

# Habitats Regulations Assessment Screening Report for the Lincolnshire Wolds Area of Outstanding Natural Beauty Management Plan 2012-17

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1. **Summary**

The purpose of this report is to determine whether there is a need to carry out a full Appropriate Assessment of the Lincolnshire Wolds AONB Management Plan 2012-2017.

The Lincolnshire Wolds Area of Outstanding Natural Beauty (AONB) Management Plan for 2012-17 (Consultation Draft) was assessed in accordance with the Habitats Regulations to establish if it has any effects on nearby nature conservation areas of designated European Importance. These include: Special Areas of Conservation (SAC) including candidate SACs; Special Protection Areas (SPA), which together form the Natura 2000 network (NB marine locations of these designations are also called European Marine Sites (EMS); and also Ramsar Sites.

There are no designated European Nature Conservation Sites within the AONB. However, there are four designated sites lying up to 30 km from the AONB. Map 1 shows the locations of these.

They are:

3.3.1 Humber Estuary

3.3.2 Saltfleetby-Theddlethorpe Dunes and Gibraltar Point

3.3.3 The Wash & North Norfolk Coast

3.3.4 Inner Dowsing, Race Bank & North Ridge (candidate site).

These four were subject to detailed screening against the Objectives and Policies of the Management Plan.

A further seven Sites located further from Lincolnshire Wolds AONB, five of which are separated by major rivers, in different landscape areas and subject to the pressures associated with the development and activities of different local societies and economies were excluded from detailed screening.

Although the AONB Management Plan is written primarily to guide the management of the AONB, some of its effects and outcomes may have influence beyond the AONB. In particular a presumption against certain forms of development might increase pressure to accommodate that development outside the AONB.

There are two types of development or activities that are more likely to have effects outside or extend outside the AONB. The first relates to certain major infrastructure development and the second relates to tourism and recreation, activities that are promoted through the several market towns that surround the AONB. The latter could work for or against impacts on Natura 2000 and Ramsar sites. Visitor numbers might be increased regionally by implementation of the objectives and policies in the AONB Management Plan, with consequent increases in visitors to the nearby European Sites. Alternatively, promoting the conservation

messages and principles that relate to the AONB, might have the effect of raising wider awareness of conservation issues that might affect the European Sites, with the result that adverse impacts there are reduced.

A further possible effect was considered that involved the question of are there limited numbers of grazing stock -such that if their use increased in the Wolds it might deprive coastal wetlands in the Natura 2000 Sites of beneficial management through grazing.

The screening process concluded that an Appropriate Assessment of the Lincolnshire Wolds AONB Management Plan 2012-17 is unnecessary as its Objectives and Policies will, subject to recommended minor changes, have no significant adverse effects directly or indirectly on European Nature Conservation Sites in proximity to the AONB.

## **2. Introduction to the Lincolnshire Wolds AONB Management Plan and the Habitats Regulations**

The purpose of this report is to determine whether there is a need to carry out a full Appropriate Assessment of the Lincolnshire Wolds AONB Management Plan 2012-17.

### **2.1 Overview of the Lincolnshire Wolds AONB Management Plan 2012-2017**

Production of an AONB Management Plan is a statutory duty under the Countryside and Rights of Way Act 2000 for the local authorities collectively in the Lincolnshire Wolds Joint Advisory Committee (JAC). The Management Plan outlines the policies of the JAC for the management of the AONB and fulfilment of its primary statutory and other purposes (summarised) which are:

- to conserve and enhance the natural beauty of the AONB (primary purpose)
- maintain local distinctiveness
- enhance economic and social wellbeing
- work towards sustainability and adapt to and mitigate the effects of climate change
- work in partnership.

The Consultation Draft of the Management Plan for 2012-2017 sets out a series of Objectives and Policies that together seek to deliver a new Vision and overall purpose of the new Management Plan.

### **New 25 year vision**

The Lincolnshire Wolds is a unique landscape of national importance and comprises the only designated Area of Outstanding Natural Beauty in the East Midlands region. The AONB is 558 square kilometres and comprises a distinctive and cohesive rolling upland landscape. The area has a number of particularly important characteristics that combine to create its very special sense of place. These include its:

- unique physiography
- scenic, working landscape
- major archaeological resource
- valued cultural landscape.

The Lincolnshire Wolds will continue to be a vibrant living and working landscape through the primary influence of sustainable agriculture, forestry and land management. It will retain its unique and nationally important sense of place: an area of open rolling hills, dramatic views, farmed fields changing with the seasons, tranquil valleys, woodland, pasture, streams and attractive villages.

The Wolds natural and cultural heritage will be well known, enjoyed and widely respected by both residents and visitors. It will continue to provide a place of tranquillity and inspiration for those fortunate enough to visit the area, whilst meeting the economic, social and environmental needs of those who live and work there”.

The AONB Management Plan will seek to ensure that wherever possible all permitted developments will be of a type, scale and quality that can build and add value to the primary reason for the Lincolnshire Wolds AONB designation – namely the protection and enhancement of its natural beauty, including the special features that contribute to the area's high scenic quality.

A sustainable approach to ongoing and future planned management activity will be normal practice with an emphasis on integrated farming and land management providing a wide range of innovative solutions to tackling the issues of climate change mitigation and adaptation, carbon storage, food production, water quality and supply, recreation provision, and energy demands. Greater connectivity between landscapes and green infrastructure will help to provide and cater for an increasingly dynamic environment and help to contribute to a good quality of life for all.

The five key aims of the Management Plan are therefore to sustain and enhance:

- the Lincolnshire Wolds' natural beauty and its landscape character
- farming and land management in the Wolds as the primary activities in maintaining its character, landscape and biodiversity
- recreational, tourism and interpretive activities and opportunities appropriate to the area
- the economic and social base of the Wolds including the development and diversification of enterprises appropriate to the area
- partnerships between organisations, the local community, landowners and others with an interest in the Wolds

## **2.2 Habitats Regulations Assessment**

Articles 6(3) and 6(4) of the Habitats Directive [reference 1] require Appropriate Assessment to be carried out for plans and projects

that are likely to affect a Natura 2000 Site [reference 2] such as a Special Area of Conservation (SAC), a Special Protection Area (SPA) or a Ramsar Site.

