

# North Somerset Local Plan

Habitat Regulations Assessment

North Somerset District Council

November 2023

## Quality information

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# 1. Introduction

## Background

- 1.1 AECOM was appointed by North Somerset District Council to produce a report to inform the Council's Habitats Regulations Assessment (HRA) of the potential effects of the North Somerset Local Plan (Hereafter NSLP) on the National Site Network of Special Areas of Conservation, Special Protection Areas and Ramsar sites. For simplicity these sites are referred to as Habitat sites throughout this report. The objectives of the assessment are to:
- Identify any aspects of the Local Plan that would cause an adverse effect on the integrity of Habitat sites either alone or in combination with other plans and projects; and
  - To advise on appropriate policy mechanisms for delivering mitigation where such effects were identified.
- 1.2 The HRA of the North Somerset Local Plan is required to determine if there are any realistic linking pathways present between a Habitat site and the Local Plan and where Likely Significant Effects cannot be screened out, an analysis to inform Appropriate Assessment is undertaken to determine if adverse effects on the integrity of the Habitat sites will occur as a result of the Local Plan alone or in combination.

## Legislative Context

- 1.3 The United Kingdom (UK) left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 (“the Withdrawal Act”). The Withdrawal Act retains the body of existing EU-derived law within our domestic law. The most recent amendments to the Habitats Regulations – the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – make it clear that the need for HRA continues post-Brexit.
- 1.4 The HRA process applies the ‘Precautionary Principle’<sup>1</sup> to Habitat sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the Habitat site(s) in question. Plans and projects with predicted adverse impacts on Habitat sites may still be permitted if there are no alternatives to them and there are Imperative Reasons of Over-riding 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.
- 1.5 The need for Appropriate Assessment (AA, Plate 1) is set out in the Conservation of Habitats and Species Regulations 2017 (as amended).

Conservation of Habitats and Species Regulations 2017 (as amended)

*“A competent authority, before deciding to ... give any consent, permission or other authorisation for a plan or project which... is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects) ... must make an appropriate assessment of the implications for that site in view of that site’s 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 ...”*

### Plate 1: The Legislative basis for Appropriate Assessment

<sup>1</sup> 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”.*

- 1.6 Over the years, the term HRA has come into wide currency to describe the overall process set out in the Habitats Regulations, from LSEs screening through to identification of IROPI. This has been established to distinguish the overall process from the individual stage of AA. Throughout this report the term HRA is used for the overall process and the use of AA is restricted to the specific stage of that name.
- 1.7 In spring 2018 the ‘Sweetman’ European Court of Justice ruling<sup>2</sup> clarified that ‘mitigation’ (i.e., measures that are specifically introduced to avoid or reduce a harmful effect on a Habitat site that would otherwise arise) should **not** be taken into account when forming a view on LSEs. Mitigation should instead only be considered at the AA stage. This HRA has been cognisant of that ruling.

## Report Layout

- 1.8 **Chapter 2** of this report explains the methodology by which this HRA has been carried out, including the three essential tasks that form part of HRA. **Chapter 3** provides details of the relevant Habitat sites, including Conservation Objectives and current pressures and threats. **Chapter 4** provides detailed background on the main impact pathways identified in relation to the NSLP and the relevant Habitat sites. **Chapter 5** undertakes the screening assessment of LSEs of the Plan policies and sites potentially proposed for allocation. The AA is undertaken in **Chapter 6**. The conclusions and recommendations arising from the HRA process are provided in **Chapter 7**.

# 2. Methodology

## Introduction

- 2.1 This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA).

## A Proportionate Assessment

- 2.2 Project-related HRA often requires bespoke survey work and novel data generation in order to accurately determine the significance of effects. In other words, to look beyond the risk of an effect to a justified prediction of the actual likely effect and to the development of avoidance or mitigation measures.
- 2.3 However, the draft MHCLG guidance<sup>3</sup> (described in greater detail later in this chapter) 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.
- 2.4 “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.”
- 2.5 More recently, the Court of Appeal<sup>4</sup> ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be “*achieved in practice*” then this would suffice to meet the requirements of the Habitats Regulations. This ruling has since been applied to a planning permission (rather than a Plan document)<sup>5</sup>. 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 reg 61 of the Habitats Regulations*”.

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<sup>2</sup> People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

<sup>3</sup> MHCLG (2006) Planning for the Protection of Habitat sites, Consultation Paper

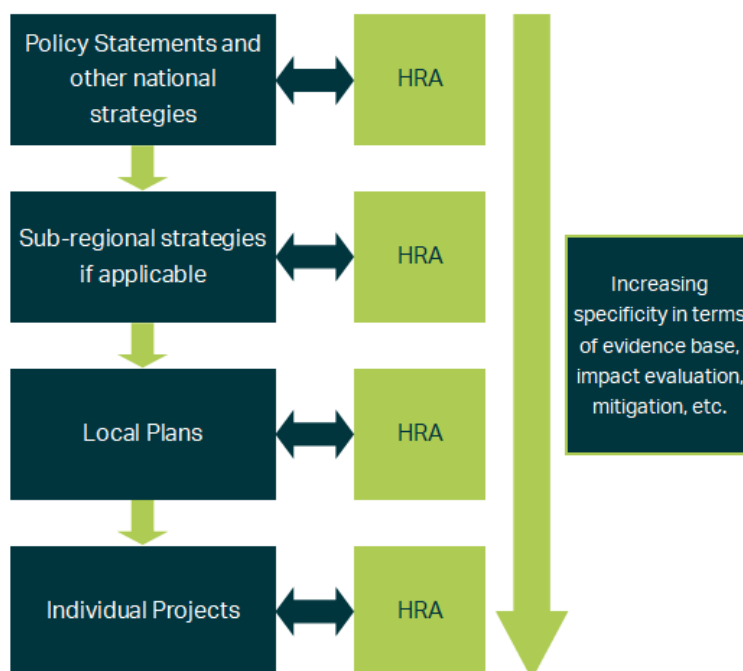
<sup>4</sup> No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17<sup>th</sup> February 2015

<sup>5</sup> High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015



- 2.6 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 as illustrated in **Plate 2**.

**Plate 2: Tiering in HRA of Land Use Plans**



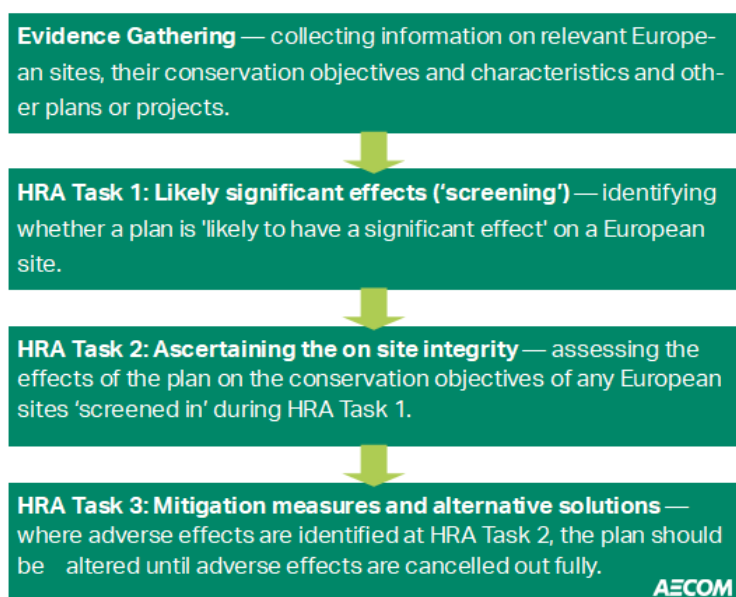
- 2.7 At the same time, it is necessary to have confidence that sites allocated in a Local Plan have a reasonable prospect of being deliverable without fundamental Habitats Regulations Assessment issues.
- 2.8 The most robust and defensible approach to the absence of fine grain detail at this level is to make use of the precautionary principle. In other words, the plan is never given the benefit of the doubt (within the limits of reasonableness); it must be assumed that a policy/measure is likely to have an impact leading to a significant adverse effect upon an internationally designated site unless it can be clearly established otherwise.

## The Process of HRA

- 2.9 Central government have released general guidance on appropriate assessment<sup>6</sup>. **Plate 3** outlines the stages of HRA according to 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 likely significant effects remain.

<sup>6</sup> <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

### Plate 3: Four-Stage Approach to Habitats Regulations Assessment



2.10 The following process has been adopted for carrying out the subsequent stages of the HRA.

## Task One: Test of Likely Significant Effects (Screening)

2.11 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a LSEs screening - essentially a brief, high-level assessment to decide whether the full subsequent stage known as AA is required. The essential question is:

*“Is the plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon Habitat sites?”*

2.12 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 Habitat sites, usually because there is no mechanism for an adverse interaction.

2.13 The LSEs screening is based on identification of the impact source, its pathway to receptors and an appraisal of the specific Habitat site receptors. These are normally designated features but also include habitats and species fundamental for designated features to achieve favourable conservation status (notably functionally linked habitats outside the Habitat site boundary).

2.14 In the Waddenzee case<sup>7</sup>, 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).

2.15 The LSEs screening consists of two parts: Firstly, it should determine whether there are any policies that could result in negative impact pathways and secondly it establishes whether there are any Habitat sites that might be affected. It identifies Habitat sites that are most likely to be impacted by the Plan and the impact pathways that are most likely to require consideration.

<sup>7</sup> Case C-127/02

- 2.16 It is important to note that LSEs screening must generally follow the precautionary principle as its main purpose is to determine whether the subsequent stage of AA (i.e., a more detailed investigation) is required.

## Task Two: Appropriate Assessment

- 2.17 Where it is determined that a conclusion of ‘no LSEs’ cannot be drawn, the analysis must proceed to the next stage of HRA known as AA. Case law has clarified that AA 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 AA rather than the screening process. AA refers to whatever level of assessment is appropriate to form a conclusion regarding effects on the integrity (coherence of structure and function) of Habitat sites in light of their Conservation Objectives.
- 2.18 By virtue of the fact that it follows LSEs screening, there is a clear implication that the analysis will be more detailed than undertaken at the previous stage. One of the key considerations during AA is whether there is available mitigation that would entirely address the potential effect. In practice, the AA would take any policies or proposed sites that could not be dismissed following the high-level screening analysis and evaluate the potential for an effect in more detail, with a view to concluding whether there would be an adverse effect on site integrity (in other words, disruption of the coherent structure and function of the Habitat site(s)).
- 2.19 In 2018 the Holohan ruling<sup>8</sup> handed down by the European Court of Justice included among other provisions paragraph 39 of the ruling stating 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].
- 2.20 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 the impacts of development on the Habitat sites considered within this assessment.

## Task 3: Mitigation

- 2.21 Where necessary, measures will be recommended for incorporation into the Plan in order to avoid or mitigate adverse effects on Habitat sites. For example, there is considerable precedent, both nationally and locally, concerning the level of detail that a Plan document needs to contain regarding mitigation for recreational impacts on Habitat 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.
- 2.22 When discussing ‘mitigation’ for a Local Plan document, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the detail of the mitigation measures themselves since the Local Plan document is a higher level policy document.

## The Geographic Scope

- 2.23 There is no standard criteria that dictates the ultimate physical scope of an HRA of a Plan in all circumstances. Therefore, in considering the physical scope of the assessment AECOM was guided primarily by the identified impact pathways rather than by arbitrary “zones”, i.e. a source-pathway-receptor approach. Current guidance suggests that the following Habitat sites be included in the scope of assessment:
- All sites within the District; and
  - Other sites shown to be linked to development within North Somerset through a known “pathway” (discussed below).
- 2.24 Briefly defined, impact pathways are routes by which a change in activity within the plan area can lead to an effect upon a Habitat site. In terms of the second category of Habitat site listed above, Department for Levelling Up, Housing and Communities (DLUHC) (formerly Ministry of Housing, Communities and Local Government (MHCLG)) guidance states that the AA should be “*proportionate to the geographical scope of*

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<sup>8</sup> Case C-461/17

the [plan policy]” and that “an AA need not be done in any more detail, or using more resources, than is useful for its purpose” (MHCLG, 2006, p.6).

- 2.25 Locations of European designated sites are illustrated in **Appendix B, Figure 1**, and full details of all European designated sites discussed in this document can be found in **Chapter 3** specifying their qualifying features, conservation objectives and pressures and threats to integrity taken from the Site Improvement Plan for each site, although it is noted that the Conservation Objectives and Supplementary Advice on Conservation Objectives take precedence over Site Improvement Plans as they are generally more recent. **Table 1** below lists all those European designated sites included in this HRA.

**Table 1. Physical Scope of the HRA - Habitat sites of Interest**

Habitat site	Distance from North Somerset District
Severn Estuary SPA / Ramsar	Partially within North Somerset District
Severn Estuary SAC	Partially within North Somerset District
North Somerset & Mendip Bats SAC	Partially within North Somerset District
Avon Gorge Woodlands SAC	Partially within North Somerset District
Mendip Limestone Grasslands SAC	Partially within North Somerset District
Mendip Woodlands SAC	~ 1km South of North Somerset District
Chew Valley Lake SPA	~ 1km East of North Somerset District
Somerset Levels & Moors SPA / Ramsar	~8.7km South of North Somerset District

## Confirming other Plans and Projects that may act ‘In Combination’

- 2.26 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 European designated site(s) in question.
- 2.27 In considering the potential for combined regional housing development to impact on Habitat sites the primary consideration is the impact of visitor numbers – i.e., recreational pressure and urbanisation.
- 2.28 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e., to ensure that those projects or plans (which in themselves have minor impacts) are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee<sup>9</sup> case.
- 2.29 It should be noted that, while the broad potential impacts of these plans will be considered, this document does not carry out a full HRA of these Plans and projects. Instead, it draws upon existing HRAs that have been carried out on the Plans and projects.
- 2.30 The following plans have been considered for their in-combination effects:
- Bristol Local Plan
  - Bath & North East Somerset Local Plan
  - South Gloucestershire Local Plan

<sup>9</sup> Waddenzee case (Case C-127/02, [2004] ECR-I 7405)

- Sedgemoor Local Plan
- Mendip Local Plan

## 3. Background to Habitat sites

### Severn Estuary SPA / Ramsar

#### Introduction

3.1 The Severn Estuary is sandwiched between Wales and England in south-west Britain and harbours extensive mud and sandflats, rocky platforms and islands. The coast is fringed by saltmarsh, backed by grazing marsh with freshwater and occasional brackish ditches. Having a unique funnel shape contributes to the Severn Estuary having the second-highest intertidal range in the world. This tidal regime shapes organismal communities that are typical to extreme physical conditions, including a species-poor invertebrate community dominated by ragworms and lugworms. These form an essential feeding ground for passage and wintering waders and waterfowl.

#### SPA Qualifying Features<sup>10</sup>

3.2 This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

##### Over winter

- Bewick's Swan *Cygnus columbianus bewickii* - 280 individuals representing at least 4.0% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

3.3 This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

##### On passage

- Ringed Plover *Charadrius hiaticula*, 655 individuals representing at least 1.3% of the Europe/Northern Africa - wintering population (5 year peak mean 1991/2 - 1995/6)

##### Over winter

- Curlew *Numenius arquata* - 3,903 individuals representing at least 1.1% of the wintering Europe - breeding population (5 year peak mean 1991/2 - 1995/6)
- Dunlin *Calidris alpina alpina* - 44,624 individuals representing at least 3.2% of the wintering Northern Siberia/Europe/Western Africa population (5 year peak mean 1991/2 - 1995/6)
- Pintail *Anas acuta* - 599 individuals representing at least 1.0% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)
- Redshank *Tringa tetanus* - 2,330 individuals representing at least 1.6% of the wintering Eastern Atlantic wintering population (5 year peak mean 1991/2 - 1995/6)
- Shelduck *Tadorna tadorna* - 3,330 individuals representing at least 1.1% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

##### Assemblage qualification: A wetland of international importance.

The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

Over winter, the area regularly supports 93,986 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Gadwall *Anas strepera*, Shelduck *Tadorna tadorna*, Pintail *Anas acuta*, Dunlin *Calidris alpina alpina*, Curlew *Numenius arquata*, Redshank *Tringa totanus*, Bewick's Swan *Cygnus columbianus bewickii*, Wigeon *Anas penelope*, Lapwing *Vanellus vanellus*, Teal *Anas crecca*, Mallard *Anas platyrhynchos*,

<sup>10</sup> Available at: <http://publications.naturalengland.org.uk/publication/5601088380076032> [Accessed on the 26/01/2023]

Shoveler *Anas clypeata*, Pochard *Aythya ferina*, Tufted Duck *Aythya fuligula*, Grey Plover *Pluvialis squatarola*, White-fronted Goose *Anser albifrons albifrons*, Whimbrel *Numenius phaeopus*.

## Ramsar Qualifying Features<sup>11</sup>

3.4 The Severn Estuary is designated as a Ramsar site under 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 pSAC 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 *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla anguilla*. It is also of particular importance for migratory birds during spring and autumn.

### Criterion 5

Assemblages of international importance

Species with peak counts in winter:

70,919 waterfowl (5 year peak mean 1998/99 – 2002/03)

### Criterion 6

Species / populations occurring at levels of international importance

Qualifying species / populations (as identified at designation):

Species with peak counts in winter

- Tundra swan *Cygnus columbianus bewickii*; 229 individuals, representing an average of 2.8% of the GB population (5 year peak mean 1998/99 – 2002/03)
- Greater white-fronted goose *Anser albifrons*; 2,076 individuals, representing an average of 35.8% of the GB population (5 year peak mean for 1996/97 – 2000/01)
- Common shelduck *Tadorna tadorna*; 3,223 individuals, representing an average of 1% of the population (5 year peak mean 1998/99 – 2002/03)
- Gadwall *Anas strepera*; 241 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/99 – 2002/03)
- Dunlin *Calidris alpina*; 25,082 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/99 – 2002/03)

<sup>11</sup> Available at: <https://jncc.gov.uk/jncc-assets/RIS/UK11081.pdf> [Accessed on the 26/01/2023]

- Common redshank *Tringa tetanus*; 2,616 individuals, representing an average of 1% of the population (5 year peak mean 1998/99 – 2002/03)

Species / populations identified subsequent to designation for possible future consideration under criterion 6

Species regularly supported during the breeding season

- Lesser black-backed gull *Larus fuscus graellsii*; 4,167 apparently occupied nests, representing an average of 2.8% of the breeding population (Seabird 2000 Census)

Species with peak counts in spring / autumn

- Ringed plover *Charadrius hiaticula*; 740 individuals, representing an average of 1% of the population (5 year peak mean 1998/99 – 2002/03)

Species with peak counts in winter

- Eurasian teal *Anas crecca*; 4,456 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/99 – 2002/03)
- Northern pintail *Anas acuta*; 756 individuals, representing an average of 1.2% of the population (5 year peak mean 1998/99 – 2002/03)

## SPA Conservation Objectives<sup>12</sup>

- 3.5 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;
- 3.6 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.

## Threats / Pressures to Site Integrity<sup>13</sup>

- 3.7 The following threats and pressures to the integrity of the Severn Estuary SPA are identified in Natural England's Site Improvement Plan (SIP);
- Public access / disturbance
  - Physical modification
  - Impacts of development
  - Coastal squeeze
  - Change in land management
  - Changes in species distributions
  - Water pollution
  - Air pollution: Impact of atmospheric nitrogen deposition

<sup>12</sup> Available at: <http://publications.naturalengland.org.uk/publication/5601088380076032> [Accessed on the 26/01/2023]

<sup>13</sup> Available at: <http://publications.naturalengland.org.uk/publication/4590676519944192> [Accessed on the 26/01/2023]



- Marine consents and permits: Minerals and waste
- Fisheries: Recreational marine and estuarine
- Fisheries: Commercial marine and estuarine
- Invasive species
- Marine litter
- Marine pollution incidents

## Severn Estuary SAC

### Introduction

- 3.8 The Severn Estuary SAC is a 73,714.11ha large site encompassing tidal rivers / estuaries (99%) and salt marshes / salt pastures (1%). The site is designated for a range of habitats, including estuaries, mudflats and sandflats not covered by seawater at low tide, Atlantic salt meadows, subtidal sandbanks and reefs. Furthermore, its qualifying species include sea lamprey (an anadromous fish species), river lamprey and twaite shad. Intertidal mudflats and sandflats are submerged at high tide and exposed at low tide. Generally, they comprise three broad categories, including clean sands, muddy sands and muds. Clean sands are found primarily on open coasts and bays with strong wave action or tidal currents. Many invertebrates inhabiting clean sands are robust and include amphipod crustaceans (e.g. sandhoppers *Bathyporeia* spp.), polychaete worms and bivalve molluscs. Mudflats occur in more sheltered areas along the coastline, where substantial quantities of silt are deposited by rivers. Sediment tends to be more stable and communities are dominated by polychaete worms, bivalve molluscs and the mud snail *Hydrobia ulvae*. Mudflats tend to support higher biomass of invertebrates, often providing important food sources for waders and waterfowl (e.g. common shelduck, knot and dunlin).
- 3.9 Atlantic salt meadows develop when halophytic vegetation colonises soft intertidal sediments of mud and sand in sheltered estuaries. Typical communities form in the middle and upper reaches of saltmarshes where tidal inundation still occurs, but with limited frequency and duration. This habitat may comprise a wide range of different community types and can cover large areas, particularly where inland development is limited. Saltmarsh vegetation tends to be naturally species-poor in the lower reaches, often dominated by the common saltmarsh grass *Puccinellia maritima*. Towards the upper reaches, the vegetation becomes more diverse as it is dominated by herbs and red fescue *Festuca rubra*.

### Qualifying Features<sup>14</sup>

- 3.10 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*)
- 3.11 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
- 3.12 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*

<sup>14</sup> Available at: <https://sac.incc.gov.uk/site/UK0013030> [Accessed on the 27/01/2023]

## Conservation Objectives<sup>15</sup>

- 3.13 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;
- 3.14 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.

## Threats / Pressures to Site Integrity<sup>16</sup>

- 3.15 The following threats and pressures to the integrity of the Severn Estuary SAC are identified in Natural England's Site Improvement Plan (SIP):
- Public access / disturbance
  - Physical modification
  - Impacts of development
  - Coastal squeeze
  - Change in land management
  - Changes in species distributions
  - Water pollution
  - Air pollution: Impact of atmospheric nitrogen deposition
  - Marine consents and permits: Minerals and waste
  - Fisheries: Recreational marine and estuarine
  - Fisheries: Commercial marine and estuarine
  - Invasive species
  - Marine litter
  - Marine pollution incidents

# North Somerset & Mendip Bats SAC

## Introduction

- 3.16 The North Somerset & Mendip Bats SAC is a 555.93ha large site, encompassing broad-leaved deciduous woodland (30%), dry grassland / steppes (27.5%), heath / scrub (22.5%), mixed woodland (19%) and urban land (1%). The SAC is a composite site that is mainly located in the Mendip Hills National Character Area

<sup>15</sup> Available at: <http://publications.naturalengland.org.uk/publication/6081105098702848> [Accessed on the 27/01/2023]

<sup>16</sup> Available at: <http://publications.naturalengland.org.uk/publication/4590676519944192> [Accessed on the 26/01/2023]

in North Somerset. Habitat typology within the component parts is highly variable. One of the largest areas of ancient woodland lies in the former county of Avon, Cheddar Gorge and surrounding area. Caves, mines and buildings in this area are important in sustaining the SAC bat populations. The site supports 3% of the UK population of greater horseshoe bat and an internationally significant assemblage of lesser horseshoe bats. Qualifying habitats include ravine woodland and calcareous grassland, which are important as supporting habitats for bats.

- 3.17 The Cheddar Gorge and Wookey Hole areas support a wide range of semi-natural habitats, including semi-natural dry grassland. The principal community is CG2 *Festuca ovina* – *Avenula pratensis* grassland, which occurs on rock ledges and steep slopes with shallow limestone soil. A large number of rare plants are associated with limestone habitats, including dwarf mouse-ear *Cerastium pumilum*, Cheddar pink *Dianthus gratianopolitanus* and rock stonecrop *Sedum forsterianum*. Transitions to designated *Tilio-Acerion* forests are a typical feature of the Cheddar Gorge.

## Qualifying Features<sup>17</sup>

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

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (\* important orchid sites)
- *Tilio-Acerion* forests of slopes, screes and ravines (\* priority feature)

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

- Caves not open to the public

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

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

## Conservation Objectives<sup>18</sup>

- 3.21 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;

- 3.22 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.

## Threats / Pressures to Site Integrity<sup>19</sup>

- 3.23 The following threats and pressures to the integrity of the North Somerset & Mendip Bats SAC are identified in Natural England's SIP:

<sup>17</sup> Available at: <https://sac.incc.gov.uk/site/UK0030052> [Accessed on the 27/01/2023]

<sup>18</sup> Available at: <http://publications.naturalengland.org.uk/publication/6252034999189504> [Accessed on the 27/01/2023]

<sup>19</sup> Available at: <http://publications.naturalengland.org.uk/publication/6226153064890368> [Accessed on the 27/01/2023]

- Undergrazing
- Planning permission: General
- Change to site conditions
- Forestry and woodland management
- Disease
- Air pollution: Impact of atmospheric nitrogen deposition
- Loss of functionally linked land<sup>20</sup>

## Avon Gorge Woodlands SAC

### Introduction

- 3.24 The Avon Gorge Woodlands SAC is a 151.07ha large site, comprising broad-leaved deciduous woodland (70%), inland rocks / screes (10%), coniferous woodland (5%), mixed woodland (5%), heath / scrub (4%), dry grassland / steppes (4%) and humid / mesophile grassland (2%). The site is an important example of a *Tilio-Acerion* forest in south-west England, mainly including ash *Fraxinus excelsior*, wych elm *Ulmus glabra*, small-leaved lime *Tilia cordata* and some large-leaved lime *Tilia platyphyllos*. The habitat types present within the site are typical for a calcareous river gorge where inaccessibility has reduced human impact.
- 3.25 Ground flora communities include fern banks (particularly Hart's-tongue *Asplenium scolopendrium*, soft shield-fern *Polystichum setiferum* and buckler-ferns *Dryopteris* spp.), ramson *Allium ursinum*, dog's-mercury *Mercurialis perennis* and enchanter's-nightshade *Circaea lutetiana*. Small groves of yew *Taxus baccata* occur in some of the stonier situations. The site is also important for greater and lesser horseshoe bat populations, breeding peregrine falcon and raven, although none of these species are qualifying features of the SAC.

### Qualifying Features<sup>21</sup>

- 3.26 Annex I habitats that are a primary reason for selection of this site:
- *Tilio-Acerion* forests of slopes, screes and ravines (\* priority feature)
- 3.27 Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:
- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (\* important orchid sites)

### Conservation Objectives<sup>22</sup>

- 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
  - The structure and function (including typical species) of qualifying natural habitats, and
  - The supporting processes on which qualifying natural habitats rely.

<sup>20</sup> Available at <https://publications.naturalengland.org.uk/publication/6252034999189504> [Accessed on the 06/04/2023]

<sup>21</sup> Available at: <https://sac.jncc.gov.uk/site/UK0012734> [Accessed on the 27/01/2023]

<sup>22</sup> Available at: <http://publications.naturalengland.org.uk/publication/6740736611450880> [Accessed on the 27/01/2023]

## Threats / Pressures to Site Integrity<sup>23</sup>

3.30 The following threats and pressures to the integrity of the Avon Gorge Woodlands SAC are identified in Natural England's SIP:

- Invasive species
- Undergrazing
- Public access / disturbance
- Disease
- Changes in species distributions
- Air pollution: Impact of atmospheric nitrogen deposition

## Mendip Limestone Grasslands SAC

### Introduction

3.31 The Mendip Limestone Grasslands SAC is a 415.24ha large site, encompassing heath / scrub (45%), dry grassland / steppes (38%), broad-leaved deciduous woodland (10%) and inland rocks / screes (7%). Broadly, the SAC is comprised of three areas, including Brean Down, Uphill Cliff and Crook Peak to Shute Shelve Hill. All three sites lie on a Carboniferous Limestone ridge that underlies much of the Mendip Hills. The SAC supports the largest area of CG1 *Festuca ovina* – *Carlina vulgaris* grassland in the UK. Furthermore, CG2 *Festuca ovina* – *Avenula pratensis* grassland occurs in mosaic with CG1.

