measures; and plan-level assessment findings, as detailed below.

Option selection and refinement

In terms of the development of individual options, a high-level red-amber-green (RAG) screening was undertaken as a precursor to the full SEA assessments. The high-level screening involved an initial assessment of the unconstrained list of options to identify high-level environmental risks. Workshops were held with SBB in autumn 2025 to present the screening findings and to highlight high-risk options.

During summer 2025, workshops were also held with the EA and Natural England to set out the approach for the SEA, HRA, WFD and INNS assessment methodologies and provided an opportunity for the regulators to raise any early comments or concerns in relation to the SEA Scoping Report.

Following this, the SEA process directly shaped the option development as environmental constraints and identified risks were used to inform decisions. Collaborative meetings with SBB, the EA and Natural England were held in autumn 2025, whereby Level 1 assessment findings were presented and key concerns discussed. SBB provided clarification on how options would be implemented and justification behind the SBB approach. As part of these workshops, environmental considerations were also discussed, and key environmental risks were identified for review and consideration within the plan development.

Mitigation and monitoring

The detailed option assessments identify the potential positive and negative environmental effects of each option. Options with negative effects will need appropriate mitigation in order for them to be taken forward. The SEA, HRA, WFD and INNS assessments identify possible mitigation and enhancement measures. Measures will be further refined through the development of EARs for those options in the Plan required to have them. See the EAR methodology document (100125254-MM-RP-EAR-017) for further information, which sets out the approach for EARs and is subject to consultation alongside this report.

Cumulative effects assessment

The options identified for implementation at each drought level underwent a cumulative effects assessment to identify potential plan-level effects when options are compounded at later drought stages. SBB have used the findings of the SEA cumulative effects assessments to review the plan and drought level of implementation for options. The SEA cumulative effects also included consideration of the HRA, WFD and INNS cumulative effects assessments. External cumulative effects have also been considered, assessing the potential effects associated with the options in combination with other relevant plans and programmes. The assessment of potential cumulative effects and a comparison of the different drought levels have been provided to SBB to aid in their decision-making process.

Drought levels for options

There has been ongoing work on the drought options and the drought levels at which they are planned to be implemented. As the results of environmental assessments have become available, alongside discussions with internal technical teams at SBB, the environmental impact category and associated confidence levels have been reviewed by SBB and updated where necessary.

As part of the SEA process, SBB reviewed all options which include a current moderate effect in the SEA at drought level 2 and has provided rationale for the reasons of a likely reduced impact, once further analysis takes place for the EAR production (see Section 6 of the Drought Plan). Should the EAR process not conclude a reduced level of effect, then SBB will review the option and the implications on the plan as a whole.

10.5.2 Removed Options

Following the high-level screening of significant environmental constraints and ongoing option development by SBB, some options originally identified by SBB were not progressed. The following options initially underwent early environmental assessment, but were determined as not suitable and were therefore not been considered further within this Environmental Report:

- C-04b: Stannon Lake - lower hands off level
- C-07b: Park Lake - lower hands off level
- C-29a: Blackpool Pit.
- IS-21: Transfer 'spare' licence volumes from Tresco to other islands - existing BH source (Borehole by lake).
- IS-08: Bottled water.
- IS-13 - St Mary's - borehole opportunities requiring permits as above existing licence thresholds.
- IS-15: Tresco - borehole opportunities with permits as outside of licence conditions.
- IS-20 - St Agnes - borehole opportunities above licence threshold.
- IS-22: Transfer 'additional' water (>licence) from Tresco to other islands - existing BH source (Borehole by lake).
- IS-23: Direct abstraction from Great Pool and/or Abbey Pool.

In addition, the options that were screened out by SBB due to likely environmental impact, amongst other reasons, prior to any detailed environmental assessment, are documented within the SBB Drought Plan Appendix 3 Drought Actions - section A3.2.3 Screened out supply actions.

