

# Kings Somborne Neighbourhood Plan

Habitats Regulation Assessment

Kings Somborne Parish Council

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## Quality information

**Prepared by**

Jake Sutton  
Graduate Ecologist  
(CIEEM)

**Checked by**

Amelia Kent  
Senior Ecologist  
(ACIEEM)

**Verified by**

James Riley,  
Technical Director  
(CEnv MCIEEM)

**Approved by**

James Riley,  
Technical Director  
(CEnv MCIEEM)

## Revision History

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Prepared for:

Kings Somborne Parish Council

Prepared by:

Jake Sutton  
Ecologist (ACIEEM)

AECOM Infrastructure & Environment UK Limited  
Midpoint, Alencon Link  
Basingstoke  
Hampshire RG21 7PP  
United Kingdom

T: +44(0)1256 310200  
aecom.com

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# 1. Introduction

## Background to the Project

- 1.1 AECOM was appointed by Locality to assist Kings Somborne Parish Council in undertaking a Habitats Regulations Assessment (HRA) for the Kings Somborne Neighbourhood Plan (NP). This is to inform the planning group and Test Valley Borough Council of the potential effects of the NP development on European sites and how they are being or should be addressed in the draft NP. Test Valley Borough Council will then be able to utilise this report to inform their formal Habitats Regulations Assessment decision making regarding the Neighbourhood Plan.

## Legislative Framework

- 1.2 The UK left the EU on 31 January 2019 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 (“the Withdrawal Act”). This established a transition period, which ended on 31 December 2020. 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 has continued after the end of the Transition Period.
- 1.3 Under the Conservation of Habitats and Species Regulations 2017 (as amended) (the “Habitats Regulations”), an appropriate assessment is required, where a plan or project is likely to have a significant effect upon an international site, either individually or in combination with other projects. .

### The legislative basis for Appropriate Assessment

#### Conservation of Habitats and Species Regulations 2017 (as amended)

With specific reference to Neighbourhood Plans, Regulation 106(1) states that:

*‘A qualifying body which submits a proposal for a neighbourhood development plan must provide such information as the competent authority [the Local Planning Authority] may reasonably require for the purposes of the assessment under regulation 105 [which sets out the formal process for determination of ‘likely significant effects’ and the ‘appropriate assessment’]...’.*

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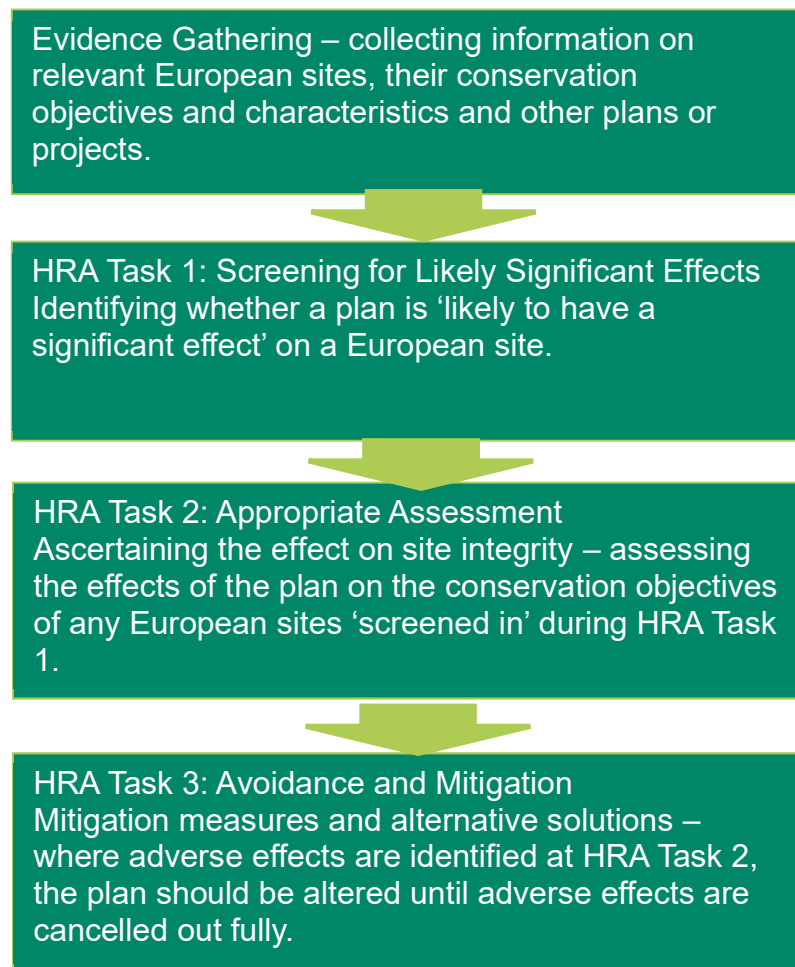
- 1.4 It is therefore important to note that this report has two purposes:
  - a. To assist the Qualifying Body (Kings Somborne Parish Council) in preparing their plan by recommending (where necessary) any adjustments required to protect international sites, thus making it more likely their plan will be deemed compliant with the Conservation of Habitats and Species Regulations 2017 (as amended); and
  - b. On behalf of the Qualifying Body, to assist the Local Planning Authority (Test Valley Borough Council in Hampshire) to discharge their duty under Regulation 105 (in their role as ‘plan-making authority’ within the meaning of that regulation) and Regulation 106 (in their role as ‘competent authority’).

- 1.5 As 'competent authority', the legal responsibility for ensuring that a decision of 'likely significant effects' is made, for ensuring an 'appropriate assessment' (where required) is undertaken, and for ensuring Natural England are consulted, falls on the local planning authority and the Neighbourhood Plan examiner. However, they are entitled to request from the Qualifying Body the necessary information on which to base their judgment and that is a key purpose of this report.
- 1.6 Over the years the phrase 'Habitats Regulations Assessment' has come into wide currency to describe the overall process set out in the Conservation of Habitats and Species Regulations from screening through to Imperative Reasons of Overriding Public Interest (IROPI). This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'. Throughout this report we use the term Habitats Regulations Assessment for the overall process.
- 1.7 Note that at the request of the group this assessment (specifically Appendix C) not only considers allocated sites but also some sites that were ultimately not allocated. These have been assessed in the event that allocations in the final plan change between the date of this analysis and the submission of the plan.

## 2. Methodology

### Introduction

- 2.1 The HRA has been carried out with reference to the general EC guidance on HRA (European Commission, 2001), general guidance on HRA published by the UK government in 2021 (Department for Environment, Food & Rural Affairs, 2021)



**Plate 1. Four Stage Approach to Habitats Regulations Assessment (Department for Environment, Food & Rural Affairs, 2021)**

- 2.2 Plate 1 above outlines the stages of HRA according to current Department for Levelling Up, Housing & Communities guidance. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations, and any relevant changes to the Plan until no significant adverse effects remain.

### HRA Task 1 – Likely Significant Effects (LSE)

- 2.3 Following evidence gathering, the first stage of any Habitats Regulations Assessment is a Likely Significant Effect (LSE) test - essentially a risk

assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

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

- 2.4 The objective is to ‘screen out’ those plans and projects that can, without any detailed appraisal, be said to be unlikely to result in significant adverse effects upon European sites, usually because there is no mechanism for an adverse interaction with European sites. This stage is undertaken in Chapter 4 of this report.

## HRA Task 2 - Appropriate Assessment (AA)

- 2.5 Where it is determined that a conclusion of ‘no likely significant effect’ cannot be drawn, the analysis has proceeded to the next stage of HRA known as Appropriate Assessment. Case law has clarified that ‘Appropriate Assessment’ is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to Appropriate Assessment rather than determination of likely significant effects. It literally means *‘whatever level of further assessment is appropriate to form a conclusion regarding effects on the integrity of relevant European sites’*.
- 2.6 During July 2019 the Department for Levelling Up, Housing and Communities (DLHC) published guidance for Appropriate Assessment (Department for Levelling Up, Housing and Communities, 2019). Paragraph: 001 Reference ID: 65-001-20190722 explains: *‘Where the potential for likely significant effects cannot be excluded, a competent authority must make an appropriate assessment of the implications of the plan or project for that site, in view of the site’s conservation objectives. The competent authority may agree to the plan or project only after having ruled out adverse effects on the integrity of the habitats site. Where an adverse effect on the site’s integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest and if the necessary compensatory measures can be secured’*.
- 2.7 One of the key considerations during Appropriate Assessment is whether there is available mitigation that would address the potential effect.

## HRA Task 3 – Avoidance and Mitigation

- 2.8 Where necessary, measures are recommended for incorporation into the Plan in order to avoid or mitigate adverse effects on European sites. There is considerable precedent concerning the level of detail that a Neighbourhood Plan document needs to contain regarding mitigation for recreational impacts on European 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.
- 2.9 In evaluating significance, AECOM has relied on professional judgement and the LP HRA regarding development impacts on the European sites considered within this assessment.

- 2.10 When discussing 'mitigation' for a Neighbourhood Plan document, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the details of the mitigation measures themselves since the Local Development Plan document is a high-level policy document. A Neighbourhood Plan is a lower-level constituent of a Local Development Plan.

## 3. Physical Scope of the HRA

### Introduction

- 3.1 There is no guidance that dictates the general physical scope of an HRA of a Plan document. Therefore, in considering the physical scope of the assessment, we were guided primarily by the identified impact pathways (called the source-pathway-receptor model).
- 3.2 Briefly defined, impact pathways are routes by which the implementation of a project can lead to an effect upon a European designated site. An example of this would be visual and noise disturbance arising from the construction/decommissioning work or operational phase associated with a project. If there are sensitive ecological receptors within a nearby European site (e.g. non-breeding overwintering birds), this could alter their foraging and roosting behaviour and potentially affect the site's integrity. For some impact pathways (notably air pollution) there is guidance that sets out distance-based zones required for assessment. For others, a professional judgment must be made based on the best available evidence.

### European Sites Relevant to the Neighbourhood Plan

- 3.3 In the case of the Kings Somborne NP, it has been determined that the European sites identified in Table 1 require consideration. The background to these European sites are discussed in **Appendix A**. In general sites have been selected because they lie within 10km of the Neighbourhood Area and experience indicates that few impact pathways apply at greater distances. However, for the Solent European sites it is known that the catchment for nutrient neutrality issues encompasses a very large area including the whole of Test Valley Borough.
- 3.4 The locations of the below European sites in relation to the NP boundary and allocated sites are illustrated in **Appendix B, Figure 1**.

