



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

# Benacre to Easton Bavents Special Protection Area Site Code: UK9009291



Benacre Broad - Paul Lacey

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## About this document

This document provides Natural England's supplementary advice for the European Site Conservation Objectives relating to Benacre to Easton Bavents SPA. This advice should therefore be read together with the <u>SPA Conservation Objectives</u>.

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

This advice updates and replaces a previous draft version dated January 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 <u>HDIRConservationObjectivesNE@naturalengland.org.uk</u>

# About this site

### **European Site information**

Name of European Site	Benacre to Easton Bavents Special Protection Area (SPA)
Location	Suffolk
Site Maps	The designated boundary of this site can be viewed <u>here</u> on the MAGiC website
Designation Date	1996
Qualifying Features	A021 <i>Botaurus stellaris</i> ; Great bittern (Breeding) A081 <i>Circus aeruginosus</i> ; Eurasian marsh harrier (Breeding) A195 <i>Sterna albifrons</i> ; Little tern (Breeding)
Designation Area Designation Changes	470.6 ha
Feature Condition Status	Details of the feature condition assessments made at this site can be found using Natural England's <u>Designated Sites System</u>
Names of component Sites of Special Scientific Interest (SSSIs)	Pakefield to Easton Bavents SSSI
Relationship with other European or International Site designations	The SPA shares some boundaries with <u>Benacre to Easton</u> Bavents Lagoons SAC

### Site background and geography

Benacre to Easton Bavents SPA is situated on the coast of Suffolk between Kessingland to the north and Southwold to the South, it is underpinned by the Pakefield to Easton Bavents SSSI, which also includes the <u>Benacre National Nature Reserve</u> (NNR).

The site is part of the <u>Suffolk Coast and Heaths National Character Area</u>, and its distinctive landscape has been greatly shaped by the actions of the sea. Much of the coastline is naturally dynamic and subject to erosion, especially that which forms the eastern boundary of the SPA, with an average of 10 metres disappearing annually.

In terms of rainfall, the area is one of the driest parts in the country, the annual total being typically two thirds of the national average. This, along with the free-draining sandy and gravelly soils, mean that much of the semi-natural habitat consists of open heathlands and acid grassland. However, there are also broadleaved woodland and softwood plantations, and tall fen vegetation in the river valleys and marshes nearer the coast.

The area also has internationally important stretches of shingle, dunes, saltmarsh and coastal lagoons which are very important for breeding, wintering and passage birds.

The site supports an important assemblage of breeding birds, in addition to the species for which the site is classified as a SPA. These include little grebe *Tachybaptus ruficollis* (also winter), shelduck *Tadorna tadorna* (also winter), wigeon *Anas penelope* (also winter), gadwall *Anas strepera*, pochard *Aythya ferina* (also winter), tufted duck *A. fuligula* (also winter), Hobby *Falco subbuteo*, water rail *Rallus aquaticus* 

(also winter), ringed plover *Charadrius hiaticula*, turtle dove *Streptopelia turtur*, barn owl *Tyto alba* (also winter), little owl *Athene noctua*, kingfisher *Alcedo atthis*, lesser spotted woodpecker *Dendrocopos minor*, nightingale *Luscinia megarhynchos*, wheatear *Oenanthe oenanthe*, grasshopper warbler *Locustella naevia*, bearded tit *Panurus biarmicus* and tree sparrow *Passer montanus*.

