

# Site Improvement Plan

## Alde-Ore Estuaries

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](mailto: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](mailto:enquiries@naturalengland.org.uk)

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

**UK0030076     Alde-Ore & Butley Estuaries SAC**

**UK9009112     Alde-Ore Estuary SPA**

**UK0014780     Orfordness-Shingle Street SAC**

## Site description

The Alde-Ore Estuary SPA, Alde, Ore and Butley Estuaries SAC and Orfordness-Shingle Street SAC are overlapping/adjacent sites on the east coast of Suffolk, England.

Their scientific interests are outstanding and diverse. The sites contain a number of coastal formations and estuarine features including mud-flats, saltmarsh, vegetated shingle and coastal lagoons which are of special botanical and ornithological value.

## 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 Hydrological changes	Pressure	A081(B) Marsh Harrier, A132(B) Avocet, A183(B) Lesser Black-backed Gull, H1130 Estuaries, H1150 Coastal lagoons	Seek alternative habitat provision or habitat enhancement opportunities	National Trust, Natural England, Suffolk Wildlife Trust, Babcocks, Alde & Ore Estuary Partnership
2 Public Access/Disturbance	Pressure	A132(B) Avocet, A132(NB) Avocet, A162(NB) Common redshank, A183(B) Lesser Black-backed Gull, A195(B) Little Tern, H1210 Annual vegetation of drift lines, H1220 Coastal shingle vegetation outside the reach of waves, Waterbird assemblage	Reduce bird disturbance and trampling of shingle vegetation	Eastern Inshore Fisheries Conservation Authority (IFCA), Ministry of Defence (MoD), National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk County Council, Suffolk Wildlife Trust, Marine Management Organisation (MMO), British Association for Shooting and Conservation (BASC), Joint Nature Conservation Committee (JNCC), Civil Aviation Authority (CAA), Suffolk Little Tern Group, EDF Energy, Shingle Street residents

3 Inappropriate coastal management	Pressure	H1210 Annual vegetation of drift lines, H1220 Coastal shingle vegetation outside the reach of waves	Seek long term sustainable solutions	Environment Agency, Natural England, Suffolk Coastal District Council, Suffolk County Council, Alde & Ore Estuary Partnership, Bawdsey-Shingle Street Partnership
4 Coastal squeeze	Threat	A132(B) Avocet, A132(NB) Avocet, A162(NB) Common redshank, H1130 Estuaries, H1140 Intertidal mudflats and sandflats, H1330 Atlantic salt meadows, Waterbird assemblage	Ensure there is scope for natural adaptation or intertidal habitat creation to offset the impacts of sea level rise	Environment Agency, National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk County Council, Suffolk Wildlife Trust, Crown Estate, Local partnership, Alde & Ore Estuary Partnership, Alde & Ore Association
5 Inappropriate pest control	Pressure	A081(B) Marsh Harrier, A132(B) Avocet, A183(B) Lesser Black-backed Gull, A191(B) Sandwich Tern, A195(B) Little Tern	Ensure adequate protection of nesting birds from predators	National Trust, Natural England, RSPB
6 Changes in species distributions	Threat	A081(B) Marsh Harrier, A132(B) Avocet, A132(NB) Avocet, A183(B) Lesser Black-backed Gull, A191(B) Sandwich Tern, A195(B) Little Tern	Understand population dynamics, and enable boundary flexibility/ better wider habitat provision	National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk Wildlife Trust, British Trust for Ornithology (BTO), LIFE+ Little Tern Project, Suffolk Little Tern Group, Shingle Street residents
7 Invasive species	Pressure/ Threat	A132(B) Avocet, A132(NB) Avocet, A162(NB) Common redshank, H1130 Estuaries, H1140 Intertidal mudflats and sandflats, H1330 Atlantic salt meadows, Waterbird assemblage	Manage <i>Spartina anglica</i> encroachment	Natural England
8 Air Pollution: impact of atmospheric nitrogen deposition	Pressure	A132(B) Avocet, A132(NB) Avocet, A162(NB) Common redshank, H1130 Estuaries, H1140 Intertidal mudflats and sandflats, H1330 Atlantic salt meadows, Waterbird assemblage	Establish a Site Nitrogen Action Plan	Not yet determined

