

West of England Combined Authority

Habitats Regulations Assessment Scoping Report

West of England
Spatial Development Strategy
May 2021



Spatial Development Strategy Evidence summary sheet

Document name

Habitats Regulations Assessment (HRA) Scoping Report

Why is this document required?

Habitat Regulations Assessments (HRA) are required by law. This requirement is set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The assessment explores the impact of plans and projects on international sites. There are three classifications of international sites, these are:

- Special Areas of Conservation (SAC)
- Special Protection Areas (SPA)
- Wetlands of International Importance (known as RAMSAR sites).

Any plan or project with the potential to impact these sites must undergo an HRA. They can only be permitted if no negative impacts (known as 'adverse effects') on the integrity of international site(s) can be demonstrated. The HRA for the Spatial Development Strategy (SDS) will be a key evidence base document.

The HRA scoping report sets out the approach to the HRA for the SDS, prior to the HRA being undertaken.

What is the purpose of the document?

The HRA scoping report sets out:

- The HRA methodology
- The international sites that will be included in the HRA
- The conservation objectives and relevant threats and pressures affecting those sites
- The types of impacts (e.g. due to increased recreation in vulnerable areas) that will be covered in the HRA
- The sources of evidence that will be considered in the HRA
- The list of other plans and projects that will be considered in the HRA.

How will it be used?

The scoping report is the first stage of undertaking HRA and informs the further assessments by setting out the overall approach and the likely sites that will be impacted.

The HRA will be carried out with reference to the general European Court guidance and Natural England guidance. The HRA is iterative throughout the plan making process and includes a series of assessment stages. These are broadly defined as:

- The Scoping Stages
- The Screening Assessment of Likely Significant Effects
- The Appropriate Assessment Stage

Once the HRA has been completed, this will be published for consultation alongside the Spatial Development Strategy draft plan.

Who was this document produced by?

This document has been commissioned by the West of England Combined Authority and has been prepared by AECOM Limited.

Engagement and consultation

This scoping report has been informed by an engagement workshop that took place on the 25th November 2020 with relevant stakeholders including the local authorities within the Combined Authority area (Bath and North East Somerset Council, Bristol City Council and South Gloucestershire Council), North Somerset Council, Natural England, the Environment Agency, The Bristol Avon Catchment Partnership, West of England Nature Partnership, and Avon Wildlife Trust.

As the HRA progresses engagement with key stakeholders will continue.

West of England Combined Authority

Habitats Regulations Assessment Scoping Report

May 2021

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1. Introduction

- 1.1 The West of England Combined Authority (WECA) incorporates the unitary authority (UA) areas of Bristol City Council (BCC), South Gloucestershire Council (SGC) and Bath and North East Somerset Council (B&NES); and WECA is cognisant of planning issues in the neighbouring authority of North Somerset Council (NSC).
- 1.2 WECA is a regional body, led by an elected Mayor. It is a statutory requirement for the WECA Mayor to deliver a SDS to ensure that growth and infrastructure is planned strategically across the region.
- 1.3 WECA is in the process of producing a new Spatial Development Strategy (SDS). AECOM has been appointed to undertake the report to inform the Habitats Regulations Assessment (HRA) of the SDS.
- 1.4 The SDS will be a planning document. Its production is led by the West of England Mayor and WECA working in partnership with the unitary authorities (UAs) of Bristol City Council (BCC), Bath & North East Somerset (B&NES) Council and South Gloucestershire Council (SGC). The SDS will be developed and agreed by all the WECA local authorities. When it is adopted, it will help set the context for the local authorities' Local Plans, which are being prepared alongside the SDS. This means the SDS and its strategic policies will form part of the 'Development Plan' (alongside the Local Plan and any Neighbourhood Plans in place within B&NES, BCC and SGC, respectively). The Development Plan contains policies and proposals to guide the use of land in the area and is used in assessing planning applications. It has been determined that the WECA SDS should establish a high-level strategic planning strategy for the region to make sure future development provides the right kind of jobs, homes and transport links in the optimum and most sustainable locations, so that everyone in the region can share in the region's success.
- 1.5 The SDS will be shaped by the overarching objective of delivering 'clean and inclusive recovery and growth' and is therefore likely to respond, within its scope, to climate and ecological emergencies; housing needs including affordability; employment related needs; sustainable travel; place and environmental quality; and inequalities. Within this context, it is envisaged that the SDS will include a spatial strategy, establishing principles and parameters for a number of broad locations where development of certain types should be directed towards, with the detail of specific sites and amount of development left as a matter to be developed at the UA level through the Local Plan preparation process.
- 1.6 The SDS will also include thematic policies flowing from the overarching objectives. These policies will establish the high-level principles of the strategic planning policy response to key issues facing the region – these principles should then inform the preparation of more detailed policies by UAs within their Local Plans. This approach aims to allow WECA to use the SDS as a means to safeguard the region against vulnerability to speculative, piecemeal development that often does not maximise the potential benefit of growth for communities in the region. It will aim to promote development at the most sustainable locations

and seek to maximise opportunities to secure and capitalise on the infrastructure needed for clean and inclusive growth.

- 1.7 It is also recognised that the way people are working, travelling and using their leisure time has changed significantly due to Coronavirus. The SDS offers an opportunity to take a fresh look at the needs of people in the region to plan for cleaner greener recovery, ensuring new development is resilient and contributes towards reducing carbon emissions.
- 1.8 The SDS will cover a period of 20 years from adoption (anticipated 2022) and will apply to the administrative boundary of WECA.
- 1.9 To inform the HRA, this scoping report is being prepared. Its purpose is to set out:
- The HRA methodology;
 - The European sites that will be covered in the HRA and their conservation objectives and relevant threats and pressures (as per the Natural England Site Improvement Plans¹ for each European site and any additional supporting documents such as Supplementary Advice on Conserving and Restoring Site Features);
 - The impact pathways that will be covered in the HRA;
 - Key evidence sources; and
 - The list of other plans and projects that will be covered in the HRA.
- 1.10 This scoping report has been further informed by a scoping workshop that took place on the 25th November 2020 with relevant stakeholders including the local authorities within WECA (Bath and North East Somerset Council, Bristol City Council and South Gloucestershire Council), North Somerset Council, Natural England, the Environment Agency, The Bristol Avon Catchment Partnership, West of England Nature Partnership, and Avon Wildlife Trust.

¹ It is noted that the Site Improvement Plans are all over 5 years old so may not be up to date – however more recently updated conservation objectives and supplementary advice are available at gov.uk for all many designated sites,

2. HRA Methodology

Legislative Context

- 2.1 The need for an Appropriate Assessment (**Figure 1**) is set out in the Conservation of Habitats and Species Regulations 2017 (as amended). From 1 January 2021, the UK is no longer a member of the European Union. However, Habitats Regulations Assessment will continue, as set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019².
- 2.2 The HRA process applies the 'Precautionary Principle'³ when undertaking assessment of international sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the international site(s) in question. Plans and projects with predicted adverse impacts on international sites may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.
- 2.3 In order to ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the plan or project in question:

Figure 1: The legislative basis for Appropriate Assessment

Conservation of Habitats and Species Regulations (Amended)(EU Exit) 2017

The Regulations state that:

"A competent authority, before deciding to ... give any consent for a plan or project which is likely to have a significant effect on a European site ... shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives... The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site".

- 2.4 Over time the phrase 'Habitats Regulations Assessment' (HRA) has come into wide currency to describe the overall process set out in the Habitats Directive from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'.
- 2.5 In spring 2018 the 'Sweetman' European Court of Justice ruling⁴ clarified that 'mitigation' (i.e. measures that are specifically introduced to avoid or reduce a harmful effect on an international site that would otherwise arise) should **not** be taken into account when forming a view on likely significant effects. Mitigation should instead only be considered at the Appropriate Assessment stage. This HRA will be cognisant of that ruling.

² these don't replace the 2017 Regulations but are just another set of amendments

³ The Precautionary Principle, which is referenced in Article 191 of the Treaty on the Functioning of the European Union, has been defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as: *"When human activities may lead to morally unacceptable harm [to the environment] that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis"*.

⁴ People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

Introduction

- 2.6 The HRA will be carried out with reference to the general EC guidance on HRA⁵; Natural England has produced its own internal guidance⁶ and the Habitats Regulations Assessment Handbook⁷. These will be referred to in undertaking this HRA.
- 2.7 Figure 2 below outlines the stages of HRA according to current EC guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the plan until no significant adverse effects remain.



Figure 2. Four Stage Approach to Habitats Regulations Assessment. Source EC, 2001¹.

⁵ European Commission (2001): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.

⁶ http://www.ukmpas.org/pdf/practical_guidance/HRGN1.pdf

⁷ Available at: <https://www.dtapublications.co.uk/handbook> [accessed 28/04/2021]

Description of HRA Tasks

HRA Task 1 – Likely Significant Effects (LSE)

2.8 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Likely Significant Effect (LSE) test - essentially a risk assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

"Is the project, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?"

2.9 The objective is to 'screen out' those plans and projects that can, without any detailed appraisal, be concluded to be unlikely to result in significant adverse effects upon international sites, usually because there is no mechanism for an adverse interaction.

2.10 In the Waddenzee case⁸, the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive, including that:

- An effect should be considered 'likely', "*if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site*" (para 44);
- An effect should be considered 'significant', "*if it undermines the conservation objectives*" (para 48); and
- Where a plan or project has an effect on a site "*but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned*" (para 47).

