

Broads Authority Development Control Policies DPD

Appropriate Assessment

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1. Introduction

The Habitats and Birds Directives protect sites of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species within Europe. These sites are referred to as European Sites and consist of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Offshore Marine Sites (OMSs), however there are no OMSs designated at present.

Articles 6(3) and 6(4) of the Habitats Directive require Appropriate Assessment (AA) of any plans or projects likely to have a significant effect on a designated feature of a European Site. Appropriate Assessment is an assessment of the potential effects of a proposed plan on all European sites, both within and adjacent to the plan area. The intention is that a plan or project should only be approved after determining that it will not adversely affect the integrity of any European Site. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest compensatory measures must be incorporated to ensure that the overall coherence of a European Site is protected.

Draft guidance on Appropriate Assessment¹ was published by the Government in August 2006 and this has informed the Appropriate Assessment of the Broads Authority Development Control DPD.

This report summarises the AA process and sets out a description and characteristics of the European Sites within, and adjacent to Broads Authority area. It then reports on the findings of the AA process as applied to the Broads Authority Development Control DPD.

¹ Planning for the Protection of European Sites: Appropriate Assessment. DCLG August 2006

The Appropriate Assessment process

Task 1: Screening for likely significant effects

Identifying whether a plan option is likely to have a significant effect on any European Site. This will determine whether the subsequent steps of Appropriate Assessment are required.

The precautionary principle must be used when assessing whether effects are significant. Where there is any doubt or further research is needed the Appropriate Assessment process should proceed to the next test, rather than reach a conclusion of 'no significant effect'.

The assessment of likely significant effect needs to take account of impacts in combination with other plans and projects, however only those plans or projects which are considered most relevant should be considered.

If there are found to be likely significant effects the plan option must be subject to Appropriate Assessment of its implications for the conservation objectives of the European Site.

Task 2: Appropriate Assessment

The implications for the conservation objectives of the European Site should be examined.

A plan should only be adopted after having ascertained that it will not adversely affect the integrity of the European Site. Fine-tune the plan as it emerges to ensure that significant effects on European sites are avoided. This will render Stage 3 unnecessary – important since this is complex, expensive and not in keeping with the spirit of the Habitats Directive.

Task 3: Alternative Solutions and Mitigation

Where the plan is assessed as having an adverse effect on the integrity of a site, then alternative solutions must be considered.

In considering whether a plan or project will adversely affect the integrity of the site, regard to the manner in which it is proposed to be carried out or to any conditions or restrictions must be considered.

The primary aim of any mitigation of an option should be to allow 'no adverse affect on integrity' to be concluded. Where this is not possible then mitigation should aim to reduce the adverse affect as much as possible. Measures will normally involve the modification of an option.

After mitigation measures and possible alternatives have been exhausted and it still cannot be concluded that there will be 'no adverse affect on integrity' then, as a rule, the option should be dropped.

In exceptional circumstances, and as an exception to that rule, if the pursuit of the option is justified by 'imperative reasons of overriding public interest' consideration can be given to proceeding. Strong justification will be required to support this and it must be demonstrated to the satisfaction of the Secretary of State that there were no possible mitigation measures and/or alternative solutions to cancel out the negative effects. In these cases the Secretary of State shall secure any necessary compensatory measures to ensure the overall coherence of the European Site is protected.

3. Consultation and Preparation

Natural England is the statutory nature conservation body responsible for providing advice on Appropriate Assessment and has been involved in the AA of the Broads Authority LDF documents. Initial scoping meetings were held and correspondence has continued throughout.

The Appropriate Assessment report was initially prepared by Planning Policy and Countryside officers at NNDC, while an external ecologist was appointed to carry out the actual assessment.

Appropriate Assessment findings should be made available to the public and this report is therefore being published alongside the submission Core Strategy document. The Inspector will consider the soundness of the Core Strategy using the AA as part of the evidence base.

4. Evidence gathering for Appropriate Assessment

Evidence gathering is the first stage and information on the following should be collected:

- European Sites within and outside the plan area potentially affected;
- The characteristics of those European Sites and their conservation objectives; and
- Other relevant plans or projects

4.1 International and European protected sites that may be affected

The following sites have been considered through the AA process:

Special Protection Areas (SPAs) (protected sites classified under the EC Directive on the conservation of wild birds, the Birds Directive):

