South Downs
National Park Authority

Biodiversity Background Paper

South Downs Local Plan

October 2017

CONTENTS

1. INTRODUCTION

Key policies covered:

- **Policy SD9:** Biodiversity and Geodiversity
- **Policy SD10:** International Sites
- **Policy SD11:** Trees, Woodland and Hedgerows

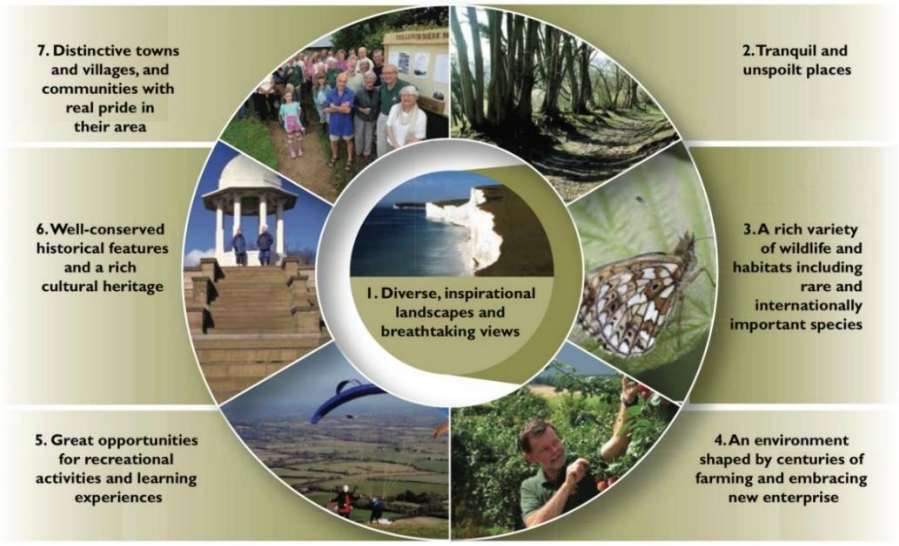
1.1 This paper outlines the basis upon which Policies SD9 to SD11 in the sub-section 'Biodiversity' of the Local Plan have been formulated. It explains the context behind why these policies are necessary to ensure that the purposes and duty of the National Park are met, briefly summarises national policy, and outlines the key evidence base studies which have fed into the policy. This paper also sets out the key findings of the Habitat Regulations Assessments that have been prepared iteratively to support the preparation of the emerging Local Plan. Appendix 1 lists all the international, national and local nature conservation designation sites in the South Downs National Park.

2. PURPOSES AND DUTY AND SPECIAL QUALITIES TO WHICH THE POLICY RELATES

2.1 Biodiversity is the range and richness of habitats and species. It is a vital component of the natural capital (the stock of natural resources) of the National Park and performs essential ecosystem services (the services that nature provides), for example pollination. Biodiversity is a core part of the purposes, and special qualities of the National Park. The South Downs was designated as a national park in recognition that the landscape is of national importance; the biodiversity of the National Park such as its iconic chalk grassland and woodlands of the Weald are fundamental to the character of the South Downs landscape.

2.2 Biodiversity is specifically identified in the special qualities of the National Park (3) as shown in Figure 1 below. Biodiversity is also important for many of the other special qualities. For example, the quality of the biodiversity in the National Park is central to the learning and recreation opportunities of the National Park (5), and are an important part of the tranquillity and unspoilt places of the National Park (2).

FIGURE 1: THE SPECIAL QUALITIES OF THE SOUTH DOWNS NATIONAL PARK



3. NATIONAL POLICY AND GUIDANCE

Natural Environment and Rural Communities (NERC) Act (2006)

3.1 Section 40 of NERC Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'. This includes carrying out the planning policy and development management processes.

Lawton Review

3.2 The Lawton Review[1] concluded that establishing a coherent and resilient ecological network would effectively conserve biodiversity and ecosystem services, delivering many benefits to people, while also making efficient use of scarce land and resources.

3.3 The review made 24 recommendations, but summarised what needed to be done in just four words: 'more, bigger, better and joined' by doing the following:

- Improving the quality of current wildlife sites by better habitat management.
- Increasing the size of existing wildlife sites.
- Enhancing connections between sites, either through physical corridors or through 'stepping stones'.
- Creating new sites.
- Reducing the pressure on wildlife by improving the wider environment.

[1] Making Space for Nature: A Review of England's Wildlife Sites and Ecological Network *(*Sir John Lawton, 2010*)*

Natural Environment White Paper for England

3.4 The *Natural Environment White Paper for England* (NEWP) (2011) highlights that nature is often taken for granted and undervalued, but that people cannot do without the benefits and services it provides, and advocates a landscape-scale approach to conservation. The *Water Framework Directive* (2000) supports this call for a landscape-scale approach to the conservation of wildlife and habitats.

Biodiversity 2020

3.5 A biodiversity strategy for England, published in 2011 (Biodiversity 2020) builds on the NEWP and sets out the strategic direction for policy in the next ten years. The overall mission for this strategy is to halt overall biodiversity loss, support healthy, well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people, and safeguarding ecosystem services for people and wildlife. The strategy sets out a number of outcomes which are delivered through action in four areas: a more integrated large-scale approach to conservation on land and at sea, putting people at the heart of biodiversity policy, reducing environmental pressures and improving our knowledge. It provides detail on how this should be accomplished which is cited by the National Planning Practice Guidance. Another priority action in Biodiversity 2020 is to bring a greater proportion of our existing woodlands into sustainable management and expand the area of woodland in England. Recognition of the value and importance of our woodland assets, including urban trees, has been emphasised in government policy on trees and forestry[2].