The site also supports a notable assemblage of other wintering birds, in addition to those mentioned above, including cormorant *Phalacrocorax carbo*, whooper swan *Cygnus cygnus*, pink-footed goose *Anser brachyrhynchus*, white-fronted goose *A. albifrons*, greylag goose *A. anser*, Canada goose *Branta canadensis*, gadwall *Anas strepera*, teal *A. crecca*, pintail *A. acuta*, garganey *A. querquedula*, shoveler *A. clypeata*, scaup *Aythya marila*, eider *Somateria mollissima*, long-tailed duck *Clangula hyemalis*, common scoter *Melanitta nigra*, velvet scoter *M. fusca*, goldeneye *Bucephala clangula*, smew *Mergus albellus*, red-breasted merganser *M. serrator*, goosander *M. merganser*, buzzard *Buteo buteo*, lapwing *Vanellus vanellus*, dunlin *Calidris alpina*, redshank *Tringa totanus*, little gull *Larus minutus*, great black-backed gull *L. marinus*, guillemot *Uria aalge*, shore lark *Eremophila alpestris*, rock pipit *A. petrosus*, fieldfare *Turdus pilaris*, siskin *Carduelis spinus*, twite *C. flavirostris*, snow bunting *Plectrophenax nivalis* and reed bunting *Emberiza schoeniclus*.

Other Annex 1 species are present on the site. Two or three pairs of Avocet *Recurvirostra avosetta* and a few pairs of common tern *Sterna hirundo* occasionally nest. Red-throated diver *Gavia stellata*, black-throated diver *G. arctica*, great northern diver *G. immer*, Slavonian grebe *Podiceps auritus* and Hen harrier *Circus cyaneus* sometimes winter within the SSSI.

# 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 on Annex I of the Wild Birds Directive

During the breeding season the SPA regularly supports the following species:

#### • Bittern *Botaurus stellaris*

The five year mean number of booming male bitterns between 991-95, was two, representing 10% of the British population. Bitterns are most commonly heard at Easton and Benacre Broads.

The most recent mean number of breeding bitterns during the period 2014-18 is 4.4 breeding pairs.

#### • Marsh Harrier Circus aeruginosus

The five year mean number of pairs (1990-94) was 6, representing more than 6% of the British population). Marsh harriers breed regularly at Benacre and Easton Broads.

The 5 year mean from the period 2014-18 is 10.8 nests.

#### • Little tern Sterna albifrons

The five year mean number of pairs (1991-95), is 39, representing 1.6% of the British population). Little terns regularly breed on the sand and shingle beaches at Benacre, Kessingland and Covehithe Broads. The five-year average 2014-2018 is 40 breeding pairs.

#### Qualifying assemblage of species

N/A

# 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. Additional site-based surveys may be required. Non-breeding water bird monthly maxima data gathered for this site through the Wetland Bird Survey ('WeBS') may be available upon request from the <u>British Trust for Ornithology</u>.

Feature	Season	Period	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Site-specific references where available
Great bittern	Breeding	Summer													
Little tern	Breeding	Summer													
Marsh harrier	Breeding	Summer													

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: A021. Botaurus stellaris; Great bittern (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 Bittern population at above 2 booming males, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent	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. Whilst we will endeavour to keep these values as up to date as possible, local Natural England staff can advise on whether the figures stated are the best available.	ENGLISH NATURE, 1996. Benacre to Easton Bavents SPA Citation (UK9009291A) information available from: http://publications.natu ralengland.org.uk/file/ 6155589163941888 The latest data can be requested via the BTO (British Trust for Ornithology) website.
			breeding pairs between 2014 and 2018 (SSSI Bird report held by Suffolk Biodiversity Records Centre (SBRC)). Although the number of booming males has greatly increased on Benacre to Easton Bavents, the percentage of the UK population has decreased. This is due to concentrated national conservation efforts for Bittern leading to large upturn in breeding Bittern in the UK (SSSI bird report, 2017 held by SBRC). Benacre to Easton Bavents has long been a national stronghold for breeding Bitterns and the current breeding data shows that this continues.	
Supporting habitat (both within and outside the SPA):	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	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	GILBERT, G., BROWN, A. F. & WOTTON, S. R. (2010) Current dynamics and

