

## Site Improvement Plan

# Solent and Isle of Wight Lagoons

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)**

**UK0017073 Solent & Isle of Wight Lagoons SAC**

## Site description

The Solent and Isle of Wight Lagoons SAC on the south coast of England encompasses a series of coastal lagoons, including percolation, isolated and sluiced lagoons. The site includes a number of lagoons in the marshes in the Keyhaven – Pennington area, at Farlington Marshes in Langstone Harbour, behind the sea-wall at Bembridge Harbour and at Gilkicker, near Gosport.

The lagoons show a range of salinities and substrates, ranging from soft mud to muddy sand with a high proportion of shingle, which support a diverse fauna including large populations of three notable species: the nationally rare foxtail stonewort *Lamprothamnium papulosum*, the nationally scarce lagoon sand shrimp *Gammarus insensibilis*, and the nationally scarce starlet sea anemone *Nematostella vectensis*.

## 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	Threat	H1150 Coastal lagoons	Improve monitoring at SAC and individual lagoon level to inform management and consider boundary change.	Environment Agency, Gosport Borough Council, Hampshire County Council, Natural England, New Forest District Council
2 Inappropriate weed control	Threat	H1150 Coastal lagoons	Undertake water testing at Gilkicker Lagoon	Gosport Borough Council, Natural England
3 Coastal squeeze	Threat	H1150 Coastal lagoons	Investigate risk and identify management options and mitigation including habitat creation	Environment Agency, Hampshire and Isle of Wight Wildlife Trust, Isle of Wight Council, Natural England, New Forest District Council, Portsmouth City Council, RSPB
4 Invasive species	Threat	H1150 Coastal lagoons	Assess the extent of problem through surveys and mapping	Hampshire and Isle of Wight Wildlife Trust, RSPB
5 Air Pollution: risk of atmospheric nitrogen deposition	Threat	H1150 Coastal lagoons	Investigate potential atmospheric nitrogen impacts on the site	Natural England

## 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

Sluices around the lagoons, particularly in East Hampshire and the Isle of Wight are in poor condition/potentially not functioning fully. This causes water quality issues and changes in the hydrology of the lagoons, for example, a poor condition outfall at Gilkicker Lagoon has caused an inappropriate salinity regime which threatens its ability to support lagoonal specialist communities. Freshwater streams and land and golf course drainage also threaten the salinity and water quality of the lagoons. Lagoon habitat is being created where tidal sluices are not functioning as originally designed and are letting in sea water resulting in good quality lagoon habitat in new areas, as identified by the 'North Solent NNR Lagoons Survey, Autumn 2012' (Bamber & Robbins (2012), Report to Natural England: Report No. R2/12/527). Inclusion of the lagoons into the designation will enable effective management of this habitat and ensure the designation is scientifically robust.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
<b>1A</b>	Monitor the salinity levels at Gilkicker Lagoon across the year to ensure that the outfall is providing sufficient saline intrusion.	£500	2014	Investigation / Research / Monitoring	Not yet determined	Natural England	Gosport Borough Council
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
<b>1B</b>	Create a management plan for individual lagoons or a suite of lagoons based on a Water Level Management Plan-style investigation into water levels/structures/salinity of lagoons – to identify areas for improvement to maintain/improve condition of lagoons.	Not yet determined	2014-17	Non-Natural England funded site management plan	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>
<b>1C</b>	Investigate the options for site engineering at Butts Lagoon - without a sea wall overflow sluice its basin has no facility sufficient to allow the outflow of excessive freshwater after periods of high rainfall. No improvement in the condition of this lagoon is anticipated without site engineering.	Not yet determined	2017	Investigation / Research / Monitoring	Not yet determined	Natural England	Environment Agency
<b>1D</b>	Site engineering at Butts Lagoon to implement the recommended option from Action 1C and ongoing monitoring to assess the effectiveness.	Not yet determined	2020	Implementation Of Appropriate Coastal Management	Not yet determined	Environment Agency	Hampshire County Council
<b>1E</b>	Annual monitoring of lagoons, to include the following Common Standards Monitoring attributes: extent of basin; isolating barrier – presence, nature and integrity; salinity regime; biotic composition; and species composition of representative or notable biotopes.	£10000	2014	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a
<b>1F</b>	Add saline lagoons to the North Solent SSSI notification (through the Detailed Notification Review process) and assess the suite of lagoons currently designated as SAC to consider SAC boundary changes.	Not yet determined	2020	Designation strategy: Notification Amendment	Natural England	Natural England	Hampshire County Council, New Forest District Council