National Parks Vision and Circular

3.6 Biodiversity is at the heart of the vision for English National Parks:

Wildlife flourishes and habitats are maintained, restored and expanded and linked effectively to other ecological networks. Woodland cover has increased and all woodlands are sustainably managed, with the right trees in the right places. Landscapes and habitats are managed to create resilience and enable adaptation.

3.7 The Vision and Circular states that biodiversity must be valued, safeguarded and enhanced. The authorities should ensure that biodiversity is protected and encouraged through proactive, sympathetic management both within recognised protected areas and in the wider landscape. Generally speaking, habitats are less fragmented in the parks then elsewhere and the authorities have an important role in helping to deliver habitat restoration and expansion at a landscape scale, especially against the backdrop of a changing climate.

3.8 The National Parks Vision and Circular states that woodlands should be managed to increase their contribution to climate change mitigation through carbon sequestration or the production of wood fuel and construction timber, and that the NPA should work in partnership to improve woodland management and increase woodland cover, contributing to a step change in planting rates in England. It requires recognition of environmental trends resulting from climate change and provision for natural systems, habitats and species to adjust to this; and a strategic framework for the protection, restoration and creation of priority habitats.

[2] DEFRA (2013) Government Forestry and Woodlands Policy Statement

National Planning Policy Framework

3.9 The NPPF requires planning policy to minimise the impacts of development on biodiversity and geodiversity. It refers to the need to plan for biodiversity at a landscape-scale across local authority boundaries, identifying the local ecological network and promoting the preservation, restoration and re-creation of priority habitats, ecological networks and the recovery of priority species population, linked to national and local targets. Therefore, it is important that the Local Plan enables and ensures that development contributes positively to the conservation and enhancement of biodiversity and geodiversity.

- Paragraph 115 of the NPPF states that: "The conservation of wildlife and cultural heritage are important considerations in all (protected) areas, and should be given great weight in National Parks and the Broads."
- Paragraph 117 states that planning policies should plan for biodiversity at a landscape-scale across local authority boundaries and identify and map components of local ecological networks.
- Paragraph 118 states that planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for and benefits of the development in that location clearly outweigh the loss.

NERC

3.10 Natural England's Climate Change Adaptation Manual (2014) recommends increased protection for veteran trees, the retention of buffer zones around woodland and hedgerows, and new tree and hedge planting to improve size, diversity and connections between woodlands

4. SUMMARY OF KEY LOCAL CONTEXT AND EVIDENCE

NATURE CONSERVATION DESIGNATIONS IN THE SOUTH DOWNS NATIONAL PARK

International Sites

4.1 There are many sites of international nature conservation importance in or nearby to the National Park. These are protected under European Directives (Special Areas of Conservation (SAC) and Special Protection Areas (SPA)) or Global Agreements (Ramsar sites).

4.2 The international nature conservations designations in the National Park are set out in Table 1. There are 13 SACs designated in the National Park, two of which are also designated as SPAs for their international importance for birds: the Arun Valley SPA and the Wealden Heaths. The Arun Valley is also designated as a Ramsar site as a wetland of global importance for its wintering waterfowl, breeding waders, rare wetland invertebrates and scarce plants.

4.3 All SACs and SPAs in the National Park are also designated as Sites of Special Scientific Interest, a national nature conservation designation. Appendix 1 lists all the nature conservation sites and highlights those SSSI's that are also subject to international nature conservation designations.

TABLE 1: INTERNATIONAL DESIGNATIONS IN THE SOUTH DOWNS NATIONAL PARK

International site name	Designation	Relevance to the Habitats Regulations Assessment
Arun Valley	SAC/SPA/Ramsar	Riverine
Buster Hill	SAC	Calcareous grassland
Castle Hill	SAC	Calcareous grassland
Duncton to Bignor Escarpment	SAC	Woodland
East Hampshire Hangers	SAC	Woodland
Ebernoe Common	SAC	Bats
Kingley Vale	SAC	Woodland
Lewes Downs	SAC	Calcareous grassland
The Mens	SAC	Bats
River Itchen	SAC	Riverine
Rook Clift	SAC	Woodland
Shortheath Common	SAC	Heathland/bog
Singleton and Cocking Tunnels	SAC	Bats
Wealden Heaths Phase II/ Woolmer Forest	SPA/ SAC	Heathland birds/ Heathland bog

4.4 In addition to the SPAs within the National Park, a very small area of the National Park is located within the zone of influence of the Solent Special Protection Area which includes Chichester & Langstone Harbours SPA, Portsmouth Harbour SPA, and Solent & Southampton Water SPA as identified in the Solent Recreation Mitigation Strategy (SRMS).

National Sites

4.5 There are three types of national nature conservation designation in the National Park: National Nature Reserves (NNR), Sites of Special Scientific Importance (SSSI) and Marine Conservation Zone (MCZ).

4.6 There are nine National Nature Reserves within the National Park, which are sites of national importance for their biodiversity value. Details of the NNRs are set out in appendix 1. Examples include Castle Hill NNR near Brighton, an outstanding area of chalk downland, and Kingley Vale NBNR, one of Europe's finest yew forests. All these are also designated as SSSIs.

4.7 In total there are 86 SSSIs, covering 6% of the National Park, and 10 of which are designated for their geological importance. Details of each SSSI are set out in appendix 1.

4.8 Beachy Head is the only MCZ within the National Park. Just over 7% of the total area of the MCZ falls within the National Park.

Local Sites

4.9 There are 3 main types of local nature conservation in the National Park: Local Wildlife Sites (which include Sites of Importance for Nature Conservation (SINCs) and Sites of Nature Conservation Importance (SNCIs)), Local Nature Reserves (LNRs) and Regional Important Geological Sites (RIGS). Further details of these are set out in the appendix.

4.10 There are 874 LWS across the National Park. This figure will change as LWS sites are regularly reviewed and some are de-designated or new ones identified.

