



European Site Conservation Objectives: Supplementary advice on conserving and restoring site features

**New Forest Special Protection Area (SPA)
Site code: UK9011031**



The New Forest Landscape: Photo by Bryan White

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About this document

This document provides Natural England's supplementary advice for the European Site Conservation Objectives relating to New Forest SPA. This advice should therefore be read together with [the SPA's Conservation Objectives](#).

Where this site overlaps with other European Sites, you should also refer to the separate European Site Conservation Objectives and Supplementary Advice (where available) provided for those sites

This advice replaces a draft version dated 8 February 2019 following the receipt of comments from the site's stakeholders.

You should use the Conservation Objectives, this Supplementary Advice and any case-specific advice given by Natural England when developing, proposing or assessing an activity, plan or project that may affect this site.

This Supplementary Advice to the Conservation Objectives presents attributes which are ecological characteristics of the designated species and habitats within a site. The listed attributes are considered to be those that best describe the site's ecological integrity and which, if safeguarded, will enable achievement of the Conservation Objectives. Each attribute has a target which is either quantified or qualitative depending on the available evidence. The target identifies as far as possible the desired state to be achieved for the attribute.

The tables provided below bring together the findings of the best available scientific evidence relating to the site's qualifying features, which may be updated or supplemented in further publications from Natural England and other sources. The local evidence used in preparing this supplementary advice has been cited. The references to the national evidence used are available on request. Where evidence and references have not been indicated, Natural England has applied ecological knowledge and expert judgement. You may decide to use other additional sources of information.

In many cases, the attribute targets shown in the tables indicate whether the current objective is to 'maintain' or 'restore' the attribute. This is based on the best available information, including that gathered during monitoring of the feature's current condition. As new information on feature condition becomes available, this will be added so that the advice remains up to date.

The targets given for each attribute do not represent thresholds to assess the significance of any given impact in Habitats Regulations Assessments. You will need to assess this on a case-by-case basis using the most current information available.

Some, but not all, of these attributes can also be used for regular monitoring of the actual condition of the designated features. The attributes selected for monitoring the features, and the standards used to assess their condition, are listed in separate monitoring documents, which will be available from Natural England.

These tables do not give advice about SSSI features or other legally protected species which may also be present within the European Site.

If you have any comments or queries about this Supplementary Advice document please contact your local Natural England adviser or email HDIRConservationObjectivesNE@naturalengland.org.uk

About this site

European Site information

Name of European Site	New Forest Special Protection Area (SPA)
Location	Hampshire, Wiltshire
Site Map	The designated boundary of this site can be viewed here on the MAGIC website
Designation Date	September 1993
Qualifying Features	See section below
Designation Area	27,997.59ha
Designation Changes	N/A
Feature Condition Status	Details of the feature condition assessments made at this site can be found using Natural England's Designated Sites System
Names of component Sites of Special Scientific Interest (SSSIs)	New Forest SSSI
Relationship with other European or International Site designations	The boundary of the New Forest SPA overlaps with The New Forest SAC and River Avon SAC

Site background and geography

The New Forest SPA falls within the New Forest National Character Area ([NCA Profile 131](#)) and the [New Forest National Park](#). It comprises the largest area of 'unsown' vegetation in lowland England and includes the representation on a large scale of habitats formerly common but now fragmented and rare in lowland western Europe. The intimate mosaic of habitats owes much to the local geology and traditional commoning grazing system, a situation which is uncommon in lowland England.

The New Forest sits in the centre of a dip in the surrounding chalk known as the Hampshire Basin and comprises a series of eroded terraces of soft sedimentary clays and sands capped with flint gravel, brick earth and other superficial deposits. The Soils are mainly acid, poor in nutrients, susceptible to leaching and only slowly permeable with locally enriched areas. This great variation in its soils is reflected in the New Forest's distinctive vegetation.

The habitats include lowland heath, valley and seepage step mire, or fen, ancient pasture woodland, including riparian and bog woodland and a range of acid to neutral grasslands. Nowhere else do these habitats occur in combination and on so large a scale.

The site supports an exceptionally rich bird fauna including internationally important breeding populations and wintering populations of bird species associated with these habitats.

With substantial development close by the Forest and within easy reach of two major urban areas it is estimated by the National Park Authority that the New Forest receives over 15 million day visits a year. The New Forest SPA has permissive public access and there are a wide range of activities including

traditional countryside pursuits and sports events permitted by the landowners. Within the SPA are ten campsites providing 3,300 pitches and three golf courses.

A small part of the site, Kingston Great Common, is declared as a [National Nature Reserve](#) managed by Natural England.

References:

RJS Associates, 2018. New Forest National Park Recreation & Leisure Visits
<https://www.newforestnpa.gov.uk/app/uploads/2019/01/New-Forest-National-Park-recreation-leisure-visits-RJS-Associates.pdf>

About the qualifying features of the SPA

The following section gives you additional, site-specific information about this SPA's qualifying features. These are the individual species of wild birds listed on Annex I of the European Wild Birds Directive, and/or the individual regularly-occurring migratory species, and/or the assemblages (groups of different species occurring together) of wild birds for which the SPA was classified for.

Qualifying individual species listed in Annex I of the Wild Birds Directive

During the breeding season the SPA regularly supports:

- **A302 Dartford Warbler (*Sylvia undata*)** - 538 pairs representing at least 33.6% of the breeding population in Great Britain at the time of SPA classification
- **A072 Honey Buzzard (*Pernis apivorus*)**, 2 pairs representing at least 10.0% of the breeding population in Great Britain at the time of SPA classification
- **A224 Nightjar (*Caprimulgus europaeus*)**, 300 pairs representing at least 8.8% of the breeding population in Great Britain at the time of SPA classification
- **A246 Woodlark (*Lullula arborea*)**, 177 pairs representing at least 12.3% of the breeding population in Great Britain at the time of SPA classification

During the non-breeding season the SPA regularly supports:

- **A082 Hen Harrier (*Circus cyaneus*)** 15 individuals representing at least 2.0% of the wintering population in Great Britain at the time of SPA classification

Qualifying individual species not listed in Annex I of the Wild Birds Directive

During the breeding season the SPA regularly supports:

- **A099 Hobby (*Falco Subbuteo*)** – up to 25 pairs representing around 3% of the British breeding population at the time of SPA classification
- **A314 Wood Warbler (*Phylloscopus trochilus*)** – in excess of 350 pairs representing at least 3% of the British breeding population at the time of SPA classification.

Within this SPA the principal habitats supporting these qualifying species are as follows:

Dartford Warbler	Mature Lowland heathland, generally with abundant stands of mature gorse, clear-felled coniferous plantation woodland being restored to heathland
Honey Buzzard	Woodland
Hobby	Lowland heathland / Woodland
Hen Harrier	Lowland heathland
Woodlark	Lowland heathland, clear-felled coniferous plantation woodland being restored to heathland, grassland and lichen heath
Wood Warbler	Broad-leaved woodland
Nightjar	Lowland heathland, woodland edge, coppiced woodland and clear-felled coniferous plantation woodland being restored to heathland

Site-specific seasonality of SPA features

The table below highlights in grey those months in which significant numbers of each mobile qualifying feature are most likely to be present at the SPA during a typical calendar year. This table is provided as a general guide only.

Unless otherwise indicated, the months shown below are primarily based on information relating to the general months of occurrence of the feature in the UK. Where site-based evidence is available and has been used to indicate below that significant numbers of the feature are typically present at this SPA outside of the general period, the site-specific references have been added to indicate this.