Appropriate Assessment (AA) is a process that assesses the implications and potential effects of plans such as the Management Plan for an AONB on the conservation objectives of any of the Natura 2000 Sites, and determines whether or not policies or proposals will significantly affect the integrity of these objectives or the site as a whole. The process or stages of AA are outlined below. This report forms only the Screening stage.

### **Stages of Appropriate Assessment**

1. **Screening.** This determines whether the Management Plan is likely to have a significant affect on any European sites and whether a full AA is needed. Screening focuses on avoidance and mitigation of impacts.
2. **Appropriate Assessment.** This determines whether, in view of the sites conservation objectives, the plan would have a significant effect on the integrity of the site. The emerging Management Plan should be developed to ensure that significant affects on European sites are avoided. This will render Stages 3 and 4 unnecessary.
3. **Assessment of Alternative Solutions.** Where the Management Plan is assessed as having an adverse affect on the integrity of a site, alternatives should be examined. Alternatives that avoid adverse affects on European sites should be developed and considered from the earliest stages.
4. **Assessment where no alternative solutions remain and where adverse impacts remain.** Compensation measures are required for any adverse affects, and are permitted only where the plan would be necessary for imperative reasons of overriding public interest.

This screening report is intended to determine whether there is a need to carry out a full Appropriate Assessment of the Lincolnshire Wolds AONB Management Plan 2012 -2017 and its polices in relation to Natura 2000 Sites.

The local authority members of the Lincolnshire Wolds JAC, working collectively as the 'competent authority' have to satisfy themselves that in adopting the plan, there will be no significant adverse effect on any Natura 2000 Site.

The local authorities have liaised with Natural England regarding the Natura 2000 Sites to consider in this exercise.

### **2.3 Links to the Sustainability Appraisal of the Management Plan**

The Lincolnshire Wolds AONB Management Plan is also subject (through a separate report) to Strategic Environmental Assessment (SEA). This involves the systematic identification and evaluation of the impacts of a plan or programme on the environment. Furthermore, Sustainability Appraisal (SA) broadens the SEA to also address economic and social impacts in order to encompass all three strands of sustainable development.

There are shared elements and parallels between AA, SA and SEA since all three are processes for assessing and minimising the environmental and sustainability impacts of plans.

### **2.4 The AONB Management Plan in combination with other plans**

It is recognised that the Lincolnshire Wolds AONB Management Plan will be implemented in the context of changing spatial patterns and housing growth, as directed by the other local spatial strategies such as Local Development Frameworks (LDF). These are themselves subject to Appropriate Assessment. However, the AONB Management Plan does not propose any housing growth or development itself, and its policies promote conservation of the natural environment and sustainable use of it.

In addition, local authorities in whose areas the Lincolnshire Wolds AONB lies will become expected to produce and implement policies that are appropriate to and compatible with the AONB Management Plan.

LDF or previous Local Plan documents are in place or in preparation for East Lindsey District and West Lindsey District, the latter now part of the Central Lincolnshire LDF (in preparation); there are LDFs for North-East Lincolnshire and North Lincolnshire Unitary Authorities (North Lincolnshire does not include any of the designated AONB). There are also: a Minerals and Waste Plan; a Local Transport Plan and an Economic Strategy for Lincolnshire County and equivalent plans and strategies for NE & N Lincs.

In addition, the Environment Agency's River Basin Plans and Catchment Flood Management Plans are additional statutory plans that should have regard to the AONB Management Plan.

### **3. Habitats Regulations Assessment of the AONB Management Plan**

#### **3.1 European nature conservation sites in the vicinity of the Lincolnshire Wolds**

There are no designated Natura 2000 Sites within the Lincolnshire Wolds AONB. However, there are three designated and one candidate Natura 2000 Sites lying between 8 and 12 km at their closest points from the AONB. Map 1 shows the locations of these, see separate pdf.

The 30km band takes in significant proportions of the following four Natura 2000 Sites:

- 4 Humber Estuary
- 5 Saltfleetby-Theddlethorpe Dunes and Gibraltar Point
- 6 The Wash & North Norfolk Coast
- 7 Inner Dowsing, Race Bank & North Ridge (candidate site)

HRA Screening exercises undertaken for other AONB Management Plans do not generally give detailed consideration to Natura 2000 Sites as far away as 30km.

The last three Natura 2000 Sites listed above also lie within 30km of another AONB; that for the Norfolk Coast.

Nevertheless, the following Natura 2000 Sites are also located in the general region but are wholly more than 30km from the edge of the Lincolnshire Wolds AONB:

- 7.2 Hornsea Mere~
- 7.3 Lower Derwent Valley (Yorks)~
- 7.4 Skipwith Common~
- 7.5 Thorne Moor
- 7.6 Hatfield Moor
- 7.7 Grimsthorpe
- 7.8 Baston Fen

~For technical reasons it was not possible to show these three Sites north of the Humber on Map1.

### 3.2 The selection of Natura 2000 Sites likely to be influenced by the Lincolnshire Wolds AONB Management Plan 2012-2017, their interest features and current conditions

feature code	feature	Humber Estuary feature	condition	S-T Dunes & Gib Pt feature	condition	TW& NNC feature	condition	ID, RB&NR feature	condition
1095	Sea Lamprey	++							
1099	River Lamprey	++							
1110	sandbanks slightly covered by sea water all the time	+				++		++	
1130	estuaries	++							
1140	mudflats & sandflats not covered by sea water at low tide	++?				++			
1150	coastal lagoons	++				+			
1160	large shallow inlets and bays								
1170	reefs								
1310	<i>Salicornia</i> and annuals	+				++			
1330	Atlantic salt meadows	++				++			
1351	Harbour porpoise							++	
1355	Otter								
1364	Grey Seal	+						++	
1365	Common Seal								
1420	Mediterranean and thermo-Atlantic halophilous scrubs								
2110	embryonic shifting dunes	+		+					
2120	shifting dunes with <i>Ammophila</i>	+		++					
2130	fixed dunes and herbaceous vegetation	+		++					
2160	dunes with <i>Hippophae</i>	+		++					
2190	humid dune slacks			++					

**Table 1**

**European nature conservation sites: qualifying features [condition information not all available]**

++ feature that is a primary reason for site selection

+ qualifying feature but not a primary reason

? uncertainty in citation relating to above classification

There are some nearby European Sites that because they lie on the opposite side of a major estuary or river to the Lincolnshire Wolds AONB, are associated with different communities and are connected by separate or distant sections of road infrastructure, are very unlikely to be physically affected by changes to visitor numbers and disturbance associated with the implementation of the AONB Management Plan.