4.11 There are also 25 Local Nature Reserves and 50 RIGS.

PROTECTED TREES

4.12 The South Downs National Park is one of the most wooded national parks in the country. The trees and woodlands of the National Park are important features of the landscape character and the character of the towns and villages within the National Park. They are a key part of the natural capital of the National Park and provide important ecosystem services such as air purification and carbon storage. Many of the trees and woodlands are subject to designations. Individual or small groups of trees may be subject to Tree Preservation Orders. Areas of woodland which have been in continuous existence since 1600AD or before may be designated as Ancient Woodland. The continual and relatively undisturbed nature of ancient woodland means that they have often developed irreplaceable complex ecosystems and are home to rare and endangered species. In all 23% of the National Park is covered by woodland, half of which (approximately 17,000ha) is designated as ancient woodland.

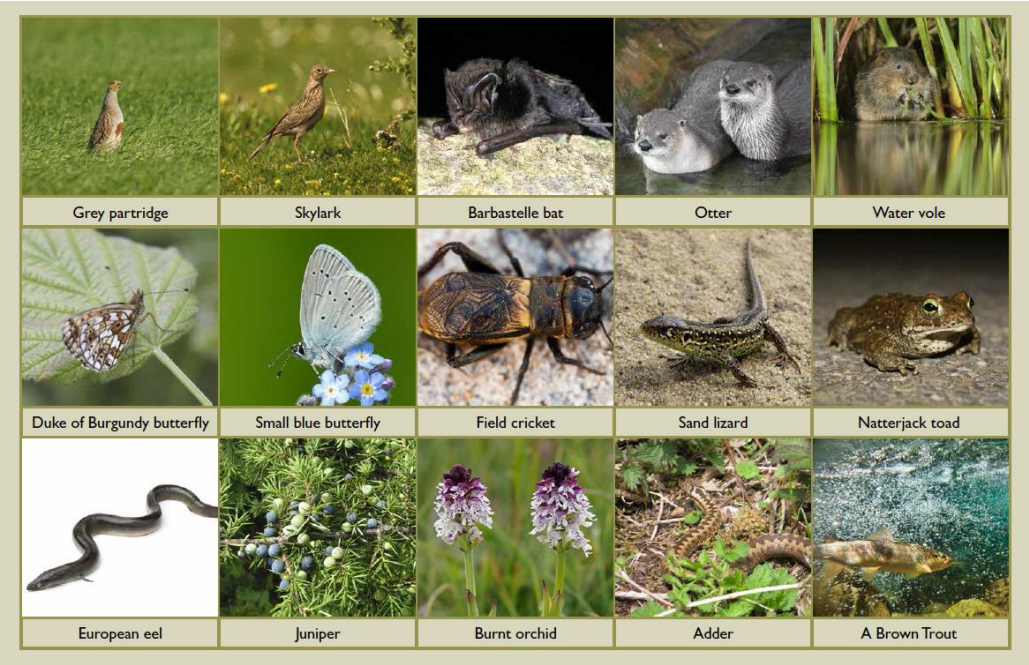
RARE, PROTECTED AND PRIORITY SPECIES

4.13 The National Park supports a wealth of wildlife including iconic species such as burnt orchid, round-headed rampion, otter, skylark, barn owl and brown trout. It is also home to less well-known species such as the barbastelle bat and sundew (a carnivorous plant). Many of the species found in the National Park are rare and localised, for example, the greater mouse-eared bat.

4.14 Some species have special protection under UK Law. This is usually because of their vulnerable conservation status. Legally protected species which are prominent in the National Park include (but are not restricted to) all native species of bat, swallow, house martin, swift, starling, barn owl, great crested newt and badger and, in rivers, water vole, brown trout, river lamprey and European eel. The National Park is also an important refuge for a number of species that are declining in the rest of the UK and in Europe. Two-hundred-and-sixty-five species identified as being of national priority (listed under Section 41 of the NERC Act) have been recorded in the National Park within the past 5 years, along with 21 European Protected Species (EPS). Figure 2 shows examples of some of these priority species.

4.15 Rare species are often restricted to habitats which are also rare, for example, the bearded tooth fungus is a national priority species which is restricted to ancient woodland and woodpasture. The success of many rare, protected or priority species is a valuable indicator of the health of their habitat. Monitoring these species therefore can also serve as a proxy for understanding the condition of habitats across the National Park.

FIGURE 2: EXAMPLES OF PRIORITY SPECIES AS SHOWN IN THE PARTNERSHIP MANAGEMENT PLAN



NON-DESIGNATED NATURE CONSERVATION ASSETS AND LANDSCAPE SCALE NATURE CONSERVATION

4.16 The National Park contains numerous biodiversity assets which are not designated, but which form an important element of the total natural capital of the National Park. These assets form vital parts of the network of habitats of the National Park and form part of the green infrastructure of the National Park.