3.32 Several rare and scarce vascular plants are found within the site, including rock-rose *Helianthemum appenium*, Somerset hair-grass *Koeleria vallesiana* and honewort *Trinia glauca*. Furthermore, caves which form hibernacula for greater horseshoe bat are present within the site.

### Qualifying Features<sup>24</sup>

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

- Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (\* important orchid sites)

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

- European dry heaths
- Caves not open to the public
- *Tilio-Acerion* forests of slopes, screes and ravines (\* priority feature)

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

- Greater horseshoe bat *Rhinolophus ferrumequinum*

### Conservation Objectives<sup>25</sup>

3.36 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;

3.37 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;

<sup>23</sup> Available at: <http://publications.naturalengland.org.uk/publication/5021516609617920> [Accessed on the 27/01/2023]

<sup>24</sup> Available at: <https://sac.jncc.gov.uk/site/UK0030203> [Accessed on the 27/01/2023]

<sup>25</sup> Available at: <http://publications.naturalengland.org.uk/publication/6269364252704768> [Accessed on the 27/01/2023]

- 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.

## Threats / Pressures to Site Integrity<sup>26</sup>

3.38 The following threats and pressures to the integrity of the Mendip Limestone Grasslands SAC have been specified in Natural England's SIP:

- Inappropriate scrub control
- Change in land management
- Disease
- Air pollution: Impact of atmospheric nitrogen deposition

## Mendip Woodlands SAC

### Introduction

3.39 The Mendip Woodlands SAC is a 251.39ha large site, encompassing broad-leaved deciduous woodland (98.5%) and dry grassland / steppes (1.5%). The site comprises four individual woods in Somerset (Cheddar Wood, Ebbor Gorge, Rodney Stoke and Asham Wood), which are all located on the southern slope of the Mendip Hills National Character Area. Asham Wood and Ebbor Gorge are associated with limestone outcrops, whereas Cheddar Wood and Rodney Stoke lie on steep hill slopes. All four woodlands are dominated by ash *Fraxinus excelsior*, subordinate small-leaved lime *Tilia cordata*. Notable species within the ground flora communities include purple gromwell *Lithospermum purpurocaeruleum*, lily of the valley *Convallaria majalis* and wild daffodil *Narcissus pseudonarcissus*. Historically, all woodlands have been managed by coppicing, with some of them having reverted to high forest. Notably, the site is within the centre of the range of common dormouse, supporting a large population of this species.

### Qualifying Features<sup>27</sup>

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

- *Tilio-Acerion* forests of slopes, screes and ravines (\* priority species)

### Conservation Objectives<sup>28</sup>

3.41 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;

3.42 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

<sup>26</sup> Available at: <http://publications.naturalengland.org.uk/publication/4795484023554048> [Accessed on the 27/01/2023]

<sup>27</sup> Available at: <https://sac.jncc.gov.uk/site/UK0030048> [Accessed on the 27/01/2023]

<sup>28</sup> Available at: <http://publications.naturalengland.org.uk/publication/6243663101296640> [Accessed on the 27/01/2023]

- The supporting processes on which qualifying natural habitats rely.

## Threats / Pressures to Site Integrity<sup>29</sup>

3.43 The following threats and pressures to the integrity of the Mendip Woodlands SAC are specified in Natural England's SIP:

- Vehicles: Illicit
- Deer
- Disease
- Air pollution: Impact of atmospheric nitrogen deposition

## Chew Valley Lake SPA

### Introduction

3.44 The Chew Valley Lake SPA lies to the south of Bristol and is the largest artificial freshwater lake in south-west England. It is a large, shallow reservoir with fringing areas of reedbeds, carr woodland and neutral grassland. General water conditions are eutrophic (nutrient-rich) with sparse open-water plant communities. The open water and reservoir margins represent an important wintering habitat for waterfowl, particularly shoveler. This species relies on undisturbed open water with sufficient submerged and emergent vegetation to support their prey species. The population of shoveler within the SPA is seen in continuity with that of the nearby Blagdon Lake SSSI.

### Qualifying Features<sup>30</sup>

3.45 Qualifying individual species not listed in Annex I of the Wild Birds Directive (Article 4.2)

During the non-breeding season, the SPA regularly supports:

- Shoveler *Anas clypeata*

### Conservation Objectives<sup>31</sup>

3.46 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;

3.47 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.

## Threats / Pressures to Site Integrity<sup>32</sup>

3.48 The following threats and pressures to the integrity of the Chew Valley Lake SPA are specified in Natural England's SIP:

<sup>29</sup> Available at: <http://publications.naturalengland.org.uk/publication/6568821745778688> [Accessed on the 27/01/2023]

<sup>30</sup> Available at: <http://publications.naturalengland.org.uk/publication/5276555349590016> [Accessed on the 27/01/2023]

<sup>31</sup> Ibid.

<sup>32</sup> Available at: <http://publications.naturalengland.org.uk/publication/4517832196882432> [Accessed on the 27/01/2023]

- Hydrological changes
- Public access / disturbance

## Somerset Levels & Moors SPA / Ramsar

### Introduction

- 3.49 The Somerset Levels & Moors SPA / Ramsar encompasses 12 SSSIs distributed across the Somerset Levels and Moors floodplain, mainly of the Rivers Parrett and Tone to the south. It is a unique landscape in the UK that has achieved widespread recognition for its extensive flatness and frequent flooding. The landscape is dominated and shaped by water that flows through a complex network of watercourses, largely a relict of its long history of drainage for agriculture and grazing. Beef production is now the most common enterprise, but faces an uncertain future due to market pressures. Peat-cutting in the Brue Valley to the north of the floodplain has declined in recent years, with areas of former exploitation now reverting to biodiversity-rich wetland.
- 3.50 The SPA / Ramsar is a transitional landscape and its rivers drain to the Bristol Channel (second highest tidal range in the world). Ground levels in the inland moors can be up to 6m below peak tide levels. Over the centuries, a complex system of sea walls, elevated river banks and pumping stations developed to facilitate farming operations. More intensive farming has been enabled by pump-drainage, with negative impacts on wetland biodiversity.
- 3.51 The Somerset Levels & Moors SPA / Ramsar harbours the largest area of lowland wet grassland in England (21%). Vast flocks of migratory waterfowl arrive in winter and utilise the supporting habitats within the site. The site has year-round importance for breeding lapwing, curlew, redshank and snipe. Some wet meadows support more than 60 species of rare invertebrates, particularly important for the Ramsar designation. Twelve of the 17 constituent SSSIs have been classified as internationally important for their wintering wildfowl.

### SPA Qualifying Features<sup>33</sup>

- 3.52 Qualifying individual species listed in Annex I of the Wild Birds Directive (Article 4.1)

During the non-breeding season the SPA regularly supports:

- Bewick's swan *Cygnus columbianus bewickii*
- European golden plover *Pluvialis apricaria*

- 3.53 Qualifying individual species not listed in Annex I of the Wild Birds Directive (Article 4.2)

During the non-breeding season the SPA regularly supports:

- Eurasian teal *Anas crecca*
- Northern lapwing *Vanellus vanellus*

- 3.54 Qualifying assemblage of species (Article 4.2)

In winter the SPA regularly supports an assemblage of waterfowl of more than 20,000 birds. When the SPA was notified the 5-year peak mean for the five-year period from 1989/90 to 1993/94 was 58,093, comprising 41,442 waders and 16,651 wildfowl.

In addition to the Annex 1 and 2 species featured above (Bewick's Swan *Cygnus columbianus bewickii*, Golden Plover *Pluvialis apricaria*, Teal *Anas crecca* and Lapwing *Vanellus vanellus*), the assemblage included Gadwall *Anas strepera*, Wigeon *Anas penelope*, Shoveler *Anas clypeata*, Pintail *Anas acuta*, Snipe *Gallinago gallinago* and Whimbrel *Numenius phaeopus*.

Since notification there has been a substantial increase in numbers with a 5-year peak mean of 90,205 individuals in the period 2012/13 to 2016/17. The representation of species exceeding national and

<sup>33</sup> Available at: <http://publications.naturalengland.org.uk/publication/4598158654963712> [Accessed on the 27/01/2023]



international population thresholds in the assemblage has changed with eight species exceeding the international threshold (Golden Plover *Pluvialis apricaria*, Teal *Anas crecca*, Lapwing *Vanellus vanellus*, Gadwall *Anas strepera*, Wigeon *Anas penelope*, Shoveler *Anas clypeata*, Pintail *Anas acuta* and Mute Swan *Cygnus olor*), and five exceeding the national threshold (Bittern *Botaurus stellaris*, Little Egret *Egretta garzetta*, Ruff *Philomachus pugnax* and Green Sandpiper *Tringa ochropus*).

## Ramsar Qualifying Features<sup>34</sup>

3.55 The Somerset Levels & Moors are designated as a Ramsar under the following criteria:

### Ramsar criterion 2

Supports 17 species of British Red Data Book invertebrates.

### Ramsar criterion 5

Assemblages of international importance

Species with peak counts in winter

97,155 waterfowl (5 year peak mean 1998/99 – 2002/2003)

### Ramsar criterion 6

Species / populations occurring at levels of international importance

Species with peak counts in winter (identified at designation):

- Tundra swan *Cygnus columbianus bewickii*; 112 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/99 – 2002/03)
- Eurasian teal *Anas crecca*; 21,231 individuals, representing an average of 5.3% of the population (5 year peak mean 1998/99 – 2002/03)
- Northern lapwing *Vanellus vanellus*; 36,580 individuals, representing an average of 1% of the population (5 year peak mean 1998/99 – 2002/03)

Species with peak counts in winter (identified subsequent to designation for possible future consideration under criterion 6):

- Mute swan *Cygnus olor*; 842 individuals, representing an average of 2.2% of the population (5 year peak mean 1998/99 – 2002/03)
- Eurasian wigeon *Anas Penelope*; 25,759 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/99 – 2002/03)
- Northern pintail *Anas acuta*; 927 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/99 – 2002/03)
- Northern shoveler *Anas clypeata*; 1,094 individuals, representing an average of 2.7% of the population (5 year peak mean 1998/99 – 2002/03)

## SPA Conservation Objectives<sup>35</sup>

3.56 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;

3.57 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

<sup>34</sup> Available at: <https://jncc.gov.uk/jncc-assets/RIS/UK11064.pdf> [Accessed on the 27/01/2023]

<sup>35</sup> Ibid.

- 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.

## Threats / Pressure to Integrity of the SPA<sup>36</sup>

3.58 The following threats and pressures to the integrity of the Somerset Levels & Moors SPA are specified in Natural England's SIP;

- Drainage
- Inappropriate water levels
- Maintain and upgrade water management structures
- Change in land management
- Agricultural management practices
- Peat extraction
- Public access / disturbance
- Offsite habitat availability / management
- Nutrients (Phosphorous)<sup>37</sup>

3.59 North Somerset does not fall within the catchment area of the Somerset Levels and Moors SAC. Therefore, impacts on water quality and management can be excluded from further analysis in this HRA.

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<sup>36</sup> Available at: <http://publications.naturalengland.org.uk/publication/6561001356918784> [Accessed on the 27/01/2023]

<sup>37</sup> Available at: [SCC - Public - 1. water-quality-and-nutrient-neutrality-advice-letter-16-march-2022.pdf \(sharepoint.com\)](#) [Accessed on 13/04/2023]

## 4. Pathways of Impact

4.1 The following pathways of impact are considered relevant to the HRA of the North Somerset Local Plan:

- Recreational pressure and disturbance;
- Loss of Functionally Linked Habitat;
- Atmospheric Pollution.

4.2 The sections below set out an introduction to each impact pathway. For the purposes of HRA, Zones of Influence (Zoi) have been identified for each impact pathway. These are discussed below and summarised in Appendix C.

### Recreational Pressure and Disturbance

4.3 Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily by fear reactions or taking flight and the time they spend responding to disturbance is time that is not spent feeding (this will apply all year round)<sup>38</sup>. Disturbance therefore risks increasing energetic output while reducing energetic input, which can adversely affect the “condition” and ultimately survival of the birds. In addition, displacement of birds from one feeding site to others can increase the pressure on the resources available within the remaining sites, as they have to sustain a greater number of birds<sup>39</sup>. Moreover, the more time a breeding bird spends disturbed from its nest, the more its eggs are likely to cool and the more vulnerable they, or any nestlings, are to predators.

4.4 The potential for disturbance may be less in winter than in summer, in that there are often a smaller number of recreational users. In addition, the consequences of disturbance at a population level may be reduced because birds are not breeding. However, activity outside of the summer months can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages. Disturbance which results in abandonment of suitable feeding areas can have severe consequences for those birds involved and their ability to find alternative feeding areas. Several empirical studies have, through correlative analysis, demonstrated that out-of-season (October-March) recreational activity can result in quantifiable disturbance:

- Tuite et al<sup>40</sup> found that during periods of high recreational activity, bird numbers at Llangorse Lake decreased by 30% as the morning progressed, matching the increase in recreational activity towards midday. During periods of low recreational activity, however, no change in numbers was observed as the morning progressed. In addition, all species were found to spend less time in their ‘preferred zones’ (the areas of the lake used most in the absence of recreational activity) as recreational intensity increased;
- Underhill et al<sup>41</sup> counted waterfowl and all disturbance events on 54 water bodies within the South West London Water Bodies Special Protection Area and clearly correlated disturbance with a decrease in bird numbers at weekends in smaller sites and with the movement of birds within larger sites from disturbed to less disturbed areas;
- Evans & Warrington<sup>42</sup> found that on Sundays total water bird numbers (including shoveler and gadwall) were 19% higher on Stocker’s Lake LNR in Hertfordshire and attributed this to observed greater recreational activity on surrounding water bodies at weekends relative to weekdays displacing birds

<sup>38</sup> Riddington, R. et al. 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279

<sup>39</sup> Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72

<sup>40</sup> Tuite, C. H., Owen, M. & Paynter, D. 1983. Interaction between wildfowl and recreation at Llangorse Lake and Talybont Reservoir, South Wales. *Wildfowl* 34: 48-63

<sup>41</sup> Underhill, M.C. et al. 1993. Use of Waterbodies in South West London by Waterfowl. An Investigation of the Factors Affecting Distribution, Abundance and Community Structure. Report to Thames Water Utilities Ltd. and English Nature. Wetlands Advisory Service, Slimbridge

<sup>42</sup> Evans, D.M. & Warrington, S. 1997. The effects of recreational disturbance on wintering waterbirds on a mature gravel pitlake near London. *International Journal of Environmental Studies* 53: 167-182

into the LNR. However, in this study, recreational activity was not quantified in detail, nor were individual recreational activities evaluated separately; and

- Tuite et al<sup>43</sup> used a large (379 site), long-term (10-year) dataset (September – March species counts) to correlate seasonal changes in wildfowl abundance with the presence of various recreational activities. They found that shoveler was one of the most sensitive species to disturbance. The greatest impact on wildfowl numbers during these months was associated with sailing/windsurfing and rowing.
- 4.5 More recent research has established that human activity including recreational activity can be linked to disturbance of wintering waterfowl populations<sup>44 45</sup>.
- 4.6 Human activity can affect birds either directly (e.g. by causing them to flee) or indirectly (e.g. by damaging their habitat). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to behavioural changes (e.g. alterations in feeding behaviour, avoidance of certain areas etc.) and physiological changes (e.g. an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects by altering the balance between immigration/birth and emigration/death<sup>46</sup>.
- 4.7 The degree of impact that varying levels of noise will have on different species of bird is poorly understood except that a number of studies have found that an increase in traffic levels on roads does lead to a reduction in the bird abundance within adjacent hedgerows - Reijnen et al (1995) examined the distribution of 43 passerine species (i.e. 'songbirds'), of which 60% had a lower density closer to the roadside than further away. By controlling vehicle usage, they also found that the density generally was lower along busier roads than quieter roads<sup>47</sup>.
- 4.8 A recent study on recreational disturbance on the Humber<sup>48</sup> assesses different types of noise disturbance on waterfowl referring to studies relating to aircraft (see Drewitt 1999<sup>49</sup>), traffic (Reijnen, Foppen, & Veenbaas 1997)<sup>50</sup>, dogs (Lord, Waas, & Innes 1997<sup>51</sup>; Banks & Bryant 2007<sup>52</sup>) and machinery (Delaney et al. 1999; Tempel & Gutierrez 2003). These studies identified that there is still relatively little work on the effects of different types of water based craft and the impacts from jet skis, kite surfers, windsurfers etc. (see Kirby et al. 2004<sup>53</sup> for a review). Some types of disturbance are clearly likely to invoke different responses. In very general terms, both distance from the source of disturbance and the scale of the disturbance (noise level, group size) will both influence the response (Delaney et al. 1999<sup>54</sup>; Beale & Monaghan 2005<sup>55</sup>). On UK estuaries and coastal sites, a review of WeBS data showed that, among the volunteer WeBS surveyors, driving of motor vehicles and shooting were the two activities most perceived to cause disturbance (Robinson & Pollitt 2002)<sup>56</sup>.
- 4.9 Other disturbing activities are on a continuum. The most disturbing activities are likely to be those that involve irregular, infrequent, unpredictable loud noise events, movement or vibration of long duration. Birds are least likely to be disturbed by activities that involve regular, frequent, predictable, quiet patterns of sound

<sup>43</sup> Tuite, C.H., Hanson, P.R. & Owen, M. 1984. Some ecological factors affecting winter wildfowl distribution on inland waters in England and Wales and the influence of water-based recreation. *Journal of Applied Ecology* 21: 41-62

<sup>44</sup> Footprint Ecology. 2010. Recreational Disturbance to Birds on the Humber Estuary

<sup>45</sup> Footprint Ecology, Jonathan Cox Associates & Bournemouth University. 2010. Solent disturbance and mitigation project – various reports.

<sup>46</sup> Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

<sup>47</sup> Reijnen, R. et al. 1995. The effects of car traffic on breeding bird populations in woodland. III. Reduction of density in relation to the proximity of main roads. *Journal of Applied Ecology* 32: 187-202

<sup>48</sup> Helen Fearnley Durwyn Liley and Katie Cruickshanks (2012) Results of Recreational Visitor Survey across the Humber Estuary produced by Footprint Ecology

<sup>49</sup> Drewitt, A. (1999) Disturbance effects of aircraft on birds. English Nature, Peterborough.

<sup>50</sup> Reijnen, R., Foppen, R. & Veenbaas, G. (1997) Disturbance by traffic of breeding birds: evaluation of the effect and considerations in planning and managing road corridors. *Biodiversity and Conservation*, 6, 567-581.

<sup>51</sup> Lord, A., Waas, J.R. & Innes, J. (1997) Effects of human activity on the behaviour of northern New Zealand dotterel *Charadrius obscurus aequilonius* chicks. *Biological Conservation*, 82,15-20.

<sup>52</sup> Banks, P.B. & Bryant, J.V. (2007) Four-legged friend of foe? Dog-walking displaces native birds from natural areas. *Biology Letters*, 3, 611-613.

<sup>53</sup> Kirby, J.S., Clee, C. & Seager, V. (1993) Impact and extent of recreational disturbance to wader roosts on the Dee estuary: some preliminary results. *Wader Study Group Bulletin*, 68, 53-58.

<sup>54</sup> Delaney, D.K., Grubb, T.G., Beier, P., Pater, L.L.M. & Reiser, H. (1999) Effects of Helicopter Noise on Mexican Spotted Owls. *The Journal of Wildlife Management*, 63, 60-76.

<sup>55</sup> Beale, C.M. & Monaghan, P. (2005) Modeling the Effects of Limiting the Number of Visitors on Failure Rates of Seabird Nests. *Conservation Biology*, 19, 2015-2019.

<sup>56</sup> Robinson, J.A. & Pollitt, M.S. (2002) Sources and extent of human disturbance to waterbirds in the UK: an analysis of Wetland Bird Survey data, 1995/96 to 1998/99: Less than 32% of counters record disturbance at their site, with differences in causes between coastal and inland sites. *Bird Study*, 49, 205.

or movement or minimal vibration. The further any activity is from the birds, the less likely it is to result in disturbance.

4.10 Recreational catchments vary from Habitat site to Habitat site but for catchments for inland sites are often in the range of 2-7km while those for coastal sites are often larger. Various research reports have provided compelling links between changes in housing and access levels. The results of studies compiling visitor survey data for a range of Habitat sites<sup>57</sup> demonstrate that more housing consistently means more visitors to protected sites, across most habitats. This is particularly the case for on-foot visitors that originate from housing within 1.5 km, highlighting that additional housing development in close proximity to protected sites is likely to significantly increase recreation pressure. For those sites with car parks, levels of housing within 15 km of protected sites were also a significant predictor of visitor pressure but depended on habitat type.

4.11 In North Somerset, the Severn Estuary SAC/SPA/Ramsar site is likely to have the largest recreational catchment. There has been detailed visitor survey work undertaken, and recreation mitigation produced in some authorities for, the Severn Estuary SPA/SAC:

- The Severn Estuary Partnership<sup>58</sup> and the State of the Severn Estuary Report (2011)<sup>59</sup>
- 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)<sup>60</sup>
  - Identification of wintering waterfowl roosts in the Severn Estuary SPA/SAC and Ramsar site; Phases 2 and 3 (RP02366)<sup>61</sup>
  - Identification Of Wintering Waterfowl High Tide Roosts On The Severn Estuary SSSI/SPA Phase 4 (Gloucestershire, With Part Of South Gloucestershire) (RP02966)<sup>62</sup>
- Southgate, J. and Colebourn, K. (2016). Severn Estuary (Stroud District) Visitor Survey Report. Report for Stroud District Council. Ecological Planning & Research, Winchester<sup>63</sup>.
- 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 Council<sup>64</sup>.
- The A Forgotten Landscape high-tide roost monitoring project report 2019<sup>65</sup>, which assessed disturbance to high tide roosts along the South Gloucestershire section of the Severn Estuary.

4.12 For this site, therefore, a range of visitor surveys have been undertaken by different local councils including Lydney, Stroud District and unpublished survey work by AECOM for Monmouthshire and Torfaen Councils in Wales. The Lydney survey indicated that the visit patterns in the Severn Estuary SAC, particularly those of dog walkers, walker and joggers, highlight that visitors tend to live very close to the SAC. For example, dog walkers travelled a median distance of 2.3km. The Stroud visitor survey identified that the 75<sup>th</sup> percentile for Stroud residents was 7.7km (i.e. 75% of visitors living in Stroud lived within 7.7km of the SAC/SPA/Ramsar site). The emerging surveys for Monmouthshire and Torfaen are identifying a core recreational catchment for residents of those authorities of 6.8km. There have therefore been numerous visitor surveys undertaken bespoke to the Severn Estuary European sites.

One notable aspect of the various surveys undertaken is that the core recreational catchments for this single European site, even though the surveys have been undertaken for different local councils and involve surveys of different parts of the SAC/SPA, have a broad consistency of c. 7km for the zone within which 75% of visitors derive. This is useful since it is standard practice when Habitat sites are involved for the affected local councils to agree on an applicable core catchment rather than each authority setting its own

<sup>57</sup> Weitowitz D.C., Panter C., Hoskin R. & Liley D. 2019. The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology* 5. [effect of urban development on visitor numbers to nearby protected nature conservation sites | Journal of Urban Ecology | Oxford Academic \(oup.com\)](#)

<sup>58</sup> Available at: [Severn Estuary Partnership](#). [Accessed 29/03/2023]

<sup>59</sup> Available at: [SOSER.pdf \(severnestuariespartnership.org.uk\)](#) [Accessed 29/03/2023]

<sup>60</sup> Available at: [Identification of wintering waterfowl high tide roosts on the Severn Estuary SSSI/SPA \(Brean Down to Clevedon\) 2015 - RP02262 \(naturalengland.org.uk\)](#) [Accessed 10/10/2023]

<sup>61</sup> Available at: [Identification of wintering waterfowl roosts in the Severn Estuary SPA/SAC and Ramsar site; Phases 2 and 3 - RP02366 \(naturalengland.org.uk\)](#) [Accessed 10/10/2023]

<sup>62</sup> Available at: [Identification Of Wintering Waterfowl High Tide Roosts On The Severn Estuary SSSI/SPA Phase 4 \(Gloucestershire, With Part Of South Gloucestershire\) - RP02966 \(naturalengland.org.uk\)](#) [Accessed 10/10/2023]

<sup>63</sup> Available at: [severnestuariesvs\\_report\\_15581c\\_final\\_060616.pdf \(stroud.gov.uk\)](#) [Accessed 29/03/2023]

<sup>64</sup> Available at: [Liley et al 2017 Lydney Severn Estuary Visitor Survey and Recreation Strategy.pdf \(footprint-ecology.co.uk\)](#) [Accessed 29/03/2023]

<sup>65</sup> Available at: [CHR-report-without-appendices.pdf \(aforgottenlandscape.org.uk\)](#) [Accessed 10/10/2023]

core catchment. Since it is typical to draw the Zol or core catchment around the 75<sup>th</sup> percentile and Severn Estuary SAC/SPA/Ramsar is likely to have the largest Zol of any Habitat site in the area, a 7km buffer for the Severn Estuary SAC/SPA and would be consistent with approaches being taken by other authorities around the Severn Estuary. Bespoke Severn Estuary visitor surveys for North Somerset planned for winter 2023-2024 will confirm the core catchment for North Somerset, although it is expected to be similar to the numerous surveys listed above and already undertaken in the adjacent districts. .

- 4.13 Chew Valley Lake is owned and managed by Bristol Water. Recreational activities on the lake include sailing and angling. However, the sailing is via membership at the Chew Valley Lake Sailing Club, and angling is managed by Bristol Water Fisheries. The yacht club is proactive in terms of minimising risks and mindful of the site sensitivities. Moreover, recreation activities are well managed at the site, for example many walkers use a well-established gravel path around part of the lake, there are specific bird hides for bird watching and picnic areas. A 7km Zol can be considered precautionary for Chew Valley Lake SPA. This matches well with the Zol identified for many inland (i.e. not coastal) Habitat sites across England where a relatively consistent core catchment of 4-7km is often identified. In general, few inland Habitat sites have significantly larger catchments except where they form a major regional showpiece site such as New Forest SAC or Cannock Chase SAC.
- 4.14 As well as disturbance of SPA birds, physical damage to habitats is of relevance. This applies to the SAC interest features of Severn Estuary SAC and Ramsar site but also to the SAC interest features of Avon Gorge Woodlands SAC. Most types of terrestrial Habitat site can be affected by trampling, which in turn causes soil compaction and erosion:
- Wilson & Seney (1994)<sup>66</sup> examined the degree of track erosion caused by hikers, motorcycles, horses and cyclists from 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
  - Cole et al (1995a, b)<sup>67</sup> conducted experimental off-track trampling in 18 closed forests, dwarf scrub and meadow & grassland communities (each tramped between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered, although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphological characteristics were found to explain more variation in response between different vegetation types than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. Cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.
  - Cole (1995c)<sup>68</sup> conducted a follow-up study (in 4 vegetation types) in which shoe type (trainers or walking boots) and trampler weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier trampers caused a greater reduction in vegetation height than lighter trampers, but there was no difference in effect on cover.
  - Cole & Spildie (1998)<sup>69</sup> experimentally compared the effects of off-track trampling by hiker and horse (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse traffic was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance but recovered rapidly. Higher trampling intensities caused more disturbance.