### **3.3 Key issues of concern for Natura 2000 Sites arising from the Lincolnshire Wolds AONB Management Plan 2012-2017 and the selection of Sites for detailed screening**

Although the AONB Management Plan is written primarily to guide the management of the AONB, some of its effects and outcomes may have influence beyond the AONB.

Development or activities in the AONB may have an effect on a Natura 2000 Site even though the site is not close. Developments or activities of that sort are likely to affect more distant locations through the atmosphere or hydrological systems such as drainage or groundwater.

Effects that occur on land are more likely to be associated with the policies in the AONB actually or by advocacy leading to the physical displacement of development or activities to locations outside the AONB and thus possibly closer to a Natura 2000 Site.

The one type of development that is more likely to have effects outside the AONB, because it is more likely to be developed there, is that concerning major infrastructure, associated perhaps most likely with transportation or energy supply.

The Management Plan seeks to influence tourism and recreation activities that enable the Lincolnshire Wolds to be appreciated. This influence might affect areas both within the AONB and outside, either additionally or subtractively. Tourism and recreation activities associated with the Lincolnshire Wolds take place and are promoted not only in the AONB but also in the surrounding settlements (shown on Map1) especially the market towns, some of which lie closer to the Natura 2000 Sites. This could either increase or reduce adverse effects on Natura 2000 Sites, some of which are in unfavourable (recovering) condition possibly due to disturbance associated with recreational activities. If potential visitor numbers are finite, the effect of the AONB Management Plan might be to provide alternative locations and activities that draw visitors away from sensitive Natura 2000 locations. On the other hand increased interest in nature and countryside as a result of the promotional work arising from the AONB Management Plan might result in increased visitor use and disturbance on Natura 2000 Sites.

An understanding of the extent to which the Lincolnshire Wolds acts as a tourism and recreation resource can be obtained from studies undertaken for Lincolnshire Tourism [reference 3].

Both Arkenford & Cambridge Model reports fail to dispel my premise: that by promoting visiting the Lincolnshire Wolds, it is unlikely that significant additional visitor pressures, unwelcome by way of increasing adverse, disturbance effects, would result on the coastal areas that are Natura 2000 Sites.

A second possible effect of the Management Plan is to influence land uses that require or produce a limited resource and therefore altering the availability of that resource to the (beneficial) management of a Natura 2000 Site.

Of the eleven Natura 2000 Sites referred to so far only four have been chosen to include in the detailed screening exercise against the Management Plan Objectives and Policies. These are the four nearest to the Lincolnshire Wolds AONB, for the following reasons.

- The Sites at Baston Fen and Grimsthorpe are both small and distant from the Lincolnshire Wolds. Thus they are unlikely to be affected by or affect infrastructure development in relation to the Lincolnshire Wolds and also their nature and location is unlikely to significantly affect the way that the AONB influences visitor pressure on the Natura 2000 Sites nearer to it.
- The Sites at Thorne Moor and Hatfield Moor do not contain characteristics similar to any in the Lincolnshire Wolds. They are therefore likely to be visited in order to experience their individual senses of place. They lie at distance to the Lincolnshire Wolds and on the other side of the River Trent. The River Trent, here near its mouth/confluence forms a major barrier to land-based infrastructure and is the main influence on location of development and intensity of visitor pressure. They and their management can therefore be treated as having little connection and exchange of effects with the management of the AONB.
- The Sites at Skipwith Common, Lower Derwent Valley and Hornsea Mere lie again at distance and on the other side of the River Humber to the Lincolnshire Wolds. The River Humber acts as an even greater barrier to land-based infrastructure and visitor exchange to the River Trent. So the same reasoning can be applied to exclude the need for detailed screening as was for the Natura 2000 Sites at Thorne & Hatfield Moors.

The detailed screening exercise therefore looks at the effect of Objectives & individual Policies on the overall area of each of the following Natura 2000 Sites:

- Humber Estuary
- Saltfleetby-Theddlethorpe Dunes and Gibraltar Point
- The Wash & North Norfolk Coast
- Inner Dowsing, Race Bank & North Ridge (candidate site)

**4. Lincolnshire Wolds AONB Management Plan HRA Screening Matrix showing:**

**Management Plan 2011-2017 Objectives and Policies considered in relation to effects on Natura 2000 Sites within 30km**

Key to effects

<b>NLSE</b>	no likely significant adverse effect(s) or possible beneficial effect(s)
<b>LSE</b>	likely significant effect(s) – a likely significant effect on the site’s conservation objectives requiring modification or dropping of the Objective
<b>U</b>	uncertain - cannot determine if NLSE or LSE (see above) so <u>may</u> require modification or dropping of the Objective/Policy

<b>Natura 2000 Site:</b>		<b>Humber Estuary SAC+</b>	<b>Saltfleetby-Theddlethorpe Dunes &amp; Gibraltar Point SAC+</b>	<b>The Wash &amp; North Norfolk Coast SAC+</b>	<b>Inner Dowsing, Race Bank &amp; North Ridge cSAC</b>
	<p align="center"><b>Natura 2000 Site Conservation Objectives</b> Summary of character and vulnerability</p>	<p>River, estuary, mud and sand flats, lagoons, salt marshes, beaches, dunes freshwater wetlands, migrant birds, grey seal. Human activities, construction, dredging, recreation &amp; access, climate change, sea level rise, diffuse pollution.</p>	<p>Salt marshes, beaches, dunes, freshwater wetlands, birds. Sedimentation changes, recreation &amp; access.</p>	<p>Sea inlet, rivers, estuaries, mud and sand flats, lagoons, salt marshes, migrant and breeding birds, common seal. Coastal squeeze (human activities &amp; sea-level rise), sedimentation changes, shellfishery issues, construction.</p>	<p>Shallow marine geomorphology and reefs. Sedimentation changes, dredging, construction.</p>
<b>Lincolnshire Wolds AONB Management Plan 2011-2017</b>					