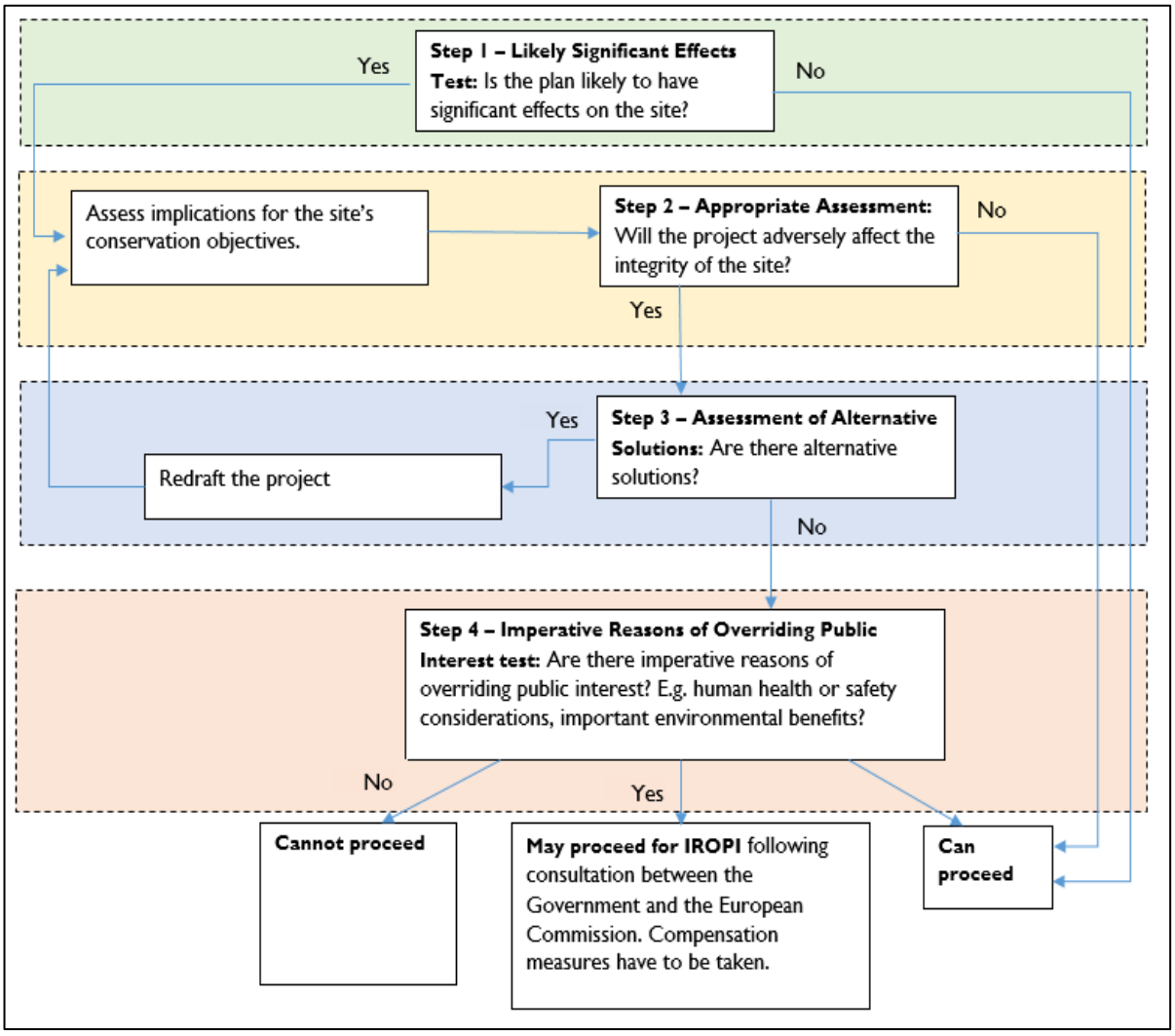
4.17 In 2008, a wide consultation was held in South East England to develop a landscape-scale approach to conservation by identifying 'Biodiversity Opportunity Areas' (BOAs). Nearly half (46%) of the National Park is covered by BOAs. There are a large number of other biodiversity-led landscape initiatives being delivered and developed in the National Park, including areas of designated and undesignated land. Examples of these are:

- The South Downs Way Ahead Nature Improvement Area (NIA) (chalk grassland)
- Arun and Rother Connections (wetland)
- Heathlands Reunited (heathland)
- West Weald Landscape Partnership (woodland and farmland)
- Local Nature Partnerships (LNPs) for Hampshire and Sussex
- The South Downs Forestry and Woodland Partnership
- The Brighton and Lewes Biosphere Reserve Partnership (chalk downland and water)
- Local Rivers Trusts; and
- Water Framework Directive projects (such as the rivers Adur and Ouse).

HABITATS REGULATIONS ASSESSMENT

4.18 Development may have the potential to affect sites of international nature conservation value within and beyond the National Park's boundaries. Under the Conservation of Habitats and Species Regulations 2010 (as amended) the Authority has a duty to give these areas the strongest protection. The Habitats Regulations Assessment (HRA) Report looks at the impacts of the Local Plan on sites of International nature conservation importance. Details of the HRA process can be found in section 2.3 of the Pre-Submission HRA Report and the key steps of HRA for development plans are set out in figure 3 below.

FIGURE 3: SUMMARY OF HRA PROCESS FOR DEVELOPMENT PLANS



4.19 An HRA report was prepared for the Preferred Options (2015) and the Pre-Submission (2017) versions of the emerging South Downs Local Plan. HRA was not undertaken for the Options consultation (2014) as it did not include any policies or allocations which could be assessed.

4.20 The HRA Report of the Preferred Options South Downs Local Plan was able to conclude that, subject to some minor changes to the Local Plan, there were not likely to be significant effects on European sites (step 1 of figure 3 above), and therefore further assessment work would not be required.

4.21 Subsequent to the Preferred Options consultation, in the preparation of the HRA Report for the Pre-Submission South Downs Local Plan, it was not possible for the HRA for the Pre-Submission Local Plan to screen out likely significant effects with regard to air quality. This was due to necessary changes in the methodology for assessing impacts of changes in traffic movements on air quality and consequent impacts on European sites arising from the recent High Court Judgement[3]. It was therefore necessary to undertake an 'Appropriate Assessment' (AA) (step 2 of figure 3 above). AA is undertaken when likely significant effects cannot be ruled out to determine if there would be adverse effects upon the integrity of European sites. It should set out and analyse sufficient information to allow the competent authority[4] to ascertain whether the plan *will not* adversely affect the site's integrity. It should therefore be proportionate and appropriate to the nature and scale of the plan, the site and the impact pathway. The AA part of the HRA for the Pre-Submission Local Plan is discussed in sections 4.32-4.40 of this paper.