9 Fisheries: Commercial  
marine and estuarine

Pressure

A195(B) Little Tern

Revised approach to fisheries  
management

Eastern Inshore Fisheries  
Conservation Authority (IFCA),  
Centre for Environment,  
Fisheries and Aquaculture  
Science (Cefas)

## 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 Hydrological changes

Flood wall breaches in December 2013 (due to tidal surge) has lead to flooding of Hazelwood Marshes and Lantern Marshes south (both currently intertidal). This has lead to a loss of nesting habitat and saline lagoons.

<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>
<b>1A</b>	Investigate options in response to the flooding of Hazelwood Marshes and identify mitigation opportunities for breeding Avocet.	Not yet determined	2015	Investigation / Research / Monitoring	Not yet determined	Environment Agency	Suffolk Wildlife Trust

<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>
<b>1B</b>	Monitor breeding Avocet numbers on Hazelwood Marshes to see if the population has reduced from pre surge levels to inform mitigation.	Not yet determined	2014-15	Investigation / Research / Monitoring	Not yet determined	Environment Agency	Suffolk Wildlife Trust

<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>
<b>1C</b>	Implement mitigation for breeding Avocet on Hazelwood Marshes, eg island creation on existing lenses of higher ground within Hazelwood Marshes.	£50,000	2016	Habitat creation / restoration strategy: Creation of new habitat	Not yet determined	Environment Agency	Natural England, Suffolk Wildlife Trust

<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>
<b>1D</b>	Investigate options in response to the flooding of Lantern Marshes south due to breach in American Wall following December 2013 tidal surge and identify any mitigation requirements (notably for Lesser black-backed gulls).	£45,000	2015	Investigation / Research / Monitoring	Not yet determined	National Trust	Environment Agency, Natural England, Babcocks, Alde & Ore Estuary Partnership
<b>1E</b>	Depending on outcome of investigations and decisions on future of Lantern Marshes South, provide on/off site mitigation for breeding Lesser black-backed gull and possibly Marsh harrier and saline lagoons habitat loss.	Not yet determined	2016-18	Mechanism not identified / develop mechanism	Not yet determined	To be agreed	Environment Agency, National Trust, Natural England, RSPB, Suffolk Wildlife Trust, Alde & Ore Estuary Partnership
<b>1F</b>	Implement options in response to the flooding of Havergate Island and identify mitigation requirements.	£30,000	2015-20	Non-Natural England funded site management plan	Not yet determined	RSPB	Environment Agency, Natural England, Alde & Ore Estuary Partnership

## 2 Public Access/Disturbance

Human disturbance to nesting birds on beaches, notably on Orfordness and Shingle Street, by people accessing the southern end of the ness by boat, plus walkers along beach from Aldeburgh, and recreational beach users at Shingle Street. Human trampling affects vegetated shingle habitat. Military and private aircraft (paramotors, helicopters and planes) regularly fly low over the site leading to disturbance of SPA features, wintering and breeding birds.