<b>Objective</b>	<b>Policy</b>				
<b>Natural Heritage – Biodiversity BO</b> To protect, enhance and restore where appropriate the biodiversity of the Lincolnshire Wolds AONB, aiding the development and relevant delivery of the Lincolnshire Biodiversity Action Plan.	<b>BP1</b> To survey and monitor key habitats and species within the AONB in line with Lincolnshire and UK Biodiversity Action Plan targets and other national aspirations.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>BP2</b> To develop and promote a landscape scale approach to species and habitat creation, restoration and conservation, helping to develop resilience to future climate change through increased habitat linkages and networks.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>BP3</b> To support and encourage agricultural guidance and good practices that protect, enhance and restore wildlife habitats across the AONB.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>BP4</b> To develop and promote general awareness and appreciation of the wildlife of the AONB and maximise the benefits with wider socio-economic benefits.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Biodiversity - Meadow, Pasture and Wet Grassland GO</b> To manage and	<b>GP1</b> To help maintain, enhance and where appropriate restore/extend grasslands of	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

increase the area and quality of wildlife-friendly grasslands across the AONB, targeting areas close to watercourses, important road verges, archaeological sites, historic parkland and settlements.	high wildlife and landscape value.				
	<b>GP2</b> To raise community awareness of the rich natural and cultural heritage of the Wolds' grassland.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>GP3</b>  To support initiatives to encourage grazing of less productive grasslands, including calcareous grassland.	<b>U</b>	<b>U</b>	<b>U</b>	<b>NLSE</b>
	<b>GP4</b>  To promote to land managers the additional benefits of good grassland management including carbon sink, climate change and flood alleviation impacts.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Biodiversity - Grass Verges and</b>	<b>VLP1</b> To help maintain, enhance and where	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

<p><b>Green Lanes VLO</b> To retain, restore and encourage positive management of the distinctive grass verges along the AONBs roadsides and green lanes.</p> <p>See LBAP FG29-31</p>	<p>appropriate restore/extend grass verges for their wildlife and landscape value.</p>				
	<p><b>VLP2</b> To raise awareness and local engagement in the natural and cultural heritage of grass verges and their contribution to green infrastructure and climate change adaptation.</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<p><b>Biodiversity - Woodlands, Beech Clumps and Traditional Orchards WBO</b> To protect, enhance, and extend where appropriate the woodland and tree cover within the AONB, maximising their contribution to the AONB by integrating landscape, biodiversity and</p>	<p><b>WBP1</b> To reinforce the existing pattern of woodland, seeking to increase the area of native broadleaved woodland (including wet woodland), accepting limited non-native planting for climate change adaptability.</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<p><b>WBP2</b> To re-establish complementary habitats adjacent to woodlands. (See also Sections 4.2.2 Meadow, Pasture and Wet Grassland and 4.2.5 Hedgerows and Landmark Trees)</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<p><b>WBP3</b> To record the extent and location of small ancient woodlands as part of an integrated digital database for the Lincolnshire Wolds woodlands.</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

socio-economic benefits.	<b>WBP4</b> To encourage and support woodland business schemes within the AONB.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>WBP5</b> To establish the extent and quality of traditional orchards and encourage suitable restoration, creation and management.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Biodiversity - Hedgerows and Landmark Trees HTO</b> To protect, enhance and increase, where appropriate, the hedgerows and landmark trees in the AONB.	<b>HTP1</b> To help record, maintain, and where appropriate restore all species-rich and ancient hedgerows and encourage planting and management of hedgerows and trees to benefit landscape and habitat connectivity. (See also Section 4.2.4 Woodlands and Beech Clumps)	<b>U</b>	<b>U</b>	<b>U</b>	<b>NLSE</b>
	<b>HTP3</b> To raise awareness of the importance of hedgerows and landmark trees for wildlife, landscape and cultural values and encourage future community engagement.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Biodiversity - Rivers, Streams and Ponds</b>  <b>RSPO</b>	<b>RSPP1</b> To maximise the extent of low-input land management adjacent to all rivers and streams and utilise floodplains to minimise impact of flooding in residential areas. (See also Section 4.2.7 Arable Farmland)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>RSPP2</b> To rehabilitate streams and rivers to enhance their biodiversity where	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

To improve, where appropriate, the natural environment of the river and stream catchments and their associated wetland habitats.	appropriate and consistent with flood defence and flood risk requirements				
	<b>RSPP3</b> To raise community awareness and where possible, community involvement of the rich diversity of water habitats within the Wolds and how their actions impact upon this resource. (See also Section 5.2 Thriving Communities)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>RSPP4</b> To establish current number, quality and distribution of ponds and lakes.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>RSPP5</b> To encourage the enhancement of existing ponds, lakes and wetlands for biodiversity, landscape and wider socio-economic gains.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Biodiversity - Arable Farmland</b>	<b>RSPP6</b> To seek to maintain groundwater levels and their seasonal fluctuations wherever possible to safeguard rivers, streams, springs and blow-wells sufficient to retain characteristic wildlife communities.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>AFP1</b> To encourage maximum take-up of agri-environment scheme options that provide enhanced conditions for arable farmland wildlife.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>AFP2</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