Attı	ributes	Targets	Supporting and Explanatory Notes	Sources of site-
				based evidence (where available)
extent and distribution		(courtship, nesting, feeding): Coastal reedbed: 243.96 ha Coastal lagoons:68.01 ha	<ul> <li>any supporting habitat which is known to occur outside the site boundary.</li> <li>Breeding Bitterns are highly localised, requiring reedbeds as their breeding habitat. They also utilise fresh water and coastal grazing marsh and coastal lagoons. Bitterns are particularly vulnerable to the loss of coastal reedbeds through coastal_flooding (Gilbert <i>et al.</i> 2010).</li> <li>Benacre to Easton Bavents SPA supports the 3rd largest continuous stand of Common Reed in England and Wales (Easton Marshes). The floodplain fen and reed need to be managed by periodic cutting or in places grazing, and by the management of water levels.</li> <li>Most recent extent data for bittern supporting habitats within Benacre to Easton Bavents SPA are as follows: Coastal reedbed: 243.96 ha Coastal lagoons:68.01 ha</li> </ul>	predicted vulnerability to sea-level rise of a threatened Bittern <i>Botaurus stellaris</i> population. Ibis <b>152</b> , 580–589.
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. eel, rudd, roach, frogs, toads) at prey sizes preferred by Bittern (e.g. roach of 6-35 cm).	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): function/ supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to 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).	The structure and function of the habitats which support this SPA feature may be sensitive to changes in air quality. 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. 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 (NOx) and sulphur dioxide (SO2), and critical loads for nutrient nitrogen deposition and acid deposition. 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. There are currently	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).

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-
				based evidence
				(where available)
			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.	
Supporting habitat (both within and outside the SPA): function/ supporting process	Connectivity with supporting habitats	Maintain the safe passage of birds moving between nesting, roosting and feeding areas	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. Management of water levels and habitat are currently undertaken by Natural England.	NATURAL ENGLAND (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: <u>http://publications.natu</u> <u>ralengland.org.uk/publ</u> <u>ication/481247641573</u> 7856
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 Much of the SPA is managed directly for nature conservation. Benacre National Nature Reserve is managed by Natural England. The remainder is managed under agri-environment schemes.	NATURAL ENGLAND. Benacre NNR management plan NATURAL ENGLAND (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: http://publications.natu ralengland.org.uk/publ ication/481247641573 7856
Supporting habitat (within the SPA): function/	Salinity	Maintain water salinity at or to <0.5% (or <5ppt (parts per thousand)).	This feature is known to be particularly susceptible to changes in the salinity (concentration of salt) of its shallow brackish/fresh water habitat; Salinity is a major factor determining the distribution and composition of communities of fish, amphibians and aquatic invertebrates such as insects, crustaceans and worms on which this feature feeds. High levels of salinity	

Attı	ributes	Targets	Supporting and Explanatory Notes	Sources of site-
				based evidence (where available)
supporting process			may adversely affect fish and invertebrate food for adults and chicks. The principal factors governing the temporal and spatial nature of the salinity regime of coastal sites are the diurnal incursion of the tide and fresh water flow from the river(s). Any activity changing either of these factors can result in a change to the salinity regime.	(
Supporting habitat (within and outside the SPA): function/ supporting process	Water area	Maintain the number of open waterbodies of optimal size ( >0.5 ha), and the percentage cover of pools overall, with shallow water extending at least 30 m landward into surrounding dense vegetation.	This feature depends on the presence and continuity of open water habitat; often requiring water bodies of a particular size to in order to successfully nest, rear their young, feed and/or roost. Changes in water area, and associated marginal habitat, can adversely affect the suitability of supporting open water habitat.	
Supporting habitat (both within and outside the SPA): function/ supporting process	Water depth	Maintain the overall depth of swamp and marginal water which is typically between 30 – 100 cm, and/or within pools and dykes at typically 200-400 cm deep.	This feature is known to require extensive areas of water in which to feed. Birds are visual predators, with some having the ability to dive or to feed from the surface. As they will rely on detecting their prey within the water to hunt, the depth of water at critical times of year may be paramount for successful feeding and therefore their fitness and survival. Deep water surrounding nesting sites may also be important to deterring predators.	
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, maintain water quality and quantity to a standard which provides the necessary conditions to support the feature. Maintain the stability of standing water levels in order to prevent flooding of nests.	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 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.	Benacre NNR management Plan. This document may be available from Natural England upon request
Supporting habitat (both within and outside the SPA): minimising	Minimising disturbance caused by human activity	Restrict the frequency, duration and/or intensity of disturbance affecting nesting, roosting, foraging, feeding, moulting and/or loafing birds so that the feature is not significantly	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	Natural England (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from:

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-
				based evidence (where available)
disturbance		disturbed	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 the physical presence of people, animals and structures. Disturbance of breeding Bittern may lead to interruption of incubation, abandonment of nests, and failure to breed. Nest sites are generally located in large stands of inaccessible wet reed bed which can discourage access. Feeding bittern usually utilise dense reed bed but will also frequent reedy ditches, increased access near to these ditches may reduce the availability of suitable feeding area. The Site Improvement Plan for Benacre to Easton Bavents SPA identifies Public/ Access as a key current threat to the SPA features. The SPA attracts a large number of recreational visitors which can result in bird disturbance. The Site Improvement Plan identifies the action to investigate the impact of public disturbance to SPA features, and feed the results of this investigation into the implementation of NNR management plans to minimise disturbance.	http://publications.natu ralengland.org.uk/publ ication/481247641573 7856
Supporting habitat (within the SPA):	Predation	Reduce and restrict the predation and disturbance of bitterns 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	NATURAL ENGLAND. Benacre NNR management plan
predation			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.	NATURAL ENGLAND (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from:

Attı	ibutes	Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
			The Site Improvement Plan identifies the action to investigate the impact of predation on nest survival and fledgling success	http://publications.natu ralengland.org.uk/publ ication/481247641573 7856
Supporting habitat (within the SPA): structure	Landform	Restore the extent of wet ditches and/or pools with suitable profiles (typically, with a deep central channel of 1.5-2.5 m deep and one or more 1 m deep with 5 m wide shallow margins).	The physical topography and landform of a site will strongly influence the quality and extent of supporting habitats used by this feature for nesting/rearing, feeding and/or roosting as appropriate. This will also influence the interactions with underlying supporting processes on which the supporting habitat may rely. Any changes or modifications to site topography may adversely affect the ability of the supporting habitats to support and sustain this feature. Management of water levels and habitat are currently undertaken by Natural England. Further management can be found in the Site Improvement Plan	NATURAL ENGLAND (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: http://publications.natu ralengland.org.uk/publ ication/481247641573 7856
Supporting habitat (both within and outside the SPA): structure	Landscape	Maintain an open and unobstructed terrain which provides safe passage for birds moving between breeding, roosting and feeding areas across the spa.	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.	
Supporting habitat (both within and outside the SPA): structure	Vegetation characteristics	Maintain the cover of scrub-free areas of reed-bed with common reed <i>Phragmites australis</i> at or above 90% cover and with a diverse age structure (typically at least 30% of the reedbed should be uncut with the remainder <7 years old with <20% cut in any year).	The height, cover, variation and composition of vegetation are often important characteristics of habitats supporting this feature which enable successful nesting/rearing/feeding/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.	
Version Contr Advice last upo	ol lated: N/A			
Variations fro	m national feature	e-framework of integrity-guidance	e: N/A	

### Table 2: Supplementary Advice for Qualifying Features: A195 Sterna albifrons; Little tern (Breeding)

Att	ributes	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 Little tern population at a level which is above 39 pairs, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent	See explanatory notes for this attribute in Table 1.	Population target taken from SPA citation. The latest data can be requested via the BTO (British Trust for Ornithology) website. ENGLISH NATURE, 1996. Benacre to Easton Bavents SPA (UK9009291A) information available from: http://publications.natu ralengland.org.uk/file/ 6155589163941888 JNCC Seabird Monitoring Programme. Available from: http://jncc.defra.gov.uk /page-3201
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): Approximately 70ha of supra- littoral sediment	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. Extent is taken from the Favourable Condition Table for Benacre – Easton Bavents SSSI, but this will be subject to natural coastal processes.	Benacre to Easton Bavents SSSI Favourable Condition Table. This document may be available on request from Natural England.