<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>
<b>2A</b>	Informed by investigation into public access/disturbance, produce and implement a plan to improve users awareness of the sensitive areas on Alde-Ore Estuary (notably Orfordness and Shingle Street) and how they can minimise disturbance. Approaches could include wardening, working groups, codes of conduct for both recreational and commercial users, leaflets, Signage and interpretation provision.	£20,000	2015-20	Advice: Education & awareness raising	Developer Contributions Scheme (DCS), AONB, Touching the Tide Project	Suffolk Coast & Heaths AONB	Eastern Inshore Fisheries Conservation Authority (IFCA), National Trust, Natural England, RSPB, Suffolk Coastal District Council, Suffolk Wildlife Trust, Marine Management Organisation (MMO), Suffolk Little Tern Group, Shingle Street residents
<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>
<b>2B</b>	Review the Orfordness NNR management plan to ensure shingle habitat is managed to minimise disturbance to SPA/SAC features through access management/zonation, wardening, awareness raising. Levels and resourcing to be informed by investigation into impacts of disturbance.	Not yet determined	2014-24	National Nature Reserve (NNR) management plan	NNR management funding	National Trust	Natural England, RSPB

<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>
<b>2C</b>	Establish wardening on shingle areas outwith NNR, notably at Shingle Street, to improve users awareness and minimise impact on SPA/SAC Features. Levels/resourcing to be informed by investigation into impacts of disturbance and patterns of use.	Not yet determined	2016-20	Advice: Wardening	Developer Contributions Scheme (DCS)	Not yet determined	National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk County Council, Suffolk Wildlife Trust
<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>
<b>2D</b>	Investigate and monitor levels and impact of military and civilian aircraft on SPA features, evaluate significance of problem in relation to other factors, establish how to remedy impacts and where resource should be allocated to address factors with greatest effect. Incorporate existing research.	Not yet determined	2015-18	Investigation / Research / Monitoring	Not yet determined	Natural England	Ministry of Defence (MoD), Natural England, RSPB, Suffolk Wildlife Trust, Joint Nature Conservation Committee (JNCC), Civil Aviation Authority (CAA)
<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>
<b>2E</b>	Reduce disturbance of SPA bird features from low flying military aircraft training flights through better recognition (and ideally avoidance) of sensitive locations.	Not yet determined	2015	Advice: Education & awareness raising	Ministry of Defence (MoD)	Not yet determined	Ministry of Defence (MoD), Natural England, Joint Nature Conservation Committee (JNCC)



<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>
<b>2F</b>	Minimise disturbance from military aircraft at the Alde-Ore Estuary through enhanced local liaison and consultation/communication.	Not yet determined	2015-25	Advice	Not yet determined	Natural England	Ministry of Defence (MoD)
<b>2G</b>	Reduce disturbance of designated bird features from low flying civilian aircraft through better recognition (and ideally avoidance) of sensitive locations.	Not yet determined	2015-16	Advice: Education & awareness raising	Not yet determined	Natural England	Civil Aviation Authority (CAA)
<b>2H</b>	Formalise reporting of incidents of all aircraft flying low over designated sites, disturbing wintering and breeding birds to allow Natural England to undertake appropriate enforcement action in relation to any breach of SSSI legislation.	Not yet determined	2015-25	Partnership agreement: Other	Not yet determined	Natural England	National Trust, RSPB, Suffolk Wildlife Trust
<b>2I</b>	Produce Aviation Code of conduct for Suffolk (and possibly include Norfolk) Coast to improve user awareness/behaviour.	Not yet determined	2015-16	Advice: Education & awareness raising	Not yet determined	Not yet determined	Natural England, Suffolk Coast & Heaths AONB, Civil Aviation Authority (CAA), Suffolk Little Tern Group

<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>
<b>2J</b>	Investigate the scope for having sensitive bird locations/SPAs marked on Civil Aviation Authority air maps as low flying avoidance areas to reduce disturbance.	Not yet determined	2015	Advice: Negotiation	Not yet determined	Natural England	Joint Nature Conservation Committee (JNCC), Civil Aviation Authority (CAA)
<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>
<b>2K</b>	Establishment of a Paramotor Working Group and Code of conduct to improve user awareness.	Not yet determined	2015	Advice: Education & awareness raising	Not yet determined	Natural England	Suffolk Coast & Heaths AONB, Civil Aviation Authority (CAA), Suffolk Little Tern Group
<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>
<b>2L</b>	Ensure impacts are assessed and that measures are in place to mitigate against impact from increased disturbance from proposed Sizewell C Development; through displacement of users away from Sizewell area and increased population during construction in the locality. Mitigation may include provision of recreational green space at robust locations (such as new country parks), etc.	Not yet determined	2015-25	Advice: Access Strategy	Developer Contributions Scheme (DCS)	Suffolk County Council	Natural England, Suffolk Coastal District Council, EDF Energy