<b>AFO</b>  To improve the abundance and diversity of characteristic farmland wildlife within the commercially farmed landscape	To improve awareness of commercial farming's 'good practices' that bring additional wildlife and landscape benefits.				
	<b>AFP3</b> To encourage surveys to improve information on distinctive arable wildlife.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Earth Heritage - Geodiversity GDO</b> To protect and enhance the geological and geomorphological features of the AONB for enjoyment, education and research.	<b>GDP1</b> To work with partners and landowners to safeguard and improve the intrinsic interest of geological and geomorphological sites, including improved access. (See also Section 6.3 Access, Recreation and Tourism)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>GDP2</b> To increase awareness and understanding of the geological and geomorphological interest through general and site specific interpretation. (See also Section 6.2 Interpretation)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Earth Heritage - Soils SO</b> To protect and enhance the soil resource for water protection, flood management,	<b>SP1</b> To work with partners and landowners to safeguard and improve the soil resource, anticipating future pressures from climate change.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

agricultural management and carbon storage					
<b>Archaeology AO</b> To protect and enhance archaeological and historic features within the AONB, preventing further loss or damage	<b>AP1</b> To encourage and support research projects to help increase understanding of the Wolds' heritage, identifying sites of key importance and promoting better understanding of the complexity of risk, particularly climate change.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>AP2</b> To raise awareness of archaeological heritage in the Wolds, working with farmers, landowners, land managers, utility companies and relevant contract workers to support positive management.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>AP3</b> To increase and enhance appropriate public access and interpretation to sites of archaeological and historic interest, in consultation with landowners. (See also Sections 5.1 Farming in the Wolds, 5.2 Thriving Communities, 6.2 Interpretation and 6.3 Access, Recreation and Tourism)	<b>U</b>	<b>U</b>	<b>U</b>	<b>NLSE</b>
<b>Built Heritage BHO</b> To protect and enhance the historic and locally	<b>BHP1</b> To work with property owners, residents, owner occupiers and developers to encourage sympathetic design and management of buildings.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

distinctive character of rural settlements, buildings and features within the AONB. (See also Section 7.1 Planning)	<b>BHP2</b> To raise awareness of the built heritage in the Wolds and increase understanding of its contribution to the AONB.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>BHP3</b> To encourage and support sympathetic repair and sustainable re-use of redundant buildings for uses directly supportive of the local economy encouraging use of local materials.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>BHP4</b> To encourage and support innovative new construction that uses local material/design and takes inspiration from local distinctiveness and character.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Farming in the Wolds</b> <b>FWO</b> To acknowledge and promote sustainable farming as a key activity in maintaining the Wolds' landscape character and other natural and heritage assets.	<b>FWP1</b> To develop and promote agricultural 'good practice' to conserve and enhance the natural beauty and landscape character of the Wolds.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>FWP2</b> To monitor and influence changes in regional, national and EU agriculture policy to bring benefits to farmers in the Wolds.	<b>U</b>	<b>U</b>	<b>U</b>	<b>NLSE</b>
	<b>FWP3</b> To encourage and support initiatives to sustain livestock farming in the AONB. (See also Section 4.2.2 Meadow, Pasture and Wet Grassland)	<b>U</b>	<b>U</b>	<b>U</b>	<b>NLSE</b>

	<p><b>FWP4</b> To support farm diversification schemes appropriate to the AONB and which accord with planning policy. (see also Section 7.1 Planning)</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<p><b>FWP5</b> To seek to maintain traditional rural activities that can protect and enhance the landscape. (See Section 5.2 Thriving Communities)</p>	<b>U</b>	<b>U</b>	<b>U</b>	<b>NLSE</b>
	<p><b>FWP6</b> To raise awareness within the farming community of the growing issues of climate change, sustainable energy and carbon management</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<p><b>Thriving Communities TCO</b> To support and promote partnership activity to help safeguard and enhance the prosperity and well-being (quality of life) of communities within the Wolds AONB, ensuring the Wolds remain a place to live, work,</p>	<p><b>TCP1</b> To foster safe, vibrant and inclusive communities, working with relevant agencies to support local businesses and communities, encouraging both innovation and wider good practice. (See also Sections 4.2.4 Woodlands and beech Clumps and 5.1 Farming in the Wolds)</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<p><b>TCP2</b> To encourage measures to reverse the declines in rural services and facilities and promote healthier lifestyles.</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<p><b>TCP3</b> To encourage existing and new businesses to have a high regard for</p>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

invest and visit whilst meeting the needs of this unique landscape. (See also Section 7 Sustaining the Wolds)	environmental sustainability especially in the context of the AONB.				
	<b>TCP4</b> To sensitively utilise the Wolds as a recreational resource, in particular promoting accessible 'green infrastructure' close to communities within and adjacent to the AONB. (See also Sections 4.2.2 Meadow, Pasture and Wet Grassland, 4.2.4 Woodlands and Beech Clumps and 6 Discovering the Wolds)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Interpretation – Awareness raising IO</b> To raise the profile of the AONB through increasing visitors' and residents' enjoyment of its special qualities (as guided by the Lincolnshire Wolds Interpretation Strategy – lose?). (See also Sections 5.2 Thriving Communities, 6.3 Access, Recreation and Tourism and	<b>IP1</b> To provide visitors and residents with a greater understanding and appreciation of what makes the Lincolnshire Wolds a special place, encouraging interpretation facilities and services that can be utilised by all.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>IP2</b> To strengthen the profile of the AONB by highlighting the area's unique landscape character and sense of place to the general public.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>IP3</b> To encourage residents to become actively involved in the interpretation and promotion of their area for visitors.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

7.2 Transport in the Wolds)					
<b>Access, Recreation and Tourism</b> <b>ARTO</b> To develop, promote and seek implementation of a wide range of access, recreation and tourism initiatives appropriate to the Lincolnshire Wolds AONB.	<b>ARTP1</b> To maximise access opportunities for all visitors and residents of the AONB, improving provision for quiet recreation. (See also Sections 4.2.2 Meadow, Pasture and Wet Grassland, 4.2.4 Woodlands and beech Clumps, 5.1 Farming in the Wolds and 5.2 Thriving Communities)	<b>U</b>	<b>U</b>	<b>U</b>	<b>NLSE</b>
	<b>ARTP2</b> To provide co-ordinated, accurate and up-to-date information on the access, recreation and tourism opportunities within the Wolds AONB. (See also Section 6.2 Interpretation)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>ARTP3</b> To develop joint promotion and marketing initiatives to raise the profile of the AONB, including utilising the surrounding market towns as gateways to the Lincolnshire Wolds. (See also Sections 5.1 Farming in the Wolds and 6.2 Interpretation)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>ARTP4</b> To identify gaps in current access, recreation and tourism provision and support new measures and good practice to improve the infra-structure where compatible with the AONB. (See also Section 7 Sustaining the Wolds)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