11 Mitigation and Monitoring

11.1 Mitigation and Enhancement Measures

Mitigation is a key part of the SEA process and is incorporated throughout the assessment stages. The mitigation hierarchy has been applied to reduce the environmental effects of the Drought Plan 2027. Possibilities for enhancement measures have also been considered. The mitigation hierarchy is set out below²⁷, alongside examples of how this could be implemented.

- **Avoid** – Where possible, the plan should be developed in a way which avoids the use of options with negative effects. This has included removing options during the screening process due to adverse environmental impacts.
- **Prevent** – Where possible, negative effects of options should be prevented, for example through changes to option abstraction quantities or location. The options have undergone an iterative process of development, informed by the environmental assessment findings and SBB's analysis of supply needs.
- **Reduce** – Unavoidable negative effects as a result of the options should undergo project-level design and mitigation proposals to reduce harm. Option proposals have included measures such as increased planting in watercourse channels to mitigate for reduced flow on dilution potential.
- **Offset** – For any effects which cannot be avoided, prevented or reduced, offsetting should be considered at a plan or project level, for example wider habitat improvements. *[This level of the mitigation hierarchy has not been used for the Drought Plan 2027.]*

Option-specific mitigation measures have been identified for each option within the HRA, WFD and INNS technical assessments (**Annex O - Q**) and incorporated into each option-level SEA (**Annex H - N**). A summary of the general mitigation measures applicable to the majority of options is included in **Table 11.1** below. Please see the option-level SEAs for further information on the mitigation proposals.

The mitigation measures identified in this SEA Environmental Report are the start of a 'live' mitigation process which will continue to be developed throughout the Drought Plan's lifetime. To date, the environmental assessments have been undertaken at a strategic level in line with the SEA Regulations and ISEP guidance²⁸. This strategic-level work has also supported the identification of data gaps that will be addressed through the EARs. Detailed permit-readiness- work is currently being undertaken by SBB, and detailed EARs will be prepared for each permit option identified for implementation at drought levels 2-3a. Further assessments will include site-based monitoring and modelling. This process will identify further targeted mitigation measures to minimise the potential environmental effects of the Drought Plan 2027. See the EAR Methodology document (100125254-MM-RP-EAR-017) for full details of the EAR approach.

During the detailed assessment for EARs, if it is determined that options cannot be mitigated to a degree where effects are no longer adverse (either alone or in-combination with other plans or projects), these options will be reviewed further by SBB and may be removed from the plan. Where drought options are no longer progressed based on the detailed assessments, SBB will review the Drought Plan 2027 as a whole to establish whether it still meets the region's needs. Progress on the Drought Plan 2027 will be discussed with the EA on an ongoing basis, and its implications will be reviewed as part of the annual Drought Plan health check.

²⁷ ISEP (2026) *Strategic Assessment: Advice from Practice*. Available from: <https://www.isepglobal.org/policy-and-practice/impact-assessment/practical-guidance/> [free for ISEP Members]

²⁸ *Ibid.*

11.2 Monitoring Proposals

Monitoring will be carried out by SBB as part of their Drought Plan processes. Monitoring helps ensure that the identified SEA objectives are being achieved and allows for early identification of unforeseen adverse effects and thus appropriate remedial action can be taken. Monitoring will be an important requirement to measure performance and ensure the Drought Plan is successfully implemented, if needed during drought periods. The information gained from monitoring will feed into SBB's EAR development and permit-readiness programmes.

The DCLG guidance²⁹ states monitoring proposals should be focused on the following areas:

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

In addition to the option-specific monitoring set out in within the option-level SEAs (**Annex H - N**), general monitoring measures applicable to the majority of options which could be considered as part of the Drought Plan development are set out in **Table 11.1** below. Potential requirements for further study and assessment are also included.