Applicants considering projects and plans scheduled in the periods highlighted in grey would benefit from early consultation with Natural England given the greater scope for there to be likely significant effects that require consideration of mitigation to minimise impacts to qualifying bird features during the principal periods of site usage by those features. The months which are *not* highlighted in grey are not ones in which the features are necessarily absent, rather that features may be present in less significant numbers in typical years. Furthermore, in any given year, features may occur in significant numbers in months in which typically they do not. Thus, applicants should not conclude that projects or plans scheduled in months not highlighted in grey cannot have a significant effect on the features. There may be a lower likelihood of significant effects in those months which nonetheless will also require prior consideration.

Any assessment of potential impacts on the features must be based on up-to-date count data and take account of population trends evident from these data and any other available information.

Feature	Season	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Site-specific references where available
Dartford Warbler	Breeding													
Hen Harrier	Non-breeding													
Hobby	Breeding													
Nightjar	Breeding													
Woodlark	Breeding													
Wood Warbler	Breeding													
Honey buzzard	Breeding													

Guide to terms:

Breeding – present on a site during the normal breeding period for that species

Non-breeding - present on a site outside of the normal breeding period for that species (includes passage and winter periods).

Summer – the period generally from April to July inclusive

Passage - the periods during the autumn and spring when migratory birds are moving between breeding areas and wintering areas. These periods are not strictly defined but generally include the months of July – October inclusive (autumn passage) and March – April inclusive (spring passage).

Winter - the period generally from November to February inclusive.

Table 1: Supplementary Advice for Qualifying Features: A072. *Pernis apivorus*; European honey-buzzard (Breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Breeding population (within the SPA)	Population abundance	Maintain the size of the breeding Honey Buzzard population at a level which is consistently above 2 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	<p>This will sustain the site's population and ensures it contributes to a viable local, national and bio-geographic population. Due to the mobility of birds and the dynamic nature of population change, the target-value given for the abundance of this feature is considered to be the minimum standard for conservation/restoration measures to achieve. This minimum-value may be revised where there is evidence to show that a population's size has significantly changed as a result of natural factors or management measures and has been stable at or above a new level over a considerable period. The values given here may also be updated in future to reflect any strategic objectives which may be set at a national level for this feature.</p> <p>Given the likely fluctuations in numbers over time, any impact-assessments should focus on the current abundance of the site's population, as derived from the latest known or estimated level established using the best available data. This advice accords with the obligation to avoid deterioration of the site or significant disturbance of the species for which the site is classified, and seeks to avoid plans or projects that may affect the site giving rise to the risk of deterioration. Similarly, where there is evidence to show that a feature has historically been more abundant than the stated minimum target and its current level, the ongoing capacity of the site to accommodate the feature at such higher levels in future should also be taken into account.</p> <p>Maintaining or restoring bird abundance depends on the suitability of the site. However, factors affecting suitability can also determine other demographic rates of birds using the site including survival (dependent on factors such as body condition which influences the ability to breed or make foraging and / or migration movements) and breeding productivity. Adverse anthropogenic impacts on either of these rates may precede changes in population abundance (e.g. by changing proportions of birds of different ages) but eventually may negatively affect abundance. These rates can be measured/estimated to inform judgements of likely impacts on abundance targets. Unless otherwise stated, the population size will be that measured using standard methods such as peak mean counts or breeding surveys. This value is also provided recognising there will be inherent variability as a result of natural fluctuations and margins of error during data collection.</p> <p>Whilst we will endeavour to keep these values as up to date as possible,</p>	Wiseman, E. J. 2012. 'Honey Buzzards in Southern England' <i>British Birds</i> , 105, no. 1, 23–28

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			local Natural England staff can advise on whether the figures stated are the best available.	
Supporting habitat (both within and outside the SPA): extent and distribution	Extent and distribution of supporting breeding habitat	Maintain the extent, distribution and availability of suitable breeding habitat which supports the Honey Buzzard for all necessary stages of its breeding cycle (courtship, nesting, feeding):	<p>Conserving or restoring the extent of supporting habitats and their range will be key to maintaining the site's ability and capacity to support the SPA population. The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection.</p> <p>This target will apply to any supporting habitat which is known to occur outside the site boundary.</p> <p>Within the SPA there are 4430ha of grazed pasture woodland and 8140ha of enclosed woodland which is not subject to livestock grazing and is a mixture of broadleaves and conifer plantation including 400ha of old growth woodland.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (both within and outside the SPA): function supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items preferred by breeding Honey Buzzard, particularly wasps, bees, lepidoptera and small vertebrates.	<p>The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.</p> <p>The main food both in summer and winter is nests, larvae, pupae and adults of social wasps, bees, bumble bees and hornets. Food is located by following flying insects to the nest and, once located, the bird will start to dig the nest out with its feet. It also hunts on foot to catch ground insects and small vertebrates. Honey buzzards will also take other food, including other insects, amphibians, reptiles, small mammals, nestlings and eggs of birds, worms, fruit and berries.</p>	
Supporting habitat (both within and outside the SPA): function/ supporting process	Adaptation and resilience	Maintain the ability of the feature's supporting habitats to adapt or evolve to wider environmental change, either within or external to the site	This recognises the increasing likelihood of natural habitat features to absorb or adapt to wider environmental changes. Resilience may be described as the ability of an ecological system to cope with, and adapt to environmental stress and change whilst retaining the same basic structure and ways of functioning. Such environmental changes may include changes in sea levels, precipitation and temperature for example, which are likely to affect the extent, distribution, composition and functioning of a feature within a site. The vulnerability and response of features to such changes will vary. Using best available information, any necessary or likely	NATURAL ENGLAND, 2015. Climate Change Theme Plan and supporting National Biodiversity Climate Change Vulnerability assessments ('NBCCVAs') for