Attr	ributes	Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)
Supporting habitat (within the SPA): function/ supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to below the site-relevant Critical Load or Level values given for the feature' supporting habitat on the Air Pollution Information System (www.apis.ac.uk).	See explanatory notes for this attribute in Table 1.	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).
Supporting habitat (both within and outside the SPA): function/ supporting process	Connectivity with supporting habitats	Maintain the safe passage of birds moving between nesting and feeding areas, generally within 6 km of breeding colonies	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.	
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.	NATURAL ENGLAND (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: http://publications.natu ralengland.org.uk/publ ication/481247641573 7856
Supporting habitat (both within and outside the SPA): function/ supporting process	Food availability within supporting habitat	Maintain the abundance and availability of key prey species (e.g. crustacea, annelids, sand eel, herring, clupeidae) at prey sizes preferred by Little tern.	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	Water quality/ quantity	Where the supporting habitats of the SPA feature are	For many SPA features which are dependent on wetland habitats supported by surface water, maintaining the quality and quantity of water	NATURAL ENGLAND. Benacre NNR

Attributes		Targets	Supporting and Explanatory Notes	Sources of site- based evidence
				(where available)
(both within and outside the SPA): function/ supporting process		dependent on surface water, maintain water quality and quantity to a standard which provides the necessary conditions to support the feature. Maintain the stability of standing water levels in order to prevent flooding of nests.	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 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.	management Plan
Supporting habitat (both within and outside the SPA): minimising disturbance	Minimising disturbance caused by human activity	Reduce the frequency, duration and/or intensity of disturbance affecting nesting, roosting, foraging and feeding, 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 the visual presence of people, animals and structures.	
Supporting habitat (both within and outside the SPA): predation	Predation	Reduce the predation and disturbance of little tern 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. As a ground-nesting species, little tern is vulnerable to predation by mammals such as fox. 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.	Natural England (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: <u>http://publications.natu</u> <u>ralengland.org.uk/publ</u> <u>ication/481247641573</u> 7856

Attr	ibutes	Targets	Supporting and Explanatory Notes	Sources of site- based evidence (where available)	
Supporting habitat (both within and outside the SPA): structure	Landform	Maintain the availability of shallow sloping nesting sites, grading to <30 cm above water level, and minimise the probability that they will flood.	The physical topography and landform of a site will strongly influence the quality and extent of supporting habitats used by this feature for nesting/rearing, feeding and/or roosting as appropriate. This will also influence the interactions with underlying supporting processes on which the supporting habitat may rely. Any changes or modifications to site topography may adversely affect the ability of the supporting habitats to support and sustain this feature.		
Supporting habitat (both within and outside the SPA): structure	Vegetation characteristics	Maintain vegetation cover (generally <15%) throughout areas used for nesting, providing sufficient bare ground for the colony as a whole.	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.		
Version Control Advice last updated: 08/03/2018: reference to Seabird Monitoring Programme reference inserted.					
Variations fro	m national feature	-framework of integrity-guidance	e: N/A		

### Table 3: Supplementary Advice for Qualifying Features: A081. *Circus aeruginosus*; Eurasian marsh harrier (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 Marsh harrier population to a level which is above 6 nesting females, whilst avoiding deterioration from its current level as indicated by the latest mean peak count or equivalent.	See explanatory notes for this attribute in Table 1.	NNR records held by SBRCThe latest data can be requested via the BTO (British Trust for Ornithology) website.ENGLISH NATURE, 1996. Benacre to Easton Bavents SPA (UK9009291A) information available from: http://publications.natur alengland.org.uk/file/61 55589163941888
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): Coastal reedbed: 243.96 ha	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. Breeding marsh harrier are highly localised, requiring reedbeds as their breeding habitat. They also utilise fresh water and coastal grazing marsh. Marsh harrier are particularly vulnerable to the loss of coastal reedbeds through coastal_flooding (Gilbert <i>et al.</i> 2010). Benacre to Easton Bavents SPA supports the 3rd largest continuous stand of Common Reed in England and Wales (Easton Marshes). The floodplain fen and reed need to be managed by periodic cutting or in places grazing, and by the management of water levels.	GILBERT, G., BROWN, A. F. & WOTTON, S. R. (2010) Current dynamics and predicted vulnerability to sea-level rise of a threatened Bittern <i>Botaurus</i> <i>stellaris</i> population. Ibis <b>152</b> , 580–589.