4.22 The findings and recommendations of the Preferred Options and Pre-Submission HRA Reports have fed into the development of the policies and allocations in the Local Plan. Key issues arising in the preparation of Pre-submission HRA Report are outlined below.

Urbanisation and recreational disturbance

4.23 Recreational use of internationally designated nature conservation sites has the potential to prevent appropriate management or exacerbate existing management difficulties, cause damage through erosion and fragmentation, cause nutrient enrichment as a result of dog fouling, and cause disturbance to sensitive species such as ground-nesting birds and wintering wildfowl. Recreational disturbance and urbanisation are discussed in in the HRA in chapters 4 and 8 respectively.

4.24 For the majority of the internationally designated sites it has been possible to screen out likely significant effects. This is due to the relatively low level of development proposed in the Local Plan and particularly the even smaller amount proposed close to these designations. Specific requirements were identified for the Solent Coast SPAs and the Wealden Heaths Phase II SPA and are outlined below.

4.25 Part of the National Park is within the 5.6km 'zone of influence' of the Solent Coast Special Protection Area. These sites have interest features, principally wintering wildfowl, which are likely to be vulnerable to disturbance. Although recreational activity arising from the Local Plan alone is not likely to prove significant, it is likely when considered in combination with development arising in the South Hampshire sub-region. The Solent Disturbance & Mitigation Project was established to explore the issue and determine a strategy in response. At a strategic level it was agreed that development within 5.6km of the Solent European sites can address the effects of increased recreational pressure on these designated sites via financial contributions per dwelling to the Solent Recreation Migration Strategy or provide its own measures to avoid or mitigate likely significant effects. Further detail is set out in section 4.4 of the Pre-submission HRA Report.

[3] Wealden District vs Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority, and Natural England. [2017] EWHC 351 (Admin).

[4] The competent authority is the South Downs National Park Authority

4.26 The Wealden Heaths Phase II SPA is also designated for its birds, in this case for its heathland birds. The adverse effects of recreational pressure on the Wealden Heaths Phase II SPA were investigated and discussed in detail at the time the East Hampshire Joint Core Strategy (JCS) was prepared. The HRA for the JCS concluded that, based on the levels of development expected within 5km of the SPA over the strategy period, no strategic mitigation solution was required on the basis that the regeneration of Whitehill-Bordon mitigated its own impacts at project-level. The HRA for the Waverley Local Plan was submitted to the Planning Inspectorate in 2016. The conclusions were in line with the East Hampshire JCS: that the small increase in housing stock of less than 5% (and visitor pressure expected to be significantly less than 5%) and the low pressure to which the SPA is currently subject to, means that a strategic mitigation strategy is not required. The proposed number of new homes in the South Downs Local Plan is slightly more than accounted for in the JCS and the Waverley Local Plan HRA: an increase of 49 dwellings. However, this does not materially change the conclusions as the increase in housing stock remains below 5%. Other development proposals within 5km will be considered on a case by case basis in determining whether mitigation is required with a project-level HRA required as necessary. Further detail is set out in section 4.6 of the Pre-submission HRA Report.

4.27 Urbanisation is closely related to recreational pressure, in that they both result from increased populations within close proximity to sensitive sites. Urbanisation impacts include increases in cat predation, disturbance from light, fly-tipping and arson. It was determined during the examination of the East Hampshire JCS that a strategic prohibition on development within 400m of the Wealden Heaths Phase II SPA was not required due to the small number of housing proposals expected within that zone. The analysis was based on approximately 30 dwellings coming forward in the plan period (up to 2028) within 400m; this figure relates to the entire 400m zone both inside and outside the National Park. Since this time an increase to 43 dwellings has been agreed by Natural England, East Hampshire District Council and the South Downs National Park Authority. It has been noted that a greater number of dwellings have come forward in the first few years of the JCS than was initially expected and the National Park Authority is now working with East Hampshire District Council in the preparation of a Supplementary Planning Document (SPD), which will safeguard remainder of the 43 dwellings for affordable housing and gypsy and traveller accommodation. The SPD is scheduled for public consultation in autumn 2017. Further detail is set out in paragraphs 8.2.6 to 8.2.10 of the Pre-submission HRA Report.

Protected bats sites

4.28 Three international sites in the National Park are designated for protected bat species: Ebernoe Commmon SAC, The Mens SAC, and Singleton and Cocking Tunnel SAC: Ebernoe Commmon SAC, The Mens SAC, and Singleton and Cocking Tunnel SAC. Development proposals have potential for likely significant effects upon bat species via direct habitat loss, loss of functionally-linked habitats such as foraging habitat or commuting routes, by disturbances of habitat during operational or construction phases, and by recreational disturbance.

4.29 The Barbastelle bat is a designated feature of both The Mens SAC and Ebernoe Common SAC. Beckstein's bats are also a designated feature of Ebernoe Common. The majority of visits to these sites is during daylight hours and so there is limited potential for conflicts between National Park users and bats. Studies[5][6] have provided detailed information on the flightlines surrounding Ebernoe Common SAC and The Mens SAC of the Barbastelle bat. These tend to follow watercourses and woodland cover, typically extending 7km from Ebernoe Common SAC and 9km from The Mens SAC. These figures are the average distance which radio-tracked bats travelled, using the third quartile (75%) of bats tracked. These figures form the basis of an identified zone around both international sites which is identified in Policy SD10: International Sites, which requires development proposals to incorporate necessary surveys, ensure that key features are retained, and provide suitable buffers to safeguard against disturbance. These distances are considered appropriate with regard to protecting the integrity of these sites and their bat populations. Further detail is set out in paragraphs 4.5.2 and 7.2.4 to 7.2.12 of the Pre-submission HRA Report.