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>adaptation or adjustment by the feature and its management in response to actual or expected climatic change should be allowed for, as far as practicable, in order to ensure the feature's long-term viability.</p> <p>The overall vulnerability of this particular SPA to climate change has been assessed by Natural England as being low, taking into account the sensitivity, fragmentation, topography and management of its supporting habitats. This means that is considered to be vulnerable overall but are a lower priority for further assessment and action. Individual species may be more or less vulnerable than their supporting habitat itself. In many cases, change will be inevitable so appropriate monitoring would be advisable.</p>	<p>SACs and SPAs in England [Available at http://publications.naturalengland.org.uk/publication/4954594591375360].</p>
<p>Supporting habitat (both within and outside the SPA): function/supporting process</p>	<p>Air quality</p>	<p>Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).</p>	<p>The structure and function of the habitats which support this SPA feature may be sensitive to changes in air quality.</p> <p>Exceeding critical values for air pollutants may result in changes to the chemical status of its habitat substrate, accelerating or damaging plant growth, altering vegetation structure and composition and thereby affecting the quality and availability of nesting, feeding or roosting habitats.</p> <p>Critical Loads and Levels are thresholds below which such harmful effects on sensitive UK habitats will not occur to a noteworthy level, according to current levels of scientific understanding. There are critical levels for ammonia (NH₃), oxides of nitrogen (NO_x) and sulphur dioxide (SO₂), and critical loads for nutrient nitrogen deposition and acid deposition.</p> <p>There are currently no critical loads or levels for other pollutants such as Halogens, Heavy Metals, POPs, VOCs or Dusts. These should be considered as appropriate on a case-by-case basis. Ground level ozone is regionally important as a toxic air pollutant but flux-based critical levels for the protection of semi-natural habitats are still under development.</p> <p>It is recognised that achieving this target may be subject to the development, availability and effectiveness of abatement technology and measures to tackle diffuse air pollution, within realistic timescales.</p> <p>The critical load for nitrogen deposition is currently being exceeded at this SPA (December 2018). As part of the preparation of local plans by NFNPA and NFDC a detailed examination of potential in-combination air quality effects on New Forest SAC / SPA, and other nearby European sites has</p>	<p>More information about site-relevant Critical Loads and Levels for this SPA is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk).</p> <p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			been carried out. Third party consultants have carried out an air quality assessment and linked ecological assessment which together constitute the HRA of air quality effects for both the New Forest National Park and New Forest District Local Plans. At the time of writing, these documents had not yet been finalised although draft results and conclusions are presented within them; the draft reports and conclusions can be found at the internet address in the next column.	
Supporting habitat (both within and outside the SPA): function/supporting process	Connectivity with supporting habitats	Maintain the safe passage of Honey Buzzards moving between nesting, feeding and/or roosting areas during the breeding season	<p>The ability of the feature to safely and successfully move to and from nesting, feeding and roosting areas is critical to their breeding success and to the adult fitness and survival.</p> <p>This target will apply within the site boundary and where birds regularly move to and from off-site habitat where this is relevant.</p>	
Supporting habitat (both within and outside the SPA): function/supporting process	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to maintain the structure, function and/or the supporting processes associated with the feature and its supporting habitats.	<p>Active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target. Further details about the necessary conservation measures for this site can be provided by Natural England.</p> <p>This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p> <p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>
Supporting habitat (both within and outside the SPA): function/	Water quality/ quantity	Where the supporting habitats of the SPA feature are dependent on surface water, maintain water quality and quantity at a standard which provides the necessary	For many SPA features which are dependent on wetland habitats supported by surface water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year during key stages of their life cycle. Poor water quality and inadequate quantities of water can adversely affect the availability and suitability of breeding, rearing, feeding and roosting habitats. Typically, meeting the surface water and groundwater	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
supporting process		conditions to support the feature.	environmental standards set out by the Water Framework Directive (WFD 2000/60/EC) will also be sufficient to support the SPA Conservation Objectives but in some cases more stringent standards may be needed to support the SPA feature. Further site-specific investigations may be required to establish appropriate standards for the SPA. Amphibians form part of their diet.	
Supporting habitat (both within and outside the SPA): structure	Landscape	Maintain areas of mature woodland within the SPA and the wider local landscape.	This feature is known to favour large areas of open terrain, largely free of obstructions, in and around its nesting, roosting and feeding areas. Often there is a need to maintain an unobstructed line of sight within nesting, feeding or roosting habitat to detect approaching predators, or to ensure visibility of displaying behaviour. An open landscape may also be required to facilitate movement of birds between the SPA and any off-site supporting habitat. The home range of breeding Honey buzzards can extend to several kilometres from its nesting area.	
Supporting habitat (within the SPA): disturbance	Minimising disturbance caused by human activity	Restrict the frequency, duration and/or intensity of disturbance within nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the feature is not significantly disturbed	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. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within or outside the designated site boundary where appropriate). This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts. Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, and presence of people, animals and structures. Evidence gathered since the 1990s has demonstrated that Honey-buzzards are as sensitive to disturbance as other raptors. Avoidance of disturbance during nesting is crucial.	Wiseman, E. J. – 'Honey Buzzards in Southern England' (British Birds, 105, no. 1, 23–28, 2012) Roberts S. & Law C., <i>Honey Buzzards in Britain</i> , 2014, British Birds 107, 668-691 NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (within the SPA): predation	Predation	Restrict predation and disturbance of breeding Honey Buzzard caused by native and non-native predators.	<p>This will ensure that breeding productivity (number of chicks per pair) and survival are sustained at rates that maintain or restore the abundance of the feature. Impacts to breeding productivity can result directly from predation of eggs, chicks, juveniles and adults, and also from significant disturbance. The presence of predators can influence bird behaviours, such as abandonment of nest sites or reduction of effective feeding. In the New Forest numbers of Goshawk, are increasing which may increase the likelihood of chick predation although there is no evidence to suggest this is currently an issue. Unpublished data provided by Hampshire ornithological Society indicates that numbers of birds and breeding success has changed little over the past ten years</p> <p>Where evidence suggests predator management is required, measures can include their exclusion through fencing and scaring or by direct control. Any such measures must consider the legal protection of some predators, as well as the likely effects of such control on other qualifying features.</p>	Roberts S. & Law C., <i>Honey Buzzards in Britain</i> , 2014, British Birds 107 , 668-691
Supporting habitat (within the SPA): structure	Vegetation characteristics	Maintain a mixture of open areas, such as glades and wide rides, and stands of mature trees within woodlands in known nesting areas.	<p>The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful nesting/rearing/concealment/roosting.</p> <p>Many bird species will have specific requirements that conservation measures will aim to maintain, for others such requirements will be less clear. Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Version Control				
Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				

Table 2: Supplementary Advice for Qualifying Features: A082. *Circus cyaneus*; Hen harrier (Non-breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Non-breeding population (within the SPA)	Population abundance	Restore the size of the non-breeding hen harrier population to a level which is above 15 wintering birds, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	<p>See general explanatory Notes for this attribute above in Table 1.</p> <p>It is hard to provide a reliable estimate of non-breeding hen harriers within the SPA due to problems of limited site monitoring and movements between roosts but anecdotal evidence suggests that the numbers are well below this baseline. The best estimate is from a survey in 2011/2012 which recorded a maxima of 2, the survey was limited in its coverage and is likely to have been an underestimation.</p> <p>The causes for the decline in numbers is unknown but is likely to be a combination of localised disturbance and a more widespread decline in the bird pool. Based on wing-tagging and tracking data, few English bred hen harriers winter in the southern counties and numbers are likely to be bolstered by an influx of birds from the Fenno-Scandia area</p>	NATURAL ENGLAND. National Hen harrier tracking data.
Supporting habitat (both within and outside the SPA): extent and distribution	Extent and distribution of supporting non-breeding habitat	Maintain the extent and distribution of suitable habitat (either within or outside the site boundary) which supports the feature for all necessary stages of the non-breeding/wintering period (moulting, roosting, loafing, feeding)	<p>Conserving or restoring the extent of supporting habitats and their range will be key to maintaining the site's ability and capacity to support the SPA population.</p> <p>The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection. This target may apply to supporting habitat which also lies outside the site boundary</p> <p>There are over 20 known roost sites within the SPA predominantly in the North West and South of the site. It would appear that some of the roost sites have not been used for many years but there has been limited site monitoring to support this perception. Birds have been recorded at historic sites after an apparent absence of over ten years. Likely changes in site suitability mean that there is probably a high turnover of birds across roost sites over any period of time</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (both within and outside the SPA):	Adaptation and resilience	Maintain the ability of the feature's supporting habitats to adapt or evolve to wider environmental change, either within or external to the site	See the notes for this attribute above in Table 1.	NATURAL ENGLAND, 2015. Climate Change Theme Plan and supporting National