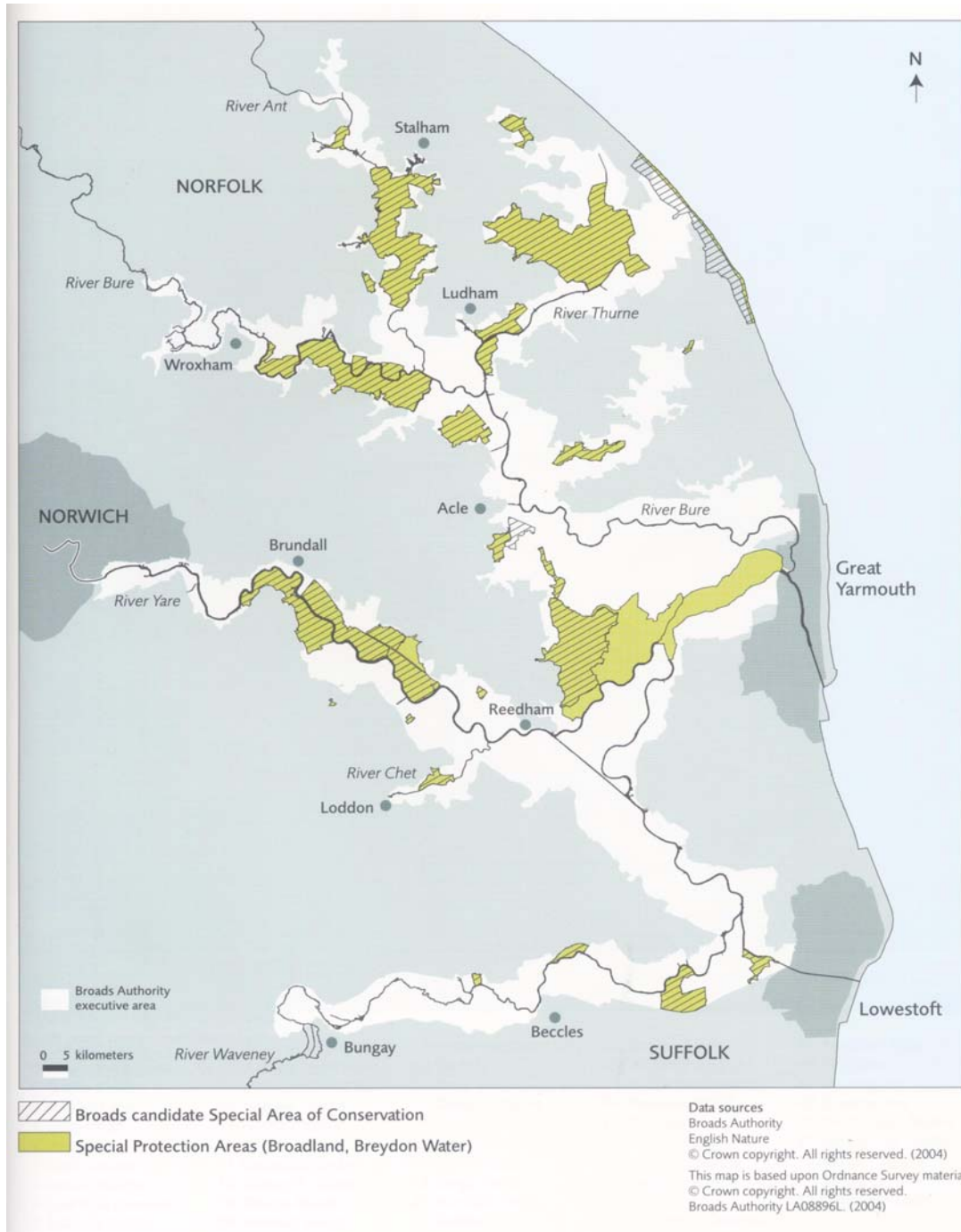
- Broadland
- Breydon Water
- Great Yarmouth North Denes

Special Areas of Conservation (SACs) (protected sites designated under the EC Habitats Directive):

- The Broads
- Winterton – Horsey Dunes

The locations of these sites are illustrated on the following location plan (Figure 1).

Figure 1: Location of European Sites within The Broads Authority Area.



4.2 Description and Characteristics of European Sites

Broadland

Incorporating

- Broadland Special Protection Area (SPA) – Designated 21st September 1994
- The Broads Special Area of Conservation (SAC) – Designated 1st April 2005

Site Condition

Of the 5462.4 hectares, or 100% of the protected area, within the administrative boundaries of the Broads Authority, 46% is considered to be in “favourable” or “unfavourable recovering” condition. The remaining 54% is considered to be in unfavourable condition.

Description

Broadland is a low-lying wetland complex straddling the boundaries between east Norfolk and northern Suffolk and comprises some 5865.60 hectares. The Broads are a series of flooded medieval peat cuttings within the floodplains of five principal river systems. The area includes the river valley systems of the Bure, Yare and Waveney and their major tributaries. Component sites include Alderfen Broad SSSI, Ant Broads and Marshes SSSI, Broad Fen, Dilham SSSI, Bure Broads and Marshes SSSI, Calthorpe Broad SSSI, Ludham–Potter Heigham Marshes SSSI, Priory Meadows, Hickling SSSI, Smallburgh Fen SSSI and Upper Thurne Broads and Marshes SSSI. Throughout the District the SPA and SAC sites overlay each other. Two additional component SSSIs that contribute to the Broads/Broadland are situated a little way outside the District boundary and might be affected by this plan. These SSSIs are Upton Broad and Marshes SSSI and Shallam Dyke Marshes, Thurne SSSI.

The open distinctive landscape comprises a complex and interlinked mosaic of wetland habitats including open water, reedbeds, carr woodland, grazing marsh and fen meadow, forming one of the finest marshland complexes in the UK. The differing types of management of the vegetation for reed, sedge and marsh hay, coupled with variations in hydrology and substrate, support an extremely diverse range of plant communities. The region is important for recreation, tourism, agriculture and wildlife.

Determining Reasons For Designation

The freshwater habitats support internationally important numbers of overwintering wetland bird species (Bewick’s swan, bittern, hen harrier, ruff, whooper swan, gadwall, pink-footed goose, shoveler, cormorant, great crested grebe, coot, bean goose, white-fronted goose, wigeon, teal, pochard and tufted duck), and internationally important breeding populations of bittern and marsh harrier.

The Broads contain several examples of naturally nutrient-rich lakes. These lakes and the ditches in areas of fen and drained marshlands support relict vegetation of the original Fenland flora, and collectively the site contains one of the richest assemblages of rare and local aquatic species in the UK. The stonewort–pondweed–water-milfoil–water-lily associations are well represented, as are club-rush–common reed associations. The dyke systems support vegetation characterised by water-soldier, whorled water-milfoil and broad-leaved pondweed as well as being a stronghold for Desmoulin’s whorl snail in East Anglia. The range of wetlands and associated habitats also provides suitable conditions for otters.

The complex of sites contain the largest blocks of alder wood in England. Within the complex complete succession sequences occur from open water through reedswamp to alder woodland, which developed on fen peat. The site also contains the largest example of calcareous fens in the UK. The Broads also contain examples of transition mire that are relatively small, having developed in re-vegetated peat-cuttings as part of the complex habitat mosaic of fen, carr and open water.

The site supports outstanding assemblages of rare plants and invertebrates including nine British Red Data Book plants and 136 British Red Data Book invertebrates.

