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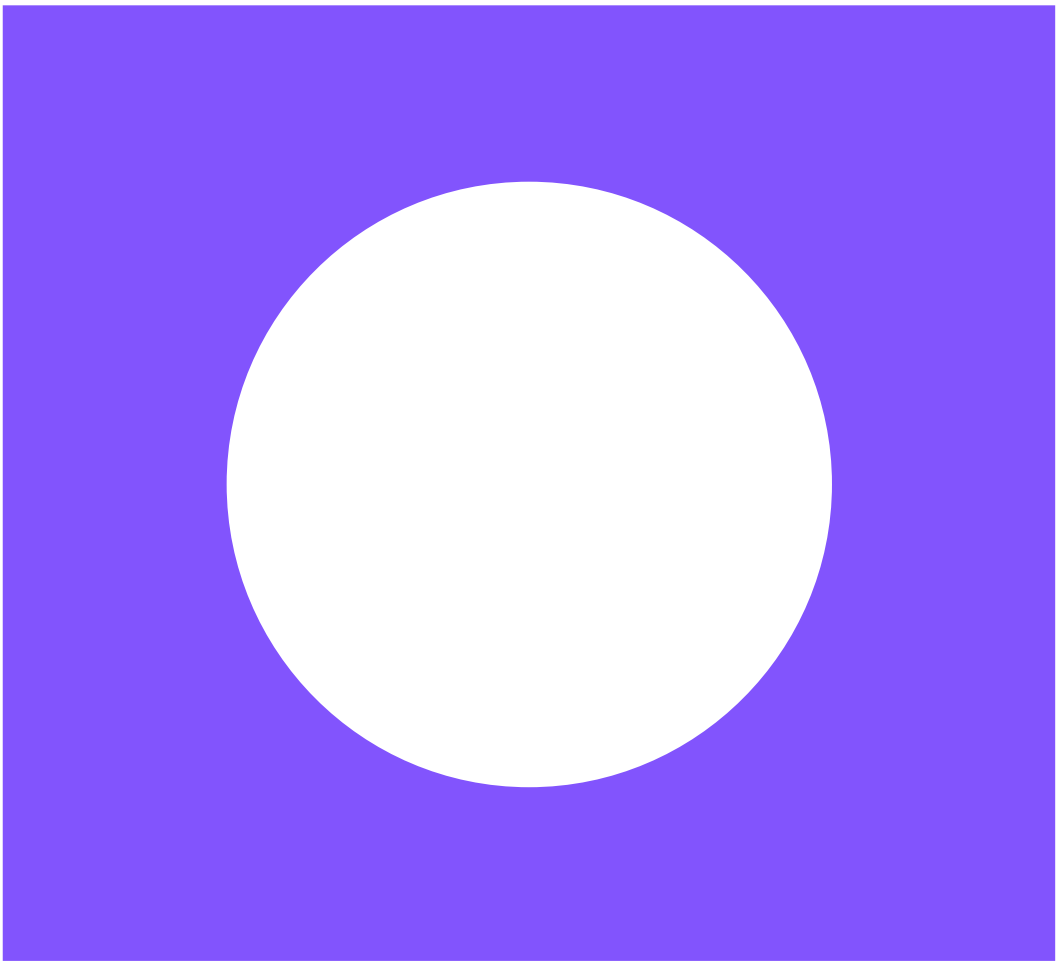

South West Water, Bristol Water and Bournemouth Water Drought Plan 2027

SEA Environmental Report: Annex O - Habitats Regulations Assessment (HRA)

March 2026

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Executive summary

As water companies, South West Water, Bristol Water and Bournemouth Water (together 'SBB' hereafter) have a statutory obligation to produce drought plan, which sets out how a company intends to manage water resources in response to drought events over a five-year period. Requirements for developing a drought plan must be 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 Habitats Regulations Assessment (HRA) report sits within a suite of environmental assessment documents that accompanies the SBB Drought Plan 2027 ('the Drought Plan'). This assessment process feeds into the plan-making process as part of SBB's Preferred Plan approach.

This report presents the results of the HRA of the Drought Plan, pursuant to Regulation 63 of the Habitats Regulations. During development of the Drought Plan, a total of 38 options remain feasible, with all of these within the Preferred Plan at this stage.

In respect of the options, this report includes the descriptions of all drought options which have undergone HRA Stage 1 Screenings. Due to programme constraints, some options identified for inclusion within the Preferred Plan have not undergone Appropriate Assessment, where identified as needed such within the Screening. This report provides a summary of the Screening results (Appendix D) but focuses on the Appropriate Assessment within the main text. Full standalone Screening assessments of all options can be provided upon request.

The primary objective of the HRA is to safeguard the protected features of a Special Area of Conservation (SAC) or Special Protection Area (SPA), as part of the national sites network (NSN). It is government policy to afford the same level of protection to a candidate Special Area of Conservation (cSAC), potential Special Protection Area (pSPA), a listed or proposed Ramsar site and sites identified, or required, as compensatory measures for adverse effects on the above listed site designations. These sites are collectively referred to as 'Habitats Sites' hereafter.

The Stage 1 Screening is the process which identifies the potential effects upon the Habitats Sites and considers if these are likely to be significant. The Appropriate Assessment assesses the implications the supply options will have on the conservation objectives of Habitats Sites and ultimately as to whether there is an adverse effect on site integrity. Mott MacDonald Limited undertook these assessments following the methodology in the UK Water Industry Research Limited's '*Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans (21/WR/02/15)*' and Tyldesley and Chapman's '*The Habitats Regulations Assessment Handbook*'.

It is considered that at the plan level there is considerable uncertainty over the potential effects on the integrity of Habitats Sites at all drought levels. At this stage, it cannot confidently be concluded, beyond scientific doubt, that some of the Drought Plan options, both individually and in-combination with other options, and other projects and/or plans, would not have an adverse effect. Following the identification of necessary future assessments, with the aim of alleviating the uncertainties, option-specific Environmental Assessment Reports (EARs) will be produced for options requiring drought permits and orders and implemented in EA drought levels 2-3a. These will inform the overall impacts of these options and allow this HRA to be updated accordingly throughout the development of the Drought Plan.

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.

Abbreviations

Abbreviation	Meaning
BH	Borehole
COSA	Conservation Objective Supplementary Advice
cSAC	Candidate Special Area of Conservation
DEFRA	Department of Environment, Farming and Rural Affairs
DO	Deployable Output
EA	Environment Agency
EAR	Environmental Assessment Report
FCS	Favourable Conservation Status
GEP	Good Ecological Potential
GES	Good Ecological Status
HRA	Habitat Regulations Assessment
INNS	Invasive Non-Native Species
IROPI	Imperative Reasons of Over-riding Public Interest
JNCC	Joint Nature Conservation Committee
LSE	Likely Significant Effects
Ml/d	Megalitres per day
NSN	National Site Network
pSPA	Potential Special Protection Area
RBD	River Basin District
RBMP	River Basin Management Plan
SAC	Special Area of Conservation
SBB	South West Water, Bristol Water and Bournemouth Water
SEA	Strategic Environmental Assessment
SIP	Site Improvement Plans
SNCB	Statutory Nature Conservation Body
SPA	Special Protection Area
UKWIR	UK Water Industry Research
WFD	Water Framework Directive
WINEP	Water Industry National Environment Programme
WRZ	Water Resource Zone
WTW	Water Treatment Works
ZoI	Zone of Influence

1 Introduction

1.1 Background

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. In the development of a drought plan, water companies must follow the Environment Agency (EA) Water Company Drought Plan Guideline 2025[1]. This 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 South West Water, Bristol Water and Bournemouth Water (SBB) Drought Plan covers Water Resource Zones (WRZs) in Devon, Cornwall and the Isles of Scilly, as well as Bristol, South Gloucestershire, North Somerset and parts of Somerset, plus Bournemouth, parts of Dorset, Hampshire and Wiltshire. SBB is due to publish its next drought plan in 2027, covering the period from 2027 to 2032. The SBB Drought Plan 2027 provides drinking water to a population of approximately 3.5 million people.

As part of the environmental assessment process to support the development of the SBB Drought Plan 2027, a Habitat Regulations Assessment (HRA) is required under of Habitats and Species Regulations 2017 (as amended) ("the Habitats Regulations"). The HRA refers to the several distinct stages of assessment that will determine if the plan may affect the protected features of a Habitats Site before deciding whether to undertake, permit or authorise it.

A Strategic Environmental Assessment (SEA) is required for the SBB Drought Plan 2027 under the Environmental Assessment of Plans and Programmes Regulations 2004 ('SEA Regulations')[2]. The SEA works to inform the decision-making process through the identification and assessment of significant and cumulative effects that a plan may have on the environment. The SEA process is conducted at a strategic level and enables consultation on the potential effects of a plan with a wide range of stakeholders. The results of the HRA feed into the SEA process, as well as the Water Framework Directive (WFD) assessment and Invasive Non-Native Species (INNS) assessment. Further details can be found in the main SEA Environmental Report, to which this document is appended.

The results of the Stage 1 and Stage 2 assessments are presented in this appendix report.

1.2 SBB Drought Plan 2027 options

The SBB Drought Plan 2027 includes both supply and demand drought options. Supply actions consist of 'operational', 'permit' and 'drought order' actions, as well as local EA agreements. Operational actions tend to be relatively minor activities which SBB can implement without the need for applying for drought permits. In most cases, operational actions have not undergone SEA, HRA, WFD and INNS assessments unless they have been identified as potentially causing harm to the environment or involve activities outside the norm of SBB activities. One operational action has undergone environmental assessments and will be reported on. The

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

[2] GOV.UK (2004) *The Environmental Assessment of Plans and Programmes Regulations 2004*. Available at: https://www.legislation.gov.uk/uksi/2004/1633/contents [accessed September 2025]

remaining supply options involve new or additional activities outside the norm of SBBs usual activities.

Demand options are activities aimed to SBB customers to reduce consumption and therefore retain more water in the natural environment. Due to the nature of the measures, demand options do not require detailed HRA assessment, however, will undergo SEA to identify possible negative and positive effects associated with demand measures.

SBB initially developed a long list of options. Following engagement with regulators, internal SBB workshops and initial environmental screenings, these drought options were refined down to the list presented in the Plan.

The list of options that have undergone assessment includes 33 drought permit options, one action and four local EA agreements, and are presented in Table 1.1 below.

1.2.1 Removed options

Following the 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 have therefore not been considered further within this 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-15 - Tresco - borehole opportunities with permits as outside of licence conditions.
- 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.

Table 1.1: Drought Plan 2027 options

WRZ	Option ID	Option title	Option description
Colliford	C-03	River Fowey at Restormel - increase annual abstraction limit	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	Increase the daily abstraction limit at Stannon Lake from 4 Ml/d to 6 Ml/d by installing temporary pumps and increase annual limit proportionally. Transfer to De Lank and Lowermoor WTW.
	C-06	Colliford Reservoir - reduce compensation flow	Colliford not releasing compensation flows when making supply releases
	C-07a	Park Lake - increase daily abstraction limit	Increase the daily abstraction limit at Park Lake from 8 Ml/d to 14 Ml/d. Also need to increase annual and rolling 5 year limit proportionally.
	C-10	Drift Reservoir - reduce compensation flow	Reduce Drift Reservoir compensation flow by up to 50%
	C-11	Hawk's Tor Pit - abstract from new source	Transfer 4 Ml/d from Hawk's Tor Pit (former quarry) to Colliford Reservoir.
	C-17	Stithians Reservoir - reduce compensation flow	Reduce Stithians compensation release rate by up to 50%.
	C-30	Siblyback Reservoir - reduce compensation flow	Siblyback not releasing compensation flows when making supply releases.
	C-37	River Cober at Wendron - increase annual licence limit	Increase of annual abstraction limit which is a key constraint on this licence.
	C-40	Colliford Reservoir - reduce fish bank releases	Reduce or not provide / reserve reservoir storage for fish bank releases. Requirement on company undertaking not licence.
Roadford	R-07	Slade Reservoir - abstract from new source	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	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	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	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	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	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	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	Roadford not releasing compensation flows when making supply releases.
	R-26	Upper Tamar Lake - reduce compensation flow	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	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	Reduce or not provide / reserve reservoir storage for fish bank releases. Requirement on company undertaking not licence.
Wimbleball	W-03	Wimbleball Reservoir - reduce compensation flow	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-06	Brampford Speke & Stoke Canon - abstract from new source	Extension of winter pumped storage season (November to March) to include April and May.
	W-09	River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May	Wimbleball not releasing compensation flows when making supply releases.
	W-22	Wimbleball Reservoir - reduce fish bank releases	Reduce or not provide / reserve reservoir storage for fish bank releases
Bristol	BR-27a	Blagdon Reservoir - reduce compensation flow	Reduce the compensation flow at Blagdon Reservoir by up to 50%

	BR-27b	Blagdon Reservoir - delay water bank releases	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	Chew Valley Lake - reduce compensation flow	Reduce the compensation flow at Chew Valley Lake by up to 50%
	BR-28b	Chew Valley Lake - delay water bank releases	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	Reduce the compensation flow at Chew Magna Reservoir by up to 50%
	BR-30	Cheddar Ponds - reduce compensation flow	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.
	BR-31a	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October	Reduce the compensation flow at Chew Magna Reservoir by up to 50%
	BR-31b	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May	Reduce the compensation flow at Cheddar Ponds by up to 50%
	BR-47	River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction	Extend pump storage season for River Axe at Brinscombe to Cheddar Reservoir from Nov-Apr to include October and increase annual abstraction limit proportionally.
Bournemouth	BN-04	River Stour at Longham - remove low flow constraint	Remove low flow constraint on River Stour at Longham, allowing increased abstraction.
	BN-05	Stanbridge boreholes – increase daily abstraction limit	Increase daily abstraction above current licence limit of 12.5 Ml/d to 17.5 Ml/d with current infrastructure and without borehole 3 and increase annual limit proportionally.
	BN-12	River Stour at Longham - increase weekly abstraction limit	River Stour at Longham licence change in April 2028 includes reduction in allowed weekly abstraction total - 310.22 to 222.72 Ml/week. Permit to increase weekly limit.
Isles of Scilly	IS-18	St Martins - increase abstraction from boreholes to greater than 20m3/d	Drop and resize pumps in existing boreholes to maximise DO above 20 m3/d.

Source: SBB, 2025; Mott MacDonald, 2026

1.3 Drought Levels and Environmental Impact

DEFRA guidance on Drought Planning 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 and 3a options (with a minor and moderate to major environmental impact respectively) are implemented during drought.
- Drought Level 3b options (with a major environmental impact) are implemented during a severe drought.

The process of determining the sequencing of drought options as a result of environmental impact has been an iterative process, with early findings from the SEA supporting decision-making. As the SEA process and plan-making tend to go hand-in-hand, the current guidance presents a challenge in using the environmental effects to determine the sequencing of drought options in the plan. Therefore, SBB have had to use professional judgement to supplement early SEA findings in order to put forward a preferred Plan.

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.

Due to programme constraints, some options identified for inclusion within the preferred Plan have not undergone stage 2 assessment (HRA AA, WFD Level 2 and INNS IRM). However, they have undergone stage 1 assessment (HRA ToLS, WFD Level 1 and INNS RA), and each have an option-level SEA. Care has been taken to ensure that the majority of the options which will be implemented first, and therefore more likely to be used, have undergone detailed stage 2 assessments. Most of the options within the Preferred Plan which are expected to be implemented in drought levels 1, 2 and 3a have undergone full assessment, with results reported on within the report and technical appendices. 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 have not yet undergone stage 2 assessment. The guidance states that 3b options are those with a major environmental impact. As such, it was considered imperative to ensure the options within the lower drought levels were fully assessed to ensure that they align with the guidance in having only a minor or moderate environmental impact.

The Stage 2 assessments for the remaining options are a known gap within this SEA.

It is possible that as a result of the findings of the more detailed assessments, the sequencing of options within the plan may change.

1.4 Environmental Assessment Reports

The EA's Drought Plan Guideline states that water companies must demonstrate they have met their responsibility to monitor, assess and where possible mitigate for the environmental impact of all drought supply options.

Drought options requiring drought permits and orders, and implemented in EA drought levels 2-3a, will also undergo a detailed EAR which 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 has been developed as part of the

SEA work and will be subject to consultation alongside this report. This will set out the detail and structure which will be adhered for each EAR in the Plan.

1.5 Preferred Plan

The preferred plan includes a selection of supply and demand options across the SBB region. All available options have been taken forward in the Plan. This has ensured a robust Plan which offers a number of supply options in every WRZ, should they be required during a drought.

It is assumed that for each supply side option, the relevant demand side options will have been active for 28 days prior to the implementation of the relevant supply option for that drought level.

As per EA guidance, options considered to have a minor environmental impact will be implemented first at drought level 1 and 2, with options assesses as having a moderate-major environmental impact implemented at later drought levels (3a and 3b), as these are less likely to be needed.

As every available option has been selected for the Plan, no alternatives to the preferred Plan were available for assessment. 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.

1.6 The purpose of the Habitats Regulations Assessment

This HRA has been undertaken for SBB's Drought Plan, to inform any likely impediments to the practicality or deliverability of the options taken forward. All plans and projects which are not directly connected with, or necessary for, the conservation management of a Habitats Site, require consideration of whether the plan or project, in this case the Drought Plan 2027, is likely to have significant effects on that site. This consideration – typically referred to as the 'Habitats Regulations Assessment Screening' – should take into account the potential effects both of the plan itself and cumulatively with other plans or projects.

Where the potential for Likely Significant Effects (LSE) cannot be excluded, a competent authority (SBB) must make an Appropriate Assessment of the implications of the plan for that Habitats Site, in view of the site's conservation objectives (Regulation 63 of the Habitats Regulations).

The competent authority may agree to the plan only after having ruled out adverse effects on the integrity of the Habitats Site. Where an adverse effect on the Habitats Site's integrity cannot be ruled out, and where there are no alternative solutions, the plan can only proceed if there are imperative reasons of over-riding public interest (IROPI) and if the necessary compensatory measures can be secured (Regulation 64).

1.7 Scope of the report

This report presents the HRA Stage 1 (Screening) and Stage 2 (Appropriate Assessment) assessments for those options which are currently considered for the Drought Plan 2027 (the 'consolidated list' within Section 1.2). Those options for which LSE could not be ruled out during the Screening were progressed to Appropriate Assessment, and details of the Appropriate Assessment are included within Section 4. For options which did not require progression to Appropriate Assessment, a summary of the individual Screenings for all options considered for the Drought Plan are provided within Appendix D.

The cumulative (or 'in-combination') assessments are provided within Section 5, evaluating the potential interactions between plan options (intra-plan), and with other plans and projects (inter-plan), to determine the potential for adverse effects on the integrity of Habitats Sites.

This report does not include assessments beyond Stage 2 of the HRA process, and therefore Regulation 64 is not currently considered. Due to uncertainties at this stage, the assessments are aimed at informing the plan development and progression of options, even where effects on integrity cannot currently be categorically ruled out beyond reasonable scientific doubt.

This report identifies and acknowledges the uncertainty and outlines 'next steps' (Section 6) to help address absence of necessary information to accurately conclude the absence of effects, where necessary for relevant options.

1.8 Assumptions and limitations

Information provided by third parties, including publicly available information and databases, is considered to be correct at the time of publication. Due to the dynamic nature of the environment, conditions may change in the period between the preparation of this report, and the implementation of the proposed Drought Plan options.

Stage 1 Screening assessments have been carried out for all developed feasible drought options being taken forward to the final Drought Plan, with information correct as of January 2026. Some options have not been subject to the Appropriate Assessment, although LSE could not be ruled out during the Screening. Whilst these options do not have dedicated sections for their assessment, it is assumed at this stage that adverse effects on Habitats Sites' integrity are possible, which is accounted for in the approach to the in-combination assessment.

At the plan making stage, the assessment of potential effects and the conclusions drawn are based on the best evidence currently available, exercising professional judgement and applying a precautionary approach. Any uncertainties surrounding, and limitations of, the assessment process are acknowledged and highlighted. Recommendations for avoidance, mitigation and future monitoring to address the potential adverse effects on the integrity of Habitats Sites identified by this report are also based on the information and evidence available at the time of the assessment. It is acknowledged that the requirement for mitigation may change as the design of the options is subject to further development and/or additional information becomes available from any ongoing investigations.

The added safeguard to the Habitats Sites is the requirement under the Habitats Regulations in due course to re-visit each option within the adopted plan, as the action or permit comes forward. The conclusions set out in this plan can be re-tested and considered in the light of further detail and refinement of individual options. As such, a revised HRA is still required at the individual options' consenting level.

Further consultation between the relevant competent authority (SBB) and the Statutory Nature Conservation Body (SNCB) (Natural England), will be required at the project stage. As such, this report will form the basis of future assessment iterations of the assessment.

Natural England will be consulted to advise whether the options presented in this report will adversely affect the integrity of Habitats Sites. The integrity of a site is defined as the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat complex of habitats and/or the levels of populations of the species for which it was designated[3].

[3] UK Government (2019). Guidance of the use of Habitats Regulations Assessment [online]. Available at: https://www.gov.uk/guidance/appropriate-assessment

2 Methodology

2.1 Habitats Regulations Assessment process

The Habitats Regulations include measures to establish and maintain a network of sites protecting habitats which in themselves are valuable as well as for the species they support. These sites form a network that across Europe is known as Natura 2000, and domestically as the national site network (NSN), to maintain the favourable conservation status of habitats and species listed in the EU Habitats Directive [92/43/EEC] and the Birds Directive [2004/25/EC].

The national site network includes those areas designated under the Habitats Regulations as a Special Area of Conservation (SAC) or Special Protection Areas (SPA), collectively known as 'Habitats Sites.' It is government policy to afford the same level of protection to a candidate Special Area of Conservation (cSAC), potential Special Protection Area (pSPA), a listed or proposed Ramsar site and sites identified, or required, as compensatory measures for adverse effects on the above listed site designations. All these sites are collectively referred to in this document as 'Habitats Sites.'

For plans or projects that are not directly connected with, or necessary for, the conservation management of a Habitats Site there is a requirement under the Habitats Regulations to determine if such a plan or project may have adverse effects on the integrity of a Habitats Site. The process of undertaking this assessment is known as an HRA. The competent authority (SBB) may agree to the plan or project only after having ruled out adverse effects on the integrity of the Habitats Site(s).

The HRA process consists of four stages, each stage being informed by the one preceding, to ensure an iterative and objective assessment. If the conclusion of the screening stage is that there will be no LSE, there is no requirement to undertake further stages. Similarly, if the Appropriate Assessment concludes there will be no adverse effect on site integrity, then the assessment with respect to Regulation 63 of the Habitats Regulations is concluded.

The third stage of the procedure is governed by Regulation 64 of the Habitats Regulations. If the Appropriate Assessment concludes that there is likely to be an adverse effect on site integrity, it must be demonstrated that there are no alternative solutions to the plan or project, that the plan or project must be carried out for imperative reasons of overriding public interest, and that suitable compensatory measures can be secured to ensure that the overall coherence of the national site network is protected. The HRA stages are summarised within Table 2.1.

Table 2.1: HRA stages under Regulation 63 and Regulation 64 of the Habitats Regulations

Stage	Description
Screening (Stage 1)	This is the process which identifies the potential effects upon the Habitats Sites and considers if these are likely to be significant (see definitions below). Screening is an iterative process and before moving to Stage 2 it can be repeated if required. Proposals to mitigate any likely significant effects cannot be considered at the screening stage. If the Screening (Stage 1) identifies that the project or plan, alone or in combination, may have likely significant effects on a Habitats Site and/or its features of interest, or if there is uncertainty, the competent authority must undertake an Appropriate Assessment (Stage 2) of the implications for that Site in view of that Site's conservation objectives.
Appropriate Assessment (Stage 2)	This stage involves the consideration of the predicted adverse effects of the project or plan either alone, or in-combination with other projects or plans, on the integrity of the Habitats Site with respect to the Site's structure, function and conservation objectives. Additionally, where mitigation has been proposed to avoid or minimise likely significant effects, this stage includes assessment of the likely effectiveness of any mitigation applied. A key outcome of the Appropriate Assessment is to identify whether the integrity of the Habitats Site(s) is likely to be adversely affected by the plan/project.
Assessment of Alternative Solutions (Stage 3)	If the mitigation measures prescribed at Stage 2 Appropriate Assessment cannot avoid adverse effects on the integrity of a Designated Site, this stage examines alternative ways of achieving the objectives of the plan or project that avoid adverse impacts on the integrity of any Habitats Site. Stage 3 (and 4) of the assessment should not be seen as an automatic progression from a negative outcome at Stage 2, i.e. adverse effects on site integrity cannot be ruled out.
Assessment where no alternative solutions exists and where adverse impacts remain (Stage 4)	If no suitable alternative solutions are available, Stage 4 requires an assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest ("IROPI"), it is deemed that the plan or project should proceed. In making this assessment, it is important to recognise that it will be appropriate to the likely scale, importance and impact of the proposed project. This is a last resort and should be avoided if possible.

Source: Based on European Commission, 2021. Assessment of plans and projects in relation to Natura 2000 sites - Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC.

This assessment has been undertaken in an iterative and objective manner following the above stages, with reference to best practice guidance and relevant legal framework (Appendix A), and case law (Appendix B) to inform the interpretation and therefore correct application of the terms 'likelihood, 'significance' and 'in-combination'.

Mott MacDonald Limited undertook this Drought Plan 2027 HRA in January 2026 following the methodology in the UK Water Industry Research (UKWIR) *Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans (21/WR/02/15)*[4] and in accordance with the following guidance:

- Tyldesley and Chapman *The Habitats Regulations Assessment Handbook*[5]*;*

[4] UKWIR (2021). Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans (21/WR/02/15), 287p.

[5] Tyldesley, D. and Chapman, C. (2013). The Habitats Regulations Assessment Handbook, edition UK. DTA Publications Limited.

- UK Government *Appropriate Assessment – Guidance on the use of Habitats Regulations Assessment*[3]*;*
- European Commission *Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC*[6]*;* and
- European Commission *Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on Article 6(3) and (4) of the Habitats Directive 92/43/EEC*[7]*.*

2.2 Screening assessment methodology

Habitats Sites were identified using a distance-based threshold of 10km. This threshold is based on the premise that Natural England's Site of Special Scientific Interest (SSSI) Impact Risk (IRZ) extend out to a maximum of a 10km radius (excluding bespoke Impact Risk Zones) and this was considered a robust threshold which was extended where appropriate when impact pathways were identified. Habitats Sites were assessed where they occur entirely or partly within the 10km threshold or where impact pathways link the option to more distant Habitats Sites, for example, those Habitats Sites that are hydrologically connected via surface or groundwater catchments.

In undertaking this HRA, a number of steps were undertaken to identify the relevant information to inform the assessment. Information gathered to inform the screening included the identification of:

- Any SPA/SAC/pSPA/cSAC/Ramsar sites, including any marine or marine elements of these sites within the potential Zone of Influence (ZoI), and any known areas of land outside the site boundary itself, which plays an important role in supporting the site and its features of interest (functionally linked land)
- Potential effects resulting from the option
- The ZoI of these effects, noting this may extend some distance from the site and are not confined to activities on or adjacent to the site
- Any viable pathways from the option to the receptor (Habitats Sites themselves or functionally linked land)
- The features of interest of the Habitats Site(s) in question and
- The conservation objectives of the Habitats Site, including any site sensitivities given within any supplementary advice, site improvement plans, or equivalent documents published by the relevant SNCB.

The above information was reviewed in respect of each feature of interest and potential development effect / impact pathway to inform an assessment of any LSE or adverse effects on integrity. Key aspects and terms used in this assessment are defined below:

- **Likelihood:** Where an effect was considered to be potentially significant, then the assessment of its occurrence was based on the likelihood of it occurring and not certainty that it would occur. Potential effects are 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.

[6] European Commission (2019). Managing Natura 2000 sites – The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC [online]. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOC_2019_033_R_0001

[7] European Commission (2021). Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC [online]. Available at: http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

- **Significance:** The significance of any effect is considered objectively, against the scale and nature of the impact in relation to those of that particular feature or condition and in relation to the extent of that feature or condition over the entire Habitats Site. A significant effect within this assessment is one which, if it occurred, would lead to a decline in the quality or status of the habitats or distribution, abundance, etc. of feature(s) of interest.
- **In-combination**: The assessment of in-combination effects considers those projects or plans which:
  - are currently in operation
  - are actually proposed - defined by being a valid live planning application, or any referenced with a local plan where there is potential for them being undertaken within a reasonable time period, specified within that plan.

In line with relevant case law (Appendix B), this assessment is undertaken in the absence of mitigation (including 'best practice' measures embedded into the option where these are intended for the avoidance of effects).

Where LSE were identified for a supply option, that option has been progressed to Stage 2 Appropriate Assessment.

2.3 Appropriate Assessment approach and methodology

2.3.1 Approach

Where a plan or project is likely to, or has the potential to, give rise to LSE upon a Habitats Site, an assessment must be made of the implications of the plan or project, either alone or in combination with other plans or projects, on the integrity of the Habitats Site in view of the Habitat Site's conservation objectives. This takes into account information on the habitats or species for which the site was selected, including but not limited to citations and Ramsar Information Sheets, conservation objective supplementary advice (COSA) and site improvement plans (SIP).

If adverse effects on the site's integrity have been identified during the Appropriate Assessment, or these cannot be ruled out, consideration is then given to introducing mitigation measures that will avoid or reduce these effects to a level where they will no longer adversely affect the integrity of the Habitats Site.

The approach in this assessment is to minimise the additional assumptions that have to be made, which, in practice, means relying on existing data, evidence and decisions. The assessment aims to reasonably predict the effects of the plan in a way that allows the assessment to inform the development of the plan options. It is considered that a reasonable assessment can be performed if:

- Effect pathways can be identified, and it is possible to determine which Habitats Sites are likely to be affected and how
- The magnitude of those effects can be estimated using existing information about the distribution, abundance and conservation status of those features and the nature of the option envisaged within the plan and
- The effects thus quantified can be related to the conservation objectives of the Habitats Site and a proportionate and precautionary conclusion can be formed, with reasonable certainty, about whether an adverse effect on site integrity can be excluded or not.

Potential effects on the qualifying features of the Habitats Site(s) are evaluated with respect to the scale, extent and nature of the impact, for example the area of habitat affected, changes in hydrodynamics, potential changes in species distribution, and the duration of the impact. Given

the high-level nature of the assessment at this plan stage it is not always possible to determine the exact scale and extent of the impact, when this is the case, a precautionary approach is taken when evaluating the significance of the impact.

To meaningfully inform the mitigation proposals for options within the plan, this assessment must be able to indicate how the effects can be avoided or mitigated through specific changes to the nature, scale, timing, and location of development.

Where the plan recommends changes to the nature, scale, timing and location of development and the other measures, it is assumed that the design and implementation of the option at the project level will have regard to the conservation objectives of the Habitats Site in question which will be a requirement of any future consenting process. In particular, consideration will be given to the 'desired state' for the attributes (ecological characters) potentially affected, which if safeguarded, will enable achievement of the conservation objectives.

For each option, a review was conducted of Natural England's SSSI Impact Risk Zones, including those relevant to 'Pipelines and underground cables, pylons and overhead cables' and all planning application ('All Consult'). In undertaking this review, functionally linked land was identified as best as possible in the absence of the full dataset (to attribute IRZs to specific Habitats Sites) and factored into the assessment. The risk of significant effects could be ruled out where it was clear there the option was not within a risk zone associated with a Habitats Site.

Functionally linked land refers to the role or 'function' that habitats beyond the boundary of a Habitats Site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified[8]. Whilst it is not possible at the plan level assessment to undertake species presence/absence surveys over multiple years in order to define precisely what land within an option's ZoI is functionally linked to a Habitats Site, reliance can be placed on existing information. In this case functionally linked land or sea is considered to fall within the distance based SSSI Impact Risk Zone or the bespoke zones defined by Natural England, e.g., 'Goose and Swan Functional Land.' This is considered to be a suitably precautionary approach.

In considering the predicted impacts and assessing the potential effects we have, in line with guidance and case law, given the most weight to the formal conservation objectives which are clearly set out for each designation under the relevant Appropriate Assessment.

2.3.2 Potential effects considered as part of the Appropriate Assessment

Based on UKWIR (2021) guidance and given the nature of the selected options, the effects considered in this assessment are summarised in Table 2.2. Proposed ZoI are also provided following the same guidance to determine if, where a pathway has been identified, the effect may adversely affect the habitats or species for which the Habitats Site(s) are designated.

Although it is assumed that the implementation of the proposed options will not require any construction or development, these aspects of the definitions below have been included.

[8] Chapman, C. & Tyldesley, D. 2016. Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects - a review of authoritative decisions. Natural England Commissioned Reports, Number 207.