**Table 1. European site descriptions and distance from Kings Somborne NP area**

Site Name/Designation	Site Description	Distance from Kings Somborne NP area
Mottisfont Bats SAC	Mottisfont Bats SAC is designated for its Annex II population of Barbastelle bats ( <i>Barbastella barbastellus</i> ) for which this is considered to be one of the best areas in the United Kingdom. It is one of only six known maternity sites in the UK and the only one in Hampshire. Mottisfont contains a mix of woodland types including hazel ( <i>Corylus avellana</i> ) coppice with standards, broadleaved plantation and coniferous plantation which the	2.0km west of the NP area

Site Name/Designation	Site Description	Distance from Kings Somborne NP area
	bats use for breeding, roosting, commuting and feeding.	
Emer Bog SAC	Emer Bog SAC is designated for its Annex I habitat of transition mires and quaking bogs for which this is considered to be one of the best areas in the United Kingdom. The bog is largely open and dominated by bottle sedge ( <i>Carex rostrata</i> ) and marsh cinquefoil ( <i>Potentilla palustris</i> ), with frequent common cotton grass ( <i>Eriophorum angustifolium</i> ), and occasional pools with bogbean ( <i>Menyanthes trifoliata</i> ). The basin is surrounded by more mature willow <i>Salix</i> woodland and open heathland.	6.2km south of the NP area
River Itchen SAC	<p>The River Itchen SAC is designated for Annex I habitats of water courses of plain to montane levels with the Crowfoot (<i>Ranunculus fluitantis</i>) and pond water-starwort (<i>Callitriche-Batrachion</i>) vegetation.</p> <p>Annex II species for primary designation are Southern damselfly (<i>Coenagrion mercuriale</i>) and Bullhead (<i>Cottus gobio</i>), with other qualifying species being white clawed (or Atlantic stream) crayfish (<i>Austropotamobius pallipes</i>), brook lamprey (<i>Lampetra planeri</i>), atlantic salmon (<i>Salmo salar</i>) and otter (<i>Lutra lutra</i>).</p>	9.4km east of the NP area
The New Forest SAC	The New Forest SAC is designated for Annex I habitats of Oligotrophic waters containing very few minerals of sandy plains ( <i>Littorelletalia uniflorae</i> ), Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> , Northern Atlantic wet heaths with <i>Erica tetralix</i> , European dry heaths, molinia meadows on calcareous, peaty or clayey-silt-laden soils ( <i>Molinion caeruleae</i> ), Depressions on peat substrates of the <i>Rhynchosporion</i> , Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrublayer ( <i>Quercion roboret-petraeae</i> or <i>Illici-Fagenion</i> ), Asperulo-Fagetum beech forests, Old acidophilous oak woods with English Oak ( <i>Quercus robur</i> ) on sandy	9.6km south west of the NP area

Site Name/Designation	Site Description	Distance from Kings Somborne NP area
	<p>plains and priority habitats of bog woodland and Alluvial forests.</p> <p>Annex II species for designation are Southern damselfly (<i>Coenagrion mercurial</i>), Stag beetle (<i>Lucanus cervus</i>) and Great crested newt (<i>Triturus cristatus</i>)</p>	
Salisbury Plain SAC	<p>Salisbury Plain SAC is designated for Annex I habitats of common juniper (<i>Juniperus communis</i>) formations on heaths or calcareous grasslands and semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) which is an important orchid site.</p> <p>Annex II species for designation are Marsh fritillary butterfly (<i>Eurodryas</i>, <i>Hypodryas</i>)</p>	9.8km north west of the NP area
Porton Down SPA	<p>Porton Down SPA is designated for its population of breeding Stone-curlew (<i>Burhinus oediconemus</i>) the SPA supports 11 breeding pairs which comprised 10.6% of the GB breeding population.</p>	9.8km north west of the NP area
New Forest SPA	<p>The New Forest SPA is designated for its breeding populations of:</p> <ul style="list-style-type: none"> <li>• European honey buzzard (<i>pernis apivorus</i>)</li> <li>• Hen harrier (<i>Circus cyaneus</i>)</li> <li>• Eurasian hobby (<i>Falco subbuteo</i>)</li> <li>• European nightjar (<i>Caprimulgus europaeus</i>)</li> <li>• Woodlark (<i>Lullula arborea</i>)</li> <li>• Dartford warbler (<i>Sylvia undata</i>)</li> <li>• Wood warbler (<i>Phylloscopus sibilatrix</i>)</li> </ul>	10km south west of the NP area
New Forest Ramsar	<p>The New Forest Ramsar is designated for the following Criterion:</p> <p>Ramsar Criterion 1</p> <p>Valley mires and wet heaths are found throughout the site and are of outstanding</p>	10km south west of the NP area

Site Name/Designation	Site Description	Distance from Kings Somborne NP area
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scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. This is the largest concentration of intact valley mores of their type in Britain.

#### Ramsar Criterion 2

The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plants are found on the site, as are at least 65 British Red Data Book species of invertebrates

#### Ramsar Criterion 3

The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scarce wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England.

Solent and Southampton Water SPA	<p>Solent and Southampton Water SPA is designated for:</p> <ul style="list-style-type: none"> <li>• Mediterranean gull (<i>Larus melanocephalus</i>) – 15.4% of the GB breeding population</li> <li>• Little tern (<i>Sternula albifrons</i>) – 2% of the GB breeding population</li> <li>• Roseate tern (<i>Sterna dougallii</i>) – 3.1% of the GB breeding population</li> <li>• Common tern (<i>Sterna hirundo</i>) – 2.2% of the GB breeding population</li> <li>• Sandwich tern (<i>Sterna sandvicensis</i>) – 1.7% of the GB breeding population</li> <li>• Eurasian teal (<i>Anas crecca</i>) – 1.1% of the population (wintering)</li> </ul>	11.4km south of the NP area
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Site Name/Designation	Site Description	Distance from Kings Somborne NP area
	<ul style="list-style-type: none"> <li>Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) – 2.5% of the population (wintering)</li> <li>Common ringed plover (<i>Charadrius hiaticula</i>) – 1.2% of the population (wintering)</li> <li>Black-tailed godwit (<i>Limosa limosa islandica</i>) – 1.7% of the population (wintering)</li> <li>Internationally important bird assemblage – regularly supports 51,361 waterfowl in the winter.</li> </ul>	
Solent and Dorset Coast SPA	<p>Solent and Dorset Coast SPA is designated for:</p> <ul style="list-style-type: none"> <li>Sandwich tern (<i>Sterna sandvicensis</i>) – 4.01 of the GB breeding population</li> <li>Common tern (<i>Sterna hirundo</i>) – 4.77% of the GB breeding population</li> <li>Little tern (<i>Sternula albifrons</i>) – 3.31% of the GB breeding population</li> </ul>	11.4km south of the NP area
Solent Maritime SAC	Solent Maritime SAC is designated for Annex I habitats of estuaries, spartina swards, Atlantic salt meadows, sandbanks which are slightly covered by sea water all the time, mudflats and sandflats not covered by seawater at low tide, coastal lagoons, annual vegetation of stoney banks, annual vegetation of drift lines, Salicornia and other annual colonising mud and sand, and shifting dunes along the shoreline with <i>Ammophila arenaria</i> “white dunes”. The site is also designated for the Annex II species desmoulins whorl snail ( <i>Vertigo moulinsiana</i> )	12.0 km south of the NP area

## Relevant Impact Pathways

3.5 Based upon Natural England Site Improvement Plans and Supplementary Advice on Conservation Objectives, there are several pathways that require consideration regarding increased development within the Kings Somborne NP area and said European sites. These are:

- Public access and recreational pressure
- Water pollution and hydrological changes (including nutrient neutrality)
- Air pollution impacts of atmospheric nitrogen deposition
- Loss of functionally linked habitats

## ‘In Combination’ Scope

- 3.6 It is a requirement of the Regulations that the impacts 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 site(s) in question.
- 3.7 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 may 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 or policy would otherwise be screened out because its individual contribution is inconsequential.
- 3.8 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 internationally designated site(s) in question.
- 3.9 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 (CJEU, 2004) case.
- 3.10 For the purposes of this assessment, we have determined that, due to the nature of the identified impacts, the key other plans and projects with potential for in combination likely significant effects are those schemes that have the following impact pathways: Public access and recreation pressure, air quality impacts, water pollution, hydrological changes and invasive species. The following plans have been assessed for their in-combination impact to interact with the Kings Somborne Neighbourhood Plan:
- Test Valley Borough Council (TVBC) Revised Local Plan (adopted 2016) (Test Valley Borough Council, 2011)
  - Other Local Plans for authorities within the River Test catchment which will cumulatively result in an in combination effect on the Solent European sites through nutrient neutrality: Basingstoke & Dean and Southampton.
  - New Forest National Park Local Plan 2016 – 2036 (adopted 2018) (New Forest District Council, 2018)

- Other Local Plans for authorities within the 15km core recreational catchment of New Forest SAC/SPA.
- Hampshire Local Transport Plan 2011 – 2031 (Hampshire County Council , 2011)

## 4. Test of Likely Significant Effects

### Summary of Policy Screening

4.1 The Kings Somborne Neighbourhood Plan (KSNP) has a total of 16 policies. Of these, five policies and/or associated allocations had the potential to cause a likely significant effect and were discussed with regards to their impacts upon European sites. These policies are.

- KS/H1 – Quantity of New Homes Needed - Sites are allocated in this NDP to accommodate around 41 new homes over the next 15 years;
- KS148b – Land at Spencer's Farm (South) - Site allocation for 14 dwellings, including affordable housing to be accessed from Eldon Road;
- SHELAA 55 – Land East of Furzedown Road - Site allocation for 10 dwellings, including affordable housing to be accessed from The Gorrings;
- SHELAA 168 – Land East off Eldon Road - Site allocation for 10 dwellings, including affordable housing to be accessed from Eldon Road;
- KS3 – Land of Froggole Lane - Site allocation for 7 dwellings, including affordable housing to be accessed from Froggole Lane.

4.2 The test of likely significant effects will focus on these policies with regards to the vulnerabilities of the European sites within Table 1. The impact pathways relating to the European sites vulnerabilities are listed below and will each be discussed:

- Public access and recreational pressure;
- Water pollution and Hydrological changes (including nutrient neutrality);
- Air pollution impacts of atmospheric nitrogen deposition, and
- Loss of functionally linked habitats

- 4.3 In addition, a number of sites that were not ultimately chosen for allocation were subject to assessment and are contained within Appendix D.

## Recreational Pressure

- 4.4 Increased development could lead to higher numbers of visitors to European Sites. For example, the nature, scale, timing, and duration of some human activities can result in the disturbance of birds at a level that may substantially affect their behaviour, and consequently affect the long-term viability of the population. This is possible for European Sites to be visited by new residents in combination with the surrounding villages. Recreational use of a European site has the potential to:

- Prevent appropriate management or exacerbate existing management difficulties.
- Cause damage through erosion and fragmentation.
- Cause eutrophication as a result of dog fouling; and
- Cause disturbance to sensitive species, particularly ground-nesting birds and wintering wildfowl

## Emer Bog SAC

- 4.5 Emer Bog SAC is designated for Annex I habitat of transition mires and quaking bogs for which this is considered to be one of the best areas in the United Kingdom. These areas of transition mires and quaking bog are mostly threatened by hydrological, eutrophication as well as erosion and fragmentation on to the unstable 'quaking' surface. Emer Bog consists of eastern and western areas of open swamp and mire communities with large wet areas of tall herb fen with small open pools resulting in much of the site being inaccessible to the public (Allen, 2003).
- 4.6 Additional recreational pressure stemming from the Kings Somborne Neighbourhood Plan (KSNP) is unlikely to act upon Emer Bog alone given that Emer Bog SAC is 6.2 km from KSNP and the number of proposed developments is small (41 dwellings). Additionally, due to the small likelihood of Emer Bog attracting dog walkers and other disturbing recreational activities, as much of the site is inaccessible to the public, the KSNP is also unlikely to increase recreational pressure in combination with other plans and projects. **Therefore, the KSNP will not cause a likely significant effect upon the European sites either alone or in combination with other plans and projects and can be screened out.**

## The New Forest SAC/SPA/Ramsar

- 4.7 The New Forest SAC is a large and complex ecosystem and one of the largest remaining relatively wild areas in the South of England attracting enormous numbers of visitors each year. The SPA is designated for breeding birds including woodlark, nightjar, and hen harrier. Additionally, the Ramsar is designated for rare mire habitats, plants and invertebrates.
- 4.8 Although the SPA and Ramsar lie on the very edge of the general 10km potential impact buffer of the KSNP, visitor survey work undertaken for New Forest

National Park Authority has led to the identification of a 13.8km core catchment for recreational pressure around the SAC/SPA, extending up to 15km for larger developments (Liley & Caals, 2021; Test Valley Borough Council, 2021) and so both of the SPA and Ramsar are included within this discussion.