Sites European qualifying features

Broadland SPA/SAC	Qualifying Features	Key Environmental Features that support site integrity
Broads SAC 1	3140 Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	Topography, hydrology, drainage, water quality
Broads SAC 2	3150 Natural eutrophic lakes with <i>Magnopotamion</i> or Hydrocharition-type vegetation	Topography, hydrology, drainage, water quality
Broads SAC 3	7140 Transition mires and quaking bogs	Topography, hydrology, drainage, water quality, management
Broads SAC 4	7210 Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	Topography, hydrology, drainage, water quality, soil conditions, management
Broads SAC 5	7230 Alkaline fens	Topography, hydrology, drainage, water quality, soil conditions, management
Broads SAC 6	91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	Hydrology, lack of human intervention
Broads SAC 7	6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)	Hydrology, management, drainage
Broads SAC 8	1903 Fen orchid <i>Liparis loeselii</i>	Hydrology, drainage, water quality, soil conditions, management
Broads SAC 9	1395 Desmoulin's whorl snail <i>Vertigo moulinsiana</i>	Hydrology, flood frequency, management
Broads SAC 10	1355 Otter <i>Lutra lutra</i>	Relative tranquillity, hydrology,
Broadland SPA 1	Breeding Populations: <ul style="list-style-type: none"> • bittern, 3 individuals representing up to 15.0% of the breeding population in Great Britain (Count as at 1998) • marsh harrier 21 pairs representing up to 13.1% of the breeding population in Great 	Relative tranquillity, hydrology,

	Britain (Count as at 1995)	
Broadland SPA 2	<p>Overwintering populations:</p> <ul style="list-style-type: none"> • Bewick's Swan <i>Cygnus columbianus bewickii</i>, 320 individuals representing up to 4.6% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6) • Bittern <i>Botaurus stellaris</i>, 6 individuals representing up to 6.0% of the wintering population in Great Britain • Hen Harrier <i>Circus cyaneus</i>, 22 individuals representing up to 2.9% of the wintering population in Great Britain (5 year peak mean 1987/8-1991/2) • Ruff <i>Philomachus pugnax</i>, 96 individuals representing up to 13.7% of the wintering population in Great Britain (5 yr peak mean 87/8-91/2) • Whooper Swan <i>Cygnus cygnus</i>, 133 individuals representing up to 2.4% of the wintering population in Great Britain (5 yr peak mean 93/4-97/8) <p>The site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:</p> <p>Over winter;</p> <ul style="list-style-type: none"> • Gadwall <i>Anas strepera</i>, 605 individuals representing up to 2.0% of the wintering Northwestern Europe population (RSPB: Count 99/00) • Pink-footed Goose <i>Anser brachyrhynchus</i>, 3,290 individuals representing up to 1.5% of the wintering Eastern Greenland/Iceland/UK population (5 yr peak mean 94/5-98/9) • Shoveler <i>Anas clypeata</i>, 401 individuals representing up to 1.0% of the wintering Northwestern/Central Europe population (RSPB: Count 99/00) <p>Assemblage qualification: A wetland of international importance.</p> <p>The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl</p> <p>Over winter, the area regularly supports 22,603 individual waterfowl (RSPB, Count 99/00) including: Cormorant <i>Phalacrocorax carbo</i>, Bewick's Swan <i>Cygnus columbianus bewickii</i>, Whooper Swan <i>Cygnus cygnus</i>, Ruff <i>Philomachus pugnax</i>, Pink-footed Goose <i>Anser brachyrhynchus</i>, Gadwall <i>Anas strepera</i>, Bittern <i>Botaurus stellaris</i>, Great Crested Grebe <i>Podiceps cristatus</i>, Coot <i>Fulica atra</i>, Bean Goose <i>Anser fabalis</i>, White-fronted Goose</p>	Relative tranquillity, hydrology, water quality.

	<i>Anser albifrons albifrons</i> , Wigeon <i>Anas penelope</i> , Teal <i>Anas crecca</i> , Pochard <i>Aythya ferina</i> , Tufted Duck <i>Aythya fuligula</i> , Shoveler <i>Anas clypeata</i> .	
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Vulnerability

The site has suffered from management neglect and natural succession during this century. This is slowly being reversed via conservation and other management works undertaken through a number of bodies. Sea level rise and reduced summer flows in the River Bure brought about by abstraction are resulting in increasing saline intrusion into the site and generally drier summer conditions. The Environment Agency, Water Companies and Natural England are proceeding with a project to investigate options and remedy this situation via the Review of Consents process and AMP4/5. The site also suffers from eutrophication, brought through the build up of nutrients over a long period, primarily through sewage outfalls, agricultural practices and sedimentation. Some of the sewage works are now stripping phosphorus and there is a programme of mud pumping to remove enriched material from lakes. The Review of Consents process and AMP4/5 is examining if further improvements to sewage treatment works is required and the Catchment Sensitive Farming Project is starting to address the diffuse pollution problem. The region as a whole is a centre for tourism and recreation, however this pressure is now starting to be brought under control by the Broads Authority via management action including Water Space Management Plans. Efficient drainage within much of the reclaimed parts of the wetland has reduced the wildlife value. Water Level Management Plans and the Environmental Stewardship scheme are starting to raise water levels, revert arable areas back to grass and encourage sensitive management, particularly of the ditches. Flood management works are carried out in accordance with the Environmental Agency Broads Strategy and Broadland Rivers Catchment Flood Management Plan.

The SPA bird species are potentially vulnerable to disturbance and possible conflicts with tourism and water space use. In practice, most of the important SPA populations are centred on protected areas where visitor numbers are carefully managed. Conflicts may arise where species such as marsh harrier use the wider Broads area for nesting.

Breydon Water

Incorporating:

- Breydon Water SPA

Site Condition

Of the 1202.94 hectares, or 100% of the protected area, within the administrative boundaries of the Broads Authority, 100% is considered to be in favourable condition.