Table 2.2: Potential effects and proposed Zone of Influence

Broad categories of potential effects on Habitats Sites (with examples)	Examples of operations resulting in effects and proposed ZoI
Physical loss Destruction (including offsite effects) e.g. foraging habitat, smothering	Development of built infrastructure associated with the schemes, e.g. reservoir embankments and access routes[9]. Physical loss is only likely to be significant where the boundary of the option extends within the boundary of the Habitats Site, or within an offsite area of known foraging, roosting, breeding habitat (that supports species for which a Habitats Site is designated or where natural processes link the option to the site, such as through hydrological connectivity downstream, or the scheme effects the linking habitat).
Physical damage Habitat degradation Erosion Trampling Fragmentation Severance/barrier effects Edge effects	Development of built infrastructure associated with the schemes, e.g. reservoir embankments and access routes. Physical loss is only likely to be significant where the boundary of the option extends within the boundary of the Habitats Site, or within an offsite area of known foraging, roosting, breeding habitat (that supports species for which a Habitats Site is designated or where natural processes link the option to the site, such as through hydrological connectivity downstream, or the scheme effects the linking habitat).
Non-physical disturbance Noise Visual presence Light pollution	Noise from construction activities. Taking into consideration the noise level generated from general building activity (c. 122dB(A)) and considering the lowest noise level identified in guidance as likely to cause disturbance to waterbird species (although this guidance is designed primarily for estuarine birds it was considered appropriate to use for this plan), it is concluded that noise effects could be significant up to 1km from the boundary of the Habitats Site. Noise from vehicular traffic during construction of the scheme Noise from construction traffic is only likely to be significant where the transport route to and from the scheme is within 500m of the boundary of the Habitats Site(s). Plant and personnel involved in operation of the option These effects (noise, visual/human presence) are only likely to be significant where the boundary of the scheme extends within or is adjacent to an offsite area of known foraging, roosting, breeding habitat that support species for which a Habitats Site is designated. Options that might include artificial lighting, e.g. for security around a temporary pumping station. Effects from light pollution are more likely to be significant where the boundary of the scheme is within 500m of the boundary of the Habitats Site
Water table/ availability Drying Flooding/storm water Changes to surface water levels and flows Changes to groundwater level and flows	Change to water levels and flows due to water abstraction, storage and drainage interception associated with inland options. These effects are only likely to be significant where the boundary of the scheme extends within the same ground or surface water catchment as the Habitats Site. However, these effects are dependent on hydrological continuity between the scheme and the Habitats Site and whether the scheme is up or downstream from the Habitats Site.
Toxic contamination Water pollution Soil contamination Air pollution	Reduced dilution in downstream or receiving waterbodies due to changes in abstraction or reduced compensation flow releases to river systems. These effects are only likely to be significant where the boundary of the scheme extends within the same ground or surface water catchment as the Habitats Site. However, these effects are dependent on hydrological continuity between the scheme and the Habitats Site, and sometimes whether the scheme is up or downstream from that site.

[9] It is acknowledged that infrastructure associated with the construction of the reservoirs may have an impact on Habitats Sites. However, for the purposes of this informal HRA, only the construction footprint of the reservoir itself has been used to determine the potential for significant effects.

	Air emissions associated with plant and vehicular traffic during construction and operation of the scheme. The effect of dust is only likely to be significant where site is within or in close proximity to the boundary of a Habitats Site. Without mitigation, dust can be deposited onto the public road network and then spread by vehicles on roads up to 500m from large sites, 200m from medium sites, and 50m from small sites as measured from the site exit. Effects of road traffic emissions from the transport route to be taken by the scheme traffic are only likely to be significant where the Habitats Site falls within 200 metres of the edge of a road affected.
Non-toxic contamination Nutrient enrichment (e.g. of soils and water) Algal blooms Changes in turbidity Changes in sedimentation/silting Air pollution (dust)	Changes to water salinity, nutrient levels, turbidity, thermal regime due to increased water abstraction, discharges, storage, or reduced compensation flow releases to river systems. These effects are only likely to be significant where the boundary of the scheme extends within the same ground or surface water catchment as the Habitats Site. However, these effects are dependent on hydrological continuity between the scheme and the Habitats Site, and sometimes whether the scheme is up or downstream from that site. Emissions of dust during the earthworks, construction of plant and tunnel/pipeline construction associated with options.
Biological Disturbances Direct mortality Changes to habitat availability Changes in species abundance or distribution Out-competition by non-native species Introduction of disease Introduction of invasive species	Killing or injury due to construction activity. Likely to be a risk where the boundary of the scheme extends within or is directly adjacent to the boundary of the Habitats Site, or within/adjacent to an offsite area of known foraging, roosting, breeding habitat (that supports species for which a Habitats Site is designated). Changes in habitat availability, such as reductions in wetted width of rivers from abstraction or reduced compensation flow. These effects are only likely to be significant where the boundary of the scheme extends within the same ground or surface water catchment as the Habitats Site. However, these effects are dependent on hydrological continuity between the scheme and the Habitats Site, and sometimes whether the scheme is up or downstream from that site. Creation of new pathway for spread of non-native invasive species. This effect is only likely to be significant where the scheme is situated within the Habitats Site or an upstream tributary of the Habitats Site, but also for inter-catchment water transfers.

Source: Adapted from: UK Water Industry Research (2021)[10].

2.4 In-combination effects

Following assessments of all options at the individual level (alone), the overall effects of the Drought Plan as a whole were considered, including the potential cumulative effects between individual options (intra-plan effects) and subsequently the potential effects of the Drought Plan in-combination with other known plans and/or projects within the SBB region and neighbouring regions. The details of the in-combination assessment are provided within Section 5.

2.5 Consultation

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.

[10] UK Water Industry Research (UKWIR, 2021). *Environmental Assessment Guidance for Water Resources Management Plans and Drought Plans (21/WR/02/15).*

The Environmental Report and Technical Appendices (including this report) will be issued for a 10-week consultation period from May to July 2026 to the statutory bodies: the EA, NE, and Historic England (HE), as well as being available to wider stakeholders for comment.

Following receipt of comments, a Statement of Response (SoR) will be published, in line with the requirements of the Water Resource Planning Guidelines.

2.6 Appropriate Assessment assumptions

2.6.1 Assumptions

The assessment has taken a worst-case scenario approach for each option, assuming that all the habitats and species for which a Habitats Site is designated are likely to be present in the ZoI of operation; no construction is anticipated for any of the options at this stage. In some cases where it has been possible on the basis of existing information (e.g. habitat distribution mapping on Magic.gov.uk and information contained within Natural England and JNCC site designation documentation) to exclude some habitats or species because their distribution in the Habitats Site falls outside the expected ZoI, this has been stated in the assessment of the option.

The high-level nature of this assessment undertaken at the plan stage means that there is a lack of detailed design. By law, any scheme being taken forward to be implemented will be subject to an Appropriate Assessment at the project stage, when, in the light of more information relating to the construction and design of the scheme, a more refined HRA assessment can be undertaken.

It is recommended that SBB works closely with Natural England and the Habitats Sites' owners/managers to agree the specific mitigation measures to be included at the project stage HRA. The agreed mitigation measures will be expected to form part of planning conditions and/or conditions of relevant environmental permits, and their implementation managed through contractual obligations.

There are no assumptions relating to best practice or otherwise during the operation of the final options. No best practice measures are recommended in this document to reduce significant effects or adverse effects on Habitats Sites during operation. These will be tailored to each supply option as required, and are likely to require additional information, assessments and/or monitoring at the project level to inform the extent of potential adverse effects during operation.

2.6.2 Higher-tier plans

Whilst it is not possible for the Drought Plan 2027 assessment to reasonably predict the effects on the Habitats Sites at a project level in a detailed way, as lower tier plans to the Severn and South West River Basin District River Basin Management Plans (RBMPs) respectively[11,12], and the South West Inshore and Offshore Marine Plan ("Marine Plan")[13], this document contains measures and future studies that would ensure compliance with the policies of the RBMPs and Marine Plan. The RBMPs and Marine Plan are the principal safeguards related to river basin and coastal/estuarine management respectively. The operational limits of abstraction of groundwater or surface water which may have adverse effects on a Habitats Site will be

[11] UK Government (2022). Severn river basin district river basin management plan [online]. Available at: https://www.gov.uk/guidance/severn-river-basin-district-river-basin-management-plan-updated-2022

[12] UK Government (2022). South west river basin district river basin management plan [online]. Available at: https://www.gov.uk/guidance/south-west-river-basin-district-river-basin-management-plan-updated-2022

[13] UK Government (2021). South West Inshore and South West Offshore Marine Plan [online]. Available at: https://assets.publishing.service.gov.uk/media/60f6f71ce90e0764cfc22a78/FINAL_South_West_Marine_Plan__1_.pdf

constrained by the updated RBMPs. With respect to flows and water levels and quality, the RBMPs aims to sustain geomorphological processes, meet the hydro-ecological requirements of the constituent species and dilute contaminants. The environmental objectives in the RBMPs are legally binding once the plan is approved by Secretary of State for Environment, Food and Rural Affairs. All public bodies (e.g. SBB) must have regard to these objectives when making decisions that could affect the quality of the water environment. The environmental objectives of the RBMPs include, inter alia: preventing deterioration of the status of surface waters and groundwater; achieving objectives and standards for protected areas; and aiming to achieve good status for all water bodies.

The Marine Plan has complementary objectives to RBMPs, with an overall objective to achieve ‘Good Environmental Status’ in marine waters, including the same objectives for good ecological and chemical status. All local development plans use RBMPs and where relevant marine plans to inform the planning policies, forming a complimentary approach to delivering the objectives of the RBMPs and marine plans.

3 Stage 1 Screening

This section summarises the results of the Stage 1 Screenings, with detailed summaries of the Stage 1 Screening for each considered Drought Plan option available within Appendix D. It is assumed that there are no construction phases associated with the options presented to date, and therefore the potential for LSEs is relevant to the options' operational phases only.

3.1 Colliford WRZ

Table 3.1: Colliford Drought Plan options

Option ID	Option title	Screening conclusion
C-03	River Fowey at Restormel - increase annual abstraction limit	No LSEs anticipated.
C-04a	Stannon Lake	Potential for significant effects – Appropriate Assessment required.
C-06	Colliford Reservoir - reduce compensation flow	No LSEs anticipated.
C-07a	Park Lake	No LSEs anticipated.
C-10	Drift Reservoir - reduce compensation flow	No LSEs anticipated.
C-11	Hawk's Tor Pit - abstract from new source	No LSEs anticipated.
C-17	Stithians Reservoir - reduce compensation flow	No LSEs anticipated.
C-30	Siblyback Reservoir - reduce compensation flow	No LSEs anticipated.
C-37	River Cober at Wendron - increase annual licence limit	No LSEs anticipated.
C-40	Colliford Reservoir - reduce fish bank releases	No LSEs anticipated.

Source: Mott MacDonald, 2025

3.2 Roadford WRZ

Table 3.1: Roadford Drought Plan options

Option ID	Option title	Screening conclusion
R-07	Slade Reservoir - abstract from new source	No LSEs anticipated.
R-11	River Lyd to Roadford Reservoir - extend pumped storage abstraction season to include April and May	Potential for significant effects – Appropriate Assessment required.
R-20	Avon Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
R-21	Burrator Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
R-22	Fernworthy Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
R-23	Trenchford Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
R-24	Meldon Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
R-25	Roadford Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
R-26	Upper Tamar Lake - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
R-45	River Dart & Littlehempston boreholes - aggregate daily and annual licence limits	Potential for significant effects – Appropriate Assessment required.

R-48	Roadford Reservoir - reduce fish bank releases	Potential for significant effects – Appropriate Assessment required.

Source: Mott MacDonald, 2025

3.3 Wimbleball WRZ

Table 3.2: Wimbleball Drought Plan options

Option ID	Option title	Screening conclusion
W-03	Wimbleball Reservoir - reduce compensation flow	No LSEs anticipated.
W-06	Brampford Speke & Stoke Canon - abstract from new source	No LSEs anticipated.
W-09	River Exe to Wimbleball Reservoir - extend pumped storage abstraction season to include April and May	No LSEs anticipated.
W-22	Wimbleball Reservoir - reduce fish bank releases	No LSEs anticipated.

Source: Mott MacDonald, 2025

3.4 Bristol WRZ

Table 3.3: Bristol Drought Plan options

Option ID	Option title	Screening conclusion
BR-27a	Blagdon Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
BR-27b	Blagdon Reservoir - delay water bank releases	Potential for significant effects – Appropriate Assessment required.
BR-28a	Chew Valley Lake - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
BR-28b	Chew Valley Lake - delay water bank releases	Potential for significant effects – Appropriate Assessment required.
BR-29	Chew Magna Reservoir - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
BR-30	Cheddar Ponds - reduce compensation flow	Potential for significant effects – Appropriate Assessment required.
BR-31a	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include October	Potential for significant effects – Appropriate Assessment required.
BR-31b	River Axe to Cheddar Reservoir - extend pumped storage abstraction season to include May	Potential for significant effects – Appropriate Assessment required.
BR-47	River Axe to Cheddar Reservoir - early commissioning of pumped storage abstraction	Potential for significant effects – Appropriate Assessment required.

Source: Mott MacDonald, 2025

3.5 Bournemouth WRZ

Table 3.4: Bournemouth Drought Plan options

Option ID	Option title	Screening conclusion
BN-04	River Stour at Longham - remove low flow constraint	Potential for significant effects – Appropriate Assessment required.
BN-05	Stanbridge boreholes – increase daily abstraction limit	Potential for significant effects – Appropriate Assessment required.

BN-12	River Stour at Longham - increase weekly abstraction limit	Potential for significant effects – Appropriate Assessment required.

Source: Mott MacDonald, 2025

3.6 Isles of Scilly WRZ

Table 3.5: Isles of Scilly Drought Plan options

Option ID	Option title	Screening conclusion
IS-18	St Martins - increase abstraction from boreholes to greater than 20m3/d	No LSEs anticipated.

Source: Mott MacDonald, 2025

3.7 Screening summary

A total of 22 options were screened in for progression to the Stage 2 Appropriate Assessment, following Screening conclusions which could not rule out the potential for significant effects on Habitats Sites. The following options require further assessment (relevant Habitats Sites in brackets):

- C-04a (River Camel SAC)
- R-11 (Dartmoor SAC; Plymouth Sound & Estuaries SAC)
- R-20 (Dartmoor SAC) - No Appropriate Assessment undertaken
- R-21 (Dartmoor SAC) - No Appropriate Assessment undertaken
- R-22 (Dartmoor SAC) - No Appropriate Assessment undertaken
- R-24 (Dartmoor SAC) - No Appropriate Assessment undertaken
- R-25 (Dartmoor SAC; Plymouth Sound & Estuaries SAC)
- R-26 (Dartmoor SAC; Plymouth Sound & Estuaries SAC) - No Appropriate Assessment undertaken
- R-45 (Dartmoor SAC)
- R-48 (Dartmoor SAC; Plymouth Sound & Estuaries SAC) - No Appropriate Assessment undertaken.
- BR-27a (Severn Estuary SAC; Severn Estuary Ramsar; Severn Estuary SPA; Chew Valley Lake SPA)
- BR-27b (Severn Estuary SAC; Severn Estuary Ramsar; Severn Estuary SPA; Chew Valley Lake SPA)
- BR-28a (Severn Estuary SAC; Severn Estuary Ramsar; Severn Estuary SPA; Chew Valley Lake SPA)
- BR-28b (Severn Estuary SAC; Severn Estuary Ramsar; Severn Estuary SPA; Chew Valley Lake SPA)
- BR-29 (Severn Estuary SAC; Severn Estuary Ramsar; Severn Estuary SPA; Chew Valley Lake SPA)
- BR-30 (North Somerset and Mendip Bats SAC; Mendip Limestone Grasslands SAC; Somerset Levels and Moors SPA; Somerset Levels and Moors Ramsar; Severn Estuary SAC; Severn Estuary SPA; Severn Estuary Ramsar)
- BR-31a (North Somerset and Mendip Bats SAC; Mendip Limestone Grasslands SAC; Somerset Levels and Moors SPA; Somerset Levels and Moors Ramsar; Severn Estuary SAC; Severn Estuary SPA; Severn Estuary Ramsar)

- BR-31b (North Somerset and Mendip Bats SAC; Mendip Limestone Grasslands SAC; Somerset Levels and Moors SPA; Somerset Levels and Moors Ramsar; Severn Estuary SAC; Severn Estuary SPA; Severn Estuary Ramsar)
- BR-47 (North Somerset and Mendip Bats SAC; Mendip Limestone Grasslands SAC; Somerset Levels and Moors SPA; Somerset Levels and Moors Ramsar; Severn Estuary SAC; Severn Estuary SPA; Severn Estuary Ramsar)
- BN-04 (River Avon SAC; Solent and Dorset Coast SPA)
- BN-05 (River Avon SAC)
- BN-12 (River Avon SAC; Solent and Dorset Coast SPA)

4 Stage 2 Appropriate Assessment

The second stage of the HRA been completed for the drought options that were screened in at Level 1. Further information on the approach is outlined in Section 2.3. Due to the overlaps in Habitats Sites screened in for Appropriate Assessment across the Options within each WRZ, the following Appropriate Assessments have taken a Habitat Sites focussed approach to prevent repetition. The mitigation measures to reduce LSEs on the qualifying habitats and species of the Habitats Sites are outlined below, with clear reference to which Option these apply.

This section provides an overview of the Appropriate Assessment findings and summary tables for each option, with details on mitigation measures and scoring.

Details of each Habitats Sites' qualifying features and conservation objectives are provided within Appendix C.

4.1 Colliford WRZ

4.1.1 C-04a

4.1.1.1 Stage 1 Screening Review

The Stage 1 Screening identified four Habitats Sites within the ZoI of C-04a (Table 4.8). LSE could not be ruled out for one of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.1: C-04a Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
River Camel SAC (approximately 2.5km west, 4.1km downstream)	Crowdy Marsh SAC (approximately 2.8km northeast)
	Bristol Channel Approaches / Dynesfeydd Mor Hafren SAC (approximately 9.3km west, 37km downstream)
	Tintagel-Marsland-Clovelly Coast SAC (approximately 9.3km northwest)

Source: Mott MacDonald Limited, 2025

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Site is outlined below, and mitigation measures are proposed.

4.1.1.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option C-04a and the 'Stannon Stream', a minor[14] impact which would not result in the deterioration of GES or Good Ecological Potential (GEP). The assessment for 'Camel (De Lank to Stannon)' waterbody downstream was screened out at Level 1, indicating that no

[14] Minor impacts are defined as "impacts that, when taken on their own, have the potential to lead to a minor localised, short-term and fully reversible effect on one or more of the quality elements but would not result in the lowering of WFD status. Impacts would be very unlikely to prevent any target WFD objectives from being achieved".

measurable effects, with regards to the WFD assessment, were anticipated. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of recent modelling and updated hydroecological assessment.

The conclusion that this option would not have an effect on the River Camel SAC within the site boundary is supported by a drought permit EAR for Stannon Lake (2023)[15] which investigates the same increase in daily abstraction that is proposed for this option (increase from 4Ml/d to 6Ml/d). The modelling indicated that the ZoI of this abstraction would not extend as far as the main River Camel, and therefore measurable effects within the SAC boundary were not anticipated. However, the Stannon Stream is considered to be functionally linked to the SAC, providing upstream habitat which may be suitable for the Atlantic salmon, bullhead (*Cottus gobio*) and otter (*Lutra lutra*) qualifying features. Records of both Atlantic salmon and bullhead have been identified within the Stannon Stream, and presence of otter is assumed. Functionally linked habitat is afforded the same consideration as that within Habitats Sites' boundaries within the HRA process. The results of the 2023 drought permit EAR are sufficient to support the conclusions of no LSE for all other qualifying interest features of the River Camel SAC.

Potential adverse effects on the integrity of the River Camel SAC during operation are:

Water table availability

Increasing the daily abstraction from Stannon Lake will result in an additional temporary reduction to the downstream flow, which will be measurable within the Stannon Stream downstream of the intake location. The Stannon Stream is considered to be functionally linked to the River Camel SAC, with habitats potentially suitable for supporting spawning Atlantic salmon and resident bullhead populations. Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Changes to fish assemblages may also have an indirect effect on the SAC's otter population. Changes in abundance and/or distribution of prey items may result in displacement of otters for preferred foraging areas, reducing the overall distribution outside of the SAC boundary. No direct effects on otters are anticipated.

Toxic and non-toxic contamination

A reduction in flow within the Stannon Stream may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the Stannon Stream and lead to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding the qualifying fish species' optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which qualifying fish interest features of the River Camel SAC rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse.

Potential changes within the Stannon Stream are not anticipated to have a direct effect on otters, but the above impacts on the fish assemblage may result in reduced prey availability and subsequent displacement from this watercourse.

[15] APEM (2023). Stannon Lake Abstraction Licence Environmental Assessment Report.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the River Camel SAC.

Biological disturbance

As a result of changes to the above, it is possible that populations of migratory Atlantic Salmon and bullhead in the Stannon Stream could be displaced from this functionally linked watercourse. Displacement to less suitable or more highly populated areas may jeopardise the completion of the complex Atlantic salmon life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

As identified above, otter populations may be indirectly affected by changes to overall fish assemblages and prey availability.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.1.1.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The increased daily abstraction must consider seasonal flows and will be restricted to periods when the flow within the River Stannon is sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the Stannon Stream, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 5% (under the assumption this is classed as a headwater stream) of the daily naturalised flow at low flows (<Q95).

According to the North Cornwall, Seaton, Looe and Fowey ALS[16], surface water is available for abstraction in the Upper Camel (which includes the Stannon Stream) at Q30 (higher flows), Q50 (moderate flows) and Q70 (moderate-low flows) but restricted at Q95. This indicates that water would be available for abstraction during drought periods, which may overlap with the sensitive migration period for Atlantic salmon, particularly that of downstream smolt migration.

Operational abstraction should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the River Camel SAC, and supporting processes which maintain this site's qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory (both upstream adults and downstream juveniles) and resident fish, must be considered.

4.1.1.4 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of the River Camel SAC. It is assumed that any reduction in downstream flow on

[16] Environment Agency (2025). North Cornwall, Seaton, Looe and Fowey abstraction licensing strategy [online]. Available at: https://www.gov.uk/government/publications/north-cornwall-seaton-and-fowey-abstraction-licensing-strategy/north-cornwall-seaton-looe-and-fowey-abstraction-licensing-strategy

the Stannon Stream will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the Stannon Stream and the RBMP. Further studies are recommended to inform updates to the option-specific EARs and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the River Camel SAC rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the Stannon Stream for targeted migratory fish species, their spawning sites and specific migratory periods for this river, and
- 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.

South West Water is supporting improvement projects in the River Camel catchment as part of WINEP (WINEP action IDs 08SW100005a and 08SW100018a). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform adaptive management in response to increased abstractions where qualifying interest features of the River Camel SAC are potentially affected.

4.2 Roadford WRZ

4.2.1 R-11

4.2.1.1 Stage 1 Screening Review

The Stage 1 Screening identified three Habitats Sites within the ZoI of R-11 (Table 4.9). LSE could not be ruled out for two of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C.

Table 4.2: R-11 Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
Dartmoor SAC (approximately 12.8km east, 15km upstream)	Tamar Estuaries Complex SPA (approximately 19.4km south, 39.5km downstream)
Plymouth Sound & Estuaries SAC (approximately 14.3km south, 27.7km downstream)	

Source: Mott MacDonald Limited, 2025

Following a review of the Screening and the option details, potential adverse effects on the Plymouth Sound & Estuaries SAC have been ruled out. A drought permit EAR for the River Lyd

(2023)[17] was reviewed, which investigates the same change period of abstraction (April-May inclusive) that is proposed for this option. The modelling indicated that the ZoI of this abstraction would not extend as far as the lower River Tamar, and therefore measurable effects within the SAC boundary were not anticipated. Additionally, and with regards to the allis shad (*Alosa alosa*) qualifying feature (a migratory fish), it is assumed that the presence of migratory barriers presented by the Duchess and Gunnislake Weirs in the lower Tamar limits the accessibility of this species beyond the tidal range[18]. As such, it is not anticipated that a significant proportion of the spawning population would be present within the affected reach of this option, and therefore it does not jeopardise any further upstream migration within the River Tamar.

Therefore, this Habitats Site has not been considered further with this Appropriate Assessment, and no mitigation is required to safeguard its integrity.

The 2023 EAR identifies Lydford Gorge as a natural barrier to further upstream fish migration on the River Lyd, therefore this doesn't not represent a pathway for Atlantic salmon to reach the edges of the SAC. However, the confluence of the River Lew is located on the River Lyd downstream of Lydford Gorge, but upstream of the abstraction location. The River Lew provides a pathway for Salmon to migrate into the Dartmoor SAC, specifically into the Dartmoor SAC's component North Dartmoor SSSI - Bridestowe & Sourton Common (077), which Atlantic Salmon is a feature of[19]. Therefore, an impact pathway remains and effects on the Dartmoor SAC cannot currently be ruled out.

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Site is outlined below, and mitigation measures are proposed.

4.2.1.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option R-11 and the 'Lower River Lyd', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

The assessment for 'Tamar (River Lyd to River Inny)' waterbody downstream was screened out at Level 1, indicating that no measurable effects, with regards to the WFD assessment, were anticipated; this supports the findings of the 2023 drought permit EAR and indicates that there will be no measurable effects on the lower Tamar.

Potential adverse effects on the integrity of the Dartmoor SAC during operation are:

Water table availability

Increasing the duration of abstraction from the River Lyd into April and May inclusive will result in an additional temporary reduction to the downstream flow, which will be measurable within the River Lyd downstream of the intake location. The River Lyd, and the River Lew upstream of the abstraction location, are considered to be functionally linked to the Dartmoor SAC, providing

[17] APEM (2023). River Lyd Drought Permit Environmental Assessment Report.

[18] Hillman, R - Natural England (2020) Natural England Research Report NERR1947 Habitat mapping and monitoring of Allis shad on the River Tamar [online]. Available at: https://publications.naturalengland.org.uk/publication/5075147242602496

[19] Natural England, 2014. Definitions of Favourable Condition for designated features of interest: North Dartmoor.

a migratory route from which adults move up the River Tamar and spawn on the edges of the SAC via the River Lew and its tributaries.

Whilst upstream migration usually takes place from November to December[20], timing and duration of upstream migration is often river system-specific and when the necessary conditions are favourable. It is not anticipated that extending the operation will affect upstream migration when compared to the current baseline, but it may affect the downstream migration of the smolts when they return to the sea. This stage of the life cycle often happens in spring, so there is potential that changes to conditions on the River Lyd and downstream result in barriers to downstream dispersal. Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Toxic and non-toxic contamination

A reduction in flow within the River Lyd may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the River Lyd and lead to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding Atlantic salmon's optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which Atlantic salmon rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Dartmoor SAC.

Biological disturbance

As a result of changes to the above, it is possible that populations of migratory Atlantic Salmon which use the River Lyd could be displaced from this functionally linked watercourse. Displacement to less suitable or more highly populated areas may jeopardise the completion of the complex Atlantic salmon life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.2.1.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The extension of the River Lyd abstraction must consider seasonal flows and will be restricted to periods when the flow within the River Lyd is sufficient to support this. A HOF above which

[20] NatureScot (2025). Atlantic Salmon. [Online]. Available from: https://www.nature.scot/plants-animals-and-fungi/fish/freshwater-fish/atlantic-salmon

no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the River Lyd, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 10% of the daily naturalised flow at low flows (<Q95).

According to the Tamar ALS[21], surface water is available for abstraction in the River Lyd at Q30 (higher flows) and Q50 (moderate flows) but restricted at Q70 (moderate-low flows) and Q95. This indicates that water would be available for abstraction during drought periods, which may overlap with the sensitive migration period for Atlantic salmon, particularly that of downstream smolt migration.

Operational abstraction should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the Dartmoor SAC, and supporting processes which maintain this site's qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory Atlantic salmon (both upstream adults and downstream juveniles), must be considered.

4.2.1.4 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of the Dartmoor SAC. It is assumed that any reduction in downstream flow on the River Lyd will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the River Lyd and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the Dartmoor SAC rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the River Lyd for targeted migratory fish species, their spawning sites and specific migratory periods for this river, and
- 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.

South West Water is supporting improvement projects upstream of the abstraction on the River Wolf as part of WINEP (WINEP action ID 08SW100019g). Any outputs of the agreed actions

[21] Environment Agency (2024). Tamar abstraction licensing strategy [online]. Available at: https://www.gov.uk/government/publications/tamar-abstraction-licensing-strategy/tamar-abstraction-licensing-strategy

should be reviewed to determine whether they are relevant to this option, and incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform adaptive management in response to increased abstractions where qualifying interest features of the Dartmoor SAC are potentially affected.

4.2.2 R-25

4.2.2.1 Stage 1 Screening Review

The Stage 1 Screening identified three Habitats Sites within the ZoI of R-25 (Table 4.10). LSE could not be ruled out for two of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.3: R-25 Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
Dartmoor SAC (approximately 11.4km east)	Tamar Estuaries Complex SPA (approximately 24km south, 45.8km downstream)
Plymouth Sound & Estuaries SAC (approximately 18.7km south, 34km downstream)	

Source: Mott MacDonald Limited, 2025

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.2.2.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option R-25 and the 'Lower River Tamar', a minor impact which would not result in the deterioration of GES or GEP.

The assessment for all other downstream surface waterbodies were screened out at Level 1, indicating that no measurable effects, with regards to the WFD assessment, were anticipated. However, the WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of recent modelling and updated hydroecological assessment. All watercourses downstream of the Roadford Reservoir are considered for residual low-level effects during operation.

Potential adverse effects on the integrity of the Dartmoor SAC and Plymouth Sound & Estuaries SAC during operation are:

Water table availability

Reducing the compensation flow from Roadford Reservoir will result in a temporary reduction to the downstream flow, which is precautionarily assumed to be measurable within the River Lyd downstream of the reservoir. The River Lyd is considered to be functionally linked to the Dartmoor SAC, providing a migratory route from which adults move up the River Tamar and spawn on the edges of the SAC. Lydford Gorge acts as a barrier to salmon migration upstream of Lydford Gorge on the River Lyd. However, the confluence of the River Lew is located on the River Lyd downstream of Lydford Gorge. The River Lew provides a pathway for Salmon to migrate into the Dartmoor SAC, specifically into the Dartmoor SAC's component North Dartmoor SSSI - Bridestowe & Sourton Common (077), which Atlantic Salmon is a feature of[22]. Details of

[22] Natural England, 2014. Definitions of Favourable Condition for designated features of interest: North Dartmoor.

typical migration and spawning timings are provided within the corresponding assessment for option R-11 (Section 4.5.1) above, which also considers the Dartmoor SAC.

It is currently assumed that existing abstraction from the River Tamar at Gunnislake Weir will continue, but instead of abstracting the compensation flow from Roadford Reservoir, it will instead be abstracting from the base flow, resulting in further flow reductions downstream of the intake location. As the Dartmoor SAC's Atlantic salmon population uses the River Tamar to reach certain spawning grounds within the SAC (North Dartmoor SSSI component), the reduced flow may jeopardise the completion of critical life stages.

The same effects are applicable to the allis shad feature of the Plymouth Sound & Estuaries SAC. The River Tamar forms part of a migratory route for this species, which spawns in the tidal reaches and the river between May and July, meaning there is a feasible overlap between this sensitive period and the operation of the option. A known spawning population exists at Gunnislake, where the weir provides a significant barrier to further upstream movement. Additionally, with spawning dates coinciding with spring tides, there is a suggestion that utilisation of the spring tides allows allis shad to migrate upstream and past the significant barriers provided by Gunnislake and Duchess weirs to access spawning areas upstream[23].

Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Toxic and non-toxic contamination

A reduction in flow within the River Tamar, and at upstream watercourses influenced by the compensation flow, may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the watercourses and lead to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding the optimal thermal range for the relevant migratory fish species. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which these species rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Dartmoor SAC and Plymouth Sound & Estuaries SAC, particularly the known allis shad spawning sites at Gunnislake.

Biological disturbance

As a result of changes to the above, it is possible that populations of migratory fish which use the River Tamar (and upstream rivers) could be displaced from these functionally linked watercourses. Displacement to less suitable or more highly populated areas may jeopardise the completion of their life cycles and lead to reductions in overall numbers and distribution of populations associated with the SACs. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

[23] Hillman, R - Natural England (2020) Natural England Research Report NERR1947 Habitat mapping and monitoring of Allis shad on the River Tamar. [Online]. Available from: https://publications.naturalengland.org.uk/publication/5075147242602496

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.2.2.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The operation of this option must consider seasonal flows and will be restricted to periods when the flow within the affected watercourses (River Tamar, River Wolf, River Thrushel and River Lyd) is sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For these watercourses, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 10% of the daily naturalised flow at low flows (<Q95).

According to the Tamar ALS[24], surface water is available for abstraction in the lower River Tamar, River Thrushel and River Lyd at Q30 (higher flows) and Q50 (moderate flows) but restricted at Q70 (moderate-low flows) and Q95. No abstraction is available at any time from the River Wolf (and Roadford Reservoir).

This indicates that water would be available for abstraction from the lower Tamar during drought periods, which may overlap with the sensitive periods for Atlantic salmon and allis shad, particularly that of downstream smolt migration and allis shad spawning. It also indicates that a reduction in compensation flow into the River Wolf is unlikely to be sustainable.

Operational abstraction should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the Dartmoor SAC and Plymouth Sound & Estuaries SAC, and supporting processes which maintain these sites' qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory fish (both upstream adults and downstream juveniles), must be considered.

4.2.2.4 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of any of the Dartmoor SAC or Plymouth Sound & Estuaries SAC. It is assumed that any reduction in downstream flow on the Rivers Tamar, Lyd, Thrushel and Wolf will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the respective rivers and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

[24] Environment Agency (2024). Tamar abstraction licensing strategy [online]. Available at: https://www.gov.uk/government/publications/tamar-abstraction-licensing-strategy/tamar-abstraction-licensing-strategy

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the Dartmoor SAC and Plymouth Sound & Estuaries SAC rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the River Tamar for targeted migratory fish species, their spawning sites and specific migratory periods for this river, and
- 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.

South West Water is supporting improvement projects on the River Wolf as part of WINEP (WINEP action ID 08SW100019g). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform adaptive management in response to increased abstractions where qualifying interest features of the Dartmoor SAC and Plymouth Sound & Estuaries SAC are potentially affected.