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
function/ supporting process				Biodiversity Climate Change Vulnerability assessments ('NBCCVAs') for SACs and SPAs in England [Available at http://publications.naturalengland.org.uk/publication/4954594591375360].
Supporting habitat (both within and outside the SPA): function/ supporting process	Connectivity with supporting habitats	Maintain the safe passage of hen harrier moving between feeding and roosting areas	<p>The ability of the feature to safely and successfully move to and from nesting, feeding and roosting areas is critical to their breeding success and to the adult fitness and survival. This target will apply within the site boundary and where birds regularly move to and from off-site habitat where this is relevant.</p> <p>During winter, Hen Harriers can gather and form communal roosts at night. Within the New Forest roosts are generally found in extensive areas of dry heathland and hold between 1 and 8 birds</p>	
Supporting habitat (both within and outside the SPA): function/ supporting process	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to maintain the structure, function and/or the supporting processes associated with the feature and its supporting habitats.	<p>Active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target.</p> <p>Further details about the necessary conservation measures for this site will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements.</p> <p>Within the New Forest the hen harrier roosts in mature dry heath habitat where the heathland is managed in blocks of 1 to 4 ha on a 20 to 30+ year rotation. It is important that sufficient deep heather remains in roosting sites but management will be required to prevent heather stands becoming degenerate which do not provide enough cover for roosting birds.</p> <p>Management should make provision for future mature heather stands in the vicinity of a roosting site.</p>	NATURAL ENGLAND, 2015. New Forest Site Improvement Plan. At: http://publications.naturalengland.org.uk/publication/5174614971908096

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): function/supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items at preferred prey sizes (pipits to gamebirds; voles to young rabbit size).	<p>The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.</p> <p>Small passerines are the principal prey of roosting Hen Harrier in the New Forest, the prey species reflects the position of each roost. Roosts in more extensive heathlands in the south showed greater dependence on the heathland community of insectivorous passerines, whereas those roosting in the north depended on a mixture of farmland- and heathland-feeding passerines, spending much time feeding on the adjacent farmland.</p>	Clarke, 1997 <i>et al.</i> A comparison of the feeding ecology of wintering Hen Harriers <i>Circus cyaneus</i> centred on two heathland areas in England. <i>Ibis</i> 139:4-18
Supporting habitat (both within and outside the SPA): function/supporting process	Water quality/quantity	Where the supporting habitats of the SPA feature are dependent on surface water ensure water quality and quantity is maintained to a standard which provides the necessary conditions to support the feature	<p>For many SPA features which are dependent on wetland habitats supported by surface water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year during key stages of their life cycle. Poor water quality and inadequate quantities of water can adversely affect the availability and suitability of breeding, rearing, feeding and roosting habitats.</p> <p>Typically, meeting the surface water and groundwater environmental standards set out by the Water Framework Directive (WFD 2000/60/EC) will also be sufficient to support the SPA Conservation Objectives but in some cases more stringent standards may be needed to support the SPA feature. Further site-specific investigations may be required to establish appropriate standards for the SPA.</p>	
Supporting habitat (both within and outside the SPA): function/supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute in table 1 above	<p>More information about site-relevant Critical Loads and Levels for this SPA is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk).</p> <p>NATURAL ENGLAND, 2015. New Forest SITE</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
				IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096
Supporting habitat (within the SPA): minimising disturbance	Minimising disturbance caused by human activity	Reduce the frequency, duration and/or intensity of disturbance affecting nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the non-breeding Hen harrier feature is not significantly disturbed	<p>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.</p> <p>Such disturbing effects can result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, and desertion of supporting habitat (both within or outside the designated site boundary where appropriate). This may undermine successful feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts.</p> <p>Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, and presence of people, animals and structures.</p> <p>Low flying helicopters in areas known to support roost sites can disturb hen harriers before, during and after roosting." Anecdotal evidence has also indicated that recreational use around less remote roost sites may also occasionally be presenting a problem.</p>	
Supporting habitat (within the SPA): structure	Vegetation characteristics	Maintain an optimal mix of vegetation (flat or gently sloping areas with wet rush, heather, cotton-grass or other wetland vegetation) in areas used for roosting by Hen harriers.	<p>The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful nesting/ rearing/ concealment/ roosting.</p> <p>Many bird species will have specific requirements that conservation measures will aim to maintain, for others such requirements will be less clear. Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Version Control Advice last updated: 17 March 2019 following stakeholder feedback. Explanatory notes for Minimising disturbance caused by human activity updated to clarify potential sources of disturbance.				
Variations from national feature-framework of integrity-guidance: N/A				

Table 3: Supplementary Advice for Qualifying Features: A099. *Falco subbuteo*; Eurasian hobby (Breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Breeding population (within the SPA)	Population abundance	Restore the size of the breeding Hobby population to a level which is consistently above 25 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	<p>See general explanatory Notes for this attribute above in Table 1.</p> <p>Data from Hampshire Ornithological Society Reports - for New Forest within SPA</p> <p>2017 4prs bred successfully and several pairs failed</p> <p>2016 4prs bred and 2 failed</p> <p>2013 8prs bred</p> <p>2011 6prs bred</p> <p>Prey availability is likely to be the main factor influencing the breeding population. National declines in key prey items is reflected in the New Forest.</p> <p>Competition for nesting sites flowing from a steady increase in goshawk numbers may also be a factor.</p>	
Supporting habitat (both within and outside the SPA): disturbance	Minimising disturbance caused by human activity	Reduce the frequency, duration and/or intensity of disturbance affecting nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the breeding Hobby population is not significantly disturbed	<p>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. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within or outside the designated site boundary where appropriate). This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts.</p> <p>Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, and presence of people, animals and structures.</p>	
Supporting habitat (both within and outside the SPA): extent and distribution	Extent and distribution of supporting breeding habitat	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding)	<p>Conserving or restoring the extent of supporting habitats and their range will be key to maintaining the site's ability and capacity to support the SPA population. The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection. This target will apply to any supporting habitat which is known to occur outside the site boundary [give details if relevant].</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): function/supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items preferred by breeding Hobby (e.g. small birds, moths, flying ants, beetles, dragonflies).	<p>The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.</p> <p>Hobbies in the New Forest have been observed to take young house martins and swallows to feed their young. The other main prey items for hobby are dragonflies, day-flying moths and beetles.</p>	
Supporting habitat (both within and outside the SPA): function/supporting process	Water quality/quantity	Where the supporting habitats of the SPA feature are dependent on surface water, restore water quality and quantity at a standard which provides the necessary conditions to support the feature.	<p>For many SPA features which are dependent on wetland habitats supported by surface water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year during key stages of their life cycle. Poor water quality and inadequate quantities of water can adversely affect the availability and suitability of breeding, rearing, feeding and roosting habitats.</p> <p>Typically, meeting the surface water and groundwater environmental standards set out by the Water Framework Directive (WFD 2000/60/EC) will also be sufficient to support the SPA Conservation Objectives but in some cases more stringent standards may be needed to support the SPA feature. Further site-specific investigations may be required to establish appropriate standards for the SPA.</p> <p>Many of the freshwater and wetland habitats of the New Forest have been subject to past drainage damage and the effects of this are still evident across much of the area. The continuation of a programme of restorations is required to prevent further reductions in <i>odonata spp</i> which are a key food source for hobbies. A greater abundance of <i>odonata spp</i> in late summer may help post fledging survival rates</p>	Thomas, J.S., Diack, I. And Mainstone, C. (2016). An assessment of evidence supporting a programme of wetland restoration projects in the New Forest Site of Special Scientific Interest. Natural England Research Reports, Number 066
Supporting habitat (both within and outside the SPA): function/sup porting process	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to maintain the structure, function and/or the supporting processes associated with the feature and its supporting habitats.	<p>Active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target.</p> <p>Further details about the necessary conservation measures for this site can be provided by Natural England.</p> <p>This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements. [Adviser to list current or desired conservation and management measures (in general terms)]</p> <p>Hobbies breed in open lowland areas with mature trees, either in groves, in clumps, in lines or at woodland edges; areas that support good numbers of large flying insects. Their favoured habitats include heaths, open woodland, and mixed farmland with woods and grassland. Hobbies breed in nests built by other species, particularly those of crows built in the previous or current spring but also nests of buzzards as well as squirrel dreys.</p>	
Supporting habitat (both within and outside the SPA): structure	Landscape	Maintain a high proportion of open and un-obstructed terrain whilst retaining mature trees in woodland, small clumps and as isolated individuals.	<p>This feature is known to favour large areas of open terrain, largely free of obstructions, in and around its nesting, roosting and feeding areas. Often there is a need to maintain an unobstructed line of sight within nesting, feeding or roosting habitat to detect approaching predators, or to ensure visibility of displaying behaviour.</p> <p>An open landscape may also be required to facilitate movement of birds between the SPA and any off-site supporting habitat.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (within the SPA): function/ supporting process	Air quality	Maintain the concentrations and deposition of air pollutants at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute above in Table 1.	<p>More information about site-relevant Critical Loads and Levels for this SPA is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk).</p> <p>IPENS SITE IMPROVEMENT PLAN</p>
Supporting habitat (within the SPA): function/ supporting process	Predation	Reduce the predation and disturbance of breeding Hobby caused by native and non-native	This will ensure that breeding productivity (number of chicks per pair) and survival are sustained at rates that maintain or restore the abundance of the feature. Impacts to breeding productivity can result directly from	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
SPA): predation		predators.	<p>predation of eggs, chicks, juveniles and adults, and also from significant disturbance. The presence of predators can influence bird behaviours, such as abandonment of nest sites or reduction of effective feeding.</p> <p>Where evidence suggests predator management is required, measures can include their exclusion through fencing and scaring or by direct control. Any such measures must consider the legal protection of some predators, as well as the likely effects of such control on other qualifying features.</p> <p>In the New Forest numbers of goshawk are increasing which may lead to the avoidance of traditional breeding sites by hobbies and an increase the likelihood of chick predation (although goshawk mainly take larger species of prey). The increase in the goshawk population is an indication of the health of the local environment and changes in native raptor population dynamics should be considered natural in a site as extensive as the New Forest and surrounding areas.</p>	
Version Control				
Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				

