

Site Improvement Plan

Deben Estuary

Site Improvement Plans (SIPs) have been developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). Natura 2000 sites is the combined term for sites designated as Special Areas of Conservation (SAC) and Special Protected Areas (SPA). This work has been financially supported by LIFE, a financial instrument of the European Community.

The plan provides a high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features. It does not cover issues where remedial actions are already in place or ongoing management activities which are required for maintenance.

The SIP consists of three parts: a Summary table, which sets out the priority Issues and Measures; a detailed Actions table, which sets out who needs to do what, when and how much it is estimated to cost; and a set of tables containing contextual information and links.

Once this current programme ends, it is anticipated that Natural England and others, working with landowners and managers, will all play a role in delivering the priority measures to improve the condition of the features on these sites.

The SIPs are based on Natural England's current evidence and knowledge. The SIPs are not legal documents, they are live documents that will be updated to reflect changes in our evidence/knowledge and as actions get underway. The information in the SIPs will be used to update England's contribution to the UK's Prioritised Action Framework (PAF).

The SIPs are not formal consultation documents, but if you have any comments about the SIP or would like more information please email us at IPENSLIFEProject@naturalengland.org.uk, or contact Natural England's Responsible Officer for the site via our enquiry service 0300 060 3900, or enquiries@naturalengland.org.uk

This Site Improvement Plan covers the following Natura 2000 site(s)

UK9009261 Deben Estuary SPA

Site description

The Deben Estuary SPA is located on the coast of Suffolk in eastern England. It extends south-eastwards for over 12 km from the town of Woodbridge to the sea just north of Felixstowe. It is relatively narrow and sheltered, and has limited amounts of freshwater input.

The estuary mouth is the narrowest section and is protected by the presence of shifting sandbanks. The intertidal areas are constrained by sea walls. The saltmarsh and intertidal mud-flats that occupy the majority of the site, however, display the most complete range of saltmarsh community types in Suffolk. The estuary holds a range of swamp communities that fringe the estuary, and occasionally form larger stands. In general, these are dominated by Common Reed *Phragmites australis*. The estuary is of importance for its wintering waterbirds, especially Avocet *Recurvirostra avosetta*.

Plan Summary

This table shows the prioritised issues for the site(s), the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Coastal squeeze	Pressure	A046a(NB) Dark-bellied Brent Goose, A132(NB) Avocet	Monitor saltmarsh change and investigate mitigation measures	Environment Agency, National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk County Council, Suffolk Wildlife Trust, Landowner(s), Crown Estate, Deben Estuary Partnership, River Deben Association
2 Public Access/Disturbance	Pressure/Threat	A046a(NB) Dark-bellied Brent Goose, A132(NB) Avocet	Investigate recreational use, minimise impact of disturbance to the Estuary	Natural England, Suffolk Coast & Heaths AONB, Deben Estuary Partnership, River Deben Association
3 Changes in species distributions	Threat	A046a(NB) Dark-bellied Brent Goose, A132(NB) Avocet	Investigate the extent and impact of <i>Spartina anglica</i> encroachment	Natural England
4 Air Pollution: risk of atmospheric nitrogen deposition	Threat	A046a(NB) Dark-bellied Brent Goose, A132(NB) Avocet	Investigate the impact of air pollution	Natural England
5 Water Pollution	Threat	A046a(NB) Dark-bellied Brent Goose, A132(NB) Avocet	Investigate pollution levels	Environment Agency, Natural England

6 Fisheries: Commercial marine and estuarine	Pressure/ Threat	A046a(NB) Dark-bellied Brent Goose, A132(NB) Avocet	Complete assessments to establish whether management is required	Natural England, Fishermens' Guild/Association
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Issues and Actions

This table outlines the prioritised issues that are currently impacting or threatening the condition of the features, and the outstanding actions required to address them. It also shows, where possible, the estimated cost of the action and the delivery bodies whose involvement will be required to implement the action. Lead delivery bodies will be responsible for coordinating the implementation of the action, but not necessarily funding it. Delivery partners will need to support the lead delivery body in implementing the action. In the process of developing the SIPs Natural England has approached the delivery bodies to seek agreement on the actions and their roles in delivering them, although in some cases these discussions have not yet been concluded. Other interested parties, including landowners and managers, will be involved as the detailed actions are agreed and delivered. Funding options are indicated as potential (but not necessarily agreed or secured) sources to fund the actions.