4.2.3 R-45

4.2.3.1 Stage 1 Screening Review

The Stage 1 Screening identified four Habitats Sites within the ZoI of R-45 (Table 4.11). LSE could not be ruled out for one of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.4: R-45 Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
Dartmoor SAC (approximately 13km northwest, 17km upstream)	South Hams SAC (approximately 5.1km northwest)
	South Dartmoor Woods SAC (approximately 9.1km northwest)
	Lyme Bay and Torbay SAC (approximately 9.5km east)

Source: Mott MacDonald Limited, 2025

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.2.3.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option R-45 and the 'Dart', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the Dartmoor SAC during operation are:

Water table availability

During operation of this option, changes to the abstraction licences (river and borehole) may result in lower flows downstream of this location on the River Dart when compared to the current baseline. The River Dart is functionally linked to the Dartmoor SAC, providing a migratory route from which adults traverse through to spawning grounds on the edges of the SAC. Details of typical migration and spawning timings are provided within the corresponding assessment for option R-11 (Section 4.5.1) above, which also considers the Dartmoor SAC.

Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Toxic and non-toxic contamination

A reduction in flow within the River Dart may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the watercourses and lead to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding the optimal thermal range for the relevant migratory fish species. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which these species rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Dartmoor SAC.

Biological disturbance

As a result of changes to the above, it is possible that populations of Atlantic salmon which use the River Dart could be displaced from this functionally linked watercourse. Displacement to less suitable or more highly populated areas may jeopardise the completion of their life cycles and lead to reductions in overall numbers and distribution of populations associated with the SAC. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.2.3.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The changes to the abstraction must consider seasonal flows and will be restricted to periods when the flow within the River Dart is sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the River Dart, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other

abstractions in the catchment, result in a deviation of 15% (based on this being a 'large river') of the daily naturalised flow at low flows (<Q95).

According to the South Devon ALS[25], surface water is available for abstraction in the River Dart at Littlehempston at Q30 (higher flows), Q50 (moderate flows) and Q70 (moderate-low flows), but not available at Q95. This indicates that water would not be available for abstraction during drought periods, which may overlap with the sensitive migration period for Atlantic salmon, particularly that of downstream smolt migration. It also indicates that any additional abstraction as a result of this option is unlikely to be sustainable.

Operational abstraction should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the Dartmoor SAC, and supporting processes which maintain this site's qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory Atlantic salmon (both upstream adults and downstream juveniles), must be considered.

4.2.3.4 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of the Dartmoor SAC. It is assumed that any reduction in downstream flow on the River Dart will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the River Dart and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the Dartmoor SAC rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the River Dart for targeted migratory fish species, their spawning sites and specific migratory periods for this river, and
- 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.

South West Water is supporting improvement projects on the River Dart at Littlehempston as part of WINEP (WINEP action ID 08SW100016b). Any outputs of the agreed actions are anticipated to be directly relevant to this drought plan option and should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform

[25] Environment Agency (2012). South Devon WFD Management Area Abstraction Licensing Strategy [online]. Available at: https://assets.publishing.service.gov.uk/media/5a7cdf9eed915d36e95f02e2/LIT_7639_c053ee.pdf

adaptive management in response to increased abstractions where qualifying Atlantic salmon associated with the Dartmoor SAC are potentially affected.

4.3 Wimbleball WRZ

No options were screened in for Stage 2 Appropriate Assessment within the Wimbleball WRZ. A total of four options, W-03, W-06, W-09 and W-22, are included within the Drought Plan, but findings of no LSE were concluded for all. Due to the overlaps in Habitats Sites identified within the ZoIs, these options are still included within the in-combination assessment sin Section 5.

4.4 Bristol WRZ

A total of nine options from the Bristol WRZ are taken forward to Appropriate Assessment, with LSEs unable to be ruled out during the Screenings.

4.4.1 BR-27a

4.4.1.1 Stage 1 Screening Review

The Stage 1 Screening identified seven Habitats Sites within the ZoI of BR-27a (Table 4.3). LSE could not be ruled out for four of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C.

Table 4.5: BR-27a Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
Chew Valley Lake SPA (approximately 5.3km east)	North Somerset and Mendip Bats SAC (approximately 3.9km south)
Severn Estuary SAC (approximately 13.3km west, 14.7km downstream)	Mendip Woodlands SAC (approximately 6.9km southwest)
Severn Estuary SPA (approximately 13.3km west, 14.7km downstream)	Mendip Limestone Grasslands SAC (approximately 8.3km southwest)
Severn Estuary Ramsar (approximately 13.3km west, 14.7km downstream)	

Source: Mott MacDonald Limited, 2025

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.4.1.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option BN-27a and the 'Yeo – source to conf Congresbury Yeo', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the Chew Valley Lake SPA, Severn Estuary SAC, Severn Estuary SPA and Severn Estuary Ramsar during operation are:

Water table availability

Reducing the compensation flow at Blagdon Lake will result in a temporary reduction to the flow downstream, which will be measurable within the Congresbury Yeo. The Congresbury Yeo is considered to be functionally linked to the Severn Estuary SAC and Ramsar on a precautionary basis, with habitat potentially suitable for supporting the upstream migration and spawning of qualifying migratory fish species; the presence of Atlantic salmon, sea trout (*Salmo trutta*), European eel (*Anguilla anguilla*) and lamprey species (*Petromyzon* or *Lampetra* sp.) cannot currently be ruled out. Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely, for example, the suitability of upstream migration routes and the environmental triggers which initiate these events. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Changes to Blagdon Lake water levels as a result of reduced compensation flows may also have an effect on qualifying features of the Chew Valley Lake SPA and Severn Estuary SPA. Although outside of the SPA boundaries, the Blagdon Lake is assumed to be functionally linked habitat which supports qualifying features, specifically Northern shoveler (*Spatula clypeata*) (Chew Valley Lake SPA) and gadwall (*Anas strepera*) (Severn Estuary SPA). Water levels have been identified within the Chew Valley Lake SPA Site Improvement Plan (SIP)[26] as having a significant influence on the suitability of the site for Northern shoveler, which can be affected by the functioning of the reservoir. An assumption is made that the same effects are applicable to other overwintering waterfowl. Changes in water levels may alter the supporting processes for which these features rely.

Toxic and non-toxic contamination

A reduction in flow within the Congresbury Yeo may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the Congresbury Yeo and lead to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding the qualifying fish species' optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which qualifying migratory fish interest features of the Severn Estuary SAC and Ramsar rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse.

Changes to Blagdon Lake water levels are not anticipated to lead to effects from toxic contamination on the qualifying features of the Chew Valley Lake SPA or Severn Estuary SPA, but changes to turbidity and the sedimentation regime may have an effect on prey availability, distribution and/or the foraging behaviour of the overwintering birds, altering the supporting processes on which these qualifying features rely.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Severn Estuary SAC and Ramsar. Changes to Blagdon Lake water levels may result in the loss of suitable supporting habitats used by qualifying features of the Chew Valley Lake SPA and Severn Estuary SPA.

Biological disturbance

[26] Natural England (2014). Site Improvement Plan: Chew Valley Lake (SIP042) [online]. Available at: https://publications.naturalengland.org.uk/publication/4517832196882432

As a result of changes to the above, it is possible that populations of migratory fish in the Congresbury Yeo could be displaced from this functionally linked watercourse. Displacement to less suitable or more highly populated areas may jeopardise the completion of their complex life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC and Ramsar. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

Lake water level changes may also displace qualifying bird features of the Chew Valley Lake SPA and Severn Estuary SPA from functionally linked habitat. The loss of prey items from preferred foraging areas may result in the displacement of qualifying species to other, less suitable, areas outside of the SPAs' boundaries and could have a measurable effect on the overall populations due to reduced overwinter survival rates.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.4.1.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The reduction in compensation flow must consider seasonal flows and will be restricted to periods when the flow within the Congresbury Yeo is sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the Congresbury Yeo, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 10% of the daily naturalised flow at low flows (<Q95).

Operational reductions in compensation flow should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the Severn Estuary SAC and Ramsar sites, and supporting processes which maintain these sites' qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory fish (both upstream adults and downstream juveniles) must be considered.

Lake levels should be maintained at an appropriate level for qualifying interest features of the Chew Valley Lake SPA and Severn Estuary SPA during the sensitive overwintering periods.

4.4.1.4 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of any of the Severn Estuary SAC, Severn Estuary SPA, Severn Estuary Ramsar or Chew Valley Lake SPA. It is assumed that any reduction in compensation flow from Blagdon Lake will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the Congresbury Yeo and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current

uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the Severn Estuary SAC and Ramsar rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the Congresbury Yeo for targeted migratory fish species, their spawning sites and specific migratory periods for this river
- Assessment to identify optimal lake conditions for supporting the non-breeding bird assemblage, including Northern shoveler and gadwall, to inform adaptive management of lake water depth, and
- 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.

Bristol Water is supporting improvement projects on the Congresbury Yeo as part of PR24 WINEP (WINEP action ID 08BW100004). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information, and fish passage opportunities, will help to inform adaptive management in response to compensation flow reductions where qualifying interest features of the Severn Estuary SAC and Ramsar sites are potentially affected.

4.4.2 BR-27b

This option is in the same location as BR-27a, and although the mechanisms of implementation are different, the impact pathways and potential adverse effects are identical based on the existing information. Both options will result in reduced downstream flows in the Congresbury Yeo and potential changes in Blagdon Lake water levels, and therefore the Appropriate Assessment, and conclusions, for BR-27b are the same as for BR-27a above.

4.4.3 BR-28a

4.4.3.1 Stage 1 Screening Review

The Stage 1 Screening identified five Habitats Sites within the ZoI of BR-28a (Table 4.4). LSE could not be ruled out for four of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.6: BR-28a Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
Chew Valley Lake SPA (adjacent to option)	North Somerset and Mendip Bats SAC (approximately 5.6km southwest)
Severn Estuary SAC (approximately 15.4km north, hydrologically connected approximately 42km downstream)	

Potential for Significant Effects	No Likely Significant Effects
Severn Estuary SPA (approximately 15.4km north, hydrologically connected approximately 42km downstream)	
Severn Estuary Ramsar (approximately 15.4km north, hydrologically connected approximately 42km downstream)	

Source: Mott MacDonald Limited, 2025

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.4.3.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option BN-28a and the 'Chew – Chew Valley Lake to conf Winford Brook' and 'Chew – conf Winford Brook to conf River Avon', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the Chew Valley Lake SPA, Severn Estuary SAC, Severn Estuary SPA and Severn Estuary Ramsar during operation are:

Water table availability

Reducing the compensation flow at Chew Valley Lake will result in a temporary reduction to the flow downstream, which will be measurable within the River Chew. The River Chew is considered to be functionally linked to the Severn Estuary SAC and Ramsar, with habitat considered suitable for supporting the upstream migration and spawning of qualifying migratory fish species; records of lamprey species, Atlantic salmon, sea trout and European eel have all been recorded since 2015. The River Chew is also identified as the only sub-catchment in the Bristol Avon where Atlantic salmon are present[27], highlighting its importance as a supporting habitat for this species. Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely, for example, the suitability of upstream migration routes and the environmental triggers which initiate these events. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Changes to Chew Valley Lake water levels as a result of reduced compensation flows may also have an effect on qualifying features of the Chew Valley Lake SPA and Severn Estuary SPA. Although outside of the Severn Estuary SPA boundary, the Chew Valley Lake is assumed to be functionally linked habitat which supports qualifying features, specifically gadwall. The Severn Estuary SPA Functionally Linked Land Bird Connectivity dataset[28] states that movement pathways of dabbling ducks and waders extend through and south of Chew Valley Lake. Water levels have been identified within the Chew Valley Lake SPA SIP as having a significant influence on the suitability of the site for Northern shoveler, which can be affected by the functioning of the reservoir. An assumption is made that the same effects are applicable to other

[27] West of England Combined Authority (2024). River Chew Floodplain [online]. Available at: https://naturerecoverywest.co.uk/index.php?contentid=45#:~:text=The%20River%20Chew%20is%20a%20priority%20river%20for,salmon%20are%20present%29%2C%20brown%20trout%2C%20lamprey%20and%20bullhead

[28] DEFRA (2021). Severn Estuary SPA Functionally Linked Land Bird Connectivity. [Online]. Available from: https://environment.data.gov.uk/dataset/254211f9-1f98-45c3-9f57-0c3ebfb46709

overwintering waterfowl. Changes in water levels may alter the supporting processes for which these features rely.

Toxic and non-toxic contamination

A reduction in flow within the River Chew may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. Changes in water quality may alter the supporting processes on which qualifying migratory fish interest features of the Severn Estuary SAC and Ramsar rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse. A reduction in flow may also reduce the thermal buffering of the River Chew and leading to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding the qualifying fish species' optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates.

Changes to Chew Valley Lake water levels are not anticipated to lead to effects from toxic contamination on the qualifying features of the Chew Valley Lake SPA or Severn Estuary SPA, but changes to turbidity and the sedimentation regime may have an effect on prey availability, distribution and/or the foraging behaviour of the overwintering birds, altering the supporting processes on which these qualifying features rely.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Severn Estuary SAC and Ramsar. Changes to Chew Valley Lake water levels may result in the loss of suitable supporting habitats used by qualifying features of the Chew Valley Lake SPA and Severn Estuary SPA.

Biological disturbance

As a result of changes to the above, it is possible that populations of migratory fish in the River Chew could be displaced from this functionally linked watercourse. Displacement into less suitable or more highly populated areas may jeopardise the completion of their complex life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC and Ramsar. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

Lake water level changes may also displace qualifying bird features of the Chew Valley Lake SPA from within the site boundary and Severn Estuary SPA from functionally linked habitat. The loss of prey items from preferred foraging areas may result in the displacement of qualifying species to other, less suitable, areas outside of the SPA boundary and could have a measurable effect on the overall populations due to reduced overwinter survival rates.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.4.3.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The reduction in compensation flow must consider seasonal flows and will be restricted to periods when the flow within the River Chew is sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the River Chew, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 10% of the daily naturalised flow at low flows (<Q95).

Operational reductions in compensation flow should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the Severn Estuary SAC and Ramsar sites, and supporting processes which maintain these sites' qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory fish (both upstream adults and downstream juveniles) must be considered.

Lake levels should be maintained at an appropriate level for qualifying interest features of the Chew Valley Lake SPA and Severn Estuary SPA during the sensitive overwintering periods.

4.4.3.4 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of any of the Severn Estuary SAC, Severn Estuary SPA, Severn Estuary Ramsar or Chew Valley Lake SPA. It is assumed that any reduction in compensation flow from Chew Valley Lake will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the River Chew and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the Severn Estuary SAC and Ramsar rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the River Chew for targeted migratory fish species, their spawning sites and specific migratory periods for this river
- Assessment to identify optimal lake conditions for supporting the non-breeding bird assemblage, including Northern shoveler and gadwall, to inform adaptive management of lake water depth, and
- 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.

Bristol Water is supporting improvement projects in the River Chew catchment as part of PR24 WINEP (WINEP action ID 08MU100151). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform adaptive management in response to compensation flow reductions where qualifying interest features of the Severn Estuary SAC and Ramsar sites are potentially affected.

4.4.4 BR-28b

This option is in the same location as BR-28a, and although the mechanisms of implementation are different, the impact pathways and potential adverse effects are identical based on the existing information. Both options will result in reduced downstream flows in the River Chew and potential changes in Chew Valley Lake water levels, and therefore the Appropriate Assessment, and conclusions, for BR-28b are the same as for BR-28a above.

4.4.5 BR-29

4.4.5.1 Stage 1 Screening Review

The Stage 1 Screening identified six Habitats Sites within the ZoI of BR-29 (Table 4.5). LSE could not be ruled out for four of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.7: BR-29 Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
Chew Valley Lake SPA (approximately 1.6km south)	North Somerset and Mendip Bats SAC (approximately 7km south)
Severn Estuary SAC (approximately 18.8km west, 35.5km downstream)	Avon Gorge Woodlands SAC (approximately 9.4km north)
Severn Estuary SPA (approximately 18.8km west, 35.5km downstream)	
Severn Estuary Ramsar (approximately 18.8km west, 35.5km downstream)	

Source: Mott MacDonald Limited, 2025

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.4.5.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option BN-29 and the 'Winford Brook – source to conf River Chew' and 'Chew – conf Winford Brook to conf River Avon', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the Chew Valley Lake SPA, Severn Estuary SAC, Severn Estuary SPA and Severn Estuary Ramsar during operation are:

Water table availability

Reducing the compensation flow from Chew Magna Reservoir will result in a temporary reduction to the flow downstream, which will be measurable within the River Chew. The River Chew is considered to be functionally linked to the Severn Estuary SAC and Ramsar, with habitat considered suitable for supporting the upstream migration and spawning of qualifying migratory fish species; records of lamprey species, Atlantic salmon, sea trout and European eel have all been recorded since 2015. The River Chew is also identified as the only sub-catchment in the Bristol Avon where Atlantic salmon are present, highlighting its importance as a supporting habitat for this species. Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely, for example, the suitability of upstream migration routes and the environmental triggers which initiate these events. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Changes to Chew Magna Reservoir water levels as a result of reduced compensation flows may also have an effect on qualifying features of the Chew Valley Lake SPA and Severn Estuary SPA. Although outside of the SPAs' boundaries, the Chew Magna Reservoir is precautionarily assumed to be functionally linked habitat which supports qualifying features, specifically Northern shoveler (Chew Valley Lake SPA) and gadwall (Severn Estuary SPA). As the Chew Valley Lake is considered to be functionally linked to the Severn Estuary SPA, an assumption is made that the nearby Chew Magna Reservoir can support the same species. Similarly, the information provided by the Chew Valley Lake SPA SIP, stating that water levels have a significant influence on the suitability of the site, is extrapolated and applied to other nearby reservoirs in the region. Changes in water levels may alter the supporting processes for which these features rely.

Toxic and non-toxic contamination

The effects of toxic and non-toxic contamination within the River Chew are outlined within the corresponding section for option BR-28a in Section 4.2.3. and the pathways are the same for this option. Changes in water quality may alter the supporting processes on which qualifying migratory fish interest features of the Severn Estuary SAC and Ramsar rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse.

Changes to the Chew Magna Reservoir water levels are not anticipated to lead to effects from toxic contamination on the qualifying features of the Chew Valley Lake SPA or Severn Estuary SPA, but changes to turbidity and the sedimentation regime may have an effect on prey availability, distribution and/or the foraging behaviour of the overwintering birds, altering the supporting processes on which these qualifying features rely.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Severn Estuary SAC and Ramsar. Changes to the Chew Magna Reservoir water levels may result in the loss of suitable supporting habitats used by qualifying features of the Chew Valley Lake SPA and Severn Estuary SPA outside of the respective SPAs' boundaries.

Biological disturbance

As a result of changes to the above, it is possible that populations of migratory fish in the River Chew could be displaced from this functionally linked watercourse. Displacement into less suitable or more highly populated areas may jeopardise the completion of their complex life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC and Ramsar. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

Lake water level changes may also displace qualifying bird features of the Chew Valley Lake SPA and Severn Estuary SPA from functionally linked habitat. The loss of prey items from preferred foraging areas may result in the displacement of qualifying species to other, less suitable, areas outside of the SPAs' boundaries and could have a measurable effect on the overall populations due to reduced overwinter survival rates.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.4.5.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The reduction in compensation flow must consider seasonal flows and will be restricted to periods when the flow within the River Chew is sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the River Chew, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 10% of the daily naturalised flow at low flows (<Q95).

Operational reductions in compensation flow should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the Severn Estuary SAC and Ramsar sites, and supporting processes which maintain these sites' qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory fish (both upstream adults and downstream juveniles) must be considered.

Lake levels should be maintained at an appropriate level for qualifying interest features of the Chew Valley Lake SPA and Severn Estuary SPA during the sensitive overwintering periods.

4.4.5.4 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of any of the Severn Estuary SAC, Severn Estuary SPA, Severn Estuary Ramsar or Chew Valley Lake SPA. It is assumed that any reduction in compensation flow from the Chew Magna Reservoir will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the River Chew and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for

which qualifying interest features of the Severn Estuary SAC and Ramsar rely, in the absence of mitigation

- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the River Chew for targeted migratory fish species, their spawning sites and specific migratory periods for this river
- Assessment to identify optimal lake conditions for supporting the non-breeding bird assemblage, including Northern shoveler and gadwall, to inform adaptive management of lake water depth, and
- 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.

Bristol Water is supporting improvement projects in the River Chew catchment as part of PR24 WINEP (WINEP action ID 08MU100151). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform adaptive management in response to compensation flow reductions where qualifying interest features of the Severn Estuary SAC and Ramsar sites are potentially affected.

4.4.6 BR-30

The Stage 1 Screening identified eight Habitats Sites within the ZoI of BR-30 (Table 4.6). LSE could not be ruled out for two of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.8: BR-30 Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
North Somerset and Mendip Bats SAC (adjacent to option)	Mendip Woodlands SAC (approximately 1.8km northwest)
Mendip Limestone Grasslands SAC (approximately 3.7km northwest)	
Severn Estuary SAC (approximately 15.7km west, 19km downstream)	
Severn Estuary SPA (approximately 15.7km west, 19km downstream)	
Severn Estuary Ramsar (approximately 15.7km west, 19km downstream)	
Somerset Levels and Moors SPA (approximately 8.2km south)	
Somerset Levels and Moors Ramsar (approximately 8.2km south)	

Source: Mott MacDonald Limited, 2025

Following a review of the Screening and the option details, potential adverse effects on the Severn Estuary SPA, Somerset Levels and Moors SPA and Ramsar, North Somerset and Mendip Bats SAC, and Mendip Limestone Grasslands SAC, have been ruled out. Therefore, these Habitats Sites have not been considered further with this Appropriate Assessment, and no mitigation is required to safeguard their integrities.

The Severn Estuary SPA was originally screened in due to a previous assumption that the operation of this option, involving a reduction in compensation release from Cheddar Ponds to the Cheddar Yeo, would potentially have an effect on functionally linked floodplain habitats around the Cheddar Yeo and downstream River Axe. However, there is no available information to indicate that there is functionally linked habitat at these locations, nor that the option would result in measurable changes to terrestrial habitats in the floodplain. The Cheddar Ponds themselves are not considered functionally linked to the SPA due to their small size and capacity to support any significant numbers of qualifying interest features.

The Somerset Levels and Moors SPA and Ramsar have been screened out following identification of a document which identifies all functionally linked habitats outside of the sites' boundaries[29]. No confirmed functionally linked habitat is present as far north as this option, and therefore there is no reason to indicate with any scientific evidence that qualifying features of the SPA and/or Ramsar would be affected by the areas which are hydrologically linked to the option.

North Somerset and Mendip Bats SAC and Mendip Limestone Grassland SAC are considered together, due to the proximity of the SACs and overlap in qualifying features (horseshoe bats). North Somerset Council supplementary planning guidance[30] provides information on the SACs and states that watercourses are not considered to be amongst the most important foraging habitats for either greater- or lesser horseshoe bat, other than when they are within woodlands (lesser horseshoe only). Watercourses are important linear flight corridors and navigational aids for horseshoe bats, but the operation of this option will not result in the removal of any watercourse habitat. Therefore, no adverse effects on the integrity of the SACs are anticipated, even where the option exists within the consultation bands defined within the guidance.

An assessment of each potential impact on the integrity of the Habitats Sites is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.4.6.1 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option BN-30 and the 'Cheddar Yeo - source to conf River Axe' and 'Axe – Cocklake to Brean Cross Sluice', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the Severn Estuary SAC and Severn Estuary Ramsar during operation are:

Water table availability

Reducing the compensation flow from Cheddar Ponds will result in a temporary reduction to the flow downstream, which will be measurable within the Cheddar Yeo and is precautionarily assumed to be measurable on the River Axe. Both watercourses are considered to be functionally linked to the Severn Estuary SAC and Ramsar, with habitat considered suitable for

[29] Woodward, I. & Austin, G. (2022). Analysis of waterbird population trends for the Somerset Levels & Moors SPA, its functionally linked land and the Bridgwater Bay coastal sites. BTO Research Report 747, 85pp.

[30] North Somerset Council (2018). North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document [online]. Available at: https://n-somerset.gov.uk/sites/default/files/2020-03/North%20Somerset%20and%20Mendip%20Bats%20SAC%20guidance%20supplementary%20planning%20document.pdf

supporting the upstream migration and spawning of qualifying migratory fish species. Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely, for example, the suitability of upstream migration routes and the environmental triggers which initiate these events. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Toxic and non-toxic contamination

A reduction in flow within the Cheddar Yeo and River Axe may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. Changes in water quality may alter the supporting processes on which qualifying migratory fish interest features of the Severn Estuary SAC and Ramsar rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse. A reduction in flow may also reduce the thermal buffering of the watercourses and leading to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding the qualifying fish species' optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Severn Estuary SAC and Ramsar.

Biological disturbance

As a result of changes to the above, it is possible that populations of migratory fish in the Cheddar Yeo and River Axe could be displaced from these functionally linked watercourses. Displacement into less suitable or more highly populated areas may jeopardise the completion of their complex life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC and Ramsar. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.4.6.2 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The reduction in compensation flow must consider seasonal flows and will be restricted to periods when the flows within the Cheddar Yeo and River Axe are sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the Cheddar Yeo and River Axe, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 5% for the Cheddar Yeo and 10% for the River Axe respectively, of the daily naturalised flow at low flows (<Q95).

Operational reductions in compensation flow should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features

of the Severn Estuary SAC and Ramsar sites, and supporting processes which maintain these sites' qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory fish (both upstream adults and downstream juveniles) must be considered.

4.4.6.3 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of any of the Severn Estuary SAC or Severn Estuary Ramsar. It is assumed that any reduction in compensation flow from the Cheddar Ponds will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the Cheddar Yeo and River Axe, and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the Severn Estuary SAC and Ramsar rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option, and
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the Cheddar Yeo and River Axe for targeted migratory fish species, their spawning sites and specific migratory periods for these rivers.
- 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.

Bristol Water is supporting improvement projects in the River Axe catchment as part of PR24 WINEP (WINEP action ID 08BW100020). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform adaptive management in response to compensation flow reductions where qualifying interest features of the Severn Estuary SAC and Ramsar sites are potentially affected.

4.4.7 BR-31a

The Stage 1 Screening identified eight Habitats Sites within the ZoI of BR-31a (Table 4.7). LSE could not be ruled out for five of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.9: BR-31a Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
Mendip Limestone Grasslands SAC (approximately 1.8km northwest)	Mendip Woodlands SAC (approximately 1.6km north)
North Somerset and Mendip Bats SAC (approximately 2.5km northeast)	
Severn Estuary SAC (approximately 13.2km west, 13.8km downstream)	
Severn Estuary SPA (approximately 13.2km west, 13.8km downstream)	
Severn Estuary Ramsar (approximately 13.2km west, 13.8km downstream)	
Somerset Levels and Moors SPA (approximately 7.5km south)	
Somerset Levels and Moors Ramsar (approximately 7.5km south)	

Source: Mott MacDonald Limited, 2025

Following a review of the Screening and the option details, potential adverse effects on the Somerset Levels and Moors SPA and Ramsar, North Somerset and Mendip Bats SAC, and Mendip Limestone Grasslands SAC, have been ruled out. Therefore, these Habitats Sites have not been considered further with this Appropriate Assessment, and no mitigation is required to safeguard their integrities.

The Somerset Levels and Moors SPA and Ramsar have been screened out following identification of a document which identifies all functionally linked habitats outside of the sites' boundaries (Woodward & Austin, 2022). No confirmed functionally linked habitat is present as far north as this option, and therefore there is no reason to indicate with any scientific evidence that qualifying features of the SPA and/or Ramsar would be affected by the areas which are hydrologically linked to the option.

North Somerset and Mendip Bats SAC and Mendip Limestone Grassland SAC are considered together, due to the proximity of the SACs and overlap in qualifying features (horseshoe bats). North Somerset Council supplementary planning guidance (North Somerset Council, 2018) provides information on the SACs and states that watercourses are not considered to be amongst the most important foraging habitats for either greater- or lesser horseshoe bat, other than when they are within woodlands (lesser horseshoe only). Watercourses are important linear flight corridors and navigational aids for horseshoe bats, but the operation of this option will not result in the removal of any watercourse habitat. Therefore, no adverse effects on the integrity of the SACs are anticipated, even where the option exists within the consultation bands defined within the guidance.

An assessment of each potential impact on the integrity of the Habitats Sites is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.4.7.1 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option BN-31a and the 'Axe – Cocklake to Brean Cross Sluice', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the Severn Estuary SAC, Severn Estuary SPA and Severn Estuary Ramsar during operation are:

Water table availability

Extending the pump storage season for the River Axe will result in an additional temporary reduction to the flow downstream, which will be measurable within the River Axe downstream of the intake location. The River Axe is considered to be functionally linked to the Severn Estuary SAC and Ramsar, with habitat potentially suitable for supporting the upstream migration and spawning of qualifying migratory fish species; the presence of Atlantic salmon, sea trout, European eel and lamprey species cannot currently be ruled out. Changes in natural seasonal flow and water levels may alter the supporting processes for which these features rely, for example, the suitability of upstream migration routes and the environmental triggers which initiate these events. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Changes to Cheddar Reservoir water levels as a result of increased abstraction and transfer may also have an effect on qualifying features of the Severn Estuary SPA. Although outside of the SPA boundary, the Cheddar Reservoir is precautionarily assumed to be functionally linked habitat which supports qualifying features. As the Chew Valley Lake and Blagdon Lake are considered to be functionally linked to the Severn Estuary SPA, an assumption is made other large reservoirs in the region have similar value. The information provided by the Chew Valley Lake SPA SIP, stating that water levels have a significant influence on the suitability of the site, is extrapolated and applied to the Cheddar Reservoir for the purposes of this assessment. Changes in water levels may alter the supporting processes for which these features rely.

Toxic and non-toxic contamination

A reduction in flow within the River Axe may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the Congresbury Yeo and lead to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding the qualifying fish species' optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which qualifying migratory fish interest features of the Severn Estuary SAC and Ramsar rely, and/or lead to increased risk of mortality for increased toxicity levels in the watercourse.

Changes to Cheddar Reservoir water levels are not anticipated to lead to effects from toxic contamination on the qualifying features of the Severn Estuary SPA, but changes to turbidity and the sedimentation regime may have an effect on prey availability, distribution and/or the foraging behaviour of the overwintering birds, altering the supporting processes on which these qualifying features rely.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the Severn Estuary SAC and Ramsar. Changes to Cheddar Reservoir water levels may result in the loss of suitable supporting habitats used by qualifying features of the Severn Estuary SPA.

Biological disturbance

As a result of changes to the above, it is possible that populations of migratory fish in the River Axe could be displaced from this functionally linked watercourse. Displacement to less suitable

or more highly populated areas may jeopardise the completion of their complex life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC and Ramsar. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

Lake water level changes may also displace qualifying bird features of the Severn Estuary SPA from functionally linked habitat. The loss of prey items from preferred foraging areas may result in the displacement of qualifying species to other, less suitable, areas outside of the SPA boundary and could have a measurable effect on the overall populations due to reduced overwinter survival rates.

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.4.7.2 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

The reduction in compensation flow must consider seasonal flows and will be restricted to periods when the flow within the River Axe is sufficient to support this. A HOF above which no additional reductions may occur will be set, in order to protect low flows during drought periods.

For the River Axe, the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 10% of the daily naturalised flow at low flows (<Q95).

Operational reductions in compensation flow should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the Severn Estuary SAC and Ramsar sites, and supporting processes which maintain these sites' qualifying features, in order to achieve FCS and GES. For this option, flows which are sufficient for migratory fish (both upstream adults and downstream juveniles) must be considered.

Lake levels should be maintained at an appropriate level for qualifying interest features of the Severn Estuary SPA during the sensitive overwintering periods.

4.4.7.3 Stage 2 Appropriate Assessment outcomes and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of any of the Severn Estuary SAC, Severn Estuary SPA or Severn Estuary Ramsar. It is assumed that any reduction in downstream flow on the River Axe will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the River Axe and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform

the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from reduced compensation flows would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the Severn Estuary SAC and Ramsar rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations to inform adaptive management of operation for this option
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify habitat suitability along the River Axe for targeted migratory fish species, their spawning sites and specific migratory periods for this river
- Assessment to identify optimal lake conditions for supporting the non-breeding bird assemblage to inform adaptive management of lake water depth, and
- 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.

Bristol Water is supporting improvement projects in the River Axe catchment as part of PR24 WINEP (WINEP action ID 08BW100020). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA. Specifically, monitoring and survey information will help to inform adaptive management in response to increased abstractions where qualifying interest features of the Severn Estuary SAC and Ramsar sites are potentially affected.

4.4.8 BR-31b

This option is in the same location as BR-31a, and although the mechanisms of implementation are different, the impact pathways and potential adverse effects are identical based on the existing information. Both options will result in reduced downstream flows in the River Axe and potential changes in Cheddar Reservoir water levels, and therefore the Appropriate Assessment, and conclusions, for BR-31b are the same as for BR-31a above.

4.4.9 BR-47

This option is in the same location as BR-31a and BR-31b, and although the mechanisms of implementation are different, the impact pathways and potential adverse effects are identical based on the existing information. All three options will result in reduced downstream flows in the River Axe and potential changes in Cheddar Reservoir water levels, and therefore the Appropriate Assessment, and conclusions, for BR-47 are the same as for BR-31a above.

4.5 Bournemouth WRZ

A total of three options from the Bournemouth WRZ are taken forward to Appropriate Assessment, with LSEs unable to be ruled out during the Screenings.