Determining Reasons For Designation

Breydon Water is an inland tidal estuary at the mouth of the River Yare and its confluence with the rivers Bure and Waveney. Extensive areas of mud are exposed at low tide and these form the only intertidal flats occurring on the east coast of Norfolk. Large numbers of wildfowl and waders are attracted to an abundant food supply when on passage and during the winter months. Several wintering wildfowl

reach nationally important population levels and the site occupies a key position on the east coast for these species and for migrating birds. Rare species are regularly recorded. There is also considerable botanical interest with small areas of saltmarsh, reedbeds and brackish water communities in the surrounding borrow dykes. The invertebrate fauna is rich and includes one scarce species of snail.

The mudflats are characterised by growths of green algae *Enteromorpha sp.* and *Ulva sp.* and two uncommon species of Eel-grass *Zostera marina* and *Z. noltii*. These plants, together with an abundant invertebrate fauna, attract large numbers of ducks and waders to feed in the estuary at the appropriate seasons. There are nationally important wintering flocks of Wigeon (winter maximum 4,500 birds) and Shelduck (1,000) and an internationally important flock of Bewick's Swans (120). Other notable wintering wildfowl include Goldeneye, Red-breasted Merganser, Pintail, White-fronted Goose and Pink-footed Goose. Large flocks of waders are also present with a total winter maximum of 3–6,000 birds. The most numerous species are Knot, Dunlin, Redshank and Ringed Plover.

Several uncommon species are recorded with some regularity, the most noteworthy being Spoonbill, Avocet and Mediterranean Gull. Breeding species include Little Grebe, Shelduck, Common Tern and Bearded Tit.

Small areas of saltmarsh occur at the lower end of the estuary. Glasswort *Salicornia sp.* is dominant on the lower marsh and this zone grades into midmarsh where typical species include Sea Lavender *Limonium vulgare*, Sea Aster *Aster tripolium*, Sea Purslane *Halimione portulacoides*, Sea Plantain *Plantago maritima* and Sea Poa *Puccinellia maritima*.

The saltmarsh is replaced by brackish reedswamp at the upper end of the estuary and there are extensive stands of Common Reed *Phragmites australis*.

A flood-bank surrounds the estuary and behind this is a borrow dyke which contains distinctive brackish water communities of plants and invertebrates. Marginal plants include Sea Club-rush *Scirpus maritimus* and Mud Rush *Juncus gerardi* while the dominant water plant is Spiked Water-milfoil *Myriophyllum spicatum*. The maritime grassland on the edge of the estuary includes the rare Bulbous Fox-tail *Alopecurus bulbosus*.

The uncommon mollusc, *Assiminea grayana* has been recorded from the upper estuary.

Breydon Water SPA	Qualifying Features	Key Environmental Features that support site integrity
Breydon SPA 1	Breeding populations: common tern, 155 pairs representing up to 1.3% of the breeding population in Great Britain (4 count mean, 1992-1994 & 1996)	Relative tranquillity, estuarine processes, water quality
Breydon SPA 2	Wintering populations: <ul style="list-style-type: none"> <li data-bbox="472 1794 975 1944">• Avocet <i>Recurvirostra avosetta</i>, 33 individuals representing up to 2.6% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6) <li data-bbox="472 1951 975 2038">• Bewick's Swan <i>Cygnus columbianus bewickii</i>, 391 individuals representing up to 5.6% 	Relative tranquillity, estuarine processes, water quality

	<p>of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)</p> <ul style="list-style-type: none"> Golden Plover <i>Pluvialis apricaria</i>, 5,040 individuals representing up to 2.0% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6) 	
Breydon SPA 3	<p>Winter bird assemblage: the area regularly supports 43,225 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Black-tailed Godwit <i>Limosa limosa islandica</i>, Dunlin <i>Calidris alpina alpina</i>, Lapwing <i>Vanellus vanellus</i>, Shoveler <i>Anas clypeata</i>, Wigeon <i>Anas penelope</i>, White-fronted Goose <i>Anser albifrons albifrons</i>, Cormorant <i>Phalacrocorax carbo</i>, Golden Plover <i>Pluvialis apricaria</i>, Avocet <i>Recurvirostra avosetta</i>, Bewick's Swan <i>Cygnus columbianus bewickii</i>.</p>	Relative tranquillity, estuarine processes, water quality

Vulnerability

The Breydon Water estuary is a robust ecosystem, the most sensitive feature being the high tide roost at its northern end. However efficient drainage, recent droughts and poor water management systems have adversely affected the wet grassland part of the site (Halvergate Marshes). A Water Level Management Plan and a feasibility study to overcome the water resource problems have been completed, and it is hoped that a scheme will commence shortly with MAFF support. The Environmentally Sensitive Area scheme has helped to raise water levels and encouraged sensitive management, particularly of the ditches. Appropriate standards of flood defence are required for the wet grassland part of the site; works are currently underway via the Environment Agency Broads Strategy. Breydon Water and its hinterland lie within the Broads, one of the family of National Parks. As such, it is largely free from development pressures. Future pressure for development may arise around the site, associated with Great Yarmouth, but regulation of such plans is covered by the Habitats Regulations 1994.

Great Yarmouth North Denes & Winterton – Horsey Dunes

Incorporating

- Great Yarmouth North Denes Special Protection Area (SPA) – Designated 1st March 1993
- Winterton – Horsey Dunes Special Area of Conservation (SAC) – Designated 1st April 2005

Site Condition

Great Yarmouth North Denes SPA: Of the 26.28 hectares, or 17.6% of the protected area, within the Broads Authority area, 0% is considered to be in “favourable” or “unfavourable recovering” condition.

Winterton – Horsey Dunes SAC: Of the approximately 129 hectares, or 30.2% of the protected area, within the administrative boundaries of the Broads Authority, approximately 66.7% is considered to be in “favourable” or “unfavourable recovering” condition.