1 Coastal squeeze

Examination of the quality of saltmarsh, rather than quantity (which had shown little change in extent) through a detailed vegetation mapping survey of saltmarsh habitats (carried out to the National Vegetation Classification (NVC) standard (Abrehart and Jackson 2013)) provides evidence of coastal squeeze. Results were compared with an earlier NVC study (Suffolk Wildlife Trust 1993) and indicated that there had been a widespread decline in the quality of saltmarsh, and an increase in lower marsh habitats at the expense of mid and upper marsh vegetation communities. This is indicative of coastal squeeze as changes result from more frequent inundation. Also, coastal squeeze on saltmarsh will affect mudflat areas as saltmarsh is lost and the estuary balance/function is altered. This may have effects on SPA birds as well. The developing policy of the Deben Estuary Partnership should have scope for natural adaption.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Investigate and monitor coastal squeeze/saltmarsh change on the Deben Estuary to provide a robust evidence base against which appropriate management requirements can be determined. This should examine how nature conservation interests are affected by coastal change and identify evidence gaps and undertake appropriate investigations.	Not yet determined	2014-20	Investigation / Research / Monitoring	Environment Agency	To be agreed	Environment Agency, Natural England, Suffolk Coast & Heaths AONB, Deben Estuary Partnership

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1B	Ensure the Deben Estuary Plan (in preparation) addresses coastal squeeze issues on the Deben and embodies opportunities for mitigation/compensation for any loss of saltmarsh, etc, through intertidal habitat creation and adaptive measures. The plan will be subject to assessments required by regulation which will identify impact from the plans proposals in relation to coastal squeeze.	Not yet determined	2014-16	Mechanism not identified / develop mechanism	Environment Agency, Flood and Coastal Erosion Risk Management (FCERM) 2015-21	Environment Agency	Natural England, Suffolk Coastal District Council, Suffolk County Council
<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1C	Develop a Deben Estuary adaptation plan that captures all the known coastal squeeze issues. Opportunities for habitat creation and suitable trial locations where known should be included. Once produced the plan should be appropriately assessed to ensure that proposed actions will maintain the integrity of the designated site and the features for which it is designated.	Not yet determined	2015-20	Investigation / Research / Monitoring	Environment Agency, Flood and Coastal Erosion Risk Management (FCERM) 2015-21	To be agreed	Environment Agency, National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk Wildlife Trust, Landowner(s), Crown Estate, Deben Estuary Partnership, River Deben Association
<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1D	Address impacts of coastal squeeze on SPA features through the Environment Agency Regional Habitat Creation Programme, as appropriate, including enabling adaptation to take place.	Not yet determined	2016-50	Habitat creation / restoration strategy: Creation of new habitat	Habitat creation programme	Environment Agency	Natural Trust, Natural England, RSPB, Suffolk Coastal District Council, Suffolk Wildlife Trust, Deben Estuary Partnership, River Deben Association

2 Public Access/Disturbance

Increased recreational activity on the estuary could lead to increased levels of disturbance to wintering birds, to their detriment. Sources of disturbance include boats, canoes, jet skis, walkers and dogs, kite surfers, paramotorists, and low flying aircraft, etc. Increase in recreational activity could occur from increased population/residents in the area (housing developments) or visitor numbers, promotion of footpaths (with obvious health benefits), and increased participants in new sports such as paramotoring, etc. Whilst wildfowling on the SPA is regulated by Natural England (including assessment to ensure there is no adverse impact on the site), shooting activity outside the site is unregulated and may be a significant source of disturbance to wintering birds .

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
2A	Investigate and monitor recreational use of the Deben Estuary.	Not yet determined	2014-18	Investigation / Research / Monitoring	Not yet determined	To be agreed	Natural England, Suffolk Coast & Heaths AONB, River Deben Association
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
2B	Produce a Code of Conduct for Deben Estuary Users.	£25,000	2018	Advice: Education & awareness raising	Developer	Suffolk Coast & Heaths AONB	Natural England, Deben Estuary Partnership, River Deben Association

3 Changes in species distributions

There is a risk of *Spartina anglica* encroaching on estuarine muds. With *Spartina* at the front, and reed encroaching at the back, the saltmarsh could be squeezed out affecting the habitats of birds.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
3A	Develop and implement <i>Spartina anglica</i> management plan as appropriate following investigation.	Not yet determined	2018-20	Invasive Control Plan: Invasive Species Control Programme	Not yet determined	Natural England	n/a