4.5.1 BN-04

4.5.1.1 Stage 1 Screening Review

The Stage 1 Screening identified nine Habitats Sites within the ZoI of BN-04 (Table 4.10). LSE could not be ruled out for two of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C.

Table 4.10: BN-04 Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
River Avon SAC (approximately 7.7km east, 17km downstream)	Dorset Heaths SAC (approximately 1.1km south)
Solent and Dorset Coast SPA (approximately 7.1km southeast, 15.5km downstream)	Dorset Heathlands SPA (approximately 2.2km west)
	Dorset Heathlands Ramsar (approximately 1.1km south)
	Avon Valley SPA (approximately 7.3km east, 17km downstream)
	Avon Valley Ramsar (approximately 7.3km east, 17km downstream)
	Poole Harbour SPA (approximately 7.4km south)
	Poole Harbour Ramsar (approximately 7.4km south)

Source: Mott MacDonald Limited, 2025

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.5.1.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option BN-04 and the 'Stour (Lower)', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the River Avon SAC and Solent and Dorset Coast SPA during operation are:

Water table availability

Removal of the low flow constraint on River Stour at Longham, allowing increased abstraction, will result in a temporary reduction to the flow downstream of the intake location, which will be measurable within the River Stour. The River Stour is considered to be functionally linked to the River Avon SAC given there is evidence of genetic interchange between Atlantic salmon (*Salmo salar*) populations in both Avon and Stour river systems[31]. Changes in natural seasonal flow and water levels may alter the supporting processes for which Atlantic salmon rely, for example, the suitability of upstream migration routes and the environmental triggers which initiate these events. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Although the WFD assessment indicated that the increased abstraction would not be measurable within Christchurch Harbour downstream, given the low confidence of the results a precautionary approach is applied for this Appropriate Assessment. The above effects, outlined

[31] Footprint Ecology (2020). Habitats Regulations Assessment of the Purbeck Local Plan review, Main Modifications [online]. Available at: https://www.dorsetcouncil.gov.uk/documents/35024/286429/Purbeck+LP+Main+Modifications+HRA+231020-final.pdf/3e3b65dc-9e17-9448-a63f-686a60a7176a

in relation to the River Avon SAC and qualifying Atlantic salmon populations, are considered to potentially affect general fish stock downstream of the intake location and may be measurable within the Solent and Dorset Coast SPA. Therefore, changes in natural seasonal flow and water levels may alter the supporting processes for which the qualifying species of the SPA rely, specifically in relation to prey availability and distribution during the breeding season.

Toxic and non-toxic contamination

A reduction in flow within the River Stour may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. There are already concerns that existing treatment work discharges in the lower Stour are influencing the water chemistry, resulting in toxicity levels which exceed tolerable thresholds for fish. Aluminium, in particular, is considered as a particularly dangerous substance for salmonid fish which can increase mortality rates. The potential for interactions between existing discharges and this option are not discussed within this section but identified within the inter-plan effects in Section 5.2.

Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the River Stour and leading to more rapid warming of freshwater[32], subsequently increasing the likelihood of temperatures exceeding Atlantic salmon's optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which qualifying interest features rely.

The effects of toxic and non-toxic contamination are assumed to apply to both Atlantic salmon (River Avon SAC) and the wider fish assemblage downstream of the intake location, making it applicable to prey availability and distribution changes in relation to the Solent and Dorset Coast SPA.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the River Avon SAC and Dorset Coast SPA.

Biological disturbance

As a result of changes to the above, it is possible that populations of Atlantic salmon in the River Stour could be displaced from this functionally linked watercourse. Displacement to less suitable or more highly populated areas may jeopardise the completion of their complex life cycle and lead to reductions in overall numbers and distribution of populations associated with the SAC. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

With the effects of displacement considered applicable to the wider fish community in the River Stour and Christchurch Harbour, the same can be concluded in relation to the Solent and Dorset Coast SPA. The loss of prey items from preferred foraging areas may result in the displacement of qualifying species to other, less suitable, areas within the SPA and could have a measurable effect on the overall populations due to reduced survival and reproduction rates.

[32] Johnson, M., Albertson, L., Algar, A., Dugdale, S., Edwards, P., England, J., Gibbins, C., Kazama, S., Komori, D., MacColl, A., Scholl, E., Wilby, R., Roque, F. and Wood., P. (2024). Rising water temperature in rivers: Ecological impacts and future resilience. *WIREs Water* [online]. Available from: https://wires.onlinelibrary.wiley.com/doi/full/10.1002/wat2.1724

On this basis, the implementation of the measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.5.1.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

Operational abstraction must consider seasonal flows and will be restricted to periods when the flow within the River Stour is sufficient to support this. A hands-off flow (HOF) above which no additional abstractions may occur will be set, in order to protect low flows during drought periods.

For the Stour (Lower), the flow targets identified in the Common Standards Monitoring Guidance (CSMG) for rivers[33] must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 15% (based on this being a 'large river') of the daily naturalised flow at low flows (<Q95).

According to the Dorset Abstraction Licensing Strategy (ALS)[34], surface water is available for abstraction in the River Stour at Q30 (higher flows) and Q50 (moderate flows) but restricted at Q70 and Q95. This indicates that water would be available for abstraction during drought periods, which may overlap with the sensitive migration period for Atlantic salmon, particularly that of downstream smolt migration. Additionally, these periods are more likely to overlap with the breeding periods for qualifying features of the Solent and Dorset Coast SPA.

Operational abstractions should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the River Avon SAC and the supporting processes relevant to the SAC, and the Solent and Dorset Coast SPA, in order to achieve favourable conservation status (FCS) and good ecological status (GES). For this option, flows which are sufficient for migrating Atlantic salmon (both upstream adults and downstream smolts) must be considered.

4.5.1.4 Stage 2 Appropriate Assessment conclusions and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of either the River Avon SAC, or the Solent and Dorset Coast SPA. It is assumed that any additional abstraction from the River Stour will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the River Stour and the RBMP. Further studies are recommended to inform the option-specific Environment Assessment Report (EAR) and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

[33] JNCC (2016). Common Standards Monitoring Guidance for Rivers [online]. Available at: https://data.jncc.gov.uk/data/1b15dd18-48e3-4479-a168-79789216bc3d/CSM-Rivers-2016-r.pdf

[34] Environment Agency (2020). Dorset: abstraction licensing strategy [online]. Available at: https://assets.publishing.service.gov.uk/media/5e8b2052d3bf7f1fb7b91c13/Dorset-abstraction-licensing-strategy.pdf

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from additional abstractions would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the River Avon SAC and Solent and Dorset Coast SPA rely, in the absence of mitigation
- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations, especially aluminium, to inform adaptive management of abstraction for this option and across the wider catchment area
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify specific migratory periods for the River Stour and the proportion of fish migrating at different times of the year, and
- 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.

SBB is supporting improvement projects in the River Stour catchment as part of WINEP (WINEP action ID 08SW100061 and 08SW100067a). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA and the Drought Plan. Specifically, monitoring and survey information will help to inform adaptive management in response to abstraction changes where qualifying interest features of the River Avon SAC and Solent and Dorset Coast SPA are potentially affected by changes in flow and the associated effects.

4.5.2 BN-05

4.5.2.1 Stage 1 Screening Review

The Stage 1 Screening identified seven Habitats Sites within the ZoI of BN-05 (Table 4.2). LSE could not be ruled out for one of these sites.

Information on the qualifying features and conservation objectives of the assessed Habitats Sites is provided in Appendix C**.**

Table 4.11: BN-05 Stage 1 Screening results

Potential for Significant Effects	No Likely Significant Effects
River Avon SAC (approximately 12.8km east, 39km downstream)	Dorset Heaths SAC (approximately 6.2km east)
Solent and Dorset Coast SPA (approximately 19.5km southeast, 37.5km downstream)*	Dorset Heathlands SPA (approximately 6.2km east)
	Dorset Heathlands Ramsar (approximately 6.2km east)
	Avon Valley SPA (approximately 12.5km east, 39km downstream)
	Avon Valley Ramsar (approximately 12.5km east, 39km downstream)

Source: Mott MacDonald Limited, 2025

*The Screening identified no LSE alone in relation to the Solent and Dorset Coast SPA, but the presence of impact pathways and low-level effects have the potential to be exacerbated by other options in the plan, and/or with other plans and projects. As such, this has been included within the in-combination assessment within Section 5.

An assessment of each potential impact on the integrity of the Habitats Site is made, in view of the sites' structure, function and conservation objectives. Potential adverse effects on the integrity of the Habitats Sites are outlined below, and mitigation measures are proposed.

4.5.2.2 Potential adverse effects

The Water Framework Directive (WFD) assessment to inform the Drought Plan concluded, in relation to option BN-05 and the 'Allen (Headwaters)' and 'Allen (Lower)', the potential for a widespread or prolonged effect on the quality of the water environment that may result in the temporary reduction in WFD status and the potential to prevent target WFD objectives from being achieved. The WFD assessment concluded the confidence in this outcome is low, and therefore a precautionary approach is taken for this assessment in the absence of modelling and hydroecological assessment.

Potential adverse effects on the integrity of the River Avon SAC during operation are:

Water table availability

Increasing the daily abstraction from the boreholes above the current licence limit of 12.5 Ml/d to 17.5 Ml/d will result in a temporary reduction to the base flow of the River Allen, which is also and precautionary considered to be measurable within the River Stour downstream. The River Stour is considered to be functionally linked to the River Avon SAC given there is evidence of genetic interchange between Atlantic salmon populations in both Avon and Stour river systems, and therefore the upstream River Allen is afforded the same assumption. Changes in natural seasonal flow and water levels may alter the supporting processes for which Atlantic salmon rely, for example, the suitability of upstream migration routes and the environmental triggers which initiate these events. It may also influence the abundance and/or distribution of prey items which support these populations during sensitive and critical life stages.

Toxic and non-toxic contamination

A reduction in flow within the River Allen and River Stour may also affect water quality, through reduced dilution potential, increased pollutant concentrations and lower dissolved oxygen concentrations. There are already concerns that existing treatment work discharges in the lower Stour are influencing the water chemistry, resulting in toxicity levels which exceed tolerable thresholds for fish. Aluminium, in particular, is considered as a particularly dangerous substance for salmonid fish which can increase mortality rates. The potential for interactions between existing discharges and this option are not discussed within this section but identified within the inter-plan effects in Section 5.2.

Reduced flows can lead to increased turbidity, sedimentation, and siltation within the water column, which ultimately reduces the water quality, potentially resulting in conditions, such as excessive nutrient loading. A reduction in flow may also reduce the thermal buffering of the River Allen and River Stour and leading to more rapid warming of freshwater, subsequently increasing the likelihood of temperatures exceeding Atlantic salmon's optimal thermal range. This may lead to additional physiological stress and potentially impact survival rates. Changes in water quality may alter the supporting processes on which qualifying interest features rely.

Physical loss and damage

The potential effects of reduced flow and toxic/non-toxic contamination listed above may also result in temporary damage to habitats which support qualifying features of the River Avon SAC.

Biological disturbance

As a result of changes to the above, it is possible that populations of Atlantic salmon in the River Allen and River Stour could be displaced from functionally linked watercourses. Displacement to less suitable or more highly populated areas may jeopardise the completion of their complex life cycle and lead to reductions in overall numbers and distribution of populations associated with

the SAC. Increases in mortality may have a measurable effect on the population, especially where during sensitive and critical life stages.

On this basis, the implementation of measures to avoid and mitigate the potential effects that are detailed in this plan level assessment, as a minimum, will be required to conclude no adverse effect on site integrity.

4.5.2.3 Measures to avoid and mitigate adverse effects

Based on the current level of information, mitigation measures are proposed that will need to be followed, as a minimum, at the consenting level to help avoid or mitigate effects of the abstraction.

Operational abstraction must consider seasonal flows and will be restricted to periods when the flow within the River Allen and downstream River Stour is sufficient to support this. A HOF above which no additional abstractions may occur will be set, in order to protect low flows during drought periods.

For the Allen (Headwaters) and Allen (Lower), the flow targets identified in the CSMG for rivers must be applied as a minimum. This means that the abstraction must not, alone or in combination with other abstractions in the catchment, result in a deviation of 5% for headwaters and 10% for the lower Allen respectively, of the daily naturalised flow at low flows (<Q95).

According to the Dorset ALS, surface water is available for abstraction in the River Allen at Q30 (higher flows) and Q50 (moderate flows) but restricted at Q70 and Q95. This indicates that water would be available for abstraction during drought periods, which may overlap with the sensitive migration period for Atlantic salmon, particularly that of downstream smolt migration.

Operational abstractions should be adjusted to meet the seasonal flow targets and may be constrained further to meet the requirements of qualifying interest features of the River Avon SAC and the supporting processes relevant to the SAC in order to achieve FCS and GES. For this option, flows which are sufficient for migrating Atlantic salmon (both upstream adults and downstream smolts) must be considered.

4.5.2.4 Stage 2 Appropriate Assessment conclusions and recommendations

Following the Appropriate Assessment, it is currently not possible to rule out adverse effects on the integrity of either the River Avon SAC. It is assumed that any additional abstraction from the River Stour will lead to residual effects, which require additional assessments to inform targeted mitigation and conclusions which could rule out adverse effects.

The recommended mitigation measures detailed within this document assume a worst-case scenario at this stage, in the absence of detailed survey data or local records. It is anticipated that maximum abstraction conditions, which are sensitive to seasonal flow, are set by the Environment Agency to ensure compliance with the targets of the CSMG for the River Allen (and River Stour) and the RBMP. Further studies are recommended to inform the option-specific EAR and subsequent updates to this HRA. The following will help to alleviate some of the current uncertainties, inform the Drought Plan and fulfil the regulatory requirements applicable at the consenting level, including:

- Hydro-ecology studies and hydrodynamic modelling of flows to identify whether the changes in the water levels from additional abstractions would have an adverse effect on the quality, quantity and availability of water required to maintain the supporting process for which qualifying interest features of the River Avon SAC, in the absence of mitigation

- Water quality assessments to identify existing locations and temporal extent of high contaminant concentrations, especially aluminium, to inform adaptive management of abstraction for this option and across the wider catchment area
- A detailed review of baseline ecological data to determine gaps and additional surveys required; this may inform targeted mitigation. It is anticipated that additional data will be collected to identify specific migratory periods for the River Allen and River Stour, and the proportion of fish migrating at different times of the year, and
- 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.

SBB is supporting improvement projects in the River Stour catchment as part of WINEP (WINEP action ID 08SW100061 and 08SW100067a). Any outputs of the agreed actions should be incorporated into the plan to help inform this HRA and the Drought Plan. Specifically, monitoring and survey information will help to inform adaptive management in response to abstraction changes where qualifying interest features of the River Avon SAC are potentially affected by changes in flow and the associated effects.

4.5.3 BN-12

This option is in the same location as BN-04, and although the mechanisms of implementation are different, the impact pathways and potential adverse effects are identical based on the existing information. Both options will result in increased abstraction from the River Stour at Longham, and therefore the Appropriate Assessment, and conclusions, for BN-12 are the same as for BN-04 above.

4.6 Isles of Scilly WRZ

An individual Appropriate Assessment was not required for the IoS option identified within the Plan.

5 In-combination Assessment

The in-combination assessment takes the approach of assessing effects at each drought level (1, 2, 3a and 3b). As the drought levels increase, i.e. drought conditions become more severe, additional options are included on top of those at the lower level; drought level 1 options continue to be implemented throughout levels 2, 3a and 3b:

All options currently included within the Preferred Plan therefore incorporated into the in-combination assessments (Table 1.2, Section 1.5).

As only one option was identified within the IoS WRZ, which did not require further AA, no potential cumulative effects were identified.

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.

5.1 Intra-plan effects

For the intra-plan effects assessment, all Habitats Sites which were identified within the ZoI of more than one of the options within each WRZ are included below, regardless of whether or not LSE were screened out at within the Stage 1 Screening or an option has not yet been subject to Appropriate Assessment but has been identified as needing progression from the Screening. As a result, a comprehensive review is provided, identifying all possible impact pathways, LSE and potential adverse effects on site integrity which may result from the plan, and the potential for any effects to act in combination with one another.

Within the plan, there is only one overlap of Habitats Sites between WRZs, and so for the intra-plan effects assessment, WRZs have been segregated to allow identification of the effects within each zone. This exception has been addressed separately at the end of the section.

5.1.1 Colliford WRZ

5.1.1.1 Drought Level 2

Three options in the Colliford WRZ are to be implemented at drought level 2, C-03, C-07a and C-37.

The River Camel SAC lies within the ZoI for both option C-03 and C-07a, but findings of no LSE were concluded for both. This was based on distance and no connectivity through the surface water, meaning that there were no impact pathways.

The Falmouth Bay to St. Austell Bay SPA lies within the ZoI for both option C-03 and C-37, but findings of no LSE were concluded for both. This was based on distance, no hydrological connectivity and the absence of functionally linked habitat with relevance to qualifying bird species.

No in-combination effects are anticipated on these Habitats Sites as a result of the plan at drought level 2.

5.1.1.2 Drought Level 3a

Four more options are to be implemented at drought level 3a, C-04a, C-06, C-11 and C-30, in addition to those at level 2.

River Camel SAC

The River Camel SAC lies within the ZoI of all options to be implemented at drought level 3a. Findings of no LSE were concluded for options C-06, C-11 and C-30, due to the distance and absence of hydrologically connectivity. Option C-04a was progressed to Appropriate Assessment, as the operation of this option has the potential to affect functionally linked habitat (the Stannon Stream) used by migratory fish species and otter, through reduced flows and associated effects including habitat degradation, reduced prey availability and reduced dilution of contaminants. Due to the level of uncertainty outlined within the individual Appropriate Assessments for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt.

However, as none of the other options implemented at drought stages 2 or 3a will affect the SAC, there are no additional in-combination effects as a result of the plan at drought level 3a.

Other Habitats Sites within the ZoI

Breney Common and Goss & Tregoss Moors SAC was identified within the ZoI for option C-03, C-06 and C-30, but findings of no LSE were concluded for all options. This was based on distance, and a lack of surface water hydrological connectivity.

Crowdy Marsh SAC was identified within the ZoI for option C-04a and C-11, but findings of no LSE were concluded for both options. This was based on distance, and a lack of surface water hydrological connectivity.

Phoenix United Mine & Crow's Nest SAC was identified within the ZoI for option C-07 and C-30, but findings of no LSE were concluded for both options. This was based on distance, and a lack of surface water hydrological connectivity.

The Falmouth Bay to St. Austell Bay SPA was identified within the ZoI for option C-03, C-06, C-30 and C-37, but findings of no LSE were concluded for all options. This was based on distance, no hydrological connectivity and the absence of functionally linked habitat with relevance to qualifying bird species.

No in-combination effects are anticipated on these Habitats Sites as a result of the plan at drought level 3a.

5.1.1.3 Drought Level 3b

An additional three options, C-10, C-17 and C-40, are to be implemented only in the most severe of drought conditions, at level 3b.

River Camel SAC

The River Camel SAC lies within the ZoI of option C-40, but not the other options to be implemented at drought level 3b. Findings of no LSE were concluded for this option, based on the distance and absence of hydrological connectivity. As outlined in Section 5.1.3.2, adverse effects on the SAC from option C-04a could not be ruled out, but option C-40 will not exacerbate these effects from the plan at drought level 3b. Therefore, no additional in-combination effects are anticipated.

Other Habitats Sites within the ZoI

The Fal & Helford SAC was identified within the ZoI for option C-17 and C-37, but findings of no LSE were concluded for both options. There is no hydrological connectivity between the SAC

and option C-37. There is a hydrological connection downstream of option C-17 through the River Kennall, but due to the increased dilution and strength of the tidal regime within the SAC boundary, no reduction in flow or associated effects were anticipated with the estuarine environment.

Phoenix United Mine & Crow's Nest SAC was identified within the ZoI for option C-07, C-30 and C-40, but findings of no LSE were concluded for both options. This was based on distance, and a lack of surface water hydrological connectivity.

No in-combination effects are anticipated on these Habitats Sites, as a result of the plan at drought level 3b.

5.1.2 Roadford WRZ

5.1.2.1 Drought Level 2

Three options in the Roadford WRZ are to be implemented at drought level 2, R-07, R-11 and R-45.

Dartmoor SAC

The Dartmoor SAC lies within the ZoI of options R-11 and R-45 and LSE could not be ruled out for the operation of either. The operation of these options in anticipated to result in a reduction in flows in parts of the River Lyd (R-11) and River Dart (R-45), downstream of the respective abstraction locations. These options are a considerable distance outside of the SAC boundary and therefore no impact pathways exist for any of the qualifying features except Atlantic salmon; both rivers constitute functionally linked habitat and provide known migration routes into the spawning grounds on the edge of the SAC. Due to the level of uncertainty outlined within the individual Appropriate Assessments 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 exacerbate the effects on the SAC. The cumulative effects of the plan may result in the degradation of suitable migrations routes, changes to the environmental cues which trigger seasonal migrations, and a reduction in the dilution of contaminants, such as aluminium, which are known to have a detrimental impact on salmonid species. These effects may displace Atlantic salmon from two separate river systems, jeopardising survival rates and reproductive success.

As such, it is concluded that there may be in-combination effects on the Dartmoor SAC for the plan at drought level 2.

Other Habitats Sites within the ZoI

There are no other overlaps between Habitats Sites within the respective ZoIs of the options to be implemented at drought level 2.

5.1.2.2 Drought Level 3a

One additional option, R-25, is to be implemented at drought level 3a, in addition to those at level 2.

Dartmoor SAC

The Dartmoor SAC lies within the ZoI of option R-25 and LSE could not be ruled out. The operation of this option would potentially result in additional flow reductions in the River Lyd and further downstream within the River Tamar. Both rivers are considered to be functionally linked to the SAC, providing an upstream migration route for Atlantic salmon associated with the SAC. Due to the level of uncertainty outlined within the individual Appropriate Assessment, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and

therefore the implementation of this option together with R-11 and R-45 implemented at drought level 2 has the potential to exacerbate the effects described for this SAC in Section 5.1.4.1. Additional pressures on the overall SAC migratory fish populations are possible as a result, with potentially adverse effects on two separate functionally linked watercourses; any effects and pressures on the Tamar-Lyd migration route would be increased. These effects may displace Atlantic salmon from two separate river systems, jeopardising survival rates and reproductive success.

As such, it is concluded that there may be additional in-combination effects on the Dartmoor SAC from the plan at drought level 3a.

Plymouth Sound & Estuaries SAC

The Plymouth Sound & Estuaries SAC lies within the ZoI of option R-25 and LSE could not be ruled out. The operation of this option would potentially result in flow reductions in the River Lyd and further downstream within the River Tamar where water is abstracted at Gunnislake. The option is not anticipated to affect any of the qualifying habitats, or shore dock, within the SAC boundary, but may have an adverse effect on the migration route and spawning habitat for allis shad both within and upstream of the boundary; this species is known to spawn at Gunnislake. Due to the level of uncertainty outlined within the individual Appropriate Assessment, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt.

The SAC is also within the ZoI of option R-11, to be implemented at drought stage 2. This SAC was initially screened in for option R-11 but subsequently ruled out of adverse effects without mitigation following a review of the Screening and option's revised information; it was not within the ZoI of any other options to be implemented at drought stage 1 and therefore not included within Section 5.1.4.1 above. However, there is the potential that the cumulative effect of reduced flow in the Rivers Lyd and Tamar exacerbates additional flow reductions and associated impacts from abstraction in the River Tamar at Gunnislake, increasing the adverse effects on migrating and spawning allis shad.

As such, it is concluded that there may be additional in-combination effects on the Plymouth Sound & Estuaries SAC from the plan at drought level 3a.

Other Habitats Sites within the ZoI

There are no other overlaps between Habitats Sites within the respective ZoIs of the options to be implemented at drought level 3a.

5.1.2.3 Drought Level 3b

An additional seven options, R-20, R-21, R-22, R-23, R-24, R-26 and R-48, are to be implemented only in the most severe of drought conditions, at level 3b. None of these options have been subject to Appropriate Assessment at this stage, although initial Screenings were unable to rule out LSEs on all Habitats Sites within the respective ZoIs; a precautionary approach is applied assuming that adverse effects cannot be fully mitigated due to current uncertainties.

Dartmoor SAC

The Dartmoor SAC lies within the ZoI of all options to be implemented at drought level 3b and LSE could not be ruled out. The operation of these options in anticipated to result in a reduction in flows in parts of the River Avon (R-20) and River Plym (R-21), Teign (R-22 and R-23), Torridge (R-24), and Tamar (R-26 and R-48), downstream of the respective reservoir locations. These options are outside of the SAC boundary and therefore no impact pathways exist for any of the qualifying features except Atlantic salmon; all rivers are precautionarily assumed to constitute functionally linked habitat and provide migration routes into the spawning grounds on the edge of the SAC.

Due to the level of uncertainty in the absence of individual Appropriate Assessments 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 SAC which are outlined within Section 5.1.4.1. The cumulative effects of the plan may result in the degradation of suitable migrations routes, changes to the environmental cues which trigger seasonal migrations, and a reduction in the dilution of contaminants, such as aluminium, which are known to have a detrimental impact on salmonid species. These effects may displace Atlantic salmon from five separate river systems, jeopardising survival rates and reproductive success.

As such, it is concluded that there may be in-combination effects on the Dartmoor SAC for the plan at drought level 3b.

Plymouth Sound & Estuaries SAC

The Plymouth Sound & Estuaries SAC lies within the ZoI of options R-21, R-26 and R-48 and LSE could not be ruled out for R-26 and R-48. The operation of these options would potentially result in flow reductions in the River Tamar. The option is not anticipated to affect any of the qualifying habitats, or shore dock, within the SAC boundary, but may have an adverse effect on the migration route and spawning habitat for allis shad both within and upstream of the boundary.

Option R-21 is hydrologically connected to the SAC upstream through the River Plym and River Meavy, therefore providing a different impact pathway than the other options within the plan. However, due to the distance between the SAC and the option, the increased input from the River Plym downstream of the confluence with the River Meavy, and the strength of the tidal regime within the SAC boundary, reductions in flow are not anticipated to have an effect within the SAC boundary. The only qualifying feature which utilises functional habitat outside of the SAC boundary is allis shad, but this species is only known to migrate and spawning within the Tamar. Therefore, option R-21 is not considered to contribute to any in-combination effects on the SAC.

Due to the level of uncertainty in the absence of individual Appropriate Assessments 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 SAC which are outlined within Section 5.1.4.2. The cumulative effects of the plan may exacerbate reduced flow in the River Tamar and increase the risk and magnitude of adverse effects on migrating and spawning allis shad.

As such, it is concluded that there may be in-combination effects on the Plymouth Sound & Estuaries SAC for the plan at drought level 3b.

Other Habitats Sites within the ZoI

The South Dartmoor Woods SAC lies within the ZoI of options R-20, R-21, R-22, R-23 and R-45, but findings of no LSE were concluded for all options. There is no hydrological connectivity between the SAC and the options through the surface water, and therefore no impact pathway is present.

South Hams SAC lies within the ZoI of options R-20, R-21, R-45, but findings of no LSE were concluded for all options. Due to the distance and lack of hydrological connectivity, there is not anticipated to be any appreciable effect from any of the options on the SAC.

No in-combination effects are anticipated on these Habitats Sites, as a result of the plan at drought level 3b.

5.1.3 Wimbleball WRZ

5.1.3.1 Drought Level 2

Three options in the Wimbleball WRZ, W-03, W-06 and W-09 are to be implemented at drought level 2.

The Exe Estuary SPA and Ramsar sites are considered together, due to their identical boundaries and significant overlap in qualifying features (overwintering birds). These sites lie within the ZoI of all options to be implemented at drought level 2, but findings of no LSE were concluded for all options. Although there is hydrological connectivity downstream of all options, due to the distance between the sites and the options, the increased inputs from other watercourses into the River Exe, and the strength of the tidal regime within the site boundaries, reductions in flow are not anticipated to have an effect within the Habitats Sites. The habitats which support the qualifying features are facilitated by the tidal regime and not influence by freshwater provision from the River Exe. Therefore, no adverse effects are anticipated from any of the options individually, or in-combination with one another.

The Dawlish Warren SAC lies within the ZoI of all options to be implemented at drought level 2, but findings of no LSE were concluded for all options. This SAC is further downstream within the estuary than the Exe Estuary SPA and Ramsar, and therefore not anticipated to be affected as none of the qualifying features are supported by freshwater provisions.

The Culm Grasslands SAC, Exmoor Heaths SAC and Exmoor and Quantock Woodlands SAC all lie within the ZoI of options W-03 and W-09, but findings of no LSE were concluded for all options. There is no hydrological connectivity between the SACs and the options through the surface water, and therefore no impact pathway is present during operation.

No in-combination effects are anticipated on these Habitats Sites, as a result of the plan at drought level 2.

5.1.3.2 Drought Level 3b

An additional option, W-22, is to be implemented only in the most severe of drought conditions, at level 3b.

The Exe Estuary SPA, Exe Estuary Ramsar, and Dawlish Warren SAC, are all within the ZoI of this option. Findings of no LSE were concluded for all Habitats Sites, as described above in Section 5.1.3.1.

No additional in-combination effects are anticipated on these Habitats Sites, as a result of the plan at drought level 3b.

5.1.4 Bristol WRZ

5.1.4.1 Drought Level 1

Two options in the Bristol WRZ are to be implemented at drought level 1, BR-27b and BR-28b.

Chew Valley Lake SPA

The Chew Valley Lake SPA lies within the ZoI of all options and LSE could not be ruled out for the operation of both options to be implemented at drought level 1. The operation of both options would involve the reduction of water releases from the Blagdon and Chew Valley Lakes respectively, potentially resulting in changes to the lake levels. Due to the level of uncertainty outlined within the individual Appropriate Assessments 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 exacerbate changes in habitat for

the qualifying features of the SPA (Northern shoveler) both within the SPA boundary and in functionally linked habitat. Changes to habitat conditions and potentially prey availability during the sensitive overwintering period as a result of the options may have a greater impact on overwinter survival through displacement of this species from preferred foraging areas.

As such, it is concluded that there may be additional in-combination effects on the Chew Valley Lake SPA at the plan level.

Severn Estuary SAC

The Severn Estuary SAC lies within the ZoI of all options and LSE could not be ruled out for the operation of both options to be implemented at drought level 1. The operation of both options would involve the reduction of water releases from the Blagdon and Chew Valley Lakes respectively, potentially resulting in changes to downstream flows on the Congresbury Yeo and River Chew respectively. Due to the level of uncertainty outlined within the individual Appropriate Assessments 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 exacerbate effects. Whilst the watercourses which would be subject to reduced flows are different and not hydrologically connected to one another, they represent different upstream migration and spawning areas functionally linked to the SAC. Pressures on the overall SAC migratory fish populations are possible as a result. The cumulative effects of the plan may result in the degradation of suitable spawning habitat, changes to the environmental cues which trigger seasonal migrations, and a reduction in the dilution of contaminants. These effects may displace the qualifying fish species from these river system, jeopardising survival rates and reproductive success.

As such, it is concluded that there may be in-combination effects on the Severn Estuary SAC at the plan level.

Severn Estuary SPA

The Severn Estuary SPA lies within the ZoI of all options and LSE could not be ruled out for the operation of both options to be implemented at drought level 1. The potential for effects on the Severn Estuary SPA is the same as described above for the Chew Valley Lake SPA, but with specific regard to gadwall as a qualifying feature; this species has been recorded on both reservoirs in high numbers, and therefore the lakes are considered to be functionally linked to the SPA. No effects from the options are anticipated within the SPA boundary, or on any other qualifying features at this stage.

Changes to habitat conditions and potentially prey availability during the sensitive overwintering period as a result, may have a greater impact on overwinter survival through displacement of this species from preferred foraging areas.

As such, it is concluded that there may be in-combination effects on the Severn Estuary SPA at the plan level.

Severn Estuary Ramsar

The potential for in-combination effects on the Severn Estuary Ramsar are the same as described above for the Severn Estuary SAC in relation to migratory fish, and the Severn Estuary SPA (and Chew Valley Lake SPA) in relation to overwintering birds.

As such, it is concluded that there may be in-combination effects on the Severn Estuary Ramsar at the plan level.

Other Habitats Sites within the ZoI

Findings of no LSE were concluded for both options in relation to the North Somerset and Mendip Bats SAC. Due to the distance (outside the associated SSSI IRZ) and lack of

hydrological connectivity, there is not anticipated to be any appreciable effect from any of the options on these Habitats Sites.

No in-combination effects are anticipated on these Habitats Sites as a result of the plan at drought level 1.

5.1.4.2 Drought Level 2

Option BR-47 is to be implemented at drought level 2, in addition to BR-27b and BR-28b.

Chew Valley Lake SPA

The Chew Valley Lake SPA is not within the ZoI of option BR-47, although it is acknowledged that Blagdon Lake, which is considered to be functionally linked, does exist within the ZoI. However, there is no evidence that the Cheddar Reservoir is functionally linked to the SPA and so the implementation of option BR-47 is not anticipated to result in any additional in-combination effects at drought level 2. The potential for cumulative effects from options BR-27b and BR-28b remains.

It is concluded that there may be in-combination effects on the Chew Valley Lake SPA from the plan at drought level 2.

Severn Estuary SAC

The Severn Estuary SAC lies within the ZoI of option BR-47 and LSE could not be ruled out. The operation of this option would result in changes to the surface water abstraction from the River Axe and is anticipated to reduce the downstream flow. The River Axe is considered to be functionally linked to the SAC, providing an upstream migration route and spawning habitats for qualifying migratory fish species. Due to the level of uncertainty outlined within the individual Appropriate Assessment, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and therefore the implementation of this option together with BR-27b and BR-28b implemented at drought level 1 has the potential to exacerbate the effects described for this SAC in Section 5.1.2.1. 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 such, it is concluded that there may be additional in-combination effects on the Severn Estuary SAC from the plan at drought level 2.