<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>
<b>2M</b>	Investigate disturbance impacts of offsite shooting activities on SPA features.	Not yet determined	2015-19	Investigation / Research / Monitoring	Not yet determined	Natural England	RSPB, Suffolk Wildlife Trust, British Association for Shooting and Conservation (BASC)

### 3 Inappropriate coastal management

Maintaining coastal defences at Bawdsey and Slaughden is leading to increased shingle recharge requirements at Slaughden, and loss of shingle beach at southern end of SAC at Bawdsey.

<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>
<b>3A</b>	Investigate sustainability of coastal defence at Bawdsey, impacts on SAC/SPA features, requirements for mitigation/compensation and alternative approaches for the area.	Not yet determined	2015-20	Shoreline Management Plan and Strategies	Not yet determined	Environment Agency	Natural England, Suffolk Coastal District Council, Suffolk County Council, Bawdsey-Shingle Street 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>
<b>3B</b>	Investigate the sustainability of shingle recharge of coastal defence Slaughden (shingle taken from Orfordness). Consider impact on SAC/SPA features, mitigation/compensation and alternative options for Slaughden flood defence.	Not yet determined	2015-16	Shoreline Management Plan and Strategies	Not yet determined	Environment Agency	Natural England, Suffolk Coastal District Council, Suffolk County Council, Alde & Ore Estuary Partnership

## 4 Coastal squeeze

Seawalls afford little scope for natural adaptation of the estuary to sea level rise through roll back of habitat. Saltmarsh is at risk of being squeezed in the future (although currently the estuary is perceived as in balance) and limited areas of natural habitat transition within the site could be lost. The developing policy of the Alde and Ore Estuary Partnership should consider scope for natural adaptation to sea level rise.

<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>
<b>4A</b>	Investigate and monitor coastal squeeze/ coastal change to provide a robust evidence base against which appropriate management requirements can be determined. This should examine the short/medium/long term, including how nature conservation interests are affected by coastal change, (e.g. freshwater to saline). Identify evidence gaps and undertake appropriate investigations.	£20,000	2015-25	Investigation / Research / Monitoring	Not yet determined	Environment Agency	Environment Agency, National Trust, Natural England, RSPB, Suffolk Wildlife Trust, Crown Estate, Alde & Ore Estuary Partnership
<b>4B</b>	Ensure the Shoreline Management Plan considers coastal squeeze and incorporates appropriate mitigation and compensation for any change that affects the integrity of the SAC/SPA.	Not yet determined	2015-20	Shoreline Management Plan and Strategies	Not yet determined	Environment Agency	National Trust, Natural England, RSPB, Suffolk Coastal District Council, Suffolk County Council, Suffolk Wildlife Trust, Alde & Ore Estuary Partnership
<b>4C</b>	Ensure the Alde-Ore Estuary Plan (in preparation) addresses coastal squeeze issues on the Alde-Ore and embodies opportunities for mitigation/compensation for any loss of saltmarsh, etc, through intertidal habitat creation, adaptive measures, etc.	Not yet determined	2014-16	Estuary Management Plan	Not yet determined	Alde & Ore Estuary Partnership	Environment Agency, Natural England, Suffolk County Council, Alde & Ore 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>
<b>4D</b>	Develop an Alde-Ore adaptation plan that captures all the known issues. Opportunities for habitat creation 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	Not yet determined	Environment Agency	Environment Agency, National Trust, RSPB, Suffolk Coastal District Council, Suffolk Wildlife Trust, Natural England (CSF), Alde & Ore Estuary Partnership, Alde & Ore 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>
<b>4E</b>	Address impacts of coastal squeeze on SPA/SAC features through the Environment Agency Regional Habitat Creation Programme, as appropriate, including enabling adaptation to take place and creation of freshwater marsh elsewhere to mitigate/compensate against future loss of freshwater habitat.	Not yet determined	2016-50	Habitat creation / restoration strategy: Creation of new habitat	Habitat creation programme	Environment Agency	National Trust, Natural England, RSPB, Suffolk Coastal District Council, Suffolk Wildlife Trust, Alde & Ore Estuary Partnership, Alde & Ore 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>
<b>4F</b>	Address impacts of coastal squeeze on SPA/SAC features through Land Management Schemes, as appropriate, including enabling adaptation to take place and creation of freshwater marsh elsewhere to mitigate/compensate against future loss of freshwater habitat.	Not yet determined	2018-50	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Higher Level Stewardship (HLS)	Natural England	Environment Agency, National Trust, RSPB, Suffolk Coastal District Council, Alde & Ore Estuary Partnership, Alde & Ore 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>
<b>4G</b>	Investigate saltmarsh adaptation methods to mitigate coastal squeeze and trial on site.	Not yet determined	2016	Investigation / Research / Monitoring	Not yet determined	Alde & Ore Estuary Partnership	Environment Agency, National Trust, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk Wildlife Trust, Crown Estate, Alde & Ore Estuary Partnership, Alde & Ore Association