<p><b>Planning and Development Management PO</b> To seek to ensure that development plans and planning guidance consistently recognise and uphold the primary purpose of the Lincolnshire Wolds AONB designation – the protection and enhancement of its natural beauty and special character. (See also Sections 4.4.2 Built heritage and 5 Living and Working in the Wolds)</p>	<p><b>PP1</b> To protect and enhance local character and distinctiveness in the highest of quality design for new development and re-development.</p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>
	<p><b>PP2</b> To encourage and support the sensitive conversion of traditional buildings to new viable uses to support local businesses and communities.</p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>
	<p><b>PP3</b> To help support planning policies for affordable housing for local people and key workers, subject to need and where consistent with AONB objectives and LA planning policies.</p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>
	<p><b>PP4</b> To encourage landowners to come forward with land that may be suitable for the development of small scale affordable housing.</p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>
	<p><b>PP5</b> To minimise damage to the AONB landscape as a result of mineral working and associated activity.</p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>
	<p><b>PP6</b> Promote awareness and encourage consideration of the impact of adjacent development on the views to and from the AONB.</p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>	<p><b>NLSE</b></p>

	<b>PP7</b> To recognise and protect the AONBs night skies and general tranquillity through ensuring future development minimises impact upon light and noise levels.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>PP8</b> To ensure a general presumption against medium-large scale wind turbines within and adjacent to the AONB.	<b>U</b>	<b>U</b>	<b>U</b>	<b>U</b>
	<b>PP9</b> To support general waste reduction measures and recycling initiatives that are in accordance with the special requirements of the AONB.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>PP10</b> To ensure that where larger scale development must proceed within or adjacent to the AONB, because of other national interests, the highest regard is placed on minimising any impacts upon the primary purpose of the designation – the area’s ‘natural beauty’.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Transport in the Wolds TWO</b> To encourage and support the development and promotion of a sustainable and fully integrated	<b>TWP1</b> To encourage integrated public and community-based transport schemes that can help to improve the links between communities within the AONB and the surrounding market towns. (See also Sections 5.2 Thriving Communities and 6.2 Interpretation)	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>TWP2</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

transport network which respects the AONB landscape and character and addresses local community and visitor needs.	To support and encourage traffic management that will promote safe and attractive walking, cycling, and riding in the AONB.				
	<b>TWP3</b> To encourage transport infrastructure improvements to support appropriate tourism development, ensuring schemes are sympathetic to the landscape and character of the AONB.	<b>U</b>	<b>U</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>TWP4</b> To encourage a consistent approach to the use of road signage, furniture, and maintenance to promote and respect the character of the AONB.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>TWP5</b> To support and encourage the development of an integrated and well maintained public rights of way network, maximising the opportunities for achieving access for all.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Climate Change and Energy CCO</b> To seek to develop and implement a long-term climate change strategy to help safeguard the	<b>CCP1</b> To establish, monitor and review key indices for monitoring and possible effects of climate change.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>CCP2</b> To develop practices that promote a sustainable landscape approach to tackle and respond to climate change pressures	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

Lincolnshire Wolds AONB, recognising and responding to the key local pressures through effective adaptation and mitigation.	through a range of mitigation and adaptation measures.				
	<b>CCP3</b> To support and develop practices that promote healthy, well-connected and managed landscapes and ecosystems resilient and flexible to the effects of climate change.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>CCP4</b> To encourage and promote innovative low carbon energy reduction/generation schemes that are conducive to the requirements of the AONB designation and complement local landscape character.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
<b>Monitoring MO</b> To monitor the Management Plan activities and condition of the Lincolnshire Wolds AONB.	<b>MP1</b> To monitor the performance of the action plan.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>
	<b>MP2</b> To monitor the condition of the AONB.	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>	<b>NLSE</b>

## 5. Possible effects and measures for their mitigation

A great majority of the Objectives and Policies are judged to have No Likely Significant (Adverse) Effect on any of these four Natura 2000 Sites parts of which lie up to 30km from the AONB.

However, the following Objectives and Policies are judged to have an Uncertain Effect on these four Natura 2000 Sites. These are effects that could go either way: adverse or beneficial. Through simple changes to their message and scope the Objectives and Policies could be reworded so as to have No Likely Significant (Adverse) Effects. They are discussed further below.

GP3 - grassland management - affecting Humber Estuary (HE), Saltfleetby-Theddlethorpe Dunes & Gibraltar Point (STD&GP) and The Wash & North Norfolk Coast (TW&NNC)

See also FWP 2, 3 & 5 below

HTP1 – planting and management of trees and hedgerows – affecting HE, STD&GP and TW&NNC

To avoid advice that might be applied in inappropriate circumstances, note that isolated trees and hedgerows ought not to be planted in wetlands important for their wildfowl and wader breeding populations as they might increase undesirable predator numbers and opportunity.

AP3 – archaeology and visiting – affecting HE, STD&GP and TW&NNC

Promoting visiting locations for their history and archaeology should also include promotion of respect for wildlife and the Countryside Code.

FWP 2, 3 & 5 – farming and grassland management – affecting HE, STD&GP and TW&NNC

Consideration should be given to whether there is a finite resource of grazing stock and/or a ceiling for production of food and other products from these animals, locally or nationally. If so, promoting this policy in the AONB might deprive these Natura 2000 Sites of grazing animals, where in the coastal grazing marshes and saltmarshes grazing has the important beneficial effect of maintaining and enhancing biodiversity. Suggest rewording to encourage new stock in the Wolds and not their redistribution from coastal locations.

ART1 – access, recreation and tourism – affecting HE, STD&GP and TW&NNC

Promoting increased access can have negative effects on wildlife, especially at certain times of year; yet at the same time increased environmental/ecological awareness can be achieved by drawing visitors' attention to good practice. Please ensure in all promotion of these activities that the Countryside Code and individual Good Practice Guides are adhered to.