Description

The Great Yarmouth North Denes SPA contains two component SSSI areas: the low dune system and beach at Great Yarmouth (within Great Yarmouth Borough Council administrative area) and the beach and foredune ridge at Winterton – Horsey Dunes (from Warren Farm, Horsey in the north down to The Valley, Winterton in the south). Within this part of the SPA only the section from Warren Farm to Bramble Hill, about 17.6% is within the Broads Authority Area. The two component areas of the SPA are linked, due to the high mobility of little terns, and to the dynamic nature of the beach shapes which influences suitability for breeding.

Winterton – Horsey Dunes SAC covers an area of 425.94 hectares from Warren Farm, Horsey in the north to The Valley, Winterton in the south. Approximately 30.2% of the designation is within the Broads Authority Area. The site is a coastal dune system, with foreshore, and associated areas of dry heathland, dry grassland and mesotrophic grassland.

Determining reasons for designation

Great Yarmouth North Denes SPA qualifies for SPA status under Article 4.1, by supporting a nationally important breeding population of little tern *Sterna albifrons*, representing 9.2% of the GB breeding population (5 year mean, 1992-1996).

Winterton – Horsey Dunes SAC: The primary reason for selection of this site is because it is the only significant area of dune heath on the east coast of England and also includes areas of acidic dune grassland as an associated acidic habitat. The Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) vegetation, a priority feature, is characteristic of dune heath in an eastern locality with low rainfall, and Winterton – Horsey Dunes is considered to be one of the best sites in the UK. The drought-resistant grey hair-grass *Corynephorus canescens* is a characteristic species of the open dry dune soils. Also a primary feature are the Humid Dune Slacks, the slacks within Winterton – Horsey Dunes are chiefly of interest because they occur on an extremely base-poor dune system on the dry coast of East Anglia in eastern England. Because of their acidic soils, the dunes support swamp and mire communities, in addition to small areas of typical dune slack vegetation. As a result they represent an extreme of the geographical range and ecological variation of Humid dune slacks within the UK.

Also of importance are the Embryonic shifting dunes, for which the area is considered to support a significant presence; and Shifting dunes along the shoreline with *Ammophila arenaria* (“white dunes”) for which the area is considered to support a significant presence.

Sites European qualifying features

Great Yarmouth North Denes SPA/SAC	Qualifying Features	Key Environmental Features that support site integrity
W-HD SAC 1	2150 Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)	Coastal processes

W-HD SAC 2	2190 Humid dune slacks	Topography, rainfall, hydrology
W-HD SAC 3	2110 Embryonic shifting dunes	Coastal processes
W-HD SAC 4	2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ('white dunes')	Coastal processes
GYND SPA 1	Breeding Populations: little tern <i>Sterna albifrons</i> .	Coastal processes, extent of site, relative tranquillity.

Vulnerability

The little tern colonies within the Great Yarmouth North Denes SPA are dependent upon the maintenance of high accreting beaches. Coast protection schemes have the potential to disrupt or reduce sediment supply to the SPA. However, Beach Management Plans are required before works proceed. These require mitigation measures should an adverse impact occur in the future. The success of the colonies at both sites is dependent upon wardening in order to exclude people and dogs and the control of predators. The wardening is jointly undertaken by the Natural England and the RSPB, with assistance of Great Yarmouth Borough Council.

A concrete wall constructed in the 1960s, together with sea defence works up-drift which reduce sediment supply, constrain and prevent the site from responding naturally to coastal processes. The embryonic shifting dune communities are most vulnerable. Beach-feeding operations pose a threat through the possible use of sand with shell fragments, particularly to the Atlantic decalcified fixed dunes. A Coastal Habitat Action Plan (ChaMP) was produced in 2002, and this provides guidance on how to address these issues. Recently the Shoreline Management Plan has been reviewed. The site is backed by intensively-farmed arable land, and water abstraction from this area is a threat to the humid dune slack communities. Visitor pressures are high especially in the summer, resulting in erosion, fire and disturbance impacts. The site relies on rabbits to maintain open habitats, and is therefore vulnerable to outbreaks of disease.

4.3 Other relevant plans or projects

The assessment of significant effects of a given option needs to take account of the impact in combination with other plans and projects. The guidance states that only those that are considered most relevant should be collected for the 'in combination' test - an exhaustive list could render the assessment exercise unworkable. The following plans or strategies are considered to have potential effects and therefore have been included within the assessment.

Draft Regional Spatial Strategy for the East of England

The East of England Plan has been subject to Examination and the revised document is awaited. This will set the general policies for the East of England and LDF's should be in consistency with it. Extracts from the following objectives are of particular relevance to the Broads:

- (i) To reduce the regions impact on, and exposure to, the effects of climate change by:
 - locating development so as to reduce the need to travel;
 - effecting a major shift in travel towards public transport, walking and cycling and away from car use;
 - maximising the energy efficiency of development and promoting the use of renewable and low carbon energy sources; and
 - reducing the risk of damage from flooding.
- (ii) To realise the economic potential of the region and its people by:
 - facilitating the development needed to support the region's business sectors and clusters, improving skills and widening opportunities in line with the Regional Economic Strategy.
- (iii) To improve the quality of life for the region's people by:
 - ensuring new development fulfils the principles of sustainable communities, providing a well designed living environment adequately supported by social and green infrastructure;
 - promoting social cohesion by improving access to work, services and other facilities, especially for those who are disadvantaged;
 - maintaining cultural diversity while addressing the distinctive needs of each part of the region;
 - promoting regeneration and renewal of disadvantaged areas; and
 - increasing community involvement in the implementation of the strategy at the local level.
- (iv) To improve and conserve the region's environment by:
 - ensuring the protection and enhancement of the region's environmental assets, including the built and historic environment, landscape and water;
 - re-using previously developed land and seeking environmental as well as development gains from the use of previously undeveloped land;

- protecting and, where appropriate, enhancing biodiversity through the protection of habitats and species and through creating new habitats through development;
- providing a network of multi-function greenspace accessible to the region's people; and
- reducing the demand for and use of water and other natural resources and reducing waste and increasing the sustainable management of waste.