## 5 Inappropriate pest control

Fox predation/disturbance is a key issue for breeding birds on Orfordness, particularly Lesser black backed gulls. Foxes can cause gulls and other breeding birds to abandon nesting sites, and predate adult birds and chicks.

<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>
<b>5A</b>	Investigate levels/impact of predation of breeding birds on Orfordness as a site specific cause of population declines.	Not yet determined	2015-16	Investigation / Research / Monitoring	Not yet determined	Natural England	National Trust, RSPB

<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>
<b>5B</b>	Informed by investigation produce an Orfordness predator control management plan (as part of next NNR Management Plan).	Not yet determined	2016-25	National Nature Reserve (NNR) management plan	Not yet determined	Not yet determined	National Trust, Natural England, RSPB

<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>
<b>5C</b>	Informed by investigation and predator control plan undertake enhanced predator control, notably foxes, on Orfordness - Shooting	£8,000 per year	2015-25	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Not yet determined	Not yet determined	National Trust, Natural England
<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>
<b>5D</b>	Informed by investigation and predator control plan, undertake enhanced predator control, notably foxes, on Orfordness (fencing).	£35,000	2015	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Not yet determined	Not yet determined	National Trust, Natural England

## 6 Changes in species distributions

There are negative population trends in bird species using the site. Breeding locations are moving within and away from the designated site, possibly due to habitat change on site, as a reaction to other species and due to draw of other adjacent hinterland habitat. This requires further investigation and possible mitigation.

<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>
<b>6A</b>	Investigate causes of decline in Lesser black-backed gull (breeding) population on SPA (habitat suitability, predation, disturbance, food source, etc).	Not yet determined	2015	Investigation / Research / Monitoring	Not yet determined	Natural England	National Trust, RSPB, British Trust for Ornithology (BTO)