<sup>66</sup> Wilson, J.P. & J.P. Seney. 1994. Erosional impact of hikers, horses, motorcycles and off road bicycles on mountain trails in Montana. *Mountain Research and Development* 14:77-88

<sup>67</sup> Cole, D.N. 1995a. Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. *Journal of Applied Ecology* 32: 203-214

Cole, D.N. 1995b. Experimental trampling of vegetation. II. Predictors of resistance and resilience. *Journal of Applied Ecology* 32: 215-224

<sup>68</sup> Cole, D.N. 1995c. Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.

<sup>69</sup> Cole, D.N., Spildie, D.R. 1998. Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* 53: 61-71

- 4.15 Walkers with dogs contribute to pressure on sites through nutrient enrichment via dog fouling and also have potential to cause greater disturbance to fauna as dogs are less likely to keep to marked footpaths and also tend to move in a more erratic manner. Motorcycle scrambling and off-road vehicle use can cause more serious erosion, as well as disturbance to sensitive species.
- 4.16 The qualifying woodland and grassland habitats of Avon Gorge Woodlands SAC are sensitive to legal public access as well as illegal recreation pressures (e.g. vandalism, squatting, off route mountain biking). Negative effects range from overall visitor pressure to vandalism due to the very high level of public access to the site. The Site Improvement Plan<sup>23</sup> states that future close monitoring and security work is needed involving various parties, to ensure the site remains protected. 'Legal' or permitted access needs close monitoring and engagement to ensure that no damage to sensitive SAC habitats occurs.
- 4.17 Recreational pressure was confirmed as being a problem for the Avon Gorge Woodlands SAC associated with the legal and illegal activities noted above but also specifically mentioned were:
- commercial dog walking (including dog fouling and bothering cattle/goats – grazing helps to increase floral diversity of the calcareous grassland);
  - mountain biking on the Leigh Woods side of the SAC is considered to cause the most damage;
  - unauthorised access to sensitive habitats, such as trampling in areas of calcareous grassland and damage to Sorbus trees, e.g. by rough sleepers, foragers, sightseers and some rock climbers (not the organised groups);
  - fires which have caused damage to veteran trees and pose a risk to areas of calcareous grassland and the Sorbus trees; and
  - cars parking outside of designated areas (leading to erosion, soil compaction and damage to plant species).
- 4.18 The main types of impact legal and illegal recreational activities are having on the Avon Gorge Woodlands SAC qualifying habitats are:
- The large numbers of people accessing the site leads to erosion of calcareous grassland, which has degraded to bare mud in some places. This includes more sensitive areas which are not publicly accessible but where trespassers often climb over the fences.
  - Ancient woodland indicator species impacted from erosion and soil compaction.
  - Rare and protected plant species are impacted by foraging and trampling from walkers and bikes.
  - Damage to the Sorbus trees.
  - Maintaining cattle and goat grazing which helps to increase floral diversity of the calcareous grassland can be challenging due to disturbance and attack (by dogs off leads).
  - Routes were formalised to try and reduce impacts but people often make their own paths ('desire lines') which can cause damage.
- 4.19 Timing of recreational pressures varies between types of activities, but is generally greatest on:
- Weekdays – dog walkers (including commercial).
  - Weekends and school holidays – biking and most activities generally higher.
  - Summer/overnight – camping/fires.
  - Summer, holidays/weekends – illegal car parking when overspill from designated areas. Also, after 9pm as car park is shut.
  - Autumn and winter are considered the busiest periods for the Leigh Woods part of the SAC as people go for more walks. In the summer Leigh Woods is quieter as many people go to the beach or more exposed areas like the Downs. Pressures from mountain biking are worse in the winter due to the soft mud.
  - The Bristol side of the SAC is busiest at weekends and in the summer. Pressures also increase during events, such as the Balloon Fiesta.
- 4.20 A 7km ZoI can be considered precautionary for Avon Gorge Woodlands SAC. This matches well with the ZoI identified for many inland (i.e. not coastal) Habitat sites across England where a relatively consistent core catchment of 4-7km is often identified, as highlighted earlier in this Section with regards to Chew Valley

Lake SAC. However, North Somerset Council is in discussions with Bristol City Council regarding commissioning a bespoke visitor survey for Avon Gorge Woodlands SAC which will not only confirm the recreational catchment but also inform the development of recreation mitigation measures.

## Loss of Functionally Linked Habitat

4.21 While most Habitat sites have been geographically defined in order to encompass the key features that are necessary for coherence of their structure and function, this is not the case for all such sites. Due to the highly mobile nature of waterfowl, it is inevitable that areas of habitat of crucial importance to the maintenance of their populations are outside the physical limits of the Habitat site for which they are an interest feature. However, this area will still be essential for maintenance of the structure and function of the interest feature for which the site was designated and land use plans that may affect this land should still therefore be subject to further assessment. This has been underlined by a recent European Court of Justice ruling (C-461/17, known as the Holohan ruling<sup>70</sup>) which in paragraphs 37 to 40 confirms the need for an appropriate assessment to consider the implications of a plan or project on habitats and species outside the Habitat site boundary provided that those implications are liable to affect the conservation objectives of the site.

## Bat Sites

4.22 For Somerset & Mendip Bats 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.

4.23 The following are key evidence sources in relation to functionally linked land at the bat SAC sites:

- Mitigation strategies devised for the North Somerset & Mendip Bats SAC, such as that by North Somerset Council<sup>71</sup>. The 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. Functionally linked habitat bands around greater horseshoe bats maternity roosts extend up to 8km (Band C) and 4.1km (Band C) around lesser horseshoe bats maternity roosts. It is important to note that the 8km and 4km distances from which Band C is derived is measured not purely from the SAC boundary but from satellite roosts that are functionally linked to the SAC. As such Zone C extends more than 8km from the SAC itself in some places. Other roosts (e.g. hibernation) for greater horseshoe bats Band C extends up to 2.4km from the roost and for lesser horseshoe bats Band C extends up to 1.3km from the roost. Greater horseshoe bats forage from roosts at a greater distance than lesser horseshoes. However, although it is recognised that greater horseshoe bats mostly forage within 2.2 km of a maternity roost (within Band A) and this will correspond with the habitats of most importance for the SAC population, they can also make regular foraging trips up to 8km and therefore habitats within this band must also be considered to be of value when considering placement of development.

4.24 Note that the SPD is currently in the process of being updated, using data produced by the Council in conjunction with the University of West of England BatLab. The current SPD works on consultation zones as above but the new modelling from BatLab could be used to refine these zones.

4.25 The area of greatest bat activity surrounding a roost is defined as the Core Sustenance Zone (CSZ)<sup>72</sup>. This term refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost.

<sup>70</sup> The Holohan ruling also requires all the interest features of the Habitat sites discussed to be catalogued (i.e. listed) in the HRA. That is the purpose of Appendix B.

<sup>71</sup> <https://www.n-somerset.gov.uk/sites/default/files/2020-02/NSC%20and%20Mendip%20Bats%20SAC%20guidance%20-%20supplementary%20planning%20document.pdf> [accessed 29/03/2023]

<sup>72</sup> BCT (2020) Core Sustenance Zones and habitats of importance for designing Biodiversity Net Gain for bats. Bat Conservation Trust, London. <https://www.bats.org.uk/resources/guidance-for-professionals/bat-species-core-sustenance-zones-and-habitats-for-biodiversity-net-gain> [Accessed on the 29/03/23]



Horseshoe bat species use commuting corridors along linear landscape features and forage in permanent pasture and woodland. The Bat Conservation Trust identifies a weighted average CSZ of 3km for greater horseshoe bats<sup>73</sup> based on weighted averages from four studies. However, confidence in this zone size is described in the guidance as Moderate because the calculation is based on a reasonable sample size from multiple colonies and studies but is rounded down from weighted average. Other radio-tracking research on greater horseshoe bats has shown that they make longer foraging trips foraging from their roost sites than lesser horseshoe bats, up to 9-10km from their roost<sup>74 75</sup> and other studies<sup>76</sup> that identify greater horseshoe bats have shown to have a maximum home range of up to 8km from a roost.

- 4.26 Given the somewhat conflicting evidence, on balance an 8km zone would be reasonable to define the area of greatest importance for a greater horseshoe colony, being precautionary (compared to the CSZ approach) but without trying to encapsulate every area that might be visited by greater horseshoe bats associated with a given SAC. The use of such a zone would not mean that greater horseshoe bat habitat more than 8km from the SAC (or from an important satellite roost) did not also need preserving, but more distant habitat could be dealt with as part of the Ecological Impact Assessment process for any planning application since bats are protected species and material considerations in the planning process wherever they are found.
- 4.27 Generally, lesser horseshoe bats forage between 2 and 3km from their roost but they have been observed to range up to 4km in their nightly foraging trips<sup>77</sup>. The Bat Conservation Trust identifies a weighted average CSZ of 2km for lesser horseshoe bats. Confidence in this zone size is described in the guidance as good, because the calculation is based on a reasonable sample size from multiple colonies and studies. As a result, 4km is a reasonable precautionary distance. The use of a 4km zone would also identify the area within which positive habitat creation and enhancement should be targeted. The use of such a zone would not mean that lesser horseshoe bat habitat more than 4km from the SAC did not also need preserving, but more distant habitat could be dealt with as part of the Ecological Impact Assessment process for any planning application since bats are protected species and material considerations in the planning process wherever they are found.

## Avian Sites

- 4.28 Natural England Impact Risk Zones (IRZ) 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
- 4.29 This identifies the typical distances that wintering waterfowl will travel from their SPAs to forage. Relevant IRZs are identified as follows:

**Table 2. Natural England Impact Risk Zones for Designated Bird Features**

Assemblage	Impact Risk Zone (foraging distance)
Wintering birds (except wintertime 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 2km
Wintering lapwing and golden plover	Maximum foraging distance is 15-20km.

<sup>73</sup> Schofield H.W. 2008. The Lesser Horseshoe Bat Conservation Handbook.

<sup>74</sup> Billington G. 2008. Radio-tracking Study of Greater Horseshoe Bats at Dean Hall, Littledean, Cinderford. Natural England Commissioned Report NERR012.

<sup>75</sup> Billington G. 2009. Radio Tracking Study of Greater Horseshoe Bats at Dean Hall, Littledean, Cinderford. Natural England Commissioned Report. NECR021.

<sup>76</sup> Billington, G. 2003. Radio tracking study of Greater Horseshoe bats at Buckfastleigh Caves Site of Special Scientific Interest: English Nature Research Report no. 573. Peterborough: English Nature.

Billington, G. 2001. Radio tracking study of Greater Horseshoe bats at Brockley Hall Stables Site of Special Scientific Interest, May – August 2001. English Nature Research Report No. 442. Peterborough: English Nature

<sup>77</sup> Schofield H.W. 2008. The Lesser Horseshoe Bat Conservation Handbook.

Golden plover can forage up to 15km from a roost site within a protected site. Lapwing can also forage similar 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.

<p>Wintering white-fronted goose, greylag goose, Bewick's swan, whooper swan &amp; wintering bean goose</p>	<p>Maximum foraging distance is 10km. 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. The IRZ is based on GIS distribution records of feeding pink-footed geese from a study undertaken for Natural England by the Wildfowl &amp; 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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4.30 The aforementioned Natural England document further identifies that for SSSIs designated for wintering waterfowl and waders (other than golden plover and lapwing) a maximum of 2km is appropriate for the identification of potential functionally-linked land for development with the exception of wind energy (3km) and airports (10km). Chew Valley Lake SPA is only designated for shoveler, while Severn Estuary SPA/Ramsar is designated for Bewick's swan, shelduck, gadwall, dunlin, redshank, and greater white-fronted goose. It is also designated for its non-breeding waterfowl assemblage, but the Regulation 33 advice does not mention either golden plover or lapwing in the list of assemblage species. Therefore, it is reasonable (and precautionary) to use 4km as a Zol for this impact pathway.

## Atmospheric Pollution

4.31 The main pollutants of concern for Habitat sites are oxides of nitrogen (NO<sub>x</sub>), ammonia (NH<sub>3</sub>) and sulphur dioxide (SO<sub>2</sub>). Other pollutants that are of relevant to human health (e.g. particulates such as PM<sub>10</sub>) are not relevant to impacts on ecological receptors. NO<sub>x</sub> can have a directly toxic effect upon vegetation. In addition, greater NO<sub>x</sub> or ammonia concentrations within the atmosphere will lead to greater rates of nitrogen deposition to soils. An increase in the deposition of nitrogen from the atmosphere to soils is generally regarded to lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats.

**Table 3. Main sources and effects of air pollutants on habitats and species**

Pollutant	Source	Effects on habitats and species
Acid deposition	SO <sub>2</sub> , NO <sub>x</sub> and ammonia all contribute to acid deposition. Although future trends in Sulphur (S) emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, it is likely that increased Nitrogen (N) emissions may cancel out any gains produced by reduced S levels.	Can affect habitats and species through both wet (acid rain) and dry deposition. Some sites will be more at risk than others depending on soil type, bed rock geology, weathering rate and buffering capacity.
Ammonia (NH <sub>3</sub> )	Ammonia is released following decomposition and volatilisation of animal wastes. It is a naturally occurring trace gas, but levels have increased considerably with expansion in numbers of agricultural livestock. Ammonia reacts with acid pollutants such as the products of SO <sub>2</sub> and NO <sub>x</sub> emissions to produce fine ammonium (NH <sub>4</sub> <sup>+</sup> ) containing aerosol which may be transferred much longer distances (can therefore be a significant trans-boundary issue.)	Adverse effects are as a result of nitrogen deposition leading to eutrophication. As emissions mostly occur at ground level in the rural environment and NH <sub>3</sub> is rapidly deposited, some of the most acute problems of NH <sub>3</sub> deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides NO <sub>x</sub>	Nitrogen oxides are mostly produced in combustion processes. About one quarter of the UK's emissions are from power stations, one-half from motor vehicles, and the rest from other industrial and domestic combustion processes.	Deposition of nitrogen compounds (nitrates (NO <sub>3</sub> ), nitrogen dioxide (NO <sub>2</sub> ) and nitric acid (HNO <sub>3</sub> )) can lead to both soil and freshwater acidification. In addition, NO <sub>x</sub> can cause eutrophication of soils and water. This alters the species composition of plant communities and can eliminate sensitive species.
Nitrogen (N) deposition	The pollutants that contribute to nitrogen deposition derive mainly from NO <sub>x</sub> and NH <sub>3</sub>	Species-rich plant communities with relatively high proportions of slow-growing perennial

emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication. species and bryophytes are most at risk from N eutrophication, due to its promotion of competitive and invasive species which can respond readily to elevated levels of N. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.

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Ozone (O <sub>3</sub> )	A secondary pollutant generated by photochemical reactions from NO <sub>x</sub> and volatile organic compounds (VOCs). These are mainly released by the combustion of fossil fuels. The increase in combustion of fossil fuels in the UK has led to a large increase in background ozone concentration. Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	Concentrations of O <sub>3</sub> above 40 ppb can be toxic to humans and wildlife, and can affect buildings. Increased ozone concentrations may lead to a reduction in growth of agricultural crops, decreased forest production and altered species composition in semi-natural plant communities.
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Sulphur Dioxide SO <sub>2</sub>	Main sources of SO <sub>2</sub> emissions are electricity generation, industry and domestic fuel combustion. May also arise from shipping and increased atmospheric concentrations in busy ports. Total SO <sub>2</sub> emissions have decreased substantially in the UK since the 1980s.	Wet and dry deposition of SO <sub>2</sub> acidifies soils and freshwater, and alters the species composition of plant and associated animal communities. The significance of impacts depends on levels of deposition and the buffering capacity of soils.
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- 4.32 Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil as well as (particularly on a local scale) shipping.
- 4.33 Ammonia emissions are dominated by agriculture, with some chemical processes also making notable contributions. As such, it is unlikely that material increases in SO<sub>2</sub> or NH<sub>3</sub> emissions will be associated with Local Plans. NO<sub>x</sub> emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). Within a 'typical' housing development, by far the largest contribution to NO<sub>x</sub> (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison<sup>78</sup>. Emissions of NO<sub>x</sub> could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of the Local Plan.
- 4.34 According to the World Health Organisation, the critical NO<sub>x</sub> concentration (critical threshold) for the protection of vegetation is 30 µgm<sup>-3</sup>; the threshold for sulphur dioxide is 20 µgm<sup>-3</sup>. In addition, ecological studies have determined "critical loads"<sup>79</sup> of atmospheric nitrogen deposition (that is, NO<sub>x</sub> combined with ammonia NH<sub>3</sub>). These are bespoke to particular habitats and are available on the Air Pollution Information System [apis.ac.uk](http://apis.ac.uk).
- 4.35 According to the Department of Transport's Transport Analysis Guidance, "*Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant*"<sup>80</sup>. This is because traffic exhausts are situated only a few inches above the ground and are horizontal to it, such that the vast majority of emitted pollutants are never dispersed far and are very quickly deposited. This distance is also related to the mix of the exhaust gases, the small dimension of the exhausts and the velocity of the exhaust gases leaving the exhaust.

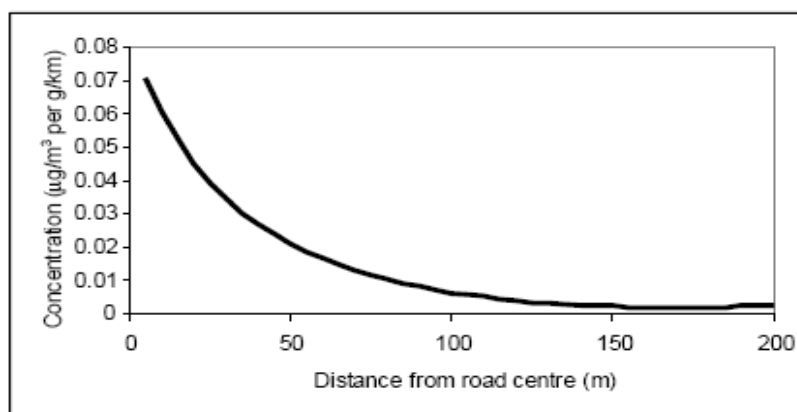
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<sup>78</sup> Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. <http://www.airquality.co.uk/archive/index.php>

<sup>79</sup> The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur

<sup>80</sup> TAG unit A3 environmental impact appraisal ([publishing.service.gov.uk](http://publishing.service.gov.uk)) [Accessed 10/10/2023]

**Plate 4: Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT<sup>80</sup>)**



4.36 This is therefore the distance that has been used throughout this HRA in order to determine whether Habitat sites are likely to be significantly affected by traffic generated by development under the NSLP.

## 5. Screening for Likely Significant Effects (LSEs)

5.1 The table in Appendix B provides the full Test of Likely Significant Effects for each Policy of the NSLP.

5.2 Of the 94 NSLP Policies and 8 Schedules, 15 policies and five schedules were considered to have the potential to result in likely significant effects either alone or in combination with other plans and projects;

- SP7: Green Belt
- SP8: Housing
- SP9: Employment
- LP1: Strategic location: Wolvershill (north of Banwell)
- LP2: Housing, employment and mixed use allocations
- LP3: Educational, sporting, leisure and community use allocations
- LP11: Royal Portbury Dock
- LP13: Preferred area for mineral working – land at Hyatts Wood Farm, south of Stancombe Quarry
- LP14: Aea of search for minerals working – land at Downside Farm, south of Freemans Quarry
- LP16: University of Bristol site in Langford
- LP17: Wyndham Way
- DP22: Visitor attractions
- DP23: Visitor accommodation
- DP44: Gypsies, travellers and travelling showpeople
- Schedule 1: Proposed large sites for residential development (LP2)
- Schedule 2: Proposed employment sites (LP2)
- Schedule 4: Proposed community facilities (LP3)
- Schedule 8: Gypsy and traveller sites (DP44)

5.3 Policy LP8 (Transport Infrastructure) and associated Schedule 7 were screened out of this HRA. Although this policy mentions 'allocation' the supporting text confirms that 'this policy provides for safeguarding routes for potential transport improvements'. Safeguarding areas for transport infrastructure will not have any impact on European sites as it is intended to protect areas from other development that may prevent the intended development coming forward.

- 5.4 The actual 'allocation' of areas for development of new transport infrastructure is in the separate Joint Local Transport Plan, which was subject to its own Appropriate Assessment (<https://www.westofengland-ca.gov.uk/wp-content/uploads/2021/10/JLTP4-HRA-Appropriate-Assessment.pdf>).
- 5.5 Several of the schemes mentioned in Schedule 7 (notably, J21 Bypass Scheme, A371 to Churchlands Way Link, Banwell Bypass, and Herluin Way to Locking Road Link, Weston-super-Mare and M5 Junctions 19, 20 & 21) were identified in the JLTP HRA as having potential to affect European sites if they led to loss of functionally-linked habitat associated with either North Somerset & Mendip Bats SAC or Severn Estuary SPA/Ramsar. However, with the inclusion of strategic and scheme levels mitigation identified in the HRA of the JLTP, it was concluded that no adverse effect on integrity of European sites would arise, including in combination with growth across the West of England region. Further assessment will be required as planning applications are developed for each scheme.
- 5.6 Since these schemes are part of the JLTP and have already been included in the HRA of that plan, they do not need reassessing in the HRA of this Local Plan.
- 5.7 Depending on the location of the development the increase in residential and employment development within North Somerset could potentially create the following impact pathways:
- Recreational Pressure and Disturbance;
  - Loss of Functionally Linked Habitat; and,
  - Atmospheric Pollution.

## Recreational Pressure & Disturbance

### Severn Estuary SAC / SPA / Ramsar

- 5.8 Urban intensification for housing, mixed use and Class E non-strategic growth has been put forward in the NSLP. The Site Improvement Plan for the Severn Estuary Habitat sites states that *"Public access and recreation (including third party activities) may have an impact on bird species sensitive to disturbance, causing displacement from feeding, roosting and moulting areas, and if severe could affect long term survival and population numbers and distributions within the Estuary. There are a wide range of recreational activities within the site (walking, dog walking, horse riding, biking, beach activities, angling, wildfowling, other shooting (eg clay pigeon)) that may cause damage to habitats where pressure is high."* Therefore, increasing recreational pressure, without mitigation, is likely to have a significant effect upon the Severn Estuary Habitat sites.
- 5.9 The NSLP allocates a minimum of 14,902 new dwellings and 81ha of employment land within North Somerset over the period between 2024 and 2039. Of these, a substantial proportion lie within 7km of the Severn Estuary sites. This includes allocations for 7,101 dwellings in Weston-super-Mare, 2,800 dwellings at Wolverhill, and 925 dwellings at Nailsea, in addition to others.
- 5.10 **Likely Significant Effects cannot be screened out for the NSLP and all will be discussed further within the Appropriate Assessment.**

### Chew Valley Lake SPA

- 5.11 Development will be relatively remote from the SPA. The nearest housing allocation proposed in the NSLP is Land north of Colliter's Way which is approximately 7.1km to the north and thus outside of the 7km recreational catchment used for HRA screening. In addition, visitor pressure is already carefully managed. Additionally, the site is considered at significantly lower risk from NSLP development than Severn Estuary or Avon Gorge Woodlands.
- 5.12 **Likely Significant Effects have been screened out for the NSLP and Chew Valley Lake SPA will not be discussed further with regards to recreational pressure.**

### Avon Gorge Woodlands SAC

- 5.13 The NSLP allocates a minimum of 14,902 new dwellings and 81ha of employment land within North Somerset over the period up to 2039. The majority of this is in the south of the district.

- 5.14 The NSLP puts forward large sites for residential development within North Somerset. The nearest of these to the Avon Gorge Woodlands SAC is the allocation at Land north of Colliter's Way. This allocation is c. 3.4km from the SAC at its closest and totals 215 new dwellings. Several smaller allocations are also within 5km of the SAC including Unit C Estune Business Park (24 dwellings) at 3.7km, Unit A Estune Business Park (18 dwellings) at 3.8km, Barrow Hospital 1 (59 dwellings) at 4.2km, and Barrow Hospital 2 (14 dwellings) at 4.4km, creating 330 net new dwellings within 7km of the SAC from the NSLP alone. These allocations therefore can be expected to be an origin for additional visitors to the SAC. This Habitat site is sensitive to public access (recreation) and disturbance through adventure sports, soil compaction/loss, diffing and creating mountain bike jumps, dog fouling/eutrophication and foraging. **Therefore, at this stage, Likely Significant Effects cannot be screened out for the NSLP and all will be discussed further within the Appropriate Assessment.**

## Somerset Levels and Moors SPA / Ramsar

- 5.15 Development will be relatively remote from the SPA. The nearest allocations proposed in the NSLP is approximately 10.8km to the north at Winscombe; Woodborough Farm with 83 dwellings and immediately north of this allocation Former Mooseheart Lodge with 14 dwellings. **On balance, the site has been screened out for recreational pressure as it lies further than 7km any residential allocations.**

## North Somerset and Mendip Bats SAC

- 5.16 North Somerset and Mendip Bats SAC can be affected by habitat isolation as this is the combined effect of habitat loss, fragmentation and barrier effects. It affects the genetics of a population if it cannot interact with populations elsewhere which can have a long-term effect on viability. There is also a risk from trampling from increased use of footpaths through the habitat from recreational impacts arising from residents generated by new housing within reasonable travelling distance.
- 5.17 Policy LP1: Wolverhill (north of Banwell) allocates land for 2,800 new dwellings. This allocation lies approximately 2km from the portion of the site within Banwell caves SSSI and Banwell Ochre Caves SSSI and as such may lead to an increase in visitor numbers to the site.
- 5.18 Additionally, there are 168 dwellings allocated for the village of Congresbury which falls within 2km of the SAC parcel that overlaps with Kings Wood and Urchin wood SSSI.
- 5.19 **At this stage, Likely Significant Effects cannot be screened out for the NSLP and all will be discussed further within the Appropriate Assessment.**

## Mendip Woodlands SAC

- 5.20 Mendip Woodlands SAC can be affected by habitat isolation as this is the combined effect of habitat loss, fragmentation and barrier effects. It affects the genetics of a population if it cannot interact with populations elsewhere which can have a long-term effect on viability. There is also a risk from trampling from increased use of footpaths through the habitat from recreational impacts arising from residents generated by new housing within reasonable travelling distance.
- 5.21 Policy LP1: Wolverhill (north of Banwell) allocates land for 2,800 new dwellings. This allocation lies approximately 6.7km from the site and as such may lead to an increase in visitor numbers to the site. There are also smaller developments planned within 7km of the site equating to approximately 738 new dwellings as detailed in Schedule 1 of the Local Plan.
- 5.22 **At this stage, Likely Significant Effects cannot be screened out for the NSLP and all will be discussed further within the Appropriate Assessment.**

## Mendip Limestone Grasslands SAC

- 5.23 Mendip Limestone Grasslands SAC can be affected by habitat isolation as this is the combined effect of habitat loss, fragmentation and barrier effects. It affects the genetics of a population if it cannot interact with populations elsewhere which can have a long-term effect on viability. There is also a risk from trampling from increased use of footpaths through the habitat from recreational impacts arising from residents generated by new housing within reasonable travelling distance.