## 2 Inappropriate weed control

There is a history of algaecide application to the Gilkicker lagoons during the management of the golf course. The algaecide can have detrimental effects on the lagoonal vegetation and associated specialist fauna. Should this practice continue unmanaged this could impact on the SAC.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
2A	Undertake water testing to assess the impacts of potential algaecide and freshwater ingress into Gilkicker lagoon from the golf club's ditch.	£500	2014-16	Investigation / Research / Monitoring	Not yet determined	Natural England	Gosport Borough Council

## 3 Coastal squeeze

Sea level rise and coastal defence threaten salinity and area of lagoons. Flooding, percolation and infiltration from sea level rise and extreme weather can alter the salinity balance of the lagoons. Flood defences or managed retreat may reduce the area of low-lying fringe habitats. Current compensation provides required habitat for Epoch 1 of the Shoreline Management Plan 2 (SMP2), further investigation is required for Epoch 2 and 3. This project will utilise outputs from Shoreline Management Plans, the Environment Agency's Regional Habitat Creation Project and the New Forest District Council/Channel Coastal Observatory's Solent Dynamic Coast Project.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
3A	Investigate lagoons at risk and identify options for management - managed retreat vs coastal defences etc. Assess potential habitat loss and provide appropriate advice.	Not yet determined	2017	Investigation / Research / Monitoring	Local Authority, Flood and Coastal Erosion Risk Management (FCERM) 2015-21	Natural England	Isle of Wight Council, New Forest District Council, RSPB
3B	Investigate the potential to create new saline lagoon habitat. This project will utilise outputs from Shoreline Management Plans, the Environment Agency's Regional Habitat Creation Project and the New Forest District Council/Channel Coastal Observatory's Solent Dynamic Coast Project.	Not yet determined	2020	Conservation Enhancement Scheme (CES)	Local Authority, Flood and Coastal Erosion Risk Management (FCERM) 2015-21	Hampshire and Isle of Wight Wildlife Trust	Environment Agency, Natural England, Portsmouth City Council

#### 4 Invasive species

Marine Invasive Non-Native Species (INNS) are known to be introduced and subsequently spread through commercial shipping (through the release of ballast water and biofouling on hulls); Recreational boating (through biofouling on hulls); Aquaculture (through contamination of imported/moved stock or escaped stock), and natural dispersal. INNS are recognised as one of the main causes of global biodiversity loss and current evidence demonstrates that this is a problem which is increasing. If present, INNS pose a threat to SAC lagoon habitats by displacing or preying upon native species, by destroying habitats, or by introducing new diseases or parasites.

<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>	Assess the extent of the current problem of invasive species through surveys and mapping work.	Not yet determined	2017	Investigation / Research / Monitoring	Not yet determined	Hampshire and Isle of Wight Wildlife 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>4B</b>	Secure funding for Solent Aliens Project	Not yet determined	2017	Invasive Control Plan: Invasive Species Control Programme	Not yet determined	Hampshire and Isle of Wight Wildlife Trust	

#### 5 Air Pollution: risk 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>
<b>5A</b>	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	Not yet determined

## Site details

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

### Qualifying features

#UK Special responsibility

<b>Solent &amp; Isle of Wight Lagoons SAC</b>	H1150# Coastal lagoons
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### Site location and links

#### **Solent & Isle of Wight Lagoons SAC**

Area (ha) <b>36.24</b>	Grid reference <b>SZ608977</b>	<a href="#">Map link</a>
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Local Authorities	City of Portsmouth; Hampshire; Isle of Wight
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Site Conservation Objectives	<a href="#">European Site Conservation Objectives for Solent &amp; Isle of Wight Lagoons SAC</a>
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European Marine Site conservation advice	<a href="#">n/a</a>
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Regulation 33/35 Package	<a href="#">n/a</a>
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Marine Management Organisation site plan	<a href="#">n/a</a>
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## 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.*

### **Solent & Isle of Wight Lagoons SAC**

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



## Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
<b>Solent &amp; Isle of Wight Lagoons SAC</b>	Brading Marshes to St Helen's Ledges SSSI Langstone Harbour SSSI Hurst Castle & Lymington River Estuary SSSI Gilkicker Lagoon SSSI
National Nature Reserve (NNR)	
<b>Solent &amp; Isle of Wight Lagoons SAC</b>	n/a
Ramsar	
<b>Solent &amp; Isle of Wight Lagoons SAC</b>	Chichester and Langstone Harbours Solent & Southampton Water
Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
<b>Solent &amp; Isle of Wight Lagoons SAC</b>	Solent & Southampton Water SPA Chichester and Langstone Harbours SPA

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	06/10/2014	

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