2.11 The likely significant effect test consists of two parts: firstly, determining whether there are any policies that could result in negative impact pathways and secondly determining whether there are any international sites that might be affected.

2.12 This scoping report identifies international designated sites that could be affected by the SDS and also those impact pathways that are most likely to require consideration in the Likely Significant Effects Test within the HRA report.

2.13 Note that as a result of 2018 case law, the conclusion of 'no likely significant effect' must not take account of any measures specifically introduced to avoid or reduce harm to European sites (consideration of such measures must be deferred to the appropriate assessment), although embedded measures (i.e. those that are integral to the plan itself) can be considered at this stage.

2.14 It is important to note that the HRA screening exercise must generally follow the precautionary principles as its main purpose is to determine whether the subsequent stage of 'appropriate assessment' (i.e. a more detailed investigation) is required.

⁸ Case C-127/02

HRA Task 2 – Appropriate Assessment (AA)

- 2.15 Where it is determined that a conclusion of ‘no Likely Significant Effect’ cannot be drawn, the analysis will proceed to the next stage of HRA known as Appropriate Assessment. Case law has clarified that ‘Appropriate Assessment’ is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to appropriate assessment rather than determination of likely significant effects. Appropriate Assessment refers to whatever level of assessment is appropriate to form a conclusion regarding effects on the integrity (coherence of structure and function) of international sites in light of their conservation objectives.
- 2.16 By virtue of the fact that it follows the Likely Significant Effects Test process, there is a clear implication that the analysis will be more detailed than undertaken at the previous stage. One of the key considerations during Appropriate Assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the Appropriate Assessment would take any policies or allocations that could not be dismissed following the high-level Likely Significant Effects Test analysis and assess the potential for an effect in more detail, with a view to concluding whether there would actually be an adverse effect on site integrity (in other words, disruption of the coherent structure and function of the international site(s)).
- 2.17 Also, in 2018 the Holohan ruling⁹ was handed down by the European Court of Justice. Among other provisions paragraph 39 of the ruling states that ‘*As regards other habitat types or species, which are present on the site, but for which that site has not been listed, and with respect to habitat types and species located outside that site, ... typical habitats or species must be included in the appropriate assessment, if they are necessary to the conservation of the habitat types and species listed for the protected area*’ [emphasis added].
- 2.18 Where necessary, measures will be recommended for incorporation into the Plan in order to avoid or mitigate adverse effects on international sites. There is considerable precedent concerning the level of detail that a Plan document needs to contain regarding mitigation for recreational impacts on international sites. The implication of this precedent is that it is not necessary for all measures that will be deployed to be fully developed prior to adoption of the Plan, but the Plan must provide an adequate policy framework within which these measures can be delivered. Sufficient detail needs to be provided to enable the determination that mitigation is likely to be achievable, to set the parameters for what that mitigation is likely to involve, and to provide safeguards that development will not come forward if this cannot be implemented.
- 2.19 In evaluating significance, AECOM will rely on professional judgement as well as the results of bespoke studies, supported by appropriate evidence/ data, and previous stakeholder consultation regarding development impacts on the international sites considered within this assessment.
- 2.20 When discussing ‘mitigation’ for a Plan document, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the details of the mitigation measures themselves since the Plan document is a high-level policy document.

⁹ Case C-461/17

Mitigation

- 2.21 Once the appropriate assessment has been completed there may be a requirement for mitigation. If required, this is most likely to consist of amendments to policy wording to ensure an adequate framework exists to protect European sites from any identified adverse effects.
- 2.22 Consideration will also be given to the role of the Environment Bill, new legislative requirements including Biodiversity Net Gain and Local Nature Recovery Strategies, and the wider West of England Joint Green Infrastructure Strategy as these could potentially perform double-duty as mitigation solutions for loss of functionally-linked land for the bat SACs and for recreational pressure on Severn Estuary SAC/SPA/Ramsar by increasing the amount of available recreational greenspace.
- 2.23 During the scoping workshop on the 25th November 2020, there was a consensus that, since both recreational pressure and loss of functionally linked land for the sensitive bat sites are going to be issues requiring mitigation, there would be value in building a strong network of new greenspaces, large parks and accessible Green Infrastructure corridors into the SDS from the start, located appropriately to draw new residents away from sensitive international sites and to deliver other benefits. This would probably be in addition to working with landowners and managers of internationally designated sites to address the direct effects of increased recreational pressure within the designated site themselves. For other European sites at which recreational pressure is a concern this latter is often done through creating a Strategic Access Management & Monitoring (SAMM) Strategy, although landowner involvement is essential.
- 2.24 A challenge with HRA of any Spatial Development Strategy is that, intentionally, the SDS is broad in terms of quantum and location of growth across the area it covers. For example, precise and full determination of the impacts and significant effects of a new settlement will require extensive details concerning the design of the new housing sites, including layout of greenspace and type of development to be delivered in particular locations, yet these data will not be decided until subsequent stages. This information will not be available at SDS level but only developed for lower tier Local Plans.
- 2.25 The draft Ministry of Housing, Communities and Local Government (MHCLG) guidance¹⁰ makes it clear that when implementing HRA of land-use plans, the Appropriate Assessment (AA) should be undertaken at a level of detail that is 'appropriate' and proportional to the level of detail provided within the plan itself:
- *"The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project."*
 - More recently, the Court of Appeal¹¹ ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be 'achieved in practice' to satisfy that the proposed development would have

¹⁰ Available at: **Error! Hyperlink reference not valid.** [accessed 09/04/2021]

¹¹ No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015

no adverse effect, then this would suffice. This ruling has since been applied to a planning permission (rather than a Local Plan)¹². In this case the High Court ruled that for *'a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of Regulation 102 of the Habitats Regulations'*.

2.26 In other words, there is a tacit acceptance that AA can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers.

2.27 Similarly, in any SDS, there are numerous policies for which there is a limit to the degree of assessment that is possible at this plan level. This is because either:

- The policy in question does not contain any specifics as to what will be delivered so literally cannot be assessed in detail at the plan level. In these cases, the appropriate assessment would focus on precautionary mitigation that can be included in the plan to ensure that whatever proposals come forward will not result in adverse effects on integrity; or
- The nature of the potential impacts (notably lighting, noise and visual disturbance during construction, or loss of functionally-linked land) are very closely related to exactly how the development will be designed and constructed, or detailed development site-specific bird survey data, and therefore cannot be assessed in detail at the plan level. In these instances, the appropriate assessment focusses on the available mitigation measures, the extent to which such measures would be achievable and effective and whether an adequate protective framework exists to ensure that the policy would not lead to an adverse effect on the integrity of any internationally designated sites.

2.28 On these occasions the advice of Advocate-General Kokott¹³ is worth considering. She commented that: *'It would ...hardly be proper to require a greater level of detail in preceding plans [rather than planning applications] or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure'* [emphasis added]. This is the approach taken in the HRA and is in line with the Department of Communities and Local Government guidance and Court rulings that the level of detail of the assessment.

2.29 Therefore, when discussing the likelihood of significant effects or adverse effects on integrity for a high-level strategic plan such as the WECA SDS, which contains no site allocations and often only a broad indication of growth quantum across

¹² High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

¹³ Opinion of Advocate General Kokott, 9th June 2005, Case C-6/04. Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland, paragraph 49. Available at: <http://curia.europa.eu/juris/document/document.jsf?docid=58359&doclang=EN>

the West of England or per authority, one is concerned primarily with establishing an overarching policy framework that will enable and require:

- Any further investigations required at the Local Plan level and how those investigations should proceed (for example, detailing any specific further assessment that is required for all housing development within a certain distance of a specific European site, along with examples of mitigation that may be needed for such development);
- Constraints that must be taken into account by local authorities in selecting site allocations;
- Any strategic multi-authority mitigation strategies that may be required, to ensure a consistent multi-authority approach;
- Any strategic multi-authority modelling (e.g. for air quality) or surveys (e.g. for recreational pressure) that may be required, to ensure a consistent multi-authority approach;
- Prevent development that would adversely affect the integrity of European sites from coming forward until adequate mitigation (if needed) was devised; and
- The delivery of mitigation rather than the details of the mitigation measures themselves which would be devised for the Local Plans.

2.30 It is that policy framework that will enable the HRA of the SDS to conclude that the plan will not result in adverse effects on European sites because of safeguards built into the delivery mechanism.

2.31 One way to establish this framework and enable consistency of approach across the WECA authorities in developing their Local Plans would be to prepare for the WECA SDS HRA a series of HRA issue/ risk maps covering bat consultation zones, recreational core catchments and noise/visual disturbance impact zones.

Assessment ‘in combination’

2.32 It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the international site(s) in question. In practice, ‘in combination assessment’ is of greatest importance when the policy would otherwise be screened out because the individual contribution is inconsequential. It is neither practical nor necessary to assess the ‘in combination’ effects of the policy within the context of all other plans and projects within the region. It is important to avoid double-counting since projects that deliver housing and employment in the West of England are part of the individual Local Plans. In these instances, the development of a planning application essentially provides further detail on those aspects of Local Plan growth rather than presenting a new project.

2.33 Similarly, where housing and employment is being delivered in surrounding authorities this is captured in the ‘in combination’ assessment through consideration of the relevant Local Plan that sets out the total amount of housing and employment growth that will be delivered across that authority during its plan period.

2.34 Projects and Plans that require consideration are identified in **Chapter 5** of this scoping report.

Geographical Scope of the HRA

2.35 There are no standard criteria for determining the ultimate physical scope of an HRA. Rather, the source-pathway-receptor model should be used (i.e. the presence of a potentially realistic linking impact pathway between an effect and the receptor of the internationally designated site) to determine whether there is any potential pathway connecting development to any international sites.