PP8 – planning and development management – affecting HE, STD&GP, TW&NNC and IDR&NR

A presumption against development such as windfarms in the AONB might increase the likelihood of proposals for them in coastal locations or at sea in or near to Natura 2000 Sites. Consider if this policy can be reworded to give a “wider protected area” scope.

TW3 – transport – affecting HE and STD&GP

Transport infrastructure development, whether sustainable or not, associated with the Wolds might have an effect on these two Natura 2000 Sites.

In general, promoting to local residents, businesses and visitors the conservation messages and principles that relate to the AONB might have the effect of raising wider awareness of conservation issues and that might bring beneficial effects to the Natura 2000 Sites as well, in terms of development, uses and visitor pressures. As a result adverse impacts may be more widely reduced. Key to this success might be more information on the wide variety of things that make (protected) locations special.

## **6. Conclusion**

A small number of Policies (8 out of 76 - guesstimate) have been classified through screening as “Uncertain” and proposals are made by which these uncertain effects can be clarified and adverse effects mitigated.

For the majority of Policies (68 out of 76 - guesstimate) screening has concluded No Likely (Adverse) Effects on the four Natura 2000 Sites in closest proximity to the Lincolnshire Wolds AONB.

Subject to minor changes that can be made through the Public Consultation Stage of the AONB Management Plan, this screening process concludes that an Appropriate Assessment of the Lincolnshire Wolds AONB Management Plan 2012-17 is unnecessary as its Objectives and Policies will have no significant adverse effects directly or indirectly on Natura 2000 Sites in proximity to the AONB.

## **7. References**

1 Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora

2 Natura 2000 sites are those identified as sites of Community importance under the Habitats Directive or classified as Special Protection Areas (SPAs) under the Birds Directive 79/409/EEC

3 Lincolnshire Tourism studies: (a) Report to Lincolnshire tourism by Arkenford Ltd 2009; (b) Visit Lincolnshire Press Release 17<sup>th</sup> August 2010 "Value of Tourism in Lincolnshire reaches £971m; (c) Lincolnshire Tourism Model 2003 The Wolds Summary Report Heart of England Tourism Geoff Broom Associates March 2006

## **8. Glossary**

### **To follow**

## **Appendix 1**

### **AONBs in the regional context**

Lincolnshire Wolds

<http://www.aonb.org.uk/wba/naaonb/naaonbpreview.nsf/Web%20Default%20Frameset?OpenFrameSet&Frame=Main&Src=%2Fwba%2Fnaaonb%2Fnaaonbpreview.nsf%2F%24LU.WebHomePage%2F%24first!OpenDocument%26AutoFramed>

Norfolk Coast

<http://www.aonb.org.uk/wba/naaonb/naaonbpreview.nsf/Web%20Default%20Frameset?OpenFrameSet&Frame=Main&Src=%2Fwba%2Fnaaonb%2Fnaaonbpreview.nsf%2F%24LU.WebHomePage%2F%24first!OpenDocument%26AutoFramed>

## **Appendix 2**

### **List of Natura 2000 Sites and sources of further information on European/International Nature Conservation Sites# in the vicinity of the Lincolnshire Wolds**

Nature on the Map guide to sites

[http://www.natureonthemap.naturalengland.org.uk/map.aspx?m=int\\_sites](http://www.natureonthemap.naturalengland.org.uk/map.aspx?m=int_sites)

#These sites are identified first on being SAC (SAC+ if other designations (SPA and/or Ramsar) apply), then as SPA; none of these are Ramsar only)

*The four closer sites*

Humber Estuary SAC+

<http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0030170>

The Wash & North Norfolk Coast SAC+

<http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0017075>

Inner Dowsing, Race Bank & North Ridge cSAC

[http://jncc.defra.gov.uk/pdf/idrbnr\\_sacsad\\_v5\\_0.pdf](http://jncc.defra.gov.uk/pdf/idrbnr_sacsad_v5_0.pdf)

Saltfleetby & Theddlethorpe Dunes and Gibraltar Point SAC+

<http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0030270>

*further sites*

Thorne Moor SAC+

<http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0012915>

Hatfield Moor SAC

<http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0030166>

Grimsthorpe SAC

Baston Fen SAC

Hornsea Mere SPA

Lower Derwent Valley SAC+

Skipwith Common SAC

### **Appendix 3**

#### **Selected Natura 2000 Sites: general character\* and vulnerability\*\***

for first three sites listed, derived from:

\* JNCC site webpage

\*\*Natura 2000 Standard Data Form

#### **Humber Estuary ref UK0030170**

- SAC
- SPA
- Ramsar Site

#### **General site character**

Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins) (94.89%)

Salt marshes. Salt pastures. Salt steppes (4.38%)

Coastal sand dunes. Sand beaches. Machair (0.38%)

Bogs. Marshes. Water fringed vegetation. Fens (0.35%)

#### **Vulnerability**

The Humber Estuary is subject to the impacts of human activities (past and present) as well as ongoing processes such as sea level rise and climate change. Management intervention is therefore necessary to enable the estuary to recover and to secure the ecological resilience required to respond to both natural and anthropogenic change. Key issues include coastal squeeze, impacts on the sediment budget, and geomorphological structure and function of the estuary (due to sea level rise, flood defence works, dredging, and the construction, operation and maintenance of ports, pipelines and other infrastructure), changes in water quality and flows, pressure from additional built development, and damage and disturbance arising from access, recreation and other activities.

Coastal squeeze is being addressed through the development and implementation of the Humber Flood Risk Management Strategy. All proposals for flood defence, development, dredging, abstractions and discharges which require consent from any statutory body, and land use plans which may have impacts upon the site are subject to assessment under the Conservation (Natural Habitats, &c.) Regulations 1994 (the "Habitats Regulations"). Diffuse pollution will be addressed through a range of measures including implementation of the Waste Water Framework Directive and Catchment Sensitive Farming initiatives. Other issues are addressed via a range of measures including regulation of on-site land management activities and implementation of the Humber Management Scheme, developed by all relevant statutory bodies to assist in the delivery of their duties under the Habitats Regulations.