Severn Estuary SPA

The Severn Estuary SPA lies within the ZoI of option BR-47 and LSE could not be ruled out. The operation of this option would involve the earlier start of abstraction from the River Axe, potentially resulting in changes to the water level in the Cheddar Reservoir earlier into the overwintering period than the baseline; this waterbody is considered to be functionally linked to the SPA and used by some of the qualifying features. Due to the level of uncertainty outlined within the individual Appropriate Assessments for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt, and therefore the implementation of this option together with BR-27b and BR-28b implemented at drought level 1 has the potential to exacerbate the effects described for this SPA in Section 5.1.2.1.

Changes to habitat conditions and potentially prey availability during the sensitive overwintering period as a result of the options may have a greater impact on overwinter survival through displacement of some of the qualifying species from different preferred foraging areas provided by the respective functionally linked waterbody habitats at Blagdon Lake (BR-27b), Chew Valley Lake (BR-28b) and Cheddar Reservoir (BR-47).

As such, it is concluded that there may be additional in-combination effects on the Severn Estuary SPA from the plan at drought level 2.

Severn Estuary Ramsar

The potential for in-combination effects on the Severn Estuary Ramsar are the same as described above for the Severn Estuary SAC in relation to migratory fish, and the Severn Estuary Ramsar in relation to overwintering birds.

As such, it is concluded that there may be additional in-combination effects on the Severn Estuary Ramsar from the plan at drought level 2.

Other Habitats Sites within the ZoI

Findings of no LSE were concluded for all three options in relation to the North Somerset and Mendip Bats SAC, and options BR-27b and BR-47 in relation to the Mendip Woodlands SAC and Mendip Limestone Grasslands SAC. Due to the distance (outside the associated SSSI IRZ), lack of hydrological connectivity, and location outside of the core sustenance zone of horseshoe bats, there is not anticipated to be any appreciable effect from any of the options on these Habitats Sites.

No in-combination effects are anticipated on these Habitats Sites as a result of the plan at drought level 2.

5.1.4.3 Drought Level 3a

The remaining six options within the Bristol WRZ, BR-27a, BR-28a, BR-29, BR-30, BR-31a and BR-31b, are to be implemented at drought level 3a.

Chew Valley Lake SPA

The Chew Valley Lake SPA lies within the ZoI of options BR-27a, BR-28a and BR-29. Given that options BR-27a and BR-28a are in the same location with near-identical impact pathways (change in lake levels as a result of reduced compensation flows) as BR-27b and BR-28b respectively, there is the potential for these options to further contribute to the potential in-combination effects as outlined within Section 5.1.2.1.

The SPA is also within the ZoI of option BR-29, which may result in the same effects on the Chew Magna Reservoir, which is precautionarily considered to be functionally linked to the SPA due to habitat suitability and proximity. Due to the level of uncertainty outlined within the individual Appropriate Assessment for this option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt. The three options together, and in-combination with the options to be implemented at drought level 1, may have further cumulative effects on the SPA, reducing habitat suitability and subsequent prey availability both within the SPA boundary (BR-28a and BR-28b) and within functionally linked habitat provided by Blagdon Lake (BR-27a and BR-27b) and the Chew Magna Reservoir (BR-29).

The Chew Valley Lake SPA is not within the ZoI of options BR-30, BR-31a or BR-31b, although it is acknowledged that Blagdon Lake, which is considered to be functionally linked, does exist within the ZoI. However, there is no evidence that the Cheddar Reservoir or Cheddar Ponds are functionally linked to the SPA and so the implementation of these options is not anticipated to result in any additional in-combination effects at drought level 3a.

It is concluded that there may be additional in-combination effects on the Chew Valley Lake SPA from the plan at drought level 3a.

Severn Estuary SAC

The Severn Estuary SAC lies within the ZoI of all additional options to be implemented at drought level 3a. The operation 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 considered to be functionally linked to the SAC by providing upstream migration routes and spawning habitats for qualifying migratory fish species. Due to the level of uncertainty outlined within the individual Appropriate Assessments for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt. Therefore, the implementation of these options together with those drought levels 1 and 2 has the potential to exacerbate the effects described for this SAC in Sections 5.1.2.1 and 5.1.2.2. Additional pressures on the overall SAC migratory fish populations are possible as a result, with potentially adverse effects on a fourth different functionally linked watercourse. These effects may displace the qualifying fish species from the River Axe (and Cheddar Yeo), River Chew and Congresbury Yeo systems, jeopardising survival rates and reproductive success.

As such, it is concluded that there may be additional in-combination effects on the Severn Estuary SAC from the plan at drought level 3a.

Severn Estuary SPA

The Severn Estuary SPA lies within the ZoI of all additional options to be implemented at drought level 3a. Effects from option BR-30 were initially screened in but subsequently ruled out of adverse effects without mitigation following a review of the Screening and option's revised information; the Cheddar Ponds are not considered to be functionally linked to the SPA and the Cheddar Yeo itself, whilst hydrologically connected via the River Axe, is unlikely to be habitat used by the qualifying features outside of the Habitats Site's boundary. It is acknowledged that Blagdon Lake and the Cheddar Reservoir, which are considered functionally linked to the SPA, are within the option's ZoI, but these are not hydrologically linked to the option or each other, and so the implementation of this option is not anticipated to result in any additional in-combination effects at drought level 3a.

For all other options, due to the level of uncertainty outlined within the individual Appropriate Assessments for each option, it is not possible to confidently alleviate any adverse effects beyond reasonable scientific doubt. Therefore, the implementation of these options together with those drought levels 1 and 2 has the potential to exacerbate the effects described for this SPA in Sections 5.1.2.1 and 5.1.2.2. The options together, and in-combination with the options to be implemented at drought levels 1 and 2, may have further cumulative effects on the SPA, reducing habitat suitability and subsequent prey availability both within the SPA boundary (BR-28a and BR-28b) and within functionally linked habitat provided by Blagdon Lake (BR-27a and BR-27b), Chew Valley Lake (BR-28a and BR-28b), the Chew Magna Reservoir (BR-29) and Cheddar Reservoir (BR-31a, BR-31b and BR-47).

As such, it is concluded that there may be additional in-combination effects on the Severn Estuary SPA from the plan at drought level 3a.

Severn Estuary Ramsar

The potential for in-combination effects on the Severn Estuary Ramsar are the same as described above for the Severn Estuary SAC in relation to migratory fish, and the Severn Estuary Ramsar in relation to overwintering birds.

As such, it is concluded that there may be additional in-combination effects on the Severn Estuary Ramsar from the plan at drought level 3a.

Other Habitats Sites within the ZoI

Findings of no LSE were concluded for all options in relation to the North Somerset and Mendip Bats SAC; this site was initially screened in for option BR-30 but subsequently ruled out of adverse effects without mitigation following a review of the Screening and option's revised information. Similarly, possible significant effects were initially screened in on the Somerset Levels and Moors SPA and Ramsar from options BR-31a, BR-31b and BR-47, but subsequently ruled following a review of the Screening; no mitigation was considered necessary to alleviate any adverse effects.

Findings of no LSE were concluded for options BR-27a, BR-27b, BR-31, BR-31b and BR-47 in relation to the Mendip Woodlands SAC and Mendip Limestone Grasslands SAC. Effects from option BR-30 were initially screened out for the Mendip Woodlands SAC but not the Mendip Limestone Grasslands SAC, but were subsequently ruled out of adverse effects on the latter without mitigation following a review of the Screening information.

Due to the distance (outside the associated SSSI IRZ), lack of hydrological connectivity, and location outside of the core sustenance zone of horseshoe bats, and functionally linked land used by overwintering birds, there is not anticipated to be any appreciable effect from any of the options on these Habitats Sites.

No in-combination effects are anticipated on these Habitats Sites as a result of the plan at drought level 3a.

5.1.5 Bournemouth WRZ

5.1.5.1 Drought Level 3b

All three options in the Bournemouth WRZ, BN-04, BN-05 and BN-12 are to be implemented only in the most severe of drought conditions, at level 3b.

River Avon SAC

The River Avon SAC lies within the ZoI of all options and LSE could not be ruled out for the operation of any options. Whilst all of these options affect the Dorset Stour catchment and not the Hampshire Avon (i.e. not within the SAC boundary), this is considered to be functionally linked to the SAC due to evidence of genetic interchange between the Atlantic salmon populations in the respective rivers. Due to the level of uncertainty outlined within the individual Appropriate Assessments 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 exacerbate the reductions in downstream flow. The cumulative effects of the plan may result in the degradation of suitable spawning habitat, changes to the environmental cues which trigger seasonal migrations, and a reduction in the dilution of contaminants, such as aluminium, which are known to have a detrimental impact on salmonid species. These effects may displace Atlantic salmon from this river system, jeopardising survival rates and reproductive success.

As such, it is concluded that there may be additional in-combination effects on the River Avon SAC at the plan level.

Solent and Dorset Coast SPA

The Solent and Dorset Coast SPA lies within the ZoI of all options and LSE were not ruled out for the operation of options BN-04 and BN-12. The potential adverse effects on the SPA were considered to be indirect, affecting the prey availability which supports the qualifying species during their breeding season in part of the SPA boundary. The effects of reduced flow downstream of the options in the River Stour are the same as identified in relation to the River Avon SAC, but with a focus on the reduced dilution of contaminants downstream and closer to

Christchurch Harbour the likely impact pathway on the SPA. Due to the level of uncertainty outlined within the individual Appropriate Assessments for these two options, 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 exacerbate the effects.

Findings of no LSE were concluded for option BN-05 during the Screening, as this option alone was not considered likely to have a significant effect on the flow as far downstream as the SPA boundary. However, there is the potential that the cumulative effect of a reduced flow in the River Allen exacerbates additional reductions from abstraction in the River Stour, thus decreasing dilution of contaminants further. This may increase the risk of fish mortality and reduce prey availability within the SPA boundary, leading to displacement of qualifying features and jeopardising survival rates and reproductive success.

As such, it is concluded that there may be additional in-combination effects on the Solent and Dorset Coast SPA at the plan level.

Other Habitats Sites within the ZoI

Findings of no LSE were concluded for all options 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 (outside the associated SSSI IRZ) and lack of hydrological connectivity, there is not anticipated to be any appreciable effect from any of the options on these Habitats Sites. All three options could be considered to be hydrologically connected to the Avon Valley SPA and Ramsar, but these sites are upstream of the confluence with the River Stour at Christchurch Harbour and upgradient of any flow reductions (and the associated effects), therefore making an impact pathway unlikely.

No in-combination effects are anticipated on these Habitats Sites as a result of the plan at drought level 3b.

5.1.6 Intra-plan in-combination assessment outcomes

There was one instance of an overlap between WRZs, with the Exmoor Heaths SAC existing within the ZoI of both option R-07, and 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 summary, in-combination effects from the plan cannot be excluded at this stage for options implemented at any drought level across the SBB regions. 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.

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.

5.2 Inter-plan effects

The potential effects of the Drought Plan in combination with other relevant plans, programmes and projects, have been considered as part of the HRA process. The core list used for the inter-plan effects assessment are consistent with other disciplines' as outlined within the SEA Environmental Report (Section 9.5, 100125254-MM-RP-SEA-011-A). Additional plans and projects, alongside existing abstractions within the SBB region, have been included where relevant for the HRA. Bristol Water is now encompassed within the SBB region, but previous the previous WRMP24 and drought plan (2022) were produced separately, and so Bristol Water are considered as a 'neighbouring water company' for this section.

As a precautionary approach, it is assumed that options within WRMPs for all water companies may be operational during the same periods as those within the Drought Plan, therefore resulting in temporal overlap and increasing the likelihood of in-combination effects.

Due to the potential for existing uncertainty within plan-level assessments, the potential for inter-plan effects has been identified where there is an overlap between Habitats Sites potentially affected within this Drought Plan, at any drought level, and Habitats Sites with possible impact pathways in any of the potentially interacting plans and/or projects. Only where there is categorical evidence which can rule out impact pathways or residual effects from other plans or projects, can it confidently be concluded that there will not be any in-combination effects between this Drought Plan and the other plan or project. As per the approach for the intra-plan effects, all Habitats Sites which have been identified within the ZoI of the Drought Plan (at any drought level) and at least one other project or plan, have been included.

Strategic plans, programmes and projects identified that may interact with this Drought Plan are:

- River Basin Management Plans (RBMPs)
- Marine plans
- West Country Water Resources Group (WCWRG) Draft Regional Water Resources Plan (2023)
- South West Water's WRMP24
- South West Water's Drought Plan
- South West Water's Drainage and Wastewater Management Plans
- Neighbouring water companies' WRMPs and Drought Plans:
  - Bristol Water WRMP24
  - Wessex Water WRMP24
  - Southern Water WRMP24
  - Severn Trent Water WRMP24
  - Thames Water WRMP24
  - Welsh Water WRMP24
  - Bristol Water drought plan
  - Wessex Water drought plan
  - Southern Water drought plan
  - Severn Trent Water drought plan
  - Thames Water drought plan and,
  - Welsh Water drought plan.
- National Policy Statements and National / Regional Infrastructure Projects
- Large Town and Country Planning applications where an Environmental Impact Assessment (EIA) is required
- Relevant Local Development Plans
- Large existing and emerging Local Plan housing allocations (500 or more dwellings)
- Transport and Works Act Orders for large-scale transport infrastructure
- Minerals and Waste Proposals
- Existing abstractions
- Environment Agency Drought: How it is managed in England, and
- Canal & River Trust Management Plans.

In terms of the sustainable management of water quantity and quality, WRMPs and RBMPs contain similar objectives. Marine plans have complementary objectives to RBMPs, with an overall objective to achieve 'Good Environmental Status' in marine waters, including the same objectives for good ecological and chemical status. All local development plans use RBMPs and where relevant marine plans to inform the planning policies, forming a complimentary approach to delivering the objectives of the RBMPs and marine plans.

Details of impact pathways and potential effects for Drought Plan options individually and intra-plan effects) are not repeated, but overall conclusions are included below. The ZoI of other plans or projects may not follow the same approach as this HRA (i.e. UKWIR guidance using a 10km search area), and information on potential effects is limited to documentation which was available at the time of assessment (January 2026).

5.2.1 WCWRG Draft Regional Water Resources Plan

Some of the Drought Plan options do involve increased abstraction from rivers, which conflicts with the aims of the RWMP. However, the demand options would be implemented first, which does support 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 in-combination effects have been identified.

5.2.2 South West Water WRMP24

Although the WRMP24 was developed with reference to the current and emerging Drought Plans (this document), meaning the requirements of the Drought Plans are accounted for, as a precautionary approach this assessment highlights the potential for interactions between the two plans.

This assessment includes the Strategic Resources Options (SROs) which were included within the WRMP24; including Mendips Quarry, Poole Harbour Final Effluent and Cheddar 2, which extend into neighbouring water company regions.

Whilst not necessary identified for intra-plan effects within the WRMP, the following Habitats Sites which exist within the ZoI of at least one of the Drought Plan options were identified as being potential affected by one or more of the WRMP options, i.e. residual (even low-level) effects remain following the Appropriate Assessment:

- Solent and Dorset Coast SPA
- Dorset Heaths SAC
- Dorset Heathlands SPA
- River Avon SAC
- Avon Valley SPA
- Avon Valley Ramsar
- Dartmoor SAC
- Severn Estuary SAC
- Severn Estuary SPA
- Severn Estuary Ramsar
- Mendip Woodlands SAC
- North Somerset and Mendip Bats SAC
- River Camel
- Falmouth Bay to St Austell Bay SPA

No in-combination effects are anticipated on the Dorset Heaths SAC, Dorset Heathlands SPA, Avon Valley SPA, Avon Valley Ramsar, Mendip Woodlands SAC, North Somerset and Mendip Bats SAC or Falmouth Bay to St Austell Bay SPA, as conclusions of no LSE were concluded with regards to the relevant Drought Plan options.

However, in-combination effects are possible between the Drought Plan and the WRMP on the other Habitats Sites due to remaining uncertainty and/or residual low-level effects. There may be in-combination effects at all drought levels:

- Severn Estuary SAC, Severn Estuary SPA and Severn Estuary Ramsar – level 1 and above
- Dartmoor SAC – level 2 and above
- River Camel SAC – level 3a and above
- River Avon SAC and Solent and Dorset Coast SPA – level 3b.

Based on the current level of information, it is concluded that there is the potential for in-combination effects between the Drought Plan and the South West Water WRMP24.

5.2.3 South West Water Drought Plan

Within the current Drought Plans (2022), findings of no LSE were concluded for all drought actions included within the plan. However, Natural England subsequently raised concerns there may be impacts from licensed abstractions in the lower River Avon. Until an Appropriate Assessment has been undertaken and can confirm an absence of potential adverse effects on the River Avon SAC, or any other Habitats Sites within the ZoI, it is assumed that there may be residual effects.

However, as the 2022 Drought Plan will be superseded once the 2027 plan is adopted, previous options from 2022 will no longer be in operation. Therefore, no in-combination effects are anticipated between this Drought Plan and South West Water's Drought Plan 2022.

5.2.4 Drainage and Wastewater Management Plan (DWMP)

South West Water's DWMP analysed the locations of 653 catchments against the locations of Habitats Sites in order for impacts to be considered within the DWMP HRA. A total of 400 sites were identified as within or partially within a Habitats Site. At the plan level, the DWMP does not include specific options or details of proposed interventions that will be made, and so all 400 sites were progressed to the Stage 2 AA.

A total of 172 sites were identified as being outside, but within 5km of, a Habitats Site. Of these, 21 were determined to require no further assessment, 58 would require AA and mitigation, and 93 would require AA as considered within the plan report. The plan level AA carried out on the 493 sites showed that with appropriate mitigation, no likely impact is expected on any Habitats Sites. Mitigation is likely to be achieved through location of interventions outside of Habitats Sites boundaries and at least 500m to 1km away.

A project level HRA will be conducted on each possible intervention when additional information is available.

Based on the current level of information, no in-combination effects between the Drought Plan and the DWMP are anticipated.

5.2.5 Bristol Water WRMP24

The preferred programme for the Bristol Water WRMP24 includes demand-side and leakage reduction options, but no supply side options have been selected. Findings of no LSE were concluded for all options within the preferred programme.

No in-combination effects between the Drought Plan and the Bristol Water WRMP are anticipated.

5.2.6 Wessex Water WRMP24

A total of 14 Habitats Sites are present within the ZoI of one or more of the Drought Plan options, and one or more of the options within the Wessex Water WRMP24. LSE, or uncertainty over potential significant effects, was only concluded within the WRMP for three Habitats Sites which overlap with the Drought Plan.

Following the Stage 2 AA, it was concluded that there will be no adverse effects on any Habitats sites as a result of the Wessex Water WRMP options, with the implementation of established project level mitigation. As all of the Wessex Water options are transfer schemes or asset upgrades, none have operational effects on the Habitats Sites above.

No in-combination effects between the Drought Plan and the Wessex Water WRMP are anticipated.

5.2.7 Southern Water WRMP24

Only the Solent and Dorset Coast SPA is relevant to both regions and LSE, or uncertainty over potential significant effects, could not be ruled out within the WRMP Screenings.

Following the Stage 2 AA, some residual uncertainties remain on the effects of the ‘Recycling: Woolston WwTW’ option group on the Solent and Dorset Coast SPA, due to the redirection of discharge away from the Southampton Water transitional waterbody. Although adverse effects are considered to be avoidable on the SPA, the precautionary approach based on existing evidence indicates that residual low-level effects remain. Until additional assessments are undertaken to inform appropriate mitigation, at the respective project levels, it is concluded that there is the potential for in-combination effects between the Drought Plan and the Southern Water WRMP24.

5.2.8 Severn Trent Water WRMP24

Only the Severn Estuary Habitats Sites (SAC, SPA and Ramsar) overlap within ZoIs of options within the BVP and the Severn Trent Water WRMP24. A total of three options were screened in which have the potential to affect the Severn Estuary SAC and Ramsar within the Preferred Programme period 2025-2049. A further three options were screened in for the Preferred Programme period 2051/2051+ and alternatives. Findings of no LSE were concluded for the Severn Estuary SPA.

Following the Stage 2 AA, uncertainties over the effects of new abstractions and flow changes on the qualifying interest features of the Severn Estuary SAC and Ramsar remain. Hydrological modelling is required at the project level to inform mitigation and support the project level HRA. Currently, adverse effects on the integrity of the SAC and Ramsar remain, which may act in-combination with the Drought Plan.

5.2.9 Thames Water WRMP24

Although the Thames Water area does not adjoin the SBB region, the Severn to Thames Transfer (STT) SRO interacts with the Severn Estuary Habitats Sites and uncertainty remains following the Gate 2 HRA as to whether changes in flow and water quality during operation of the SRO will have an adverse effect on qualifying interest features. It is anticipated that further assessments identified for Gate 3 will provide the necessary evidence to inform mitigation and alleviate adverse effects, but until this time the precautionary approach concludes that there is

the potential for in-combination effects between the Drought Plan and the Thames Water WRMP24.

5.2.10 Welsh Water WRMP24

Only the Severn Estuary Habitats Sites (SAC, SPA and Ramsar) overlap within ZoIs of options within the Drought Plan and the Welsh Water WRMP24.

Following the Stage 2 AA, it was concluded that there will be no adverse effects on any Habitats sites as a result of the Welsh Water WRMP options, with the implementation of established project level mitigation.

No in-combination effects between the Drought Plan and the Welsh Water WRMP24 are anticipated.

5.2.11 Other water company Drought Plans and DWMPs

Other water company Drought Plans are currently in preparation and so in-combination assessments cannot be finalised at this stage. However, based on reviews of previous and adopted Drought Plans, the options within the Wessex Water, Bristol Water, Southern Water, and Thames Water plans are not considered likely to affect Habitats Sites which are also exposed to effects from the Drought Plan, and therefore no in-combination effects are anticipated.

The HRA for the Seven Trent Drought Plan 2022-2027 was not publicly available, but the overall Drought Plan document indicates that there was the potential for effects on the Severn Estuary Habitats Sites (SAC, SPA and Ramsar), both within the Habitats Sites' boundaries and functionally linked habitat upstream. It is likely that the operation of this drought option would have a low to negligible impact on river flow, but uncertainty remains. Ongoing monitoring and AA were scheduled for agreement by the end of 2022, but details within the associated HRA were not available to summarise the results.

Even adopting the precautionary approach that residual low-level effects from this drought option are measurable within the Severn Estuary Habitats Sites, there is no indication that this option will persist beyond the life of the current Drought Plan (2027). Therefore, no in-combination effects between the Drought Plan and the Severn Trent Drought Plan 2022-2027 are reasonably foreseeable.

The HRA for the revised Welsh Water Drought Plan 2025 concluded that, following the Appropriate Assessment, one of the options would lead to adverse effects on the integrity of the Severn Estuary Habitats Sites. Therefore, there is the potential for in-combination effects between the Drought Plan and the Welsh Water Drought Plan.

The Severn Trent DWMP was subject to a HRA screening in January 2023, where LSE on the Severn Estuary Habitats Sites could be ruled out, based on available information at the time. No AA was available at the time of writing, and specific locations and timings of DWMP options/interventions remain unknown. Currently, the precautionary approach concludes that there is the potential for in-combination effects between the Drought Plan and the Severn Trent DWMP.

No other water company DWMPs are anticipated to interact with the Drought Plan and so in-combination effects can be ruled out. The HRAs for some of the DWMPs have been deferred, whilst others conclude no adverse effects on the integrity of Habitats Sites which also interact with the Drought Plan.

5.2.12 Effects with major projects

Known major projects that are likely to increase demand have been taken into account during the development of the Drought Plan and the potential for future water deficits. Individual major projects which may interact with Drought Plan options at an individual and plan level, have been assessed for in-combination effects. 'Major projects' incudes, but is not limited to, the following:

- Large existing and emerging Local Plan housing allocations (500 or more dwellings)
- NSIPs listed on the Planning Inspectorate's Website[35]
- Large Town and Country Planning applications where an EIA is required and,
- Transport and Works Act Orders for large-scale transport infrastructure.

The following NSIPs may interact with the Drought Plan, based on Habitats Sites which could be affected by the developments:

- Avon Power Station – Severn Estuary SAC, SPA and Ramsar
- Tavistock to Bere Alston railway reinstatement project – Dartmoor SAC and Plymouth Sound & Estuaries SAC
- Hampshire Water Transfer & Water Recycling Project – Solent and Dorset Coast SPA
- The Trelavour Lithium Project – River Camel SAC, and
- Portishead Branch Line (MetroWest Phase 1) – North Somerset and Mendip Bats SAC.

The Portishead Branch Line HRA concluded findings of no adverse effects on the North Somerset and Mendip Bats SAC, both alone and in-combination with other projects. As no LSE were concluded from the Drought Plan as well, no in-combination effects are anticipated.

The other projects identify Habitats Sites which may be impacted, and therefore in the absence of a project-specific HRA, the precautionary approach has identified the potential for in-combination effects. It is likely that project-level mitigation will be able to alleviate any adverse effects, but this cannot currently be concluded.

No other major projects likely to act in-combination with the Drought Plan were identified during the assessment in January 2026. It is anticipated that between the time of writing and the implementation of the Drought Plan options, additional major projects will be developed which could result in interactions. Therefore, updated in-combination assessments are required at the project level to identify the potential for additional effects.

5.2.13 Effects with minor projects

It has not been possible to produce a definitive list of existing planning applications near each option's ZoI. It is possible that there will be in-combination project-specific effects associated with future planning applications, but this cannot be assessed at this time. This approach is consistent with the guidance on in-combination assessments provided by the All Company Working Group (ACWG). This conclusion applies to the Drought plan at all drought levels.

5.2.14 Minerals and Waste Plans

The adopted or proposed mineral and waste plans for Hampshire, Dorset, Devon, Cornwall, Wiltshire, Somerset and Bristol were all reviewed at a high level to determine whether in-combination effects with the Drought Plan are likely. Allocation sites were only identified within the Hampshire, Devon and Dorset plans.

[35] Planning Inspectorate (2024). Find a National Infrastructure Project (Beta). Available at: https://national-infrastructure-consenting.planninginspectorate.gov.uk/

Within the Hampshire plan documents, the potential for in-combination effects with the Drought Plan were identified on the Solent and Dorset Coast SPA, and River Avon SAC. No accompanying HRA has been undertaken, although as these Habitats Sites are specifically mentioned as considerations for respective allocation sites, the precautionary approach concludes there may be adverse effects and therefore in-combination effects with the Drought Plan.

Each of the mineral and waste plans includes specific policies which relate to nature conservation sites of international importance, stating that developments will seek to avoid adverse effects on the integrity of Habitats Sites, and therefore undertake HRA accordingly.

There remains the potential for in-combination effects between the Drought Plan and local mineral and waste plans, although many potential effects are likely to be identified and mitigated at the project level, once site allocations are fully understood. This conclusion applies to the Drought Plan at all drought levels.

5.2.15 Existing abstractions

Information has been obtained for a number of existing abstractions within the SBB region and there may be in-combination effects with the Drought Plan for the following, including the relevant Habitats Sites:

- Longham: surface water abstraction from the River Stour - River Avon SAC and Solent and Dorset Coast SPA, drought level 3b
- Longham Valley: groundwater abstraction adjacent to the River Stour - River Avon SAC and Solent and Dorset Coast SPA, drought level 3b
- Stanbridge Mill: groundwater abstraction adjacent to the River Allen - River Avon SAC and Solent and Dorset Coast SPA, drought level 3b
- Chew Stoke: surface water abstractions from the Chew Valley Lake, Chew Magna Reservoir and Chew Stoke Stream – Chew Valley Lake SPA, Severn Estuary SAC, Severn Estuary SPA, Severn Estuary Ramsar, drought level 1 and above
- Blagdon Lake: abstraction from Blagdon Lake - Chew Valley Lake SPA, Severn Estuary SAC, Severn Estuary SPA, Severn Estuary Ramsar, drought level 1 and above
- Cox’s Mill Pond: surface water abstraction from Cheddar Yeo – Severn Estuary SAC and Severn Estuary Ramsar, drought level 3a and above
- Brinscombe: surface water abstraction from the River Axe - Severn Estuary SAC, Severn Estuary SPA, Severn Estuary Ramsar, drought level 2 and above
- Stannon: abstraction from Stannon Lake – River Camel SAC, drought level 3a and above
- Littlehempston: surface water abstraction from the River Dart – Dartmoor SAC, drought level 2 and above
- Littlehempston Radial Collectors: groundwater abstraction adjacent to the River Dart – Dartmoor SAC, drought level 2 and above
- Lifton: surface water abstraction from the River Lyd – Dartmoor SAC, drought level 2 and above
- Roadford abstraction: abstraction from Roadford Reservoir – Dartmoor SAC and Plymouth Sound & Estuaries SAC, drought level 3a and above
- Gunnislake: surface water abstraction from the River Tamar - Dartmoor SAC and Plymouth Sound & Estuaries SAC, drought level 3a and above
- Exebridge: surface water abstraction from the River Exe – Exe Estuary SPA and Exe Estuary Ramsar, drought level 2 and above

- Brampford Speke: groundwater abstraction - Exe Estuary SPA and Exe Estuary Ramsar, drought level 2 and above
- Stoke Canon: groundwater abstraction - Exe Estuary SPA and Exe Estuary Ramsar, drought level 2 and above
- Meldon: abstraction from Meldon Reservoir and West Okement River – Dartmoor SAC, drought level 3b
- Avon: abstraction from Avon Reservoir – Dartmoor SAC, drought level 3b
- Burrator: abstraction from Burrator Reservoir - Dartmoor SAC, drought level 3b
- Fernworthy: abstraction from Fernworthy Reservoir - Dartmoor SAC, drought level 3b, and
- Upper Tamar Lake: abstraction from Upper Tamar Lake - Dartmoor SAC, drought level 3b.

Abstraction licences which have no hydrological connectivity or impact pathway for Habitats Sites have not been detailed above. No in-combination effects are anticipated from the Exebridge, Brampford Speke or Stoke Canon abstractions, as findings of no LSE have been concluded on the Exe Estuary SPA and Ramsar at the individual option and plan levels, at all drought levels.

There is the potential for in-combination effects between the Drought Plan and all other identified abstractions.

5.2.16 Environment Agency Drought: how it is managed in England

Through the development of the Drought Plan, 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 offer the potential for positive in-combination effects with the 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. At this time no in-combination effects have been identified.

5.2.17 Canal & River Trust management plans

The Canal & River Trust is carrying out essential maintenance on reservoirs across the UK to ensure the long-term integrity and safe secure water supply provided to the canal network. 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.

No in-combination effects between the Drought Plan and the Cana & River Trust management plans are anticipated.

5.2.18 Inter-plan in-combination assessment outcomes

Following the inter-plan assessment for the Drought Plan, in-combination effects are possible with other strategic level plans and individual projects. The timescales involved in the development of individual options within a plan, and/or allocation proposal, makes it challenging to undertake an in-combination assessment at this stage.

The construction associated with developments at a project level, for plan-level options/allocations, are temporary and typically not at a scale that would make in-combination effects likely. However, where operational effects are present from other plans or projects, the likelihood of in-combination effects is greater and will often require further assessment to understand and mitigate.

6 Next Steps

It is considered that at the plan level there is considerable uncertainty over the potential effects on the integrity of Habitats Sites at all drought levels. At this stage, it cannot confidently be concluded, beyond scientific doubt, that some of the Drought Plan options, both individually and in-combination with other options, and other projects and/or plans, would not have an adverse effect. Following the identification of necessary future assessments, with the aim of alleviating the uncertainties, option-specific EARs will be produced, where required, which will inform the overall impacts of each option and allow this HRA to be updated accordingly throughout the development of the Drought Plan. 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. There are currently no options available in the preferred drought plan that would replace these actions if they were removed.

The investigations will need to be undertaken by SBB, in partnership with other organisations. The investigations will require more detail on the design and likely operational activities of the options included within the Drought Plan, and any subsequent alternative plans. To facilitate the assessment 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. The environmental scope of the investigations should focus on the qualifying features having regard to the contents of this HRA and should ensure the precautionary principle is applied.

Consultation with statutory stakeholders should be undertaken to define the scope and objectives of these investigations for the different options' EARs.

At the consenting level, the following principles should be adhered to:

- Engagement plans will set out the expectations and timescales of consultation so that stakeholders can provide advice during the design and consenting processes.
- Option design and the development of measures to safeguard the Habitats Sites will be informed by further research, including the studies recommended within individual supply option's conclusions.
- In developing the Drought Plan, the emphasis should be on avoiding Habitats Sites. If this is not possible, adverse effects must be minimised through design, so they are no longer significant. If avoidance is not possible, and the option cannot be removed from the plan, then this must be clearly justified, including reasons why alternative locations, either inside and/or outside the Habitats Site, are unsuitable. There are currently no options available in the preferred drought plan that would replace these actions if they were removed.
- Where it is necessary to minimise adverse effects at the consenting level, appropriate measures should ideally be agreed with statutory stakeholders and be capable of being secured within project design and/or consents. Mitigation measures will also need to be acceptable to competent authorities.
- 'Best available techniques' (BAT) for preventing or minimising impacts on the environment. Consideration of BAT will include the use of technology and design, as well as operation, and maintenance methods, and
- Current best practice environmental considerations, guidance and advice from statutory nature conservation bodies (e.g. Natural England) will be taken into account during the detailed design process.