- 5.24 Two large allocations Policy LP1: Wolverhill (north of Banwell) which allocates land for 2,800 new dwellings and Parklands Village Former RAF Locking which allocates land for 2,894 new dwellings are located within 2.9km and 3.5km of the SAC respectively, as well as other smaller development within 7km of the SAC and as such may lead to an increase in visitor numbers to the site.
- 5.25 **At this stage, Likely Significant Effects cannot be screened out for the NSLP and all will be discussed further within the Appropriate Assessment.**

## Loss of Functionally Linked Habitat

### Severn Estuary SPA/Ramsar

- 5.26 It was identified in the pathways of impact section (paragraph 4.30) that high tide roosts for the species for which Severn Estuary SPA/Ramsar are designated would generally be located within 4km of the SPA/Ramsar site, and generally much closer.
- 5.27 Work was undertaken by Natural England in 2015 to identify wintering wildfowl high tide roosts on the Severn Estuary<sup>81</sup>. The work identified significant areas of the coast which host large numbers of waterfowl and waders during high tide. Woodspring Bay to Blackstone Rocks south of Clevedon host a number of significant high tide roosts along the saltmarsh, on the artificial sea defences, shingle/mud flats and up the Congresbury Yeo in the saltmarshes and managed retreat along the river, which can include numbers of between 10 and 500 birds per species, such as dunlin (*Calidris alpina*), redshank (*Tringa totanus*), curlew (*Numenius arquata*), whimbrel (*Numenius phaeopus*), turnstone (*Arenaria interpres*), black tailed godwit (*Limosa limosa*) and bar-tailed godwit (*Limosa lapponica*), grey plover (*Pluvialis squatarola*), ringed plover (*Charadrius hiaticula*), and golden plover (*Pluvialis apricaria*), herring gull (*Larus argentatus*), snipe (*Gallinago gallinago*), brent goose (*Branta bernicla*) and oystercatcher (*Haematopus ostralegus*) among others. This is the most active area between Brean Down and Clevedon for high tide roosts, there are also other high tide roosts present within Sand Bay (north of Whorlbury) and Weston Bay (east of Brean Down). However, the Natural England data showed there are less high tide roosts and smaller numbers than between Woodspring Bay and Blackstone Rocks south of Clevedon.
- 5.28 The main area to host high tide roosts within Sand Bay was in the open water and consisted of several gull species and shelduck (*Tadorna tadorna*). The high tide roosts within the Weston Bay area are centred around the mouth of the River Axe along the sand flats and saltmarsh here as well as up the River Axe itself and within fresh pools and reedbeds to the east. There is the potential that more high tide roosts are seen in the Woodspring Bay to Blackstone Rocks area due to this bay being more rural than Sand Bay and Weston Bay which are immediately adjacent to the main settlement of Weston-super-Mare, both highly populated and a major tourist area.
- 5.29 None of the sites proposed for development in the Local Plan were identified as being significant high tide roosts. Therefore, direct loss of functionally-linked land as a result of the Local Plan is unlikely to occur (recreational pressure on these roosts is discussed separately below).
- 5.30 **Land to the East of J20, Clevedon, is a large employment allocation located within 4km of the SPA/Ramsar site., It appears to overlap with areas identified on [www.magic.gov.uk](http://www.magic.gov.uk) as 'grazing marsh'. If this is functional grazing marsh this could serve as functionally-linked habitat for SPA birds. For any planning application it is therefore recommended that botanical survey is undertaken to confirm the status of the grazing marsh, and if it is functional it should be either retained undeveloped within the masterplan, or subject to non-breeding bird survey to confirm its significance, followed by any necessary offsetting habitat creation.**

## North Somerset & Mendip Bats SAC and Mendip Limestone Grasslands SAC

- 5.31 The North Somerset & Mendip Bats SAC and Mendip Limestone Grasslands SAC are partly designated for their internationally important bat populations, including lesser horseshoe bat (North Somerset & Mendip Bats SAC only) and greater horseshoe bat (both SACs). Being highly mobile species, bats are not confined to designated site boundaries and depend on a wide range of functionally linked habitats for commuting,

<sup>81</sup> [Identification of wintering waterfowl high tide roosts on the Severn Estuary SSSI/SPA \(Brean Down to Clevedon\) 2015 - RP02262 \(naturalengland.org.uk\)](https://www.naturalengland.org.uk/Information-and-Data/Species/Species-Action-Plans/Waterfowl/Waterfowl-Action-Plans/Wintering-Waterfowl-High-Tide-Roosts-on-the-Severn-Estuary-SSSI/SPA-(Brean-Down-to-Clevedon)-2015-2022) [Accessed 07/11/2023]

foraging and roosting. Furthermore, the North Somerset & Mendip Bats SAC is a composite site in a highly fragmented landscape, signifying that the maintenance of functional commuting corridors is essential in safeguarding the genetic integrity of resident bat populations.

- 5.32 Natural England's SIP highlights planning permissions as an important threat / pressure to the North Somerset & Mendip Bats SAC<sup>82</sup>: *'Development on the land between the sites that make up the ...SAC could have an impact on bats through loss of foraging habitat, loss of minor roost sites, and disruption of flightpaths (the latter particularly through light pollution).'* The Supplementary Advice on Conservation Objectives (SACO) for the Mendip Limestone Grasslands SAC<sup>83</sup> also targets maintaining or restoring flightlines from roosts into surrounding foraging areas and states that *'non-breeding greater horseshoe adults can forage up to 4km from roost sites... Greater horseshoes commute and forage along linear features, over grazed pasture and in woodland. Permanent pasture and ancient woodland linked with an abundance of tall bushy hedgerows is ideal supporting habitat for this species. Flightlines will extend beyond the designated site boundary into the wider local landscape.'*
- 5.33 The NSLP allocates a minimum of 14,902 new dwellings and 81ha of employment land within North Somerset over the period between up to 2039. Where this development occurs on greenfield sites or results in the loss of linear habitat features on previously developed land, functionally linked habitat of importance to SAC bats could be impacted. Therefore, it is considered that a detailed appraisal of site allocations is required in the context of the SAC bat populations. **Overall, LSEs of the NSLP on the North Somerset & Mendip Bats SAC and Mendip Limestone Grasslands SAC regarding the potential loss of functionally linked habitat cannot be excluded. Both sites are screened in for Appropriate Assessment in relation to this impact pathway.**

## Atmospheric Pollution

- 5.34 A 200m buffer has been utilised to identify potential risk of localised (rather than dispersed) effects on air quality applicable to all Habitat sites where air quality is a priority issue currently affecting or threatening the condition of a feature of the site.
- 5.35 The 200m zone is well evidenced, based on monitoring data, and is in line with the standard approach in Design Manual for Roads and Bridges and will certainly cover the zone along each relevant road where traffic pollution will be most elevated.
- 5.36 Regarding air pollution impacts from traffic, the extent to which this can be explored in detail at the local plan 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. To undertake detailed air quality modelling 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 Local Plan but including growth from other sources including surrounding local councils)
  - Do Something (i.e. end of plan period with the Local Plan and growth from other sources including surrounding local councils)
- 5.37 This would be required for every significant road within 200m of relevant Habitat sites i.e. A4, Clifton Suspension Bridge and A369 past Avon Gorge Woodlands SAC. It is considered that this is the Habitat site of greatest relevance. Chew Valley Lake SPA is remote from significant roads likely to form journey to work routes from residents of new development. The woodland at North Somerset and Mendip Bats SAC components are vulnerable to nitrogen deposition but the relatively subtle botanical changes likely to arise at the SAC from nitrogen deposition is very unlikely to materially affect the ability of the SAC to support bats. Although the A38 connecting North Somerset to Somerset passes through Mendip Limestone Grasslands SAC, the calcareous grassland habitat is 270m from the A38 at its closest and therefore beyond the ZOI. Similarly, the M5 is over 300m from the SAC and therefore beyond the ZOI.

<sup>82</sup> Available at: <http://publications.naturalengland.org.uk/publication/6226153064890368> [Accessed on the 01/02/2023]

<sup>83</sup> Available at: <http://publications.naturalengland.org.uk/publication/6269364252704768> [Accessed on the 01/02/2023]



- 5.38 **Air pollution effects cannot be screened out at this stage regarding Avon Gorge Woodlands SAC and will require further information and discussion within the Appropriate Assessment.**

## 6. Appropriate Assessment

### Recreational Pressure

#### Severn Estuary SAC / SPA / Ramsar

- 6.1 Natural England's Site Improvement Plan<sup>84</sup> and Regulation 33 conservation advice package<sup>85</sup> identifies public access/disturbance as a current pressure and a threat and prioritises it above all other threats identified. The plan states that: 'Public access and recreation (including third party activities) may have an impact on bird species sensitive to disturbance, causing displacement from feeding, roosting and moulting areas, and if severe could affect long term survival and population numbers and distributions within the Estuary. There are a wide range of recreational activities within the site (walking, dog walking, horse riding, biking, beach activities, angling, wildfowling, other shooting (e.g., clay pigeon)) that may cause damage to habitats where pressure is high'. Increased recreational activity from growth within the core recreational catchment of the site could therefore result in all of these potential impacts when considered in combination with growth in other authorities around the Severn Estuary.
- 6.2 Recreation impacts for the Severn Estuary therefore primarily will relate to the SPA/Ramsar interest but potentially extend to the SAC interest through habitat damage (e.g. trampling of saltmarsh creating areas of bare mudflat).
- 6.3 Net new housing within the 7km zone for recreational impact identified earlier in the report is likely to result in an increase in recreational visitors to the Severn Estuary SAC, SPA and Ramsar site.
- 6.4 The NSLP puts forward strategic residential development within 7km of the Habitat site for approximately 10,735 dwellings in total, including the following:
- Weston-super-Mare - 6,243
  - Wolverhill (north of Banwell) - 2,800
  - Clevedon - 292
  - Nailsea - 701
  - Portishead - 492; and,
  - Yatton - 207
- 6.5 In addition to growth within the North Somerset, new dwellings are currently planned within 7km of the SAC, SPA and Ramsar site in South Gloucestershire, Bristol, Stroud District, Forest of Dean District, Monmouthshire, and Somerset Council area (previously including Sedgemoor, Somerset West & Taunton, and other districts). At least 50,000 dwellings are therefore likely to have been delivered within 7km of the SAC, SPA and Ramsar site between c. 2006 and 2040 and probably more as the Local Plans of several local councils in the vicinity are in the process of being updated.

**Table 4. Other Local Councils' Planned Growth in Relation to Severn Estuary SAC, SPA and Ramsar site**

Local Plan/Core Strategy	Dwellings
South Gloucestershire	28,355 dwellings between 2006 and 2026 including 800 at Thornbury and 5,700 at Cribbs Causeway and Patchway, all of which are within 7km of the SAC, SPA and Ramsar site.
Bristol	30,600 dwellings between 2006 and 2026. Much of Bristol within 7km of the SAC, SPA and Ramsar site is the Avonmouth/Bristol Port area which is primarily industry and warehousing but the western extent of the Northern Arc Regeneration Area (c. 3,000 net additional dwellings across the whole regeneration area by 2026) lies within 7km of the SAC, SPA and Ramsar site.
Stroud	12,600 dwellings 2020 to 2040, including 2,700 (5,300 by 2050) at Sharpness (mainly) and Sharpness Docks, which are both close to the SAC, SPA and Ramsar site.

<sup>84</sup> <http://publications.naturalengland.org.uk/publication/4590676519944192> [Accessed on the 26/01/2023]

<sup>85</sup> <https://publications.naturalengland.org.uk/publication/3184206?category=3212324>

Local Plan/Core Strategy	Dwellings
Forest of Dean <sup>86</sup>	6,200 dwellings 2006 to 2026, approximately 1,900 of which would be at Lydney, close to the SAC, SPA and Ramsar site.
Monmouthshire	5,250 dwellings 2006 to 2021, including approximately 675 dwellings at Chepstow and 210 dwellings at Caldicott, both of which are close to the SAC, SPA and Ramsar site.
Sedgemoor	13,530 dwellings between 2011 and 2032, including approximately 2,030 at Highbridge and Burnham-on-Sea and 8,118 at Bridgewater which are all close to the SAC, SPA and Ramsar site.
Somerset West & Taunton	2,900 dwellings between 2012 and 2032, although the area of the district within 7km of the SAC, SPA, Ramsar site is very rural.

- 6.6 Footprint Ecology undertook a visitor survey to understand the current recreation patterns around the Severn Estuary and surrounding land for Stroud District Council. Two days were spent at each of 21 survey locations between January and April 2022. A total of 586 interviews were completed of which 93% were on a day trip or short visit from home. 49% of interviewees were there to walk their dog and 35% were there to walk without a dog with the most common reason for choosing the location being it was close to home. However, the majority (63%) of those visiting came by car. Of the 93% of people visiting from home, half lived within 3.7 km (straight line distance) and 75% within 10.4 km of the site they were interviewed at. A total tally of 1,781 groups were counted making a total of 3,270 persons and 1,153 dogs passing through the SPA/SAC during the surveys.
- 6.7 As identified in the Likely Significant Effects section on functionally-linked land, work was undertaken by Natural England in 2015 to identify wintering wildfowl high tide roosts on the Severn Estuary<sup>87</sup>. The main area to host high tide roosts within Sand Bay was in the open water and consisted of several gull species and shelduck (*Tadorna tadorna*). The high tide roosts within the Weston Bay area are centred around the mouth of the River Axe along the sand flats and saltmarsh here as well as up the River Axe itself and within fresh pools and reedbeds to the east. There is the potential that more high tide roosts are seen in the Woodspring Bay to Blackstone Rocks area due to this bay being more rural than Sand Bay and Weston Bay which are immediately adjacent to the main settlement of Weston-super-Mare, both highly populated and a major tourist area.
- 6.8 Increasing populations in Clevedon and the rural area south could have the potential to increase the disturbance of the high tide roosts in the Woodspring to Blackstone Rock area. The Footprint Ecology data, the work Natural England have done on high tide roosts, mentioned earlier in the report, and other data such as the A Forgotten Landscape “Coming Home to Roost” project<sup>88</sup> between 2016 and 2019 which identified high tide roosts between South Gloucestershire and Bristol will be utilised as background knowledge of the area to guide where visitor surveys for North Somerset which are planned for the winter of 2023 – 2024 should be focused to get a more robust picture of recreational pressure in the local area, which will inform a mitigation strategy.
- 6.9 The Footprint Ecology visitor survey highlights the SPA/SACs are utilised significantly for recreation from adjacent authorities and likely similar patterns for those visiting from North Somerset. Additionally, such a large amount of growth within the core catchment of the SAC, SPA and Ramsar site could easily result in increased adverse effects on the integrity of the site without a recreation mitigation and management strategy. This particularly relates to potential for significant disturbance of the bird populations of the site, which could affect both bird health and reproductive success as well as overall bird numbers (especially though not exclusively from dogs), but also includes physical damage to some of the habitats for which the SAC is designated.

## Strategic Access Management and Monitoring

- 6.10 In the case of the Severn Estuary there is already a Recreation & Management Strategy that covers Stroud District and has been published by that authority<sup>89</sup>. This will be used as a broad model for a similar strategy to be produced by North Somerset Council, tailored to the situation in North Somerset. For example, in

<sup>86</sup> New Local Plan in preparation

<sup>87</sup> [Identification of wintering waterfowl high tide roosts on the Severn Estuary SSSI/SPA \(Brean Down to Clevedon\) 2015 - RP02262 \(naturalengland.org.uk\)](#) [Accessed 07/11/2023]

<sup>88</sup> [CHR-report-without-appendices.pdf \(aforgottenlandscape.org.uk\)](#) [Accessed 07/11/2023]

<sup>89</sup> <https://www.stroud.gov.uk/media/557874/item-8-appendix-a.pdf>

consultation of a previous draft of this HRA Natural England commented that on the seafront of Weston-Super-Mare, despite large numbers of visitors, bird disturbance is not thought to be a major issue.

6.11 Elements within the Stroud Severn Estuary Recreation & Management Strategy include:

- *‘Educate and engage with local dog walkers to promote particular less-sensitive sites or routes to dog walkers and raise awareness of disturbance issues.*
- *Explore potential warden use and a visitor engagement role deployed across a range of locations, targeting areas with particular issues or close to new development.*
- *Explore new access Infrastructure through a range of discrete, focussed projects that could be phased with new development.*
- *Explore and review parking locations with landowners, communities and developers. Any changes can be phased over time and linked to available funding and locations where new development comes forward.*
- *Introduce Codes of Conduct (with ASERA/SEP), raising awareness of estuarine issues and providing guidance across a range of activities. In-line with these, working with local clubs/groups is envisaged.*
- *Create ‘quiet’ refuge areas within the upper Severn Estuary where recreation and other activities are discouraged.*
- *Introduce interpretation/signage targeted on areas of most concern.*
- *Advise, educate and work with landowners to improve land management practices which can increase the suitability and/or capacity of habitat.*
- *Advise and work with landowners to create new habitat and alternative recreational areas.*
- *Continue to monitor levels of usage. As with the Rodborough Common Mitigation Strategy, this is needed to address any implementation issues and to adjust this Strategy if necessary.*
- *Enhance existing sites to create managed hubs –Slimbridge, Purton, Saul for example. In the long term, access is best focussed away from the SPAs or in particular honey pots around the shore where it can be managed and engagement with visitors targeted. The Wetland & Wildfowl Trust, Slimbridge already draws high numbers of visitors and through careful site management and education contributes to the reduction of disturbance potential elsewhere.*
- *Create new wildfowl feeding and roosting habitat in appropriate locations with the reintroduction of saltwater marsh, scrapes and new or better management regimes’.*

6.12 It would be logical for the North Somerset District Council to adopt a similar approach (tailored to the North Somerset parts of the SPA/Ramsar site) and for a cross-boundary collaborative forum to be initiated with Stroud District Council and other authorities bordering the site.

6.13 The mitigation strategy could be funded by a tariff on new residential development. The actual tariff would be dependent on the cost of the identified package of mitigation measures and the number of dwellings being delivered in the catchment, but as an indicator the 2022 tariff for Stroud District was £385/dwelling applied as a flat rate to all net new residential development within 7.7km of the SPA/Ramsar site irrespective of number of bedrooms (such that a five bed dwelling would pay the same tariff as a one bed apartment). In other parts of the country (e.g. the Thames Basin Heaths SPA) the tariff is graduated dependent on the number of bedrooms such that larger dwellings with more occupants pay a higher tariff.

6.14 The Recreation Management Strategy would need to be developed in parallel with the NSLP such that it was available at least in outline (including a developer charging strategy) when the NSLP was submitted for Examination and available for implementation by the time of adoption of the Local Plan. The NSLP would also need a policy identifying the recreation management strategy, the core catchment that would be covered, what the management strategy would broadly entail and the principle behind the developer charging scheme. However, it is not recommended that the actual tariff is referenced in Local Plan policy as this would potentially necessitate a revision of the Local Plan if the tariff were to change following the initial implementation stage.

6.15 Avon Gorge Woodlands SAC is also likely to be affected due to increased recreational pressure (see below) and can be considered in the same policy as the Severn Estuary Sites.

- 6.16 **It is recommended that the following wording is included in a policy of the NSLP: ‘Recreation Management Strategies for Severn Estuary SPA/Ramsar site and Avon Gorge Woodlands SAC will be devised (in outline for submission of the Local Plan for Examination and in detail prior to the adoption of the Local Plan) in order to support the North Somerset Local Plan and ensure no adverse effect on the integrity of these two sites from recreational pressure. The North Somerset Council will work with other councils within the vicinity of these protected sites. The delivery of the RMS will be paid for by developer contributions using tariffs to be identified and published once the RMS has been devised in outline’.**
- 6.17 Since the Severn Estuary SAC, SPA and Ramsar site is abutted by so many local councils there will be considerable value in the North Somerset council liaising with the other adjacent authorities to ensure a consistency of approach and delivery

## Suitable Alternative Natural Greenspace

- 6.18 Provision of alternative natural greenspace will probably play a less important role in reducing recreational pressure on the Severn Estuary SAC/SPA/Ramsar site than it would for an inland site given that the attractions of coastal recreation cannot be replicated inland. However, within the NSLP there is a policy requiring the incorporation of green infrastructure into developments within the district, or the improvement of existing green infrastructure. This is detailed in Policy DP31: Green Infrastructure.
- 6.19 Green infrastructure projects are to support the strategic green infrastructure projects detailed in the North Somerset Green Infrastructure Strategy (NSGIS)<sup>90</sup>. This document highlights several projects which will assist in alleviating some of the visitor burden, including woodland improvement projects near Clevedon and to the east of Weston-Super-Mare.
- 6.20 One of the medium-term projects detailed in the NSGIS is the preparation of supplementary planning documents to provide further guidance on green infrastructure, including documentation for a North Somerset Nature Park by 2022 and a policy on Suitable Alternative Green Space (SANG) by 2025
- 6.21 A project separate from the NSLP is the West of England Nature Recovery Network<sup>91</sup> led by the West of England Nature Partnership. This is a connected network of marine and terrestrial habitats where both people and nature can thrive. It is an active, adaptive spatial plan that identifies the best opportunities to deliver nature recovery. As part of this plan a large area between Weston-Super-Mare, Yatton and Clevedon has been identified for indicative wetland opportunities. Depending on the public accessibility of these opportunity areas the delivery of these elements of the Nature Recovery Network will spread the recreational focus beyond the Severn Estuary itself and thus alleviate recreational pressure on the SPA/Ramsar site alongside delivery of the aforementioned formal Recreation Management Strategy.
- 6.22 Since the potential need for SANG is already identified in the NSGIS and referenced within the text of NSLP, the incorporation of the aforementioned recommendation regarding a Recreation Management Strategy for the SAC, SPA and Ramsar site would result in the NSLP having an appropriate framework to ensure the further development of strategic mitigation for impacts on the SAC within the NSGIS and the delivery of necessary mitigation at a planning application level. As such there is a sufficient policy framework in place to enable a conclusion that no adverse effects on the integrity of the Severn Estuary SAC, SPA and Ramsar site would result from the NSLP through recreational pressure, either alone or in combination with other plans or projects, subject to the timely further development and delivery of mitigation solutions at lower planning tiers.

## Avon Gorge Woodland SAC

- 6.23 In the Site Improvement Plan and Supplementary Advice on the Conservation Objectives Natural England advises that negative effects are already occurring on this SAC. The SAC qualifying woodland and grassland habitats are sensitive to legal public access as well as illegal recreation pressures (e.g. vandalism, squatting, introduction of non-native species, mountain biking). Recreational pressure was confirmed as being a problem for the SAC and specifically mentioned were: commercial dog walking (including dog fouling and bothering cattle/goats – grazing helps to increase floral diversity of the calcareous grassland); mountain biking on the Leigh Woods side of the SAC is considered to cause the most damage; unauthorised access to sensitive habitats, such as trampling in areas of calcareous grassland and damage to Sorbus trees, e.g. by rough sleepers, foragers, sightseers and some rock climbers (not the organised groups); fires which

<sup>90</sup> [www.n-somerset.gov.uk/sites/default/files/2022-06/green%20infrastructure%20strategy.pdf](http://www.n-somerset.gov.uk/sites/default/files/2022-06/green%20infrastructure%20strategy.pdf)

<sup>91</sup> <https://awt.maps.arcgis.com/apps/webappviewer/index.html?id=5cc11efcac3e448aa7e9ef2067b571a1>

have caused damage to veteran trees and pose a risk to areas of calcareous grassland and the Sorbus trees; and cars parking outside of designated parking areas (leading to erosion, soil compaction and damage to plant species). Recreational pressure could increase over the coming years due to increased interest and a desire to engage further with the woodlands coupled with a substantial increase in population within the core recreational catchment of the SAC.

6.24 The main source of potential further visitors from NSLP development will be those associated with Land north of Colliter's Way. This allocation is c. 3.4km from the SAC at its closest and totals 215 new dwellings. Several smaller allocations are also within 5km of the SAC including Unit C Estune Business Park (24 dwellings) at 3.7km, Unit A Estune Business Park (18 dwellings) at 3.8km, Barrow Hospital 1 (59 dwellings) at 4.2km, and Barrow Hospital 2 (14 dwellings) at 4.4km, creating 330 net new dwellings within 7km of the SAC from the NSLP alone. On the opposite side of the River Avon is the City of Bristol and the potential for in combination effects from recreational pressure therefore exists between the Bristol Local Plan and the North Somerset Local Plan.

6.25 In the current Bristol Core Strategy, the Northern Arc, Inner East and South Bristol regeneration or growth areas all fall within 7km of the SAC and are expected to deliver approximately 13,000 dwellings between 2006 and 2026. Further visitor survey work is planned to be undertaken at Avon Gorge in consultation with Bristol City Council, which will feed into a Recreation Management Plan. As the likely major source of additional local recreational pressure on the SAC will be from the City of Bristol, it will be important for the RMS to be a joint strategy with that authority and with the land-owners and managers.

### Strategic Access Management and Monitoring

6.26 'Legal' or permitted access needs close monitoring and engagement to ensure that no damage to sensitive SAC habitats occurs but there is also a need to manage anti-social behaviour so increased wardening and a public awareness raising campaign will be key to any Recreation Management Strategy. The SAC is owned by a range of bodies including Forestry Commission, The National Trust, Bristol City Council and Network Rail. As such collaboration will be essential to assembling a mitigation strategy in conjunction with Natural England.

6.27 Close collaboration with City of Bristol Council will also be required as some of the SAC lies within the City of Bristol Unitary Authority area. The various landowners were canvassed in January/February 2019 regarding the measures that they are currently implementing. Depending on the extent to which these have been successfully implemented or need further resources this list should be the starting point for a Recreation Management Strategy.

**Table 5. Existing access and visitor management activities at Avon Gorge Woodlands SAC**

Owner/manager	Existing initiatives
Forestry Commission	<ul style="list-style-type: none"> <li>• A permitted route has been created on the Forestry Commission's side to help manage mountain biking but people still access the National Trust side and create unauthorised paths and jumps through the woods.</li> <li>• Looking at parking (increasing provision etc.)</li> <li>• Inspection of trails monthly to monitor erosion.</li> <li>• Contractors (3x a week) and volunteers (2x a month) visit for litter collection.</li> <li>• Conservation work group (volunteer) meets 1 x a month.</li> <li>• Wild Trail Policy</li> <li>• For biking looking at improving trails, signage and blocking unofficial trails.</li> </ul>
National Trust	<ul style="list-style-type: none"> <li>• Contrary to the Forestry Commission, the National Trust does not want to provide increased parking facilities as this would likely result in increased visitor numbers - currently the limited parking is one of the few things that keeps these numbers down.</li> <li>• A dog specialist is currently being consulted on how best to manage the recreational pressures relating to dog walking.</li> <li>• The Trust has been in touch with homeless charities to help minimise/ manage rough sleeping</li> <li>• Path maintenance/ restricting access with logs etc. to reduce trampling in more sensitive areas and discourage activities such as mountain biking.</li> <li>• The rangers try to maintain a presence, engaging with visitors and educating on the need to conserve. This is limited by a lack of staff, particularly at the weekend as the Trust cannot afford to provide rangers at the weekend when visitor pressure is often highest.</li> </ul>
Bristol City Council	<ul style="list-style-type: none"> <li>• There is footpath infrastructure but this requires a lot of resources to maintain.</li> <li>• Access to sensitive areas during festivals is prevented.</li> <li>• Grazing has been introduced on the Bristol side in one enclosure. The Council is embarking on a feasibility study to extend that area but the most suitable areas are currently used by climbers, which is an issue as fencing would be required and therefore gates would need to be provided. Grazing would also need to be carefully managed due to issues with disturbance.</li> </ul>

Owner/manager	Existing initiatives
Network Rail	<ul style="list-style-type: none"> <li>• Fencing in some areas.</li> </ul>

6.28 The following additional future management measures were recommended:

- Paid parking (although this may push cars into surrounding estates and also may increase verge parking so may not work).
- Commercial dog walking licences/policy with associated charge.
- Resurfacing of marked trails, and more sites created elsewhere as part of new developments (or specific mountain-biking sites).
- Rectifying some of the existing damage caused by recreational pressures and thus improve resilience of the SAC to further use.
- A ranger presence 7 days a week would make a big difference. Rangers would then be more visible and more able to manage recreational activities at the weekends, which is when the site is busiest.
- More engagement with mountain bikers.
- Prevention of access in some areas through improved fencing.
- Proposals to make access on the gorge/ Portway side more structured, e.g. through paths and fences.
- Improved management of access for climbers.
- Interpretation boards for climbers, visitors and dog walkers, so that they understand the importance of the site and its flora, particularly in grazing areas.

6.29 In addition, the Site Improvement Plan for the SAC notes that there are many opportunities to improve safe multi-user access to certain areas of both sides of the Gorge, and also further possibilities to link both sides together by promoted routes.