3. Internationally Designated Sites

- 3.1 In the case of the West of England Combined Authority, it was determined that for the initial coarse screen international sites identified in **Table 1** required consideration.
- 3.2 The locations of the below internationally designated sites are illustrated in **Appendix A, Figure A1**.

Table 1 International Designated Sites for Consideration and their Location in Relation to the West of England Combined Authority Boundary

Internationally Designated Site	Location
Severn Estuary SPA	Located within the WECA boundary (South Gloucestershire and the City of Bristol).
Severn Estuary Ramsar site	
Severn Estuary SAC	
Chew Valley Lake SPA	Located within the WECA boundary (Bath and North East Somerset)
Bath & Bradford on Avon Bat Sites SAC	Located within the WECA boundary (Bath and North East Somerset) Partially located within Wiltshire.
North Somerset & Mendip Bats SAC	Partially located within the WECA boundary (Compton Martin Ochre Mine SSSI). Located within Bath and North East Somerset.
Avon Gorge Woodlands SAC	Located within the WECA boundary (Bristol City Council). Partially located within North Somerset.
River Wye / Afon Gwy SAC	Located c.2.5km from the WECA boundary. Located within the Forest of Dean District and Monmouthshire.
Mells Valley SAC	Located c.5km from the WECA boundary (St Dunstan's Well Catchment SSSI). Located within Mendip District.
Wye Valley Woodlands SAC.	Located c.5.5km from the WECA boundary. Located within the Forest of Dean District and Monmouthshire.
Wye Valley & Forest of Dean Bat Sites SAC; and	Located c.6km from the WECA boundary. Located within the Forest of Dean District.
Mendip Limestone Grasslands SAC	Located c.9km from the WECA boundary. Located within Sedgemoor District.
Somerset Levels and Moors SPA and Ramsar;	Located c.13km from the WECA boundary. Located within Sedgemoor District, Mendip District, South Somerset, and Taunton Deane.
Rodborough Common SAC	Located c.14.5km from the WECA boundary. Located within Stroud District.
River Usk / Afon Wysg SAC	Located c.18.5km from the WECA boundary. Located within Monmouthshire.
North Meadow and Clattinger Farm SAC	Located c.20km from the WECA boundary.

Located within Wiltshire County

3.3 The reason for designation, conservation objectives and environmental vulnerabilities of the internationally designated sites are detailed below.

Avon Gorge Woodlands SAC

Reason for Designation¹⁴

3.4 The site is designated as an SAC for its:

3.5 Annex 1 habitat:

- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*); Dry grasslands and scrublands on chalk or limestone
- *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes

Conservation Objectives¹⁵

3.6 *“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;*

3.7 *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”*

Environmental Vulnerabilities

3.8 The Site improvement Plan¹⁶ identifies the following pressures and threats to the SAC:

- Invasive species
- Undergrazing
- Recreational pressures: including disturbance, soil compaction/loss, digging and creating mountain bike jumps, dog fouling/eutrophication, gathering mushrooms, holly etc.
- Air pollution: impact of atmospheric nitrogen deposition

¹⁴ <http://publications.naturalengland.org.uk/file/5623975455490048> [accessed 21/01/2021]

¹⁵ <http://publications.naturalengland.org.uk/file/5594677558640640> [accessed 21/01/2021]

¹⁶ <http://publications.naturalengland.org.uk/file/6686567240302592> [accessed 21/01/2021]

Bath & Bradford on Avon Bat Sites SAC

Reason for Designation¹⁷

3.9 The site is designated as an SAC for its:

3.10 Annex II species that are a primary reason for selection of this site:

- Greater horseshoe bat *Rhinolophus ferrumequinum* - This site in southern England includes the hibernation sites associated with 15% of the UK greater horseshoe bat population and is selected on the basis of the importance of this exceptionally large overwintering population.
- Bechstein's bat *Myotis bechsteinii* - Small numbers of Bechstein's bats have been recorded hibernating in abandoned mines in this area, though maternity sites remain unknown.

3.11 Annex II species present as a qualifying feature, but not a primary reason for site selection:

- Lesser horseshoe bat *Rhinolophus hipposideros*

Conservation Objectives¹⁸

3.12 "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;

3.13 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 the habitats of qualifying species
- The structure and function of the habitats of qualifying species
- The supporting processes on which the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site."

Environmental Vulnerabilities

3.14 The Site improvement Plan¹⁹ identifies the following pressures and threats to the SAC:

- Planning permission: general in combination effects
- Change in land management
- Direct impact from a third party) vandalism and recreational activities) - There have been impacts at Brown's Folly, Box Mine and Bathampton Down Mines, specifically from third parties gaining access for inappropriate purposes.

¹⁷ <http://publications.naturalengland.org.uk/file/6652449532149760> [accessed 21/01/2021]

¹⁸ <http://publications.naturalengland.org.uk/file/6600635269251072> [accessed 21/01/2021]

¹⁹ <http://publications.naturalengland.org.uk/file/5753272461688832> [accessed 21/01/2021]

- Functionally linked land
- Public access / disturbance

Chew Valley Lake SPA

Reason for Designation²⁰

3.15 The site is designated as an SPA for its:

- Northern shoveler *Anas clypeata* (non breeding)

Conservation Objectives²¹

3.16 *“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;*

3.17 *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.”*

Environmental Vulnerabilities

3.18 The Site improvement Plan²² identifies the following pressures and threats to the SPA:

- Hydrological changes
- Public access / disturbance

Mells Valley SAC

Reason for Designation²³

3.19 The site is designated as an SAC for its:

3.20 Annex I habitats:

- Caves not open to the public

²⁰ <http://publications.naturalengland.org.uk/file/5359000568725504> [accessed 21/01/2021]

²¹ <http://publications.naturalengland.org.uk/file/5129685222817792> [accessed 21/01/2021]

²² <http://publications.naturalengland.org.uk/file/4874784930267136> [accessed 21/01/2021]

²³ <http://publications.naturalengland.org.uk/file/6301977415778304> [accessed 21/01/2021]

- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*). (Dry grasslands and scrublands on chalk or limestone)

3.21 Annex II species:

- Greater horseshoe bat *Rhinolophus ferrumequinum*

Conservation Objectives²⁴

3.22 “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;

3.23 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.”

Environmental Vulnerabilities

3.24 The Site improvement Plan²⁵ identifies the following pressures and threats to the SAC:

- Public access / disturbance
- Arson - Fires on the Old Ironstone Works site are a potential threat to hibernating bats in a derelict flume structure (a brick lined tunnel). This is a particular threat beneath the access point to the hibernaculum.
- Direct impact from third party (vandalism)
- Undergrazing
- Air pollution: impact of atmospheric nitrogen deposition

Mendip Limestone Grasslands SAC

Reason for Designation²⁶

3.25 The site is designated as an SAC for its:

²⁴ <http://publications.naturalengland.org.uk/file/6245401586040832> [accessed 21/01/2021]

²⁵ <http://publications.naturalengland.org.uk/file/4896385117716480> [accessed 21/01/2021]

²⁶ <http://publications.naturalengland.org.uk/file/5713972770635776> [accessed 21/01/2021]

3.26 Annex I habitats:

- *Tilio-Acerion* forests of slopes, screes and ravines. (Mixed woodland on base-rich soils associated with rocky slopes)
- Caves not open to the public
- European dry heaths
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*). (Dry grasslands and scrublands on chalk or limestone)

3.27 Annex II species:

- Greater horseshoe bat *Rhinolophus ferrumequinum*

Conservation Objectives²⁷

3.28 “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;

3.29 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.”

Environmental Vulnerabilities

3.30 The Site improvement Plan²⁸ identifies the following pressures and threats to the SAC:

- Disease
- Air pollution: impact of atmospheric nitrogen deposition

3.31 Natural England have also identified recreational pressure as a potential issue within this SAC. Notably at honey pot sites such as Crooks Peak and Brean Down.

²⁷ <http://publications.naturalengland.org.uk/file/4576009739567104> [accessed 21/01/2021]

²⁸ <http://publications.naturalengland.org.uk/file/5172212225015808> [accessed 21/01/2021]

North Meadow and Clattinger Farm SAC

Reason for Designation²⁹

3.32 The site is designated as an SAC for its:

3.33 Annex I habitats:

- Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*).

Conservation Objectives³⁰

3.34 “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;

3.35 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”

Environmental Vulnerabilities

3.36 The Site improvement Plan³¹ identifies the following pressures and threats to the SAC:

- Inappropriate water levels
- Public access / disturbance
- Water pollution

North Somerset & Mendip Bats SAC

Reason for Designation³²

3.37 The site is designated as an SAC for its:

3.38 Annex I habitats:

- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco- Brometalia); Dry grasslands and scrublands on chalk or limestone
- Caves not open to the public
- Tilio-Acerion forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes*

²⁹ <http://publications.naturalengland.org.uk/file/4779957305737216> [accessed 21/01/2021]

³⁰ <http://publications.naturalengland.org.uk/file/4953376035176448> [accessed 21/01/2021]

³¹ <http://publications.naturalengland.org.uk/file/4896312373805056> [accessed 21/01/2021]

³² <http://publications.naturalengland.org.uk/file/5309740112412672> [accessed 21/01/2021]

3.39 Annex II species:

- Lesser horseshoe bat *Rhinolophus hipposideros*
- Greater horseshoe bat *Rhinolophus ferrumequinum*

Conservation Objectives³³

3.40 “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;

3.41 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.”