4 Air Pollution: risk of atmospheric nitrogen deposition

Air pollution impacts on vegetation diversity. Aerial deposits of nitrogen may exceed the threshold limit (20 – 30 kg N ha⁻¹ yr⁻¹) above which the diversity of saltmarsh vegetation begins to be altered (possibly to reed) and adversely impacted. The impact on SPA birds is unclear. Many land use practices contribute to this issue including locally land spreading, outdoor pigs, high nutrient inputs on fields, etc.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4A	Further investigate potential atmospheric nitrogen impacts on the site based on application of guidance from Chief Scientist Group Nitrogen Task and Finish Group.	Not yet determined	2017	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a

5 Water Pollution

Inappropriate water quality may impact on the supporting habitats of SPA birds. Eutrophication may be having an influence on reed growth and saltmarsh composition. Increased flood events could lead to habitat change/loss of diversity. Nutrient run off from farming operations could exacerbate the issue.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
5A	Regularly monitor nitrogen and phosphorus concentrations in the Deben Estuary.	Not yet determined	2018	Investigation / Research / Monitoring	Environment Agency	Environment Agency	Natural England

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
5B	Establish whether nitrogen and phosphorus concentrations in Deben Estuary exceed the threshold limit.	Not yet determined	2018	Investigation / Research / Monitoring	Not yet determined	Environment Agency	n/a

6 Fisheries: Commercial marine and estuarine

Commercial marine and estuarine fisheries. Shore-based activities. Commercial fishing activities categorised as 'amber or green' under Defra's revised approach to commercial fisheries in European Marine Sites (EMS) require assessment and (where appropriate) management. This assessment will be undertaken by Eastern IFCA. For activities categorised as 'green', these assessments should take account of any in-combination effects of amber activities, and/or appropriate plans or projects, in the site. Where these assessments indicate management is required, appropriate measures will be introduced by the Regulator by 2016.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6A	Where the assessments indicate management is required, introduce appropriate measures.	Not yet determined	2015-20	Mechanism not identified / develop mechanism	Not yet determined	Eastern Inshore Fisheries Conservation Authority (IFCA)	Natural England, Fishermens' Guild/Association

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
6B	If management measures are established, ensure compliance with the byelaw and provide an appropriate level of reporting to ensure sites are well managed and to enable Natural England to provide advice on the condition of features and potential condition threats.	Not yet determined	2016	Regulation: Other - obtain appropriate permissions	Not yet determined	Eastern Inshore Fisheries Conservation Authority (IFCA)	Natural England, Fishermens' Guild/Association

Site details

The tables in this section contain site-relevant contextual information and links

Qualifying features

#UK Special responsibility

Deben Estuary SPA	A046a(NB) <i>Branta bernicla bernicla</i> : Dark-bellied brent goose
	A132(NB) <i>Recurvirostra avosetta</i> : Pied avocet

Site location and links

Deben Estuary SPA

Area (ha) 978.93	Grid reference TM294435	Map link
Local Authorities	Suffolk	
Site Conservation Objectives	European Site Conservation Objectives for Deben Estuary SPA	
European Marine Site conservation advice	Conservation Advice for European Marine Sites	
Regulation 33/35 Package	Regulation 33/35 package link	
Marine Management Organisation site plan	n/a	

Water Framework Directive (WFD)

The Water Framework Directive (WFD) provides the main framework for managing the water environment throughout Europe. Under the WFD a management plan must be developed for each river basin district. The River Basin Management Plans (RBMP) include a summary of the measures needed for water dependent Natura 2000 sites to meet their conservation objectives. For the second round of RBMPs, SIPs are being used to capture the priorities and new measures required for water dependent habitats on Natura 2000 sites. SIP actions for non-water dependent sites/habitats do not form part of the RBMPs and associated consultation.

Deben Estuary SPA

River basin

Anglian

[Anglian RBMP](#)

WFD Management catchment

East Suffolk

WFD Waterbody ID (Cycle 2 draft)

GB105035040200, GB105035040280, GB105035046310

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
Deben Estuary SPA	Deben Estuary SSSI

National Nature Reserve (NNR)	
Deben Estuary SPA	n/a

Ramsar	
Deben Estuary SPA	Deben Estuary

Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
Deben Estuary SPA	n/a

Other relevant documents and links	
Suffolk Coast & Heaths AONB	Web link
The Deben Estuary and its hinterland: Evaluation of key areas for birds, recreational disturbance issues and opportunities for mitigation and enhancement (2014)	Document
Touching the Tide	Web link
Spartina anglica 2004 review	2004 Anglica spartina Review

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	08/10/2014	

www.naturalengland.org.uk/ipens2000