6.30 **As indicated in the prior section regarding the Severn Estuary, it is recommended that the following wording is included in a policy of the NSLP: ‘Recreation Management Strategies for Severn Estuary SPA/Ramsar site and Avon Gorge Woodlands SAC will be devised (in outline for submission of the Local Plan for Examination and in detail prior to the adoption of the Local Plan) in order to support the North Somerset Local Plan and ensure no adverse effect on the integrity of these two sites from recreational pressure. The North Somerset Council will work with other councils within the vicinity of these protected sites. The delivery of the RMS will be paid for by developer contributions using tariffs to be identified and published once the RMS has been devised in outline’.**

## Mendip Woodlands SAC

6.31 Mendip Woodlands SAC can be affected by habitat isolation as this is the combined effect of habitat loss, fragmentation and barrier effects. It affects the genetics of a population if it cannot interact with populations elsewhere which can have a long-term effect on viability. There is also a risk from trampling from increased use of footpaths through the habitat from recreational impacts arising from residents generated by new housing within reasonable travelling distance.

6.32 Policy LP1: Wolvershill (north of Banwell) allocates land for 2,800 new dwellings. This allocation lies approximately 6.7km from the site and as such may lead to an increase in visitor numbers to the site. There are also smaller developments planned within 7km of the site equating to approximately 738 new dwellings as detailed in Schedule 1 of the Local Plan.

6.33 The SAC consists of 5 separate portions. Only one of these is located with 7km of North Somerset. The relevant portion of the SAC is contained within the Cheddar Wood SSSI. The SSSI condition assessment indicates that the calcareous grassland of the site is in unfavourable declining condition, but this is primarily due to undergrazing leading to scrub encroachment and the dominance of coarse grasses. This is supported by the Supplementary Advice on the Conservation Objectives for the SAC suggesting that far from excessive trampling being a concern, excessive vegetation growth is more of an issue. Moreover, the Site Improvement Plan for the SAC does not mention recreational trampling as a concern.

- 6.34 The steep ravine nature of much of the woodlands in the Mendip Woodlands SAC means that potential for off-track recreational activity in those woodlands is inherently limited, the calcareous grasslands at Cheddar Gorge and Wookey Hole are in areas that are a national recreational draw and yet are not identified to be at threat from recreational pressure. Indeed, for both these sites undergrazing is identified as a concern which suggests that excessive vegetation growth is more of a concern than vegetation damage by trampling.
- 6.35 Overall, it is therefore considered that an adverse effect on integrity will not arise on Mendip Woodlands SAC from growth in North Somerset as set out in the NSLP either alone or in combination with other plans and projects.

## North Somerset and Mendip Bats SAC

- 6.36 Recreational pressure could arise from North Somerset and Mendip Bats SAC if a significant increase in the population of the core catchment around the SAC arises. Any potential adverse effects on integrity would take the form of disturbing SAC bats if the caves in which they roost are entered or trampling and nutrient enrichment (from dog fouling) of calcareous grassland on site.
- 6.37 Policy LP1: Wolvershill (north of Banwell) allocates land for 2,800 new dwellings. This allocation lies approximately 2km from the portion of the site within Banwell Caves SSSI and Banwell Ochre Caves SSSI and as such may lead to an increase in visitor numbers to the site. Additionally, there are approximately 168 dwellings allocated for the village of Congresbury which falls within 2km of the SAC parcel that overlaps with Kings Wood and Urchin Wood SSSI. North Somerset and Mendip Bats SAC is not listed as vulnerable to recreational pressure within the Site Improvement Plan nor the Supplementary Advice on Conservation Objectives (SACO). The main habitat within the SAC that the bats will utilise are the qualifying feature "H8310: Caves not open to the public". These caves are described in the SACO as not being routinely exploited for tourism and usually have gated entrances as a health and safety measure to ensure the public cannot enter the caves.
- 6.38 The primary threat to the grasslands and habitats on site is due to undergrazing leading to scrub encroachment and the dominance of coarse grasses. This is supported by the Supplementary Advice on the Conservation Objectives for the SAC suggesting that far from excessive trampling being a concern, excessive vegetation growth is more of an issue.
- 6.39 The steep ravine nature of much of the woodlands in North Somerset & Mendip Bats SAC mean that potential for off-track recreational activity in those woodlands is inherently limited, the calcareous grasslands at Cheddar Gorge and Wookey Hole are in areas that are a national recreational draw and yet are not identified to be at threat from recreational pressure. Indeed, for both these sites undergrazing is identified as a concern which suggests that excessive vegetation growth is more of a concern than vegetation damage by trampling.
- 6.40 As such, it is considered that no adverse effect on the integrity of North Somerset and Mendip Bats SAC will arise through recreational pressure either alone or in combination with other plans and projects.

## Mendip Limestone Grasslands SAC

- 6.41 Mendip Limestone Grasslands SAC can be affected by habitat isolation as this is the combined effect of habitat loss, fragmentation and barrier effects. It affects the genetics of a population if it cannot interact with populations elsewhere which can have a long-term effect on viability. There is also a risk from trampling from increased use of footpaths through the habitat from recreational impacts arising from residents generated by new housing within reasonable travelling distance.
- 6.42 Policy LP1: Wolvershill (north of Banwell) allocates land for 2,800 new dwellings and Parklands Village Former RAF Locking which allocates land for 2,894 new dwellings are located within 2.9km and 3.5km respectively as well as other smaller development within 7km of the SAC and as such may lead to an increase in visitor numbers to the site.
- 6.43 However, the steep nature of the grasslands (typically lying 100m/328 feet above the surrounding settlements) and ravine nature of the woodlands means that potential for off-track recreational activity is inherently limited. Indeed, based on the Site Improvement Plan and SSSI condition assessments, undergrazing is identified as a concern which suggests that excessive vegetation growth is more of a concern than vegetation damage by trampling. The current conditions assessment for both Brean Down



SSSI and Uphill Cliffs are regarded to be in favourable condition. The HRA<sup>92</sup> for Natural England's Coastal Access Program which aims to increase access along coastal habitats suggests there are "*worn paths on Brean Down corresponding to the public footpath followed by the England Coast Path and paths linking it to the old military road on the north side of the down with which it forms a popular circular walk to Brean Down Fort*". However, there has been footpath erosion monitoring at Brean Down since 1996 and this is regarded as stable despite increasing populations.

- 6.44 The Nature Conservation Assessment<sup>93</sup> for the aforementioned HRA also indicated that the species of conservation concern at the site are concentrated at the base of the cliffs which are fenced off from public access ensuring no trampling can occur in the section of pathways to be included within the coast path route. According to the Council Parks and Open Spaces team, since the main path at Uphill Cliff was upgraded approx. six to seven years ago to tarmac and was included into Brean Down Way cycle path there has been a significant increase in usage, both from walkers and cyclists. However, the majority of people, especially cyclists, do stay on the dedicated path and while there is off path activity it hasn't resulted in noticeable damage despite the significant increase in usage and there is no evidence to suggest any significant damage is being caused to the site.
- 6.45 As such, it is considered that no adverse effect on the integrity of Mendip Limestone Grasslands SAC will arise through recreational pressure either alone or in combination with other plans and projects. **However, it is recommended that the Council commits to a visitor and erosion monitoring exercise at Uphill Cliff similar to that at Brean Down, to keep this issue under advisement and trigger any introduction of measures at the next Local Plan review.**

## Loss of Functionally Linked Habitat

### North Somerset & Mendip Bats SAC and Mendip Limestone Grasslands SAC

- 6.46 As highlighted in the previous chapter, LSEs of the NSLP on the North Somerset & Mendip Bats SAC and Mendip Limestone Grassland SAC regarding the potential loss of functionally linked habitat could not be excluded.
- 6.47 An understanding of the habitat requirements of lesser and greater horseshoe bats is an essential prerequisite for determining the potential impacts of Local Plan allocations. For example, by constraining development to existing brownfield sites, potential impacts on designated bat populations are likely to be minimised. In contrast, a focus on the allocation of greenfield sites has a much higher potential for negative effects because essential flightpaths and commuting routes are at risk of being lost.

### Habitat Requirements – Greater Horseshoe Bat

- 6.48 Much work on the habitat requirements of lesser and greater horseshoe bats has been completed in recent years. Greater horseshoe bats preferentially forage in permanent pastures that are interspersed with deciduous woodland and hedgerows. In North Somerset, the top five feeding areas for greater horseshoe bats encompass cattle-grazed pasture (38.6%), ancient semi-natural woodland (16.6%), pastures grazed by other animals than cattle (10.3%), meadows (9.4%) and broadleaved woodland (4.9%)<sup>94</sup>. Notably, there is temporal variability in the importance of different habitat types in sustaining SAC bats, with woodlands and pastures being most important in spring and early summer.
- 6.49 Linear habitat features, such as large hedgerows, are primarily important as commuting routes and, to a lesser extent, for foraging. For example, continuous lines of vegetation facilitate relative darkness and commuting while light levels are still relatively high. Previously, it has been recommended to maintain a hedgerow width of 3-6m and height of 3m between areas of woodland and other foraging habitats to safeguard greater horseshoe bat mobility<sup>95</sup>. Broad hedgerows with emergent trees also provide suitable habitat complexity for sustaining maximum abundances of insect prey and enable more economical hunting flight. Linear aquatic habitats (e.g. ditches and rhynes) are important as flight corridors into adjoining

<sup>92</sup> Natural England, 2019. Assessment of England Coast Path proposals between Aust and Brean Down. Assessment of the Coastal Access programme under regulation 63 of the Habitats Regulations 2017. Natural England.

<sup>93</sup> Natural England, 2019. Nature Conservation Assessment for Coastal Access Proposals between Aust and Brean Down. Natural England.

<sup>94</sup> Duverge P.L. & Jones G. (1994). Greater horseshoe bats – Activity, foraging behaviour and habitat use. *British Wildlife* 6.

<sup>95</sup> Ransome R.D. (1997). The management for greater horseshoe bat feeding areas to enhance population levels. English Nature Research Reports No. 241. English Nature, Peterborough.

foraging areas and provide ideal conditions for the development of tipulid larvae (an important secondary prey source for greater horseshoe bats).

## Habitat Requirements – Lesser Horseshoe Bat

- 6.50 The lesser horseshoe bat specialises on foraging in the high canopy of broadleaved deciduous woodland, although secondary foraging areas may also encompass mixed coniferous woodland, hedgerows, treelines and wooded riverbanks<sup>96</sup>. A radio-tracking study in the Wye valley in Monmouthshire showed that broadleaved woodland accounts for the majority (58.7%) of habitat used in the core foraging areas of lesser horseshoe bats<sup>97</sup>. Generally, surrounding the River Wye, lesser horseshoe bats forage predominantly in broadleaved woodland parcels along the riverbank and its tributaries. Additionally, the structure of woodland is also important with sufficiently low densities of taller trees to allow the development of shrub and coppice understorey<sup>98</sup>. Pastures grazed by cattle at low densities (e.g. 0.5-1 cows per hectare) may provide important secondary foraging resources (e.g. *Scatophagidae*, yellow dung fly larvae) at times of high stress, such as the pre- to post-weaning period.
- 6.51 Like for the greater horseshoe bats, the primary importance of tall, bushy hedgerows to lesser horseshoe bats is as commuting corridors. In a Belgian study, no lesser horseshoe bat was recorded more than 1m from a linear feature (including manmade structures such as stonewalls)<sup>99</sup>. This species is known to be particularly vulnerable to the loss of commuting corridors because it avoids crossing large open areas, making it more likely that different sub-populations are isolated. Past research has shown that open areas (e.g. the River Wye) and urban features (e.g. roads) are only crossed in complete darkness or where the tops of large trees are in contact<sup>100</sup>.

## Core Sustainment Zones (CSZs) – Both Species

- 6.52 One of the primary determinants of potential impacts of development on designated bat populations relates to its distance to Habitat sites. All bats are likely to forage beyond the designated site boundary, but the relative importance of supporting habitats (in terms of the number of individuals supported) will diminish with distance from maternity roosts and hibernacula. To identify areas in which development poses the greatest potential threat to designated populations, North Somerset Council adopted the North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document (Bats SAC SPD) in 2018<sup>101</sup>. This technical guidance was based on the best available scientific evidence on bat ecology (at the time of writing) and is kept under continued review in collaboration with Natural England.
- 6.53 Of primary importance in the SPD is the delineation of Bat Consultation Zones (BCZs) and Juvenile Sustainment Zones (JSZs), which are based on radio-tracking data and research studies on bat mobility. The BCZs encompass three bands (A, B and C), reflecting the lower numbers of bats with reduced distance from the SAC. Generally, both greater and lesser horseshoe bats have higher foraging ranges from maternity roosts compared to other roosts (e.g. hibernacula). Lesser horseshoe bats undertake significantly shorter foraging trips (roughly half in distance) compared to greater horseshoe bats. The Bats SAC SPD shows three consultation zone bands (A, B, C) around maternity roosts, with the band As extending to settlements like Backwell, Yatton, Congresbury and Cheddar, whereas only two bands (B, C) surround hibernation and subsidiary roosts.
- 6.54 JSZs of 1km for greater horseshoe bats and 600m for lesser horseshoe bats<sup>102</sup> are assigned around maternity roosts within Band A. The JSZs are delineated to protect cattle-grazed pasture, which support the most important foraging resources for both bat species. These areas are particularly sensitive and new development on greenfield sites in these zones should be avoided. Unlike linear landscape features, which can typically be preserved using sensitive landscaping, such foraging fields cannot be easily preserved or recreated within allocation boundaries.

<sup>96</sup> Schofield H.W. (2008). The lesser horseshoe bat Conservation Handbook. The Vincent Wildlife Trust, Ledbury.

<sup>97</sup> Bontadina F., Schofield H. & Naef-Daenzer B. (2002). Radio-tracking reveals that lesser horseshoe bats (*Rhinolophus hipposideros*) forage in woodland. *Journal of the Zoological Society London* **258**: 281-290.

<sup>98</sup> Holzhaider J., Kriner E., Rudolph B.-U. & Zahn A. (2002). Radio-tracking a lesser horseshoe bat (*Rhinolophus hipposideros*) in Bavaria: An experiment to locate roosts and foraging sites. *Myotis* **49**: 47-54.

<sup>99</sup> Motte G. & Libois R. (2002). Conservation of the lesser horseshoe bat (*Rhinolophus hipposideros* Bechstein, 1800) (Mammalia: Chiroptera) in Belgium. A case study in feeding requirements. *Belgian Journal of Zoology* **132**: 47-52.

<sup>100</sup> Schofield H., Messinger J., Birks J. & Jermyn D. (2003). Foraging and roosting behaviour of lesser horseshoe bats at Ciliau, Radnor. The Vincent Wildlife Trust, Ledbury.

<sup>101</sup> This guidance was jointly produced by North Somerset Council, other Somerset Local Authorities and Natural England. North Somerset Council. (January 2018). North Somerset and Mendip Bats Special Area of Conservation (SAC) Guidance on Development: Supplementary Planning Document. 86pp. Available at:

<sup>102</sup> Bontadina F., Schofield H. & Naef-Daenzer B. (2002). Radio-tracking reveals that lesser horseshoe bats (*Rhinolophus hipposideros*) forage in woodland. *Journal of the Zoological Society London* **258**: 281-290.

- 6.55 Table 6 below presents an analysis of every allocation in the Local Plan with regard to its impact on probable functionally linked land for bats. The analysis uses data and a modelling exercise undertaken by University of West of England (now Bath University) Bat Lab for, and in conjunction with, North Somerset District Council. Note that this is a high-level analysis using strategic data. It does not therefore preclude the need for specific bat investigations and surveys for planning applications for each allocation.

**Table 6. Functionally-linked land assessment of each Local Plan allocation**

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Wolvershill (north of Banwell) – 2,800 dwellings	0.6km to the Banwell Caves SSSI and 1.6km to the Banwell Ochre Caves SSSI	Various parcels of tree- or hedgerow-lined agricultural land and permanent pasture	<p>Based on information available from the Bat Conservation Research Lab the majority of the site is of moderate quality for greater horseshoe bat foraging, with smaller areas of high and low suitability. In terms of connectivity to known roosts in the wider landscape, the south of the allocation it is of low-moderate connectivity increasing to moderate connectivity further north within the allocation. As the allocation has moderate to high suitability areas and moderate connectivity there is a likely adverse impact on functionally linked land for the SAC.</p> <p><b>Mitigation may be required which could include offsetting, to be submitted as a site mitigation plan prior to any application.</b></p> <p>The allocation boundary is separated from the Banwell Caves SSSI by the A371, which may act as a partial barrier to the movement of SAC bats.</p> <p>Any lesser horseshoe bats would be expected to remain south of the A371, where various fragments of broad-leaved deciduous woodland exist.</p>
Land West of Hutton – 20 dwellings	3.5 km west of Banwell Caves SSSI	Permanent pasture, scrub, buildings, sand school and hedgerows and trees.	<p>Based on information available from the Bat Conservation Research Lab the area within the north of the allocation (pasture) is of low-quality habitat for bats, and that within the south of the allocation (buildings and sand school/equestrian ground) is not suitable. The area within the north of the allocation has low-mid connectivity and south no connectivity. Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation specific bat roosts/activity.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.
Elm Grove Nursery, Locking – 35 dwellings	2.4 km west of Banwell Caves SSSI	Arable, buildings, scrub,	<p>Based on information available from the Bat Conservation Research Lab the habitats are unsuitable for bats and the site has no connectivity for bats. Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Parklands Village - 2,894 dwellings	1.4 km northwest of Banwell Caves SSSI	Former RAF base, pasture, hedgerows, trees, scrub, bare ground.	<p>Based on information available from the Bat Conservation Research Lab, the majority of the allocation is unsuitable for bats and has no connectivity. However, there are areas of low, moderate and high suitability and low, low-moderate and moderate connectivity within the east and western areas of the allocation. Given there are areas of moderate/high suitability and moderate connectivity there is the potential to have an adverse impact on functionally linked land for the SAC.</p> <p>Most of the 2,894 dwellings allocated now have planning consent but masterplanning of the site has had regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats..</p> <p>The allocation is separated from Banwell Caves SSSI by the M5 and the A371, which may act as a partial barrier to the movement of SAC bats.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Winterstoke Village - 1,356 dwellings	3.5 km west of Banwell Caves SSSI	Bare ground, scrub, grassland, former Airfield	<p>Based on information available from the Bat Conservation Research Lab, the majority of the allocation is unsuitable for bats and has no connectivity. There are some areas of low suitability and low connectivity within the east of the allocation and on the western boundary (low-moderate connectivity) north of Haywood Village Academy where it borders a high suitability area adjacent to the site.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, in any case this site now entirely has consent, part outline, part detailed, and masterplanning of the site has had regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Locking Road Car Park – 230 dwellings	5.9 km northwest of Banwell Caves SSSI	Hardstanding former carpark	<p>Based on information available from the Bat Conservation Research Lab, the allocation is unsuitable for bats and has no connectivity and is located within the built-up area of Weston-Super-Mare, which is also unsuitable for SAC species.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, A370 and the Highbridge to St. Georges railway line, which may act as a partial barrier to the movement of SAC bats.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Former Leisuredome allocation/Parklands site B (Phase e) – 400 dwellings	1.9 km northwest of Banwell Caves SSSI	Bare ground, grassland, scrub, trees, Former RAF base	<p>Based on information available from the Bat Conservation Research Lab, a large area of the allocation is moderately suitable for SAC bats, within the centre and northern areas of the allocation; the allocation also has low-moderate connectivity with known roosts in the wider area.</p> <p>Given there are areas of moderate suitability there is the potential to have an adverse impact on functionally linked land for the SAC.</p> <p><b>Mitigation would be required which could include offsetting, to be submitted as a site mitigation plan prior to any application.</b></p> <p>Most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p>
Weston Rugby Club – 200 dwellings	6 km west of Banwell Caves SSSI	Grass sports pitch and associated buildings and hard standing	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability for SAC bats and also has low connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5 and A370, which may act as a partial barrier to the movement of SAC bats.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land west of Winterstoke Road – 134 dwellings	4.5 km west of Banwell Caves SSSI	Grassland, scrub, mature trees, hedgerows and astro turf football pitch	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability for SAC bats and has low connectivity within the north of the allocation and low-moderate connectivity within the south of the allocation with known roosts in the wider area. The area is also situated within the built-up area between Weston-Super-Mare and Uphill, although there are areas of open countryside within 225m of the south of the site and is connected to this open countryside by the water body Cross Rhyne.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation -specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Sunnyside Road – 120 dwellings	6 km north west of Banwell Caves SSSI	Hardstanding in the form of a carpark, with scrub/grass verges around the boundaries	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5 and A370, which may act as a partial barrier to the movement of SAC bats.</p>
Woodspring Stadium, Winterstoke Road – 100 dwellings	4.6 km west of Banwell Caves SSSI	Grass sports pitch and associated buildings and hard standing	Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability for SAC bats and also has low connectivity with known roosts in the wider area.



Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5 and A370, which may act as a partial barrier to the movement of SAC bats.</p>
Gas Works, Winterstoke Road – 95 dwellings	4.5 km west of Banwell Caves SSSI	Grass sports pitch and associated buildings and hard standing	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability for SAC bats and also has low connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5 and A370, which may act as a partial barrier to the movement of SAC bats.</p>
Dolphin Square - 80 dwellings	6.6 km west of Banwell Caves SSSI	Hard standing	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land west of Trenchard Road – 75 dwellings	1.0 km north of Banwell Caves SSSI	Pasture grassland with mature trees and hedgerow	<p>Based on information available from the Bat Conservation Research Lab, a large area of the allocation is moderately suitable, for SAC bats, within the southern areas of the allocation and low suitability within the northern parcel of the allocation, the allocation also has low-moderate connectivity with known roosts in the wider area.</p> <p>Given there are areas of moderate suitability there is the potential to have an adverse impact on functionally linked land for the SAC.</p> <p>However this site already has extant planning permission for housing.</p>
Police Station/Magistrates Court/Roselawn – 70 dwellings	6.4 km west of Banwell Caves SSSI	Buildings and associated hard standing e.g. car parks	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Anson Road – 70 dwellings	5.7 km northwest of Banwell Caves SSSI	Pasture surrounded by mature hedgerows and trees	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability for SAC bats and also has low connectivity with known roosts in the wider area. However the allocation is bordered by moderate and high suitability land which has low and moderate connectivity. Therefore, boundary features will need consideration in the plans.</p> <p>Given there are areas of moderate suitability bordering the allocation there is the potential to have an adverse impact on functionally linked</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>land for the SAC through removal or disturbance to high value boundary features.</p> <p>However this site already has extant permission for housing.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Land at Bridgwater Road – 60 dwellings	5.6 km west of Banwell Caves SSSI	Pasture bordered with mature trees and hedgerow	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability for SAC bats, with a small area of no suitability within the southern area of the allocation and also has low-moderate connectivity with known roosts in the wider area. However the allocation is bordered by moderate suitability land which has moderate connectivity. Therefore, boundary features will need consideration in the plans.</p> <p>Given there are areas of moderate suitability bordering the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to high value boundary features.</p> <p>However this site already has extant permission for housing.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5 and railway line, which may act as a partial barrier to the movement of SAC bats.</p>
Scot Elm Drive – 57 dwellings	3.2 km north of Banwell Caves SSSI	Grassland and bare ground bordered with some trees and waterfilled ditches	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. Also this site already has extant permission for housing. The</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.
Former Bournville School site – 48 dwellings	5 km west of Banwell Caves SSSI	Grassland with scattered trees and small area of hard standing bordered by mature trees	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability for SAC bats and also has low connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Lynton House Hotel – 40 dwellings	7.8 km northwest of Banwell Caves SSSI	Buildings	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC..</p> <p>Also this site already has extant permission for housing.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Knightstone Road Hotels – 40 dwellings	7.3 km north west of Banwell Caves SSSI	Buildings	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Former Sweat FA site, Winterstoke Road – 37 dwellings	5.5 km northwest of Banwell Caves SSSI	Hard standing	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Former Police Depot, Winterstoke Road – 36 dwellings	4.8 km west of Banwell Caves SSSI	Buildings and hard standing bordered by mature trees and scrub	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Nightingale Close, Mead Vale – 29 dwellings	4.2 km northwest of Banwell Caves SSSI	Buildings and associated hard standing, grass verges, scrub	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC..</p> <p>Also this site already has extant permission for housing.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Former TJ Hughes, High Street – 32 dwellings	6.7 km northwest of Banwell Caves SSSI	Buildings	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Land at Atlantic Road South – 18 dwellings	7.6 km northwest of Banwell Caves SSSI	Bareground, scrub	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC</p> <p>Also this site already has extant permission for housing.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land to the rear of Locking Road – 12 dwellings	5.3 km northwest of Banwell Caves SSSI	Buildings and hard standing	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Madeira Cove Hotel – 10 dwellings	7.6 km northwest of Banwell Caves SSSI	Buildings	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>However this site already has extant permission for development. Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Land off Millcross – 70 dwellings	6.6 km from Kings Wood and Urchin Wood SSSI	Hardstanding, trees and scrub	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.
Land north of Churchill Avenue – 44 dwellings	7.2 km northwest of Kings Wood and Urchin Wood SSSI	Grassland, scattered trees, scrub, river	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Great Western Road – 39 dwellings	7.2 km northwest of Kings Wood and Urchin Wood SSSI	Hardstanding, trees, scrub	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>. Also this site already has extant permission for development.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Castlewood – 120 dwellings	7 km northwest of Kings Wood and Urchin Wood SSSI	Buildings, hard standing, mature trees, grassland, hedgerow, river	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the</p>



Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
2-6 Bay Road – 19 dwellings	8.3 km northwest of Brockley Hall Stables SSSI	Buildings, hardstanding, trees, hedgerow	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>Also the site already has extant planning permission for development.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Land at North West Nailsea – 75 dwellings	3.9 km north of Brockley Hall Stables SSSI	Grassland, arable, sports pitches, buildings, hard standing, mature trees, hedgerows	<p>Based on information available from the Bat Conservation Research Lab, approximately half the allocation has low suitability for SAC bats with the remaining split between moderate and high suitability and also the majority of the allocations has moderate-high connectivity with the remaining moderate connectivity with known roosts in the wider area.</p> <p>Given there are areas of moderate and high suitability within the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features. <b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Youngwood Lane – 399 dwellings	2 km north of Brockley Hall Stables SSSI	Grassland, trees, hedgerow.	<p>Based on information available from the Bat Conservation Research Lab, approximately two thirds of the allocation has moderate suitability for SAC bats with the remaining split between low within the north of the allocation and a small area of high suitability within the centre of the allocation and the allocations has areas of moderate and moderate-high connectivity within the south centre and north of the allocation with low-moderate in the east and high connectivity with known roosts in the wider area in the west of the allocation.</p> <p>Given there are areas of moderate and high suitability and high connectivity within the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>
West of Engine Lane -109 dwellings	2.7 km north of Brockley Hall Stables SSSI	Pasture, trees, hedgerow,	<p>Based on information available from the Bat Conservation Research Lab, approximately half of the allocation has low suitability for SAC bats with the remaining split between low within centre and west of the allocation and a small area of low suitability within the southeast of the allocation and the allocations has high connectivity with known roosts in the wider area. As well as an area of high suitability bordering the allocation to the west.</p> <p>Given there are areas of moderate and high suitability and high connectivity within the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land south of The Uplands – 52 dwellings	2.6 km north of Brockley Hall Stables SSSI	Grassland, bound by mature trees and hedgerow and woodland.	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area. However, the site does have a high suitability area adjacent to the south east and the connectivity of the adjacent land parcels are moderate.</p> <p>Given there are areas of moderate suitability bordering the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to high value boundary features.</p> <p>However this site already has extant permission for housing.</p>
Weston College Site, Somerset Square – 28 dwellings	5.6 km north of King's Wood and Urchin wood SSSI	Hardstanding and trees	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p>
Trendlewood Way – 24 dwellings	4.8 km north of King's Wood and Urchin wood SSSI	Arable fields, with mature trees and hedgerow.	Based on information available from the Bat Conservation Research Lab, approximately 50% of the allocation has low suitability for SAC bats with the remaining area having no suitability. 50% of the allocation has moderate connectivity with known roosts in the area (the remainder having no connectivity). The allocation borders urban areas with no connectivity to roost or habitat suitability for SAC bats.