Environmental Vulnerabilities

3.42 The Site improvement Plan³⁴ identifies the following pressures and threats to the SAC:

- Planning permission: general in combination effects
- Air pollution: impact of atmospheric nitrogen deposition

3.43 During the scoping meeting with stakeholders in November 2020, the potential for issues stemming from recreational pressure from activities such as caving and tree climbing, but in particular from walkers with dogs disrupting grazing of important foraging areas, were identified for further investigations.

River Usk/ Afon Wysg SAC

Reason for Designation³⁵

3.44 The site is designated as an SAC for its:

3.45 Annex I habitats:

- Water courses of plain to montane levels with the *Ranunculon fluitantis* and *Callitricho-Batrachion* vegetation

³³ <http://publications.naturalengland.org.uk/file/5575002288291840> [accessed 21/01/2021]

³⁴ <http://publications.naturalengland.org.uk/file/5158748492398592> [accessed 21/01/2021]

³⁵ <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013007.pdf> [accessed 27/01/2020]

3.46 Annex II species:

- Sea lamprey *Petromyzon marinus*
- Brook lamprey *Lampetra planeri*
- River lamprey *Lampetra fluviatilis*
- Twaite shad *Alosa fallax*
- Atlantic salmon *Salmo salar*
- Bullhead *Cottus gobio*
- Otter *Lutra lutra*
- Allis shad *Alosa alosa*

Conservation Objectives³⁶

“Conservation Objective for the water course:

- *The capacity of the habitats in the SAC to support each feature at near-natural population levels, as determined by predominantly unmodified ecological and hydromorphological processes and characteristics, should be maintained as far as possible, or restored where necessary.*
- *The ecological status of the water environment should be sufficient to maintain a stable or increasing population of each feature. This will include elements of water quantity and quality, physical habitat and community composition and structure. It is anticipated that these limits will concur with the relevant standards used by the Review of Consents process given in Annexes 1-3.*
- *Flow regime, water quality and physical habitat should be maintained in, or restored as far as possible to, a near-natural state, in order to support the coherence of ecosystem structure and function across the whole area of the SAC.*
- *All known breeding, spawning and nursery sites of species features should be maintained as suitable habitat as far as possible, except where natural processes cause them to change.*
- *Flows, water quality, substrate quality and quantity at fish spawning sites and nursery areas will not be depleted by abstraction, discharges, engineering or gravel extraction activities or other impacts to the extent that these sites are damaged or destroyed.*
- *The river planform and profile should be predominantly unmodified. Physical modifications having an adverse effect on the integrity of the SAC, including, but not limited to, revetments on active alluvial river banks using stone, concrete or waste materials, unsustainable extraction of gravel, addition or release of excessive quantities of fine sediment, will be avoided.*
- *River habitat SSSI features should be in favourable condition. In the case of the Usk Tributaries SSSI, the SAC habitat is not underpinned by a river*

³⁶ <https://naturalresources.wales/media/674281/Usk%20Bat%20Sites%20Management%20Plan%20Feb%202008.pdf>
[accessed 27/01/2021]

habitat SSSI feature. In this case, the target is to maintain the characteristic physical features of the river channel, banks and riparian zone.

- *Artificial factors impacting on the capability of each species feature to occupy the full extent of its natural range should be modified where necessary to allow passage, eg. weirs, bridge sills, acoustic barriers.*
- *Natural factors such as waterfalls, which may limit the natural range of a species feature or dispersal between naturally isolated populations, should not be modified.*
- *Flows during the normal migration periods of each migratory fish species feature will not be depleted by abstraction to the extent that passage upstream to spawning sites is hindered.*
- *Flow objectives for assessment points in the Usk Catchment Abstraction Management Strategy will be agreed between EA and CCW as necessary. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 1 of this document.*
- *Levels of nutrients, in particular phosphate, will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC, and measures taken to maintain nutrients below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 2 of this document. 4.*
- *Levels of water quality parameters that are known to affect the distribution and abundance of SAC features will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC, and measures taken to maintain pollution below these levels. It is anticipated that these limits will concur with the standards used by the Review of Consents process given in Annex 3 of this document.*
- *Potential sources of pollution not addressed in the Review of Consents, such as contaminated land, will be considered in assessing plans and projects.*
- *Levels of suspended solids will be agreed between EA and CCW for each Water Framework Directive water body in the Usk SAC. Measures including, but not limited to, the control of suspended sediment generated by agriculture, forestry and engineering works, will be taken to maintain suspended solids below these levels”*

Environmental Vulnerabilities

3.47 The Standard Data Form for the site³⁷ identifies the following pressures and threats to the SAC:

- Water pollution
- Human induced changes in hydraulic conditions
- Grazing pressure
- Invasive non-native species
- Forest and Plantation management and use

³⁷ <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013007.pdf> [accessed 27/01/20201]

- Forestry activities
- Soil pollution and solid waste (excluding discharges)

River Wye / Afon Gwy SAC

Reason for Designation³⁸

3.48 The site is designated as an SAC for its:

3.49 Annex I habitats:

- Water courses of plain to montane levels with the *Ranunculus fluitans* and *Callitriche-Batrachium* vegetation; Rivers with floating vegetation often dominated by water-crowfoot
- Transition mires and quaking bogs; Very wet mires often identified by an unstable 'quaking' surface

3.50 Annex II species:

- White-clawed (or Atlantic stream) crayfish *Austropotamobius pallipes*
- Sea lamprey *Petromyzon marinus*
- Brook lamprey *Lampetra planeri*
- River lamprey *Lampetra fluviatilis*
- Allis shad *Alosa alosa*
- Twaite shad *Alosa fallax*
- Atlantic salmon *Salmo salar*
- Bullhead *Cottus gobio*
- Otter *Lutra lutra*

Conservation Objectives³⁹

3.51 "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;

3.52 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

³⁸ <http://publications.naturalengland.org.uk/file/5464505186254848> [accessed 21/01/2021]

³⁹ <http://publications.naturalengland.org.uk/file/5099305425960960> [accessed 21/01/2021]

- *The supporting processes on which qualifying natural habitats and habitats of qualifying species rely*
- *The populations of qualifying species, and,*
- *The distribution of qualifying species within the site.”*

Environmental Vulnerabilities

3.53 The Site improvement Plan⁴⁰ identifies the following pressures and threats to the SAC:

- Water pollution
- Invasive species
- Hydrological changes
- Public access / disturbance
- Air pollution: impact of atmospheric nitrogen deposition
- Fisheries
- Water abstraction
- Undergrazing

Rodborough Common SAC

Reason for Designation⁴¹

3.54 The site is designated as an SAC for its:

3.55 Annex II habitats:

- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*). (Dry grasslands and scrublands on chalk or limestone)

Conservation Objectives⁴²

3.56 *“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;*

3.57 *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”*

⁴⁰ <http://publications.naturalengland.org.uk/file/5550181483282432> [accessed 21/01/2021]

⁴¹ <http://publications.naturalengland.org.uk/file/4660056750555136> [accessed 21/01/2021]

⁴² <http://publications.naturalengland.org.uk/file/5518108223864832> [accessed 21/01/2021]

Environmental Vulnerabilities

3.58 The Site improvement Plan⁴³ identifies the following pressures and threats to the SAC:

- Undergrazing
- Public access / disturbance
- Air pollution: risk of atmospheric nitrogen deposition

Severn Estuary Ramsar site

Reason for Designation⁴⁴

3.59 The site is designated as a Ramsar site for the following Criteria:

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 Ramsar site include: H1110 Sandbanks which are slightly covered by sea water all the time H1130 Estuaries H1140 Mudflats and sandflats not covered by seawater at low tide H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)

Criterion 3: Due to unusual estuarine communities, reduced diversity and high productivity.

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 *Salmo trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *Alosa fallax*, and eel *Anguilla anguilla*.

It is also of particular importance for migratory birds during spring and autumn

Criterion 5: Assemblages of international importance:

Species with peak counts in winter: 70919 waterfowl (5 year peak mean 1998/99-2002/2003)

Criterion 6: species/populations occurring at levels of international importance:

- Bewick's swan *Cygnus columbianus bewickii*
- Common shelduck *Tadorna tadorna*
- Gadwall *Anas strepera*
- Dunlin *Calidris alpina alpina*
- Common redshank *Tringa totanus*
- Greater white-fronted goose *Anser albifrons albifrons*

Qualifying Species/populations (as identified at designation):

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 *Salmo salar*, sea trout *Salmo trutta*,

⁴³ <http://publications.naturalengland.org.uk/file/6317220919508992> [accessed 21/01/2021]

⁴⁴ <https://jncc.gov.uk/jncc-assets/RIS/UK11081.pdf> [accessed 21/01/2021]

sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *Alosa fallax*, and eel *Anguilla anguilla* 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 *Alosa alosa* and twaite shad *Alosa fallax* which feed on mysid shrimps in the salt wedge.

