

Site Improvement Plan

Stour and Orwell 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, 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)

UK9009121 Stour and Orwell Estuaries SPA

Site description

The Stour and Orwell estuaries straddle the eastern part of the Essex/Suffolk border. The estuaries include extensive mud-flats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The site also includes areas of low-lying grazing marsh at Shotley Marshes on the south side of the Orwell and at Cattawade Marshes at the head of the Stour. In summer, the site supports important numbers of breeding Avocet *Recurvirostra avosetta*, while in winter it holds major concentrations of waterbirds, especially geese, ducks and waders.

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/ Threat	A054(NB) Pintail, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Investigate the extent of impact to the site	Environment Agency, Local Authority(ies), National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk County Council, Suffolk Wildlife Trust, Landowner(s), Crown Estate, Stour & Orwell Estuary Management Group
2 Public Access/Disturbance	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, A054(NB) Pintail, A132(B) Avocet, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Collate site knowledge, and coordinate cross-sector disturbance management plan	Developer, Eastern Inshore Fisheries Conservation Authority (IFCA), Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Local Authority(ies), Ministry of Defence (MoD), National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Wildlife Trust, Volunteers, Landowner(s), Crown Estate, Suffolk Little Tern Group, Stour & Orwell Estuary Management Group, Wildfowlers' Association(s)

3 Changes in species distributions	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, A054(NB) Pintail, A132(B) Avocet, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Investigate extent of impact to the site, and wider area	Natural England, Stour & Orwell Estuary Management Group
4 Invasive species	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, A054(NB) Pintail, A132(B) Avocet, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Investigate extent of impact to the site, and wider area	Environment Agency, Natural England, Ports And Harbour Authority(ies)
5 Planning Permission: general	Pressure	A046a(NB) Dark-bellied Brent goose, A054(NB) Pintail, A132(B) Avocet, A141(NB) Grey plover, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Collation and analysis of data to develop guidance	Developer, Environment Agency, Local Authority(ies), Natural England, Suffolk Coast & Heaths AONB, Stour & Orwell Estuary Management Group
6 Air Pollution: impact of atmospheric nitrogen deposition	Pressure	A046a(NB) Dark-bellied Brent goose, A054(NB) Pintail, A132(B) Avocet, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Site Nitrogen Action Plan	Environment Agency, Natural England
7 Inappropriate coastal management	Threat	A046a(NB) Dark-bellied Brent goose, A054(NB) Pintail, A132(B) Avocet, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Shoreline management plan implementation	Environment Agency, Local Authority(ies), Natural England, Suffolk Coast & Heaths AONB, Stour & Orwell Estuary Management Group
8 Fisheries: Commercial marine and estuarine	Pressure/ Threat	A046a(NB) Dark-bellied Brent goose, A054(NB) Pintail, A132(B) Avocet, A141(NB) Grey plover, A143(NB) Red knot, A149(NB) Dunlin, A156(NB) Black-tailed godwit, A162(NB) Common redshank, Waterbird assemblage	Investigate impact on site and disturbance, and introduce new management measures if required	Eastern Inshore Fisheries Conservation Authority (IFCA), Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Natural England, Suffolk Coast & Heaths AONB

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

Coastal defences exist along much of the Orwell coastline. Sea level rise is also occurring. It is therefore certain, that if circumstances do not change, much of the supporting habitats of the SPA birds will be lost/degraded through processes such as coastal squeeze; sedimentation rates inability to keep pace with sea level rise; and reduced exposure (extent and duration) of mudflats/sandflats. Seawalls afford little scope for natural adaption to sea level rise through roll back and saltmarsh at risk of

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Assess coastal squeeze/saltmarsh change on the Stour & Orwell 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	EA Integrated Environment Programme Budget Bid	Natural England	Environment Agency, Suffolk Coast & Heaths AONB, Stour & Orwell Estuary Management 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>
1B	Ensure the Stour & Orwell Estuary Management Strategy addresses coastal squeeze issues on the Stour & Orwell and embodies opportunities for mitigation/compensation for any loss of saltmarsh etc. through intertidal habitat creation, adaptive measures etc. Projects will be subject to sustainability appraisal, which will include an SEA, HRA and WFD assessments and this process will identify impact from plans proposals in relation to coastal squeeze, etc.	Not yet determined	2014-16	Shoreline Management Plan and Strategies	EA FCRM Capital/Improvement Scheme	Environment Agency	Local Authority(ies), Natural England, Suffolk County Council, Landowner(s), Stour & Orwell Estuary Management 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>
1C	Evaluation of which dredging disposal method, and disposal site(s) would benefit the long term health of the salt marsh, mudflats and biota and consideration of the cumulative effect of all dredging activity in the estuary including ABP, HHA, Port of Felixstowe and small operations such as Woolverstone, Shotley and Mistley.	Not yet determined	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Environment Agency