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>Given half the area has moderate connectivity there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>
Land east of Youngwood Lane – 14 dwellings	4.8 km north of King's Wood and Urchin wood SSSI	Grassland, bound by mature trees and hedgerow and woodland.	<p>Based on information available from the Bat Conservation Research Lab, the 0.7 ha allocation has low suitability for SAC bats. The allocation has moderate connectivity with known roosts in the area.</p> <p>Given the moderate connectivity of the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>
Wyndham Way Broad Location – 350 dwellings	9 km north of Brockley Hall Stables SSSI	Buildings, hardstanding, trees, and hedgerow	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from King's Wood and Urchin wood SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Harbour Road/Gordano Gate – 93 dwellings	9.2 km north of Brockley Hall Stables SSSI	Buildings, hardstanding, and managed hedgerow	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>Also this site already has extant permission for development.</p>
V2 Harbour Road – 26 dwellings	9.6 km north of Brockley Hall Stables SSSI	Hardstanding, scattered trees, poor grassland and barren land	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>Also this site already has extant permission for housing.</p>
Land south of Downside – 23 dwellings	9.2 km north of Brockley Hall Stables SSSI	Grassland bordered by trees	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Grove Farm – 515 dwellings	1.1 km north of Brockley Hall Stables SSSI	Arable land with hedgerows and scattered trees. An area of farm buildings and hard standing is incorporated within the allocation.	<p>Based on information available from the Bat Conservation Research Lab, approximately 40% of the allocation is of high suitability for bats of the SAC and 60% of moderate suitability. The majority of the allocation has moderate-high connectivity with known roost in the area with areas of low to medium and high connectivity with known roosts in the wider area also within the allocation.</p> <p>Given there are areas of moderate and high suitability and high connectivity within the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features. <b>Mitigation may be required which could include buffer zones around the boundary and high suitability features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>
Land at Farleigh Farm – 125	2.6 km northeast of Brockley Hall Stables SSSI	Grassland with hedgerow	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of moderate suitability for bats of the SAC and has high connectivity with known roosts in the wider area also within the allocation.</p> <p>Given the allocation is of moderate suitability and high connectivity there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>
Land West of Rodney Road – 65 dwellings	1.7 km north of Brockley Hall Stables SSSI	Arable land with hedgerows	<p>Based on information available from the Bat Conservation Research Lab, approximately 90% of the allocation has moderate suitability for SAC bats with the remaining 10% being of high suitability (with further high suitability land adjoining to the south). The allocation has high</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>connectivity with the remaining moderate connectivity with known roosts in the wider area.</p> <p>Given there are areas of moderate and high suitability within the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>
Land at North End Yatton – 47 dwellings	2.8 km northwest of King's Wood and Urchin wood SSSI	Arable land with hedgerows and trees. Allocation incorporates farm buildings and some hardstanding.	<p>Based on information available from the Bat Conservation Research Lab, the allocation has no suitability for SAC bats and also has no connectivity with known roosts in the wider area. Although the land is adjacent to two areas of high connectivity to the north.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>Also this site already has extant permission for housing.</p>
Moor Road, Yatton – 60 new dwellings	2.6 km northwest of King's Wood and Urchin wood SSSI	Grassland with hedgerows and trees.	<p>Based on information available from the Bat Conservation Research Lab, the allocation has moderate suitability for SAC bats. The allocation has high connectivity with the remaining moderate connectivity with known roosts in the wider area.</p> <p>Given the moderate suitability of the allocation and moderate connectivity, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			However this site already has extant permission for housing.
Rectory Farm, Yatton – 100 dwellings	1.8 km west of King's Wood and Urchin wood SSSI	Arable land with hedgerows and trees. Allocation incorporates farm buildings and some hardstanding.	<p>Based on information available from the Bat Conservation Research Lab, 60% of the allocation has low suitability and 40% no suitability for SAC bats. The southwestern element of the allocation has low connectivity with known roosts in the wider area, whereas 40% of the allocation to the north east has no connectivity.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>.Also this site already has extant permission for housing.</p>
Land west of Wolvershill Road – 54 dwellings	1 km northeast of Banwell Caves SSSI and 1.1 km west of Banwell Ochre Caves SSSI	Grassland with scrub, hedgerows and trees. Allocation incorporates farm dwelling and domestic garden including some hardstanding.	<p>Based on information available from the Bat Conservation Research Lab, this 3.2 ha allocation has low suitability for SAC bats. The allocation includes land with low and medium-low connectivity with known roosts in the wider area. The land is bordered to the northwest by an area of medium suitability although 90% of the land bordering the allocation has no suitability. Although the land is adjacent to two areas of high connectivity to the north.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>Also this site already has extant permission for housing.</p>



Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land South of Knightcott Gardens – 37 dwellings	0.5 km northeast of Banwell Caves SSSI.	Grassland with scrub and hedgerows	<p>Based on information available from the Bat Conservation Research Lab, this 2.8 ha allocation has no suitability for SAC bats and no connectivity with known roosts in the wider area. The land bordering the allocation has no suitability or connectivity.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC..</p> <p>Also this site already has extant permission for housing.</p>
Land at Western Trade Centre – 10 dwellings	0.4 km north of Banwell Caves SSSI.	Hardstanding	<p>Based on information available from the Bat Conservation Research Lab, this 0.45 ha allocation has no suitability for SAC bats and no connectivity with known roosts in the wider area. The land bordering the allocation has no suitability or connectivity.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>.Also this site already has extant permission for development.</p>
Bleadon Quarry – 42 dwellings	4.5 km southwest of Banwell Caves SSSI	Buildings and hardstanding	<p>Based on information available from the Bat Conservation Research Lab, this 2.17 ha allocation has no suitability for SAC bats and no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC..</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			Also this site already has extant permission for housing.
Land off Purn Way – 14 dwellings	4.7 km southwest of Banwell Caves SSSI	Grassland, hedgerow and trees	<p>Based on information available from the Bat Conservation Research Lab, this 0.81 ha allocation has low suitability for SAC bats. The allocation has low-moderate connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>Also this site already has extant permission for housing.</p>
Land east of Ladymead Lane – 70 dwellings	3.2 km south of King's Wood and Urchin wood SSSI	Grassland, hedgerow and trees	<p>Based on information available from the Bat Conservation Research Lab, 50% of the allocation has high suitability for SAC bats and 50% no suitability. 50% of the allocation has moderate connectivity with the remaining area no connectivity with known roosts in the wider area.</p> <p>Given the high suitability of part the allocation and moderate connectivity, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features. <b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>
Land north of Pudding Pie Lane – 65 dwellings	3.0 km south of King's Wood and Urchin wood SSSI	Grassland, hedgerow and scattered trees	<p>Based on information available from the Bat Conservation Research Lab, 50% of the allocation has moderate suitability for SAC bats. 25% high suitability and 25% no suitability. 40% of the site has low-moderate connectivity, 40% moderate and 20% no connectivity with the remaining area no connectivity with known roosts in the wider area.</p> <p>Given the moderate and high suitability of part the allocation and moderate connectivity, there is the potential to have an adverse impact</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			on functionally linked land for the SAC through removal or disturbance to valuable features.. <b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b>
Pudding Pie Lane (West) – 35 net new dwellings	3.2 km south of King's Wood and Urchin wood SSSI	Grassland and hedgerow (including trees)	Based on information available from the Bat Conservation Research Lab, this 1.52 ha allocation has low (50%) or no (50%) suitability for SAC bats. The allocation has moderate (50%) or no (50%) connectivity with known roosts in the wider area.  Given the moderate connectivity of the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features. <b>Consideration to retention and protection from disturbance of the boundary features should be given in the masterplan design.</b>
Land south of Jubilee Lane, Churchill – 21 dwellings	3.1 km south of King's Wood and Urchin wood SSSI	Arable land with hedgerow (including trees)	Based on information available from the Bat Conservation Research Lab, the allocation has high suitability for SAC bats. The allocation has moderate connectivity with known roosts in the wider area.  Given the high suitability of the allocation and moderate connectivity, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.. <b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b>
Land south of Bristol Road and north of Bath Road – 68 dwellings	4.0 km south of King's Wood and Urchin wood SSSI and 4.0 km east of Banwell Ochre Caves SSSI	Grassland and scrub with hedgerow (including trees)	Based on information available from the Bat Conservation Research Lab, the allocation has high suitability for SAC bats. The allocation has moderate connectivity with known roosts in the wider area.  Given the high suitability of the allocation and moderate connectivity, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			However there is a resolution to grant consent for development..
Land at Dinghurst Road – Churchill – 25 new dwellings	3.5 km east of Banwell Ochre Caves SSSI	Grassland with hedgerow (including trees)	<p>Based on information available from the Bat Conservation Research Lab, this 1.62 ha allocation has low suitability for SAC bats. The allocation has moderate connectivity with known roosts in the wider area.</p> <p>Given the moderate connectivity of the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features. <b>Consideration to retention and protection from disturbance of the boundary features should be given in the masterplan design.</b></p>
North Field Claverham Works, Claverham – 24 dwellings	1.1 km north of King's Wood and Urchin wood SSSI	Buildings and barren ground/hardstanding	<p>Based on information available from the Bat Conservation Research Lab, this 1.45 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC..</p> <p>Also this site already has extant permission for development.</p>
Woodhill Nurseries – 60 net new dwellings	360 m west of King's Wood and Urchin wood SSSI	Hardstanding and buildings with some managed "garden"	<p>Based on information available from the Bat Conservation Research Lab, this 0.9 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation -specific bat roosts/activity.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land east of Smallway – 25 dwellings	950 m west of King's Wood and Urchin wood SSSI	Grassland with scrub and hedgerows (including trees)	<p>Based on information available from the Bat Conservation Research Lab, this 0.6 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC</p> <p>Also this site already has extant permission for housing.</p>
Land to the north of Bristol Road – 20 dwellings	670 m west of King's Wood and Urchin wood SSSI	Grazed grassland with hedgerows	<p>Based on information available from the Bat Conservation Research Lab, this 0.9 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p>
Land south of Station Road – 13 dwellings	1.7 km west of King's Wood and Urchin wood SSSI	Grassland with some hardstanding	<p>Based on information available from the Bat Conservation Research Lab, this 0.7 ha allocation has low suitability for SAC bats. The allocation has moderate connectivity with known roosts in the wider area.</p> <p>Given the moderate connectivity of the allocation there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features..</p> <p>However this site already has extant permission for housing.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land at Mead Farm – 35 dwellings	750 m east of Banwell Ochre Caves SSSI	Grassland with hedgerows and scattered trees.	<p>Based on information available from the Bat Conservation Research Lab, the allocation has high (70%) or no (30%) suitability for SAC bats. The site has moderate (70%) or no (30%) connectivity with known roosts in the wider area.</p> <p>Given the high suitability of part of the allocation and moderate connectivity, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.. <b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>
Land south of Greenhill Lane – 49 dwellings	1.6 km east of Banwell Ochre Caves SSSI	Grassland with scrub and trees	<p>Based on information available from the Bat Conservation Research Lab, the allocation has high (40%), medium (10%) or no (50%) suitability for SAC bats. The allocation has moderate (40%) or no (60%) connectivity with known roosts in the wider area.</p> <p>Given the high suitability of part of the allocation and moderate connectivity, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>
Woodborough Farm – 83 dwellings	1.8 km southeast of Banwell Ochre Caves SSSI	Grassland with hedgerow (including trees)	<p>Based on information available from the Bat Conservation Research Lab, this 8.1 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			Also this site already has extant permission for housing.
Broadleaze Farm – 74 dwellings	750 m east of Banwell Ochre Caves SSSI	Grassland with hedgerow (including trees)	<p>Based on information available from the Bat Conservation Research Lab, the allocation has medium (90%) or no (10%) suitability for SAC bats. The site has moderate (90%) or no (10%) connectivity with known roosts in the wider area.</p> <p>Given the medium suitability of part of the allocation and moderate connectivity, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.. <b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>
West of Hill Road – 30 dwellings	750 m east of Banwell Ochre Caves SSSI	Arable Line with hedgerow	<p>Based on information available from the Bat Conservation Research Lab, this 0.9 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p>
Land at Coombe Farm and Shipham Lane – 68 dwellings	1.1 km southeast of Banwell Ochre Caves SSSI	Grassland, arable land, scattered trees and hedgerows	<p>Based on information available from the Bat Conservation Research Lab, this 4.3 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			Also the site has planning consent for housing subject to the completion of a legal agreement .
Former Mooseheart Lodge – 14 dwellings	1.6 km southeast of Banwell Ochre Caves SSSI	Grassland with hedgerow (including trees)	<p>Based on information available from the Bat Conservation Research Lab, this 0.42 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>Also this site already has extant permission for housing.</p>
Barrow Hospital (1), Barrow Gurney – 59 dwellings	7 km east of Brockley Hall Stables SSSI	Hardstanding and buildings with scattered trees and barren land	<p>Based on information available from the Bat Conservation Research Lab, this 5.5 ha 90% of the allocation has no suitability for SAC bats and 10% low suitability. The allocation has moderate connectivity (10%) or no connectivity (90%) with known roosts in the wider area.</p> <p>There is also evidence from the Council that there is a greater horseshoe roost within the allocation, which is currently not mapped.</p> <p>. However this site already has extant permission for housing.</p>
Barrow Hospital (2), Barrow Gurney – 14 dwellings	7 km east of Brockley Hall Stables SSSI	Hardstanding and buildings	<p>Based on information available from the Bat Conservation Research Lab, this 1.3 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area. However, there is evidence from the Council that there is a greater horseshoe roost within the allocation, which is currently not mapped.</p> <p>However this site already has extant permission for housing.</p>



Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Unit C, Estune Business Park, Long Ashton – 24 dwellings	6.8 km northeast of Brockley Hall Stables SSSI	Building	<p>Based on information available from the Bat Conservation Research Lab, this 0.08 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation specific bat roosts/activity.</p> <p>However this site already has extant permission for housing.</p>
Unit A, Estune Business Park, Long Ashton – 18 dwellings	6.8 km northeast of Brockley Hall Stables SSSI	Building	<p>Based on information available from the Bat Conservation Research Lab, this 0.03 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>However this site already has extant permission for housing.</p>
Tickenham Garden Centre, Tickenham – 14 dwellings	4.8 km north of Brockley Hall Stables SSSI	Hardstanding, buildings and barren ground	<p>Based on information available from the Bat Conservation Research Lab, this 1.95 ha allocation has no suitability for SAC bats. The allocation has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC.</p> <p>However this site already has extant permission for housing.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
Land north of Colliter's Way – 215 dwellings	9 km east of Brockely Hall Stables SSSI	Arable fields with hedgerows and small woodland and hardstanding.	<p>Based on information available from the Bat Conservation Research Lab, the allocation has high (10%), low (80%) or no (10%) suitability for SAC bats. The site has moderate (10%), low-moderate (70%) or no (10%) connectivity with known roosts in the wider area.</p> <p>Given the high suitability and moderate connectivity of part of the allocation, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.. <b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>
Gatcombe Farm, Wrington – 38 dwellings	642 m east of King's Wood and Urchin wood SSSI	Buildings and hardstanding with grassland and scattered trees	<p>Based on information available from the Bat Conservation Research Lab, the allocation has high (50%) or no (50%) suitability for SAC bats. The site has moderate (50%) or no (50%) connectivity with known roosts in the wider area.</p> <p>Given the high suitability and moderate connectivity of part of the allocation, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>However this site already has extant permission for housing.</p>
Haywood Village Business Quarter – 21.5 ha	3.8 km west of Banwell Caves SSSI	Grassland, scrub, hardstanding, wet ditches	<p>Based on information available from the Bat Conservation Research Lab, the allocation is in the majority of low suitability with a small area of moderate suitability in the north of the site. The south of the allocation has low connectivity, and the north of the site has low-moderate connectivity to known roosts in the area.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>Given the moderate suitability of part of the allocation, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p>,However in any case this site now entirely has consent, part outline, part detailed, and masterplanning of the site has had regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Parklands Village site A – 0.3 ha	1.8 km north of Banwell Caves SSSI	Arable	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability. The allocation has low-moderate connectivity to known roosts in the area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>However most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.
Parkland Village site C – 0.37 ha	2.6 km northwest of Banwell Caves SSSI	Arable	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability. The allocation has no connectivity to known roosts in the area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>However most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Parklands Village site D – 1.67 ha	2.6 km northwest of Banwell Caves SSSI	Arable, wet ditch, hedgerow, bare ground	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability. The allocation has low-moderate connectivity to known roosts in the area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation -specific bat roosts/activity.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>However most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Parklands Village site E – 1.82 ha	3.0 km northwest Banwell Caves SSSI	Grassland, scrub, wet ditch	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability. The allocation has low-moderate connectivity to known roosts in the area. The allocation is bordered by areas of moderate and high suitability on the south and west.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation-specific bat roosts/activity. Consideration must be given to retention and protection of high value boundary features from removal and disturbance, within the masterplan.</p> <p>Most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.
Parklands Village site F – 0.47 ha	3.2 km northwest of Banwell Caves SSSI	Grassland, hedgerow, scrub	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of low suitability. The allocation has low-moderate connectivity to known roosts in the area. The allocation is bordered by areas of moderate on the southwest.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity. Consideration must be given to retention and protection of high value boundary features from removal and disturbance, within the masterplan.</p> <p>Most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Parklands Village site G – 0.31 ha	2.6 km north of Banwell Caves SSSI	Scrub, wet ditch, bare ground	Based on information available from the Bat Conservation Research Lab, the allocation has no suitability. The allocation has no connectivity to known roosts in the area. However, the allocation is bordered by areas of moderate suitability land to the north and west, which also has low-moderate connectivity.

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity. Consideration must be given to retention and protection of high value boundary features from removal and disturbance, within the masterplan.</p> <p>Most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Parklands Village site H – 0.57 ha	1.8 km northwest of Banwell Caves SSSI	Grassland, hedgerows, bare ground	<p>Based on information available from the Bat Conservation Research Lab, the majority of the allocation is of low suitability. The allocation has low connectivity to known roosts in the area. The remaining area is of no suitability or connectivity.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>Most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Parklands Village site I – 0.12 ha	1.6 km northwest of Banwell Caves SSSI	Hardstanding with grassland, trees and hedgerow	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability. The allocation has no connectivity to known roosts in the area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>Most of the Parklands Village site now has planning consent and it is likely that masterplanning of remaining areas will have regard to the Weston Villages Supplementary Planning Document (SPD) which puts a large emphasis on provision of green infrastructure, including a network of green corridors to provide wildlife habitat, with dark vegetated corridors for bats</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Wolvershill (north of Banwell) – 6.5 ha	580 m north of Banwell Caves SSSI	Arable or grassland, with hedgerow and trees, small area of woodland in the northwest. Some buildings and hardstanding.	Based on information available from the Bat Conservation Research Lab, the majority of the allocation is of moderate suitability with areas of high suitability in the southwest, west and northeast of the allocation.



Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>The majority of the site is of low-moderate connectivity, with moderate connectivity in the north.</p> <p>Given the moderate and high suitability of part of the allocation, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p><b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>
West Wick Business Park – 5.3 ha	2.7 km north of Banwell Caves SSSI	Grassland, scrub, wet ditches	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability. The allocation has no connectivity to known roosts in the area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>Also this site already has extant planning permission for development</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Summer Lane, North of A370 – 2.53 ha	3.5 km north of Banwell Caves SSSI	Grassland, hedgerow, scrub	<p>Based on information available from the Bat Conservation Research Lab, the majority of the allocation is of no suitability, a small area of low suitability within the east of the allocation. The majority of the allocation has no connectivity to known roosts in the area, with a small area of low-moderate connectivity in the east of the allocation.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p>SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>Also this site already has extant planning permission for development The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Moor Park, A371 – 1.23 ha	3.1 ha northwest of Banwell Caves SSSI	Hardstanding	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability. The allocation has no connectivity to known roosts in the area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Aisecombe Way 0.5 ha	4.4 km northwest of Banwell Caves SSSI	Grassland and scrub	<p>Based on information available from the Bat Conservation Research Lab, the allocation has no suitability. The allocation has no connectivity to known roosts in the area. However, the allocation is bordered by a large area of high suitability land to the west, which also has low-moderate connectivity.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity. Consideration must be given to retention and protection of high value boundary features from removal and disturbance, within the masterplan.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			The allocation is separated from Banwell Caves SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.
Land to the west of Kenn Road – 8.2 ha	5.6 km northwest of King’s Wood and Urchin wood SSSI	Grassland, hedgerow and mature trees	<p>Based on information available from the Bat Conservation Research Lab, within the north of the allocation is of low suitability with the south of the site being of moderate and southwest high suitability. The south of the allocation has moderate-high connectivity, and the north of the site has low-moderate connectivity to known roosts in the area.</p> <p>Given the moderate suitability of part of the allocation, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p> <p><b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p> <p>The allocation is separated from King’s Wood and Urchin wood SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Land to the east of J20, Clevedon – 25 ha	5.6 km northwest of King’s Wood and Urchin wood SSSI	Arable or grassland, with hedgerow and trees, small area of woodland in the north	<p>Based on information available from the Bat Conservation Research Lab, the majority of the allocation is of moderate suitability with high suitability in the southeast of the allocation and a small area in the north. The majority of the site is of moderate-high connectivity, with moderate connectivity in the southeast corner and moderate and low-moderate connectivity to known roosts in the area in the north.</p> <p>Given the moderate suitability of part of the allocation, there is the potential to have an adverse impact on functionally linked land for the SAC through removal or disturbance to valuable features.</p>

Site Allocation	Approximate Distance to Nearest Component Part of the North Somerset & Mendip Bats SAC (km)	Habitat Types	Implications Regarding Functionally Linked Habitat Loss
			<p><b>Mitigation may be required which could include buffer zones around the boundary features and offsetting, to be submitted as a site mitigation plan prior to any application.</b></p>
Gordano Gate, Portishead – 1.1 ha	9.2 km north of Brockley Hall Stables SSSI	Grassland, scrub, trees	<p>Based on information available from the Bat Conservation Research Lab, the allocation has no suitability. The allocation has no connectivity to known roosts in the area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation- specific bat roosts/activity.</p> <p>The allocation is separated from Brockley Hall Stables SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>
Wyndham Way Development Framework Area (excluding Gordano Gate allocation) – 3.75 ha	9 km north of Brockley Hall Stables SSSI	Buildings, hardstanding, trees, and hedgerow	<p>Based on information available from the Bat Conservation Research Lab, the allocation is of no suitability for SAC bats and also has no connectivity with known roosts in the wider area.</p> <p>Given this information it is likely that the allocation would not make a material impact upon functionally linked land at a strategic level for the SAC. However, this does not preclude individual site surveys which will be required to confirm allocation specific bat roosts/activity.</p> <p>The allocation is separated from King's Wood and Urchin wood SSSI by the M5, which may act as a partial barrier to the movement of SAC bats.</p>

6.56 In summary, the following sites were identified to potentially need mitigation or offsetting for impacts on functionally-linked habitat associated with North Somerset & Mendip Bats SAC, depending on the details of masterplanning, final development quanta and planning application surveys. However, as indicated above, a number of the sites already have planning consent, so the consented development could occur as approved unless the approval lapses, which is not particularly likely; (indeed some sites are already under construction):

- Wolverhill (north of Banwell) – 2,800 dwellings
- Parklands Village - 2,894 dwellings
- Former Leisuredome allocation/Parklands site B (Phase e) – 400 dwellings
- Land west of Trenchard Road – 75 dwellings
- Anson Road – 70 dwellings
- Land at Bridgwater Road – 60 dwellings
- Land at North West Nailsea – 75 dwellings
- Youngwood Lane – 399 dwellings
- West of Engine Lane -109 dwellings
- Land south of The Uplands – 52 dwellings
- Trendlewood Way – 24 dwellings
- Land east of Youngwood Lane – 14 dwellings
- Grove Farm – 515 dwellings
- Land at Farleigh Farm – 125
- Land West of Rodney Road – 65 dwellings
- Moor Road, Yatton – 60 new dwellings
- Land east of Ladymead Lane – 70 dwellings
- Land north of Pudding Pie Lane – 65 dwellings
- Pudding Pie Lane (West) – 35 net new dwellings
- Land south of Jubilee Lane, Churchill – 21 dwellings
- Land at Dinghurst Road – Churchill – 25 new dwellings
- Land south of Station Road – 13 dwellings
- Land at Mead Farm – 35 dwelling
- Land south of Greenhill Lane – 49 dwellings
- Broadleaze Farm – 74 dwellings
- Barrow Hospital (1), Barrow Gurney – 59 dwellings
- Barrow Hospital (2), Barrow Gurney – 14 dwellings
- Land north of Colliter's Way – 215 dwellings
- Gatcombe Farm, Wrington – 38 dwellings
- Haywood Village Business Quarter – 21.5 ha
- Land to the west of Kenn Road – 8.2 ha
- Land to the east of J20, Clevedon – 25 ha

6.57 The North Somerset and Mendip Bats SAC SPA highlights that any built development on greenfield sites in the JVZs is unacceptable, due to the disproportionate importance of these potential foraging habitats in supporting maternity roost populations. In case such allocations are considered, Natural England and the Local Planning Authority should be consulted at an early stage in the development process. However, the NSLP does not allocate any sites within 1km or 600m of active<sup>103</sup> maternity roosts of greater horseshoe

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<sup>103</sup> Although there are allocations within 1km of King's Wood and Urchin Wood SSSI the council have evidence that sparrowhawks have cause the bats to largely no longer use that site.

bats or lesser horseshoe bats respectively. Therefore, it does not have the potential to negatively impact the reproductive success in maternity roosts.

6.58 Some of the proposed allocations discussed in the table above, fall within the Bat Consultation Zones identified in the North Somerset and Mendip Bats SAC SPD. Generally, the likely level of impact and associated mitigation requirements for development differ between the three zones. In Zone C developers should seek advice from their consultant ecologist to identify and assess any impacts a proposal may have<sup>104</sup>. Where development has the potential to affect the following habitat features in Zones A or B, early discussions with the LPA are advised:

- Known, but non-designated bat roost
- Site of Special Scientific Interest (SSSI)
- Linear features (e.g. hedgerows, treelines, watercourses, stone walls)
- Pasture, hay meadow, woodland, parkland or woodland edge
- Wetland habitat (e.g. ponds, marsh, reedbed, rivers, streams, rhynes)
- Man-made structures with roost potential (e.g. buildings, bridges, cellars, mines, tunnels)

## Survey Requirements

6.59 For development proposals in all Bat Consultation Zones, surveys are required to determine whether a site is used by horseshoe bats as a commuting route and / or for foraging. The precise survey requirements are determined by the sensitivity of the site and scale of the proposals. Consultant ecologists will advise on the survey scope following a preliminary desk study and site assessment. Importantly, bat surveys are seasonally constrained, requiring a full season of data (April to October), except where this is not necessary and demonstrable to the council ecologist. Winter surveys will be required for developments in close proximity to hibernacula. Generally, two types of surveys are required to provide evidence on the importance of a land parcel to SAC bats, a bat survey and habitat / land use survey.

6.60 Bat surveys in Bands A and B of the Bat Consultation Zone need to consider the difficulty in detecting echolocation calls of greater horseshoe bats (due to directionality and rapid attenuation). Therefore, it is recommended that a greater survey effort and the most sensitive equipment is used. The survey effort should focus on specific linear landscape features (e.g. watercourses, transport corridors, hedgerows, woodland edges, treelines) that may be used as commuting flightlines. Automated detectors, deployed in various locations for at least 50 days from April to October, should be the main survey method. The number of automated detectors should be such that each potential habitat component is surveyed equally. For example, where woodland is present on site, three detectors should be deployed to cover the woodland edge, canopy and eye-level. Manual transect surveys covering all commuting and foraging features should be carried out on ten days, with at least one in each month from April to October to reflect changes in bat activity throughout the year<sup>105</sup>. These surveys should be undertaken in warm, still weather and cover the peak activity levels of bats (at least three hours after sunset).