Table 4: Supplementary Advice for Qualifying Features: A224. *Caprimulgus europaeus*; European nightjar (Breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): function/supporting process	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to Maintain the structure, function and/or the supporting processes associated with the feature and its supporting habitats.	<p>Active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target.</p> <p>This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements. Further details about the necessary conservation measures for this site can be provided by Natural England.</p> <p>Habitat management should retain the open, mosaic structure of lowland wet and dry heath, ensuring all life cycles of heather are present. It may, in certain areas, be appropriate to maintain scrubby vegetation and occasional taller trees should be available for the nightjar to “churr” from.</p> <p>Where habitat conditions are currently unsuitable, management should seek to increase the availability and continuity of lowland heath or other suitable open habitat.</p> <p>Declines of the species in the UK have largely been attributed to loss and fragmentation of heathland which may explain a shift in habitat nationally towards clear-felled forestry plantations.</p> <p>The New Forest heathlands are extensive and extend to around 13,500ha comprising extensive dry and wet heaths and associated grasslands and mires and comprises most of the supporting habitat for the species but plantations provide additional habitat. Conifer plantations should therefore be managed to provide permanent open space. Following clear-fell, sites should be restored to heathland where appropriate.</p> <p>..</p>	<p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p> <p>Gates N. & Bull A., 2013. <i>New Forest Nightjar Report. Higher Level Stewardship Agreement The Verderers of the New Forest AG00300016</i>, RPS</p>
Supporting habitat (within the SPA):	Predation	Restrict the predation and disturbance of breeding Nightjar caused by native and non-native predators.	This will ensure that breeding productivity (number of chicks per pair) and survival are sustained at rates that maintain or restore the abundance of the feature.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
predation			<p>Impacts to breeding productivity can result directly from predation of eggs, chicks, juveniles and adults, and also from significant disturbance. The presence of predators can influence bird behaviours, such as abandonment of nest sites or reduction of effective feeding. Where evidence suggests predator management is required, measures can include their exclusion through fencing and scaring or by direct control.</p> <p>Any such measures must consider the legal protection of some predators, as well as the likely effects of such control on other qualifying features.</p> <p>In the vicinity of population centres, urban edge effects, of which cat predation is one element, can be a factor in breeding productivity</p>	
Supporting habitat (both within and outside the SPA): function/supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	<p>See the notes for this attribute above in Table 1.</p> <p>Levels for supporting heathland habitat are within critical load limits (and therefore technically maintain), levels for supporting coniferous woodland exceed critical load limits.</p>	More information about site-relevant Critical Loads and Levels for this SPA is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk).
Breeding population (within the SPA)	Population abundance	Maintain the size of the breeding Nightjar population at a level which is consistently above 300 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	<p>See general explanatory Notes for this attribute above in Table 1.</p> <p>The 2013 survey indicates a population of 544 pairs.</p>	Gates N. & Bull A., 2013. <i>New Forest Nightjar Report. Higher Level Stewardship Agreement The Verderers of the New Forest</i> AG00300016, RPS (2013)
Supporting habitat (both within and outside the SPA): extent and distribution	Extent and distribution of supporting breeding habitat	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding)	<p>Conserving or restoring the extent of supporting habitats and their range will be key to maintaining the site's ability and capacity of the SPA to support the breeding Nightjar population.</p> <p>The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection. This target will apply to any supporting habitat which is known to occur outside the site boundary</p>	<p>Footprint Ecology (2008) <i>Recreational Pressure in New Forest</i>.</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
				Condition Assessments
Supporting habitat (within the SPA): structure	Vegetation characteristics	Maintain vegetation structure suitable for nesting Nightjars (20-60 cm tall with frequent bare patches of >2 m ² , 10-20% bare ground and <50% tree/scrub cover overall; trees <2 m in height) throughout the nesting area.	<p>The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful nesting/ rearing /concealment /roosting.</p> <p>Nightjar show a preference for bare patches or areas of very short vegetation with widely scattered tree where they are able to see predators approaching. These patches may be on open heathland and within open areas of plantation woodland.</p> <p>Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (within the SPA): disturbance	Minimising disturbance caused by human activity	Reduce the frequency, duration and/or intensity of disturbance affecting nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the breeding Nightjar feature is not significantly disturbed	<p>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. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within or outside the designated site boundary).</p> <p>This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts. Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, and presence of people, animals and structures.</p> <p>Nightjar is a bird known to be sensitive to disturbance. Disturbance caused by human activity is particularly significant because of its attraction as a tourist destination and proximity to urban areas. A 2008 study on recreational pressure within the New Forest showed that a level of recreational pressure of above approximately 60 visitors per 16 hour period there is a weak negative trend, where habitat utilisation by nightjar decreases as visitor pressure increases. Above 400 visitors per 16 hour period there are no nightjar present.</p> <p>The study indicated while nightjar within the New Forest are not currently</p>	<p>Footprint Ecology (2008) Recreational Pressure in New Forest.</p> <p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>being significantly impacted by visitor pressure, they are showing some avoidance of suitable habitat where estimated visitor pressure is high. There may therefore be concern if the number of people visiting the national park in the future substantially increases, and enlarging the area of nightjar habitat receiving high levels of visitor pressure.</p> <p>In addition, the creation or upgrading of tracks to facilitate visitor access across the New Forest may lead to the process of fragmentation, which in turn can have a number of effects, i.e. subdivision of habitat into smaller patches, isolation of habitat patches, increased edge effects, therefore with the potential for increased recreational pressure on suitable habitat as new access could encourage people to penetrate further across a site. New access routes will also in most cases cause direct habitat loss and damage through impaired function of ecosystem processes, drainage, compaction, trampling etc.</p>	
Supporting habitat (both within and outside the SPA): structure	Landscape	Maintain the amount of open and unobstructed patches within nesting and foraging areas, including areas of clear-fell, windfall, wide tracks, open forest and heath.	<p>This feature is known to favour large areas of open terrain, largely free of obstructions, in and around its nesting, roosting and feeding areas. Often there is a need to maintain an unobstructed line of sight within nesting, feeding or roosting habitat to detect approaching predators, or to ensure visibility of displaying behaviour.</p> <p>Nightjar will also utilise areas of permanent open space and clear-fell within plantation woodland</p> <p>An open landscape may also be required to facilitate movement of birds between the SPA and any off-site supporting habitat.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (both within and outside the SPA): function/ supporting process	Connectivity with supporting habitats	Maintain the safe passage of Nightjars moving between nesting and feeding areas	<p>The ability of the feature to safely and successfully move between feeding and nesting areas using flight-lines and movement routes is critical to their breeding success and to adult fitness and survival.</p> <p>The nightjar is insectivorous, feeding primarily on moths and beetles during the summer. The location of feeding areas which support the SPA's nightjar population is often not well understood and may require further studies or research. More generally, nightjars are known to forage in such habitats as open forest and heathland</p> <p>This target will apply within the site boundary and where birds regularly move to and from off-site habitat where this is relevant. The foraging range of nightjar is known to extend up to several kilometres from their nest sites. Detailed information about the range of nightjar using this SPA</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			is currently not available.	
Supporting habitat (both within and outside the SPA): function/ supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items (e.g. moths, beetles) at prey sizes preferred by Nightjar.	<p>The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.</p> <p>The nightjar is insectivorous, feeding primarily on moths and beetles. Aspects which might affect prey availability will include lighting, pest control, changes in land use and habitat management</p>	
Version Control				
Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				