Environmental Vulnerabilities

3.60 The Information Sheet on Ramsar Sites⁴⁵ identifies the following pressures and threats to the Ramsar site:

- Dredging
- Erosion
- Recreational / tourism disturbance

Severn Estuary SAC

Reason for Designation⁴⁶

3.61 The site is designated as an SAC for its:

3.62 Annex I habitats that are a primary reason for selection of this site:

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

3.63 Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- Sandbanks which are slightly covered by sea water all the time
- Reefs

3.64 Annex II species that are a primary reason for selection of this site:

- Sea lamprey *Petromyzon marinus*
- River lamprey *Lampetra fluviatilis*
- Twaite shad *Alosa fallax*

Conservation Objectives⁴⁷

3.65 “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;

⁴⁵ Ibid

⁴⁶ <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0013030.pdf> [accessed 21/01/2021]

⁴⁷ <http://publications.naturalengland.org.uk/file/6377265718099968> [accessed 21/01/2021]

3.66 *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.”*

Environmental Vulnerabilities

3.67 The Site improvement Plan⁴⁸ identifies the following pressures and threats to the SAC:

- Public access/ disturbance. Natural England have also identified issues such as damage from dog fouling (nutrification), habitat erosion, bait digging and fishing activities.
- Physical modification
- Impacts from development in-combination and offsite impacts (drainage, disturbance, runoff, impacts on managed realignment etc.
- Coastal squeeze
- Change in land management
- Changes in species distribution
- Water pollution
- Air pollution: impact of atmospheric nitrogen deposition
- Fisheries: recreational, marine and estuarine
- Invasive species

Severn Estuary SPA

Reason for Designation⁴⁹

3.68 The site is designated as an SPA for its:

3.69 Non breeding:

- Bewick's swan *Cygnus columbianus bewickii*
- Common shelduck *Tadorna tadorna*

⁴⁸ <http://publications.naturalengland.org.uk/file/4856107648417792> [accessed 21/01/2021]

⁴⁹ <http://publications.naturalengland.org.uk/file/6512584593244160> [accessed 21/01/2021]

- Gadwall *Anas strepera*
- Dunlin *Calidris alpina alpina*
- Common redshank *Tringa totanus*
- Greater white-fronted goose *Anser albifrons albifrons*

3.70 Waterbird assemblage: Bewick's swan, greater white-fronted goose, common shelduck, gadwall, dunlin, and common redshank

Conservation Objectives⁵⁰

3.71 “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;

3.72 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.”

Environmental Vulnerabilities

3.73 The Site improvement Plan⁵¹ identifies the following pressures and threats to the SPA:

- Public access/ disturbance
- Impacts from development in-combination and offsite impacts (drainage, disturbance, runoff, impacts on managed realignment etc.
- Coastal squeeze
- Water pollution
- Air pollution: impact of atmospheric nitrogen deposition
- Fisheries: recreational, marine and estuarine
- Invasive species

3.74 It is acknowledged that the Site Improvement Plan is dated 2015. Natural England have identified that increasingly recreational pressure has been recognised as a contributing factor to issues with management such as grazing regimes.

⁵⁰ <http://publications.naturalengland.org.uk/file/6288530213175296> [accessed 21/01/2021]

⁵¹ <http://publications.naturalengland.org.uk/file/4856107648417792> [accessed 21/01/2021]

Somerset Levels and Moors Ramsar

Reason for Designation⁵²

3.75 The site is designated as a Ramsar site under the following Criteria:

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

Criterion 5: Assemblages of international importance:

Species with peak counts in winter: 97,155 waterfowl (5 year peak mean 1998/99-2002/2003)

Criterion 6: Species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation): Species with peak counts in winter:

- Eurasian teal *Anas crecca*
- Northern lapwing *Vanellus vanellus*
- Mute swan *Cygnus olor*
- Northern pintail *Anas acuta*
- Northern shoveler *Anas clypeata*

Environmental Vulnerabilities

3.76 The following pressures and threats to the Ramsar site could potentially be linked to the SDS:

- Drainage
- Inappropriate water levels
- Public access / disturbance
- Functionally linked land

3.77 Natural England have also identified that phosphorous levels are also of concern. Component Sites of Special Scientific Interest (SSSIs) are all in unfavourable condition as a result of phosphorous levels. This has implications for new development in the Ramsar site catchment. Although it is noted that WECA and all the UAs are located outside of the catchment.

Somerset Levels and Moors SPA

Reason for Designation⁵³

3.78 The site is designated as an SPA for its:

⁵² <https://rsis.ramsar.org/RISapp/files/RISrep/GB914RIS.pdf> [accessed 21/01/2021]

⁵³ <http://publications.naturalengland.org.uk/file/4509541668487168> [accessed 21/01/2021]

3.79 Annex I species: (Non breeding):

- Bewick's swan *Cygnus columbianus bewickii*
- Eurasian teal *Anas crecca*
- European golden plover *Pluvialis apricaria*
- Northern lapwing *Vanellus vanellus*
- Waterbird assemblage

Conservation Objectives⁵⁴

3.80 "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;

3.81 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."

Environmental Vulnerabilities

3.82 The Site improvement Plan⁵⁵ identifies the following pressures and threats to the SAC:

- Drainage
- Inappropriate water levels
- Public access / disturbance
- Functionally linked land

Wye Valley & Forest of Dean Bat Sites SAC

Reason for Designation⁵⁶

3.83 The site is designated as an SAC for its:

3.84 Annex II species:

- Lesser horseshoe bat *Rhinolophus hipposideros*
- Greater horseshoe bat *Rhinolophus ferrumequinum*

⁵⁴ <http://publications.naturalengland.org.uk/file/4881623615275008> [accessed 21/01/2021]

⁵⁵ <http://publications.naturalengland.org.uk/file/6251066375012352> [accessed 21/01/2021]

⁵⁶ <http://publications.naturalengland.org.uk/file/5725464458952704> [accessed 21/01/2021]

Conservation Objectives⁵⁷

3.85 *“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;*

3.86 *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 the habitats of qualifying species*
- *The structure and function of the habitats of qualifying species*
- *The supporting processes on which the habitats of qualifying species rely*
- *The populations of qualifying species, and*
- *The distribution of qualifying species within the site.”*

Environmental Vulnerabilities

3.87 The Site improvement Plan⁵⁸ identifies the following pressures and threats to the SAC:

- Physical modification
- Public access / disturbance
- Habitat connectivity

Wye Valley Woodlands SAC.

Reason for Designation⁵⁹

3.88 The site is designated as an SAC for its:

3.89 Annex I habitats:

- Asperulo-Fagetum beech forests. (Beech forests on rich to neutral soils)
- Taxus baccata woods of the British Isles. (Yew-dominated woodland)
- Tilio-Acerion forests of slopes, screes and ravines. (Mixed woodland on base-rich soils associated with rocky slopes)

3.90 Annex II species:

- Lesser horseshoe bat *Rhinolophus hipposideros*

Conservation Objectives⁶⁰

3.91 *“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;*

⁵⁷ <http://publications.naturalengland.org.uk/file/5128727537385472> [accessed 21/01/2021]

⁵⁸ <http://publications.naturalengland.org.uk/file/5483403396775936> [accessed 21/01/2021]

⁵⁹ <http://publications.naturalengland.org.uk/file/4729640186806272> [accessed 21/01/2021]

⁶⁰ <http://publications.naturalengland.org.uk/file/6571286793027584> [accessed 21/01/2021]

3.92 *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 habitats of qualifying species rely*
- *The populations of qualifying species, and,*
- *The distribution of qualifying species within the site.”*

Environmental Vulnerabilities

3.93 The Site improvement Plan⁶¹ identifies the following pressures and threats to the SAC:

- Invasive species
- Habitat connectivity
- Air pollution: impact of atmospheric nitrogen deposition
- Public access / disturbance
- Disease

4. Impact Pathways for Consideration

4.1 This section discusses potential impact pathways that could potentially link the SDS to an international designated site (as identified in **Chapter 3**). These are briefly identified in **Table 2**. Where existing evidence exists in relation to a specific impact pathway or an internationally designated site, further discussion is undertaken in the subsequent section.

Table 2: Potential Impact Pathways that Could Link the SDS to an Internationally Designated Site

Internationally Designated Site	Potential Linking Impact Pathways
Avon Gorge Woodlands SAC	Air quality: impact of atmospheric nitrogen deposition Public access (recreation) / disturbance including adventure sports, soil compaction/loss, digging and creating mountain bike jumps, dog

⁶¹ <http://publications.naturalengland.org.uk/file/4985420184027136>
<http://publications.naturalengland.org.uk/file/4856107648417792> [accessed 21/01/2021]

	fouling/eutrophication, mushrooms, holly etc.	gathering
Bath & Bradford on Avon Bat Sites SAC	<p>Loss of, and disturbance to, functionally linked habitat (including inappropriate land management)</p> <p>Direct disturbance of bats (including direct habitat damage)</p> <p>Public access / disturbance (including vandalism and problems with grazing levels resulting from dogs scaring grazers resulting in inadequately management for target species).</p>	
Chew Valley Lake SPA	<p>Recreational pressure</p> <p>Construction-related noise impacts</p> <p>Hydrological changes</p>	
Mells Valley SAC	<p>Public access / disturbance</p> <p>Direct impact from third party (vandalism - arson)</p> <p>Air quality: impact of atmospheric nitrogen deposition</p>	
Mendip Limestone Grasslands SAC	<p>Air quality: impact of atmospheric nitrogen deposition</p> <p>Recreational pressure: notably at honey pot sites such as Crooks Peak and Brean Down.</p>	
North Meadow and Clattinger Farm SAC	<p>Inappropriate water levels</p> <p>Water pollution</p> <p>Public access / disturbance</p>	
North Somerset & Mendip Bats SAC	<p>Loss of, and disturbance to, functionally linked habitat</p> <p>Direct disturbance of bats (including direct habitat damage / recreational pressure from activities such as caving and tree climbing and dog walkers disrupting grazing on important foraging areas.</p> <p>Air quality: impact of atmospheric nitrogen deposition</p>	
River Usk / Afon Wysg SAC	Water pollution	