- 4.9 It is widely understood that the New Forest is vulnerable to recreational pressure. The Supplementary Conservation Advice states: *“The New Forest attracts high numbers of visitors annually and there is an assumption that disturbance affects the breeding success of SPA birds and SAC habitats through erosion, compaction and damage to vegetation and water bodies.”*
- 4.10 . Given that the New Forest SAC is 9.6 km from the KSNP area and the SPA and Ramsar at 10km from the KSNP area, it is regarded that a net increase in new dwellings within the NP area will lead to a likely a significant effect through increasing recreational pressure within the SAC/SPA. **Therefore, this will be discussed further in the Appropriate Assessment.**

## Porton Down SPA

- 4.11 The Porton Down SPA designated site is important for chalk grassland and heath, with scrub, ancient and plantation woodland, a large juniper population, lichens, rare flowering plants, butterflies, and other invertebrates, and breeding birds, including stone-curlew. Porton Down is home to the Defence Science and Technology Laboratory (DSTL), part of the Ministry of Defence, employing more than 3,000 scientists. It was created 100 years ago in response to gas attacks in WWI. The site is not accessible to the general public.
- 4.12 Human pressure at the SPA relates mainly to being subject to research trials, entailing vehicle movements along regular routeways, human activity at the built locations around the site and occasional loud explosions from the DSTL and a shoot operates during the autumn and winter season. The general public (and their dogs) do not have access.
- 4.13 The Supplementary Conservation Advice (Natural England, 2018) highlights that *“Overall, the DSTL site appears relatively undisturbed and there has been no reason, so far, to suggest that disturbance is having an impact”*. Additionally, Henderson (Henderson, 2013) investigated potential disturbance effects on stone-curlew at Porton Down and found that ‘time off the nest’ and ‘total alarm rate’ behaviours were negatively correlated with nest proximity to internal access roads; however, this did not affect the distribution or success of breeding attempts. This suggests that although there is a pressure, the extent this significantly affects the SPA is not likely and as the site is inaccessible to the public, unlikely to be affected by an increase in walkers and dog walkers through growth from the NP or other plans.
- 4.14 Porton Down is 9.8 km from the western boundary of the NP area and further from the nearest allocation site. Given this distance and the site being inaccessible to the general public, it is regarded that the increase in net new dwellings is unlikely to have a significant effect on increasing recreational pressure within the European site either alone or in-combination. **Therefore, the Kings Somborne NP will not cause a likely significant effect upon the European site either alone or in-combination with other plans and projects and can be screened out.**

## Functionally Linked Land

4.15 While most European 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 European 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>1</sup>) (CJEU, 2018) which in paragraphs 37 to 40 confirms the need to consider the implications of a plan or project on habitats and species outside the European site boundary provided that those implications are liable to affect the conservation objectives of the site.

## Mottisfont Bats SAC

4.16 Areas of functionally linked land typically provide habitat for foraging or other ecological functions essential for the maintenance of the designated population e.g., high suitability roost locations. Functionally linked land may extend up to the maximum foraging distances for the bat species. However, the number of bats foraging will tend to decrease further away from the protected site and thus the importance of the land to the maintenance of the designated population will decrease.

4.17 The site designation of Mottisfont Bats is a mixed woodland located approximately 1.5km at its closest from the boundary of the NP area, and c. 3.5km from the closest allocation. Barbastelle bat, which is the qualifying feature of the SPA designation, has a typical core sustenance zone of 6km around the designated sites in which they have their maternity colonies<sup>2</sup>. However, local evidence justifies a requirement for a core sustenance zone of 7.5km around Mottisfont Bats SAC (Wiltshire Council & Natural England, 2015). As such, areas within this distance could have potential as functionally linked land. The Neighbourhood Area lies well within this zone for Mottisfont Bats SAC. As a rule of thumb functionally linked land is usually considered significant where the parcel of land is considered part of a critical flyway or foraging area for the SAC designated species (Natural England, 2016). The majority of the NP area appears from aerial mapping ([www.magic.defra.gov.uk](http://www.magic.defra.gov.uk)) to be rural, with a mix of grassland, woodland and arable cropped fields. The main areas of settlement are King's Somborne village at the centre of the NP area and Up Somborne in the east of the NP area, with hamlets and farms scattered throughout the rest of the NP area. The River Test runs north-south along the western boundary of the NP area with a tributary of the River Test flowing east-west through the centre of King's Somborne village from its source west of New Lease Farm.

4.18 Desk study data was collected for the previous King's Somborne NP – Shadow HRA undertaken in 2018 which highlighted records of 'flying' barbastelle bats at locations west of the NP area c. 2km away. A total of 6 records were returned for

<sup>1</sup> The Holohan ruling also requires all the interest features of the European sites discussed to be catalogued (i.e. listed) in the HRA. That is the purpose of Appendix B.

<sup>2</sup> [https://cdn.bats.org.uk/uploads/pdf/Resources/Core\\_Sustenance\\_Zones\\_Explained\\_04.02.16.pdf?v=1550597495](https://cdn.bats.org.uk/uploads/pdf/Resources/Core_Sustenance_Zones_Explained_04.02.16.pdf?v=1550597495)

two locations in Houton and Bossington, five of which were in 2017. Although both settlements are on the western side of the River Test, it is likely that the bats are using the river as a commuting corridor. Given that barbastelle have been recorded at the boundary of the NP area it is also likely that barbastelle will also commute and forage east of the river corridor and therefore development within the King's Somborne NP area could have a likely significant effect upon the Mottisfont Bats SAC with regards to functionally linked land. **Therefore, this will be discussed further within the Appropriate Assessment.**

## Air Pollution

4.19 The main pollutants of concern for European 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 2. 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	Nitrogen oxides are mostly	Deposition of nitrogen compounds

oxides NO <sub>x</sub>	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.	(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> emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication.	Species-rich plant communities with relatively high proportions of slow-growing perennial 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.
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.
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.

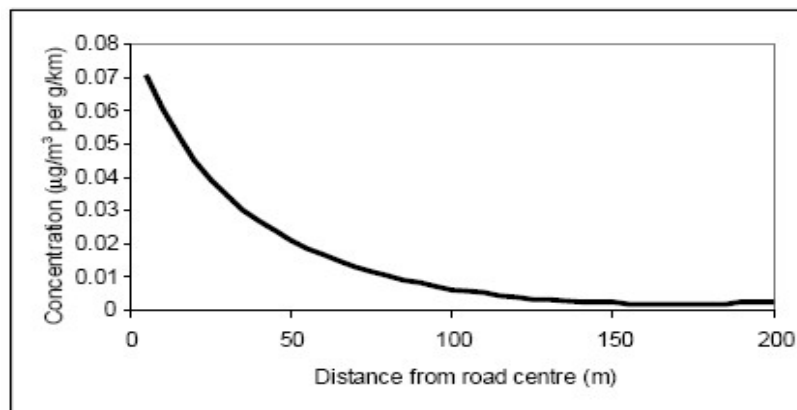
4.20 Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil as well as (particularly on a local scale) shipping.

4.21 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 or Neighbourhood 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>3</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.

- 4.22 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>4</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 [www.apis.ac.uk](http://www.apis.ac.uk).
- 4.23 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” (Department For Transport, 2021). 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.

### Plate 2: Traffic contribution to concentrations of pollutants at different distances from a road (Department for Transport, 2016)



- 4.24 This is therefore the distance that has been used throughout this HRA in order to determine whether European sites are likely to be significantly affected by traffic generated by development under the Spatial Strategy.

## Emer Bog SAC

- 4.25 The A27 lies 600m south of Emer Bog SAC which is designated for habitat features of a young oligotrophic and mesotrophic basin mire, together with associated damp acidic grassland, heathland and developing woodland. While these habitats are vulnerable to air quality impacts, none are within 200m of a major through route (A road) and therefore vehicle emissions from the NP or

<sup>3</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>4</sup> The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur

other plans and projects would not be significant to local pollution levels and can therefore be screened out.

## The New Forest SAC

4.26 The New Forest SAC is also adjacent south of the A36. The New Forest SAC is designated for the habitat features of a complex mosaic of habitats including wet and dry heaths and associated bogs and mires, wet and dry grasslands, ancient pasture woodlands, frequent permanent and temporary ponds and a network of streams and rivers. According to [www.magic.gov.uk](http://www.magic.gov.uk) the main habitat types within 200m of the A36 are European dry heathland and dry acid grassland. The habitat types are currently classed (by Natural England with reference to all the following New Forest SSSI Units: 141, 144, 164, and 163) (Natural England, 2012-2016) as 'Favourable' (Units 141, 144 and 164) and as 'Unfavourable - Recovering' (Unit 163). The reason behind the impact classification for Unit 163 is due to high levels of recreation, high numbers of dog faeces, compacted ground, dog walkers seen throughout. According to APIS the nitrogen critical load for the qualifying feature habitat dry heaths is 10- 20 KG/N/ha/yr. The minimum nitrogen deposition calculated for this habitat at this site is 11 KG/N/ha/yr and the maximum is 18.1 Kg/N/ha/yr with an average of 13.6 Kg/N/ha/yr. All deposition rates are already over the minimum critical load.

However, at the distance of 9.6km from the NP area at its closest point and further to the roads adjacent to the SAC, and as the total number of net new dwellings within the NP is small (41 dwellings), it is unlikely that the increase in population within the NP will extend to an increase in car journeys passed the SAC components alone. Given the deposition of nitrogen is already over the minimum critical load, increasing this deposition could cause deterioration of the habitats and increases in net new dwellings from the KSNP may act in combination with other developments from other neighbouring plans. **Therefore, this impact pathway upon the New Forest SAC will be discussed further within the Appropriate Assessment.**

## Salisbury Plain SAC

4.27 Salisbury Plain SAC (Porton Down element) is located adjacent to the A30 between Newton Tony and Firsttown. Several small areas of the SAC are directly adjacent to the main road with the main body of the SAC being on average at least 300m from the A30. According to [www.magic.gov.uk](http://www.magic.gov.uk) the main habitat types within 200m of the A30 are lowland calcareous grassland. The habitat types are currently classed (by Natural England with reference to the following Porton Down SSSI Units: 6 and 12) (Natural England, 2012-2016) as 'Unfavourable recovering' for both Units. The reason behind the impact classification for Units 6 and 12 is due to very high rabbit populations affecting vascular plants within these Units. According to APIS the nitrogen critical load for the habitat type Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (\* important orchid sites) is 15 – 25 KG/N/ha/yr. The minimum nitrogen deposition calculated for this habitat at this site is 15.8 KG/N/ha/yr and the maximum is 23.6 KG/N/ha/yr, with an average of 17.6 KG/N/ha/yr. All deposition rates are already over the minimum critical load.

4.28 However, at the distance of the almost 9.6km from the NP area, and as the total number of net new dwellings within the NP is small (41 dwellings), it is unlikely

that the increase in population within the NP will extend to an increase in car journeys passed this SAC component alone. Given the deposition of nitrogen is already over the minimum critical load, increasing this deposition could cause deterioration of the habitats and increases in net new dwellings from the KSNP may act in combination with other developments from neighbouring plans. **Therefore this impact pathway upon the Salisbury Plains SAC will be discussed further within the Appropriate Assessment.**

## Water Resources and Water Quality

- 4.29 Increased amounts of housing or business development can lead to reduced water quality of rivers and estuarine environments. Sewage and industrial effluent discharges can contribute to increased nutrients on European sites leading to unfavourable conditions. In addition, diffuse pollution, partly from urban run-off has been identified during an Environment Agency Review of Consents process and a joint Environment Agency and Natural England evidence review (Environment Agency, 2007), as being a major factor in causing unfavourable condition of European sites.
- 4.30 The quality of the water that feeds European sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:
- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour. Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity, and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient and so eutrophication is associated with discharges containing available nitrogen.
  - Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.
- 4.31 At sewage treatment works, additional residential development increases the risk of effluent escape into aquatic environments in addition to consented discharges to the catchment. In many urban areas, sewage treatment and surface water drainage systems are combined, and therefore a predicted increase in flood and storm events could increase pollution risk.
- 4.32 The following sites are vulnerable to water resource and water quality impacts:
- Emer Bog SAC
  - River Itchen SAC
  - The New Forest SAC

4.33 The three SAC's listed above and their designated habitats are all subject to hydrological changes due to water abstraction primarily. In 2007 the Environment Agency published a report classifying areas based on their level of water stress (Environment Agency, 2007). Through this, Southern Water's operational area was classified as being of 'serious' water stress. This was in part due to "*allowing abstraction up to the limits of the existing licence and the competent authority should impose conditions that would ensure mitigation of the projects contribution to any in-combination adverse effect on the integrity of the protected sites*". However, the increase net new dwellings is small (41 dwellings) and therefore unlikely to cause an impact on any site alone. The increase in net new dwellings within the KSNP area could act in combination with regards to abstraction for an increase in net new dwellings outside of the NP area. **Therefore, the Kings Somborne NP could produce likely significant effects through abstraction in combination with other plans and project and will therefore be discussed further within the Appropriate Assessment.**

4.34

4.35 Additionally, as Emer Bog SAC is designated for bog/mire habitat, surface water hydrology could also be affected by increased dwellings within the hydrological catchment of the SAC. Studies have been undertaken by Test Valley Council with regards to the hydrology of Emer bog SAC and its surrounding catchment including water quality, quantity and flow/discharge rates. These studies have created a critical and wider catchment zone. Within these catchment zone development proposals would need an assessment to demonstrate any changes to surface and/or ground water would not adversely affect the sites hydrology. The critical catchment extends north of Emer bog to just south of Greenridge Farm (SU392219) and Churchers Common Plantation (SU402221) and around Baddesley Common (SU392207). The wider catchment extends south of the critical catchment into North Baddesley (SU388199). The critical catchment for Emer Bog SAC is approximately 6.2 km south of the KSNP area boundary and further from allocated sites. **Therefore the KSNP would not have a likely significant effect on the surface or groundwater hydrology of Emer Bog SAC either alone or in combination with other plans and projects and can be screened out.**

The Solent Maritime, Solent and Southampton Water and Solent and Dorset Coast European sites are also vulnerable to water quality impact with specific regard to nutrient neutrality. This is discussed below.

