

Habitats Directive

BERWICKSHIRE AND NORTH NORTHUMBERLAND COAST

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 used 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 effect will stand and those that do have been examined further to see what can be done about it.

Location



About this site

The Berwickshire and North Northumberland Coast is designated as a SAC for the following features:

- intertidal mudflats and sandflats
- large shallow inlets and bays
- reefs
- submerged or partly submerged sea caves
- grey seal



The site boundaries are St. Abbs Head in the north and Alnmouth Bay in the south, our review only considered activities in the English part of the site. This is one of the most varied stretches of coastline in the UK. From large shallow bays and inlets separated by rocky headlands stretching down to subtidal reefs and sea caves. Expanses of intertidal mud and sand, to rocky islands offshore. The mixture of soft sediments and hard substrates produce a diverse range of habitat types, several of which hold international significance and support species of European importance.

Nutrient enrichment

The mudflats and sandflats are potentially at risk from excess levels of nutrients. We found that there were elevated phosphorus levels in waters over the mud and sandflat interest feature within Budle Bay. This could contribute to an adverse effect on the feature due to the excessive growth of opportunistic green macroalgae.

An area of the mudflat and sandflat at Budle Bay is affected by excessive coverage of green algal mats. At Stage 3 we used a computer model to look in detail at the amount of phosphorus and nitrogen contributed by two consented discharges to the Budle Bay area.

The amount of nitrogen contributed by consented discharges was very small, however the amount of phosphorus from the two discharges was significant.

Budle Bay



Conclusion

We needed to reduce the level of nutrients in the Budle Bay area to reduce the risk of excessive growths of algal mats. We concluded that changes were needed to two consented discharges to reduce the amount of phosphorus. A reduced limit for the amount of phosphorus that can be in the discharged effluent has been applied to one of the consents; the effluent is now treated to remove phosphorus.

The other discharge contributing phosphorus is now made to a soak-away which means it does not contribute nutrients to the Budle Bay area.

Further information can be found at:

www.environment-agency.gov.uk

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

Effects of nutrient enrichment

Nutrients such as phosphorus and nitrogen are needed for plant growth, but excess levels can adversely affect habitats by encouraging the spread or proliferation of opportunistic species such as green algal mats.

Excessive growth of algae can be toxic. They can smother other habitats and can cause oxygen depletion. This may adversely affect the invertebrates that live in the sediments, plants, fish and other animals by causing changes in the type and productivity of the species present.

Other impacts

We found that the vast majority of nutrients reaching the site are from unregulated sources. A significant proportion of the phosphorus is from unregulated background sources.

We did not investigate the sources in detail, however as the catchment is largely rural it is likely that agricultural activities contribute to the amount of nitrogen and phosphorus. It is essential that these unregulated sources are addressed as well to reduce the risk of impacts from nutrient enrichment occurring.