<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	Develop a Stour & Orwell Estuary adaptation plan that captures all the known 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. The plan should be linked to the Essex and South Suffolk Shoreline Management Plan.	Not yet determined	2020-25	Investigation / Research / Monitoring	EA FCRM Capital/Improvement Scheme	Not yet determined	Environment Agency, National Trust, Natural England, RSPB, Suffolk Coast & Heaths AONB, Suffolk Coastal District Council, Suffolk Wildlife Trust, Landowner(s), Crown Estate
<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>
1E	Address impacts of coastal squeeze on SPA features through the implementation of schemes such as the EA Habitat Creation Programme, or mitigation from large developments as appropriate, enabling adaptation to take place.	Not yet determined	2020-50	Habitat creation / restoration strategy: Creation of new habitat	EA FCRM Capital/Improvement Scheme	Environment Agency	Local Authority(ies), National Trust, Natural England, RSPB, Suffolk Wildlife Trust, Landowner(s), Stour & Orwell Estuary Management Group

2 Public Access/Disturbance

Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and watersports; walking; bait-digging; fishing; wildfowling, and military overflight training. Some activities, such as powerboating, may produce physical disturbance to habitats. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. A better understanding will be required of: which species and habitats are most susceptible; which types of activity are most disturbing; and which locations and times of year are most sensitive in order to manage change, with intervention as necessary in order to minimise the risks of disturbance impacts.

<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>
2A	Investigate significance of effects of bait digging, and mechanisms to manage bait digging and minimise disturbance to breeding and overwintering birds, focusing on the most sensitive areas.	Not yet determined	2017-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Eastern Inshore Fisheries Conservation Authority (IFCA), Kent and Essex Inshore Fisheries Conservation Authority (IFCA), Local Authority(ies), National Trust, RSPB, Suffolk Coast & Heaths AONB, Suffolk Wildlife Trust, Volunteers, Landowner(s), Crown Estate, Stour & Orwell Estuary Management 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>
2B	Investigate and monitor levels and impact of public access/disturbance 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. Investigate the possibility of a cross-sector disturbance management plan.	Not yet determined	2014-18	Investigation / Research / Monitoring	Not yet determined	Natural England	Local Authority(ies), RSPB, Suffolk Coast & Heaths AONB, Suffolk Wildlife Trust, Crown Estate, Stour & Orwell Estuary Management 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>
2C	Informed by investigation into public access/disturbance, produce and implement a plan to improve user awareness on sensitive areas of the Stour & Orwell Estuary and how they can minimise disturbance. This will include working with and updating as needed the Voluntary Code of Conduct led by The Stour & Orwell Estuary Management Group and the production of signage and interpretation.	£25,000	2015 onwards	Advice: Education & awareness raising	Developer Contributions Scheme (DCS), Existing user group contribution	Natural England	Local Authority(ies), Suffolk Coast & Heaths AONB, Landowner(s), Stour & Orwell Estuary Management 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>
2D	Investigate the need for bylaws to back up any necessary restrictions to dog walkers/general access.	Not yet determined	2016-20	Enforcement: Byelaws	Not yet determined	Natural England	Stour & Orwell Estuary Management 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>
2E	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	2014-18	Investigation / Research / Monitoring	Not yet determined	Natural England	RSPB, Suffolk Coast & Heaths AONB, Suffolk Wildlife Trust, Local partnership, Stour & Orwell Estuary Management 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>
2F	If required, reduce disturbance of SPA bird features from low flying Apaches and other military aircraft training flights through better recognition (and ideally avoidance) of sensitive locations and understanding of S28G responsibilities under the Wildlife & Countryside Act (as amended)/Habitats Regulations.	Not yet determined	2015 onwards	Advice: Education & awareness raising	Not yet determined	Not yet determined	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>
2G	Ensure MoD takes steps to conserve and enhance the features of special interest of SSSI (underpin SPA features) as per the Section 28G general duty and, where applicable, has a HRA undertaken in relation to military aircraft training over the Stour & Orwell estuary.	Not yet determined	2015 onwards	Regulation: SSSI Regulation	Ministry of Defence (MoD)	Natural England	Ministry of Defence (MoD)
<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>
2H	Work with MoD to minimise disturbance the Stour & Orwell Estuary through enhanced local liaison and consultation/communication (notably RAF Wattisham).	Not yet determined	2015 onwards	Advice	Ministry of Defence (MoD)	Natural England	Ministry of Defence (MoD)