## Nutrient Neutrality

4.36 With the increase of new developments within the Kings Somborne NP area, there is a potential for an increase strain on sewage and water treatment works. Achieving nutrient neutrality is one way to address the existing uncertainty surrounding the impact of new development on designated sites. Natural England have advised that there is a risk to condition for the designated habitat sites listed in Table 4 that are hydraulically linked to the Kings Somborne wastewater system (Southern Water, 2021):

**Table 4. Habitat Sites with a risk to condition that are hydrologically linked to Kings Somborne**

## Habitat Sites

Solent Maritime SAC	Nitrate permit review required. Overflow Spills
Solent & Southampton Water SPA	No Threat/Remedy Identified or Anticipated
Solent and Dorset Coast SPA	Nitrate permit review required. Overflow Spill

- 4.37 These European sites lie outside the 10km buffer used to identify potential impacts within the HRA. However, some impacts are further reaching and as the Parish is within the drainage catchment of the Solent European sites, there is a potential linking impact pathway. The River Test which lies within the Kings Somborne NP, feeds into the above Solent European sites water systems and as such any new housing within the catchment of the Solent European sites may, without mitigation create a likely significant effect upon these sites. **Therefore, the KSNP cannot be screened out and nutrient neutrality will be discussed further within the Appropriate Assessment.**

4.38

## 5. Appropriate Assessment In-combination

### Recreational Pressure

- 5.1 As described in the Test of Likely Significant Effects, Footprint Ecology (Liley & Caals, 2021) has recently published research to understand the core recreational zone of the New Forest European sites. The core recreational zone is the straight line distance from home postcode to the boundary of the European site of which 75% of regular visitors travel. This core zone extends 13.8km from all three designations. Within this core zone, mitigation is expected from all developments, with developments of 200 or more dwellings within 15km looked at on a case-by-case basis.
- 5.2 Test Valley Borough Council has developed a strategic approach to avoiding and mitigating the potential impacts of increasing recreational pressure on the New Forest. At a high level this is highlighted in Policy 5: Biodiversity, of the Local Plan which states; *“Development that is likely to result in a significant effect, either alone or in combination, on an international or European nature conservation designation, or a site proposed for such designation will need to satisfy the requirements of the Habitats Regulations”*
- 5.3 Prior to the research Footprint Ecology undertook on recreational zoning, the council created the New Forest SPA Mitigation Interim Framework (Test Valley Borough Council, 2014), which sets out *“an approach to be taken in considering proposals for net gains in dwellings... in relation to the requirements of the [Habitats Regulations] for the New Forest SPA designations and recreational pressures”*. The framework bases the areas where development is required to provide mitigation on an Open Spaces Residents Survey from 2014 which created a 13.6km recreational zone. However, the report by Footprint overrides these areas with the 13.8km (up to 15km) core recreational zone. However, the mitigation which the developments need to carry out, is still valid at the time of writing this report (Test Valley Borough Council, 2022).
- 5.4 Mitigation measures proposed within the Interim Framework are as follows:
- a) Put forward evidence to justify that the proposal would not lead to a likely significant effect when considered alone, or in combination.*
  - b) Develop a bespoke mitigation package for the proposal, which would need to be subject to site specific Habitats Regulations Assessment*
  - c) Provide alternative natural green space for recreational use to a standard of 8ha per 1000 population, to be designed to divert visitors from the New Forest SPA<sup>5</sup>*
  - d) Provide a contribution of £1,300 per dwelling for off-site mitigation*
- The council would need to agree the proposed approach to mitigation. In addition to mitigation measures, a contribution towards monitoring measures would be*

<sup>5</sup> Such provisions would need to be designed seeking advice from the Borough Council and Natural England. The figure relates to the net area of usable space and is in addition to public open space requirements. This option is unlikely to be appropriate for smaller sites given the scale of provision it would be likely to generate.

*required (payable on occupation), this has been factored into the figure provided for option d)."*

- 5.5 As the Policy and Interim Framework is a part of the overarching Local Plan, the NP is required to comply with this mitigation as well. Therefore, should a development within the NP not be able to provide evidence that there will not be a significant effect, the developer will have to provide mitigation in accordance with one of options b) to d). Given that the developments within the NP are relatively small e.g. four sites of seven to 14 net new dwellings, the most appropriate mitigation option would be d) to provide a contribution to suitable alternative natural greenspace (SANG) and Strategic Access Management and Monitoring (SAMM) which is included in the tariff provided. The council should be contacted with regards to ensuring a strategic SANG with an appropriate amount of capacity is present within the required catchment area for the developments.
- 5.6 Although the NP must comply with the Local Plan, to strengthen the NP itself it is recommended that a policy is added to the NP such as ***"Developments within 13.8km of the New Forest SAC/SPA/Ramsar are required to provide mitigation in accordance with Policy E5: Biodiversity of the Test Valley Local Plan 2011-2029 and the New Forest SPA Mitigation – Interim Framework 2014 or any subsequent updates. Mitigation for developments located between 13.8km and 15km of the New Forest SAC/SPA/Ramsar will be assessed by the Borough Council on a case-by-case."*** This text could be added to the Policy KS/E6 – Biodiversity of the NP.
- 5.7 Should the recommended text be added to the NP and should mitigation be provided for developments in accordance with the Interim Framework or any subsequent updates at the stage of planning where mitigation is required then it can be concluded that the Kings Somborne NP would not adversely affect the integrity of the New Forest SAC/SPA/Ramsar.

## Functionally Linked Habitat

- 5.8 There are four sites allocated within the NP, these are:

- SHELAA 148b – Land at Spencer's Far (14 dwellings) – the site is located east of residential dwellings at Muss Lane and north of residential dwellings at Riverside Gardens and currently appears to be an arable field or pastureland cut for hay. Hedgerow and trees border the site to the east and south, however there appears to be little vegetation bordering the north and west of the site. The developable area of the site is located on the southern half of the site with access coming from Muss Lane.
- SHELAA 55 – Land East off Furzedown Road (10 dwellings) – the site is located west of residential dwellings along Scott Close and The Gorings and is currently an arable field. There is a public footpath to the east and north of the site, which is bordered by hedgerow and semi-mature to mature trees within the hedgerow. There is no physical boundary to the south or west. The developable area of the site is located to the northeast of the site close to a new access point at The Gorings.
- SHELAA 168 – Land East off Eldon Road (10 dwellings) – the site is located east of residential dwellings along Eldon Road and is currently an

arable field. The site is bordered by hedgerow to the east and west and a strip of mature trees to the north and south. The developable area of the site is located in the central east of the site around the current access point to the field.

- KS3 – Land off Froghole Lane (7 dwellings) – the site is located directly adjacent (north) of the River Test tributary (Somborne Stream) and is currently pasture with hedgerows and trees bordering the site. The developable area of the site is located in the north-east corner of the site.

5.9 Descriptions of the sites have come from aerial mapping ([www.magic.gov.uk](http://www.magic.gov.uk)) and mapping used within the NP. No on the ground surveys have been conducted.

5.10 The closest site to Mottisfont Bats SAC is SHELAA 55 which is approximately 3.5km to the east. The only allocated site located next to the River Test tributary, the Somborne Stream is KS3 – Land off Froghole Lane. This site is also around 3.5km to the east of the SAC. The other sites are approximately 3.9km (SHELAA 168) and 4.2km (SHELAA 148b) from the SAC east of King's Somborne village.

5.11 Barbastelle bats generally forage within the woodland in which their roost tree is located until light levels fall. At this stage, they fly beyond the woodland to the wider countryside to forage in more open habitats like wood pasture, parklands, wetlands, over herb-rich meadows and alongside hedgerows and tree lines (Bat Conservation Trust, 2022).

5.12 The site allocations are all bordered by mature trees and hedgerows, as well as being adjacent to pasture and arable fields on at least one side. At least one sites is adjacent to the Somborne Stream and therefore connected by this stream to the river corridor of the River Test. There is potential for the sites to affect the integrity should barbastelle utilise these sites as key foraging areas/corridors.

5.13 However, at the plan stage there is little information regarding the design of the development or about the species which utilise the site. Therefore, at this stage the individual sites cannot be fully assessed for their potential to cause an adverse effect upon the SAC.

5.14 There is a long history of development being delivered whilst taking into account roosting, commuting, and foraging locations for bats. The National Planning Policy Framework (NPPF) sets out government policy regarding consideration of biodiversity in planning decisions. Under the NPPF the presence of a protected species (such as the barbastelle bat) is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat, as such all bat species are protected irrespective of whether they are associated with an SAC. This would be through the detailed design of individual developments, the delivery of the developments and relevant planning obligations. This could include provisions including habitat retention, habitat enhancements and designing lighting for the development that will not expose boundary features of retained/ enhanced habitats to artificial illumination greater than 0.5 lux through a combination of careful luminaire and lighting column design and physical separation between the relevant corridors and the built footprint of the development. The SAC and present of functionally-linked habitat on the boundaries of the allocated sites therefore do not provide a fundamental obstacle to site allocations that may be

utilised by barbastelle bats as impacts to bats can be ‘designed out’ at the site development and masterplanning stage.

- 5.15 However, it is recommended that a more explicit requirement relating to the SAC is included in the Neighbourhood Plan to make it clear that specific surveys and detailed design considerations will be required for all allocated sites to support planning applications. An example would be to state that ‘*Development proposals on greenfield sites and sites that support or are in close proximity to suitable commuting and foraging habitat (including mature vegetative linear features such as woodlands, hedgerows riverine and wetland habitats) should have due regard to the possibility that barbastelle bats will be utilising the site. Such proposals will be required to incorporate necessary surveys and ensure that key features (foraging habitat and commuting routes) are retained, in addition to a suitable buffer to safeguard against disturbance.*’**
- 5.16 Deferring detailed bat surveys to the planning application stage is in line with the advice of Advocate-General Kokott<sup>6</sup> to the European Court of Justice regarding the appropriate approach to HRA, and level of detail required, when a multi-stage planning process exists. She commented that: *“It would ...hardly be proper to require a greater level of detail in preceding plans [rather than planning applications] or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure”.*
- 5.17 The Court of Appeal has ruled that provided the competent authority is duly satisfied that mitigation can be achieved in practice (in other words that solutions exist that are likely to be effective) this will suffice to enable a conclusion that the proposed development would have no adverse effect (reference No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015)
- 5.18 The High Court has 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 the Habitats Regulations*’ (High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015)
- 5.19 The UK courts have also clarified that when reaching decisions over adverse effects on integrity ‘absolute certainty that there would be no adverse effects was not required; a competent authority could be certain that there would be no adverse effects even though, objectively, absolute certainty was not proved’ (case [2019] EWHC 3242 (Admin)). What is required for the Neighbourhood Plan is a suitable policy framework that will protect the SAC and set out the further work required for the planning application stage.

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

- 5.20 Should the recommendation above be added to NP policy then it can be concluded that the NP would not have an adverse effect upon the Mottisfont Bats SAC with regards to functionally linked habitats.