4.30 Singleton and Cocking Tunnels SAC is designated for its hibernating populations of barbastelle and Beckstein's bats. The tunnels are grilled at both ends and so secured from human disturbance. Singleton and Cocking Tunnels are part of the former railway route between Chichester and Midhurst. This is safeguarded as a non-motorised travel route under Policy SD20: Walking, Cycling and Pedestrian Routes, but that part of the route that runs through the SAC is excluded from the policy. With regard to functionally linked habitat, the HRA recognises that establishing a zone similar to that of Ebernoe Common SAC and The Mens is arguably less relevant for the Singleton and Cocking Tunnels. This is because there is no core sustenance zone as such, because the bats primarily use the site for hibernation. Further detail is set out in paragraphs 4.5.3, 4.5.4, and 7.2.13 to 7.2.20 of the Pre-submission HRA Report.

Bewick Swan

4.31 The Arun Valley SPA and Ramsar site is designated for its wintering population of Bewick's swan. It is widely accepted that Bewick's swan may feed on suitable farmland up to 5km from the designated site. As such suitable fields within 5km of the SPA could constitute important supporting habitat. This has informed development of policy SD10: International Sites which requires development proposals within 5km of the SPA to undertake an assessment of whether the land is suitable for Bewick's swan. Further detail is set out in paragraphs 7.2.21 to 7.2.23 of the Pre-submission HRA Report.

[5] Greenaway, F. (2004) Advice for the management of flightlines and foraging habitats of the barbastelle bat. English Nature Research Report, Number 657.

[6] Greenaway, F. (2008) Barbastelle bats in the Sussex West Weald 1997-2008.

Air quality

4.32 In March 2017 a legal challenge from Wealden District Council (WDC) was upheld by the High Court on the Lewes District Joint Core Strategy (Lewes JCS)[7] on the grounds that the HRA was flawed because the assessment of air quality impact on the Ashdown Forest SAC was not undertaken 'in combination' with other plans or projects (such as other Local Plans). This resulted in the quashing of Policies SP1 and SP2 of the Lewes JCS, insofar as they apply to the administrative area of the South Downs National Park, at the High Court on 20 March 2017. The outcome of the judgement has informed the methodology of air quality assessment as set out in section 2.6 of the HRA Report which accompanies the Pre-Submission South Downs Local Plan.

4.33 The challenge was generally concerned with the approach to in-combination assessments in order to address the requirements of the Habitats Regulations. Particularly, it focused on whether Lewes District Council and the SDNPA had acted unlawfully in concluding, on advice from Natural England, that the JCS would not be likely to have a significant effect on the Ashdown Forest Special SAC, in combination with the Wealden Core Strategy. The environmental effect in question was the impact from vehicle emissions on nitrogen deposition in the heathland within the SAC. The HRA of the JCS followed the advice of Natural England that if the predicted increase in traffic arising from the JCS is less than 1,000 Annual Average Daily Traffic (AADT) on a particular road it can be concluded that, either alone or in combination, no significant effects is likely. This, according to Natural England, was because 1,000 AADT broadly equates to a process contribution of nitrogen oxides so small as to be considered 'de minimis' neutral or inconsequential. The particular concern of WDC was around the predicted increase in traffic on the A26 as it passes close to Ashdown Forest, which was calculated to be 190 AADT arising from growth in the Lewes JCS.

4.34 WDC contended that the 190 AADT of the Lewes JCS should be added to the Wealden Local Plan, which calculated traffic increase on the A26 of 950 AADT. WDC stated this would result in a combined figure over 1,000 AADT, a figure which triggered further assessment work when applied to a single plan.

4.35 The judgement in March 2017 concluded that the HRA was flawed for legal error because it relied on examining the flows arising from the JCS in isolation and did not take into account the potential accumulation of growth from multiple authorities all affecting vehicle flows through the SAC, and the role (or not) of the JCS in any cumulative effect.

4.36 The judgement has implications for other internationally designated nature conservation sites in addition to that of Ashdown Forest. The HRA of the Preferred Options South Downs Local Plan identified eight such designated sites which have the potential for air quality impacts. These are the Lewes Downs SAC, Butser Hill SAC, Duncton to Bignor Escarpment SAC, Kingley Vale SAC, Woolmer Forest SAC, Ebernoe Common SAC, The Mens SAC and Wealden Heath Phase II SPA. Further consideration of scope for the Pre-Submission HRA Report also identified two further sites: the River Itchen SAC located to the far west of the

[7] Wealden District Council vs Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority, and Natural England. [2017] EWHC 351 (Admin) http://www.bailii.org/ew/cases/EWHC/Admin/2017/351.html

National Park, and also Thursley, Ash, Pirbright and Chobham SAC / Thursley, Hankley and Frensham Commons SPA located outside of the National Park.

4.37 In response to the High Court ruling the SDNPA and Lewes District Council jointly commissioned AECOM to undertake further traffic modelling, air quality calculations and ecological interpretation work. This work forms the Appropriate Assessment part of the HRA for the Pre-submission Local Plan. The methodology is set out in section 2.6 and the addendum of the Pre-Submission HRA Report. In summary, the traffic modelling work has used background growth forecasts generated from the National Trip End Model (TEMPRO), which includes traffic flows arising from population increase, unimplemented outstanding permissions and surrounding authorities adopted Core Strategies/Local Plans. To be precautionary, the housing growth rates from TEMPRO have been increased for the work undertaken relating to Ashdown Forest SAC, to allow for some recent decisions made, or expected, regarding growth in those surrounding authorities. For example, the Inspector for the Mid-Sussex Local Plan Examination indicated in February 2017 that he was minded to substantially increase their growth rates to over 1,026 dwellings per annum, so this figure is used in the traffic calculations for that district.