A. Legislation

A.1 The Directives

Under the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna, commonly referred to as “the Habitats Directive” (Council Directive 92/43/EEC), Member States are required to take special measures to maintain the distribution and abundance of certain priority habitats and species (listed in Annexes I and II of the Directive). Each Member State is required to designate the most suitable sites as SACs. All such SACs will form part of the Natura 2000 network under article 3(1) of the Habitats Directive.

Article 2(3) sets out that Member States have a duty, in exercising their obligations under the Habitats Directive, to:

“.. take account of economic, social and cultural requirements and local characteristics.”

There is an obligation under the Habitats Directive for Member States to designate sites before turning to measures for their protection.

Article 6(2) requires Member States to take appropriate steps to avoid the deterioration of natural habitats and disturbance of species for which the sites have been designated, in so far as the disturbance could be significant in relation to the objectives of the Directive. Article 6(3) and Article 6(4) require that a plan or project not directly connected with the management of the site, but likely to have a significant effect upon it, either individually or in combination with other plans or projects, must be subject to an appropriate assessment of its implications on the site, in view of the sites conservation objectives.

Having undertaken an appropriate assessment, the competent authority may agree to a plan or project where it can be concluded that it will not adversely affect the integrity of the designated site. In light of a negative assessment on the implications for the integrity of the site, Article 6(4) provides that the plan or project may still proceed where it can be demonstrated that there are no alternatives and there are imperative reasons of over-riding public interest as to why it must proceed. In the event that a plan or project is to proceed on the basis of imperative reasons of over-riding public interest, by direction of Article 6(4), compensatory measures must be put in place to ensure that the overall coherence of the Natura 2000 network is protected.

A.2 The 2017 Regulations

The 2017 Regulations transpose the requirements of the Habitats Directive into UK legislation. The 2017 Regulations aim to protect a network of sites that have rare or important habitats and species in order to safeguard biodiversity.

Under the 2017 Regulations, Competent Authorities have a duty to ensure that all the activities they regulate have no adverse effect on the integrity of any of the Natura 2000 sites. Regulation 63 of the 2017 Regulations requires that:

“63(1) A competent authority before deciding to undertake, or give any consent, permission or other authorisation for a plan or project, which: -

(a) is likely to have a significant effect on a European site in Great Britain (either alone or in combination with other plans or projects) and

(b) is not directly connected with or necessary for the management of the site,

shall make an appropriate assessment of the implications for the site in view of that site's conservation objectives.

…

63(5) In light of the conclusions of the assessment, and subject to regulation 64, the authority shall agree to a plan or project only after having ascertained that it will not adversely affect the integrity of the European site.

…

63(6) In considering whether a plan or project will adversely affect the integrity of the site, the authority shall have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which they propose that the consent, permission or other authorisation should be given.

…"

Regulation 63 of the 2017 Regulations therefore sets out a two-stage process. The first test is to determine whether the plan / project is likely to have a significant effect on the European site, the second test (if applicable) is to determine whether the plan / project will affect the integrity of the European site.

A.3 Guidance and other relevant documents

A.3.1 Natura Standard Data Forms

A standard reporting format has been developed for Natura 2000 sites (SACs and Special Protection Areas – SPAs) to ensure that the relevant site selection information is reported and stored in a consistent manner that can be easily made available.

A standard reporting form for SPAs and SACs was developed by the European Commission and published in 1996. The form is used for all sites designated or proposed to be designated as SPAs and SACs under the relevant Directives, with the information to be stored on a central database.

Article 4 of the Habitats Directive provides the legal basis for providing the data. Article 4 states that information shall include a map of the site, its name, location, extent and the data resulting from application of the criteria specified in Annex III and that this shall be provided in a format established by the Commission.

Whilst it is the relevant country agency *Natural England) that is responsible for designating a site, it is the JNCC who are responsible for collating the lists of European and international designated sites, together with relevant supporting information. The Natura 2000 Data Forms for SPAs and SACs are therefore made available by the JNCC.

Within the explanatory notes for Natura Standard Data Forms (European Commission 1996) the following "main objectives" of the Natura data form / database are given:

1. *"to provide the necessary information to enable the Commission, in partnership with the Member States, to co-ordinate measures to create a coherent NATURA 2000 network and to evaluate its effectiveness for the conservation of Annex I habitats and for the habitats of species listed in Annex II of Council Directive 92/43/EEC as well as the habitats of Annex I bird species and other migratory bird species covered by Council Directive 79/409/EEC."*
2. *"to provide information which will assist the Commission in other decision making capacities to ensure that the NATURA 2000 network is fully considered in other*

policy areas and sectors of the Commission's activities in particular regional, agricultural, energy, transport and tourism policies."

3. *"to assist the Commission and the relevant committees in choosing actions for funding under LIFE and other financial instruments where data relevant to the conservation of sites, such as ownership and management practice, are likely to facilitate the decision making process."*

4. *"to provide a useful forum for the exchange and sharing of information on habitats and species of Community interest to the benefit of all Member States."*

A.3.2 Communication from the Commission on the Precautionary Principle (2000)

Enshrined within the Habitats Directive and 2017 Regulations (though not explicitly set out in either), based upon article 191 of the Treaty on the Functioning of the European Union, is the need to have due regard to the Precautionary Principle when assessing the risks posed to the integrity of the site(s). If a risk of significant effect to the integrity of a site cannot be excluded on the basis of objective information, then the application of the precautionary principle requires no consent to be given for such a project.

The document titled "Communication from the Commission on the Precautionary Principle" (2000) provides useful guidance in relation to the application of the Precautionary Principle in relation to European sites issues. Paragraph 6, sets out the six key matters for consideration when applying the Precautionary Principle. Paragraph 6 states:

- *"Where action is deemed necessary, measures based on the precautionary principle should be, inter alia:*
- *proportional to the chosen level of protection,*
- *non-discriminatory in their application,*
- *consistent with similar measures already taken,*
- *based on an examination of the potential benefits and costs of action or lack of action (including, where appropriate and feasible, an economic cost/benefit analysis),*
- *subject to review, in the light of new scientific data, and*
- *-capable of assigning responsibility for producing the scientific evidence necessary for a more comprehensive risk assessment."*

Under these bulleted points, the guidance gives specific definitions in relation to each of the above.

A.3.3 Managing Natura 2000 Sites (European Communities 2000)

The document entitled "Managing Natura 2000 Sites the provisions of article 6 of the Habitats Directive 92/43/CEE", published by the European Commission in 2000, provides guidelines to the Member States on the interpretation of certain key concepts used in Article 6 of the Habitats Directive. It should be noted that the Section relating to Article 6(4) has subsequently been replaced through the publication of a further guidance document by the European Commission in 2007 entitled "Guidance document on Article 6(4) of the 'Habitats Directive', which is considered below under the relevant heading.

This document states that conservation measures must correspond to the ecological requirements of the habitats and species present for which the site is designated and that these requirements *"involve all the ecological needs necessary to ensure their favourable conservation status".*

The guidance states, in relation to deterioration and disturbance of habitats or species:

"Deterioration or disturbance is assessed against the conservation status of species and habitats concerned. At a site level, the maintenance of the favourable conservation status has to be evaluated against the initial conditions provided in the Natura 2000 standard data forms when the site was proposed for selection or designation, according to the contribution of the site to the ecological coherence of the network. This notion should be interpreted in a dynamic way according to the evolution of the conservation status of the habitat or the species."

Section 4.4.1 of the document sets out that in determining what may constitute a likely 'significant' effect one should take into account the conservation objectives for the site and other relevant baseline information. In the second paragraph of this section of the document it is stated:

"In this regard, the conservation objectives of a site as well as prior or baseline information about it can be very important in more precisely identifying conservation sensitivities."

Section 4.5.3 of the document sets out the duty of Member States to provide certain specific information in support of the inclusion of a site within the Natura 2000 network. This information is to be provided in a format specified by the European Commission (the Natura 2000 Standard Data Form).

A link is drawn between the Standard Data Form and the formation of the sites conservation objectives within the text box at the end of Section 4.5.3 of the guidance where it is stated:

"The information provided according to the standard data form established by the Commission forms the basis for a Member State's establishment of the site's conservation objectives."

With regard to an assessment of the effects of a plan / project on the integrity of a site, the 'integrity of the site' is defined in Section 4.6.3 of the document as:

"… the coherence of the site's ecological structure and function, across the whole area, or the habitats, complex of habitats and / or populations of species for which the site is or will be classified."

The guidance is clear, within the text box at the foot of page 39, that an assessment as to the implications of the plan / project on the integrity of the site should be limited to an assessment against the sites' conservation objectives:

"The integrity of the site involves its ecological functions. The decision as to whether it is adversely affected should focus on and be limited to the site's conservation objectives."

Section 5 of the document deals with Article 6(4) of the Habitats Directive. Note that this section has been expanded upon and replaced by further guidance issued by the European Commission entitled "Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC" (2007).

A.3.4 Assessment of Plans and Projects Significantly Affecting Natura 2000 sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission 2001)

This document, published by the European Commission in 2001, gives guidance on carrying out and reviewing those assessments required under Article 6(3) and (4) of the Habitats Directive. It is provided as supplementary guidance and does not over-ride or replace any of that set out within Managing Natura 2000 (European Commission 2000) which as stated at page 6 of the document, "*is the starting point for the interpretation of the key terms and phrases contained in the Habitats Directive*". The guidance provided is not mandatory and it is clearly set out that its use is "optional and flexible" and that it is for "*Member States to determine the procedural requirements deriving from the directive*".

The guidance sets out the key stages in following the tests contained within the Habitats Directive. Pertinent to this assessment of the Best Value Plan, alternative plans and adaptive pathways, stages one and two are relevant. Stage one is the screening stage assessing the likelihood of a plan / project resulting in a significant effect upon the European site. The second comprises the appropriate assessment.

Section 3.2.4 of the document is concerned with Appropriate Assessment and specifically, the assessment against the conservation objectives of the European Site. Box 9 provides a list of five example conservation objectives for differing broad habitat types. One such example, that for a coastal site, taken from Box 9 is provided below:

"to maintain the status of the European features of this coastal site in favourable condition, allowing for natural change. Features include coastal shingle vegetation and lagoons (within a candidate special area of conservation (SAC), which is also an SPA). "

A.3.5 Common Standards Monitoring (JNCC February 2004)

Common Standards Monitoring is a means by which condition objectives for habitats, species, or other features of designated sites (e.g. SSSIs and SPAs) are set based on key attributes of the features.

The JNCC and the country Conservation Agencies (e.g. NE) developed guidance on the setting and assessment of condition objectives, as required under the Birds and Habitats Directives and set out a framework for this in 1999. This framework is provided in the form of Common Standards Monitoring ("CSM") guidance which comprises a suite of documents including an "Introduction to the Guidance Manual on Common Standards Monitoring" and several species/habitat specific documents. The Introduction to the Guidance Manual covers various relevant concepts and terms. It also provides a background to the setting of conservation objectives and sets out the desired approach to setting targets, monitoring, management and reporting on conservation measures in designated sites.

The Introduction to the CSM Guidance and CSM guidance for individual site attributes, sets out specific criteria regarding the identification of interest features, targets and methods of assessment. There is in-built flexibility and allowances for 'judgements to be made' when assessing, for example, favourable condition.

It is understood that NIEA applies the Common Standards Monitoring approach to European designated sites through an assessment of the SSSI condition. This is undertaken on a cycle of approximately 6 years. The assessment does not relate to the Conservation Objectives of the European site but provides a tool for tailoring future management of the SSSI such that favourable condition of the interest features can be maintained or restored as appropriate.

A.3.6 Guidance document on Article 6(4) of the 'Habitats Directive' (European Commission 2007)

This document, published by the European Commission in 2007, is intended to provide clarification on key terms / concepts as referred to within "Managing Natura 2000 Sites" and replaces the section on Article 6(4) within that earlier document.

The Guidance document covers, in particular, the concepts of Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensation Measures, Overall coherence and the Opinion of the Commission. With regard to ensuring the quality of an appropriate assessment, and to define exactly what needs to be compensated, it is stated in Section 1.3 that:

"Assessment procedures of plans or projects likely to affect Natura 2000 sites should guarantee full consideration of all elements contributing to the site integrity and to the overall

coherence of the network, both in the definition of the baseline conditions and in the stages leading to identification of potential impacts, mitigation measures and residual impacts. These determine what has to be compensated, both in quality and quantity."

The need to use information contained within the Natura Standard Data Form, in tandem with the sites conservation objectives, when undertaking an appropriate assessment is specifically referred to (under the second hyphenated point in Section 1.3 on page 5 of the guidance).

Section 1.3.2 gives guidance on the application of Article 6(4) in respect of reasons of overriding public importance and Section 1.4.1 gives guidance on the application of Article 6(4) in respect of compensatory measures.

A.3.7 Managing Natura 2000 Sites – The provisions of Article 6 of the habitats Directive 92/43/EEC

In January 2019 the European Commission published updated guidance in relation to managing Natura 2000 sites, following initial guidance published in 2000 (see above).

The primary purpose of the revision was to incorporate relevant rulings of the Court of Justice of the European Union (EU) which have been issued since the initial guidance was published in 2000. It also integrates, into a single document, other relevant European Commission notes / guidance documents. Those key rulings (of the Court of Justice of the EU) and other relevant European Commission notes / guidance are discussed above in this report. The revised guidance provides clarifications of key concepts to Member State, authorities and stakeholders involved in the management of Natura 2000 sites (e.g. SPAs and SACs).

A.3.8 Conservation Objectives

Whilst Regulation 63 of the Habitats Regulations is explicit in setting out that any assessment of the implications of the plan/project on a European designated site should be undertaken in view of the site's "conservation objectives", the term 'conservation objective' is not explicitly defined within the Regulations. The term "conservation objectives" appears at Article 6(3) of the Habitats Directive which sets out the process of assessment for a plan or project which may be likely to have an effect on a designated site, however the term itself is not defined.

To understand what is meant by the term "conservation objective" it is necessary to look at the Habitats Directive in light of relevant European and other guidance. That guidance is not always consistent or clear about the use of the term "conservation objectives". For the purposes of this assessment, reference is made to the formal "conservation objectives" mentioned in Article 6(3) and Regulation 63 as "Conservation Objectives".

The term "conservation" is defined within the Habitats Directive at Article 1(a):

"conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status as defined in (e) and (i)".

The term "conservation status of a natural habitat" is defined within the Habitats Directive at Article 1(e):

"conservation status of a natural habitat means the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within the territory referred to in Article 2."

The term "conservation status of a species" is defined within the Habitats Directive at Article 1(i):

"conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2:

The conservation status will be taken as 'favourable' when:

- *Population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and*
- *The natural range of the species is neither being reduced nor is it likely to be reduced for the foreseeable future, and*
- *There is and will probably continue to be a sufficiently large habitat to maintain its populations on a long-term basis."*

Article 3 of the Habitats Directive sets out that Member States have a duty to designate (in accordance with Article 4 of the Directive) special areas of conservation and that where necessary Member States shall endeavour to improve the ecological coherence of Natura 2000.

Article 4(1) of the Habitats Directive states that Member States must provide a list of sites, indicating which Annex I habitats and species occurring on Annex II are present. This Article also clarifies the type of information that must be submitted for each listed site (map, name, location, extent and the results of the application of qualification criteria listed at Annex III of the Directive). This information provides the basis of the Natura 2000 Data Form discussed elsewhere within this document. Article 4(4) states:

"Once a site of Community importance has been adopted in accordance with the procedure laid down in paragraph 2, the Member State concerned shall designate that site as a special area of conservation as soon as possible within six years at most, establishing priorities in the light of the importance of the sites for the maintenance or restoration, at a favourable conservation status, of a natural habitat type in Annex 1 or a species in Annex 2 and for the coherence of Natura 2000, and in the light of the threats of degradation or destruction to which those sites are exposed."

Full regard has been had to the significant weight to be applied to the formal Conservation Objectives when considering a plan or project and applying the tests of the Habitats Regulations. Regard has also been had to other relevant information including that available from the JNCC.

A.3.9 Summary

The above legal framework and guidance documents have been used by the Authors of this HRA in determining the effects of both the individual elements of the Plan and the Plan as a whole. In doing so the judgements made rely on the baseline information currently available and the information regarding the nature of the proposals at this, the Plan making stage.

A. Relevant Case Law

A.1 Waddenzee Judgement

In the 'Waddenzee' case the European Court of Justice considered the trigger for 'Appropriate Assessment'. It decided that an appropriate assessment is required for a plan or project where there is a probability or a risk that it will have a significant effect on the SPA. The Judgement states [at paragraph 3(a)] that:

"…any plan or project not directly connected with or necessary to the management of the site is to be subject to an appropriate assessment of its implications for the site in view of the site's conservation objectives if it cannot be excluded, on the basis of objective information, that it will have a significant effect on that site, either individually or in combination with other plans or projects."

Hence the need for an appropriate assessment should be determined on a precautionary basis.

The Judgement gives clarity that the test of 'likely significant effect' should also be undertaken in view of the European site's conservation objectives. It is stated at paragraph 3(b)] that:

"where a plan or project not directly connected with or necessary to the management of a site is likely to undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site."

Paragraph 4 of the Judgement emphasises the requirement for the appropriate assessment to rely on objective scientific information:

"…an appropriate assessment…implies that, prior to its approval, all the aspects of the plan or project which can, by themselves or in combination with other plans or projects, affect the site's conservation objectives must be identified in the light of the best scientific knowledge in the field. The competent national authorities, taking account of the appropriate assessment of the implications…for the site concerned in the light of the site's conservation objectives, are to authorise such an activity only if they have made certain that it will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects."

In terms of Objective evidence, the decision in Smyth v Secretary of State for Communities & Local Government 2 (the Exminster Marshes decision) the English Court of Appeal clarified at Paragraph 46 to 48 of the Judgement that objective evidence includes that knowledge, experience and expertise of an expert. The contention brought before the Court of Appeal was that an expert witness's evidence amounted "merely to assertion, unsupported by any objective evidence".

However, the Court of Appeal rejected this assertion, finding that:

Para 46. "Three points should be made. First, I consider that on a fair reading of Mr Goodwin's proof of evidence it can be seen that he has drawn on specific information relevant to the SPA and the SAC, as well as the development site and proposed mitigation measures, in a manner which supports in an entirely conventional and acceptable way his expressions of opinion as an ecological expert. By way of example, at paras. 10.4 and 10.5 of his proof, he pointed out that, contrary to the suggestion made by GIE's representative at the inquiry, it was not appropriate to use the analogy of mitigation measures developed for

heathland sites (a 400m exclusion zone), where ground nesting birds might be subject to predation by cats, since for the SPA "the designating bird features are wintering or passage species and access to large parts of the site is not possible in any event" (because it is marshland or cut off by water). He referred to the Interim Report and the Disturbance Study, as appropriate. Mr Goodwin demonstrated a good understanding of the particular ecological and mitigation features relevant to the SPA and the SAC. Contrary to Mr Jones's contention, Mr Goodwin's evidence was very far from being unsupported, free-standing assertion."

Para 47. "Secondly, in my view it is acceptable and to be expected that an expert will draw on his own background knowledge, experience and expertise in the field to inform the opinions which constitute his evidence to a relevant decision-maker (here, the Inspector). That is, indeed, in large part the point of looking to expert witnesses to provide assistance on technical matters. In this case, Mr Goodwin's own practical experience, the practical experience of ecologists generally and the knowledge shared between them all informed the expertise which he was able to bring to bear in giving his views regarding the effects of the development and the practical impact and viability of the mitigation options which he reviewed in his proof of evidence."

Para 48. "Thirdly, expert evidence of the kind given by Mr Goodwin was objective evidence on which the competent authority, the Inspector, was entitled to rely in making his assessment for the purposes of Article 6(3) of the Directive. Where, as in this case, an assessment is called for of impacts on bird species and of how large numbers of people might be expected to react to incentives to direct their recreational habits away from a protected site or of how on-site control measures could be expected to limit their impact, the views of an expert ecologist drawing on his practical experience and knowledge of the effectiveness of ecological initiatives elsewhere may constitute highly material and relevant objective evidence. The Inspector clearly thought he would be assisted by such evidence, which is why he adjourned the inquiry to provide an opportunity for Bellway to provide it. It cannot be said that this indicates any error of approach on the part of the Inspector. On the contrary, in my view it indicates the care with which the Inspector approached the question of application of the Habitats Directive in this case."

A.2 Dilly Lane Decision

In applying the tests of the Habitats Regulations it is important to refer to the Judgment of Justice Sullivan (as he was then) in relation to the decision handed down in the English High Court regarding the case of Hart District Council v The Secretary of State for Communities and Local Government, Luckmore Ltd and Barratt Homes Ltd (commonly known as "the Dilly Lane Judgement").

The Secretary of State's decision to allow an appeal in relation to applications for a total of 170 new homes on a greenfield site off Dilly Lane, Hartley Witney, was challenged in the English High Court by Hart District Council. The legal challenge was made on the grounds that the Secretary of State had erred in departing from her Inspector's conclusions as to the effects on the Thames Basin Heaths SPA. A key issue for the case was whether mitigation measures should be disregarded when assessing whether the project would have a significant effect on the SPA. Mr Justice Sullivan ruled in favour of the Secretary of State after concluding that there was no absolute legal rule [see below] that mitigation measures should be disregarded in assessing whether the new homes would have significant effect on the SPA. Importantly Mr Justice Sullivan states at paragraph 55 of his judgement:

"The competent authority is not considering the likely effect of some hypothetical project in the abstract. The exercise is a practical one which requires the competent authority to

consider the likely effect of the particular project for which permission is being sought. If certain features (to use a neutral term) have been incorporated into that project, there is no sensible reason why those features should be ignored at the initial, screening, stage merely because they have been incorporated into the project in order to avoid, or mitigate, any likely effect on the SPA."

As such, it was judged right and proper that mitigation or avoidance measures, which form a feature of a plan / project should be viewed as integral to the plan / project and not excluded when considering the likely significance test, in this instance at Regulation 63(1).

It should however be noted that more recent case law now supersedes that approach, but what remains useful from the Sullivan Judgment is the overall consideration of the approach i.e. HRA is essentially a practical exercise of assessing the plan or project which is being considered.

A.3 Sweetman Case

Further guidance in relation to the consideration of impacts in the light of the Habitats Regulations is provided in the Sweetman case. The case as set out by the Advocate General considered in detail the test for likely significant effect in paragraphs 50 and 51:

"50. The test which that expert assessment must determine is whether the plan or project in question has 'an adverse effect on the integrity of the site', since that is the basis on which the competent national authorities must reach their decision. The threshold at this (the second) stage is noticeably higher than that laid down at the first stage. That is because the question (to use more simple terminology) is not 'should we bother to check' (the question at the first stage) but rather 'what will happen to the site if this plan or project goes ahead; and is that consistent with "maintaining or restoring the favourable conservation status" of the habitat or species concerned'…

51. It is plain, however, that the threshold laid down at this stage of Article 6(3) may not be set too high, since the assessment must be undertaken having rigorous regard to the precautionary principle. That principle applies where there is uncertainty as to the existence or extent of risks. The competent national authorities may grant authorisation to a plan or project only if they are convinced that it will not adversely affect the integrity of the site concerned. If doubt remains as to the absence of adverse effects, they must refuse authorisation."

The Court of Justice of the European Union (CJEU) agreed with the Advocate General's conclusions, and held:

"40. Authorisation for a plan or project, as referred to in Article 6(3) of the Habitats Directive, may therefore be given only on condition that the competent authorities – once all aspects of the plan or project have been identified which can, by themselves or in combination with other plans or projects, affect the conservation objectives of the site concerned, and in the light of the best scientific knowledge in the field – are certain that the plan or project will not have lasting adverse effects on the integrity of that site. That is so where no reasonable scientific doubt remains as to the absence of such effects."

Hence a plan or project may be authorised only if no reasonable scientific doubt remains as to the absence of effects. Reasonable scientific doubt will exist if the evidence is not sufficiently conclusive, or if there are gaps in the information.

A.4 The A5 Judgment

The A5 judgement handed down by Mr Justice Stephens provides guidance in relation to the application of the Habitats Regulations/Directive on two main counts. The first being the requirement to demonstrate the efficacy of mitigation. The second being the fact that a clear difference exists between what is required of a screening assessment and what is required of an Appropriate Assessment.

At paragraph 89 Mr Justice Stephens considers the Judgment of Mr Justice Sullivan in relation to the Dilly Lane case (as referred to above). He states:

"[89] In R (on the application of Hart District Council) v Secretary of State for the Communities and Local Government the competent authority was not the developer. In that case Sullivan J stated:

'If the competent authority does not agree with the proponents' view as to the likely efficacy of the proposed mitigation measures, or is left in some doubt as to the efficacy, then it will require an appropriate assessment because it will not have been able to exclude the risk of a significant effect on the basis of objective information (see Waddenzee above)."

He goes on:

"I consider that is the test to be applied by the competent authority, namely if it is left in some doubt as to the efficacy of the mitigation measures. In this case the Department is both the competent authority and the developer but that does not relieve the Department of its obligation to have an appropriate assessment if it is left in some doubt as to the efficacy of the mitigation Thus the Judgment is clear that the efficacy of the mitigation must be demonstrable if the Competent Authority are to hold at the first stage of the legal tests being applied (namely at Regulation 63(1), and not move to undertake an Appropriate Assessment.

Paragraph 91 gives direction as to what is required of a screening assessment and what is required of an Appropriate Assessment. It is stated:

"[91] A screening opinion is different from an appropriate assessment which involves detailed consideration. The screening opinion does not require all considerations to be mentioned."

A.5 Wealden v SSCLG [2017] ('the Wealden Judgment 2017')

Specifically, in relation to air quality impacts on designated sites (most notably in relation to Nitrogen deposition), until relatively recently, Natural England's advice regarding the screening threshold for a likely significant effect was as follows. Where either, the resulting deposition / concentration equates to 'less than 1% of the relevant benchmark', or the predicted AADT value is less than 1000, a likely significant effect can be screened out for the project when it is considered both alone and in combination with other plans or projects.

However, relevant guidance has changed in the light of the High Court judgment in Wealden v SSCLG [2017] ('the Wealden Judgment 2017').

The Wealden Judgment confirms that the use of the project / plan level 1000 AADT threshold (equivalent to 1% of the critical level/load for receiving habitat) as the only means of addressing in combination effects was not appropriate, particularly where other AADT values are known and importantly which, when added together, breach the threshold. The

1000 AADT (and 1%) thresholds themselves were not questioned in terms of their use for assessment purposes.

The Judgment clarified that whilst the 1000 AADT (and 1% of the critical load / level) threshold is appropriate for use in screening assessments when applying the tests of the Habitats Regulations, a true in combination assessment must be undertaken, in view of all relevant AADT data.

A.6 People over Wind (Sweetman II) [C323/17]

This CJEU judgment concerned a Preliminary Ruling in Case C-323/17. A request for a preliminary ruling was made to the CJEU concerning the interpretation of Article 6(3) of Council Directive 92/43/EEC (the Habitats Directive). The request was made in relation to proceedings brought by 'People Over Wind', and Mr Peter Sweetman against Coillte Teoranta. The ruling is as follows:

"Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site."

The ruling from the CJEU, departs from previous domestic jurisprudence (in particular the Dilly Lane Decision, discussed above), where it was deemed acceptable to include consideration of any mitigation / avoidance measures, which formed an integral part of the plan or project, in considering the first stage of assessment and screening for LSE on a European site (or Ramsar site). In that case, where it could be concluded that no likely significant effect arises there was no recourse to move to Appropriate Assessment and address the Integrity test.

In view of this ruling from the CJEU, in addressing the test at Regulation 63(1) of the Habitats Regulations, it is necessary to undertake the screening assessment in the absence of any consideration of avoidance or mitigation measures.

A.7 ESB Wind Developments (Sweetman III) [Case C164/17]

In this case a request for a preliminary ruling was made to the CJEU concerning the interpretation of Articles 6(3) and 6(4) of Council Directive 92/43/EEC (the Habitats Directive). The request was made in relation to proceedings brought by Mr Peter Sweetman and Edel Grace against the decision of An Bord Pleanála (National Planning Appeals Board, Ireland) concerning the latter's decision to grant ESB Wind Developments Ltd and Coillte permission for a wind farm project within an SPA. The ruling was handed down on 25th July 2018.

For the purpose of the application of Articles 6(3) and 6(4) of the Directive, this ruling distinguishes between 'mitigation' that consists of measures intended to avoid or reduce harm to the protected site, and measures intended to compensate for any harm (Compensatory measures). It is stated:

"Article 6 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that, where it is

intended to carry out a project on a site designated for the protection and conservation of certain species, of which the area suitable for providing for the needs of a protected species fluctuates over time, and the temporary or permanent effect of that project will be that some parts of the site will no longer be able to provide a suitable habitat for the species in question, the fact that the project includes measures to ensure that, after an appropriate assessment of the implications of the project has been carried out and throughout the lifetime of the project, the part of the site that is in fact likely to provide a suitable habitat will not be reduced and indeed may be enhanced may not be taken into account for the purpose of the assessment that must be carried out in accordance with Article 6(3) of the directive to ensure that the project in question will not adversely affect the integrity of the site concerned; that fact falls to be considered, if need be, under Article 6(4) of the directive."

The ruling clarifies (in the context of the specifics of that project) what constitutes mitigation and what should correctly be termed compensation. It confirms that mitigation should be subject to Appropriate Assessment under article 6(3) but that measures designed to compensate for any harm rather than prevent it, cannot be considered under article 6(3) (Appropriate Assessment). In such instances, the proposal must be considered under article 6(4) and thus it cannot be permitted unless there are, "Imperative Reasons of Overriding Public Interest".

A.8 Holohan Judgment

In the case of Holohan v. An Bord Pleanála the CJEU considered the appropriate assessment procedure to be adopted when considering potential impacts on a European Site. In considering this case, the CJEU ruled, amongst other matters:

a) An appropriate assessment (AA) must catalogue the entirety of the habitat types and species for which a site is protected.

b) It must also identify and examine the implications of the proposed project for the species present on that site and for which that site has not been listed. Additionally, it must examine the implications for habitat types and species outside the boundaries of the protected site, as far as those implications are liable to affect the site's Conservation Objectives.

c) Where the competent authority rejects findings of an expert that additional information must be obtained, the Appropriate Assessment must include a detailed statement dispelling all reasonable scientific doubt concerning effects on the protected site.

A.9 The Dutch Nitrogen Cases

On 7th November 2018 the Judgment of the CJEU was handed down pursuant to a reference for a Preliminary Ruling relating to the application of Article 6 of Directive 92/43/EEC (the Habitats Directive) in joined cases C-293/17 and C294/17.

The cases concerned authorisation schemes for agricultural activities which cause nitrogen deposition on Natura 2000 (European) sites in the Netherlands.

Key parts of the ruling (as far as they are relevant to this assessment) are discussed below.

In line with preceding case law (Waddenzee and Sweetman, discussed above) the need for scientific rigour and firm conclusions as to the absence of effects are a pre-requisite for authorisation of a plan / project. Ruling 3 in the case states:

"Article 6(3) of Directive 92/43 must be interpreted as not precluding national programmatic legislation which allows the competent authorities to authorise projects on the basis of an 'appropriate assessment' within the meaning of that provision, carried out in advance and in which a specific overall amount of nitrogen deposition has been deemed compatible with that legislation's objectives of protection. That is so, however, only in so far as a thorough and in-depth examination of the scientific soundness of that assessment makes it possible to ensure that there is no reasonable scientific doubt as to the absence of adverse effects of each plan or project on the integrity of the site concerned, which it is for the national court to ascertain." Ruling 4 in the case states:

"Article 6(3) of Directive 92/43 must be interpreted as not precluding national programmatic legislation, such as that at issue in the main proceedings, exempting certain projects which do not exceed a certain threshold value or a certain limit value in terms of nitrogen deposition from the requirement for individual approval, if the national court is satisfied that the 'appropriate assessment' within the meaning of that provision, carried out in advance, meets the criterion that there is no reasonable scientific doubt as to the lack of adverse effects of those plans or projects on the integrity of the sites concerned."

Ruling 5 in the case states:

"Article 6(3) of Directive 92/43 must be interpreted as precluding national programmatic legislation, such as that at issue in the main proceedings, which allows a certain category of projects, in the present case the application of fertilisers on the surface of land or below its surface and the grazing of cattle, to be implemented without being subject to a permit requirement and, accordingly, to an individualised appropriate assessment of its implications for the sites concerned, unless the objective circumstances make it possible to rule out with certainty any possibility that those projects, individually or in combination with other projects, may significantly affect those sites, which it is for the referring court to ascertain."

Ruling 6 in the case confirms that any measures which are relied upon to mitigate or avoid adverse effects on the integrity of the European site in question, must be certain at the time of assessment. It is stated:

"Article 6(3) of Directive 92/43 must be interpreted as meaning that an 'appropriate assessment' within the meaning of that provision may not take into account the existence of 'conservation measures' within the meaning of paragraph 1 of that article, 'preventive measures' within the meaning of paragraph 2 of that article, measures specifically adopted for a programme such as that at issue in the main proceedings or 'autonomous' measures, in so far as those measures are not part of that programme, if the expected benefits of those measures are not certain at the time of that assessment."