²⁹ DCLG (2005) *A Practical Guide to the Strategic Environmental Assessment Directive*. Available at: <https://www.gov.uk/government/publications/strategic-environmental-assessment-directive-guidance>

Table 11.1: General mitigation and monitoring measures

SEA objective	Mitigation measures	Future monitoring and additional survey and assessment requirements
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> ● Ecology surveys will be required as the option develops to determine effects and mitigation required. ● A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. ● All maximum flow compensation reductions should be sensitive to seasonal flows and set by the Environment Agency to ensure compliance with targets of the relevant River Basin District (RBD) River Basin Management Plan (RBMP). ● Consider further assessment on species abundance and recovery, with measures put in place to halt any decline in species abundance in line with the 25-year Environment Plan targets. ● Investigate opportunities to improve existing habitats. ● Follow best practice guidelines and consultation of the INNS risk assessment in order to minimise spread of INNS. ● Where possible, priority habitats should be protected to minimise effects. ● Monitor the rates of abstraction during operation to avoid and mitigate negative effects on water resources and habitats that are dependent on water quality and levels. ● Careful monitoring of water quality to minimise any potential impacts on designated and non-designated sites. ● Water quantity and quality downstream should be regularly monitored to reduce effects on habitats, species and biodiversity. ● Best practise mitigation methods should be in place during installation of the temporary pumps. 	<ul style="list-style-type: none"> ● Detailed option-level EARs required. ● Hydro-ecology studies and hydrodynamic modelling of seasonal flows to identify whether changes in water availability would have an adverse effect on watercourses and migratory fish using said watercourse. ● Surveys to identify optimal lake conditions for supporting the non-breeding bird assemblage. ● % of habitat creation or existing habitat enhancement. ● Area (hectares) and number of statutory and non-statutory ecological sites that will be harmed or lost to the Drought Plan options. ● Species abundance and recovery. ● Ongoing INNS monitoring should be implemented on all untreated water transfers. ● Further investigations into response of INNS to water quality and quantity changes is required. ● Investigations of the response of physiochemical parameters recommended. ● Identification of mitigation measures for priority species through the HRA AA. ● A climate change scenario analysis is recommended to account for mid- and long-term effects which could be compounded through more frequent and intense droughts in the future. ● Monitor and identify opportunities for river restoration to enhance habitat value, including woody debris installation, flow deflectors, bank stabilisation, increased flow diversity, and re-meandering to improve floodplain connectivity post-reservoir construction.
Water	<ul style="list-style-type: none"> ● Engagement with a water environment specialist is recommended once further details of the proposed works are known. ● Monitor the rates of abstraction during operation to ensure compliance with licence to avoid and mitigate negative effects on water resources. ● Abstraction conditions should be set in order to minimise changes to hydrological regime / minimise changes to levels in reservoir. 	<ul style="list-style-type: none"> ● Detailed option-level EARs required. ● Detailed review of any additional baseline ecological WFD data, including results of any surveys already undertaken for this scheme. ● Hydroecology assessment, hydromorphological survey, aquatic baseline survey and hydrological modelling of the impacts of discharge cessation on flow, hydromorphology, water quality and biology within the relevant

SEA objective	Mitigation measures	Future monitoring and additional survey and assessment requirements
	<ul style="list-style-type: none"> ● Monitor compensation flows during operation to avoid and mitigate negative effects on water resources. ● Implement river restoration measures immediately downstream of where the loss in flow originates. ● Monitor the rates of abstraction during operation to avoid and mitigate negative effects on water resources and habitats dependent on water quality and levels. ● Modify or remove (as well as removal of in-channel structures) the addition of fish passes. ● Localised mitigation for impact of reduced flow on dilution potential includes increased planting of native species in watercourse channel, bank sides and / or within its riparian zone. ● Modification of weir (where required) without significant changes to channel footprint and if possible designed to improve hydromorphology of river. ● Best practice mitigation measures are to be implemented to maintain quality of raw water. ● Appropriate precautions to be undertaken when working in the channels of a watercourses (if needed), to appropriately manage flood risk and the potential for deposition of silt or release of other forms of suspended material or pollution within the water column. 	<p>watercourse should be undertaken to understand the local implications of this reduction in compensation flow.</p> <ul style="list-style-type: none"> ● Monitoring abstraction during operation will reduce the risks of over-abstraction, ensuring that effects on the environment are minimised. ● Achievements against WFD objectives. ● Ecological and chemical status of water bodies. ● River flow levels. ● Lake and reservoir levels. ● Groundwater levels. ● Further survey work (including hydroecology, hydromorphological, and aquatic baseline survey and assessment) as well as hydrological modelling to improve confidence of the WFD Level 2 Assessment.
Soil	<ul style="list-style-type: none"> ● Any additional infrastructure such as temporary pumps should be situated on existing hard-standing ground where possible to reduce effects on soil as far as practicable. ● During operation, careful monitoring of abstraction to avoid any impacts on soil subsidence. ● Monitor river water levels during operation to ensure compliance with licence to avoid and mitigate negative effects on soil stability. ● Monitor levels of abstraction to understand and mitigate impacts of reducing groundwater table on soil stability. 	<ul style="list-style-type: none"> ● Area of agricultural land (by grade) lost. ● Number of geological sites affected. ● Area of peatland or peat forming habitat affected.
Climatic Factors	<ul style="list-style-type: none"> ● Investigate the use of substitute materials with lower embodied carbon and use of renewables. Decarbonisation of the National Grid is likely to help reduce future emissions. 	<ul style="list-style-type: none"> ● Reduction of GHG emissions per MI/d. ● Energy use from new operations and change in energy use per MI/d. ● % energy supplied by renewable sources.