	Human induced changes in hydraulic conditions
River Wye / Afon Gwy SAC	<p>Water pollution</p> <p>Hydrological changes</p> <p>Water abstraction</p> <p>Public access / disturbance</p> <p>Air quality: impact of atmospheric nitrogen deposition</p>
Rodborough Common SAC	<p>Public access / disturbance (including resulting in undergrazing)</p> <p>Air quality: risk of atmospheric nitrogen deposition</p>
Severn Estuary Ramsar site	<p>Recreational pressure</p> <p>Construction-related noise impacts</p> <p>Water quality</p> <p>Coastal squeeze</p> <p>Air quality: impact of atmospheric nitrogen deposition</p> <p>Invasive species</p>
Severn Estuary SAC	<p>Water quality</p> <p>Coastal squeeze</p> <p>Air quality: impact of atmospheric nitrogen deposition</p> <p>Invasive species</p> <p>Recreational pressure</p>
Severn Estuary SPA	<p>Recreational pressure</p> <p>Construction-related noise impacts</p> <p>Water quality</p> <p>Coastal squeeze</p> <p>Air quality: impact of atmospheric nitrogen deposition</p> <p>Invasive species</p>

Somerset Levels and Moors Ramsar site	Inappropriate water levels (including drainage) Water Quality: phosphorous levels Public access / disturbance Functionally linked land
Somerset Levels and Moors SPA	Inappropriate water levels (including drainage) Public access / disturbance Functionally linked land
Wye Valley & Forest of Dean Bat Sites SAC	Public access / disturbance Functionally linked land - habitat connectivity
Wye Valley Woodlands SAC.	Functionally linked land - habitat connectivity Air quality: impact of atmospheric nitrogen deposition Public access / disturbance

- 4.2 It should be noted that all the above internationally designated sites will be included within the Habitats Regulations Assessment. However, it is likely that the focus will be on the Severn Estuary SPA / Ramsar site and SAC, Chew Valley Lake SPA, Bath & Bradford on Avon Bat Sites SAC, North Somerset & Mendip Bats SAC, the Avon Gorge Woodlands SAC, and Mendip Limestone Grasslands SAC as it is these internationally designated sites that are considered most likely to be affected by development in the West of England Combined Authority Area at this stage due to their proximity to the West of England Combined Authority boundary.

5. Key Evidence

- 5.1 Where present, current and relevant, existing evidence and stakeholder knowledge will be drawn upon to inform the Habitats Regulations Assessment of the SDS. The following discussion identifies existing evidence and includes a summary of its relevance to the SDS HRA.
- 5.2 All Emerald Network Sites (SPA and SAC sites), have Site Improvement Plans produced for them by Natural England/ Natural Resources Wales. These documents identify existing pressures and threats to a designated site and have been used as a basis for this scoping report. At the same time, some of the Site Improvement Plans are several years old and therefore more recent Supplementary Advice for conservation objectives has also been used where available.

Recreational Pressure

Severn Estuary SPA/ Ramsar site and SAC

- 5.3 Detailed visitor survey work and recreation mitigation for the Severn Estuary SPA/SAC:
 - LUC (2019) Further work on recreational pressures on European sites in West of England. Unpublished report for the withdrawn Joint Spatial Plan (JSP).
 - The Severn Estuary Partnership⁶² and the State of the Severn Estuary Report (2011)⁶³
 - The Severn Estuary High Tide Study reports:
 - Identification of wintering waterfowl high tide roosts on the Severn Estuary SSSI/SPA (Brean Down to Clevedon) 2015 (RP02262)
 - Identification of wintering waterfowl roosts in the Severn Estuary SPA/SAC and Ramsar site; Phases 2 and 3 (RP02366)
 - Identification Of Wintering Waterfowl High Tide Roosts On The Severn Estuary SSSI/SPA Phase 4 (Gloucestershire, With Part Of South Gloucestershire) (RP02966)
 - Southgate, J. and Colebourn, K. (2016). Severn Estuary (Stroud District) Visitor Survey Report. Report for Stroud District Council. Ecological Planning & Research, Winchester⁶⁴.
 - Liley, D., Panter, C. & Hoskin, R (2017). Lydney Severn Estuary Visitor Survey and Recreation Strategy. Unpublished report by Footprint Ecology for the Forest of Dean District Council⁶⁵.
- 5.4 During the scoping meeting, it was identified that for the HRA of the JSP a 7km core recreational catchment zone was utilised. Natural England also identified that caution should be used in using this as a standard figure without site-specific

⁶² Available at: [Severn Estuary Partnership](#). [accessed 09/04/2021]

⁶³ Available at: [SOSER.pdf \(severnestuarypartnership.org.uk\)](#) [accessed 09/04/2021]

⁶⁴ Available at: [severnestuaryvs_report_15581c_final_060616.pdf \(stroud.gov.uk\)](#) [accessed 28/01/2021]

⁶⁵ Available at: [Liley et al 2017 Lydney Severn Estuary Visitor Survey and Recreation Strategy.pdf \(footprint-ecology.co.uk\)](#) [accessed 29/01/2021]

data. For the JSP the 7km core recreational catchment zone was based upon the established Zone of Influence for the Thames Basin Heaths SPA which is itself based on studies that indicate the distance that people travel for recreation. However, that is a heathland site and it is known that coastal internationally designated sites have a widely varying core recreational catchment. As an example, the Essex Coastal designated sites have a core recreational catchment of between 4.3km and 22km⁶⁶, while the Solent international sites have a core recreational catchment of 5.6km⁶⁷. Since the JSP HRA was produced LUC undertook visitor surveys on the Severn Estuary⁶⁸ and Stroud Council have undertaken visitor surveys of the Severn Estuary⁶⁹ to support their Local Plan.

- 5.5 The LUC report identifies that *“A mean of 7.36km was calculated from the distances travelled by respondents, regardless of journey direction. This distance, when applied as a buffer around the boundary of the Severn Estuary SAC, SPA and Ramsar site, covers 86.8% of respondent’s postcodes within the West of England boundary. The buffer also covers 93.4% of respondents who reported visiting the sites at least once a week and included 89.6% of dog walkers”*. The supporting report that underlies Stroud District Council’s Severn Estuary Avoidance Strategy⁷⁰ (2016) identifies that the core recreational catchment for the Severn Estuary (within Stroud District) is 7.7km. These core catchments (7.36km and 7.7km) compare well with the 7km catchment previously used in the JSP HRA.

Chew Valley Lake SPA

- 5.6 From the scoping meeting, it was identified that recreational pressure at Chew Valley Lakes is a complex one. The site is owned and managed by Bristol Water. Recreational activities on the lake include sailing and angling. The sailing is via membership at the Chew Valley Lake Sailing Club, and angling is managed by Bristol Water Fisheries. As such, growth in the population across the plan area and wider West of England will not necessarily correlate to an increase in sailing activity or fishing. It is understood that the many walkers to the site utilise the existing path (this does not currently extend around the entire lake). However, there is a Management Plan already in place and planning permission for the Chew Valley Recreational Trail (18/02543/FUL⁷¹) was granted in June 2018. This constitutes a path to the north of the lake (located away from sensitive areas). A business case and funding was approved in December (WECA Joint Committee) and January (B&Nes) to fund the recreational trail repairs. At the time of writing (April 2021) a business case was being developed for the south section to complete the circular trail. The business case includes ecological restoration work, restoring protective fencing, signage, reedbed enhancements, moving the fishing barrier etc.

⁶⁶ Available at: [FINAL RAMS - July 2019_reduced_size.pdf \(birdaware.org\)](#) [accessed 29/01/2021]

⁶⁷ Available at: [Birdaware Solent - Our Strategy](#) [accessed 29/01/2021]

⁶⁸ LUC (2019) Further work on recreational pressures on European sites in West of England

⁶⁹ Southgate, J., and Colebourn, K. (2016). Severn Estuary (Stroud District) Visitor Survey Report. Report for Stroud District Council. Ecological Planning & Research, Winchester.

⁷⁰ Liley et al 2017 [Lydney Severn Estuary Visitor Survey and Recreation Strategy.pdf \(footprint-ecology.co.uk\)](#) [accessed 29/01/2021]

⁷¹ Ibid

⁷¹ [Planning Application Details \(bathnes.gov.uk\)](#) [accessed 29/01/2021]

- 5.7 The LUC report⁷² identifies that recreational activities are thus well managed at the site. Issues do remain with regards to trespass and disturbance from dog walkers in sensitive area, which could worsen if numbers of visitors increase.

Avon Gorge Woodlands SAC

- 5.8 The LUC⁷³ report identifies the provision of a 7km Zone of Influence. This is not based on specific survey data but matches well with the Zones of Influence identified for many inland European sites across England where a relatively consistent core catchment of 4-7km is often identified. In general, few inland European sites have significantly larger catchments except where they form a major regional showpiece site such as New Forest SAC or Cannock Chase SAC.