Habitats Sites	Qualifying Features	Conservation Objectives
Bournemouth		
Solent and Dorset Coast SPA (UK9020330)	Article 4.1 qualification: During the breeding season the area regularly supports: Sandwich tern *Sterna sandvicensis* (4.01% of the GB breeding population) Common tern *Sterna hirundo* (4.77% of the GB breeding population) Little tern *Sterna albifrons* (3.31% of the GB breeding population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Dorset Heaths SAC (UK0019857)	Annex I habitats (primary reason for site selection): 4010 Northern Atlantic wet heaths with *Erica tetralix* 4030 European dry heaths 7150 Depressions on peat substrates of the Rhynchosporion Annex I habitats present as a qualifying feature, but not primary reason for selection: 6410 *Molinia* meadows on calcareous, peaty of clayey-silt-laden soils (*Molinion caeruleae*) 7210 Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae *priority feature 7230 Alkaline fens 9190 Old acidophilous oak woods with *Quercus robur* on sandy plains Annex II species (primary reason for site selection): 1044 Southern damselfly	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats *Coenagrion mercuriale* of qualifying species rely The populations of qualifying species, and,

Habitats Sites	Qualifying Features	Conservation Objectives
	Annex II species present as a qualifying feature, but not primary reason for selection: 1166 Great crested newt *Triturus cristatus*	The distribution of qualifying species within the site
Dorset Heathlands SPA (UK9010101)	Article 4.1 qualification: During the breeding season the area regularly supports: Nightjar *Caprimulgus europaeus* (at least 12.8% of the GB breeding population) Woodlark *Lullula arborea* (at least 6.8% of the GB breeding population) Dartford warbler *Sylvia undata* (at least 26.1% of the GB breeding population) Over winter the area regularly supports: Hen harrier *Circus cyaneus* (2.7% of the GB population) Merlin *Falco columbarius* (1.2% of the GB population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Dorset Heathlands Ramsar (UK11021)	Ramsar criterion 1: The site contains particularly good examples of northern Atlantic wet heaths with cross-leaved heath and acid mire with Rhynchosporion. The site contains the largest example in Britain of southern Atlantic wet heaths with Dorset heath and cross-leaved heath. Ramsar criterion 2: The site supports 1 nationally rare and 13 nationally scarce wetland plant species, and at least 28 nationally rare wetland invertebrate species. Ramsar criterion 3: The site has a high species richness and high ecological diversity of wetland habitat types and transitions and lies in one of the most biologically-rich wetland areas of lowland Britain, being continuous with three other Ramsar sites - Poole Harbour, Avon Valley and The New Forest.	Conservation objectives are not produced for Ramsar sites. In this instance, regard has been had to the high-level conservation objective established in the Ramsar Convention's "wise use of wetlands" which states: "…the maintenance of ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development" (Ramsar Convention Secretariat, 2010)." Furthermore, with the reference to the relevant qualifying interest features of the Ramsar site, the conservation advice package produced by Natural England for the overlapping SAC and SPA designations will be, in most cases, sufficient to support the management of the Ramsar interests.

Habitats Sites	Qualifying Features	Conservation Objectives
River Avon SAC (UK0013016)	Annex I habitats (primary reason for site selection): 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and Callitricho-Batrachion vegetation	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;
	Annex II species (primary reason for site selection): 1016 Desmoulin's whorl snail *Vertigo moulinsiana* 1095 Sea lamprey *Petromyzon marinus* 1096 Brook lamprey *Lampetra planeri* 1106 Atlantic salmon *Salmo salar* 1163 Bullhead *Cottus gobio*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Avon Valley SPA (UK9011091)	Article 4.1 qualification: Over winter the area regularly supports: Bewick's swan *Cygnus columbianus bewickii* (1.9% of the GB population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;
	Article 4.2 qualification: Over winter the area regularly supports: Gadwall *Anas strepera* (2.2% of the population)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.

Habitats Sites	Qualifying Features	Conservation Objectives
Avon Valley Ramsar (UK11005)	Ramsar criterion 1: The site shows a greater range of habitats than any other chalk river in Britain, including fen, mire, lowland wet grassland and small areas of woodland. Ramsar criterion 2: The site supports a diverse assemblage of wetland flora and fauna including several nationally rare species. Ramsar criterion 6: Species/populations occurring at levels of international importance: Species with peak counts in winter: Gadwall *Anas strepera*; 537 individuals representing an average of 3.1% of the GB population. Species/populations identified subsequent to designation for possible consideration under criterion 6: Species with peak counts in winter: Northern pintail *Anas acuta*; 715 individuals representing an average of 1.1% of the population Black-tailed godwit *Limosa limosa islandica*; 1,142 individuals representing an average of 3.2% of the population	Conservation objectives are not produced for Ramsar sites. In this instance, regard has been had to the high-level conservation objective established in the Ramsar Convention's "wise use of wetlands" which states: "…the maintenance of ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development" (Ramsar Convention Secretariat, 2010)." Furthermore, with the reference to the relevant qualifying interest features of the Ramsar site, the conservation advice package produced by Natural England for the overlapping SAC and SPA designations will be, in most cases, sufficient to support the management of the Ramsar interests.
Poole Harbour SPA (UK9010111)	Article 4.1 qualification: During the breeding season the area regularly supports: Mediterranean gull *Larus melanocephalus* (10% of the GB breeding population) Common tern *Sterna hirundo* (1.8% of the GB breeding population) Sandwich tern *Sterna sanvicensis* (1.6% of the GB breeding population) Over winter the area regularly supports: Avocet *Recurvirostra avosetta* (36.1% of the GB population) Little egret *Egretta garzetta* (2.5% of the GB population) Eurasian spoonbill *Platalea leucorodia* (100% of the GB population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features

Habitats Sites	Qualifying Features	Conservation Objectives
	Article 4.2 qualification: Over winter the area regularly supports: Shelduck *Tadorna tadorna* (1.2% of the biogeographic population) Black-tailed godwit *Limosa limosa islandica* (2.3% of the biogeographic population) In the non-breeding season the area regularly supports 25,176 individuals (4 year peak mean 1993/94 - 1996/97)	The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Poole Harbour Ramsar (UK11054)	Ramsar criterion 1: The site is the best and largest example of a bar-built estuary with lagoonal characteristic (a natural harbour) in Britain. Ramsar criterion 2: The site supports two species of nationally rare plant and one nationally rare alga. There are at least three British Red Data Book invertebrate species. Ramsar criterion 3: The site includes examples of natural habitat types of community interest - Mediterranean and thermo Atlantic halophilous scrubs and calcareous fens. transitions from saltmarsh through to peatland mires are of exceptional conservation importance as few examples remain in Britain. The site supports nationally important populations of breeding waterfowl and a nationally important population of avocet of winter. Ramsar criterion 5: The site supports 24,709 waterfowl over winter (5 year peak mean 1998/99 - 2002/03) Ramsar criterion 6: Species/populations occurring at levels of international importance: Species with peak counts in winter: Shelduck *Tadorna tadorna*; 2,120 individuals representing an average of 2.7% of the GB population Black-tailed godwit *Limosa limosa islandica*; 1,724 individuals representing an average of 4.9% of the population	Conservation objectives are not produced for Ramsar sites. In this instance, regard has been had to the high-level conservation objective established in the Ramsar Convention's "wise use of wetlands" which states: "…the maintenance of ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development" (Ramsar Convention Secretariat, 2010)." Furthermore, with the reference to the relevant qualifying interest features of the Ramsar site, the conservation advice package produced by Natural England for the overlapping SPA designation will be, in most cases, sufficient to support the management of the Ramsar interests.

Habitats Sites	Qualifying Features	Conservation Objectives
	Species/populations identified subsequent to designation for possible future consideration under criterion 6: Species with peak counts in winter: Avocet *Recurvirostra avosetta*; 1,260 individuals representing an average of 1.7% of the population	
Bristol		
Avon Gorge Woodlands SAC (UK0012734)	Annex I habitats (primary reason for site selection): 9180 Tilio-Acerion forests of slopes, screes and ravines * Priority feature Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	With regard to the SAC and the natural habitats for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely.
Chew Valley Lake SPA (UK9010041)	Article 4.2 qualification Over winter the area regularly supports: Northern shoveler *Anas clypeata* (1.3% of the population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and,

Habitats Sites	Qualifying Features	Conservation Objectives
		The distribution of the qualifying features within the site.
Mendip Limestone Grasslands SAC (UK0013030)	Annex I habitats (primary reason for site selection): 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site 4030 European dry heaths 8310 Caves not open to the public 9180 Tilio-Acerion forests of slopes, screes and ravines Annex II species present as a qualifying feature, but not a primary reason for site selection 1304 Greater horseshoe bat *Rhinolophus ferrumequinum*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Mendip Woodlands SAC (UK0030048)	Annex I habitats (primary reason for site selection): 9180 Tilio-Acerion forests of slopes, screes and ravines * Priority feature	With regard to the SAC and the natural habitats for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely.
North Somerset and Mendip Bats SAC (UK0030052)	Annex I habitats (primary reason for site selection): 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Habitats Sites	Qualifying Features	Conservation Objectives
	9180 Tilio-Acerion forests of slopes, screes and ravines * Priority feature Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: 8310 Caves not open to the public Annex II species (primary reason for site selection): 1303 Lesser horseshoe bat *Rhinolophus hipposideros* 1304 Greater horseshoe bat *Rhinolophus ferrumequinum*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.
Severn Estuary SAC (UK0013030)	Annex I habitats (primary reason for site selection): 1110 Sandbanks which are slightly covered by sea water all the time 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1170 Reefs 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) Annex II species (primary reason for site selection): 1095 Sea lamprey *Petromyzon marinus* 1099 River lamprey *Lampetra fluviatilis* 1103 Twaite shad *Alosa fallax*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.
Severn Estuary SPA (UK9015022)	Article 4.1 qualification Over winter, the area regularly supports: Bewick's swan *Cygnus columbianus bewickii* (4.1% of the GB population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified

Habitats Sites	Qualifying Features	Conservation Objectives
	Article 4.2 qualification The area regularly supports: Common shelduck *Tadorna tadorna* (3.9% of the GB population) Gadwall *Anas strepera* (5.5% of the GB population) Dunlin *Calidris alpina alpina* (9.6% of the GB population) Common redshank *Tringa totanus* (2.6% of the GB population) Greater white-fronted goose *Anser albifrons albifrons* (50.0% of the GB population) An internationally important assemblage of birds in the non-breeding season: 68026 individuals (5 year peak mean 1988/89 -19923/93).	(the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Severn Estuary Ramsar (UK11081)	**Ramsar criterion 1** Due to immense tidal range (second-largest in world), this affects both the physical environment and biological communities. Habitats Directive Annex I features present on the SAC include: 1110 Sandbanks which are slightly covered by sea water all the time 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) **Ramsar criterion 3** Due to unusual estuarine communities, reduced diversity and high productivity. **Ramsar criterion 4** This site is important for the run of migratory fish between sea and river via estuary. Species include Salmon *Salmo salar*, sea trout *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla anguilla*. It is also of particular importance for migratory birds during spring and autumn.	Conservation objectives are not produced for Ramsar sites. In this instance, regard has been had to the high-level conservation objective established in the Ramsar Convention's "wise use of wetlands" which states: "…the maintenance of ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development" (Ramsar Convention Secretariat, 2010)." Furthermore, with the reference to the relevant qualifying interest features of the Ramsar site, the conservation advice package produced by Natural England for the overlapping SAC and SPA designations will be, in most cases, sufficient to support the management of the Ramsar interests.

Habitats Sites	Qualifying Features	Conservation Objectives
	Ramsar criterion 8 The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded. Salmon, sea trout, sea lamprey, river lamprey, allis shad, twaite shad, and eel use the Severn Estuary as a key migration route to their spawning grounds in the many tributaries that flow into the estuary. The site is important as a feeding and nursery ground for many fish species particularly allis shad and twaite shad which feed on mysid shrimps in the salt wedge. **Ramsar criterion 5** Assemblages of international importance: Species with peak counts in winter: 70919 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6** Species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in winter: Tundra swan *Cygnus columbianus bewickii*; 229 individuals, representing an average of 2.8% of the GB population Greater white-fronted goose *Anser albifrons albifrons*; 2076 individuals, representing an average of 35.8% of the GB population Common shelduck *Tadorna tadorna*; 3223 individuals, representing an average of 1% of the population Gadwall *Anas strepera strepera*; 241 individuals, representing an average of 1.4% of the GB population Dunlin *Calidris alpina alpina*; 25082 individuals, representing an average of 1.8% of the population Common redshank *Tringa totanus totanus*; 2616 individuals, representing an average of 1% of the population Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species regularly supported during the breeding season:	

Habitats Sites	Qualifying Features	Conservation Objectives
	Lesser black-backed gull *Larus fuscus graellsii*; 4167 apparently occupied nests, representing an average of 2.8% of the breeding population Species with peak counts in spring/autumn: Ringed plover *Charadrius hiaticula*; 740 individuals, representing an average of 1% of the population Species with peak counts in winter: Eurasian teal *Anas crecca*; 4456 individuals, representing an average of 1.1% of the population Northern pintail *Anas acuta*; 756 individuals, representing an average of 1.2% of the population	
Somerset Levels and Moors SPA (UK9010031)	Article 4.1 qualification Over winter, the area regularly supports: Bewick's swan *Cygnus columbianus bewickii* (2.7% of the GB population) European golden plover *Pluvialis apricaria* (1.2% of the GB population) Article 4.2 qualification Over winter, the area regularly supports: Northern lapwing *Vanellus vanellus* (0.5% of the population) Eurasian teal *Anas crecca* (3.3% of the population) An internationally important assemblage of birds in the non-breeding season: 58093 individuals (5 year peak mean 1989/90 -1993/94).	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Somerset Levels and Moors Ramsar (UK11064)	**Ramsar criterion 2** Supports 17 species of Red Data Book invertebrates. The vascular plants *Wolffia arrhiza*, *Hydrocharis morsus-ranae* and *Peucedanum palustre* are considered vulnerable by the GB Red Book. **Ramsar criterion 5** Assemblages of international importance: Species with peak counts in winter:	Conservation objectives are not produced for Ramsar sites. In this instance, regard has been had to the high-level conservation objective established in the Ramsar Convention's "wise use of wetlands" which states: "…the maintenance of ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development" (Ramsar Convention Secretariat, 2010)." Furthermore, with the reference to the relevant qualifying interest features of the Ramsar site, the conservation advice

Habitats Sites	Qualifying Features	Conservation Objectives
	97,155 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6** Species/populations occurring at levels of international importance. Species with peak counts in winter: Eurasian teal *Anas crecca*; 21,231 individuals, representing an average of 4.2% of the population Northern lapwing *Vanellus vanellus*; 36,580 individuals, representing an average of 1.8% of the population Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in winter: Eurasian wigeon *Anas penelope*; 25,759 individuals, representing an average of 1.7% of the population Mute swan *Cygnus olor*; 842 individuals, representing an average of 2.6% of the population Northern pintail *Anas acuta*; 927 individuals, representing an average of 1.5% of the population Northern shoveler *Anas clypeata*; 1,094 individuals, representing an average of 2.7% of the population	package produced by Natural England for the overlapping SPA designation will be, in most cases, sufficient to support the management of the Ramsar interests.
Colliford		
Breney Common and Goss & Tregoss Moors SAC (UK0030098)	Annex I habitats (primary reason for selection): 4010 Northern Atlantic wet heaths with *Erica tetralix* 4030 European dry heaths 7140 Transition mires and quaking bogs Annex II species (primary reason for selection): 1065 Marsh fritillary butterfly *Euphydryas aurinia*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats

Habitats Sites	Qualifying Features	Conservation Objectives
		The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Tregonning Hill SAC	Annex II species present as a qualifying feature, but not a primary reason for site selection 1390 Western rustwort *Marsupella profunda*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Tintagel-Marshland-Clovelly Coast SAC	Annex I habitats (primary reason for site selection): 1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: 4030 European dry heaths	With regard to the SAC and the natural habitats for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and,

Habitats Sites	Qualifying Features	Conservation Objectives
		The supporting processes on which qualifying natural habitats rely.
Phoenix United Mine & Crow's Nest SAC (UK0030238)	Annex I habitats (primary reason for site selection): 6130 Calaminarian grasslands of the *Violetalia calaminariae*	With regard to the SAC and the natural habitats for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely.
Marazion Marsh SPA	Article 4.1 qualification Over winter the area regularly supports: Bittern *Botaurus stellaris* (2.0% of the GB population) Aquatic warbler *Acrocephalus paludicola* (9.0% of the GB population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Lower Bostraze & Leswidden SAC	Annex II species (primary reason for site selection): 1390 Western rustwort *Marsupella profunda*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Habitats Sites	Qualifying Features	Conservation Objectives
		Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Lands End and Cape Bank SAC	Annex I habitats (primary reason for site selection): 1170 Reefs	With regard to the SAC and the natural habitats for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely.
Falmouth Bay to St. Austell Bay SPA (UK9020323)	Article 4.1 qualification: Over winter the area regularly supports: Black-throated diver *Gavia arctica* (20.5% of the GB population) Great northern diver *Gavia immer* (3% of the GB population) Slavonian grebe *Podiceps auritus* (1.4% of the GB population)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Habitats Sites	Qualifying Features	Conservation Objectives
		Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Fal & Helford SAC (UK0013112)	Annex I habitats (primary reason for site selection): 1110 Sandbanks which are slightly covered by sea water all the time 1140 Mudflats and sandflats not covered by seawater at low tide 1160 Large shallow inlets and bays 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) Annex I habitats present as a qualifying feature, but not primary reason for selection: 1130 Estuaries 1170 Reefs Annex II species (primary reason for site selection): 1441 Shore dock *Rumex rupestris*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.
Crowdy Marsh SAC	Annex I habitats (primary reason for site selection): 7140 Transition mires and quaking bogs	With regard to the SAC and the natural habitats for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Habitats Sites	Qualifying Features	Conservation Objectives
		Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely.
River Camel SAC (UK0030056)	Annex I habitats present as a qualifying feature, but not primary reason for selection: 4030 European dry heaths 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) *priority feature Annex II species (primary reason for site selection): 1163 Bullhead *Cottus gobio* 1355 Otter *Lutra lutra* Annex II species present as qualifying features, but not primary reason for selection: 1106 Atlantic salmon *Salmo salar*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Carrine Common SAC (UK0012795)	Annex I habitats (primary reason for site selection): 4020 Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* *priority feature Annex I habitats present as a qualifying feature, but not primary reason for selection: 4030 European dry heaths	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

Habitats Sites	Qualifying Features	Conservation Objectives
		The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely
Bristol Channel Approaches/Dynesfeydd Mor Hafren SAC	Annex II species (primary reason for site selection): 1351 Harbour porpoise *Phocoena phocoena*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.
Roadford		
Braunton Burrows SAC (UK0012570)	Annex I habitats (primary reason for site selection): 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") 2130 Fixed coastal dune with herbaceous vegetation ("grey dunes") 2170 Dunes with *Salix repens ssp. argentea* (Salicion arenariae) 2190 Humid dune slacks Annex I habitats present as a qualifying feature, but not primary reason for selection: 1140 Mudflats and sandflats not covered by seawater at low tide Annex II species (primary reason for site selection):	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species

Habitats Sites	Qualifying Features	Conservation Objectives
	1395 Petalwort *Petalophyllum ralfsii*	The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.
Tamar Estuaries Complex SPA (UK9010141)	Article 4.1 qualification: Over winter the area regularly supports: Avocet *Recurvirostra avosetta* (15.8% of the GB population) On passage the area regularly supports: Little egret *Egretta garzetta* (at least 9.3% of the GB population	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
South Hams SAC (UK0012650)	Annex I habitats (primary reason for site selection): 4030 European dry heaths 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) Annex I habitats present as a qualifying feature, but not primary reason for selection: 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 8310 Caves not open to the public 9180 Tilio-Acerion forests of slopes, screes and ravines Annex II species (primary reason for site selection):	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats

Habitats Sites	Qualifying Features	Conservation Objectives
	1304 Greater horseshoe bat *Rhinolophus ferrumequinum*	The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
South Dartmoor Woods SAC (UK0012749)	Annex I habitats (primary reason for site selection): 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles Annex I habitats present as a qualifying feature, but not primary reason for selection: 4030 European dry heaths	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely
Plymouth Sound and Estuaries SAC (UK0013111)	Annex I habitats (primary reason for site selection): 1110 Sandbanks which are slightly covered by sea water all the time 1130 Estuaries 1160 Large shallow inlets and bays 1170 Reefs 1330 Atlantic salt meadows (Glauco-Puccinellietalia maritimae) Annex I habitats present as a qualifying feature, but not primary reason for selection: 1140 Mudflats and sandflats not covered by seawater at low tide Annex II species (primary reason for site selection): 1441 Shore dock *Rumex rupestris* Annex II species present as a qualifying feature, but not primary reason for selection: 1102 Allis shad *Alosa alosa*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and,

Habitats Sites	Qualifying Features	Conservation Objectives
		The distribution of qualifying species within the site
Lyme Bay and Torbay SAC (UK0030372)	Annex I habitats (primary reason for site selection): 1170 Reefs 8330 Submerged or partially submerged sea caves	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely
Dartmoor SAC (UK0012929)	Annex I habitats (primary reason for site selection): 4010 Northern Atlantic wet heaths with *Erica tetralix* 4030 European dry heaths 7130 Blanket bogs (* if active bog) *priority feature 91A0 Old sessile woods with *Ilex* and *Blechnum* in the British Isles Annex II species (primary reason for site selection): 1044 Southern damselfly *Coenagrion mercuriale* Annex II species present as a qualifying feature, but not primary reason for selection: 1106 Atlantic salmon *Salmo salar* 1355 Otter *Lutra lutra*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Culm Grasslands SAC (UK0012679)	Annex I habitats (primary reason for site selection): 6410 *Molinia* meadows on calcareous, peaty of clayey-silt-laden soils (Molinion caeruleae)	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change;

Habitats Sites	Qualifying Features	Conservation Objectives
	Annex I habitats present as a qualifying feature, but not primary reason for selection: 4010 Northern Atlantic wet heaths with *Erica tetralix* Annex II species (primary reason for site selection): 1065 Marsh fritillary butterfly *Euphydryas aurinia*	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site
Exmoor Heaths SAC (UK0030040)	Annex I habitats (primary reason for site selection): 4010 Northern Atlantic wet heaths with *Erica tetralix* 4030 European dry heaths Annex I habitats present as a qualifying feature, but not primary reason for selection: 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 7130 Blanket bogs (* if active bog) *priority feature 7230 Alkaline fens 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely
Wimbleball		
Exe Estuary Ramsar (UK11025)	**Ramsar criterion 5**: Species with peak counts in winter: 20,263 waterfowl (5 year peak mean 1998/99 - 2002/03) **Ramsar criterion 6**:	Conservation objectives are not produced for Ramsar sites. In this instance, regard has been had to the high-level conservation objective established in the Ramsar Convention's "wise use of wetlands" which states: "…the maintenance of ecological character, achieved through the implementation of ecosystem

Habitats Sites	Qualifying Features	Conservation Objectives
	Species/populations occurring at levels of international importance: Species with peak counts in winter: Dark-bellied brent goose *Branta bernicla bernicla*; 1,509 individuals representing an average of 1.5% of the GB population Species/populations identified subsequent to designation for possible future consideration under criterion 6: Black-tailed godwit *Limosa limosa islandica*: 857 individuals representing an average of 2.4% of the population	approaches within the context of sustainable development" (Ramsar Convention Secretariat, 2010)." Furthermore, with the reference to the relevant qualifying interest features of the Ramsar site, the conservation advice package produced by Natural England for the overlapping SPA designations will be, in most cases, sufficient to support the management of the Ramsar interests.
Exe Estuary SPA (UK9010081)	Article 4.1 qualification: Over winter the area regularly supports: Slavonian grebe *Podiceps auritus* (5% of the GB population) Avocet *Recurvirostra avosetta* (28.3% of the GB population) Article 4.2 qualification: Over winter the area regularly supports: Dark bellied brent goose *Branta bernicla bernicla* (0.6% of the population) Dunlin *Calidris alpina alpina* (1.1% of the GB population) Oystercatcher *Haematopus ostralegus* (1.2% of the GB population) Black-tailed godwit *Limosa limosa islandica* (7.2% of the GB population) Grey plover *Pluvialis squatarola* (1.1% of the GB population) Over winter the area regularly supports 23,811 waterfowl (5 year peak mean 1991/92 - 1995/96)	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Dawlish Warren SAC (UK0030130)	Annex I habitats (primary reason for site selection): 2190 Humid dine slacks Annex I habitats present as a qualifying feature, but not primary reason for selection: 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes") 2130 Fixed coastal dune with herbaceous vegetation ("grey dunes") Annex II species (primary reason for site selection):	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats

Habitats Sites	Qualifying Features	Conservation Objectives
	1395 Petalwort *Petalophyllum ralfsii*	The structure and function (including typical species) of qualifying natural habitats, and, The supporting processes on which qualifying natural habitats rely.
Exmoor and Quantock Oakwoods SAC (UK0030148)	Annex I habitats (primary reason for site selection): 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles Annex I habitats present as a qualifying feature, but not primary reason for selection: 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae) * Priority feature Annex II species (primary reason for site selection): 1308 Barbastelle *Barbastella barbastellus* Annex II species present as a qualifying feature, but not primary reason for site selection: 1323 Bechstein's bat *Myotis bechsteinii* 1355 Otter *Lutra lutra*	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.
Isles of Scilly		
Isles of Scilly Complex SAC (UK0013694)	Annex I habitats (primary reason for site selection): 1110 Sandbanks which are slightly covered by se water all the time 1140 Mudflats and sandflats not covered by seawater at low tide 1170 Reefs Annex II species (primary reason for site selection): 1441 Shore dock *Rumex rupestris* Annex II species present as a qualifying feature, but not a primary reason for site selection:	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats and habitats of qualifying species

Habitats Sites	Qualifying Features	Conservation Objectives
	1364 Grey seal *Halichoerus grypus*	The structure and function (including typical species) of qualifying natural habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.
Isles of Scilly SPA	Article 4.1 qualification The site regularly supports: European storm-petrel *Hydrobates pelagicus* (5.07% of GB population) Article 4.2 qualification The site regularly supports: Lesser black-backed gull *Larus fuscus graellsii* (1.37% of the biogeographic population) European shag *Phalacrocorax aristotelis aristotelis* (1.46% of biogeographic population) Great black-backed gull *Larus marinus* (1,882 individuals) The site regularly supports at least 26,478 (1999) individual seabirds	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
Isles of Scilly Ramsar	**Ramsar criterion 6** Species/populations occurring at levels of international importance. Species regularly supported during the breeding season: European storm-petrel *Hydrobates pelagicus*:, 71 apparently occupied sites, representing an average of 0.2% of the GB population Lesser black-backed gull *Larus fuscus graellsii*: 3603 apparently occupied nests, representing an average of 2.4% of the breeding population	Conservation objectives are not produced for Ramsar sites. In this instance, regard has been had to the high-level conservation objective established in the Ramsar Convention's "wise use of wetlands" which states: "…the maintenance of ecological character, achieved through the implementation of ecosystem approaches within the context of sustainable development" (Ramsar Convention Secretariat, 2010)." Furthermore, with the reference to the relevant qualifying interest features of the Ramsar site, the conservation advice package produced by Natural England for the overlapping SAC and SPA designations will be, in most cases, sufficient to support the management of the Ramsar interests.