Local Transport Plan for Norfolk 2006 – 2011 and Suffolk Local Transport Plan 2006-2011

These documents cover the five year period from April 2006 to March 2011 but with a longer term strategy up to 2021. The Plan contains five thematic strategies:

- Delivering sustainable growth
- Improving accessibility
- Reducing congestion
- Protecting and enhancing the environment
- Improving road safety

Area strategies seek to achieve a number of aims such as discouraging development that could be detrimental to the Broads.

Biodiversity Mapping and Ecological Networks, Norfolk Wildlife Trust

Norfolk Wildlife Trust and the Norfolk Biodiversity Partnership have prepared a series of maps showing areas for protection and enhancement in order to create an ecological network. Key habitats for protection and enhancement in North Norfolk include all coastal habitats, reedbed, calcareous grassland, lowland meadow, heath, fen, chalk river, woodland, grazing marsh on the coast and large river valleys.

Broads Sediment Management Strategy

Contains objectives for reducing, re-using and recycling sediment dredged from the Broads.

Norfolk Biodiversity Action Plan 2002-2005

This contains objectives for improving the sustainability of priority habitats and species in coastal, agricultural, heathland, wetland and urban environments and contains broad targets for creating or expanding new habitat.

Broadland Rivers Catchment Flood Management Plan, consultation draft June 2006

The Environment Agency is currently preparing CFMPs for all river catchments in England and Wales. These should provide a broad understanding of current and future flood risk, together with a set of justifiable long-term flood risk management policies and a prioritised set of further studies. The aim is to ensure that policies are sustainable and maximise benefits to the environment, as well as providing protection from flooding to people and property. The Broadland Rivers CFMP covers the Waveney, Yare, Wensum, Bure, Ant and Thurne catchments and gives detailed information on the flood risk in each area.

Norfolk Ambition (Community Strategy)

This document aims to improve the quality of life for all of the people of Norfolk. Specifically relevant:

- To reduce carbon dioxide emissions by reducing energy consumption, promoting low-emission technology and increasing the use of renewable resources
- To find an acceptable means of managing floodwaters
- To adopt an holistic approach to land and heritage management, land use and biodiversity enhancement.
- Norfolk retains an attractive and sustainable blend of rural villages, market towns and urban areas with a range of good quality, affordable housing, a significantly improved transport infrastructure to, from and within Norfolk, and accessibility to broadband throughout the county.

Norwich's Environment Strategy 2003-2008

Relevant objectives include:

- To significantly reduce activities in the city that contribute to climate change
- To protect and enhance the natural built and historic environment
- To work toward sustainable resource use
- To develop sustainable transport
- To protect and improve health and well-being
- To further integrate social, economic and environmental decision-making by promoting the principles of sustainable development

Broads Plan 2004

Relevant objectives include:

- social progress that recognises the needs of everyone;
- effective protection of the environment;
- wise use of natural and cultural resources; and
- maintenance of economically and socially thriving communities.

Neighbouring Districts

The districts neighbouring the Broads Authority Area are Great Yarmouth, Waveney, South Norfolk, Broadland and Norwich City. These Authorities are also in the process of preparing LDFs for their area, although they are all at different stages.

Authority	Core Strategy Preferred options report	Core Strategy Submission document
Norwich City	Started work 2007	tbc
North Norfolk	2007	May 2007
South Norfolk	Started work 2007	tbc
Waveney	July 2006	November 2007
Great Yarmouth	August 2006	May 2007
Broadland	Started work 2007	tbc

Most of the Districts have not prepared their submission Core Strategy, and timetables are frequently reviewed. Therefore the only LDF document that has been incorporated in the Appropriate Assessment is the Broads Authority Core Strategy submission document.

5. Appropriate Assessment and Plan Analysis

In order to determine whether the Broads Authority Development Control DPD represents an adverse affect to the integrity of any European Site a two stage assessment has been carried out.

Task 1 – Identifying whether a plan option is likely to have a significant effect.

Task 2 – Where there is found to be a likely significant effect, assess the affect to the integrity of the European site and explore any mitigation measures that could reduce or remove the impact.

Task 1 is a screening process. Those policies which are considered not to have a significant effect on any European Site within or outside of the District boundaries at this stage, need be considered no further. Those that are considered to have a significant effect will be taken forward to Task 2. The screening process involves consultation with the statutory nature conservation body (Natural England), and is a judgement based on a number of factors including the proximity of proposals to the European Sites, the type of impacts likely to be caused by the policy, the qualifying features of the European Site, the probability of the impact, the duration, frequency and reversibility of the impact.

The term “significant” means not trivial or inconsequential but an effect that is potentially relevant to the site’s Conservation Objectives. The Conservation Objectives for each site are produced by Natural England, and are the objectives of management necessary to maintain the qualifying features in favourable condition. Maintenance implies restoration where the feature is currently in unfavourable condition.

A series of matrices have been created which seek to assess the following:

Task 1:

- Whether the policy is necessary for the conservation management of a European Site.
- If a ‘likely significant effect’ can be expected.
- What is the likely mechanism for impact and the feature/features affected?
- Is an Appropriate Assessment required?

Where an Appropriate Assessment is required then move to Task 2:

Task 2:

- Can it be ascertained it will not adversely affect the integrity of the European Site?
- Can it be carried out in a different way or be conditioned or restricted?
- What modifications to the policy/option are required?
- Can the modified policy/option be pursued without adversely affecting the integrity of the European Site?