### **Saltfleetby-Theddlethorpe Dunes and Gibraltar Point**

ref UK0030270

- SAC
- Ramsar Site (Gib only?)

#### **General site character**

Salt marshes. Salt pastures. Salt steppes (35%)

Coastal sand dunes. Sand beaches. Machair (63%)

Bogs. Marshes. Water fringed vegetation. Fens (2%)

#### **Vulnerability**

Saltfleetby-Theddlethorpe Dunes and Gibraltar Point are two separate coastal complexes. They both contain a complex of habitats ranging from dry 'grey' dunes down to saltmarsh. The sites are both vulnerable to changes in sedimentation rates along the coast caused by coastal protection schemes further north.

The sites are both visited by large numbers of tourists and disturbance and damage from inappropriate access is a problem.

The majority of these sites are declared as National Nature Reserves.

### **The Wash & North Norfolk Coast** ref UK0017075

- SAC
- SPA
- Ramsar Site

### **General site character**

Marine areas. Sea inlets (51%)

Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins) (46%)

Salt marshes. Salt pastures. Salt steppes (3%)

### **Vulnerability**

The Wash and North Norfolk Coast is one of the most diverse coastal systems in Britain. This diversity is largely dependent on physical processes that dominate the natural system; consequently the vulnerability of habitats is linked to changes in the physical environment. The intertidal zone is being threatened from coastal squeeze as a result of land-claim and coastal defence works as well as sea-level rise and storm-surges.

Changes in the sediment budgets also threaten these habitats. At present activities which alter the sediment characteristics include dredging and coastal protection works. Current management is underway to address concerns over declines in shellfisheries.

The area supports internationally important seal populations that are vulnerable to disturbance and disruption of the marine ecosystem upon which they depend. Such issues should be addressed through the Marine Scheme of Management.

### **Inner Dowsing, Race Bank & North Ridge**

- candidate SAC

#### **Site summary** (from SAC candidate site JNCC/Natural England/Defra submission document version 5.0)

The Inner Dowsing, Race Bank and North Ridge site is located off the south Lincolnshire coast in the vicinity of Skegness, extending eastwards and north from Burnham Flats on the North Norfolk coast, occupying The Wash Approaches. Water depths are generally shallow and mostly less than 30m below chart datum. The area encompasses a wide range of sandbank types (banks bordering channels, linear relict banks, sinusoidal banks with distinctive 'comb-like' subsidiary banks) and biogenic reef of the worm *Sabellaria spinulosa*. These features lay almost entirely on the glacial till of the Bolders Bank Formation which is responsible for much of the evident surface topography, especially glacial mounds, channels and hollows (Cooper *et al*, 2008). The group of banks within the Wash Approaches are generally between 15 to 20km long and 1.5 to 3km wide. They arise from the basal layers by 7 to 12m with crest heights generally less than 5m BCD. The sedimentary component of the banks is fine to medium sands, predominantly being derived from coastal erosional processes over the last 5,000 years following the last glacial retreat and marine inundation (Cooper *et al*, 2008). Inner Dowsing in the west of the site is a sandbank comprising coarse sand with some areas of gravel and possessing a distinctive elongate shape. It is thought to be a relict bank sitting on a linear basement layer carved by

glacial processes (ENTEC UK Ltd, 2008a). The tidal currents in the area maintain the feature and probably shape the veneer of sand bedforms in the overfalls at the northern end of Inner Dowsing. The Race Bank/North Ridge/Dudgeon Shoal sandbank system is a good example of a sinusoidal sandbank that also has a complex pattern of smaller sandbanks associated with it. These smaller features form a unique 'comb-like' pattern running east from the main line of the sandbank ridges. The tops of the sandbanks are characterised by low diversity communities dominated by polychaete worms and mobile amphipod crustaceans. The areas between these main sandbank features are composed of mixed sand and gravelly sands, predominantly as veneers over glacial tills (Cooper *et al*, 2008). They are part of the wider oceanographical system that feeds the flood tide into the Wash and over the sandbanks at the entrance to the Wash. In these areas a diverse mosaic of biotopes occur dominated by the ascidian *Molgula* sp. along with a number of nemertean worms and polychaetes of the genera *Pomatoceros*, *Caulleriella*, *Polycirrus*, *Pholoe*, and *Lumbrineris*. Abundant *Sabellaria spinulosa* agglomerations have consistently been recorded within the boundary of the cSAC (Foster-Smith & Hendrick, 2003). Survey data indicate that reef structures are concentrated in certain areas of the site, with a patchy distribution of crust-forming aggregations across the site. The main areas of *S. spinulosa* reef are found along the Lincolnshire coast south of Skegness at Lynn Knock and Skegness Middle Ground (south-east part of the site); just north of Docking Shoal bank; and associated with the southern edge of Silver Pit (in the northern area of the site) (Woo, 2008; Foster-Smith & Hendrick, 2003; Brutto, 2009; Limpenny *et al*, 2010).

Typically in the environs of The Wash and its approaches areas of high *S. spinulosa* density support attached epifauna of bryozoans, hydroids, sponges and anemones. Additional fauna also includes polychaetes, squat lobsters, crabs, the common lobster *Homarus gammarus* and notably the commercially exploitable pink shrimp *Pandalus montagui*. Reefs formed by *S. spinulosa* allow the colonisation by other species not associated with adjacent sediment habitats. The habitat creates a diverse community of epifaunal and infaunal species, increasing biomass and possibly supporting higher trophic interactions (foodweb links) (Hendrick, 2007; Pearce, 2007). Diverse *S. spinulosa* reef communities are found on the flanks and toes of sandbanks and associated with bedforms along troughs and swales. In other parts of the site, diverse communities are found associated with the sand mason worm *Lanice conchilega* and the tube-building amphipod *Ampelisca* sp., or as part of a hydroid / bryozoan turf on gravelly sediments (Foster-Smith & Hendrick, 2003; Brutto, 2009).