6.61 A Phase 1 habitat survey of all development allocations in the Bat Consultation Zone should be carried out to indicate habitats (and their hectareage) of potential suitability for horseshoe bats. This must include information on the usage of each field (e.g. arable, pasture, etc.) and the dimensions and management of hedgerows in the period of bat activity. For grazed pastures, the type of stock and stocking density should be assessed, by seeking information from the landowner where required.

## Mitigation Requirements

6.62 Where development proposals in the Bat Consultation Zone would impact designated bat populations, adequate mitigation will be required to avoid adverse effects on the integrity of the North Somerset & Mendip Bats SAC. In all instances, the preferred mitigation approach is to retain and enhance habitat features of value to horseshoe bats. While this is often possible for linear habitat features, retention of foraging habitats within development boundaries can be challenging. Replacement habitat is needed where bat commuting structures and foraging habitats are permanently lost. The type and extent of replacement habitat to be

<sup>104</sup> Note that consultant ecologists are required for development proposals in all Zones. They should be members of CIEEM or listed on the Environmental Consultants Directory.

<sup>105</sup> Collins J. (2016). Bat survey guidelines for professional ecologists: Good practice guidelines. (3<sup>rd</sup> Edition). Bat Conservation Trust, London.

provided should be determined in dialogue with the LPA ecologist and / or Natural England. There are a range of optimal replacement habitats for horseshoe bats, including hedgerows with trees, wildflower meadows, grazed pastures, ponds, woodland / copses and night roost opportunities. Provision of replacement habitats should be carried out to timescales set by the LPA and Natural England, to ensure this is functional as soon as possible. For mitigation to be effective, any replacement habitat must be in continuity with the wider ecological landscape to be accessible to SAC bats.

## Mitigation Contained in the NSLP

6.63 The NSLP extends a high level of protection to Habitat sites. Policy DP35 (Nature conservation) explicitly states that *'Development which would have an adverse impact on identified sites of international importance (which include Special Areas of Conservation (SAC), Special Protection Areas (SPAs) and Ramsar sites) will not be permitted.'* It also states that *'Development proposals will need to meet Habitats Regulation requirements, including, where necessary, the need to address recreational pressures and air quality issues.'* Therefore, by definition no development proposals which place the Conservation Objectives of the North Somerset & Mendip Bat SAC and Mendip Limestone Grassland SAC at risk will be permitted.

6.64 However, Policy DP35 goes much further than this and explicitly references Nature Parks. It states that *'Nature Parks will be identified to protect and enhance greater and lesser horseshoe bat habitat at Nailsea, Backwell, Wolvershill (north of Banwell) and at other locations.'* Legally protected species, which include lesser and greater horseshoe bats, are also specifically addressed in Policy DP35 and protected from harm associated with development. Where the potential for harm is present, appropriate avoidance or mitigation measures must be provided. The policy states that *'For all development proposals, where biodiversity could be adversely affected, developers should ensure that, where appropriate, provision is made for: ...*

- *Retention of native and ancient woodland, native trees including veteran trees, native hedgerows, watercourses, ponds, rhynes, other wetland habitats such as reedbeds, botanically diverse grasslands, traditional orchards, geological features, and other major natural features, habitats or wildlife corridors and buffers, and their protection during construction work;*
- *Compensatory provision, within the site itself, or immediate vicinity if practicable, where the loss of habitats or features of importance to wild flora and fauna is unavoidable, taking account of the need for adequate biodiversity net gain;*
- *Measures to link habitats within the development and also to link to adjoining wildlife corridor networks:*
- *Appropriate long-term management of retained and newly created features of importance...'*

6.65 Importantly, the above policy text acknowledges different levels of the mitigation hierarchy, striving for the retention of important habitat features in the first instance, but requiring compensatory provision if the loss of sensitive habitat features is unavoidable, as well as increasing connecting habitat and long-term management of retained and created features. Furthermore, the range of habitats that is referred to in the policy includes all habitats of value to horseshoe bats.

6.66 This is also backed up by Policy SP11 Historic and Natural Environment which states that *"New development proposals will be supported where they make a positive contribution to the protection and enhancement of valued landscapes and the historic environment, as well as increasing biodiversity and enhancing the natural environment"*. Valued landscapes include those which are functionally linked to the North Somerset & Mendip Bats SAC and Mendip Limestone Grasslands SAC for their importance to commuting and foraging bats. The Policy states that *"new development will, where appropriate, be expected to:*

- *Conserve, restore and enhance priority habitats, ecological networks and the protection and recovery of priority species;*
- *Secure biodiversity net gain;*
- *Support the establishment and delivery of North Somerset Nature Parks to protect and enhance internationally important bat habitats and mitigate the impacts of development proposals;*
- *Retain existing trees and support new planting and woodland creation to help increase district-wide canopy cover...'*

6.67 The Local Plan refers to Nature Parks, but their precise boundary definition will be included in a subsequent SPD. It is likely that there will be a Nature Park in at least the Nailsea/Backwell area and the

Wolvershill/Banwell area. Nature Parks will be strategic areas that ideally include areas of already good habitat for bats, and less good fringes that could be improved. They should have good connectivity allowing bats to feed but also to travel further out to other feeding grounds. They should include dark areas.

- 6.68 With these requirements in place, and the commitment to strategic Nature Parks, it is considered that the Local Plan does have a sufficient policy framework to protect functionally-linked land associated with North Somerset & Mendip Bats SAC and thus ensure no adverse effect on the integrity of the SAC arises.

## Atmospheric Pollution

### Appropriate Assessment of Avon Gorge Woodlands SAC

- 6.69 Nitrogen deposition can adversely affect calcareous grassland, woodland and (to a lesser extent) saltmarsh. For calcareous grassland Caporn et al (2016) note that '*Calcareous habitats are less affected by nitrogen deposition than less well pH buffered systems*'<sup>106</sup> and it seems clear that any effect is manifested less by a reduction in species richness (as is observed for many other habitats) than a shift from more desirable (less competitive) species to less desirable (more competitive) species without any actual reduction in the number of species recorded.
- 6.70 With regard to woodland, elevated nitrogen deposition in general has driven strong biogeochemical responses with many authors documenting reductions in soil carbon-nitrogen ratio, acidification and increased nitrate leaching<sup>107</sup> and understory plants can be negatively affected by nitrogen inputs. However, the impact of nitrogen deposition on vegetation composition of woodlands is poorly understood partly due to the strong confounding influence that tree canopy structure places on ground flora species richness, cover and other parameters that might illustrate the influence of nitrogen deposition. The canopy does this through interception of light, rainfall and pollution, and the effect of woodland management upon this structure also has a big influence on ground flora.
- 6.71 Given the size of planned development and proximity to Avon Gorge Woodlands SAC the Bristol Local Plan must be considered in combination with the NSLP to determine what impacts will occur.
- 6.72 To undertake detailed air quality modelling, it is 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 (i.e. measured traffic flows)
  - Do Minimum (i.e. end of plan period **without** the NSLP but **including** an allowance for growth from other sources including surrounding local councils)
  - Do Something (i.e. end of plan period with the Local Plan **and** growth from other sources including surrounding local councils)
- 6.73 This is required for every significant road within 200m of relevant Habitat sites i.e. A4 past Avon Gorge Woodlands SAC.
- 6.74 To undertake an in-combination assessment the air quality modellers would also need to calculate a 'future baseline' scenario which would use the baseline traffic data but apply improvements in vehicle emission factors over time. The difference between Do Something and Future Baseline would then provide the results for the 'in combination' assessment while the difference between Do Something and Do Minimum would be the contribution of the individual Local Plan in question.
- 6.75 A first step in the assessment will be to determine whether the lowest part of the nitrogen critical load range for each Habitat site is already exceeded. If not then provided the effects of growth do not cause an exceedance no adverse effect on integrity would be expected to occur.
- 6.76 The critical load for the designated habitats of Avon Gorge Woodlands SAC is 10 kgN/ha/yr for the calcareous grassland (lowered from 15 kgN/ha/yr in May 2023) and 15 kgN/ha/yr for the woodland. These

<sup>106</sup> Caporn, S., Field, C., Payne, R., Dise, N., Britton, A., Emmett, B., Jones, L., Phoenix, G., S Power, S., Sheppard, L. & Stevens, C. 2016. Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance. Natural England Commissioned Reports, Number 210. Page 45

<sup>107</sup> Ibid. Section 7.3, page 65



are already far exceeded across most of the site. Although the critical load for Avon Gorge Woodlands SAC is already exceeded paragraph 5.26 of Natural England guidance on the issue<sup>108</sup> states that: ‘An exceedance [of the critical level or load] alone is insufficient to determine the acceptability (or otherwise) of a project’. So, the fact that the critical level for NOx or ammonia, or critical load for nitrogen are already exceeded is not a legitimate basis to conclude that any further NOx, ammonia, or nitrogen (no matter how small) will result in an adverse effect.

- 6.77 In addition, paragraph 4.25 of the same guidance states ‘...1% of critical load/level are considered by Natural England’s air quality specialists (and by industry, regulators and other statutory nature conservation bodies) to be suitably precautionary, as any emissions below this level are widely considered to be imperceptible...There can therefore be a high degree of confidence in its application to screen for risks of an effect’. This does not mean that a pollutant dose exceeding 1% of the critical load will result in an adverse effect on integrity but does mean that the effects can be dismissed in the view of Natural England if the pollutant dose does not exceed 1% of the critical load or level.
- 6.78 Traffic and air quality modelling is to be commenced in winter 2023 and is intended to inform the submission Local Plan.
- 6.79 It is worth noting that traffic-related air quality impacts on Habitat sites associated with nitrogen deposition, NOx and ammonia is an inherently time-limited issue in that the UK government’s policy to ban the sale of new petrol and diesel cars and vans entirely from 2035 means that within the decade or so following that ban significant net improvements in roadside nitrogen deposition and other exhaust pollution should be observed as the UK car fleet shifts to predominantly electric vehicles.
- 6.80 It is possible that a mitigation strategy could prove to be necessary at least in the short to medium term. The most effective measures are ‘hard measures’ such as Clean Air Zones and changes to vehicle speeds or road alignment or width which will either help to drive a conversion from older vehicles to newer vehicles, and from petrol and diesel cars to electric vehicles, or will otherwise change the emissions profile of the traffic. For example, a Clean Air Zone covering Epping Forest SAC is a core part of the Air Pollution Mitigation Strategy that has been agreed with Natural England as mitigation for Epping Forest Local Plan and modelled (along with other measures to drive a shift from petrol cars to ultra-low emission vehicles) to be an effective solution. Bristol introduced such a zone in central Bristol late in 2022 and this may have consequential benefits to nitrogen deposition at Avon Gorge Woodlands SAC (at least that element attributable to NOx) by pushing a shift in the vehicle fleet from older, more polluting, vehicles to newer, less polluting, vehicles. The need for such a strategy cannot be determined until modelling is undertaken, which should inform the submission stage of the Local Plan as identifying mitigation measures to adequately address air quality impacts will need undertaking prior to Examination.
- 6.81 **It is recommended that the following text is included in a policy to set a suitable framework for down-the-line investigation of this issue for the NSLP: ‘As allocations for the NSLP and Local Plans for adjacent local authorities are being developed air quality impacts of increased traffic on the A4 within 200m of Avon Gorge Woodlands SAC will require further investigation in the form of traffic and air quality modelling and this will need to consider the effects of Local Plan growth alone and in combination with other plans and projects, including adjacent local authorities. The developed transport and air quality model should account for vehicle fleet change over the plan period and the already identified sustainable transport interventions. Following this exercise, mitigation may be required to ensure no adverse effect on integrity arises’. This would be in line with the Duty to Cooperate requirement that exists for all local authorities in developing their Local Plans.**
- 6.82 The incorporation of the aforementioned recommendation regarding necessary down-the-line investigations and (where necessary) mitigation solutions for air quality impacts would result in the NSLP having an appropriate framework to enable the delivery of necessary mitigation at a planning application level. A firm conclusion on the impacts of the NSLP will need to await the completed air quality modelling.

<sup>108</sup> ‘Natural England’s approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations. Version: June 2018’. <http://publications.naturalengland.org.uk/publication/4720542048845824>

## 7. In Combination Effects

7.1 In combination effects with other plans have been discussed throughout this HRA.

### Recreational Pressure

7.2 As discussed, a buffer of 7km has been identified to encompass any potential effect to European sites from growth within this area.

### Severn Estuary SAC/SPA/Ramsar

7.3 The following other authorities are all within 7km of the Severn Estuary European sites.

- City of Bristol – 30,600 dwellings between 2006 and 2026. Much of Bristol within 7km of the SAC, SPA and Ramsar site is the Avonmouth/Bristol Port area which is primarily industry and warehousing but the western extent of the Northern Arc Regeneration Area (c. 3,000 net additional dwellings across the whole regeneration area by 2026) lies within 7km of the SAC, SPA and Ramsar site.
- South Gloucestershire - 28,355 dwellings between 2006 and 2026 including 800 at Thornbury and 5,700 at Cribbs Causeway and Patchway, all of which are within 7km of the SAC, SPA and Ramsar site.
- Vale of Glamorgan, Wales – A small area (c. 4.5km<sup>2</sup>) south of Penarth falls within the 7km buffer. However, as the European site is adjacent to the English side of the with the River Severn and the river being a barrier to access for any resident of this area. To access the European site, it would be a car journey of c. 50km to the nearest boundary (English side of the Severn Bridge). It is unlikely that growth in this area would present in-combination effects.
- Newport City, Wales – A small area (c. 21km<sup>2</sup>) south of Uskmouth to the Caldicot Levels falls within the 7km buffer. However, as the European site is adjacent to the English side of the River Severn and the river being a barrier to access for any resident of this area. To access the European site, it would be a car journey of c. 14km to the nearest boundary (English side of the Severn Bridge). It is unlikely that growth in this area would present in-combination effects.
- Monmouthshire, Wales – an area from the Caldicot Levels in the west to Chepstow in the east and up to Tintern in the north is included within the 7km buffer. As the crow flies from the southern end of Caldicot to the nearest accessible boundary (English side of Severn Bridge) is c. 5km and from Chepstow in the east it is less than 1km to the boundary of the European Sites. Therefore, growth in Monmouthshire is likely to present in-combination effects.
- Gloucestershire County, England – Forest of Dean and Stroud Districts are adjacent to the European sites on the north-west and south-east sides of the River Severn respectively. A large area of each district is present within the 7km buffer, although mostly rural except for the small town of Lydney in the Forest of Dean District. However, any growth within these areas are likely to present in-combination effects.
- Former Sedgemoor District – from the south of Weston-Super-Mare in the north to Bridgwater in the South this area is again fairly well populated along the coast with more rural areas further inland. As the site is directly adjacent to the district and within 7km it is likely to present recreational pressure effects in-combination
- Former West Somerset District – a small rural and coastal area is part of the 7km buffer and growth to these areas are likely to present effects In-combination.

7.4 The mitigation strategy recommended in this HRA would ensure that North Somerset's contribution to any in combination effect was addressed.

### Avon Gorge Woodlands SAC

7.5 The City of Bristol is the main source of additional recreational pressure for this SAC. The mitigation strategy recommended in this HRA would ensure that North Somerset's contribution to any in combination effect was addressed.

## Loss of Functionally Linked Habitat

### Bird Sites

- 7.6 As noted previously Natural England's impact risk zones (IRZ) for waterfowl and waders have been set at a precautionary 4km to cover the core foraging zones of all waterfowl and waders except lapwing and golden plover. The only European site with waterfowl and waders as their qualifying features, impacted by North Somerset Local Plan, are the Severn Estuary European Sites.
- 7.7 Therefore, any authority within 4km of the Severn Estuary European sites must be considered within the Appropriate Assessment in-combination with the potential effects presented by growth within North Somerset. These authorities are as follows:
- Monmouthshire (Wales)
  - Forest of Dean District (Gloucestershire)
  - Stroud District (Gloucestershire)
  - City of Bristol
  - South Gloucestershire
  - Somerset (particularly the former Sedgemoor and West Somerset parts of this)

### Bat Sites

- 7.8 An initial 8km buffer was applied to SAC's designated for greater horseshoe bats where loss of bat foraging and commuting habitat would be most likely to affect the ability of the SAC to continue to support its bat population. That was then followed by a much more detailed analysis for North Somerset & Mendip Bats SAC. Any other authority within 8km of a component site of the North Somerset & Mendip Bats SAC must be considered within the appropriate assessment in-combination with the potential effects presented by growth within from the North Somerset Local Plan. These authorities are as follows:
- Somerset (particularly the former Sedgemoor and Mendip parts of this)
  - Bath & North East Somerset
- 7.9 The mitigation recommended in this plan will address the contribution of North Somerset Local Plan to this in combination effect.

### Air Quality

- 7.10 A 200m buffer has been utilised to identify potential risk of localised (rather than dispersed) effects on air quality applicable to all European sites where air quality is a priority issue currently affecting or threatening the condition of a feature of the site. All growth that could lead to material increases in traffic flows on the roads within 200m of Avon Gorge Woodlands SAC could result in effects 'in combination' with North Somerset Local Plan and an allowance for this in combination growth will be made in the forthcoming air quality modelling. This is likely to particularly include consideration of the impacts of Bristol City Local Plan.

## 8. Conclusions and Recommendations

- 8.1 The North Somerset Local Plan has a total of 94 policies and eight schedules. Of these 15 policies and five schedules had the potential to cause a likely significant effect and were discussed with regards to their impacts on Habitat sites within the Appropriate Assessment. These policies were:
- SP7: Green Belt
  - SP8: Housing
  - SP9: Employment

- LP1: Strategic location: Wolvershill (north of Banwell)
- LP2: Housing, employment and mixed-use allocations
- LP3: Educational, sporting, leisure, and community use allocations
- LP11: Royal Portbury Dock
- LP13: Preferred area for mineral working – land at Hyatts Wood Farm, south of Stancombe Quarry
- LP14: Area of search for minerals working – land at Downside Farm, south of Freemans Quarry
- LP16: University of Bristol site in Langford
- LP17: Wyndham Way
- DP22: Visitor Attractions
- DP23: Visitor Accommodation
- DP44: Gypsies, travellers and travelling showpeople
- Schedule 1: Proposed large sites for residential development (LP2)
- Schedule 2: Proposed employment sites (LP2)
- Schedule 4: Proposed community facilities (LP3)
- Schedule 8: Gypsy and traveller sites (DP44)

8.2 These policies were discussed regarding the following impact pathways:

- Recreational pressure and disturbance;
- Loss of Functionally Linked Habitat; and,
- Atmospheric Pollution.

8.3 To conclude that the North Somerset Local Plan, with mitigation present, would have no adverse impact on the integrity of Habitat sites, the plan would require a robust policy framework.

8.4 Appropriate assessment concluded that increased recreational pressure was possible at the Severn Estuary SPA/Ramsar site and at Avon Gorge Woodlands SAC therefore the following recommendation was made:

- **It is recommended that the following wording is included in a policy of the NSLP: ‘Recreation Management Strategies for Severn Estuary SPA/Ramsar site and Avon Gorge Woodlands SAC will be devised (in outline for submission of the Local Plan for Examination and in detail prior to the adoption of the Local Plan) in order to support the North Somerset Local Plan and ensure no adverse effect on the integrity of these two sites from recreational pressure. North Somerset Council will work with other councils within the vicinity of these protected sites. The delivery of the RMS will be paid for by developer contributions using tariffs to be identified and published once the RMS has been devised in outline’.**

8.5 Appropriate assessment could not rule out the possible impacts of atmospheric pollution on the Avon Gorge Woodlands SAC. As such the following recommendation was made:

- **It is recommended that the following text is included in a policy to set a suitable framework for down-the-line investigation of this issue for the NSLP: ‘As allocations for the NSLP and Local Plans for adjacent local authorities are being developed air quality impacts of increased traffic on the A4 within 200m of Avon Gorge Woodlands SAC will require further investigation in the form of traffic and air quality modelling and this will need to consider the effects of Local Plan growth alone and in combination with other plans and projects, including adjacent local authorities. The developed transport and air quality model should account for vehicle fleet change over the plan period and the already identified sustainable transport interventions. Following this exercise, mitigation may be required to ensure no adverse effect on integrity arises’.** This would be in line with the Duty to Cooperate requirement that exists for all local authorities in developing their Local Plans.

- 8.6 Should these recommendations (in bold above) be incorporated into the final North Somerset Local Plan document it can be concluded that the North Somerset Local Plan will not cause adverse effects on Habitat site integrity either alone or in-combination with other plans or projects.

# Appendix A Likely Significant Effects Assessment of the Plan Policies

Policies identified in green do not provide for impact pathways that could link to a European designated site.

Policies identified in orange have potential to provide for impact pathways that could link to a Habitat site.

Note that this assessment was undertaken in March 2023 and precise policy wording may change between then and consultation on the NSLP.

Policy	Policy Summary	Likely Significant Effects
Policy SP1 Sustainable development	Policy sets out how development in North Somerset should demonstrate how it contributes to the achievement of sustainable development.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that sets out sustainability goals for future development. The policy does not allocate any sites or have any linking impact pathways</p>
Policy SP2 Climate change	Policy sets out that proposals must demonstrate how they will address both the mitigation of climate change and the adaptation to its effects, encourage the decarbonisation of energy and transport, and support the delivery of carbon neutrality in North Somerset by 2030.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that sets out environmental goals for future development. The policy does not allocate any sites or have any linking impact pathways</p>
Policy SP3 Spatial strategy	Policy sets out that priority will be given to locating new residential and mixed use development in or close to urban areas where there is an existing or proposed wide range of facilities and services. Additionally sets out that development at villages and in the countryside will relate to local community needs. This is to ensure that new development in these less sustainable locations will deliver positive benefits to the local community particularly addressing local needs.	<p><b>No Likely Significant Effects</b></p> <p>This is a development management policy which sets out the overall approach to where development will be located within North Somerset over the plan period, prioritising the most sustainable locations for growth consistent with government advice.</p>

Policy	Policy Summary	Likely Significant Effects
		<p>However, the policy does not allocate a quantum of development.</p> <p>Specific allocations arising from this policy will require project level HRA.</p>
Policy SP4 Placemaking	Policy stating that developments should show a robust design process including collaboration with local communities	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that sets a requirement for a thorough design process. The policy does not allocate any sites or have any linking impact pathways</p>
Policy SP5 Towns	Policy states that development within settlement boundaries should meet certain requirements regarding transport links, education and health facilities and the local character	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that limits non-strategic growth to within existing settlement boundaries. The policy does not allocate any sites or have any linking impact pathways.</p>
Policy SP6 Villages and rural areas	Policies stating that development within settlement boundaries should meet certain requirements regarding transport links, education and health facilities and the local character	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that limits non-strategic growth to within existing settlement boundaries. The policy does not allocate any sites or have any linking impact pathways.</p>
Policy SP7 Green Belt	Policy defines the extent of the Green Belt and sets sustainability requirements for any developments in land that has been released from the Green Belt. Land has been released from the North of Colliter's Way for residential use and at Bristol Airport for increasing operational capacity at the airport.	<p><b>Likely significant effects: Screened in</b></p> <p>This policy releases land from the Green Belt for the construction of new dwellings.</p>

Policy	Policy Summary	Likely Significant Effects
		Possible impact pathways include: Recreational pressure, Loss of functionally linked habitat, air pollution
Policy SP8 - Housing	Policy determining the need for 14,902 net new dwellings over the plan period 2024-2039. Policy also defines the broad distribution in accordance with the spatial strategy	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of new dwellings</p> <p>Possible impact pathways include: Recreational pressure, Loss of functionally linked habitat, air pollution</p>
Policies SP9 – Employment	Policy determining the need for 81ha of employment land. Policy also defines the broad distribution in accordance with the spatial strategy	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of employment</p> <p>Possible impact pathways include: Recreational pressure, Loss of functionally linked habitat, air pollution</p>
Policy SP10 Transport	Policy determines that new development should be located and designed to limit the need for travel and to support active travel and the use of public transport	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy. The policy does not allocate any sites or have any linking impact pathways</p>
SP11 Historic and Natural Environment	<p>Policy states that new development should make a positive contribution to the protection and enhancement of valued landscapes and the natural and historic environment.</p> <p>The policy also highlights that developments should “Support the establishment and delivery of North Somerset Nature Parks to protect and enhance internationally important bat habitats and mitigate the impacts of development proposals”</p>	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy. The policy does not allocate any sites or have any linking impact pathways</p>



Policy	Policy Summary	Likely Significant Effects
SP12 Minerals	Policy states that mineral resources will be protected with a mineral safeguarding area	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy concerning the extraction of mineral resources. The policy does not allocate any sites or have any linking impact pathways</p>
SP13 Waste	Policy states that proposals involving management of waste should demonstrate waste hierarchy, encourage prevention and reuse of waste before recycling and other recovery as well as being designed to facilitate easy and efficient collection and be sensitively designed and sited to minimise environmental, residential and transport impacts.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy which aims to reduce waste materials and reduce the impact of waste material sites on the environmental, residential and transport infrastructure. The policy does not allocate any waste material facilities merely sets out conditions for support. The policy does not have any linking impact pathways.</p>
Policy LP1: Strategic location: Wolvershill (north of Banwell)	Policy proposing a new mixed use strategic growth at Wolvershill (north of Banwell) to accommodate up to around 2,800 dwellings, including 980 affordable homes, around 6.5ha of employment land, a mixed-use local centre and two 420-place and one 210 place primary schools, as well as land for a new secondary school. Also provision of gypsy and traveller pitches. Policy	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of new dwellings and employment land.</p> <p>Possible impact pathways include: Recreational pressure, Loss of functionally linked habitat, air pollution</p>
Policy LP2: Housing, Employment and Mixed Use Allocations	Policy states that residential sites of 10 or more units and employment sites (including mixed use sites) are shown on the Policies Map and set out in Schedules 1 and 2. Also that, development must take account of the site-specific requirements set out in the schedules.	<p><b>Likely significant effects: Screened in</b></p> <p>This policy, when read with schedules 1&amp;2 allocates land for the construction of new dwellings and employment land.</p>

Policy	Policy Summary	Likely Significant Effects
		Possible impact pathways include: Recreational pressure, Loss of functionally linked habitat, air pollution
Policy LP3: Educational, sporting, leisure, and community use allocations	Policy states that sites for educational, sporting, leisure, and community facilities are shown on the Policies Map and set out in Schedule 4 and that development must take account of the site-specific requirements set out in the schedule.	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of new community facilities.</p> <p>Possible impact pathways include: Loss of functionally linked habitat, air pollution</p>
Policy LP4: Settlement boundaries	Policy defining the settlement boundaries to be as defined in schedule 5. States development within settlement boundaries will be supported in principle subject to other relevant policies within the plan.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that defines what other policies developments must comply with within the extent of the settlement boundaries. The policy does not allocate any sites or have any linking impact pathways</p>
Policy LP5: Town centre hierarchy	Policy states that new town centre uses should be focused on existing town, district and local centres as set out in Schedule 6.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that limits what kind of and where town centre development will be supported. The policy does not allocate any sites or have any linking impact pathways</p>
Policy LP6 Extent of the Green Belt	Policy defines the extent of the greenbelt within North Somerset	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that limits where development will be supported. The policy does not allocate any sites or have any linking impact pathways</p>