These are set out in the following pages, under the Task 1 and Task 2 stages

Task 1 – Identifying whether a policy is likely to have a significant effect

*******NOTE PREFERRED OPTIONS RENUMBERING IN FINAL DC PREFERRED OPTIONS DOCUMENT: SEE SECTION 6*******

Policy	Necessary for conservation management of Natura 2000 site	Likely significant effect	European Site Affected: Possible Mechanism: Possible Feature Impacted:	Appropriate Assessment required?
1PO – Landscape Character	No	No	No mechanism as policy deals entirely with landscape issues	No
2PO – Biodiversity	No	No	Any impacts likely to be positive	No
3PO – Trees and Hedgerows	Yes	Yes	European Site Affected: Broads SAC Possible Mechanism: Policy does not take into account wetland restoration projects which may require removal of large areas of trees/ scrub. Possible Feature Impacted: Broads SAC1, 3, 4 and 5	Yes
4PO – Landscaping	No	No	No mechanism assuming such landscaping is not within Natura 2000 sites	No
5PO – Design	No	No	No mechanism as policy deals entirely with building design issues	No
6PO – Sustainable Design	No	No	No mechanism as policy deals entirely with building design issues	No
7PO – Neighbour Amenity	No	No	No mechanism	No
8PO – Water Resources	No	No	Policy already takes full and sufficient account of potential risks and impacts.	No
9PO – Development and Flood Risk Policy	No	No	Policy already takes full and sufficient account of potential risks and impacts.	No
10PO – Location of Development	No	No	Policy already takes full and sufficient account of potential risks and impacts.	No
11PO – Access and	No	No	No mechanism as the policy addresses possible concerns over impacts of new access.	No

Policy	Necessary for conservation management of Natura 2000 site	Likely significant effect	European Site Affected: Possible Mechanism: Possible Feature Impacted:	Appropriate Assessment required?
Highways policy				
12PO – Rights of Way	No	No	Assessment of no likely significant effect assumes that increased public access “where appropriate” precludes any potential disturbance impacts on SPA birds.	No
13PO – Climate Change and Energy Efficiency	No	No	No mechanism as policy deals entirely with building design issues	No
14PO – Creation of New Landscapes	No	No	Any impacts likely to be positive, e.g. enhancing green network	No
15PO – Waterways and Navigation	No	Yes	European Site Affected: Broadland SPA/ Broads SAC Possible Mechanism: Opening up of new navigation on existing waterbodies may cause adverse impacts e.g. human disturbance, clearing of channels, pollution, bank erosion, production and disposal of sediment. Possible Feature Impacted: Broadland SPA birds/ Broads SAC otter, habitats	Yes
16PO – Integrated waterspace management	No	No	Policy already takes full and sufficient account of potential risks and impacts.	No
17PO – Increased sediment input	No	No	Most sediment input to the Broads system comes from outside the Broads Authority area and unplanned bank erosion. Any increased sediment from the type of developments permitted within the Broads Authority area is likely to be insignificant in comparison.	No
18PO – Reuse and disposal of dredgings	No	No	Policy encourages reduction of impacts	No
19PO – Listed Buildings	No	No	No mechanism	No
20PO – Historic and Cultural assets	No	No	No mechanism	No
21PO – Conservation areas	No	No	No mechanism	No

Policy	Necessary for conservation management of Natura 2000 site	Likely significant effect	European Site Affected: Possible Mechanism: Possible Feature Impacted:	Appropriate Assessment required?
22PO – Sensitive areas	No	No	No mechanism	No
23PO – open space	No	No	No mechanism	No
24PO – Archaeology	No	No	No mechanism	No
25PO – Protection of existing local facilities	No	No	No mechanism	No
26PO- Policy on affordable housing	No	No	No mechanism	No
27PO – Policy on standards and planning obligations	No	No	No mechanism	No
28PO – The general location of sustainable tourism and recreation development	No	Yes	European Site Affected: Broadland SPA, Breydon Water SPA Possible Mechanism: Increased human disturbance (individually or cumulatively) from new developments in the open countryside Possible Feature Impacted: SPA bird populations, otter	Yes
29PO – New Community facilities	No	No	No mechanism	No
30PO – Holiday dwellings	No	No	No mechanism	No
31PO – New Residential Moorings	No	No	No mechanism	
32PO – New permanent moorings	No	No	New permanent moorings are unlikely to be proposed in areas where they may impact on Natura 2000 sites	No
33PO – New Visitor Moorings	No	Yes	European Site Affected: Broadland SPA Possible Mechanism: Increased human disturbance Possible Feature Impacted: SPA bird populations, otter	Yes
34PO – Mooring plots	No	No	No mechanism	No
35PO – Waterside sites in commercial non-	No	No	No mechanism	No

Policy	Necessary for conservation management of Natura 2000 site	Likely significant effect	European Site Affected: Possible Mechanism: Possible Feature Impacted:	Appropriate Assessment required?
residential use and boat yards				
36PO – Access to the Water	No	No	No mechanism	No
37PO – Bank protection, piling and quay heading	No	No	No mechanism, policy advocates sound approach to bank protection.	No
38PO – Protecting general employment	No	No	No mechanism	No
39PO – Employment diversification	No	No	No mechanism	No
40PO – Reuse of historic buildings	No	No	No mechanism	No
41PO – Buildings in the countryside without historic or architectural merit	No	No	No mechanism	No
42PO – Telecommunications and Renewable Energy Developments	No	No	Potentially harmful effects to SPA birds from renewable developments are well addressed within the policy.	No
43PO – Winter water storage	No	No	No mechanism	No
44PO – Development within settlements	No	No	No mechanism	No
45PO – Replacement dwellings in the countryside	No	No	No mechanism	No
46PO – Dwellings for staff at boatyards and other tourist or organised recreation	No	No	No mechanism	No

Policy	Necessary for conservation management of Natura 2000 site	Likely significant effect	European Site Affected: Possible Mechanism: Possible Feature Impacted:	Appropriate Assessment required?
facilities				
47PO – New agricultural and forestry dwellings	No	No	Assumes proposals will not come forward from inside European sites	No
48PO – Temporary mobile homes	No	No	No mechanism	No
49PO - Advertisements	No	No	No mechanism	No

Where Appropriate Assessment is required, move to Task 2

Task 2 - Assessing the possible impact and any mitigation measures that could reduce or remove the impact