## Air Quality

- 5.21 The test of likely significant effects concluded that although the KSNP is unlikely to cause significant effects with regards to air quality alone, there is a linking impact pathway to some European sites as there is a main road within 200m of a component part of an SAC and therefore the potential to cause a likely significant effect in combination with other plans and projects. Therefore, the follow European sites will be discussed further below:

- The New Forest SAC
- Salisbury Plains SAC

- 5.22 The Test Valley Local Plan (2011) intends to deliver at least 10,584 net new dwellings by the end of the plan period 2029 which could increase the number of car journeys past the above European sites and given that all of the sites are above their critical nitrogen deposition loads, this has the potential to cause an impact on the integrity of the European sites.

- 5.23 However, the adopted Test Valley Local Plan has undertaken a Habitats Regulations Assessment of its own, which took account of air quality impacts and concluded *“the Local Plan was unlikely to result in significant effects upon protected sites”*. This was ensured by including the following statements from Policy E5 within the Plan:

- *‘Proposals that have the potential to impact on air quality in such a way as to adversely affect these destinations will need to identify mitigation measures. For example, where it is evidenced that the increase in traffic movements will have an impact on air quality the promotion of more sustainable modes of travel will be sought. The Council will consider how best to monitor changes in air quality with partners in areas adjoining European sites likely to be affected by additional development’*
- *And with regards specifically to the New Forest SAC ‘The Council has commenced work with neighbouring authorities and statutory bodies on preparing a long-term approach for mitigating the pressures on the New Forest ecological designations. In the short term the Council has approved the New Forest Interim Mitigation Framework 2014’*

- 5.24 Clearly if the Local Plan is delivering 10,584 dwellings and concluded European sites would not be negatively affected then a maximum of 41 net new dwellings within the NP area is unlikely to change that conclusion, particularly since the overall allowance will have been captured in the Local Plan considerations e.g. the Local Plan has already made an allowance for growth at Kings Somborne. In addition, for dismissing impacts on Salisbury Plain SAC the relevant habitat e.g. chalk grassland, is heavily rabbit grazed. The action of intensive rabbit grazing on chalk grassland will offset any negative effects of nitrogen deposition by removing the additional growth.

- 5.25** Furthermore, There are policies within the over-arching Local Plan with regards to protection of European sites and the NP must comply with this, to give the KSNP additional strength in terms of European site protection **it is recommended that a policy is added to confer this. For example, “Developments which could potentially adversely affect European sites (SAC/SPA/Ramsar) would not be supported unless it can be shown through Habitats Regulations Assessment that there are no adverse impacts to European sites or that they are adequately mitigated”**.
- 5.26** As the KSNP must comply with the overarching Adopted Local Plan and the KSNP is not allocating housing in addition to those allocated within the Local Plan and with the addition of the recommendation above, it can be concluded that the Kings Somborne NP will not contribute to an adverse effect on the integrity of any European site with regards to air quality either alone or in combination with other plans and projects.

## Water Resources and Water Quality

- 5.27** The three SAC's Emer Bog SAC, River Itchen SAC and The New Forest SAC and their designated habitats are all vulnerable to hydrological changes due to water abstraction. However, the quantum of development to be provided by the KSNP is in conformity with the overarching Local Plan (Test Valley Borough Council, 2011). This local plan has been subject to HRA that concluded no adverse effects on integrity, impact pathways relating to increased water demand and increased water treatment provided by the additional development that could result in an increase in water abstraction and increased effluent. This issue has therefore been addressed at a higher tier level within the Test Valley Local Plan.
- 5.28** That document includes a statement following an enquiry from the water supplier of the area, Southern Water, a Section 20 agreement is now in place between the Environment Agency and Southern water which is stated in the Water Resource Management Plan 2019<sup>7</sup> where *‘As soon as conditions become drier than normal, we will in the short term, have to impose temporary use bans and apply for Drought Orders to allow us to continue to abstract water below the conditions imposed in the new licences. Where Drought Orders are applied for, we will implement river restoration and habitat mitigation measures in potentially affected rivers in combination with Drought Orders.’* Within the Local Plan (Test Valley Borough Council, 2011) developments will be expected to also pace construction in line with improvements to Fullerton Wastewater Treatment Works (WwTW) where Policy E7 states *‘It will also be important to ensure the delivery of development is phased to take account of any ecological or capacity constraints, including environmental constraints for Wastewater Treatment Works. Development draining will be monitored in collaboration with the Environment Agency and Southern Water to ensure water quality objectives are not compromised.’* The KSNP must comply with the overarching adopted Local Plan, this agreement, following of new licences and monitoring within the Test Valley Local Plan will lead to Kings Somborne NP not causing an adverse impact upon the integrity of any European sites with regards to water resources.

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<sup>7</sup> [Appendix 7 Cover Sheet \(southernwater.co.uk\)](#) (Assessed 23/02/2022)

## Nutrient Neutrality

- 5.29 The high levels of nitrogen input to the water environment in the Solent catchment is generally currently caused by wastewater from existing housing and agricultural sources. There are a number of mechanisms already in place to reduce the amount of nutrient inputs within the river and lake catchments and coastal waterbodies. Within the Solent catchment both the Department for Environment, Food and Rural Affairs (DEFRA) and partnership funded Catchment Sensitive Farming (CSF) programmes work with agriculture to reduce diffuse agricultural sources of pollution such as fertiliser and slurry run-off. One of the aims of this work is to deliver environmental benefits from reducing diffuse water pollution. To achieve these goals the CSF partnership delivers practical solutions and targeted support which should enable farmers and land managers to take voluntary action to reduce diffuse water pollution from agriculture to protect water bodies and the environment.
- 5.30 Any new residential or employment development in Kings Somborne as a result of the Neighbourhood Plan has potential to result in increased levels of nutrients entering the Solent catchment zone. While the level of development in the NP is small (41 net new dwellings), this could operate ‘in combination’ with all other existing and future development connected to Kings Somborne WwTW.
- 5.31 Natural England advises that a nutrient budget (TN) can be calculated for new developments and has provided a guidance document to enable this to be calculated (Natural England, 2022). Such a calculation has been undertaken for this NP and is included in Appendix C. This can be used to show that development either avoids harm to protected sites from water quality issues or will need to provide mitigation required to ensure that there is no adverse effect with respect to nutrients. It will then be for the applicant to ensure that such mitigation is identified before their planning application is submitted.
- 5.32 Currently, Kings Somborne WwTW does not have a nitrogen Environmental Permit (mg/l TN). Therefore, an average figure for Southern Water WwTW of 27mg/l for nitrogen is used. This average figure may change if new evidence becomes available. Using this information, nutrient calculations for the allocation of 41 net new residential dwellings within the 4 allocated sites can provide indications of changes of nitrogen (full calculations can be seen in Appendix C). Table 5 shows a summary of the proposed development sites nutrient calculations. Appendix C includes screenshots of the full calculations. Note that calculations have also been produced for sites that have been considered for allocation but not ultimately taken forward. This has been done the future-proof the plan in the event that any allocated sites drop out of the plan and are replaced with the non-allocated sites in Appendix C.

**Table 5. Proposed Development Sites Nutrient Calculation Further Information**

Proposed Development Reference and Name	Number of New Dwellings	Further Information
SHELAA 148b – Land at Spencer’s Farm (South)	14	Calculations indicate that the development of the site will, without mitigation, lead to a Total Nitrogen Budget for the proposed development of 23.56 kg/yr when compared to the ‘no change’ in existing land use

		scenario. Therefore, the development will generate additional nitrogen and mitigation is required.
SHELAA 55 – Land East of Furzedown Road	10	Calculations indicate that the development of the site will, without mitigation, not lead to an increase in total annual nitrogen. Therefore, the development will be nitrogen neutral, and no mitigation will be required.
SHELAA 168 – Land East off Eldon Road	10	Calculations indicate that the development of the site will, without mitigation, not lead to an increase in total annual nitrogen. Therefore, the development will be nitrogen neutral, and no mitigation will be required.
KS3 – Land of Froghole Lane	7	Calculations indicate that the development of the site will, without mitigation, lead to a Total Nitrogen Budget for the proposed development of 24.56 kg/yr when compared to the ‘no change’ in existing land use scenario. Therefore, the development will generate additional nitrogen and mitigation is required.

5.33 The results of the above site nutrient calculations show that allocated sites SHELAA 148b and KS3 will generate additional nitrogen with current development plans.

5.34 Note that the calculations make a series of broad assumptions about a) the existing habitats on site (and thus the amount of phosphorus they currently release into the catchment) and b) how each site is to be developed (the areas to be altered) and thus the future balance between areas of housing and areas of retained greenspace. Therefore, the calculations undertaken for this report would need to be re-run by the applicants for each housing scheme and planning application as each scheme is developed and a detailed masterplan becomes available.

5.35 The following text is recommended for inclusion in the Neighbourhood Plan policy KS/H1 – Quantity of New Homes Needed:

***“The development will only be supported if it can achieve nutrient neutrality regarding the Solent Maritime, Solent & Southampton Water and the Solent and Dorset Coast European sites. Assuming the developer’s nutrient neutrality calculation confirms that mitigation is required, it is likely that some or all of the following may need to be undertaken.***

***If mitigation is required, the following should be explored:***

- ***Provide measures that will remove nitrogen draining from the development site or discharged by the WwTW (such as wetland or reedbed).***
- ***Increase the size of the Open Space provision for the development on agricultural land that removes more nitrogen from this source or***

***establish changes to agricultural land in the wider landholding in perpetuity that removes more nitrogen from this source.***

- ***Use Nutrient Neutrality – Off Site Mitigation Financial Contributions Framework<sup>8</sup> to help offset an increase in nitrogen off-site. Acquire, or support others in acquiring, agricultural land elsewhere within the river catchment area containing the development site (or the waste water treatment discharge if different), changing the land use in perpetuity (e.g. to woodland, heathland, saltmarsh, wetland or conservation grassland) to remove more nitrogen from this source and/or, if conditions are suitable, provide measures that will remove nitrogen on drainage pathways from land higher up the catchment (e.g. interception wetland)."***

5.36 Although the increase in net new dwellings within the KSNP area could act in combination with plans outside of the NP area. If the Section 20 agreement and licences between the Environment Agency and Southern water is adhered to, alongside recommended additional text for policy KS/H1 – Quantity of New Homes Needed, **the Kings Somborne NP will not cause an adverse effect upon the integrity of any European site either alone or in combination with other plans and projects in relation to water quality and nutrient neutrality.**

## 6. Conclusion

6.1 The Kings Somborne Neighbourhood Plan (KSNP) has a total of 16 policies. Of these policies 5 had the potential to cause a likely significant effect and were discussed with regards to their impacts upon European sites. These sites were;

- KS/H1 – Quantity of New Homes Needed - Sites are allocated in this NDP to accommodate around 41 new homes over the next 15 years;
- KS148b – Land at Spencer's Farm (South) - Site allocation for 14 dwellings, including affordable housing to be accessed from Eldon Road;
- SHELAA 55 – Land East of Furzedown Road - Site allocation for 10 dwellings, including affordable housing to be accessed from The Gorrings;
- SHELAA 168 – Land East off Eldon Road - Site allocation for 10 dwellings, including affordable housing to be accessed from Eldon Road;
- KS3 – Land of Frogghole Lane - Site allocation for 7 dwellings, including affordable housing to be accessed from Frogghole Lane.