4.38 Using the result of the traffic modelling, air quality specialists have calculated expected oxides of nitrogen (NOx) concentrations, nitrogen deposition rates and acid deposition rates for the identified road links, making an allowance (as directed by Government) for improvements in background air quality and vehicle emissions factors over the same time period. The air quality calculations have been subject to ecological interpretation, an important part of which is the 'in combination' comparison between growth in surrounding authorities (Do Nothing) and the figures with the South Downs Local Plan in place (Do Something).

4.39 The conclusions of this work are set out in section 5.3 and the addendum of the Pre-Submission HRA Report are that there are no adverse effects on the integrity of the assessed international nature conservation designations from the South Downs Local Plan or in combination with growth arising from surrounding authorities. Although no mitigation is required, the HRA Report recommends that, that the South Downs Local Plan includes for similar provision as neighbouring authorities (East Hampshire and Waverley) have done with regard to monitoring air quality along the A3 corridor within the Wealden Heaths Phase 2 and Thursley, Hankley & Frensham Commons (Wealden Heaths Phase 1) to track the projected improvements in air quality and enable the introduction of any further measures (beyond those already identified in policy) to assist in delivery of the projected improving trend. These sites have been singled out because they have NOx concentrations and deposition rates that are currently high and are expected to remain above the critical level/load (albeit considerably improved compared to the 2017 baseline) even by 2033. This will bring the South Downs Local Plan into line with neighbouring authorities. New indicators SDLP20 and SDLP21 and associated targets, data sources and triggers were included in the Monitoring and Implementation Framework in chapter 10 of the Pre-submission South Downs Local Plan.

4.40 In order to make progress on this important cross-boundary strategic matter the SDNPA has also led on convening and chairs the Ashdown Forest Officer Working Group made up of a number of districts, counties and Natural England. The group first met in May 2017 and agreed to move forward together to address the in combination effects of traffic generation on Ashdown Forest SAC and other SACs particularly by sharing emerging evidence. Work has

now started on a Statement of Common Ground. Further details are set out in the Duty to Cooperate Statement[8]

OTHER EVIDENCE AND STRATEGY DOCUMENTS

4.41 The Sustainability Appraisal (SA) was undertaken of both the Preferred Options and Pre-submission South Downs Local Plan. The SA assesses the policies and proposals in the Local Plan against a series of SA objectives, of which SA objective 3 is particularly relevant and set out in Table 2 below. The iterations of the SA have informed development of the policies in the Local Plan.

TABLE 2: SA OBJECTIVE RELATING TO BIODIVERSITY

No	Theme	SDLP SA objective	SA sub-objectives	Questions used to assess proposed policy
3	Biodiversity	To conserve and enhance the region's biodiversity.	**3.1:** Maintain a functioning ecological network and improve the resilience of natural systems, flora, fauna, soils and semi-natural habitat.	Are biodiversity indicators in response to Partnership Management Plan and SDLP policies improving?
			3.2: Conserve, enhance, restore, expand, and reconnect areas of priority habitat (*'Bigger, better, more and joined'*).	

4.42 As part of the first purpose of the National Park, biodiversity in the National Park is a matter which has been explored in numerous studies and strategy documents. Below is a summary of some other key documents which have informed understanding of biodiversity in the National Park and policies/requirements which have fed into the biodiversity policies. This list is not exhaustive.

- State of the Park Report published in 2012 sets out a snapshot of the condition of the Special Qualities of the National Park. Some of the key comments and observations are summarised below:
  - The National Park has an incredibly rich and diverse array of wildlife habitats. Key habitats include farmland, heathland, chalk grassland, woodland, coastal and riverine habitats. These habitats support distinctive populations of specialist species, native species, and localised, rare or threatened species. These habitats are sensitive and vulnerable to loss, degradation and fragmentation.
  - Key threats to biodiversity are invasive non-native species, habitat loss or fragmentation, and climate change.

[8] South Downs National Park Duty to Cooperate Statement (2017)

- Woodland is identified as a very significant feature of the landscape of the National Park. Particular ages and species of trees are characteristic in different areas. Ancient woodland is nationally important and has preserved irreplaceable ecological and historical features. Large-leaved lime woodland is particularly noted as it may closely resemble woodland prior to Neolithic forest clearance 6,000 years ago. Appropriate management of trees and woodland is important.
- The landform of the National Park contribute to its distinctive character. Soils derived from the chalk support slow rates of plant growth important for specialist chalk grassland species. Deeper chalk derived soils can support the nationally important chalk heathland. Wealden greensand support wooded heaths and commons.

- Partnership Management Plan 2014-2019 sets the overarching strategy for the National Park. The relevant outcomes and policies are:
  - **Outcome 2:** There is increased capacity within the landscape for its natural resources, habitats and species to adapt to the impacts of climate change and other pressures.
  - **Outcome 3**: A well-managed and better connected network of habitats and increased populations and distribution of priority species now exist in the National Park.
  - **Policy 4:** Create more, bigger, better-managed and connected areas of habitat in and around the National Park, which deliver multiple benefits for people and wildlife.
  - **Policy 5:** Conserve and enhance populations of priority species in and around the National Park, delivering targeted action where required.
  - **Policy 6:** Favour natural functions and processes in and around the National Park where they support the value and resilience of terrestrial, freshwater, marine, coastal and estuarine habitats.
  - **Policy 8:** Focus the prevention, control and eradication of invasive non-native species on those that are most harmful to biodiversity.
  - **Policy 19:** Enhance the landscape, habitat connectivity, carbon storage and flood risk management with woodland creation by natural regeneration or tree planting with appropriate species, on an appropriate scale and in suitable locations.
- **Habitat Connectivity Study:** This project utilised available data and information on landscape and ecology to create a model to measure semi-natural habitat connectivity across the National Park. In addition a series of habitat opportunity maps were produced for agreed priority habitats of chalk grassland, heathland, semi-natural woodland, hedgerows, freshwater priority habitats such as rivers and streams, and coastal priority habitats such as saltmarsh.
- **EcoServ GIS based tool:** This GIS mapping tool has been developed to provide supporting evidence for the Local Plan. The GIS tool enables us to map and understand the delivery of Ecosystem Services with the National Park. The mapping work also informed the development requirements set out in many of the allocation policies.

