

SUMMARY

Many UK ports are situated in estuarine areas that are designated under European and international legislation for their nature conservation importance. Ports often have to undertake maintenance dredging to maintain navigation channels and berths at a declared depth and capital dredging as part of the new developments (approach channel deepening and creation of new berths).

Capital and maintenance dredging has the potential to impact on designated intertidal areas and the waterbird populations they support, for example through increasing the rate of intertidal erosion. In addition, increasing suspended sediment concentrations in the water column can impact on fish species (e.g. migration through estuarine areas).

Given the sensitive nature of estuarine habitats and the high level of protection afforded to them by legislation, the assessment of the potential impacts of both capital and maintenance dredging is often central to environmental impact studies, to-

gether with mitigation and/or compensation measures to minimise, avoid or compensate for the predicted effects.

This article examines the approach taken to sediment management as part of mitigation and compensation packages for port development and dredging projects through a number of case studies. These case studies are considered to represent examples of 'good practice' in the management of the estuarine environment where port development has occurred or is proposed. The approaches that are discussed comprise:

- Capital dredging protocols;
- Sediment replacement; and,
- Direct intertidal placement of dredged sediments.

The article concludes by highlighting ways in which the sediment management techniques can be considered to be 'working with nature?'