6.2 The test of likely significant effects focused on the above policies with regards to the vulnerabilities of the European sites within Table 1. The impact pathways relating to the European site's vulnerabilities are listed below:

- Public access and recreational pressure
- Water quality and hydrological changes (including nutrient neutrality)

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<sup>8</sup> [Background \(testvalley.gov.uk\)](https://testvalley.gov.uk) (Assessed 25/02/2022)

- Air quality impacts of atmospheric nitrogen deposition
  - Loss of functionally linked habitats
- 6.3 The policies were found to have a potential likely significant effect upon the European sites within Table 1 with regards to the following impact pathways, air quality impacts of atmospheric nitrogen deposition and water quality and hydrological changes (including nutrient neutrality) in-combination with other plans and project. These pathways and the policies were discussed within the Appropriate Assessment.
- 6.4 The overarching Local Plan – Test Valley Local Plan 2011 (Test Valley Borough Council, 2011) was discussed to provide protective policies for European sites within Policy's E5 Biodiversity and E7 Water Management, and the HRA of this Plan was able to conclude that the Plan would not cause likely significant effects upon any European site either alone or in combination with other plans and projects. As the KSNP is not allocating net new dwellings above the level of the Adopted Local Plan and is required to comply with policies within the Local Plan it could be concluded that the KSNP would not adversely impact European sites either alone or in-combination with other plans and projects.
- 6.5 This HRA does however make a series of recommendations to strengthen the protection of the NP itself by adding a policy with regards to European site protection. Those recommendations (in bold throughout this document) would need including in the Neighbourhood Plan for it to contain a sufficient policy framework to ensure no adverse effect on integrity of European sites arises from the allocations in the plan.
- 6.6 Natural England were consulted on this report and its conclusions in May 2022 and confirmed on 30<sup>th</sup> May 2022 that they had no comments to make.

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# Appendix A European Sites Background

## New Forest SAC, SPA and Ramsar site

### Qualifying Features

The European Site is designated as an SPA for its populations of:

- Breeding European nightjar *Caprimulgus europaeus*
- Breeding Woodlark *Lullula arborea*
- Breeding Honey Buzzard *Pernis apivorus*
- Breeding Dartford Warbler *Sylvia undata*
- Non-breeding Hen Harrier *Circus cyaneus*
- Breeding Hobby *Falco subbuteo*
- Breeding Wood Warbler *Phylloscopus sibilatrix*

The European Site is designated as an SAC for its:

- Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*); for which this is one of only four known outstanding localities in the United Kingdom and which is considered to be rare, as its total extent in the United Kingdom is estimated to be less than 1,000 hectares.
- Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea; for which this is considered to be one of the best areas in the United Kingdom.
- Northern Atlantic wet heaths with *Erica tetralix*; for which this is considered to be one of the best areas in the United Kingdom.
- European dry heaths; for which this is considered to be one of the best areas in the United Kingdom.
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); for which this is considered to be one of the best areas in the United Kingdom.
- Transition mires and quaking bogs; for which the area is considered to support a significant presence.
- Depressions on peat substrates of the Rhynchosporion; for which this is considered to be one of the best areas in the United Kingdom.
- Alkaline fens; for which the area is considered to support a significant presence.

- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion roburipetraeae* or *Ilici-Fagenion*); for which this is considered to be one of the best areas in the United Kingdom.
- Asperulo-Fagetum beech forests; for which this is considered to be one of the best areas in the United Kingdom.
- Old acidophilous oak woods with *Quercus robur* on sandy plains; for which this is one of only four known outstanding localities in the United Kingdom.
- Bog woodland; which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1,000 hectares and for which this is considered to be one of the best areas in the United Kingdom.
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*); for which this is considered to be one of the best areas in the United Kingdom.
- Southern Damselfly *Coenagrion mercuriale*; for which this is considered to be one of the best areas in the United Kingdom.
- Stag beetle *Lucanus cervus*; for which this is one of only four known outstanding localities in the United Kingdom.
- Great crested newt *Triturus cristatus*; for which the area is considered to support a significant presence.

The European Site is designated as a Ramsar site under three criteria (1, 2 and 3):

- Criterion 1: Valley mires and wet heaths are found throughout the site and are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped states buffer the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain.
- Criterion 2: The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plants are found on the site, as are at least 65 British Red Data Book species of invertebrate.
- The higher plants *Cicendia filiformis*, *Illecebrum verticillatum* and *Myosurus minimus* are considered vulnerable by the GB Red Book; while *Mentha pulegium* and *Ranunculus tripartitus* are included as endangered and *Pulicaria vulgaris* as critically endangered. The Dark Guest Ant *Anergates atratulus* is also considered vulnerable by the IUCN Red List.
- Criterion 3: The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scarce wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England. The site contains a rich invertebrate fauna.

## Conservation Objectives

The Conservation Objectives for the New Forest SAC are:

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.

The Conservation Objectives for the New Forest SPA are:

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.

## Mottisfont Bats SAC

### Conservation Objectives<sup>9</sup>

With regard to the SAC and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contribute to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- The extent and distribution of the habitats of qualifying species

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<sup>9</sup> [European Site Conservation Objectives for Mottisfont Bats SAC - UK0030334 \(naturalengland.org.uk\)](#) (Assessed 23/02/2022)

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

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

The following features are reasons for designation as an SAC:

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

- Barbastelle bats (*Barbastella barbastellus*)

## Environmental Vulnerabilities<sup>11</sup>

The threats and pressures likely to affect the SPA, SAC and Ramsar are listed below:

- Feature location/ extent/ condition unknown
- Forestry and woodland management
- Offsite habitat availability/ management

## Emer Bog SAC

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

With regard to the SAC and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contribute to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of the qualifying natural habitat
- The structure and function (including typical species) of the qualifying natural habitat, and,
- The supporting processes on which the qualifying natural habitat rely

## Qualifying Features<sup>13</sup>

The following features are reasons for designation as an SAC:

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

- Transition mires and quaking bogs

<sup>10</sup> [Mottisfont Bats - Special Areas of Conservation \(jncc.gov.uk\)](https://jncc.gov.uk/mottisfont-bats-special-areas-of-conservation) (Assessed 23/02/2022)

<sup>11</sup> [European Site Conservation Objectives for Mottisfont Bats SAC - UK0030334 \(naturalengland.org.uk\)](https://naturalengland.org.uk/european-site-conservation-objectives-for-mottisfont-bats-sac-uk0030334) (Assessed 23/02/2022)

<sup>12</sup> [European Site Conservation Objectives for Emer Bog SAC - UK0030147 \(naturalengland.org.uk\)](https://naturalengland.org.uk/european-site-conservation-objectives-for-emer-bog-sac-uk0030147) (Assessed 23/02/2022)

<sup>13</sup> [Emer Bog - Special Areas of Conservation \(jncc.gov.uk\)](https://jncc.gov.uk/emerbog-special-areas-of-conservation) (Assessed 23/02/2022)

## Environmental Vulnerabilities<sup>14</sup>

The threats and pressures likely to affect the SAC are listed below:

- Public access / disturbance
- Hydrological changes
- Air pollution: impact of atmospheric nitrogen deposition

## River Itchen SAC

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

With regard to the SAC and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contribute 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.

### Qualifying Features<sup>16</sup>

The following features are reasons for designation as an SAC:

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

- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation

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

- Southern damselfly (*Coenagrion mercuriale*)
- Bullhead (*Cottus gobio*)

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

- White-clawed (or Atlantic stream) crayfish (*Austropotamobius pallipes*)
- Brook lamprey (*Lampetra planeri*)

<sup>14</sup> <http://publications.naturalengland.org.uk/publication/6367668705689600> (Assessed 23/02/2022)

<sup>15</sup> <http://publications.naturalengland.org.uk/publication/5130124110331904> (Assessed 23/02/2022)

<sup>16</sup> [River Itchen - Special Areas of Conservation \(jncc.gov.uk\)](http://river-itchen-jncc.gov.uk) (Assessed 23/02/2022)

- Atlantic salmon (*Salmo salar*)
- Otter (*Lutra lutra*)

## Environmental Vulnerabilities<sup>17</sup>

The threats and pressures likely to affect the SAC are listed below:

- Water pollution
- Physical modification
- Siltation
- Overgrazing
- Water abstraction
- Inappropriate weed control
- Hydrological changes
- Inappropriate water levels
- Change in land management
- Inappropriate cutting / mowing
- Invasive species
- Undergrazing
- Inappropriate ditch management
- Inappropriate scrub control
- Forestry and woodland management

## The New Forest SAC

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

With regard to the SAC and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contribute 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

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<sup>17</sup> [publications.naturalengland.org.uk/file/5665158219169792](https://publications.naturalengland.org.uk/file/5665158219169792) (Assessed 23/02/2022)

<sup>18</sup> [European Site Conservation Objectives for The New Forest SAC - UK0012557 \(naturalengland.org.uk\)](https://publications.naturalengland.org.uk/file/5665158219169792) (Assessed 23/02/2022)

- 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.

## Qualifying Features<sup>19</sup>

The following features are reasons for designation as an SAC:

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

- Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*
- Northern Atlantic wet heaths with *Erica tetralix*
- European dry heaths
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)
- Depressions on peat substrates of the *Rhynchosporion*
- Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)
- Asperulo-Fagetum beech forests
- Old acidophilous oak woods with Quercus robur on sandy plains
- Bog woodland
- Alluvial forests with *Alnus glutinosa* and Fraxinus excelsior (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)

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

- Transition mires and quaking bogs
- Alkaline fens

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

- Southern damselfly (*Coenagrion mercurial*)
- Stag beetle (*Lucanus cervus*)

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

- Great crested newts (*Triturus cristatus*)

<sup>19</sup> <https://sac.jncc.gov.uk/site/UK0012557> (Assessed 23/02/2022)

## Environmental Vulnerabilities<sup>20</sup>

The threats and pressures likely to affect the SAC are listed below:

- Drainage
- Inappropriate scrub control
- Fish stocking
- Deer
- Air pollution
- Public access/disturbance
- Change in land management
- Change in species distribution
- Water pollution
- Forestry and woodland management
- Inappropriate ditch management
- Invasive species
- Vehicles
- Inappropriate cutting/mowing
- Direct impact from 3rd party

## New Forest SPA and Ramsar

### Conservation Objectives<sup>21</sup>

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

### Qualifying Features

The following features are reasons for designation as an SPA

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<sup>20</sup> <http://publications.naturalengland.org.uk/publication/5174614971908096> (Assessed 23/02/2022)

<sup>21</sup> <http://publications.naturalengland.org.uk/file/4908493534658560> (Accessed 27/04/2022)

- European honey buzzard (*Pernis apivorus*)
- Hen harrier (*Circus cyaneus*)
- Eurasian hobby (*Falco subbuteo*)
- European nightjar (*Caprimulgus europaeus*)
- Woodlark (*Lullula arborea*)
- Dartford warbler (*Sylvia undata*)
- Wood warbler (*Phylloscopus sibilatrix*)

The following features are reasons for designation as a Ramsar<sup>22</sup>

### Criterion 1

- Valley mires and wet heaths are found throughout the site and are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain.

### Criterion 2

- The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plant are found on the site, as are at least 65 British Red Data Book species of invertebrate.

### Criterion 3

- The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scarce wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England.

## Environmental Vulnerabilities

The threats and pressures likely to affect the SPA are listed below:

- Drainage
- Inappropriate scrub control
- Fish stocking
- Deer
- Air pollution
- Public access/disturbance
- Change in land management
- Change in species distribution

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<sup>22</sup> [Information Sheet on Ramsar Wetlands - The New Forest \(jncc.gov.uk\)](#) (Accessed 27/04/22)

- Water pollution
- Forestry and woodland management
- Inappropriate ditch management
- Invasive species
- Vehicles
- Inappropriate cutting/mowing
- Direct impact from 3rd party

## Salisbury Plain SAC

### Conservation Objectives<sup>23</sup>

With regard to the SAC and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contribute 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.

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

The following features are reasons for designation as an SAC:

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

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

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

- Marsh fritillary butterfly (*Euphydryas aurinia*)

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<sup>23</sup> [European Site Conservation Objectives for Salisbury Plain SAC - UK0012683 \(naturalengland.org.uk\)](https://naturalengland.org.uk) (Assessed 23/02/2022)

<sup>24</sup> <https://sac.jncc.gov.uk/site/UK0012683> (Assessed 23/02/2022)

## Environmental Vulnerabilities<sup>25</sup>

The threats and pressures likely to affect the SAC are listed below:

- Change in species distributions
- Air pollution: risk of atmospheric nitrogen deposition

## Porton Down SPA

### Conservation Objectives<sup>26</sup>

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site

### Qualifying Features

The following features are reasons for designation as an SPA

- Stone-curlew (*Burhinus oedicnemus*)

## Environmental Vulnerabilities

The threats and pressures likely to affect the SPA are listed below:

- Population abundance
- Extent and distribution of supporting breeding habitat
- Predation
- Air quality
- Vegetation characteristics
- Food availability within supporting habitat
- Landscape
- Connectivity with supporting habitats
- Disturbance caused by human activity

<sup>25</sup> <http://publications.naturalengland.org.uk/publication/5384236060114944?category=23039> (Assessed 23/02/2022)

<sup>26</sup> [European Site Conservation Objectives for Porton Down SPA - UK9011101 \(naturalengland.org.uk\)](#) (Assessed 23/02/2022)

# Solent Maritime SAC

## Conservation Objectives<sup>27</sup>

With regard to the SAC and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contribute 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.