SEA objective	Mitigation measures	Future monitoring and additional survey and assessment requirements
	<ul style="list-style-type: none"> Investigate the use of renewable energy sources to power the pumping and treatment of water during operation. Continue to assess the impacts of climate change within the area and implement best practice in order to mitigate against these. For certain options, water levels should be carefully monitored during operation to ensure they remain at an appropriate level. Best practice measures should be applied to prevent over abstraction and negative impacts on the environment. Water quantity and quality downstream should be regularly monitored to reduce effects on habitats, species and biodiversity. 	<ul style="list-style-type: none"> Reduction of operational and capital carbon emissions.
<p>Historic Environment</p>	<ul style="list-style-type: none"> Avoidance, preservation by burial, or investigation in the case of archaeological remains. Photographic or drawn surveys in the case of historic buildings or designated assets. Recording, information panels or landscape works in the case of impacts on historic landscapes. Measures to ensure preservation of waterlogged environments, following advice and guidance such as Historic England 2016 'Preserving archaeological remains: Decision-taking for sites under development'³⁰. Carry out mitigation with the appropriate local authority and / or Historic England. Where required, carry out appropriate level of Archaeological desk-based assessment, Geo Physical assessment, and Geo Archaeological assessment. Additional baseline collection and assessment to be undertaken at a more detailed stage to determine the additional potential effects on water-dependent heritage assets and water sensitive historic environments to be identified. Ensure preservation of waterlogged environments following Historic England's (2016) advice: 'Preserving archaeological remains: Decision-taking for sites under development'. 	<ul style="list-style-type: none"> Number of heritage assets adversely affected by the Drought Plan options. Number of heritage assets enhanced by the Drought Plan options.

³⁰ Historic England (2016) *Preserving Archaeological Remains*. Available at: <https://historicengland.org.uk/images-books/publications/preserving-archaeological-remains/>

SEA objective	Mitigation measures	Future monitoring and additional survey and assessment requirements
	<ul style="list-style-type: none"> ● A Heritage Impact Assessment may be required for certain proposals, which should follow a recognised standard approach and be in line with Historic England best practice guidance. ● In order to take account of unrecorded and undesignated archaeology, the relevant Historic Environment Records should be referred to, and the views of the local authority archaeological advisors sought. ● Consider archaeological recording as a form of mitigation, where required. ● Consider mitigation identified Historic England’s ‘Sustainability Appraisal and Strategic Environmental Assessment’ advice note³¹ including; <ul style="list-style-type: none"> – Strengthened references to the historic environment in the policy framework, criteria and guidance e.g. addition of a specific historic environment policy, regeneration policies, planning obligations; – Preparation of detailed historic environment policy guidance e.g. SPD, design guides; – Heritage conservation requirements including positive measures to promote the conservation and enjoyment of heritage assets within site specific development policies; – Undertaking of detailed historic characterisation studies to inform development; – Environmental Impact Assessments – particularly supporting technical appendices that focus on archaeological interpretation; – Use of Article 4 Directions to protect the character of conservation areas; – Specific conditions included within Development Consent Orders or other regulatory consent. – Preparation of management plans for heritage assets; and – Completion of feasibility studies to help facilitate the sustainable use of a heritage asset. 	

