

Habitats Directive

Carmarthen Bay & Estuaries European Marine Site

What's happening?

Laws have been introduced under the Habitats Directive to safeguard Europe's most endangered plants, animals and habitats.



As part of this, the Environment Agency has to review all the existing consents that we regulate to ensure there are no adverse effects on the nature conservation interests of designated sites such as Special Areas of Conservation (SAC) and Special Protection Areas (SPA).

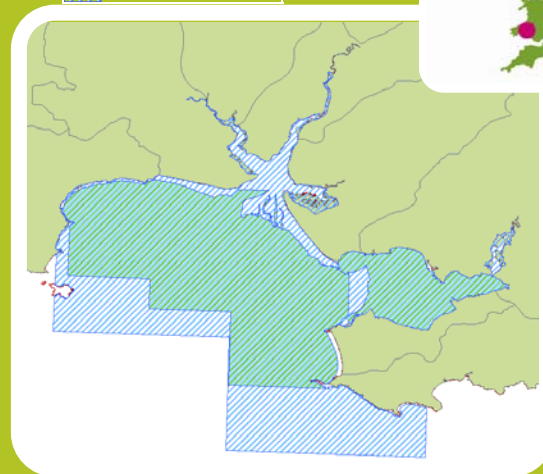
We are using a staged approach to do this:

- Stages One and Two – listed all consents and looked at those with the potential to have a significant effect.
- Stage Three – looked in detail at whether they have an adverse affect on special sites;
- Stage Four - those consents with no adverse affect will stand, whilst those with adverse effects will need to be changed.

Location

Legend

-  Special Protection area
-  Special Area of Conservation



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About this site

Carmarthen Bay and Estuaries European Marine Site (EMS) lies between the Gower and Pembrokeshire peninsulas in southwest Wales. It extends from Tenby in the west, offshore past Caldey Island and almost to Oxwich Point in the east and includes the Burry Inlet / Loughor Estuary and the Taf–Tywi–Gwendraeth (Three Rivers) estuaries. The EMS encompasses three marine *Natura 2000* sites – Carmarthen Bay & Estuaries Special Area of Conservation (SAC), Carmarthen Bay Special Protection Area (SPA) and Burry Inlet SPA.

The Carmarthen Bay and Estuaries / Bae Caerfyrddin ac Aberoedd SAC shares the same boundary as the EMS, whilst the Burry Inlet and Carmarthen Bay SPAs are wholly encompassed within the EMS boundary. In total, the site covers in excess of 66,000 hectares.



Impacts

We developed water quality models to help us understand the effects of nutrients from water discharges. The study estimated the nutrient inputs from point source and diffuse sources, analysis of estuary monitoring data, assessment of temporal trends and application of a decision-support tool to predict the biological response to nutrient input in estuaries

The risks of nutrient enrichment include:

- Frequent occurrence of surface anoxia
- High levels of organic detritus
- 'Bacterial' blooms
- Release of hydrogen sulphide
- Drifting rafts of detached macroalgae
- 'green tides' deposited on shore, smothering salt meadows
- Dense algal mats likely to inhibit bird feeding
- Stressed/'polluted' biological communities

The stage 3 assessment concluded that the Loughor Estuary is at high/moderate risk from nutrient inputs. In addition it was concluded that the Tywi, Gwendraeth and Taf estuaries are at high/moderate, moderate and low risk respectively from nutrient inputs.

Our assessments showed that nine discharges to water had the potential to affect species and habitats of the SAC.

What will change?

We will change discharge consents to ensure there are lower concentrations of phosphate entering the European Marine Site.



Shad are migratory and return to the River Tywi to spawn after maturing in the in-shore waters of Carmarthen Bay.

Conclusions

- Stage 3 considered 351 permissions, assessing whether or not they were having an adverse effect on Carmarthen Bay & Estuaries EMS. The impacts assessed included toxic contamination, nutrient enrichment, reduction of freshwater flows, air quality impacts.
- Stage 4 demonstrates the need to modify 4 discharge consents to remove their proportional contribution to impacts on the site.
- We recommend a number of other actions that are necessary in order to restore the EMS to favourable condition. These include tackling diffuse sources of nutrients within the catchment, in particular run-off from agricultural land that drain in to the estuaries via rivers and streams.



Further information can be found on our website

www.environment-agency.gov.uk

Guidance can be requested from enquiries@environment-agency.gov.uk