

SOLENT MARITIME SAC

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

About this site

The Solent encompasses a major estuarine system on the south coast of England with four coastal plain estuaries (Yar, Medina, King's Quay Shore and Hamble) and four bar-built estuaries (Newtown Harbour, Beaulieu, Langstone Harbour and Chichester Harbour).

The Solent and its inlets are unique in Europe due to their four tides each day and the complexity of the marine and estuarine habitats present within the area. Sediment habitats within the estuaries include extensive estuarine flats, often with intertidal areas supporting eelgrass, sand and shingle spits, and natural shoreline transitions. The mudflats range from low and variable salinity to very sheltered, almost fully marine muds in Chichester and

Langstone Harbours. The site's unusual features include the presence of very rare sponges in the Yar estuary and a sandy 'reef' of a marine worm on the steep eastern side of the entrance to Chichester Harbour.

Solent Maritime is the only site for smooth cord-grass in the UK and is one of only two sites where significant amounts of small cord-grass are found. It is also one of the few remaining sites for Townsend's cord-grass.

The Solent contains the second-largest aggregation of Atlantic salt meadows in south and south-west England.

Review of Consents

Solent Maritime SAC suffers from **nutrient enrichment**, which causes excessive growth of green weed across the site. This green weed can form dense mats within the intertidal areas throughout sheltered areas of the site, inhibiting the natural functioning of these habitats. Sources of nutrients to the site include:

- coastal background seawater in the English Channel
- consented point source discharges (e.g. sewage treatment works)
- natural and diffuse sources in rivers and streams
- landfill leachate from historic unlicensed and current licensed waste sites
- nitrogen bound in the sediment

Aerial view of the Solent coastline



Desmoulin's Whorl Snail

These rare snails are found at the head of a tidal channel at Fishbourne, on the north-eastern boundary of the SAC.



There is evidence of **toxic contamination** within certain areas of the site. For example, tri-butyl tin (TBT) concentrations exceed the Environment Quality Standard (EQS) for this substance at the head of Southampton Water and in the middle of the Solent. Levels are likely to be of concern throughout the site and are from historic use as an anti-fouling paint on boats.

The Review of Consents investigation has identified an area of **thermal pollution** occurring over the shallow intertidal zone on the western shore of Southampton Water. Thermal plumes may affect the distribution of fish.

There are areas of **organic enrichment** on the western shore of Southampton Water. This can make sediments anaerobic (low or lacking in oxygen) which can effect the distribution or composition of designated habitats.

Reductions in freshwater flows into the SAC may pose a risk to site's integrity. Estuaries are a very important feature of the site and implicitly require some freshwater input. It is also widely agreed that small freshwater flows may also be important to intertidal SAC habitats.

Changes in groundwater levels resulting from abstraction of groundwater have also been assessed; high groundwater levels throughout the year are considered to be one of the most important factors influencing the distribution of the Desmoulin's Whorl Snail, specific to Chichester Harbour.

Conclusions

- Stage Three considered 674 permissions, assessing whether or not they were having an adverse effect on the Solent Maritime SAC. The impacts assessed included nutrient enrichment, toxic contamination, thermal pollution, organic enrichment, reductions to freshwater flows and impacts on groundwater levels
- Stage Four demonstrates the need to modify 11 discharge consents, 12 abstraction licences and one waste management licence, to remove their proportional contribution to impacts upon the site.
- One of the abstraction licence modifications is designed to protect high ground water levels at the top of Chichester Harbour, which is the only location in the SAC that supports the Desmoulin's Whorl Snail.
- We recommend a number of other actions that are necessary in order to restore the SAC to favourable condition. These include tackling diffuse sources of nutrients within the catchment, in particular run-off from agricultural land that drains into the Solent via rivers and streams.

For more details about this process, contact Jo Simmons

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Further information can be found at:

www.environment-agency.gov.uk under Southern>Habitats Directive
or visit www.naturalengland.org.uk for contacts within Natural England

For guidance e-mail: enquiries@environment-agency.gov.uk

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