<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>
<b>6B</b>	Develop and implement Lesser black-backed gull recovery/management plan following investigation.	Not yet determined	2015-17	Mechanism not identified / develop mechanism	Not yet determined	Natural England	National Trust, RSPB, British Trust for Ornithology (BTO)
<b>6C</b>	Investigate the movement of breeding Avocet away from the SPA, particularly due to displacement by large gulls on Havergate.	Not yet determined	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	National Trust, RSPB, Suffolk Wildlife Trust
<b>6D</b>	Mitigate against loss of breeding Avocet on SPA through active management of suitable nesting habitat/habitat creation within and/or adjacent to SPA, particularly on hinterland.	Not yet determined	2015-20	Rural Development Programme for England (RDPE): Environmental Stewardship Higher Level Scheme (HLS)	Not yet determined	Natural England	National Trust, RSPB, Suffolk Wildlife Trust
<b>6E</b>	Investigate downward trend in breeding numbers of Little tern using SPA including habitat decline, predation, disturbance, regional/wider trends, etc.	Not yet determined	2015-19	Investigation / Research / Monitoring	Not yet determined	Natural England	RSPB, Suffolk Wildlife Trust, LIFE+ Little Tern Project, Suffolk Little Tern Group



<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>
<b>6F</b>	Mitigate against recent Little tern breeding failure through active management of suitable nesting habitat at Orfordness, Shingle Street and possibly Havergate for benefit of Little terns through fencing, wardening, etc.	Not yet determined	2015-20	Existing Local Project	Not yet determined	Natural England	National Trust, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk Little Tern Group, Shingle Street residents
<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>
<b>6G</b>	Investigate any downward trends in breeding numbers of Sandwich tern using SPA including habitat decline, predation, disturbance, regional/wider trends, etc.	Not yet determined	2015-16	Investigation / Research / Monitoring	Not yet determined	Natural England	RSPB
<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>
<b>6H</b>	Mitigate against any Sandwich tern declines informed by investigation for benefit of Sandwich terns.	Not yet determined	2016	Investigation / Research / Monitoring	Not yet determined	Natural England	National Trust, RSPB

## 7 Invasive species

*Spartina* is encroaching on estuarine muds. With *Spartina* at the front, and reed encroaching at the back, saltmarsh could be squeezed out.

<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>
<b>7A</b>	Investigation and monitoring of <i>Spartina anglica</i> encroachment onto estuarine muds.	Not yet determined	2018	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
<b>7B</b>	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	

## 8 Air Pollution: impact of atmospheric nitrogen deposition

Air pollution impacts on vegetation diversity. Aerial deposits of nitrogen may exceed the site relevant critical load (20 – 30 kg N ha<sup>-1</sup> yr<sup>-1</sup>) above which the diversity of saltmarsh vegetation begins to be altered (possibly to reed) and adversely impacted. Many land use practices contribute to this problem locally including land spreading, outdoor pigs, high nutrient inputs on fields.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
<b>8A</b>	Control, reduce and ameliorate atmospheric nitrogen.	Not yet determined	2015-20	Site Nitrogen Action Plan	Not yet determined	Not yet determined	Not yet determined

## 9 Fisheries: Commercial marine and estuarine

There are many different fishing pressures close to shore that may include bycatch of juvenile fish and disturbance of fish nursery areas that could potentially have an impact on Little tern *Sterna Albifrons* by reducing suitable feeding areas.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
<b>9A</b>	Where the assessments indicate management is required, introduce appropriate measures.	Not yet determined	2016	Regulation: Regulating Order (Public fishery)	Defra	Eastern Inshore Fisheries Conservation Authority (IFCA)	Centre for Environment, Fisheries and Aquaculture Science (Cefas)

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
<b>9B</b>	If management measures are established, ensure compliance with bye-law 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. Ongoing action.	Not yet determined	2020	Enforcement: Byelaws	Not yet determined	Eastern Inshore Fisheries Conservation Authority (IFCA)	Centre for Environment, Fisheries and Aquaculture Science (Cefas)