³¹ Historic England (2016) *Sustainability Appraisal and Strategic Environmental Assessment*. Available at: <https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/hea036-sustainability-appraisal-strategic-environmental-assessment/>

SEA objective	Mitigation measures	Future monitoring and additional survey and assessment requirements
Population and Human Health	<ul style="list-style-type: none"> • Ensure best practice in terms of timings and volume of work to mitigate the effects on residents and other road users, and that disruption to green spaces is minimised through best practice mitigation measures. • Best practice mitigation measures to be implemented to minimise effects on recreation and visual amenity. • Best practice mitigation measures to be implemented to minimise effects on tourism and recreational land in the long term. • Abstraction rates should be monitored to avoid and mitigate impacts on agricultural land. 	<ul style="list-style-type: none"> • Number of, and attendance levels at, public engagement events. • Number, type, and area of community assets created. • Number of apprenticeships. • Number of tourism assets created or enhanced. • Monitoring is essential to ensure that reduced flows do not cause long-term ecological degradation or loss of recreational value. • Develop adaptive management measures to restore recreational and ecological value post-drought.
Resources	<ul style="list-style-type: none"> • Follow waste hierarchy in waste management and adhere to a SWMP (if needed). • Seek to reuse or repurpose existing assets. • Monitor the rates of abstraction during operation to ensure compliance with licence to avoid and mitigate negative effects on soil stability. • Best practice measures should be implemented to seek to use energy efficient temporary pumps. • Opportunities should be identified and implemented to incorporate sustainable design measures, which minimise the option's resource-use impacts. • Opportunities should be sought to reduce carbon emissions relating to the distribution of bottled water such as, using electric vehicles. • Review the existing energy supply to seek opportunities for renewable sources. 	<ul style="list-style-type: none"> • % of A-Rated, recycled, reused material used. • Number of options that utilise existing infrastructure. • Volume of waste generated. • Waste disposal method by %.

12 Consultation and Next Steps

12.1 SEA Environmental Report Consultation

The draft Drought Plan 2027 and accompanying SEA Environmental Report (this document) has been published for a 10 week statutory consultation period from May to July 2026. This has been shared with statutory consultation bodies including the EA, Natural England and Historic England, as well as being available to wider stakeholders and the public for comment.

Following receipt of comments, a Statement of Response (SoR) will be published which provides SBB's response to comments received, in line with the requirements of the Water Resource Planning Guidelines. This will include SBB's response to comments received on the SEA Environmental Report and assessments.

SBB welcomes all views on the SEA Environmental Report, and in particular the following key questions during the consultation:

1. Do you have any comments on the effects identified in the SEA?
2. Do you have any comments on the proposed mitigation measures?
3. Do you have any comments on the assessment of the Drought Plan 2027?

Following the consultation period, all consultation responses will be recorded and reviewed. Any necessary amendments will be made to the SEA Environmental Report and technical assessments (HRA, WFD and INNS), if required. The feedback will be considered during this process as far as possible.

12.2 Next Steps

Monitoring will be carried out by SBB for the production of the EARs for those options identified for implementation at drought levels 2-3a, as well as when the Drought Plan 2027 is implemented (Stage E of the SEA process).

Following adoption of the SBB Drought Plan 2027, an SEA Post-Adoption Statement will be produced which outlines:

- how the SEA process has influenced the development of the Drought Plan 2027;
- how consultation comments were taken into consideration; and
- how the Plan will be monitored.

The Post-Adoption Statement will provide sufficient information to make it clear how the Drought Plan 2027 was influenced as a result of the SEA process and consultation.