## Qualifying Features<sup>28</sup>

The following features are reasons for designation as an SAC:

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

- Estuaries
- Spartina swards (*Spartinion maritimae*)
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

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
- Mudflats and sandflats not covered by seawater at low tide
- Coastal lagoons \* Priority feature
- Annual vegetation of drift lines
- Perennial vegetation of stony banks
- Salicornia and other annuals colonizing mud and sand
- "Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")"

<sup>27</sup> <http://publications.naturalengland.org.uk/file/5336347464433664> (Assessed 14/03/2022)

<sup>28</sup> [Solent Maritime - Special Areas of Conservation \(jncc.gov.uk\)](http://www.jncc.gov.uk/publications/Solent_Maritime_-_Special_Areas_of_Conservation) (Assessed 14/03/2022)

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

- Desmoulin's whorl snail (*Vertigo moulinsiana*)

## Environmental Vulnerabilities<sup>29</sup>

The threats and pressures likely to affect the SAC are listed below:

- Public Access/Disturbance
- Coastal squeeze
- Fisheries: Commercial marine and estuarine
- Water Pollution
- Changes in species distributions
- Climate change
- Change to site conditions
- Invasive species
- Direct land take from development
- Biological Resource Use
- Change in land management
- Inappropriate pest Threat control
- Air Pollution: impact of atmospheric nitrogen deposition
- Hydrological changes
- Direct impact from 3rd Threat party
- Extraction: non-living resources

## Solent & Southampton Water SPA

### Conservation Objectives<sup>30</sup>

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely

<sup>29</sup> <http://publications.naturalengland.org.uk/file/5319610920337408> (Assessed 14/03/2022)

<sup>30</sup> <http://publications.naturalengland.org.uk/file/5932771361161216> (Assessed 14/03/2022)

- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

## Qualifying Features<sup>31</sup>

The following features are reasons for designation as an SPA:

- Dark-bellied brent goose (Non-breeding) *Branta bernicla bernicla*;
- Eurasian teal (Non-breeding) *Anas crecca*;
- Ringed plover (Non-breeding) *Charadrius hiaticula*;
- Black-tailed godwit (Non-breeding) *Limosa limosa islandica*;
- Mediterranean gull (Breeding) *Larus melanocephalus*;
- Sandwich tern (Breeding) *Sterna sandvicensis*;
- Roseate tern (Breeding) *Sterna dougallii*;
- Common tern (Breeding) *Sterna hirundo*;
- Little tern (Breeding) *Sterna albifrons*;

## Environmental Vulnerabilities<sup>32</sup>

The threats and pressures likely to affect the SPA are listed below:

- Public Access/Disturbance
- Coastal squeeze
- Fisheries: Commercial marine and estuarine
- Water Pollution
- Changes in species distributions
- Climate change
- Change to site conditions
- Invasive species
- Direct land take from development
- Biological Resource Use
- Change in land management
- Inappropriate pest Threat control
- Air Pollution: impact of atmospheric nitrogen deposition
- Hydrological changes
- Direct impact from 3rd Threat party
- Extraction: non-living resources

<sup>31</sup> <http://publications.naturalengland.org.uk/file/5932771361161216> (Assessed 14/03/2022)

<sup>32</sup> <http://publications.naturalengland.org.uk/file/5319610920337408> (Assessed 14/03/2022)

# Solent and Dorset Coast SPA

## Conservation Objectives<sup>33</sup>

With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change.

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

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

The following features are reasons for designation as an SPA:

- Sandwich tern (*Sterna sandvicensis*) Breeding
- Common tern (*Sterna hirundo*) Breeding
- Little tern (*Sternula albifrons*) Breeding

## Environmental Vulnerabilities<sup>35</sup>

The threats and pressures likely to affect the SPA are listed below:

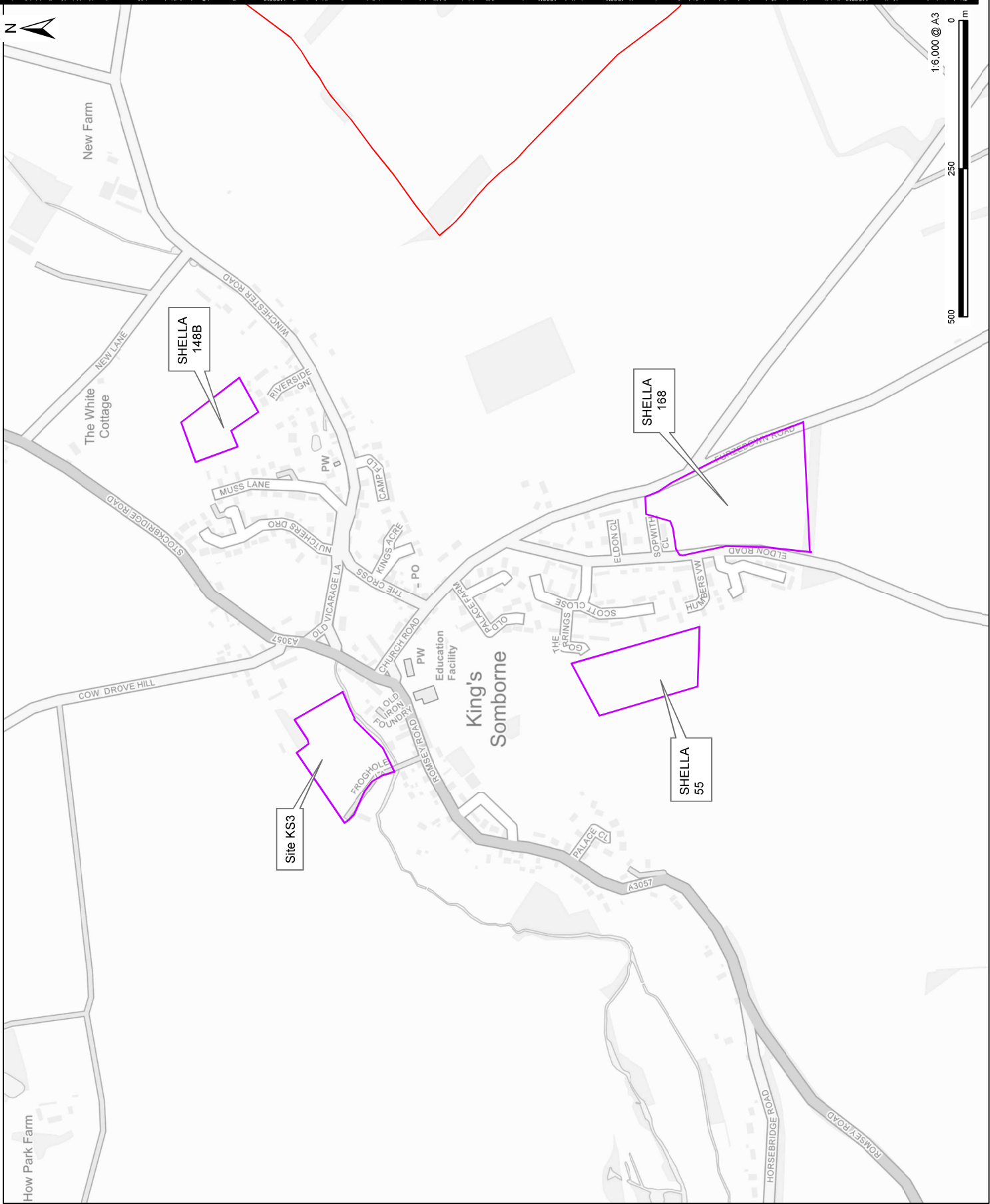
- Public Access/Disturbance
- Coastal squeeze
- Fisheries: Commercial marine and estuarine
- Water Pollution
- Changes in species distributions
- Climate change
- Change to site conditions
- Invasive species
- Direct land take from development
- Biological Resource Use
- Change in land management
- Inappropriate pest Threat control

<sup>33</sup> <http://publications.naturalengland.org.uk/file/6374193567629312> (Assessed 14/03/2022)

<sup>34</sup> <http://publications.naturalengland.org.uk/file/6374193567629312> (Assessed 14/03/2022)

<sup>35</sup> <http://publications.naturalengland.org.uk/file/5319610920337408> (Assessed 14/03/2022)

- Air Pollution: impact of atmospheric nitrogen deposition
- Hydrological changes
- Direct impact from 3rd Threat party
- Extraction: non-living resources



# Appendix B Policy Screening

**Table 6. Kings Somborne Neighbourhood Plan Policy Screening**

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
KS/E1 - Preserving Landscape Features, Views and Surrounding Farmland	This policy relates to the type and size of major applications that would be supported	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathways.
KS/E2 - Horsebridge to King's Somborne Local Gap	This policy relates to preserving the separate identities of King's Somborne and Horsebridge the land between is identified as a local gap.	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathways.
KS/E3 – Local Green Space	This policy lists the ten areas of Local Green Space	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathway.
KS/E4 - Archaeology	This policy explains appropriate archaeological investigation where proposals could affect sites of archaeological interest	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathway.
KS/E5 – Flooding and Water Management	This policy outlines strategies to manage water and flooding during new developments and with Flood Risk Assessments	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathway.
KS/E6 - Biodiversity	This policy supports development that conserves, restores, and enhances biodiversity. Development likely to result in the loss, deterioration, or harm to habitats / species of importance of geological interest will not be permitted unless it meets a range of criteria.	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathway.
KS/E7 – The River Network	This policy outlines features of Somborne Steam, Park Stream, River Test and the River Test, that if adversely affected will not enable development.	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathway.
KS/H1 – Quantity of New Homes Needed	Sites are allocated in this NDP to accommodate around 41 new homes over the next 15 years.	Potential likely significant effects.  The policy allocates 4 sites with 41 new homes. This is a net increase in dwellings and will need to be discussed further within the body of the report.

Policy Name	Brief Policy Description	Potential Likely Significant Effect?
KS/H2 – Housing Mix	This policy relates to all new residential developments providing a mixed size of properties.	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathways.
KS148b – Land at Spencer's Farm (South)	Site allocation for 14 dwellings, including affordable housing to be accessed from Eldon Road	Potential likely significant effects.  The policy allocates 14 new homes. This is a net increase in dwellings and will need to be discussed further within the body of the report.
SHELAA 55 – Land East of Furzedown Road	Site allocation for 10 dwellings, including affordable housing to be accessed from The Gorrings	Potential likely significant effects.  The policy allocates 10 new homes. This is a net increase in dwellings and will need to be discussed further within the body of the report.
SHELAA 168 – Land East off Eldon Road	Site allocation for 10 dwellings, including affordable housing to be accessed from Eldon Road	Potential likely significant effects.  The policy allocates 10 new homes. This is a net increase in dwellings and will need to be discussed further within the body of the report.
KS3 – Land of Froghole Lane	Site allocation for 7 dwellings, including affordable housing to be accessed from Froghole Lane	Potential likely significant effects.  The policy allocates 7 new homes. This is a net increase in dwellings and will need to be discussed further within the body of the report.
KS/H8 - Design	This policy relates to the aim for new buildings to fit comfortably, respecting the character and scale of local buildings.	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathways.
KS/F1 – Community Assets	This policy states planning permission for proposals that support and safeguard the future of the community facilities identified above will be supported.	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathways.
KS/F2 - Utilities	This policy relates to services of all new developments shall be routed underground where possible so as not to perpetuate the impact on the street scene and reliability	No likely significant effects.  The policy is a development management policy and does not have any linking impact pathways.