Policy	Policy Summary	Likely Significant Effects
Policy LP7 Strategic gaps	Policies defining the extent of the strategic gaps between settlements.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that limits where development will be supported. The policy does not allocate any sites or have any linking impact pathways</p>
Policy LP8: Transport infrastructure, allocations and safeguarding	Policy allocates or safeguards land as defined in Schedule 7 and on the Policies Map for the delivery of several transport schemes, the improvement of existing services and the creation of sustainable transport links and facilities	<p><b>No Likely Significant Effects</b> Although this policy mentions 'allocation' the supporting text confirms that 'this policy provides for safeguarding routes for potential transport improvements'. Safeguarding areas for transport infrastructure will not have any impact on European sites as it is intended to protect areas from other development that may prevent the intended development coming forward.</p> <p>The actual 'allocation' of areas for development of new transport infrastructure is in the separate Joint Local Transport Plan, which was subject to its own Appropriate Assessment (<a href="https://www.westofengland-ca.gov.uk/wp-content/uploads/2021/10/JLTP4-HRA-Appropriate-Assessment.pdf">https://www.westofengland-ca.gov.uk/wp-content/uploads/2021/10/JLTP4-HRA-Appropriate-Assessment.pdf</a>).</p> <p>Several of the schemes mentioned in Schedule 7 (notably, J21 Bypass Scheme, A371 to Churchlands Way Link, Banwell Bypass, and Herluin Way to Locking Road Link, Weston-super-Mare and M5 Junctions 19, 20 &amp; 21) were identified in the JLTP HRA as having potential to affect European sites if they led to loss of functionally-linked habitat</p>

Policy	Policy Summary	Likely Significant Effects
		<p>associated with either North Somerset &amp; Mendip Bats SAC or Severn Estuary SPA/Ramsar. However, with the inclusion of strategic and scheme levels mitigation identified in the HRA of the JLTP, it was concluded that no adverse effect on integrity of European sites would arise, including in combination with growth across the West of England region. Further assessment will be required as planning applications are developed for each scheme.</p> <p>Since these schemes are part of the JLTP and have already been included in the HRA of that plan, they do not need reassessing in the HRA of this Local Plan.</p>
Policy LP9 Bristol Airport	Policy defines control of development within the vicinity of Bristol Airport and what requirements would need to be met for developments within the airport	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that limits what development will be supported near the airport. The policy does not allocate any sites or have any linking impact pathways Any significant growth at Bristol Airport would almost certainly be determined by The Planning Inspectorate rather than North Somerset Council.</p>
Policy LP10 Air safety	Policy defines what developments would be acceptable within certain radii of the airport	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that limits what development will be supported near the airport. The policy does not allocate any sites or have any linking impact pathways</p>

Policy	Policy Summary	Likely Significant Effects
Policy LP11: Royal Portbury Dock	Policy explaining how the role of Royal Portbury Dock will be maintained and enhanced by providing for the intensification of employment and business development associated with the port as defined on the Policies Map.	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the development of transport links and employment intensification.</p> <p>Possible impact pathways include: air pollution</p>
Policy LP12: Local Green Space	Policy stating that support will not be given to projects that adversely affect local green space except under very special circumstances	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that prevents negative impacts on local green spaces. The policy does not allocate any sites or have any linking impact pathways</p>
Policy LP13 Preferred area for mineral working – land at Hyatts Wood Farm, south of Stancombe Quarry	Sets out that land at Hyatts Wood Farm south of exiting Stancombe Quarry is identified as a Preferred Area for mineral working once areas at current extraction sites are complete.	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the preferred extension of mineral extraction at the Stancombe Quarry site.</p> <p>Possible impact pathways include: air pollution, loss of functionally linked land</p>
Policy LP14 Area of Search for minerals working – land at Downside Farm, south of Freemans Quarry	Sets out that land at Downside Farm is allocated as an 'Area of Search' for mineral extraction. This is an area where knowledge of mineral resources may be less certain and would need to carry out detailed investigation to obtain prior to a planning application.	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for detailed investigation for possible extension of mineral extraction at the Downside Farm Quarry.</p> <p>Possible impact pathways include: air pollution, loss of functionally linked land</p>

Policy	Policy Summary	Likely Significant Effects
Policy LP15 Minerals Safeguarding Area for carboniferous limestone	States that permission will not be granted for development within carboniferous limestone mineral safeguarding areas that are incompatible with safeguarding the mineral unless a set of conditions are met.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy which aims to safeguard areas of carboniferous limestone from incompatible development. This policy does not allocate land for mineral extraction or other forms of development. There are no linking impact pathways.</p>
Policy LP16 University of Bristol site in Langford	Policy sets out that development for educational, employment and ancillary uses including student accommodation associated with the university's operations will be supported.	<p><b>Likely significant effects: Screened in</b></p> <p>Although this policy does not allocate a quantum of employment or residential accommodation, it does provide a location where proposals for this development will be supported. This policy therefore has the potential to provide linking impact pathways.</p> <p>Possible impact pathways include: Recreational pressure, Loss of functionally linked habitat, air pollution</p>
Policy LP17 Wyndham Way	Policy sets out delivery of up to 350 net new dwellings and employment space at the Wyndham Way Development Framework Area.	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates this development for delivery of up to 350 net new dwelling as well as employment space. This policy therefore has the potential to provide linking impact pathways.</p> <p>Possible impact pathways include: Recreational pressure, Loss of functionally linked habitat, air pollution</p>

Policy	Policy Summary	Likely Significant Effects
Policy LP18 Coastal Change Management Areas	Policy sets out that development within a CCMA will only be appropriate where it is in accordance with national guidance, new residential including change of use will not be permitted within a CCMA and all development within a CCMA will require a coastal vulnerability assessment and outside of CCMS close to cliff edges or coastal defences will require a risk assessment covering coastal erosion to be submitted to the council	<p><b>No Likely Significant Effects</b></p> <p>This is a development management policy which aims to reduce or prevent new development being built within areas of the coast that are at greatest risk of coastal erosion or of managed retreat of coastal defences. There are no linking impact pathways.</p>
Policy DP1-DP6	<p>DP1 High quality design                      DP2 Residential development within settlement boundaries                      DP3 Residential extensions                      DP4 houses in multiple occupation and residential subdivision                      DP5 Climate change adaptation and resilience                      DP6 Net zero construction</p> <p>A suite of development management policies covering design resilience and adaptation of construction and development.</p>	<p><b>No Likely Significant Effects</b></p> <p>These polices are development management policies that set out design, adaptation, resilience and placement considerations for developers. The policies do not allocate any sites or have any linking impact pathways</p>
Policy DP7 Large scale renewable and low carbon renewable energy	Sets out that proposals for energy generation from renewable and low carbon sources including wind turbines, solar photovoltaic arrays and biomass and hydrogen power schemes will be supported where there is no unacceptable impact on environment, historic, townscape and landscape, residential amenity, and infrastructure.	<p><b>No Likely Significant Effects</b></p> <p>This policy supports the development of renewable and low carbon energy, however, it does not specifically allocate sites for this development within the policy and does highlight that developments will only be supported where there are no unacceptable impacts to internationally designated sites.</p> <p>Therefore, this policy does not have linking impact pathway; however, down the line project level HRA will be required for any project brought forwards that could have a</p>

Policy	Policy Summary	Likely Significant Effects
		likely significant effect on internationally designated sites.
Policy DP8-11	<p>DP8 Efficient use of land                      DP9 Flood risk                      DP10 Sustainable drainage                      DP11 Rivers watercourses and springs                      DP12 Development in the Green Belt                      DP13 Environmental pollution, living conditions, health and safety</p> <p>A suite of development management policies covering efficient use of land, protection of the Green Belt, reduction and prevention of flooding and pollution and protection and enhancement of waterbodies.</p>	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out protection of the Green Belt, land use, flood risk, sustainable development and protection and enhancement of waterbodies. The policies do not allocate any sites or have any linking impact pathways.</p>
Policy DP14-DP20	<p>DP14 Highway safety, traffic and provision of infrastructure associated with development                      DP15 Active and sustainable transport                      DP16 Active travel routes                      DP17 Public transport accessibility                      DP18 Travel plans                      DP19 Parking                      DP20 Airport related car parking</p> <p>A suite of development management policies relating to transport aspects of development including ensuring sustainable travel, improving active travel routes and public transport services, and ensuring appropriate parking is provided.</p>	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out transport considerations for future development. The policies do not allocate any sites or have any linking impact pathways.</p>
Policy DP21 Safeguarding employment sites	Policy sets out criteria to safeguard employment sites for employment uses.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that sets out criteria to safeguard employment sites for future employment uses. The policy does not allocate any sites or have a linking impact pathway.</p>
Policy DP22-DP23	<p>DP22 Visitor attractions                      DP23 Visitor accommodation</p>	<b>Likely significant effects: Screened in</b>



Policy	Policy Summary	Likely Significant Effects
	Both policies mention the support of new and improved visitor accommodation.	Although neither policy allocate sites or a quantum of new visitor accommodation, the policy does support the development of "appropriate high quality visitor accommodation such as 3* and above hotels, family accommodation, [and] quality budget accommodation in rural areas [such as camping and glamping]". Should visitor accommodation increase within the district this will increase pressure on vulnerable Habitat sites through recreational pressure without mitigation. Therefore, these policies are screened in to the Appropriate Assessment.
Policy DP24-DP29	DP24 Town centres DP25 District centres DP26 Local centres DP27 Primary shopping areas DP28 Retail parks DP29 Sequential approach for town centre uses  A suite of development management policies which set out criteria to manage development within town and local centres etc.	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies which set criteria for development within towns and retail parks.</p>
Policy DP30-DP31	DP30 Control of non-mineral development DP31 Mineral working, exploration, extraction and processing  Policies regarding development near to mineral extractions sites and criteria to manage mineral extraction developments.	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out criteria around managing mineral extraction development and safeguarding mineral extraction areas. The policies do not allocate any sites, therefore, they do not have linking impact pathway, however, down the line project level HRA will be required for any project brought forwards that could have a</p>

Policy	Policy Summary	Likely Significant Effects
		likely significant effect on internationally designated sites.
Policy DP32	<p>DP32 Waste management facilities                      DP33 Disposal of waste by landfill or land raise</p> <p>Policies which set criteria for where waste management and landfill and land raise sites will be supported.</p>	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out criteria around managing waste management and landfill/land raise development. The policies do not allocate any sites and therefore, do not have linking impact pathway. However, down the line project level HRA will be required for any project brought forwards that could have a likely significant effect on internationally designated sites.</p>
Policy DP34-DP39	<p>DP34 Green infrastructure                      DP35 Nature conservation                      DP36 Biodiversity net gain                      DP37 Trees, woodland and hedges                      DP38 Landscape                      DP39 Mendip hills area of outstanding natural beauty</p> <p>A suite of development management policies which aim to protect and enhance the districts natural environment.</p>	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out environmental considerations for developers. The policies do not allocate any sites or have any linking impact pathways.</p> <p>DP35 Nature conservation also sets out that HRA will be required for development where there is potential for likely significant effects on Habitat sites.</p>
Policy DP40-DP42	<p>DP40 Built heritage                      DP41 Archaeology                      DP42 Historic parks and gardens</p> <p>A suite of development management policies which aim to protect heritage assets including archaeology and historic parks and gardens</p>	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out considerations for heritage assets. The policy</p>

Policy	Policy Summary	Likely Significant Effects
		does not allocate any sites or have any linking impact pathways
Policy DP43	A policy which sets out criteria where development is expected to include affordable housing.	<p><b>No Likely Significant Effects</b></p> <p>This policy is a development management policy that sets out considerations around affordable housing. The policy does not allocate any sites or have any linking impact pathways.</p>
DP44 Gypsies, travellers and travelling showpeople	<p>Two sites have been identified to meet the need for pitches in North Somerset.</p> <p>In the short-medium term extension to two existing sites:</p> <ul style="list-style-type: none"> <li>• Land between Moorland Park and the A370 for up to 40 pitches</li> <li>• Land to the west of Heathfield Park for 4 pitches</li> </ul> <p>Longer term need will be met through provision of Wolverhill Strategic Development (LP1)</p>	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of gypsy and traveller plots.</p> <p>Possible impact pathways include: Recreational pressure, loss of functionally linked habitat, air pollution</p>
Policy DP45-DP52	<p>DP45 Residential space standards            DP46 Housing type and mix            DP47 Older person accommodation            DP48 Residential annexes            DP49 Health places            DP50 New community facilities, open spaces and sports pitches            DP51 Protection of built community facilities            DP52 Protection of open space and recreation</p> <p>A suite of policies that set conditions around housing space type, mix and annexes, as well as older persons accommodation. Also protecting community facilities and open spaces.</p>	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out considerations around housing and protecting community and open space. The policies do not allocate any sites or have any linking impact pathways.</p> <p>Policy DP47 Older person accommodation mentions that the council will seek to ensure there is sufficient supply of older persons accommodation. However, it does not allocate any site for development. Any allocations arising from this policy will require</p>

Policy	Policy Summary	Likely Significant Effects
		project level HRA where there is the potential for likely significant effects on Habitat sites.
Policy DP53-DP61	<p>DP53 Best and most versatile land                      DP54 Rural workers housing                      DP55 Agriculture and land based rural businesses                      DP56 Equestrian development                      DP57 Replacement dwellings in the countryside                      DP58 Conversions or re-use of rural buildings                      DP59 Previously developed land in the countryside                      DP60 Employment on greenfield land in the countryside                      DP61 Existing businesses in the countryside</p> <p>A suite of policies which set out criteria developers must adhere to when developing within the countryside.</p>	<p><b>No Likely Significant Effects</b></p> <p>These policies are development management policies that set out considerations around development within the countryside. The policies do not allocate any sites or have any linking impact pathways.</p>
DP62 Visitor accommodation in the countryside including camping and caravanning	<p>This policy sets out that that camping and caravanning sites within the countryside will be permitted provided that certain criteria are met.</p>	<p><b>No Likely Significant Effects</b></p> <p>The policy sets out development management criteria for development of tourist accommodation in the countryside to be supported by the Council. The policy does not allocate a quantum of development and so the policy does not have a linking impact pathway. However, down the line HRA will be required where there is potential for likely significant effect.</p> <p>The drive for more tourist accommodation is captured in Policies DP22 and DP23 which has been screened into the Appropriate Assessment.</p>
Policy DP63 Infrastructure delivery and development contributions	<p>This policy sets out that where the local provision for travel infrastructure, education, health, sport, recreation, open space and other community facilities will be inadequate to meet the projected needs and standards of new residential development additional</p>	<p><b>No Likely Significant Effects</b></p> <p>This is a development management policy setting criteria for the provision of appropriate</p>

Policy	Policy Summary	Likely Significant Effects
	provision will be sought to need any identified shortfall through developer contributions.	auxiliary facilities to residential development. The policy does not allocate a quantum of development and so there are no linking impact pathways.
Schedule 1: Proposed large sites for residential development	<p>Schedule 1 sets out allocations for a total of 12, 863 net new dwellings across the district.</p> <ul style="list-style-type: none"> <li>• Wolvershill (North of Banwell) – 2,800 net new dwellings</li> <li>• Land West of Hutton – 20 net new dwellings</li> <li>• Elm Grove Nursery, Locking – 35 net new dwellings</li> <li>• Parklands Village - 2,894 net new dwellings</li> <li>• Winterstoke Village - 1,356 net new dwellings</li> <li>• Locking Road Car Park – 230 net new dwellings</li> <li>• Former Leisuredome allocation/Parklands site B (Phase e) – 400 net new dwellings</li> <li>• Weston Rugby Club – 200 net new dwellings</li> <li>• Land west of Winterstoke Road – 134 net new dwellings</li> <li>• Sunnyside Road – 120 net new dwellings</li> <li>• Woodspring Stadium, Winterstoke Road – 100 net new dwellings</li> <li>• Gas Works – 95 net new dwellings</li> </ul>	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of new dwellings.</p> <p>Possible impact pathways include: Recreational pressure, loss of functionally linked habitat, air pollution</p>

Policy	Policy Summary	Likely Significant Effects
	<ul style="list-style-type: none"> <li>• Dolphin Square - 80 net new dwellings</li> <li>• Land west of Trenchard Road – 75 net new dwellings</li> <li>• Police Station/Magistrates Court/Roselawn – 70 net new dwellings</li> <li>• Anson Road – 70 net new dwellings</li> <li>• Land at Bridgewater Road – 60 net new dwellings</li> <li>• Scot Elm Drive – 57 net new dwellings</li> <li>• Former Bournville School site – 48 net new dwellings</li> <li>• Lynton House Hotel – 40 net new dwellings</li> <li>• Knightstone Road Hotels – 40 net new dwellings</li> <li>• Former Sweat FA site, Winterstoke Road – 37 net new dwellings</li> <li>• Former Police Depot, Winterstoke Road – 36 net new dwellings</li> <li>• Nightingale Close, Mead Vale – 29 net new dwellings</li> <li>• Former TJ Hughes, High Street – 32 net new dwellings</li> <li>• Land at Atlantic Road South – 18 net new dwellings</li> <li>• Land to the rear of Locking Road – 12 net new dwellings</li> <li>• Madeira Cove Hotel – 10 net new dwellings</li> </ul>	

Policy	Policy Summary	Likely Significant Effects
	<ul style="list-style-type: none"> <li>• Land off Millcross – 70 net new dwellings</li> <li>• Land north of Churchill Avenue – 44 net new dwellings</li> <li>• Great western Road – 39 net new dwellings</li> <li>• Castlewood – 120 net new dwellings</li> <li>• 2-6 Bay Road – 19 net new dwellings</li> <li>• Land at North West Nailsea – 75 net new dwellings</li> <li>• Youngwood Lane – 399 net new dwellings</li> <li>• West of Engine Lane -109 net new dwellings</li> <li>• Land south of The Uplands – 52 net new dwellings</li> <li>• Weston College Site, Somerset Square – 28 net new dwellings</li> <li>• Trendlewood Way – 24 net new dwellings</li> <li>• Land east of Youngwood Lane – 14 net new dwellings</li> <li>• Wyndham Way Broad Location – 350 net new dwellings</li> <li>• Harbour Road/Gordano Gate – 93 net new dwellings</li> <li>• Site V2 Harbour Road – 26 net new dwellings</li> <li>• Land south of Downside – 23 net new dwellings</li> <li>• Grove Farm – 515 net new dwellings</li> </ul>	

Policy	Policy Summary	Likely Significant Effects
	<ul style="list-style-type: none"> <li>• Land at Farleigh Farm – 125 net new dwellings</li> <li>• Land west of Rodney Road – 65 net new dwellings</li> <li>• Land at North End, Yatton – 47 net new dwellings</li> <li>• Moor Road, Yatton – 60 net new dwellings</li> <li>• Rectory Farm, Yatton – 100 net new dwellings</li> <li>• Land west of Wolvershill Road – 54 net new dwellings</li> <li>• Land South of Knightcott Gardens – 37 net new dwellings</li> <li>• Land at Western Trade Centre – 10 net new dwellings</li> <li>• Bleadon Quarry – 42 net new dwellings</li> <li>• Land of Purn Way – 14 net new dwellings</li> <li>• Land east of Ladymead Lane – 70 net new dwellings</li> <li>• Land north of Pudding Pie Lane – 65 net new dwellings</li> <li>• Pudding Pie Lane (West) – 35 net new dwellings</li> <li>• Land south of Jubilee Lane, Churchill – 21 net new dwellings</li> <li>• Land south of Bristol Road and north of Bath Road – 68 net new dwellings</li> <li>• Land at Dinghurst Road – Churchill – 25 net new dwellings</li> </ul>	



Policy	Policy Summary	Likely Significant Effects
	<ul style="list-style-type: none"> <li>• North Field Claverham Works, Claverham – 24 net new dwellings</li> <li>• Woodhill Nurseries Congresbury– 60 net new dwellings</li> <li>• Land off Wrington Lane, Congresbury</li> <li>• Land east of Smallway Congresbury– 25 net new dwellings</li> <li>• Land to the north of Bristol Road Congresbury – 20 net new dwellings</li> <li>• Land south of Station Road Congresbury– 13 net new dwellings</li> <li>• Land at Mead Farm Sandford– 35 net new dwellings</li> <li>• Land south of Greenhill Lane Sandford – 49 net new dwellings</li> <li>• Woodborough Farm Winscombe – 83 net new dwellings</li> <li>• Broadleaze Farm Winscombe– 74 net new dwellings</li> <li>• West of Hill Road Winscombe – 30 net new dwellings</li> <li>• Land at Coombe Farm and Shipham Lane Winscombe – 68 net new dwellings</li> <li>• Former Mooseheart Lodge Winscombe – 14 net new dwellings</li> <li>• Barrow Hospital (1), Barrow Gurney – 59 net new dwellings</li> <li>• Barrow Hospital (2), Barrow Gurney – 14 net new dwellings</li> </ul>	

Policy	Policy Summary	Likely Significant Effects
	<ul style="list-style-type: none"> <li>• Unit C, Estune Business Park, Long Ashton – 24 net new dwellings</li> <li>• Unit A, Estune Business Park, Long Ashton – 18 net new dwellings</li> <li>• Tickenham Garden Centre, Tickenham – 14 net new dwellings</li> <li>• Land north of Colliter’s Way – 215 net new dwellings</li> <li>• Gatcombe Farm, Wrington – 38 net new dwellings</li> </ul>	
<p>Schedule 2: Proposed employment sites</p>	<p>Schedule 1 allocated a total land area of 81.25 ha to employment land.</p> <ul style="list-style-type: none"> <li>• Haywood Village Business Quarter – 21.5 ha</li> <li>• Parklands Village site A – 0.3 ha</li> <li>• Parkland Village site C – 0.37 ha</li> <li>• Parklands Village site D – 1.67 ha</li> <li>• Parklands Village site E – 1.82 ha</li> <li>• Parklands Village site F – 0.47 ha</li> <li>• Parklands Village site G – 0.31 ha</li> <li>• Parklands Village site H – 0.57 ha</li> <li>• Parklands Village site I – 0.12 ha</li> <li>• Wolverhill (north of Banswell) – 6.5 ha</li> <li>• West Wick Business Park Weston-super-Mare – 5.3 ha</li> <li>• Summer Lane, North of A370 Weston-super-Mare – 2.53 ha</li> </ul>	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of new employment land.</p> <p>Possible impact pathways include: Recreational pressure, loss of functionally linked habitat, air pollution</p>

Policy	Policy Summary	Likely Significant Effects
	<ul style="list-style-type: none"> <li>• Moor Park, A371 Weston-super-Mare – 1.23 ha</li> <li>• Aisecombe Way Weston-super-Mare 0.5 ha</li> <li>• Land to the west of Kenn Road – 8.2 ha</li> <li>• Land to the east of J20, Clevedon – 25 ha</li> <li>• Gordano Gate, Portishead – 1.1 ha</li> </ul> <p>Wyndham Way Development Framework Area (excluding Gordano Gate allocation) – 3.75 ha</p>	
<p>Schedule 3: Proposed Local Green Space</p>	<p>This schedule forms part of Policy LP12 Local Green Space and sets out proposed Local Green Space designations, some being carried forward from adopted or made plans.</p>	<p><b>No Likely Significant Effects</b></p> <p>This schedule allocates Local Green Space sites within the plan area. Additional green spaces can reduce the pressure on Habitat sites which can be positive for reaching or maintaining conservation objectives. The schedule does not allocate any development and therefore there are no linking impact pathways.</p>
<p>Schedule 4: Proposed community facilities</p>	<p>This schedule forms part of Policy LP3: Educational, sporting, leisure and community and sets out proposed allocations for the Local Plan</p> <ul style="list-style-type: none"> <li>• Land to the south of Church Lane, Backwell – Primary School playing fields</li> <li>• Land next to the Village Hall, Kewstoke – Primary School replacement site</li> <li>• Land at The Batch, Yatton – Primary School replacement site</li> <li>• Winterstoke Village East (former Weston Airfield) – new Primary School</li> </ul>	

Policy	Policy Summary	Likely Significant Effects
	<ul style="list-style-type: none"> <li>• Parklands Village North – new Primary School</li> <li>• Parklands Village Central – new Primary School</li> <li>• Land fronting Drove Road roundabout, Weston-super-Mare – new 420 place Primary School with two nursery classes</li> <li>• Grove Farm Blackwell – new Primary School</li> <li>• Wolvershill Strategic Site – three new Primary Schools</li> <li>• Wolvershill Strategic Site – new Secondary School</li> <li>• Land at Ladymead Lane, Churchill – Social, Emotional and Mental Health School provision</li> <li>• Maltlands, Railway Triangle, Locking Castle, Weston-super-Mare – Allotments</li> </ul> <p>Land adjacent to Village Hall, Portbury – Car park.</p>	
Schedule 5: Settlements with settlement boundaries	This schedule forms part of Policy LP4: Settlement boundaries and sets out the proposed settlement boundary status of settlements	<p><b>No Likely Significant Effects</b></p> <p>This schedule does not allocate any development but merely sets out the proposed settlement boundary status of the settlements within the district. This policy/schedule does not provide any linking impact pathways as it is a development management policy.</p>
Schedule 6: Town, district and local centres	This schedule forms part of Policy LP5: Town centre hierarchy and sets out the proposed town, district and local centres for the Local Plan.	<p><b>No Likely Significant Effects</b></p>

Policy	Policy Summary	Likely Significant Effects
		This schedule does not allocate any development; it merely sets out the settlement hierarchy within the district. This policy/schedule does not provide any linking impact pathways as it is a development management policy.
Schedule 7: Transport infrastructure allocations and safeguarded routes	<p>This schedule forms part of Policy LP8: Transport infrastructure, allocation and safeguarding and DP16: Active Travel Routes. It sets out the proposed transport allocations and safeguarded routes for the Local Plan.</p> <p>List of proposed schemes are available within the Local Plan.</p>	<p><b>No Likely Significant Effects</b></p> <p>Although this policy mentions 'allocation' the supporting text confirms that 'this policy provides for safeguarding routes for potential transport improvements'. Safeguarding areas for transport infrastructure will not have any impact on European sites as it is intended to protect areas from other development that may prevent the intended development coming forward.</p> <p>The actual 'allocation' of areas for development of new transport infrastructure is in the separate Joint Local Transport Plan, which was subject to its own Appropriate Assessment (<a href="https://www.westofengland-ca.gov.uk/wp-content/uploads/2021/10/JLTP4-HRA-Appropriate-Assessment.pdf">https://www.westofengland-ca.gov.uk/wp-content/uploads/2021/10/JLTP4-HRA-Appropriate-Assessment.pdf</a>).</p> <p>Several of the schemes mentioned in Schedule 7 (notably, J21 Bypass Scheme, A371 to Churchlands Way Link, Banwell Bypass, and Herluin Way to Locking Road Link, Weston-super-Mare and M5 Junctions 19, 20 &amp; 21) were identified in the JLTP HRA as having potential to affect European sites if</p>

Policy	Policy Summary	Likely Significant Effects
		<p>they led to loss of functionally-linked habitat associated with either North Somerset &amp; Mendip Bats SAC or Severn Estuary SPA/Ramsar. However, with the inclusion of strategic and scheme levels mitigation identified in the HRA of the JLTP, it was concluded that no adverse effect on integrity of European sites would arise, including in combination with growth across the West of England region. Further assessment will be required as planning applications are developed for each scheme.</p> <p>Since these schemes are part of the JLTP and have already been included in the HRA of that plan, they do not need reassessing in the HRA of this Local Plan.</p>
<p>Schedule 8: Gypsy and Traveller sites</p>	<p>This schedule forms part of Policy DP44: Gypsies, Travellers and Travelling Showpeople and sets out the proposed allocations for the Local Plan and identifies the indicative capacity for each site, subject to detailed consideration. These figures are given as a guide, the final capacities may be higher or lower.</p> <ul style="list-style-type: none"> <li>Land to the north of Mooreland Park and south of the A370 – up to 40 pitches</li> </ul> <p>Land to the West of Healthfield Park south of A370 – 4 pitches</p>	<p><b>Likely significant effects: Screened in</b></p> <p>This policy allocates land for the construction of new gypsy and traveller pitches.</p> <p>Possible impact pathways include: recreational pressure, loss of functionally linked habitat, air pollution</p>