<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>
2I	If necessary, reduce disturbance of designated bird features from low flying civilian aircraft through better recognition (and ideally avoidance) of sensitive locations and understanding of third party responsibilities under the Wildlife & Countryside Act (as amended).	Not yet determined	2015-16	Advice: Education & awareness raising	Not yet determined	Natural England	n/a
<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>
2J	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. Better evidence will allow for enhanced investigation and monitoring incidents of military and other aircraft flying over sites disturbing wintering birds.	Not yet determined	2015-25	Partnership agreement: Other	Not yet determined	Natural England	Stour & Orwell Estuary Management 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>
2K	Produce Aviation Code of conduct and a Paramotor Code of conduct to improve user awareness.for Suffolk (and possibly include Norfolk) Coast to improve user awareness/behaviour.	Not yet determined	2016-18	Advice: Education & awareness raising	Not yet determined	Natural England	Suffolk Coast & Heaths AONB, Suffolk Little Tern Group, Stour & Orwell Estuary Management 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>
2L	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	n/a
2M	Ensure impacts are assessed and that measures are in place to mitigate against impact from increased disturbance from development in the area (including the proposed Brantham housing development; housing and proposed Sizewell C Development; through displacement of users away from the 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	Not yet determined	Developer, Local Authority(ies), Natural England, Suffolk Coast & Heaths AONB, Stour & Orwell Estuary Management Group
2N	Assess the impact of disturbance from offsite shooting activity on SPA features.	Not yet determined	2015-16	Investigation / Research / Monitoring	Not yet determined	Natural England	Landowner(s), Crown Estate, Wildfowlers' Association(s)

<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>
2O	Investigate impact of disturbance from offsite agricultural gas guns and other bird scaring techniques on SPA features, notably Brent geese.	Not yet determined	2015-16	Investigation / Research / Monitoring	Not yet determined	Natural England	RSPB, Suffolk Wildlife Trust, Landowner(s), Stour & Orwell Estuary Management 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>
2P	Formalise reporting of incidents of speeding watercraft on designated sites (in breach of the 8Knot limit) disturbing nationally important wintering populations (especially Red-breasted merganser, Great crested grebe, Cormorant and other wildfowl) that use the open water within the middle of the estuaries.	Not yet determined	2015-25	Partnership agreement: Other	Not yet determined	Natural England	Stour & Orwell Estuary Management Group

3 Changes in species distributions

Numbers of some species of birds are declining on the Stour and Orwell Estuaries. This may be related to international changes in distribution and/or population levels related to climate change. This includes climatic variables and habitat quality issues at breeding grounds outside of the UK.

<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>
3A	Investigate how significant the changes in numbers of waders and wildfowl recorded at the site are, in relation to national and international changes in distribution and/or population levels related to climate change and other factors in a wider geographic context.	Not yet determined	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Stour & Orwell Estuary Management Group

4 Invasive species

The growth in *Spartina anglica* may be impacting on *Spartina maritima* (part of the supporting habitat feature), adversely impacting on bird roosting and feeding areas of saltmarsh and mudflat.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4A	Investigate what impact the spread of <i>Spartina anglica</i> has on native saltmarsh and its possible further impact on birds on saltmarsh roost areas.	£7,500	2015-18	Investigation / Research / Monitoring	Not yet determined	Natural England	Environment Agency, Ports And Harbour Authority(ies)
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4B	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

5 Planning Permission: general

Several of the issues affecting the Stour and Orwell Estuaries and the management of disturbance effects on the sites are related to each other. Addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development (perhaps summarised as sensitivity maps and matrices for the SIP area). Difficult issues include; a) Assessing the cumulative effects of numerous, small and often 'non-standard' developments. b) Development outside the SPA boundary can have negative impacts, particularly on the estuaries' birds. c) Assessing the indirect, 'knock-on' effects of proposals. d) Pressure to relax planning conditions on existing developments.

<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>
5A	Collation and spatial analysis of available data for public access/disturbance to include variables related to types of development or other activities with potentially adverse effects on SPA interest features, whether as a result of disturbance or other causes. Summarise and disseminate the results to delivery partners, in particular local planning authorities, in user-friendly formats, such as sensitivity maps and matrices. Identify important knowledge gaps that need to be addressed.	Not yet determined	2015-19	Investigation / Research / Monitoring	Not yet determined	Natural England	Environment Agency, Local Authority(ies), Stour & Orwell Estuary Management 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>
5B	Develop more detailed national guidance for the assessment of potential impacts on SPA waterbirds of new types of development and development pressures close to wetland SPAs and on cumulative and indirect effects.	Not yet determined	2015-19	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a

<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>
5C	Ensure impacts are assessed and that measures are in place to mitigate against impact from increased disturbance from development in the area (including the proposed Brantham housing development; housing and 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	Not yet determined	Not yet determined	Developer, Local Authority(ies), Natural England, Suffolk Coast & Heaths AONB, Stour & Orwell Estuary Management Group

6 Air Pollution: impact of atmospheric nitrogen deposition

Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site. This requires further investigation.