## Site details

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

### Qualifying features

#UK Special responsibility

#### Alde-Ore & Butley Estuaries SAC

H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

H1130 Estuaries

H1140 Mudflats and sandflats not covered by seawater at low tide

#### Alde-Ore Estuary SPA

A151(NB) *Philomachus pugnax*: Ruff

A132(NB) *Recurvirostra avosetta*: Pied avocet

A081(B) *Circus aeruginosus*: Eurasian marsh harrier

A162(NB) *Tringa totanus*: Common redshank

A132(B) *Recurvirostra avosetta*: Pied avocet

A183(B) *Larus fuscus*: Lesser black-backed gull

A191(B) *Sterna sandvicensis*: Sandwich tern

A195(B) *Sterna albifrons*: Little tern

#### Orfordness-Shingle Street SAC

H1210 Annual vegetation of drift lines

H1220 Perennial vegetation of stony banks

H1150# Coastal lagoons

### Site location and links

#### Alde-Ore & Butley Estuaries SAC

Area (ha) **1561.53**      Grid reference **TM444509**      [Map link](#)

Local Authorities      Suffolk

Site Conservation Objectives      [European Site Conservation Objectives for Alde-Ore & Butley Estuaries SAC](#)

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](#)

**Alde-Ore Estuary SPA**

Area (ha) **2416.87**      Grid reference **TM433487**

[Map link](#)

Local Authorities

Suffolk

Site Conservation Objectives

[European Site Conservation Objectives for Alde-Ore 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](#)

**Orfordness-Shingle Street SAC**

Area (ha) **901.19**      Grid reference **TM440486**

[Map link](#)

Local Authorities

Suffolk

Site Conservation Objectives

[European Site Conservation Objectives for Orfordness - Shingle Street SAC](#)

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.

### Alde-Ore & Butley Estuaries SAC

River basin	Anglian	<a href="#">Anglian RBMP</a>
WFD Management catchment	East Suffolk	
WFD Waterbody ID (Cycle 2 draft)	GB105035040160, GB105035040190	

### Alde-Ore Estuary SPA

River basin	Anglian	<a href="#">Anglian RBMP</a>
WFD Management catchment	East Suffolk	
WFD Waterbody ID (Cycle 2 draft)	GB105035040160, GB105035040190	

### Orfordness-Shingle Street SAC

River basin	Anglian	<a href="#">Anglian RBMP</a>
WFD Management catchment	East Suffolk	
WFD Waterbody ID (Cycle 2 draft)	n/a	

## Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)		
Alde-Ore & Butley Estuaries SAC	Alde-Ore Estuary SSSI	
Alde-Ore Estuary SPA	Alde-Ore Estuary SSSI	
Orfordness-Shingle Street SAC	Alde-Ore Estuary SSSI	
National Nature Reserve (NNR)		
Alde-Ore & Butley Estuaries SAC	Orfordness-Havergate NNR	
Alde-Ore Estuary SPA	Orfordness-Havergate NNR	
Orfordness-Shingle Street SAC	Orfordness-Havergate NNR	
Ramsar		
Alde-Ore & Butley Estuaries SAC	Alde-Ore Estuary	
Alde-Ore Estuary SPA	Alde-Ore Estuary	
Orfordness-Shingle Street SAC	Alde-Ore Estuary	
Special Areas of Conservation (SAC) and Special Protection Areas (SPA)		
Alde-Ore & Butley Estuaries SAC	Alde-Ore Estuary SPA	
Alde-Ore Estuary SPA	Orfordness-Shingle Street SAC	
	Alde-Ore & Butley Estuaries SAC	
Orfordness-Shingle Street SAC	Alde-Ore Estuary SPA	
Other relevant documents and links		
	<a href="#">Alde-Ore Future for Wildlife project</a>	Web link
	<a href="#">Touching the Tide</a>	Web link
	<a href="#">Alde &amp; Ore Estuary Partnership</a>	Web link
	<a href="#">Suffolk Local Biodiversity Action Plan (Little tern)</a>	Biodiversity Action Plan: Little Tern
	<a href="#">Spartina anglica: a review of its status, dynamics and management (ENRR527)</a>	2004 Anglica spartina Review

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

[www.naturalengland.org.uk/ipens2000](http://www.naturalengland.org.uk/ipens2000)