# Appendix C Neutrality Calculations

## Approved Sites

### SHELAA 168

Stage 1

User Inputs

Date of first occupancy:	
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	10
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Kings Somborne WwTW
Wastewater treatment works N permit (mg TN/litre):	25

Stage 1 Calculated Loading

Stage 1 Nutrient Loading		
Additional population	24	people
Wastewater by development	2880	litres/day
Annual wastewater TN load	26.30	kg TN/yr

Stage 2

User Inputs

Catchment:	Upper and Middle Test
Soil drainage type:	Freely draining
Annual average rainfall (mm):	800.1 - 850
Within Nitrate Vulnerable Zone	Yes

Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Greenspace	0.26	0.78
Cereals	3.80	106.14
Total:	4.06	106.92

### Stage 3

User Inputs		
New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.25	3.84
Greenspace	3.81	11.43
Please enter area in hectares.		
Total:	4.06	15.27

### Stage 4

Calculated Outputs	
Annual Nutrient Budget	
The total annual nitrogen load to mitigate is:	0 kg TN/year

Development will be nitrogen neutral – no mitigation required

**SHELAA 148b****Stage 1****User Inputs**

<b>Date of first occupancy:</b>	
<b>Average occupancy rate:</b>	2.40
<b>Water usage (litres/person/day):</b>	120
<b>Development Proposal (dwellings/units):</b>	14
<b>Include deductible acceptable loading?</b>	Yes
<b>Wastewater treatment works:</b>	Kings Somborne WwTW
<b>Wastewater treatment works N permit (mg TN/litre):</b>	25

**Stage 1 Calculated Loading**

## Stage 1 Nutrient Loading

Additional population	33.6	people
Wastewater by development	4032	litres/day
<b>Annual wastewater TN load</b>	<b>36.82</b>	<b>kg TN/yr</b>

**Stage 2****User Inputs**

<b>Catchment:</b>	Upper and Middle Test
<b>Soil drainage type:</b>	Freely draining
<b>Annual average rainfall (mm):</b>	750.1-800
<b>Within Nitrate Vulnerable Zone</b>	Yes

Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Cereals	0.85	23.74
Please enter area in hectares.		
<b>Total:</b>	<b>0.85</b>	<b>23.74</b>

## Stage 3

### User Inputs

New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.35	5.06
Greenspace	0.50	1.50
Total:		0.85
		6.56

Please enter area in hectares.

## Stage 4

### Calculated Outputs

#### Annual Nutrient Budget

The total annual nitrogen load to mitigate is:

23.56 kg TN/year

Development will generate additional nitrogen – mitigation is required.

## SHELAA 55

## Stage 1

## User Inputs

Date of first occupancy:	
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	10
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Kings Somborne WwTW
Wastewater treatment works N permit (mg TN/litre):	25

## Stage 1 Calculated Loading

## Stage 1 Nutrient Loading

Additional population	24	people
Wastewater by development	2880	litres/day
Annual wastewater TN load	26.30	kg TN/yr

## Stage 2

## User Inputs

Catchment:	Upper and Middle Test	
Soil drainage type:	Freely draining	
Annual average rainfall (mm):	750.1 – 800	
Within Nitrate Vulnerable Zone	Yes	
Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Cereals	3.50	97.76
<div>Please enter area in hectares.</div>		
Total:	3.5	97.76

### Stage 3

#### User Inputs

New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.25	3.61
Greenspace	3.25	9.75
Total:		3.5
		13.36

Please enter area in hectares.

### Stage 4

#### Calculated Outputs

##### Annual Nutrient Budget

The total annual nitrogen load to mitigate is:

0 kg TN/year

Development will be nitrogen neutral – no mitigation required

## KS3

## Stage 1

## User Inputs

Date of first occupancy:	
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	7
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Kings Somborne WwTW
Wastewater treatment works N permit (mg TN/litre):	25

## Stage 1 Calculated Loading

## Stage 1 Nutrient Loading

Additional population	16.8	people
Wastewater by development	2016	litres/day
Annual wastewater TN load	18.41	kg TN/yr

## Stage 2

## User Inputs

Catchment:	Upper and Middle Test
Soil drainage type:	Freely draining
Annual average rainfall (mm):	750.1 - 800
Within Nitrate Vulnerable Zone	Yes

Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Greenspace	1.75	5.25
Please enter area in hectares.		
Total:	1.75	5.25

## Stage 3

### User Inputs

New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.18	2.60
Greenspace	1.57	4.71
Total:		7.31

Please enter area in hectares.

## Stage 4

### Calculated Outputs

#### Annual Nutrient Budget

The total annual nitrogen load to mitigate is:

24.56 kg TN/year

Development will generate additional nitrogen – mitigation is required.

Non-approved sites

SHELAA 186/79

Stage 1

User Inputs

Date of first occupancy:	
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	18
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Kings Somborne WwTW
Wastewater treatment works N permit (mg TN/litre):	25

Stage 1 Calculated Loading

Stage 1 Nutrient Loading

Additional population	43.2	people
Wastewater by development	5184	litres/day
Annual wastewater TN load	47.34	kg TN/yr

Stage 2

User Inputs

Catchment:	Upper and Middle Test	
Soil drainage type:	Freely draining	
Annual average rainfall (mm):	750.1 - 800	
Within Nitrate Vulnerable Zone	Yes	

Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Community food growing	0.58	8.97
Please enter area in hectares.		
Total:	0.58	8.97

### Stage 3

#### User Inputs

New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.45	6.50
Greenspace	0.13	0.39
<b>Total:</b>		<b>0.58</b>
		<b>6.89</b>

Please enter area in hectares.

### Stage 4

#### Calculated Outputs

##### Annual Nutrient Budget

The total annual nitrogen load to mitigate is:

**54.31 kg TN/year**

Development will generate additional nitrogen – mitigation is required.

## SHELAA 80

## Stage 1

## User Inputs

Date of first occupancy:	
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	11
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Kings Somborne WwTW
Wastewater treatment works N permit (mg TN/litre):	25

## Stage 1 Calculated Loading

## Stage 1 Nutrient Loading

Additional population	26.4	people
Wastewater by development	3168	litres/day
Annual wastewater TN load	28.93	kg TN/yr

## Stage 2

## User Inputs

Catchment:	Upper and Middle Test
Soil drainage type:	Freely draining
Annual average rainfall (mm):	750.1 - 800
Within Nitrate Vulnerable Zone	Yes

Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Greenspace	1.00	3.00
Woodland	0.10	0.30
Total:		1.1
		3.30

Please enter area in hectares.

### Stage 3

#### User Inputs

New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.28	4.04
Greenspace	0.82	2.46
<b>Total:</b>		<b>1.1</b>
		<b>6.50</b>

Please enter area in hectares.

### Stage 4

#### Calculated Outputs

##### Annual Nutrient Budget

The total annual nitrogen load to mitigate is:

**38.56 kg TN/year**

Development will generate additional nitrogen – mitigation is required.

## KS1

## Stage 1

## User Inputs

Date of first occupancy:	
Average occupancy rate:	2.40
Water usage (litres/person/day):	120
Development Proposal (dwellings/units):	4
Include deductible acceptable loading?	Yes
Wastewater treatment works:	Kings Somborne WwTW
Wastewater treatment works N permit (mg TN/litre):	25

## Stage 1 Calculated Loading

## Stage 1 Nutrient Loading

Additional population	9.6	people
Wastewater by development	1152	litres/day
Annual wastewater TN load	10.52	kg TN/yr

## Stage 2

## User Inputs

Catchment:	Upper and Middle Test
Soil drainage type:	Freely draining
Annual average rainfall (mm):	750.1 - 800
Within Nitrate Vulnerable Zone	Yes

Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.01	0.14
Greenspace	0.37	1.11
Woodland	0.10	0.30
Please enter area in hectares.		
Total:	0.48	1.55

## Stage 3

### User Inputs

New land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Residential urban land	0.10	1.44
Greenspace	0.38	1.14
Total:		0.48
		2.58

Please enter area in hectares.

## Stage 4

### Calculated Outputs

#### Annual Nutrient Budget

The total annual nitrogen load to mitigate is:

13.86 kg TN/year

Development will generate additional nitrogen – mitigation is required.

# Appendix D Consideration of non-allocated Sites

## Introduction

7.1 As well as the selected sites KS3, SHELAA 55, SHELAA 148b and SHELAA 168 it has been advised to include the following non-allocated Sites for consideration:

- KS1 - This is due to the fact access to KS3 will be via this site.
- SHELAA 186/79 - Whilst there is no intention to develop these sites, developers are fairly determined and extremely active with applications in relation to these sites.
- SHELAA 80 - This site came close to being nominated rather than KS3.

## Recreational pressure

7.2 Recreational pressure stemming from non-allocated sites within the KSNP, is likely to have the same impact on designated sites, as the sites that have been selected for development. The KSNP is therefore unlikely to act upon Emer Bog SAC, The New Forest SAC and Porton Down SPA alone and in combination. Given that the closest designated site (Emer Bog SAC) is 6.2 km from KSNP with the other two being over 9km, as well as the number of proposed developments being small, the KSNP featuring non-allocated sites is unlikely to have a significant effect on increasing recreational pressure, as stated in sections of Chapter 5 of this report. **Therefore, the Kings Somborne NP will not cause a likely significant effect upon the European sites either alone or in combination with other plans and projects and can be screened out.**

## Functionally Linked Land

7.3 The areas of non-allocated land are predominantly located within the town centre adjacent to already existing built up areas. Barbastelle bats generally forage within the woodland in which their roost tree is located until light levels fall. At this stage, they fly beyond the woodland to the wider countryside to forage in more open habitats like wood pasture, parklands, wetlands, over herb-rich meadows and alongside hedgerows and tree lines (Bat Conservation Trust, 2022). The non-allocated site areas neither fit this description nor would inhibit flyways related to these significant habitats. Given this information on foraging suitability and the habitat type of the non-allocated sites, it is considered unlikely that the location of the non-allocated sites would be considered functionally linked to the Mottisfont Bats SAC. Therefore, **The Kings Somborne NP would not cause any likely significant effects either alone or in combination with other plans or projects and could be screened out.**

## Air Pollution

7.4 The areas of non-allocated land would result in the same number of new dwellings at the same distance from European sites as the allocated land, resulting in the same zone of influence and associated impacts including similar increased use of roads. With these similarities, the same guidance can be used

for the non-allocated sites. Therefore, while the KSNP follows guidance set out by Test Valley Local Plan (2011 - 2029) and the New Forest Interim Mitigation Framework 2014, the Kings Somborne NP will not cause a likely significant effect upon the European sites either alone or in combination with other plans and projects and can be screened out

## Water Resources and Water Quality

**Table 7. Non-allocated Development Sites Nutrient Calculation Further Information**

Proposed Development Reference and Name	Number of New Dwellings	Further Information
KS1	4	Calculations indicate that the development of the site will, without mitigation, lead to a Total Nitrogen Budget for the proposed development of 13.86 kg/yr when compared to the 'no change' in existing land use scenario. Therefore, the development will generate additional nitrogen and mitigation is required.
SHELAA 186/79	18	Calculations indicate that the development of the site will, without mitigation, lead to a Total Nitrogen Budget for the proposed development of 54.31 kg/yr when compared to the 'no change' in existing land use scenario. Therefore, the development will generate additional nitrogen and mitigation is required.
SHELAA 80	11	Calculations indicate that the development of the site will, without mitigation, lead to a Total Nitrogen Budget for the proposed development of 38.56 kg/yr when compared to the 'no change' in existing land use scenario. Therefore, the development will generate additional nitrogen and mitigation is required.

7.5 With all currently non-allocated development sites requiring mitigation requirement, the text written in 5.35 above is recommended for inclusion in the Neighbourhood Plan policy KS/H1 – Quantity of New Homes Needed.

7.6 The total number of potential new dwellings within the NP is small, alongside the increase net new dwellings being 6.2km from the closest SAC, it is therefore unlikely to cause an impact on any site alone. The increase in net new dwellings within the KSNP area could act in combination with an increase in net new dwellings outside of the NP area. However, if the Section 20 agreement and licences between the Environment Agency and Southern water is adhered to

alongside recommended additional text for policy KS/H1 – Quantity of New Homes Needed, **the Kings Somborne NP will not cause a likely significant effect upon the European sites either alone or in combination with other plans and projects and can be screened out.**