- Other documents which informed early development of the policies for the Preferred Options South Downs Local Plan:
    - Access Network and Accessible Natural Greenspace Study
    - Biodiversity Indicators in Your Pocket 2014 (JNCC)
    - Biodiversity Offsetting Pilots Technical Paper: the metric for he biodiversity offsetting pilot in England 2012 (Defra)
    - Natural England Monitor of Engagement with Natural Environment (MENE) Report 2015
    - South Downs Visitor & Tourism Economic Impact Study 2012
    - State of Nature Report 2013. Burns F, Easton MA, Gregory RD et al.

5. POLICY FORMULATION

5.1 In order to address the range of objectives, issues and requirements as set out above, it was considered that biodiversity matters would be addressed through three policies: Strategic Policy SD9: Biodiversity and Geodiversity, Strategic policy SD10: International Sites and Development Management policy SD12: Trees, Woodland and Hedgerows. These policies sit within the 'Thriving Living Landscape' chapter, in their own sub-section titled 'Biodiversity'.

5.2 It was not considered necessary to have separate policies for all the different types of nature conservation designations. Given the range of habitats and species within the National Park, many of which are subject to specific protection, designation and particular requirements, this would have produced far too many policies and the overarching strategy would risk being lost.

Strategic Policy SD9: Biodiversity and Geodiversity

5.3 This strategic policy sets out a positive strategy for the conservation and enhancement of biodiversity and geodiversity across the National Park. Many of the key principles of this strategy, such as retaining, protecting and enhancing features of biodiversity and geodiversity, taking and incorporating opportunities for net gains in biodiversity, and create linkages to create and enhance local and regional ecological networks, are set out in criteria (1).

5.4 Given the range of habitats and species within the National Park, many of which are subject to various designations and associated specific requirements, it is important that the policy provides an overarching framework. This policy sets a clear hierarchy that can be applied proportionately to the biodiversity asset. This hierarchy is set out in criteria (2).

5.5 The geodiversity (geological diversity) of the National Park is fundamental to its purposes and special qualities. The soils of the National Park, which are the foundation for the biodiversity of the National Park and the numerous rare and specialist species, derive from its particular geology. It is therefore considered appropriate that the geodiversity of the National Park is protected together with biodiversity in this policy.

Strategic Policy SD10: International Sites

5.6 This strategic policy sets out specific requirements relating to particular international nature conservation designations: Arun Valley SPA, Ebernoe Common SAC, Singleton and Cocking SAC, Solent Coast SPAs, The Mens SAC, and Wealden Heaths Phase II SPA. These requirements arise from the HRA of the South Downs Local Plan and are summarised in more detail in section 4 above. There are many other international sites in or near the National Park which do not have specific requirements arising from the HRA and these sites are addressed through the requirements and hierarchy as set out in Policy SD9.

5.7 It was considered appropriate to set out the specific requirements arising from the HRA regarding these particular international sites in a dedicated policy because including them within SD9 would have made the policy overly long and difficult to navigate. A separate policy allows for the necessary detail to be set out clearly.

Development Management Policy SD11: Trees, hedgerows and woodland

5.8 This development management policy sets out the specific requirements relating to trees, woodland and hedgerows, to ensure their management, conservation, enhancement, restoration and new planting. Trees, woodland and hedgerows are recognised as important assets for both landscape character, for biodiversity, and many other ecosystem services they provide and the policy seeks to conserve and enhance trees. The policy reflects the different protection status of trees, woodland and hedgerows but requires that loss of protected or non-projected assets should be appropriately replaced.

5.9 The policy sets out criteria which development proposals must address, including relevant surveys, assessments and management plans, requirements for root protection and buffer zones, and demonstration that opportunities for enhancement and new planting is identified and incorporated.

5.10 It was considered appropriate to set out these policy requirements in a dedicated policy for trees, woodland and hedgerows as they are at a much greater level of detail beyond the strategic framework of SD9. Trees, woodland and hedgerows may be subject to nature conservation designation or other forms of protection and policy SD11 should be read in conjunction with the overarching strategy and hierarchy set out in SD9.

Other policies

5.11 Individual policies in the Local Plan do not cross-reference other policies as the plan should be read as a whole. However, as a fundamental component to the first purpose of the National Park, biodiversity evidence and policy has influenced many policies in the Local Plan, including but not limited to:

- Policy SD2: Ecosystem services - includes criteria (b) protect and provide more, better and joined up habitats, and criteria (g) conserve and enhance soils.
- Policy SD4: Landscape Character - contains criteria which safeguard green and blue corridors, take opportunities to create and connect green corridors, and where planting is appropriate, it enhances biodiversity and uses native species.
- Policy SD5: Design - requires a landscape-led approach and sets out criteria which requires enhancing and connecting green infrastructure, and high quality routes for and wildlife.
- Policy SD45: Green infrastructure - requires development proposals to demonstrate that they maintain or enhance exiting GI assets and networks, and provide new GI. GI proposals should strengthen connectivity and resilience of ecological networks, maximise opportunities to mitigate and adapt to climate change, and should be integrated with development.
- Allocations - each of the allocations have been assessed for their biodiversity value in the SHLAA, settlement context study and through the HRA and SA. In addition many have been informed by Eco-serv mapping where they may deliver multiple ecosystem service benefits. More information on allocations and ecosystem services are set out in their respective background papers.

6. CONCLUSION

6.1 This background paper explains the formulation of the three biodiversity policies in the Pre-Submission version of the South Downs Local Plan. It also explains the preparation of the HRA and the response of the National Park Authority to the High Court Judgement on the Lewes JCS.