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
Colliford				
C-03	River Camel SAC	7.2km north	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in surface water abstraction from the River Fowey are not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Breney Common and Goss and Tregoss Moors SC	4km west	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in surface water abstraction from the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Falmouth Bay to St Austell Bay SPA	9.35km south	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in surface water abstraction from the River Fowey are not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-04a	River Camel SAC	2.5km west, 4.1km downstream	During the operation of this option, additional drawdown from Stannon Lake is anticipated to have an effect on the downstream flow within the Stannon Stream. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon, bullhead and otter features. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. The effects on fish populations may have indirect effects on otters through a reduction is prey availability. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Crowdy Marsh SAC	2.8km northeast	During the operation of this option, additional drawdown from Stannon Lake is anticipated to have an effect on the local groundwater levels. Although this SAC is a groundwater-dependent ecosystem, due to the distance between the SAC and the option, there are no anticipated to be any significant effects. The influence of the water levels within the Crowdy Reservoir are much more likely to influence the adjacent SAC, as opposed to Stannon Lake. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Bristol Channel Approaches/Dyneseydd Mor Hafren SAC	9.3km west, 37km downstream	Whilst there is hydrological connectivity downstream of the option via the Stannon Stream and River Camel, due to the distance and additional freshwater inputs between the option and the SAC, any changes to base flow are not anticipated to have an effect. Furthermore, the qualifying features of the SAC, harbour porpoise, are not likely to be dependent on freshwater provision due to their marine nature. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Tintagel-Marshland-Clovelly Coast SAC	9.3km northwest	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, changes in base flow within the River Camel are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-06 C-40 (these options are at the same location with	Phoenix United Mine and Crow's Nest SAC	8.3km east	Due to the distance between these options and this site and a lack of hydrological connectivity through the surface water, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
the same impact pathways)	River Camel SAC	7.5km northwest	Due to the distance between these options and this site and a lack of hydrological connectivity, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Breney Common and Goss and Tregoss Moors SAC	4km west	Due to the distance between these options and this site and a lack of hydrological connectivity, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Falmouth Bay to St Austell Bay SPA	9.35km south	Due to the distance between these options and this site and a lack of hydrological connectivity, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-07a	Phoenix United Mine and Crow's Nest SAC	7.1km east	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	River Camel SAC	7.9km northwest	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-10	Lands' End and Cape Bank SAC	7.6km west	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the Newlyn River are not anticipated to have any effect on the Habitats Site.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			As such, LSEs can be screened out, and no further assessment is required.	
	Lower Bostraze & Leswidden SAC	5.2km northwest	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, changes in base flow on the Newlyn River are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Marazion Marsh SPA	6.9km east	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, changes in base flow on the Newlyn River are not anticipated to have any effect on the Habitats Site within the SPA boundary. Additionally, the habitat around the reservoir and the affected surface water reach are not considered to be functionally linked to the SPA. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-11	Crowdy Marsh SAC	8.1km north	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the Warleggan River and River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	River Camel SAC	2.4km northwest	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the Warleggan River and River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-17	Carrine Common SAC	9.6km northeast	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, changes in base flow	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			on the River Kennall are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	
	Fal & Helford SAC	8.7km east, 11.8km downstream	This option proposes to reduce Stithians compensation release rate by up to 50%, which is anticipated to result in a reduced base flow downstream on the River Kennall. The option and the SAC are hydrologically connected approximately 11.8km downstream. However, due to the additional freshwater inputs into the SAC, the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Falmouth Bay to St Austell Bay SPA	9.7km east, 11.8km downstream	The option and the SPA are hydrologically connected approximately 11.8km downstream. However, due to the additional freshwater inputs into the SAC, the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. Additionally, the habitat around the reservoir and the affected surface water reach are not considered to be functionally linked to the SPA. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-30	Phoenix United Mine & Crow's Nest SAC	3.1km east	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	River Camel SAC	6.9km north	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Breney Common and Goss and Tregoss Moors SAC	4km west	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Falmouth Bay to St Austell Bay SPA	9.3km south	Due to the distance between the option and this site (approximately 9.3km south) and a lack of hydrological connectivity, changes in base flow on the River Fowey are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
C-37	Fal & Helford SAC	5.6km southeast	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the River Cober are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Falmouth Bay to St Austell Bay SPA	8.7km east	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the River Cober are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	The Lizard SAC	8.8km south	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the River Cober are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Lizard Point SAC	8.9km south	Due to the distance between the option and this site and a lack of hydrological connectivity, changes in base flow on the River Cober are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Tregonning Hill SAC	7.4km west	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, changes in base flow on the River Cober are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
Roadford				
R-07	Braunton Burrows SAC	9.1km south	During operation of this option, additional drawdown from Slade Reservoir is anticipated to affect the local groundwater levels. Although this SAC is a groundwater-dependent ecosystem, and there is hydrological connection between the option and the SAC through the WFD groundwater waterbody (River Taw and North Devon Streams), the option and the SAC are sufficiently distant that no significant effects are anticipated. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Exmoor Heaths SAC	9.2km east	During operation of this option, additional drawdown from Slade Reservoir is anticipated to affect the local groundwater levels. Although this SAC is a groundwater-dependent ecosystem, and there is hydrological connection between the option and the SAC through the WFD groundwater waterbody (River Taw and North Devon Streams), the option and the SAC are sufficiently distant that no significant effects are anticipated. As such, LSEs can be screened out, and no further assessment is required.	No LSE
R-11	Dartmoor SAC	12.8km east, 15km upstream	This option is anticipated to result in a reduction of base flow within the River Lyd and potentially the River Tamar as a result of extended abstraction. There is hydrological connectivity between the option and the	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			SAC through the surface water. Although outside of the SAC boundary, these watercourses and upstream tributaries are assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
	Plymouth Sounds and Estuary SAC	14.3km south, 27.7km downstream	This option is anticipated to result in a reduction of base flow within the River Lyd and potentially the River Tamar as a result of extended abstraction. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying allis shad features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. Due to the strength of the tidal regime within the estuary it is not considered that any reduction in flow will have a significant effect within the SAC boundary on the other qualifying features. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Tamar Estuaries Complex SPA	19.4km south, 39.5km downstream	Whilst there is hydrological connectivity downstream of the option via the River Lyd and River Tamar, due to the additional freshwater inputs into the River Tamar, the strength of the tidal regime within the estuary, and the	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	
R-20	South Hams SAC	6km east	This option is anticipated to result in a reduced base flow downstream in the River Avon. However, given the absence of a direct hydrological connection, it is considered that there will be no direct or indirect impacts from the option that would impact the conservation status of the qualifying habitats of the SAC. The SAC is also designated for greater horseshoe bats. However, the option lies outside of the core sustenance zone of 4km from roosts for greater horseshoe bats, as per the SAC supplementary planning guidance document (2019), and therefore no significant effects on suitable supporting habitat are anticipated. Additionally, watercourses are not identified as key habitats for greater horseshoe bats. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	South Dartmoor Woods SAC	7km southeast	Due to the distance between the option and this site and a lack of direct hydrological connectivity through the surface water, changes in base flow on the River Avon are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Dartmoor SAC	1.3km west, 1.5km upstream	This option is anticipated to result in a reduction of base flow within the River Avon. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
R-21	Dartmoor SAC	3.5km southeast, 6km upstream	This option is anticipated to result in a reduction of base flow within the River Meavy. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Plymouth Sound & Estuaries SAC	8.2km southwest, 23km downstream	Whilst there is hydrological connectivity downstream of the option via the River Meavy and the River Plym, due to the strength of the tidal regime within the estuary it is not considered that any reduction in flow will have a significant effect within the SAC boundary. The River Plym is not considered to be functionally linked habitat for migrating allis shad, as this species is only known to spawn within the River Tamar. As such, LSEs can be screened out, and no further assessment is required	No LSE
	South Dartmoor Woods SAC	3.3km south, 6.7km downstream,	Due to the distance between the option and this SAC and a lack of direct hydrological connectivity through the surface water, changes in base flow on the River Meavy and River Plym are not anticipated to have any effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Tamar Estuaries Complex SPA	8.2km west, 26km downstream	Whilst there is hydrological connectivity downstream of the option via the River Meavy and the River Plym, due to the additional freshwater inputs into the River Tamar, the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	No LSE
R-22	Dartmoor SAC	250m south, 250m upstream	This option is anticipated to result in a reduction of base flow within the South Teign River and potentially the River Teign. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	South Dartmoor Woods SAC	9km east, 18km downstream	There is a hydrological connection between the Option and the SAC through both the surface water and groundwater. Although this SAC is a groundwater-dependent ecosystem, due to the distance between the SAC and the option, there are not anticipated to be any significant effect within the SAC boundary. As such, LSEs can be screened out, and no further assessment is required.	No LSE
R-23	South Hams SAC	6.7km southeast	This option is anticipated to result in a reduced base flow downstream in the Beadon Brook and River Teign. However, given the absence of a direct hydrological connection, it is considered that there will be no direct or	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			indirect impacts from the option that would impact the conservation status of the qualifying habitats of the SAC. The SAC is also designated for greater horseshoe bats. However, the option lies outside of the core sustenance zone of 4km from roosts for greater horseshoe bats, as per the SAC supplementary planning guidance document (2019), and therefore no significant effects on suitable supporting habitat are anticipated. Additionally, watercourses are not identified as key habitats for greater horseshoe bats. As such, LSEs can be screened out, and no further assessment is required.	
	South Dartmoor Woods SAC	3.25km southeast	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, a reduced base flow downstream in the Beadon Brook and River Teign is not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Dartmoor SAC	8.9km west	This option is anticipated to result in a reduced base flow downstream in the Beadon Brook and River Teign. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
R-24	Dartmoor SAC	Within the Option boundary	This option is anticipated to result in in a reduction of flow in the West Okement River. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary,	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
R-25 R-48 (these options are at the same location with the same impact pathways)	Plymouth Sound and Estuaries SAC	18.7km south, 34km downstream	These options are anticipated to result in the reduction of flow downstream of the Roadford Reservoir, potentially affecting the flows in the River Wolf, River Thrushel, River Lyd and River Tamar. It is also assumed that the existing abstraction from the River Tamar at Gunnislake will continue as normal, reducing flow downstream of the intake location. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying allis shad features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. Due to the strength of the tidal regime within the estuary it is not considered that any reduction in flow will have a significant effect within the SAC boundary on the other qualifying features. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Tamar Estuaries Complex SPA	24km south, 45.8km downstream	Although reductions in flow are anticipated on the River Tamar, due to the additional freshwater inputs between the option location at Roadford	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			Reservoir, the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	
	Dartmoor SAC	11km east	These options are anticipated to result in the reduction of flows in the River Wolf, River Thrushel, River Lyd and River Tamar. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
R-26	Dartmoor SAC	33km southeast	This option proposes to reduce compensation flow form Upper Tamar Lake by up to 50%, which is anticipated to result in a reduced base flow downstream in the River Tamar. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Culm Grasslands SAC	3.7km southwest	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, a reduced base flow downstream on the River Tamar is not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Bristol Channel Approaches/Dynesfeydd Mor Hafren SAC	9km west	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, a reduced base flow downstream on the River Tamar is not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Tintagel-Marsland-Clovelly Coast SAC	8.5km west	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, a reduced base flow downstream on the River Tamar is not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Plymouth Sound and Estuaries SAC	43km south, 61km downstream	Whilst there is hydrological connectivity downstream of the option via the River Tamar, due to the additional freshwater inputs into the River Tamar upstream of the SAC, the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect within the SAC boundary. Upstream of the SAC, there is considered to be suitability for spawning allis shad within the River Tamar. However, there is no evidence of this as far upstream of the option, and the presence of multiple significant barriers to migration (weirs) is likely to preclude passage into the reach affected by this option.. As such, LSEs can be screened out, and no further assessment is required.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Tamar Estuaries Complex SPA	47km south, 74km downstream	Whilst there is hydrological connectivity downstream of the option via the River Tamar, due to the additional freshwater inputs into the River Tamar upstream of the SPA, the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	No LSE
R-45	South Dartmoor Woods SAC	9.1km northwest, 10.4km upstream	This option is anticipated to result in a reduction of base flow within the River Dart. There is hydrological connectivity between the option and the SAC through the WFD groundwater waterbody (Teign, Avon, Dart and Erme), and upstream on the River Dart. Although this SAC is a groundwater-dependent ecosystem, the option and the SAC are sufficiently distant that no significant effects are anticipated. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Lyme Bay and Torbay SAC	9.5km east, 19km downstream	Although there is hydrological connectivity between the option and the SAC downstream on the River Dart, the qualifying features are of marine interest, and therefore not dependent on the provision of freshwater or groundwater. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	South Hams SAC	5.1km northwest	This option is anticipated to result in a reduction of base flow within the River Dart. However, given the absence of a direct hydrological connection, it is considered that there will be no direct or indirect impacts from the option that would impact the conservation status of the qualifying habitats of the SAC. The SAC is also designated for greater horseshoe bats. However, the option lies outside of the core sustenance zone of 4km from roosts for greater horseshoe bats, as per the SAC supplementary planning guidance document (2019), and therefore no significant effects on suitable	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			supporting habitat are anticipated. Additionally, watercourses are not identified as key habitats for greater horseshoe bats. As such, LSEs can be screened out, and no further assessment is required.	
	Dartmoor SAC	13km northwest, 17km upstream	This option is anticipated to result in a reduction of base flow within the River Dart. There is hydrological connectivity between the option and the SAC through the surface water. Although outside of the SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying Atlantic salmon features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
Wimbleball				
W-03 W-22 (these options are at the same location with the same impact pathways)	Exmoor Heaths SAC	200m south	This option is anticipated to result in a reduction of base flow in the River Haddeo and River Exe due to reduced compensation flow from Wimbleball Reservoir. Whilst there is hydrological connectivity between this option and the SAC through the WFD groundwater waterbody (Central Devon and Exe - Aylesbeare Mudstone) and this SAC is a groundwater-dependent ecosystem, the option is only anticipated to impact the surface watercourse. There is no direct connectivity through the surface water and the SAC therefore no effects are anticipated. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Exmoor and Quantock Oakwoods SAC	5km west	This option is anticipated to result in a reduction of base flow in the River Haddeo and River Exe due to reduced compensation flow from Wimbleball Reservoir. Whilst there is hydrological connectivity between this option and	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			the SAC through the WFD groundwater waterbody (Central Devon and Exe - Aylesbeare Mudstone) and this SAC is a groundwater-dependent ecosystem, the option is only anticipated to impact the surface watercourse. There is no direct connectivity through the surface water and the SAC therefore no effects are anticipated on qualifying habitats. Mobile qualifying species are also considered, which includes the potential for effects on Barbastelle, Bechstein's bat and otter. None of these qualifying features are noted to be present (in large populations) within the nearest component of the SAC (Barle Valley SSSI). Although otters have a large range on watercourses, the affected reaches of the River Haddeo and River Exe are not considered to be functionally linked to the SAC for otter. Similarly, the option is outside of the consultation zone for the qualifying bat species and therefore no significant effects are anticipated. As such, LSEs can be screened out, and no further assessment is required.	
	Exe Estuary SPA	7.6km south, 10.3km downstream	This option is anticipated to result in a reduction of base flow in the River Exe downstream of the abstraction at Pynes WTW. The option and the sites are hydrologically connected downstream of this location. However, due to additional significant freshwater inputs into the River Exe upstream of the sites (from the River Creedy), the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Exe Estuary Ramsar			
W-06	Exe Estuary SPA	7.6km south, 10.3km downstream	This option is anticipated to result in a reduction of base flow in the River Exe downstream of the groundwater abstractions at Stoke Canon and Brampford Speke respectively, and it is precautionarily assumed that these effects may be applicable downstream of the abstraction at Pynes WTW. The option and the sites are hydrologically connected downstream of this location. However, due to additional significant freshwater inputs into the River Exe upstream of the sites (from the River Creedy), the strength of the	No LSE
	Exe Estuary Ramsar			

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	
W-09	Exmoor Heaths SAC	100m south	This option is anticipated to result in a reduction of base flow in the River Exe downstream of the abstraction at Exebridge. It is not anticipated that additional discharge into Wimbleball Reservoir will affect the local groundwater levels. Whilst there is hydrological connectivity between this option and the SAC through the WFD groundwater waterbody (Central Devon and Exe - Aylesbeare Mudstone) and this SAC is a groundwater-dependent ecosystem, the option is only anticipated to impact the surface watercourse. There is no direct connectivity through the surface water and the SAC therefore no effects are anticipated. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Exmoor and Quantock Oakwoods SAC	3.9km northwest	This option is anticipated to result in a reduction of base flow in the River Exe downstream of the abstraction at Exebridge. It is not anticipated that additional discharge into Wimbleball Reservoir will affect the local groundwater levels. Whilst there is hydrological connectivity between this option and the SAC through the WFD groundwater waterbody (Central Devon and Exe - Aylesbeare Mudstone) and this SAC is a groundwater-dependent ecosystem, the option is only anticipated to impact the surface watercourse. There is no direct connectivity through the surface water and the SAC therefore no effects are anticipated. Mobile qualifying species are also considered, which includes the potential for effects on Barbastelle, Bechstein's bat and otter. None of these qualifying features are noted to be present (in large populations) within the nearest component of the SAC (Barle Valley SSSI). Although otters have a large range on watercourses, the affected reaches of the River Haddeo and River Exe are not considered to be functionally linked to the SAC for	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			otter. Similarly, the option is outside of the consultation zone for the qualifying bat species and therefore no significant effects are anticipated. As such, LSEs can be screened out, and no further assessment is required.	
	Exe Estuary SPA	35km south, 48.8km downstream	This option is anticipated to result in a reduction of base flow in the River Exe downstream of the abstraction at Exebridge. The option and the sites are hydrologically connected downstream of this location. However, due to additional significant freshwater inputs into the River Exe upstream of the sites (from the Rivers Creedy, Culm and Barle), the strength of the tidal regime within the estuary, and the qualifying features' lack of dependence on freshwater provision, it is not considered that any reduction in flow will have a significant effect. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Exe Estuary Ramsar			
	Culm Grasslands SAC	8km southwest	Due to the distance between the option and this site and a lack of hydrological connectivity through the surface water, a reduced base flow downstream on the River Exe is not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
Bristol				
BR-27a BR-27b (these options are at the same location with the same impact pathways)	North Somerset and Mendip Bats SAC	3.9km south	This option is anticipated to result in a reduction of base flow within the Congresbury Yeo, and possible changes to the water levels in Blagdon Lake. Given the distance of the option from the SAC and the absence of a direct hydrological connection, it is considered that there will be no direct or indirect effect on the qualifying habitats of the SAC. The SAC is also designated for two mobile species, greater horseshoe bats and lesser horseshoe bats. However, the option lies outside of the core sustenance zone of 3km and 2km from roosts for greater horseshoe and lesser horseshoe bats, respectively. The option does not lie within consultation zones A for the SAC, as per the SAC supplementary planning	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			guidance document (2018), and therefore no significant effects on suitable habitat are anticipated. As such, LSEs can be screened out, and no further assessment is required.	
	Chew Valley Lake SPA	5.3km east	Blagdon Lake is considered to be functionally linked to the SPA due to the number of Northern shoveler which use this habitat. Changes to the water level as a result of operation would have no effect within the SPA boundary, but may alter habitat suitability, and abundance and/or distribution of prey availability which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of Northern shoveler and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Mendip Woodlands SAC	6.9km southwest	Given the distance of the option from the SAC and the absence of a direct hydrological connection, it is considered that there will be no direct or indirect impacts from the option that would impact the conservation status of the qualifying habitats of the SAC. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Mendip Limestone Grasslands SAC	8.3km southwest	Given the distance of the option from the SAC and the absence of a direct hydrological connection, it is considered that there will be no direct or indirect on the qualifying habitats of the SAC. The SAC is also designated for one mobile species, greater horseshoe bats. However, the option lies outside of the core sustenance zone of 3km from roosts for greater horseshoes bats. The option does not lie within consultation zones A or B for the SAC, as per the SAC supplementary planning guidance document (2018), and therefore no significant effects on suitable habitat are anticipated. As such, LSEs can be screened out, and no further assessment is required.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Severn Estuary SAC	13.3km west, 14.7km downstream	Depending on the seasonality of the operation, this may result in changes to the flow and water level on the downstream Congresbury Yeo during the sensitive migratory periods for qualifying fish species of the Severn Estuary SAC. Although outside of the Severn Estuary SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying migratory fish features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary SPA	13.3km west, 14.7km downstream	Blagdon Lake is considered to be functionally linked to the SPA due to the number of gadwall which use this habitat. Changes to the water level as a result of operation would have no effect within the SPA boundary, but may alter habitat suitability, and abundance and/or distribution of prey availability which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of gadwall and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary Ramsar	13.3km west, 14.7km downstream	The assessment in relation to qualifying migratory fish and overwintering birds, noted under Ramsar criteria 4 and 5 respectively, are provided within the Severn Estuary SAC and SPA summaries above. No other qualifying features of the Ramsar are anticipated to be affected. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
BR-28a	North Somerset and Mendip Bats SAC	5.6km southwest	This option is anticipated to result in a reduction of base flow within the River Chew, and possible changes to the water levels in the Chew Valley	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
BR-28b (these options are at the same location with the same impact pathways)			Lake. Given the distance of the option from the SAC and the absence of a direct hydrological connection, it is considered that there will be no direct or indirect on the qualifying habitats of the SAC. The SAC is also designated for two mobile species, greater horseshoe bats and lesser horseshoe bats. However, the option lies outside of the core sustenance zone of 3km and 2km from roosts for greater horseshoe and lesser horseshoe bats, respectively. The option does not lie within consultation zones A for the SAC, as per the SAC supplementary planning guidance document (2018), and therefore no significant effects on suitable habitat are anticipated. As such, LSEs can be screened out, and no further assessment is required.	
	Chew Valley Lake SPA	Adjacent to option	The Chew Valley Lake SPA Site Improvement Plan provides evidence that water levels can significantly impact upon the suitability of the site for qualifying Northern shoveler. This issue is affected both by annual changes in rainfall and the functioning of the reservoir. At this stage it is not known exactly how the water level within Chew Valley Lake will change as result of reducing compensation flows. If a reduction in compensation flow occurs during the sensitive non-breeding bird period (August – March inclusive for this SPA)), water levels may be higher than usual, potentially causing a reduction in suitable feeding habitat for Northern shoveler. As a dabbling duck that feed on aquatic plants and invertebrates, Northern shoveler rely on shallow areas of water to feed. Changes to suitable habitat, prey availability and abundance may result in a reduction of overall distribution of Northern shoveler through displacement for preferred foraging areas, and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary SAC	15.4km north, 42km downstream	Depending on the seasonality of the operation, this may result in changes to the flow and water level on the downstream River Chew during the sensitive migratory periods for qualifying fish species of the Severn	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			Estuary SAC. Although outside of the Severn Estuary SAC boundary, this watercourse is assumed to be functionally linked habitat which supports the qualifying migratory fish features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
	Severn Estuary SPA	15.4km north, 42km downstream	Chew Valley Lake is considered to be functionally linked to the SPA due to the number of gadwall which use this habitat. Changes to the water level as a result of operation would have no effect within the SPA boundary, but may alter habitat suitability, and abundance and/or distribution of prey availability which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of gadwall and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary Ramsar	15.4km north, 42km downstream	The assessment in relation to qualifying migratory fish and overwintering birds, noted under Ramsar criteria 4 and 5 respectively, are provided within the Severn Estuary SAC and SPA summaries above. No other qualifying features of the Ramsar are anticipated to be affected. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
BR-29	North Somerset and Mendip Bats SAC	7.0km south	This option is anticipated to result in a reduction of base flow within the River Chew, and possible changes to the water levels in the Chew Valley Lake. Given the distance of the option from the SAC and the absence of a	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			direct hydrological connection, it is considered that there will be no direct or indirect on the qualifying habitats of the SAC. The SAC is also designated for two mobile species, greater horseshoe bats and lesser horseshoe bats. However, the option lies outside of the core sustenance zone of 3km and 2km from roosts for greater horseshoe and lesser horseshoe bats, respectively. The option does not lie within consultation zones A or B for the SAC, as per the SAC supplementary planning guidance document (2018), and therefore no significant effects on suitable habitat are anticipated. As such, LSEs can be screened out, and no further assessment is required.	
	Avon Gorge Woodlands SAC	9.4km north	Given the distance of the option from the SAC and the absence of a direct hydrological connection, it is considered that there will be no direct or indirect impacts from the option that would impact the conservation status of the qualifying habitats of the SAC. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Chew Valley Lake SPA	1.6km south	The Chew Magna Reservoir is precautionarily considered to be functionally linked to the SPA due to habitat suitability within close proximity to the SPA boundary. Changes to the water level as a result of operation would have no effect within the SPA boundary, but may alter habitat suitability, and abundance and/or distribution of prey availability which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of Northern shoveler and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary SAC	18.8km west, 35.5km downstream	Depending on the seasonality of the reduced compensation flow releases from Chew Manga Reservoir, this may result in changes to the flow and water level on the downstream Winford Brook and River Chew during the sensitive migratory periods for qualifying features of the Habitats Site.	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			Changes to flow and water level may result in a loss of and degradation to suitable habitat which supports qualifying fish species of the SAC. Therefore, and changes to water levels and flow may result in reduced habitat suitability, and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn.	
	Severn Estuary SPA	18.8km west, 35.5km downstream	The Chew Magna Reservoir is precautionarily considered to be functionally linked to the SPA due to habitat suitability within close proximity to other functionally linked habitat such as Blagdon lake and the Chew Valley Lake. Changes to the water level as a result of operation would have no effect within the SPA boundary, but may alter habitat suitability, and abundance and/or distribution of prey availability which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of qualifying features and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary Ramsar	18.8km west, 35.5km downstream	The assessment in relation to qualifying migratory fish and overwintering birds, noted under Ramsar criteria 4 and 5 respectively, are provided within the Severn Estuary SAC and SPA summaries above. No other qualifying features of the Ramsar are anticipated to be affected. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
BR-30	North Somerset and Mendip Bats SAC	Adjacent to option	This option is anticipated to result in a reduction of base flow within the Cheddar Yeo and downstream River Axe, and possible changes to the water levels in the Cheddar Ponds. Although there is no direct hydrological connection between the option and the SAC, the option lies within consultation zones A and B for the SAC, as per the SAC supplementary planning guidance document (2018). The affected waterbody and watercourses could constitute functionally linked habitat used by the qualifying horseshoe bat features. Any impacts on this watercourse, given their location within consultation zone A, are precautionarily considered to	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			have the potential to impact foraging and commuting habitats for the qualifying features. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
	Somerset Levels and Moors SPA	8.2km south	The Cheddar Ponds are not considered to be functionally linked habitat used by qualifying features of the SPA and therefore changes to water levels are not anticipated to have any effect. However, the potential for reduced downstream flows on the Cheddar Yeo and River Axe are precautionarily considered to potentially have an effect on suitable floodplain habitats which could be used by qualifying features during the sensitive overwintering period. This may result in changes to habitat suitability and prey availability and/or abundance (for wading birds specifically) which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of qualifying features and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Somerset Levels and Moors Ramsar	8.2km south	The assessment in relation to overwintering birds, noted under Ramsar criteria 5 and 6 respectively, are provided within the Somerset Levels and Moors SPA summary above. The invertebrate and vascular plant species of interest listed under Ramsar criterion 2 are not anticipated to be affected due to the distance between the option and the Ramsar; no effects within the site boundary are anticipated. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Mendip Limestone Grasslands SAC	3.7km northwest	Although there is no direct hydrological connection between the option and the SAC, the option lies within consultation zones A and B for the SAC, as per the SAC supplementary planning guidance document (2018). The affected waterbody and watercourses could constitute functionally linked habitat used by the qualifying horseshoe bat features. Any impacts on this watercourse, given their location within consultation zone A, are	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			precautionarily considered to have the potential to impact foraging and commuting habitats for the qualifying features. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
	Mendip Woodlands SAC	1.8km northwest	Given the distance of the option from the SAC and the absence of a direct hydrological connection, it is considered that there will be no direct or indirect impacts from the option that would impact the conservation status of the qualifying habitats of the SAC. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Severn Estuary SAC	15.7km west, 19km downstream	Depending on the seasonality of the operation, this may result in changes to the flow and water level on the downstream Cheddar Yeo and River Axe during the sensitive migratory periods for qualifying fish species of the Severn Estuary SAC. Although outside of the Severn Estuary SAC boundary, these watercourses are assumed to be functionally linked habitat which supports the qualifying migratory fish features and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, degradation of spawning sites and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn. Reductions in flow can lead to reduced dilution of contaminants in water which can have direct effects on fish health, increased injury and mortality rates. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary SPA	15.7km west, 19km downstream	The Cheddar Ponds are not considered to be functionally linked habitat used by qualifying features of the SPA and therefore changes to water levels are not anticipated to have any effect. However, the potential for reduced downstream flows on the Cheddar Yeo and River Axe are precautionarily considered to potentially have an effect on suitable floodplain habitats which could be used by qualifying features during the sensitive overwintering period. This may result in changes to habitat suitability and prey availability and/or abundance (for wading birds	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			specifically) which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of gadwall and could jeopardise overwinter survival depending on the timing and duration of operation. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
	Severn Estuary Ramsar	15.7km west, 19km downstream	The assessment in relation to qualifying migratory fish and overwintering birds, noted under Ramsar criteria 4 and 5 respectively, are provided within the Severn Estuary SAC and SPA summaries above. No other qualifying features of the Ramsar are anticipated to be affected. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
BR-31a BR-31b BR-47 (these options are at the same location with the same impact pathways)	North Somerset & Mendip Bats SAC	2.5km northeast	This option is anticipated to result in a reduction of base flow within the River Axe, and possible changes to the water levels in the Cheddar Reservoir. Although there is no direct hydrological connection between the option and the SAC, the option lies within consultation zones A and B for the SAC, as per the SAC supplementary planning guidance document (2018). The affected waterbody and watercourses could constitute functionally linked habitat used by the qualifying horseshoe bat features. Any impacts on this watercourse, given their location within consultation zone A, are precautionarily considered to have the potential to impact foraging and commuting habitats for the qualifying features. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Mendip Limestone Grasslands SAC	1.8km northwest	This option is anticipated to result in a reduction of base flow within the River Axe, and possible changes to the water levels in the Cheddar Reservoir. Although there is no direct hydrological connection between the option and the SAC, the option lies within consultation zones A and B for the SAC, as per the SAC supplementary planning guidance document (2018). The affected waterbody and watercourses could constitute functionally linked habitat used by the qualifying horseshoe bat features. Any impacts on this watercourse, given their location within consultation	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			zone A, are precautionarily considered to have the potential to impact foraging and commuting habitats for the qualifying features. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	
	Mendip Woodlands SAC	1.6km north	Given the distance of the option from the SAC and the absence of a direct hydrological connection, it is considered that there will be no direct or indirect impacts from the option that would impact the conservation status of the qualifying habitats of the SAC. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Somerset Levels & Moors SPA	7.5km south	The Cheddar Reservoir is precautionarily considered to be functionally linked to the SPA due to habitat suitability. Changes to the water level as a result of operation would have no effect within the SPA boundary, but may alter habitat suitability which supports the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of qualifying features and could jeopardise overwinter survival depending on the timing and duration of operation. Similarly, the potential for reduced downstream flows on the River Axe are precautionarily considered to potentially have an effect on suitable floodplain habitats which could be used by qualifying features outside of the SPA boundary. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Somerset Levels and Moors Ramsar	7.5km south	The assessment in relation to overwintering birds, noted under Ramsar criteria 5 and 6 respectively, are provided within the Somerset Levels and Moors SPA summary above. The invertebrate and vascular plant species of interest listed under Ramsar criterion 2 are not anticipated to be affected due to the distance between the option and the Ramsar; no effects within the site boundary are anticipated. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Severn Estuary SAC	13.2km west, 13.8km downstream	Extending the pump storage season for River Axe at Brinscombe to Cheddar Reservoir from Nov-Apr to include October may result in changes to the flow and water level on the downstream in the River Axe, from the point of abstraction. Although outside of the SAC boundary, this watercourse may constitute functionally linked habitat which supports the qualifying fish species of the SAC, and the completion of their lifecycles. Changes to water levels may result in reduced habitat suitability, and abundance and/or distribution of prey items which support populations of qualifying fish species which traverse the river to spawn.	Potential for significant effects
	Severn Estuary SPA	13.2km west, 13.8km downstream	The Cheddar Reservoir is precautionarily considered to be functionally linked to the SPA due to habitat suitability within close proximity to other inland functionally linked habitat such as Blagdon lake and the Chew Valley Lake. Changes to the water level as a result of operation would have no effect within the SPA boundary, but may alter habitat suitability, and abundance and/or distribution of prey availability which support the qualifying species within functionally linked habitat. These changes may result in a reduction of overall distribution of qualifying features and could jeopardise overwinter survival depending on the timing and duration of operation. Similarly, the potential for reduced downstream flows on the River Axe are precautionarily considered to potentially have an effect on suitable floodplain habitats which could be used by qualifying features outside of the SPA boundary. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Severn Estuary Ramsar	13.2km west, 13.8km downstream	The assessment in relation to qualifying migratory fish and overwintering birds, noted under Ramsar criteria 4 and 5 respectively, are provided within the Severn Estuary SAC and SPA summaries above. No other qualifying features of the Ramsar are anticipated to be affected. LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
Bournemouth				
BN-04 BN-12 (these options are at the same location with the same impact pathways)	Dorset Heaths SAC	1.1km south	Both options result in additional abstraction from the River Stour at Longham. Whilst there is hydrological connectivity between this option and the Habitats Sites, through the WFD groundwater waterbody ID GB40802G805800 (Lower Dorset Stour and Lower Hampshire Avon), the option is only anticipated to impact the surface watercourse. There is no connectivity through the surface water and therefore no impact pathway exists during operation. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Dorset Heathlands Ramsar			
	Dorset Heathlands SPA	2.2km west		
	Solent and Dorset Coast SPA	7.1km southeast, 15.5km downstream	No direct effects are anticipated on the qualifying features of the SPA due to the distance between the option and the site. However, there is hydrological connectivity through the surface water and the potential for indirect effects as a result of increased abstraction and associated changes in flows downstream on the River Stour. It is possible that this influences prey availability resulting from habitat changes, which could also exacerbate downstream chemical changes from treatment works' discharges and additional abstractions, resulting in increased fish mortality due to reduced contaminant dilution. This could ultimately result in the displacement of qualifying features from preferred foraging areas, jeopardising survival rates and reproductive success. As such, LSEs cannot currently be screened out and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	River Avon SAC	7.7km east, 17km downstream	No effects are anticipated within the SAC boundary, and therefore qualifying features which exist within are unlikely to be affected. However, there is evidence of some genetic interchange between Atlantic salmon populations using the River Avon (Hampshire) and Dorset rivers including the River Stour. Therefore, the River Stour, and upstream tributaries of, are considered to be functionally linked to the SAC and provide suitable migratory routes upstream of Christchurch Harbour to spawning grounds. The increased abstraction may result in changes to these migration routes and jeopardise the completion of a critical life stage of both adult upstream	Potential for significant effects

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			migration and juvenile downstream migration, depending on the timing of operation. Furthermore, these habitat changes could exacerbate downstream chemical changes from treatment works' discharges and additional abstractions, resulting in increased fish mortality and displacement from functionally linked habitats due to reduced contaminant dilution. As such, LSEs cannot currently be screened out on Atlantic salmon and progression to Stage 2 Appropriate Assessment is recommended.	
	Avon Valley SPA	7.3km east, 17km downstream	Additional abstraction will be permitted from the River Stour at Longham. Whilst there is hydrological connectivity between this option and the Habitats Sites, through the WFD groundwater waterbody ID GB40802G805800 (Lower Dorset Stour and Lower Hampshire Avon), the option is only anticipated to impact the surface watercourse. There is also hydrological connectivity to the SPA upstream of Christchurch Harbour (WFD coastal and transitional waterbody ID GB520804315900 (Christchurch Harbour)), but no effects are anticipated, as per the conclusions of the WFD Level 1 assessment. The wetland habitats, as both qualifying features and supporting other qualifying species, both within and outside of the sites' boundaries, are not anticipated to be affected during operation due to their location upstream of the confluence where there is hydrological connectivity. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Avon Valley Ramsar			
	Poole Harbour SPA	7.4km south	Due to the distance between the option and these sites (approximately 7.5km southwest) and a lack of hydrological connectivity, changes in surface water abstraction from the River Stour are not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Poole Harbour Ramsar			
BN-05	Dorset Heaths SAC	6.2km east	Due to the distance between the option and these sites (approximately 6.2km east) and a lack of hydrological connectivity, changes in	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
	Dorset Heathlands Ramsar Dorset Heathlands SPA		groundwater abstraction and any effects on base flow of the River Allen, and downstream River Stour, are not anticipated to have any effect on the Habitats Sites. As such, LSEs can be screened out, and no further assessment is required.	
	River Avon SAC	12.8km downstream, 39km downstream	No effects are anticipated within the SAC boundary, and therefore qualifying features which exist within are unlikely to be affected. However, there is evidence of some genetic interchange between Atlantic salmon populations using the River Avon (Hampshire) and Dorset rivers including the River Stour. Therefore, the River Stour, and upstream tributaries of, are considered to be functionally linked to the SAC and provide suitable migratory routes upstream of Christchurch Harbour to spawning grounds. The increased groundwater abstraction may result in changes to the base flow of the River Allen and to these migration routes, jeopardising the completion of a critical life stage of both adult upstream migration and juvenile downstream migration, depending on the timing of operation. Furthermore, these habitat changes could exacerbate downstream chemical changes from treatment works' discharges and additional abstractions, resulting in increased fish mortality and displacement from functionally linked habitats due to reduced contaminant dilution. The reduced dilution potential from this option is not anticipated to have an effect downstream of the confluence between the River Allen and River Stour, due to the additional flow input beyond this location. As such, LSEs cannot currently be screened out on Atlantic salmon and progression to Stage 2 Appropriate Assessment is recommended.	Potential for significant effects
	Avon Valley SPA Avon Valley Ramsar	12.5km east, 39km downstream	There is no hydrological connectivity between the option and these sites through the groundwater. It is, however, anticipated that the operation of this option will affect the base flow of the River Allen, which is connected through the surface water approximately 39km downstream, via the River Stour and Christchurch Harbour. The wetland habitats, as both qualifying features and supporting other qualifying species, both within and outside of the sites' boundaries, are not anticipated to be affected during operation	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			due to their location upstream of the confluence where there is hydrological connectivity. As such, LSEs can be screened out, and no further assessment is required.	
	Solent and Dorset Coast SPA	19.5km southeast, 37.5km downstream	No direct effects are anticipated on the qualifying features of the SPA due to the distance between the option and the site. There is hydrological connectivity through the surface water and a pathway for indirect effects as a result of reduced downstream flows on the River Allen and potentially River Stour. However, due to the distance downstream, and the additional flow input of the River Stour and Moors River between the option location and the SPA, any change in base flow of the River Allen is not anticipated to have an appreciable effect on the Habitats Site. As such, LSEs can be screened out, and no further assessment is required.	No LSE alone, but potential for in-combination effects
Isles of Scilly				
IS-18	Isles of Scilly Complex SAC	0.2km west	This option will result in additional groundwater abstractions and is anticipated to have localised effects on the groundwater catchment. Shore dock is considered to be dependent on water table levels but is assumed to be absent from St. Martins and therefore no impact pathway exists. None of the other qualifying features of the SAC are groundwater-dependent, and the marine environment is not anticipated to be affected by the option. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Isles of Scilly SPA	0.1km west	The qualifying features are not dependent on groundwater levels for foraging or nesting habitat, and therefore are unlikely to be affected by any water table changes as a result of the option. As such, LSEs can be screened out, and no further assessment is required.	No LSE
	Isles of Scilly Ramsar	0.5km west	The extent of the Ramsar designation does not include any areas on St. Martins, and therefore there is no impact pathway present.	No LSE

Option Title	Habitats Site	Distance from option (approximate, closest component)	Screening assessment summary	Screening conclusion
			As such, LSEs can be screened out, and no further assessment is required.	