Policy: European site(s): Possible Mechanism(s):	Can it be ascertained it will not adversely affect the integrity of the European Site	Can it be carried out in a different way or be conditioned or restricted?	Modification to original policy	Can it be ascertained that the modified proposal/policy will not adversely affect the integrity of the European Site
Policy: 3PO – Trees and Hedgerows European site(s): Broads SAC Possible Mechanism(s): Potential conflict with SAC conservation objectives	No	The policy can be amended to specify scrub and woodland removal for wetland restoration projects (which would be subject to AA in their own right) are not included.	Amend to read “Development and/ or works which would have an adverse effect on trees or hedgerows of landscape or wildlife importance will not be permitted, except where the biodiversity benefits from the proposal clearly outweigh the losses”	Yes

<p>Policy: 15PO – Waterways and Navigation European site(s): Broadland SPA/ Broads SAC Possible Mechanism(s): Opening up of new navigation on existing waterbodies may cause adverse impacts e.g. human disturbance, clearing of channels, pollution, bank erosion, production and disposal of sediment.</p>	No	The policy could emphasise more that there are risks as well as benefits from such schemes by recommending they are subject to full assessment.	Adjust policy to read “Proposals to restore or extend navigable waterspace, to create new water areas and provide by-pass channels, will be considered, subject to a detailed assessment of direct and diffuse impacts”.	Yes
<p>Policy: 28PO – The general location of sustainable tourism and recreation development European site(s): Broadland SPA, Breydon Water SPA Possible Mechanism(s): Increased human disturbance (individually or cumulatively) from new developments in the open countryside</p>	No	Given the expected increases in visitor/ tourist numbers from neighbouring districts and Eastern England, the policy could address potential issues between recreation and disturbance by including a provision for larger attractions to undertake detailed assessment of visitor impacts both in isolation and cumulatively with other developments.	Insert sentence to this effect.	Yes

Policy: 32PO – New Visitor Moorings European site(s): Broadland SPA, Breydon Water SPA Possible Mechanism(s): Increased human disturbance from “wild” moorings	No	Underline the importance of sensitive siting of “wild” moorings by specifying that all proposals must take biodiversity into account	Add sentence to specify that the location of wild moorings must take biodiversity considerations into account	Yes
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Summary

Some policies in the Preferred Options document may result in an adverse impact on the European sites in the district (see task 2 above), and will require minor amendment to emphasise consideration of issues relating to impacts on European sites. With the policy modifications outlined above, it should be possible to conclude no adverse effect from the plan on the integrity of any of the European sites both inside or outwith the district boundaries. The findings of this AA should be reflected in subsequent documents produced.

6. Redrafted Preferred Option policy numbering

The timetable leading up to consultation on the Preferred Options for DC policies was such that the AA and Sustainability Appraisal had to be commissioned and started before the Preferred Options were themselves agreed by Broads Authority members. Subsequent redrafting has meant there is a mismatch in numbering of the Preferred Option on the tables of the AA. This table below provides a cross match between the draft Preferred Option numbering used for the AA and the final numbering in the published document.

FINAL Preferred Option DC Policy numbering	DRAFT Preferred Option DC Policy Numbering used in AA	Preferred Option DC Policy Title
PO1	1PO	Character
PO2	2PO	Biodiversity and Geodiversity
PO3	3 PO	Trees and Hedgerows
PO4	4 PO	Landscaping Schemes
PO5	5 PO	Design
PO6	6 PO	Sustainable Design
PO7	13 PO	Climate Change and Energy Efficiency
PO8	7 PO	Amenity
PO9	8 PO	Water Recourses
PO10	9 PO	Development and Flood Risk
PO11	10 PO	Location
PO12	11 PO	Access and Highways
PO13	12 PO	Rights of Way
PO7	13 PO	Climate Change and Energy Efficiency
PO14	14 PO	Creation of New Landscapes
PO15	15 PO	Waterways and Navigation
DELETED	16PO	Merged with 15PO
PO16	17 PO	Increased Sediment Input
PO17	18 PO	Reuse and Disposal of Dredgings
PO18	19 PO	Listed Buildings
PO19	20 PO	Historic and Cultural Assets

FINAL Preferred Option DC Policy numbering	DRAFT Preferred Option DC Policy Numbering used in AA		Preferred Option DC Policy Title
PO20	21 PO		Conservation Areas
PO21	22 PO		Sensitive Areas
PO22	23 PO		Open Space
PO23	24 PO		Archaeology
PO24	25 PO		Protection of Existing Local Facilities and Services
PO25	26 PO		Affordable Housing
PO26	27 PO		Standards, Planning Obligations and Community Infrastructure
PO27	28 PO		The General Location of Sustainable Tourism and Recreation Development
PO28	29 PO		New Community Facilities
PO29	30 PO		Holiday Dwellings
PO30	32 PO		New Permanent Moorings
PO31	31 PO		New Residential Moorings
PO32	33 PO		New Visitor Moorings
PO33	34 PO		Mooring Plots
PO34	35 PO		Waterside Sites in Commercial Use and Boat Yards
PO35	36 PO		Access to the Water
PO36	37 PO		Bank Protection, Pilling and Quay Heading
PO37	38 PO		Protecting General Employment
PO38	39 PO		Employment Diversification
PO39	40 PO		Reuse of Historic Buildings
PO40	41 PO		Buildings in the Countryside without Historic or Architectural Merit
PO41	42 PO		Telecommunications and Renewable Energy Developments
PO42	43 PO		Winter Water Storage
PO43	44 PO		Residential Development within Settlements
PO44	45 PO		Replacement Dwellings in the Countryside

FINAL Preferred Option DC Policy numbering	DRAFT Preferred Option DC Policy Numbering used in AA		Preferred Option DC Policy Title
PO45	46 PO		Dwellings for Staff at Boatyards or other Tourist Accommodation
PO46	47 PO		New Agricultural and Forestry Dwellings
PO47	48 PO		Temporary Mobile Homes
PO48	49 PO		Advertisements
PO31	50 PO		New Residential Moorings