

## SOLENT AND ISLE OF WIGHT LAGOONS SAC

This document summarises the key issues and findings of the Habitats Directive Review of Consents for the Solent and Isle of Wight Lagoons Special Area of Conservation (SAC).

### About this site

Coastal lagoons are a scarce habitat in the EU and rare in the UK. They have a restricted distribution on the Atlantic coast.

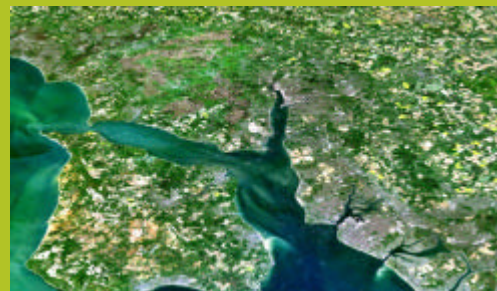
This site includes lagoons in four distinct areas: Keyhaven - Pennington, Bembridge (Chichester Harbour), Gilkicker (near Gosport) and Shut Lake (Farlington Marshes).

These lagoons have a range of salinities and substrates, ranging from soft mud to muddy sand with a high proportion of shingle. They support a diverse fauna, including large populations of three nationally rare species: the foxtail stonewort, the lagoon sand shrimp and the starlet sea anemone.

The lagoons in Keyhaven – Pennington Marshes are part of a network of ditches and ponds within the saltmarsh behind a sea wall. The lagoons at Bembridge Harbour have formed in a depression behind the sea wall and seawater enters by percolation. Very high densities of starlet sea anemone are found in these lagoons.

Shut Lake is an isolated lagoon in marsh pasture that receives sea water during spring tides, despite separation from the sea. Gilkicker Lagoon is a sluiced lagoon with marked seasonal salinity fluctuation.

### Aerial view of the coastline supporting the lagoons



### Review of consents

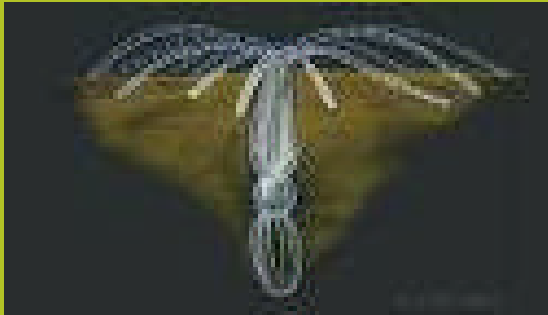
Because of the different ways in which water enters the lagoons, we found that only certain lagoons are at risk of being adversely affected by a limited number of impacts. Our investigations show the following water quality issues:

- Pennington lagoons were found to be at risk from salinity, elevated nutrients and toxic contamination;
- Bembridge lagoons were found to be at risk from elevated nutrients only.

Gilkicker and Shut Lake lagoons were not found to be at risk from any potential impacts associated with Environment Agency permissions.

## Starlet Sea Anemone

The nationally rare starlet sea anemone occurs at very high densities in these lagoons



## Salinity

The salinity levels of the lagoons are important to the number of lagoonal specialist species that they can support.

Salinity is influenced by the amount of freshwater and saline water that can enter the system.

## | Nutrient enrichment

Salinity levels in the lagoons influence which nutrient, for example nitrogen or phosphorus, is more likely to promote excessive algal growth, which can have an adverse effect on the ecology of the site.

## Conclusions

- We assessed 179 permissions in Stage Three of the review. We will affirm 149 of these, following our Stage Four assessment, except where they are found to be having an adverse effect on coincident of adjacent Natura 2000 sites in the Solent.
- We propose to modify two discharge consents to improve water quality in these lagoons. This will reduce impacts from nutrient enrichment and toxic compounds.
- Unfortunately, these measures alone will not restore the SAC to favourable condition, they will only remove the proportion of the impact from the consented discharges. Therefore, we have identified a number of further actions. These include promoting improved management of the lagoons to improve current water quality conditions, specifically salinity levels.

For more details about this process, contact Jo Simmons

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Further information can be found at:

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk) under Southern Habitats Directive  
or visit [www.naturalengland.org.uk](http://www.naturalengland.org.uk) for contacts within Natural England

For guidance e-mail: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

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