Table 5: Supplementary Advice for Qualifying Features: A246. *Lullula arborea*; Woodlark (Breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): function/supporting process	Conservation measures	Restore management or other measures (whether within and/or outside the site boundary as appropriate) necessary to restore the structure, function and/or the supporting processes associated with the feature and its supporting habitats.	<p>Active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target.</p> <p>Further details about the necessary conservation measures for this site can be provided by Natural England. This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements</p> <p>At this site, management should retain the open, mosaic structure of lowland wet and dry heath, ensuring that all life cycle stages of heather are present. Occasional taller trees should be present to provide song posts. Areas of bare or sparsely vegetated ground created as a result of rotational forestry management can also be valuable.</p> <p>Habitat management should seek to ensure that the overall extent and continuity of supporting habitat is at least maintained.</p> <p>Heathland management by burning and cutting produces ephemeral sites for woodlark. The timing of operations is important. A long tradition of grazing has produced and maintains the ideal habitat with a mosaic of vegetation with tightly grazing grasses</p>	<p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p> <p>GATES.N.2014. New Forest Woodlark 2014 Survey Report. Higher Level Stewardship Agreement The Verderers of the New Forest AG00300016</p>
Supporting habitat (within the SPA): predation	Predation	Restrict predation and disturbance of breeding Woodlark caused by native and non-native predators.	<p>This will ensure that breeding productivity (number of chicks per pair) and survival are sustained at rates that maintain or restore the abundance of the feature. Impacts to breeding productivity can result directly from predation of eggs, chicks, juveniles and adults, and also from significant disturbance.</p> <p>The presence of predators can influence bird behaviours, such as abandonment of nest sites or reduction of effective feeding. Where evidence suggests predator management is required, measures can include their exclusion through fencing and scaring or by direct control.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Any such measures must consider the legal protection of some predators, as well as the likely effects of such control on other qualifying features.	
Supporting habitat (both within and outside the SPA): function/supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	<p>The structure and function of the habitats which support this SPA feature may be sensitive to changes in air quality.</p> <p>Increased levels of nitrogen deposition may lead to a transition from a heather dominated vegetation community to one dominated by grass species.</p>	<p>More information about site-relevant Critical Loads and Levels for this SPA is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk).</p> <p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>
Breeding population (within the SPA)	Population abundance	Restore the size of the breeding Woodlark population to a level which is above 177 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	<p>See general explanatory Notes for this attribute above in Table 1.</p> <p>Following a dramatic decline in breeding numbers and contraction of range nationally during the latter half of the 20th century, the numbers of breeding Woodlark have steadily increased since the 1986 national survey. The most recent national survey, undertaken in 2006, showed an overall increase in the population size and range for the whole of Britain.</p> <p>Surveys within the New Forest in 2006 and 2014 appear to show a decrease in population which contradicts the national trend over the same period. The 2014 survey recorded a total of 134 Woodlark territories within the area surveyed. Whilst the trend appears to show a continued decline in the population of Woodlark within the New Forest, the rate of decline appears to be slowing.</p> <p>It should however be noted that the 2014 survey was not a systematic survey of the entire SPA and focussed primarily on the crown lands managed by the Forestry Commission. Consequently the data is not</p>	<p>Gates.N.2014. New Forest Woodlark 2014 Survey Report. Higher Level Stewardship Agreement The Verderers of the New Forest AG00300016.</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>directly comparable with previous surveys which covered the whole SPA.</p> <p>The reasons for the ongoing decline is unclear and further investigation is required</p>	
Supporting habitat (both within and outside the SPA): extent and distribution	Extent and distribution of supporting breeding habitat	Maintain the extent, distribution and availability of suitable breeding habitat which supports Woodlark for all necessary stages of its breeding cycles(courtship, nesting, feeding)	<p>Conserving or restoring the extent of supporting habitats and their range will be key to maintaining the ability and capacity of the SPA to support the breeding woodlark population</p> <p>The extent and distribution of supporting habitat used by woodlark will vary over time as a result of habitat management, succession, and ad-hoc events such as heath fires. The objective is to seek to ensure that there is no overall reduction in habitat availability whilst taking this variability into account.</p> <p>There should at all times be sufficient extent of the habitat in order to support the population despite the variations in habitat cover over the year. Bare ground should be adjacent to structurally diverse vegetation, favouring very short heather areas.</p> <p>The majority of woodlark territories within the New Forest are centred either in or within 100m of dry heathland demonstrating that it may form an important component of the territory area. The SPA supports around 7,600ha of this habitat. Dry acid grassland and Lichen heath with a characteristically prostrate form of heather also support good numbers of territories, particularly in the north of the SPA. There is around 282ha of dry grassland communities within the SPA.</p> <p>Woodlark can colonise clear-fell conifer stands almost as soon as they are felled, 422ha of plantation is planned to be felled within the SPA over the next 10 years.</p> <p>The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection. This target will apply to any supporting habitat which is known to occur outside the site boundary.</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments to the attribute or target.</p> <p>Gates.N.2014. New Forest Woodlark 2014 Survey Report. Higher Level Stewardship Agreement The Verderers of the New Forest AG00300016</p> <p>New Forest Inclosures Forest Design Plan 2016</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (within the SPA): structure	Vegetation characteristics	Restore the mix of trees, ground vegetation and bare ground (including frequency of bare patches of <0.5 ha within mosaic of short (<5 cm) to medium (10-20 cm) ground vegetation, and small clumps of shrubs or trees scattered throughout nesting and feeding areas.	<p>The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful nesting/ rearing/ concealment/ roosting and/or displaying.</p> <p>Many bird species will have specific requirements that conservation measures will aim to maintain, for others such requirements will be less clear. Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature.</p>	<p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p> <p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p>
Supporting habitat (both within and outside the SPA): disturbance	Minimising disturbance caused by human activity	Reduce the frequency, duration and/or intensity of disturbance affecting nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the breeding Woodlark population is not significantly disturbed	<p>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. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within or outside the designated site boundary where appropriate).</p> <p>This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts. Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, and presence of people, animals and structures.</p> <p>A 2008 study of recreational pressure in the New Forest suggested that woodlark are more likely to avoid areas of high visitor pressure when choosing a territory. It shows that below 200 visitors per 16 hour period there appears to be no effect on increasing visitor pressure. Above 200 visitors per 16 hour period there are no woodlark using the suitable habitat.</p> <p>These results indicate that visitor pressure is having an impact upon woodlark distribution and habitat utilisation, however this is not currently statistically significant. Nevertheless should</p>	<p>2008 Recreational Pressure in the New Forest (Footprint Ecology</p> <p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>visitor numbers increase in the future this may result in significant impacts on this species</p> <p>In addition, the creation or upgrading of tracks to facilitate visitor access across the New Forest may lead to the process of fragmentation, which in turn can have a number of effects, i.e. subdivision of habitat into smaller patches, isolation of habitat patches, increased edge effects, therefore with the potential for increased recreational pressure on suitable habitat as new access could encourage people to penetrate further across a site. New access routes will also in most cases cause direct habitat loss and damage through impaired function of ecosystem processes, drainage, compaction, trampling etc.</p>	
Supporting habitat (both within and outside the SPA): structure	Landscape	Maintain open and un-obstructed terrain, typically within at least 0.2 km of nesting areas, with no increase in tall (>0.2 m) vegetation cover to >50% of the site overall.	<p>This feature is known to favour large areas of open terrain, largely free of obstructions, in and around its nesting, roosting and feeding areas. Often there is a need to maintain an unobstructed line of sight within nesting, feeding or roosting habitat to detect approaching predators, or to ensure visibility of displaying behaviour.</p> <p>An open landscape may also be required to facilitate movement of birds between the SPA and any off-site supporting habitat.</p>	
Supporting habitat (both within and outside the SPA): function/ supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items (e.g. spiders, weevils, caterpillars) at prey sizes preferred by Woodlark	<p>The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population.</p> <p>Many bird species will have specific requirements that conservation measures will aim to maintain, for others such requirements will be less clear. Woodlarks need areas of very short, sparse vegetation with a high abundance of invertebrate prey on bare ground. This needs to be interspersed with tussocky vegetation for nesting.</p> <p>As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.</p>	
Version Control				
Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				