<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>
6A	Establish regular monitor atmospheric nitrogen and possibly phosphorus concentrations in the Stour & Orwell estuary.	Not yet determined	2015-20	Investigation / Research / Monitoring	Not yet determined	Not yet determined	Environment Agency, 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>
6B	Develop a site nutrient plan to investigate levels of atmospheric nitrogen and possibly phosphorus deposition across the SPA, and impacts on site features. This will determine if nutrient levels exceed thresholds and if there is action required.	Not yet determined	2015-20	Investigation / Research / Monitoring	Not yet determined	Not yet determined	Environment Agency, 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>
6C	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	2014-17	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a
<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>
6D	Informed by investigation and monitoring and nutrient plan, reduce atmospheric nutrient inputs where monitoring identifies concentrations of nutrients exceeding thresholds for Natura 2000 sites, by working with local landowners/managers, through DSF/ DWP etc.	Not yet determined	2020	Site Nitrogen Action Plan	Not yet determined	Not yet determined	Environment Agency, Natural England

7 Inappropriate coastal management

Freshwater habitat areas behind failing seawall walls could be inundated by seawater which would remove this habitat from the site.

<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>
7A	Investigate the impacts of possible overtopping and failure of coastal defences in the Orwell Estuary and the impacts on SAC/SPA feature; requirements for mitigation/compensation; consideration of adaptation and how these can be managed and alternative approaches for the area. Consideration should be given to the sustainability of sites.	Not yet determined	2015-20	Shoreline Management Plan and Strategies	Not yet determined	Environment Agency	Local Authority(ies), Natural England, Suffolk Coast & Heaths AONB, Stour & Orwell Estuary Management Group

8 Fisheries: Commercial marine and estuarine

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 Kent & Essex IFCA and 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.

<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>
8A	Where the assessments indicate management is required, introduce appropriate measures.	Not yet determined	2015-16	Regulation: Creation / amendment of byelaws	Not yet determined	Eastern Inshore Fisheries Conservation Authority (EIFCA)/ Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	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>
8B	If management measures are established, promote compliance with bylaws and provide an appropriate measure of reporting to ensure commercial activities within these sites are well-managed and to enable Natural England to provide advice on the condition of features and potential condition threats. Information may be provided by IFCA on potential condition threats. Ongoing action.	Not yet determined	2015 onwards	Enforcement	Not yet determined	Eastern Inshore Fisheries Conservation Authority (EIFCA)/ Kent and Essex Inshore Fisheries Conservation Authority (IFCA)	Natural England, Suffolk Coast & Heaths AONB

Site details

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

Qualifying features

#UK Special responsibility

Stour and Orwell Estuaries SPA

A156(NB) *Limosa limosa islandica*: Black-tailed godwit

A143(NB) *Calidris canutus*: Red knot

A149(NB) *Calidris alpina alpina*: Dunlin

Waterbird assemblage

A162(NB) *Tringa totanus*: Common redshank

A141(NB) *Pluvialis squatarola*: Grey plover

A046a(NB) *Branta bernicla bernicla*: Dark-bellied brent goose

A054(NB) *Anas acuta*: Northern pintail

A132(B) *Recurvirostra avosetta*: Pied avocet

Site location and links

Stour and Orwell Estuaries SPA

Area (ha) **3676.92** Grid reference **TM172331** [Map link](#)

Local Authorities Essex; Suffolk

Site Conservation Objectives [Stour and Orwell Estuaries SPA](#)

European Marine Site conservation advice [Stour and Orwell Estuaries SPA](#)

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.

Stour and Orwell Estuaries SPA

River basin

[Anglian RBMP](#)

WFD Management catchment

Combined Essex, East Suffolk

WFD Waterbody ID (Cycle 2 draft)

GB105035040440, GB105036040800, GB105036040880, GB105036040890, GB105036041000

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
Stour and Orwell Estuaries SPA	Stour Estuary SSSI Orwell Estuary SSSI Cattawade Marshes SSSI
National Nature Reserve (NNR)	
Stour and Orwell Estuaries SPA	n/a
Ramsar	
Stour and Orwell Estuaries SPA	Stour and Orwell Estuaries
Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
Stour and Orwell Estuaries SPA	n/a
Other relevant documents and links	
Stour and Orwell Estuaries SPA	Wildlife & Wading Bird Disturbance Studies Touching the Tide website Spartina anglica: a review of its status, dynamics and management (ENRR527) Code of Conduct for users of the Estuaries Stour & Orwell Estuaries Management Scheme Stour & Orwell Estuary Management Strategy

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	13/05/2015	

www.naturalengland.org.uk/ipens2000