Functionally Linked Land

Bat Sites

- 5.9 For the bat SACs (Bath and Bradford on Avon Bats SAC, Mells Valley SAC, North Somerset & Mendip Bats SAC, Wye Valley & Forest of Dean Bat Sites SAC, Wye Valley Woodlands SAC), issues relating to loss of habitat, disturbance to and deteriorating habitats has been identified as a potential threat to the SAC and its bat species. The designated bat features use functionally linked land surrounding the SACs to forage, commute and use for seasonal migration into the wider countryside. During the Scoping meeting it was identified that due to the large number of land owners that own and manage this potentially functionally linked land surrounding the SACs designated for their bat features it has been difficult to monitor the condition and suitability of these land parcels and thus encourage appropriate management. Another issue that was raised was that increased recreational activities within land outside of the designated site itself is altering the land management strategies. This include increased recreational pressure resulting in problems with grazing (dogs scaring livestock) that results in inadequate grazing regimes and the land becomes poorly managed for the target species, and thus less suitable to support the designated features.
- 5.10 The following are key evidence sources that will be used in undertaking the Habitats Regulations Assessment in relation to functionally linked land at the bat SAC sites:
- Mitigation strategies already developed for Bath and Bradford on Avon Bats SAC to protect roosting and foraging habitat, such as the Trowbridge Bat Mitigation Strategy SPD for Bath and Bradford on Avon Bats SAC (adopted February 2020)⁷⁴ which provides tailored recreational pressure zones of impact:
 - Red Zone: new development unlikely to be granted permission due to high risks.
 - Yellow Zone: new development on greenfield sites outside the settlement boundaries will need to demonstrate no adverse effect on the integrity of the SAC, undertake appropriate bat surveys, mitigate for

⁷² LUC (2019) Further work on recreational pressures on European sites in West of England

⁷³ Ibid

⁷⁴ <https://www.wiltshire.gov.uk/media/3928/Trowbridge-Bat-Mitigation-Strategy-SPD/pdf/whsap-trowbridge-bat-mitigation-strategy.pdf?m=637273390249630000> [accessed 27/01/2021]

all impacts on target bat species on site through retaining and enhancing wide swathes of unlit bat habitat with associated buffer zones, and for each allocated site, it is anticipated that in most circumstances the full residual green space will be required for mitigation and proposals within these yellow zones should expect to make a payment for habitat mitigation.

- Grey (hatched) Zone: development proposals are required to make a payment for recreational pressure mitigation.
- Similar mitigation strategies devised for the North Somerset & Mendip Bats SAC, such as that by North Somerset Council⁷⁵. That guidance identifies that:
 - The Juvenile Sustenance Zones of 1 kilometre (km) around the maternity roosts for greater horseshoe bats and 600m for lesser horseshoe bats. New build development on green field sites should be avoided in the Juvenile Sustenance Zones (JSZs)
 - The “Bat Consultation Zone” where horseshoe bats may be found, divided into bands A, B and C, reflecting the likely importance of the habitat for the bats and proximity to maternity and other roosts.

Avian Sites

5.11 Natural England Impact Risk Zones for each SSSI and guidance that underlies those zones will be utilised. The main document of reference is:

- Natural England (2019). Impact Risk Zones Guidance Summary Sites of Special Scientific Interest Notified for Birds. Version 1.1

5.12 This identifies the typical distances that wintering waterfowl will travel from their SPAs to forage. Relevant Impact Risk Zones are identified as follows:

Table 3 Natural England Impact Risk Zones for Designated Bird Features

Assemblage	Impact Risk Zone (foraging distance)
Wintering birds (except winterring waders and grazing wildfowl; wigeon and geese)	Up to 500m
Dabbling ducks such as teal, mallard and gadwall	Home ranges could extend beyond site boundaries at coastal sites, but less likely to do so at inland water bodies.
Wintering waders (except golden plover and lapwing), brent goose & wigeon	Maximum foraging distance is 500m
Wintering lapwing and golden plover	Maximum foraging distance is 15-20km. Golden plover can forage up to 15km from a roost site within a protected site. Lapwing can also forage similar

⁷⁵ <https://www.n-somerset.gov.uk/sites/default/files/2020-02/NSC%20and%20Mendip%20Bats%20SAC%20guidance%20-%20supplementary%20planning%20document.pdf> [accessed 27/01/2021]

distances. Both species use lowland farmland in winter and it is difficult to distinguish between designated populations and those present within the wider environment.

Developments affecting functionally linked land more than 10km from the site are unlikely to impact significantly on designated populations.

Wintering white-fronted goose, greylag goose, Bewick's swan, whooper swan & wintering bean goose	<p>Maximum foraging distance is 10km.</p> <p>A bespoke functional land IRZ has replaced the individual Birds 6/7 IRZs for sites supporting the following goose and swan species: pink-footed geese, barnacle goose, Bewick's swan, white-fronted goose and whooper swan.</p> <p>The IRZ is based on GIS distribution records of feeding pink-footed geese from a study undertaken for Natural England by the Wildfowl & Wetlands Trust and the results of work undertaken by the British Trust for Ornithology to identify functionally connected habitat used by barnacle goose, Bewick's swan, white-fronted goose and whooper swan based on WeBS site and BirdTrack data and focuses on only the areas of land that we know are being used as functional habitat by designated populations</p>
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Water Quality

Severn Estuary SPA/ Ramsar site and SAC

- 5.13 Whilst water quality has been raised as a potential linking impact pathway between the SDS and the Severn Estuary, during the scoping meeting it was confirmed that the need for nutrient neutrality calculations is driven by the Water Framework Directive and an international designated site failing for water quality. The Environment Agency identified that the Severn Estuary WFD Status is 'Good' for nitrogen (the limiting nutrient), and thus Natural England confirmed it is unlikely that this impact pathway will require further consideration.

Construction Related Noise

- 5.14 Regarding construction noise impacts on waterfowl and waders, AECOMs professional experience is that noise impacts are unlikely to arise from noise-generating activities located more than c.200m from the qualifying bird species. Studies indicate that noise levels in excess of 84 dB(A) typically elicit a flight response in birds⁷⁶ and the same research recommends that construction noise levels are kept below 70 dB to avoid excessive disturbance of birds⁷⁷. The noisiest construction activity is generally impact piling, where a hammer is dropped on the pile. This has a typical maximum noise level of 100-110dB at 1m from source. Noise attenuates by 6dB for every doubling of distance, such that impact piling typically results in noise levels below 70 dB at distances of more than 100m from source. Therefore, a 200m separation between construction

⁷⁶ Cutts N & Allan J. 1999. Avifaunal Disturbance Assessment. Flood Defence Works: Saltend. Report to Environment Agency).

⁷⁷ Cutts, N., Phelps, A. and Burdon, D. (2009) Construction and waterfowl: Defining Sensitivity, Response, Impacts and Guidance. Report to Humber INCA, Institute of Estuarine and Coastal Studies, University of Hull

activity and the SPA/Ramsar should generally ensure no disturbance arises through this pathway, if one uses the 70dB metric as a reference. However, Natural England's advice in consultation over this Scoping Report is that attention should be paid not only to the 70dB metric but also to the relative change in noise compared to the baseline, and that any potential impacts should be investigated when noise at the receptor site/feature increases by 3dB or more, 3dB being generally accepted as being the smallest change in noise that is perceptible as a change to humans and birds.

Other Key Evidence

- Bristol Water and Wessex Water's Water Resource Management Plans. These plan for water provision across the WECA area to 2045 and are based on robust population projections that take account of climate change. Each has been subjected to its own HRA.
- Site Improvement Plans (noting that these can be out of date), detailed Conservation Objectives and Supplementary Advice
- Bespoke reports / data to support the production of the Habitats Regulations Assessment such as traffic modelling forecasts and associated air quality assessments.

5.15 Regarding air quality impacts from traffic, the extent to which this can be explored in detail at the SDS level will depend upon the availability of traffic and air quality modelling for the intended growth scenario(s). In turn this will depend upon the level of detail available to the traffic modellers concerning the distribution of growth, noting that the SDS will be identifying broad growth areas but not making site allocations. To undertake detailed air quality modelling for growth scenarios it would be necessary to have, from the traffic modellers:

- 24hr Annual Average Daily Traffic, average vehicle speeds and percentage heavy duty vehicles for each growth scenario for each of the following:
- Baseline
- Do Minimum (i.e. end of plan period without the SDS but including growth from other sources including surrounding local authorities)
- Do Something (i.e. end of plan period with the SDS and growth from other sources including surrounding local authorities)

5.16 This would be required for every significant road within 200m of relevant European sites i.e. A4 past Avon Gorge Woodlands SAC in Bristol and A403 past Severn Estuary SAC. It is unknown at this stage whether that level of detail will be available, although it appears to be unlikely. Therefore, the HRA will need to undertake a high-level assessment of potential air quality issues, identifying a strong sustainable travel framework for the SDS and the possible need for further multi-authority strategic mitigation to be developed. Individual Local Plans would then undertake more detailed assessments along the lines discussed above in their Local Plan HRAs. However, the HRA of the SDS could seek to define the recommended parameters of that down-the-line assessment for Local Plans, taking care to ensure that anything identified at the SDS level can be taken on board in Local Plans and their HRAs. It would be advisable for the WECA authorities to collaborate on a transport model to inform each Local Plan, to avoid a proliferation of traffic models examining impacts on the same European sites.

This is similar to the approach being undertaken elsewhere, such as in the Epping Forest area.