Table 6: Supplementary Advice for Qualifying Features: A302. *Sylvia undata*; Dartford warbler (Breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): function/supporting process	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to maintain the structure, function and/or the supporting processes associated with the feature and its supporting habitats.	<p>Active and ongoing conservation management is often needed to protect, maintain or restore the breeding Dartford Warbler population at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target.</p> <p>Further details about the necessary conservation measures for this site can be provided by Natural England. This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements.</p> <p>The site should have areas of structurally diverse heather and gorse. Dartford Warbler particularly favour areas of tall, dense gorse and tall mature heather for nesting. The availability of areas of shorter but structurally diverse vegetation nearby are important in providing invertebrate prey such as spiders and weevils.</p> <p>Open Forest grazing and rotational heather burning management is ideal although periodicity of operations is important allowing sufficient time to develop optimal structure</p> <p>422ha of plantation is planned to be felled within the SPA over the next 10 years which will eventually provide additional habitat</p>	<p>This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments</p> <p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>
Supporting habitat (within the SPA): predation	Predation	Reduce predation and disturbance of breeding Dartford warbler caused by native and non-native predators.	<p>This will ensure that breeding productivity (number of chicks per pair) and survival are sustained at rates that maintain or restore the abundance of the feature. Impacts to breeding productivity can result directly from predation of eggs, chicks, juveniles and adults and also from significant disturbance.</p> <p>The presence of predators can influence bird behaviours, such as abandonment of nest sites or reduction of effective feeding. Where evidence suggests predator management is required, measures can include their exclusion through fencing and scaring or by direct control.</p>	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			Any such measures must consider the legal protection of some predators, as well as the likely effects of such control on other qualifying features.	
Supporting habitat (both within and outside the SPA): function/supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk) .	See notes for this attribute above in Table 5.	More information about site-relevant Critical Loads and Levels for this SPA is available by using the 'search by site' tool on the Air Pollution Information System (www.apis.ac.uk). NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096
Breeding population (within the SPA)	Population abundance	Restore the size of the breeding Dartford Warbler population to a level which is above 538 pairs whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	See general explanatory Notes for this attribute above in Table 1. The figure given for the total SPA of Dartford Warbler was 538; this represents the minimum acceptable number of breeding pairs which should be present expressed as a 5-year mean for the feature to be considered in favourable condition. Monitoring of the SPA population has taken place in 1984, 1994, 2006 and 2014. This monitoring has demonstrated that numbers vary considerably from survey to survey with a marked decrease between 2006 and 2014. It is likely that this is a combination of a range of factors including climatic factors, increased recreational disturbance and variations in survey methodology. It should however be noted that the 2014 survey was not a systematic survey of the entire SPA and focussed primarily on the crown lands managed by the Forestry Commission. Consequently the data is not directly comparable with previous surveys which covered the whole SPA.	Gates.N.2014. New Forest Dartford warbler 2014 Survey Report. Higher Level Stewardship Agreement The Verderers of the New Forest AG00300016