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based
				available)
Supporting habitat (both within and outside the SPA): function/ supporting process	Connectivity with supporting habitats	Maintain the safe passage of breeding marsh harriers moving between nesting, feeding and roosting areas	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. The home range of marsh harriers can extend several kilometres from their nesting territory, often hunting over nearby arable farmland, saltmarshes, reedbeds and grasslands. At the end of the breeding season, young and adult birds often congregate overnight at communal roost sites.	
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. small mammals, small birds) at prey sizes preferred by marsh harrier	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 (both within and outside the SPA): function/ supporting process	Water depth	Maintain the availability of water over the entire reedbed area, with a high proportion of the area with a water depth of 0.1 m to 0.3 m.	Deep water surrounding nesting sites may also be important to deterring predators.	
Supporting habitat (both within and outside the SPA): function/ supporting process	Air quality	Restore as necessary the concentrations and deposition of air pollutants to 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 explanatory notes for this attribute in Table 1.	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).
Supporting habitat (both within and outside the SPA):	Conservation measures	Maintain management or other measures (whether within and/or outside the site boundary as appropriate) necessary to Maintain the structure, function	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	NATURAL ENGLAND. Benacre NNR Management plan NATURAL ENGLAND

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)
function/ supporting process		and/or the supporting processes associated with the feature and its supporting habitats.	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. Much of the SPA is managed directly for nature conservation. Benacre National Nature Reserve is managed by Natural England. The remainder is within agri-environment schemes.	(2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: <u>http://publications.natur</u> <u>alengland.org.uk/public</u> <u>ation/481247641573785</u> <u>6</u>
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, maintain water quality and quantity to a standard which provides the necessary conditions to support the feature Maintain the stability of standing water levels in order to prevent flooding of nests.	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 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.	NATURAL ENGLAND. Benacre NNR management plan.
Supporting habitat (both within and outside 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 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 the visual presence of people, animals and structures.	NATURAL ENGLAND (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: <u>http://publications.natur</u> <u>alengland.org.uk/public</u> <u>ation/481247641573785</u> <u>6.</u>

Attributes		Targets	Supporting and Explanatory Notes	Sources of site-based
				evidence (where
			The Site Improvement Plan for Benacre to Easton Bavents SPA identifies Public/ Access as a key current threat to the SPA features. The SPA attracts a large number of recreational visitors which can result in bird disturbance. The Site Improvement Plan identifies the action to investigate the impact of public disturbance to SPA features, and feed the results of this investigation into the implementation of NNR	
			management plans to minimise disturbance. For more detailed	
Supporting habitat (within the SPA): predation	Predation	Restrict the predation and disturbance of breeding Marsh harriers caused by native and non-native predators.	<ul> <li>Information, please see the Site Improvement Plan</li> <li>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.</li> <li>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.</li> <li>The Site Improvement Plan identifies the action to investigate the impact</li> </ul>	NATURAL ENGLAND (2015) Site Improvement Plan: Benacre to Easton Bavents (SIP015). Available from: <u>http://publications.natur</u> <u>alengland.org.uk/public</u> <u>ation/481247641573785</u> <u>6</u>
Supporting	Landscape	Maintain continuous reed cover	of predation on nest survival and fledgling success	
habitat (both within and outside the SPA): structure		over large areas, avoiding fragmentation of extensive reedbeds.	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.	
Supporting habitat (within the SPA): structure	Vegetation characteristics	Maintain the continuity and availability of areas of dense reed stands as nesting cover.	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.	

Attributes	Targets	Supporting and Explanatory Notes	Sources of site-based evidence (where available)		
Version Control					
Advice last updated: N/A					
Variations from national feature-framework of integrity-guidance: N/A					