6. Other Plans and Projects

6.1 Other plans and projects that will be considered when undertaking the Habitats Regulations Assessment include⁷⁸:

- Local Plan documents for authorities within the WECA area and those of surrounding authorities:
 - Bath and North East Somerset Core Strategy (adopted 2014) and Placemaking Plan (adopted in 2017)
 - City of Bristol Core Strategy (adopted 2011) and Site Allocations and Development Management Policies Local Plan (adopted 2014)
 - South Gloucestershire Local Plan Core Strategy (adopted 2013) and Policies, Sites and Places Plan (adopted 2017)
 - Cardiff Local Development Plan (2006 - 2026)
 - Newport Local Development Plan (2011 - 2026)
 - Monmouthshire Replacement Local Development Plan (2018 – 2033)
 - The Forest of Dean District Local Plan
 - Stroud District Local Plan (2015 – 2031)
 - Cotswold District Local Plan (2011 – 2031)
 - Wiltshire Core Strategy Development Plan (adopted 2015)
 - Mendip District Local Plan Part I (2006 – 2029)
 - Sedgemoor District Local Plan (2011 - 2032)
 - North Somerset Core Strategy and Local Plan
- Transport Plan documents
 - Travelwest Joint Local Transport Plan 4 (2020 – 2036)⁷⁹ (covers Bath and North East Somerset, Bristol City, North Somerset and South Gloucestershire authorities)
 - Travelwest West of England Local Cycling and Walking Infrastructure Plan 2020-2036⁸⁰ (covers Bath and North East Somerset, Bristol City, North Somerset and South Gloucestershire authorities)
 - Gloucestershire Local Transport Plan (TLP3) (to 2026)⁸¹
 - Wiltshire Local Transport Plan (TLP3) (2011 – 2026)⁸²
- Minerals and Waste Plans

⁷⁸ Full detail of the documents to be drawn upon will be updated when the HRA itself is undertaken. This is because documents may change over time as consultation stages progress.

⁷⁹ <https://travelwest.info/app/uploads/2020/05/JLTP4-Adopted-Joint-Local-Transport-Plan-4.pdf> [accessed 27/01/2021]

⁸⁰ Available at: [LCWIP-West-of-England-Local-Cycling-and-Walking-Infrastructure-Plan-2020-2036-VJan21.pdf](https://www.travelwest.info/app/uploads/2020/05/LCWIP-West-of-England-Local-Cycling-and-Walking-Infrastructure-Plan-2020-2036-VJan21.pdf) (travelwest.info) [accessed 28/04/2021]

⁸¹ <https://www.fdean.gov.uk/media/unbna5wr/gloucestershire-local-transport-plan-2011-to-26.pdf> [accessed 27/01/2021]

⁸² <http://pages.wiltshire.gov.uk/ltp3-strategy.pdf> [accessed 27/01/2021]

- Gloucestershire Minerals Plan⁸³
- Gloucestershire Waste Core Strategy (adopted 2012)⁸⁴
- Wiltshire Minerals Core Strategy (to 2026)
- Wiltshire Waste Core Strategy (to 2026)
- Somerset Minerals Plan (to 2030)⁸⁵
- Somerset Waste Plan / Core Strategy
- Climate Emergency Action Plans
- Water Resource Management Plans
 - Bristol Water Water Resource Management Plan 2019
 - Bristol Water Drought Plan 2018
 - Wessex Water Water Resource Management Plan 2019
 - Wessex Water Drought Plan 2018
 - Dwr Cymru Water Resource Management Plan 2019
 - Dwr Cymru Drought Plan 2020
 - Severn Trent Water Resource Management Plan 2019
 - Severn Trent Drought Plan 2019
 - Thames Water Water Resource Management Plan 2019
 - Thames Water Drought Plan 2020
- Coastal Plans
 - Severn Estuary Shoreline Management Plan (SMP2)
 - Severn Estuary Flood Risk Management Strategy
 - North Devon and Somerset Shoreline Management Plan (SMP2)
 - North Somerset Local Flood Risk Management Strategy
 - Bristol Flood Strategy
- Individual Projects
 - Portishead Branch Line – MetroWest Phase I
 - Oldbury New Nuclear Power Station.
 - Avon Power Station 950 MW output.
 - Seabank 3 CCGT.
 - The West Somerset Tidal Lagoon.
 - Tidal Lagoon Newport
 - Tidal Lagoon Cardiff
 - Hinkley Point C Connection

⁸³ <https://www.fdean.gov.uk/media/5rlhwtvd/adopted-gloucestershire-minerals-local-plan.pdf> [accessed 27/01/2021]

⁸⁴ <https://www.fdean.gov.uk/media/u2flyhbe/waste-core-strategy-nov-2012.pdf> [accessed 27/01/2021]

⁸⁵ <http://www.somerset.gov.uk/EasySiteWeb/GatewayLink.aspx?allId=98609> [accessed 27/01/2021]

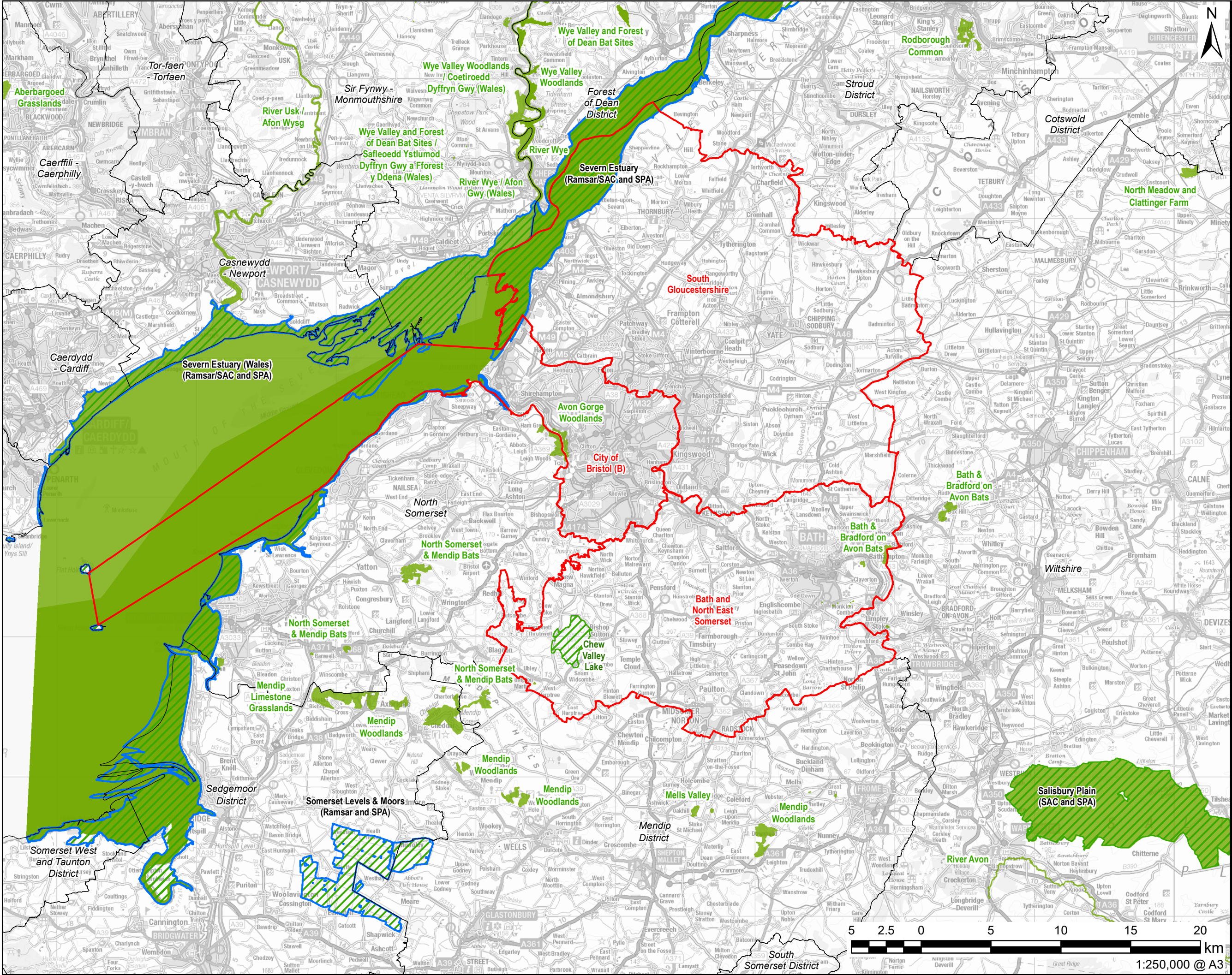
- Severn Barrage Barrier
- Poppy Dock Expansion
- Environment Agency schemes and or projects
- Renewable energy opportunities.

6.2 It should be noted that rather than undertaking HRA of the individual projects and plans listed above, the SDS HRA will draw upon those HRAs of the projects and plans listed above in drawing its conclusions.

7. Next Steps

7.1 It is the intention of this document to present the initial scoping exercise, presenting stakeholder opinions and knowledge of various impact pathways of relevance to the SDS and identifying existing evidence sources that can be drawn upon or the subsequent stages of the appropriate assessment. At this stage we would be interested in stakeholder comments on the proposed approach and of any further scoping details that require inclusion or mention in the subsequent appropriate assessment.

Appendix A Figure A1: Location of Internationally Designated Sites in relation to the West of England Combined Authority Area.



AECOM

PROJECT
WECA HRA

CLIENT
WEST OF ENGLAND
COMBINED AUTHORITY

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LEGEND

- WECA Boundary
- District Boundary
- Ramsar
- Special Protection Area
- Special Area of Conservation

NOTES

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ISSUE PURPOSE
DRAFT

PROJECT NUMBER
60642452

SHEET TITLE
INTERNATIONAL
DESIGNATED SITES

SHEET NUMBER
Figure 1