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>Dartford Warblers are particularly susceptible to climatic factors such as prolonged periods of snow cover in winter and cold, damp spring weather. Survival and productivity appears to be enhanced when patches of dense gorse are available when provide protection from bad weather.</p> <p>The objective is therefore both to ensure that the overall population is maintained above the minimum population size (subject to natural population variations in response to climatic factors) and to seek to ensure that new activities do not adversely affect the population trend, measured through on-going monitoring programmes.</p>	
Supporting habitat (both within and outside the SPA): extent and distribution	Extent and distribution of supporting breeding habitat	Restore the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding):	<p>Conserving or restoring the extent of supporting habitats and their range will be key to maintaining the site's ability and capacity to support the SPA population. The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection. This target will apply to any supporting habitat which is known to occur outside the site boundary</p> <p>Dartford Warbler territories within the New Forest SPA are aggregated around the main areas of heathland, predominantly in the western half of the Forest. Their distribution correlates well with that of areas of dry heathland Other habitats are less often used, with other heathland and grassland mosaic types the next most important habitats utilised within the New Forest.</p> <p>The SPA supports around 7,600ha of dry heathland habitat. There is around 282ha of dry grassland which can provide a sub-optimal habitat where there are mature gorse breaks.</p> <p>422ha of plantation is planned to be felled within the SPA over the next 10 years and restored to heathland. However the heather and gorse stands will need sufficient time to develop optimal structure for the species.</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (within the SPA): structure	Vegetation characteristics	Maintain an optimal mix of vegetation suitable as nesting habitat (areas >50% heather, <25 trees/ha and [5-25%] scrub of 0.5-3 m overall) throughout the nesting area.	<p>The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful nesting/ rearing/ concealment/ roosting.</p> <p>Dartford Warbler have species requirements that conservation measures should seek to maintain. Stands of gorse are closely associated with Dartford Warblers due to its high invertebrate biomass which may be related to its year</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
			<p>round flowering and evergreen nature. Its dense and spikey structure may also provide protection from both the weather and predators.</p> <p>Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature.</p>	<p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>
Supporting habitat (within the SPA): disturbance	Minimising disturbance caused by human activity	<p>Reduce the frequency, duration and/or intensity of disturbance affecting nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the breeding Dartford Warbler feature is not significantly disturbed</p>	<p>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.</p> <p>Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within or outside the designated site boundary where appropriate). This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts.</p> <p>A 2008 survey of recreational pressure within the New Forest indicated that while Dartford warbler within the New Forest are not being significantly impacted by visitor pressure, the species is showing some avoidance of suitable habitat where estimated visitor pressure is high. There may therefore be concern if the number of people visiting the national park in the future substantially increases.</p> <p>In addition, the creation or upgrading of tracks to facilitate visitor access across the New Forest may lead to the process of fragmentation, which in turn can have a number of effects, i.e. subdivision of habitat into smaller patches, isolation of habitat patches, increased edge effects, therefore with the potential for increased recreational pressure on suitable habitat as new access could encourage people to penetrate further across a site. New access routes will also in most cases cause direct habitat loss and damage through impaired function of ecosystem processes, drainage, compaction, trampling etc.</p>	<p>Footprint Ecology (2008) Recreational Pressure in the New Forest.</p> <p>NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096</p>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (both within and outside the SPA): structure	Landscape	Maintain the connectivity of open, structurally-diverse heath and patches of dense gorse across the SPA	Local populations of Dartford Warbler are subject to large variation in numbers in response to changing weather patterns and habitat structure. It is important that birds are able to move across the landscape and between patches of suitable habitat so they can re-colonise readily from strongholds. Habitat connectivity is particularly important for this species.	
Supporting habitat (both within and outside the SPA): function/supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items (e.g. beetles, spiders, caterpillars, bugs) of prey sizes preferred by Dartford Warbler.	The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.	
Version Control				
Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				

Table 7: Supplementary Advice for Qualifying Features: A314. *Phylloscopus sibilatrix*; Wood warbler (Breeding)

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Breeding population (within the SPA)	Population abundance	Restore the size of the breeding Wood Warbler population to a level which is above 350 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	See general explanatory Notes for this attribute above in Table 1. The Wood warbler is a long distance migrant species which has been declining across much of its UK range. There is evidence to indicate that the factors causing the decline are away from the breeding areas and operating on migration or the wintering grounds.	Vickery J.A. <i>et al.</i> 2014. The decline of Afro-Palaeartic migrants and an assessment of potential causes. <i>Ibis</i> , 156, 1–22
Supporting habitat (both within and outside the SPA): function/supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (www.apis.ac.uk).	See the notes for this attribute in Table 5 above.	NATURAL ENGLAND, 2015. New Forest SITE IMPROVEMENT PLAN. At: http://publications.naturalengland.org.uk/publication/5174614971908096
Supporting habitat (both within and outside the SPA): function/supporting process	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to maintain the structure, function and/or the supporting processes associated with the feature and its supporting habitats.	Active and ongoing conservation management is often needed to protect, maintain or restore this feature at this site. Other measures may also be required, and in some cases, these measures may apply to areas outside of the designated site boundary in order to achieve this target. Further details about the necessary conservation measures for this site can be provided by Natural England. This information will typically be found within, where applicable, supporting documents such as Natura 2000 Site Improvement Plan, Site Management Strategies or Plans, the Views about Management Statement for the underpinning SSSI and/or management agreements. Wood Warblers are associated with well-wooded landscapes and favour sub-mature and mature, usually oak dominated, woodlands. They prefer relatively closed-canopy woodlands with varied sub-canopy structure, relatively sparse understorey and some field layer vegetation.	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (within the SPA): disturbance	Minimising disturbance caused by human activity	Reduce the frequency, duration and/or intensity of disturbance of nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the breeding Wood Warbler feature is not significantly disturbed	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. Such disturbing effects can for example result in changes to feeding or roosting behaviour, increases in energy expenditure due to increased flight, abandonment of nest sites and desertion of supporting habitat (both within or outside the designated site boundary where appropriate). This may undermine successful nesting, rearing, feeding and/or roosting, and/or may reduce the availability of suitable habitat as birds are displaced and their distribution within the site contracts. Disturbance associated with human activity may take a variety of forms including noise, light, sound, vibration, trampling, and presence of people, animals and structures.	
Supporting habitat (within the SPA): extent and distribution	Extent and distribution of supporting breeding habitat	Maintain the extent, distribution and availability of suitable breeding habitat which supports the feature for all necessary stages of its breeding cycle (courtship, nesting, feeding)	<p>Conserving or restoring the extent of supporting habitats and their range will be key to maintaining the site's ability and capacity to support the SPA population. The information available on the extent and distribution of supporting habitat used by the feature may be approximate depending to the nature, age and accuracy of data collection.</p> <p>Within the SPA there is 4430ha pasture woodland 400ha of old growth woodland within enclosed plantations. The extent outside the SPA is unknown</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Supporting habitat (within the SPA): function/ supporting process	Food availability within supporting habitat	Maintain the distribution, abundance and availability of key prey items (e.g. caterpillars, flies, moths, beetles, aphids, spiders) at prey sizes preferred by Wood Warbler.	The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which may affect the distribution, abundance and availability of prey may adversely affect the population.	
Supporting habitat (within the SPA): predation	Predation	Reduce the predation and disturbance of breeding Wood Warblers caused by native and non-native predators.	This will ensure that breeding productivity (number of chicks per pair) and survival are sustained at rates that maintain or restore the abundance of the feature. Impacts to breeding productivity can result directly from predation of eggs, chicks, juveniles and adults, and also from significant disturbance. The presence of predators can influence bird behaviours, such as abandonment of nest sites or reduction of effective feeding. Where evidence suggests predator management is required, measures can include their exclusion through fencing and scaring or by direct control. Any such measures must consider the legal protection of some predators, as well as the likely effects of such control on other qualifying features.	

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
Supporting habitat (within the SPA): structure	Vegetation characteristics	Maintain a woodland structure which typically comprises >60% high (>10 m) canopy cover, patches of ground vegetation of <20 cm locally frequent and <25% ground cover overall.	<p>The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful nesting/ rearing/ concealment/ roosting. Many bird species will have specific requirements that conservation measures will aim to maintain, for others such requirements will be less clear. Activities that may directly or indirectly affect the vegetation of supporting habitats and modify these characteristics may adversely affect the feature.</p> <p>Wood warblers prefer open woods and avoid areas with dense shrub or understorey. They need some perches 1-2 m above the ground on approach to the nest but also need no visual obstruction so that they scan for predators on approach. They nest on or close to the ground, often on slopes, in relatively open ground vegetation with some cover (grass tussocks, sparse bramble, ferns, heavy leaf litter, fallen branches)</p>	This attribute will be periodically monitored as part of Natural England's SSSI Condition Assessments
Version Control				
Advice last updated: N/A				
Variations from national feature-framework of integrity-guidance: N/A				