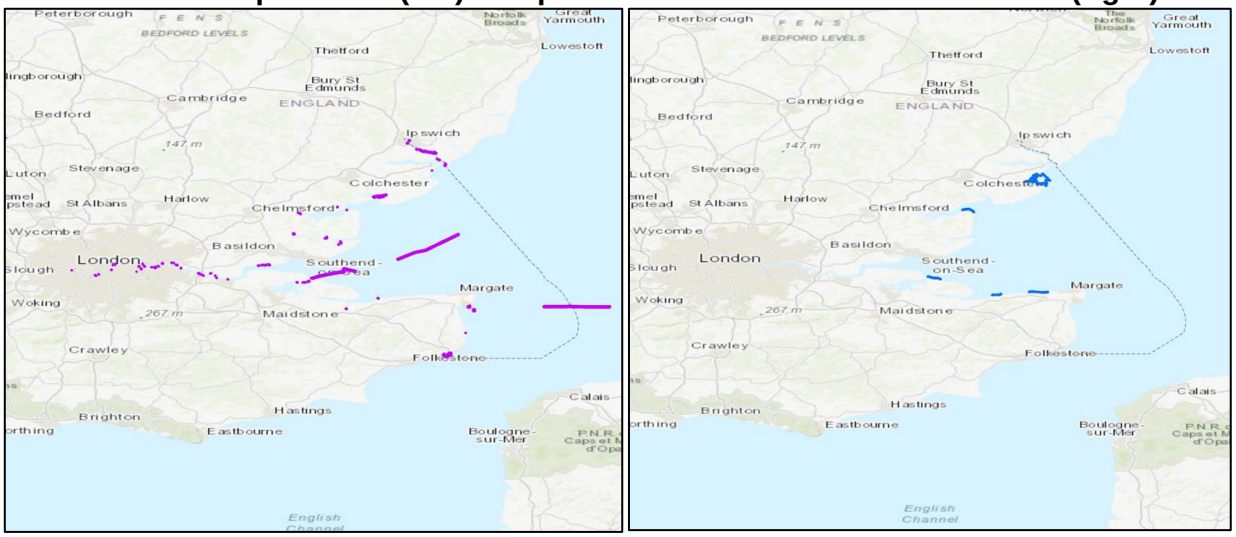
Marine Management Organisation

Alternative use of dredge material in the north east, north west, south east and south west marine plan areas (MMO1190)

Aim

There is a need for more dredged material to be re-used rather than disposed of at sea, therefore used “alternatively”, this project aimed to develop a national dataset to identify sites of potential alternative use and to link these with suitable future dredging campaigns.

Figure 1: Examples from the report of the historic and existing licensed dredging in the south east marine plan area (left) and potential future alternative use sites (right)



Introduction and methodology

The Marine Management Organisation (MMO) is currently developing marine plans, as part of this stakeholders stressed the need for a strategic overview of where dredging occurs and where this resource is needed to support alternative use of the extracted dredge material. The MMO commissioned Royal HaskoningDHV to develop this dataset for the North East, North West, South East and South West Marine Plans and to undertake a review of the data.

The objectives of the study were to:

1. Map existing:
    a) sites of dredging activity in the north east, north west, south east and south west marine plan areas; and
    b) sites where dredged material has been used alternatively, rather than depositing at sea.
2. Map potential future:
    a) sites of dredging activity; and
    b) sites where the material could be used/is needed alternatively in the future.

This study developed a GIS dataset and maps to describe existing and future opportunities for alternative use of dredge material in the North East, North West, South East and South West Marine Plans. This was completed using the MMO Public Register, a review of relevant literature and stakeholder consultation.

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Results

The GIS database is split into four datasets; historic and existing dredging, historic and existing alternative use, future dredging and future alternative use. The accompanying report contains the tabulated data from the database as well as a series of maps depicting dredging and alternative use in each of the marine plan areas. Opportunities have been identified across the 4 marine plan areas, for example future dredging campaigns in the North East are estimated to yield over 5.6 million cubic metres of material. Licensed ongoing dredging campaigns in the North West are estimated to yield up to 1.5 million cubic metres of material per year over the next ten years. Eleven future alternative use opportunities have been identified in the south west marine plan area, nine of which are stretches of coast which have been identified as suitable for beach nourishment, one high potential sandscaping site and one application for the use of 400 tonnes of mud in a flood protection scheme. In the south east marine plan area the total anticipated dredging volume estimated is more than 16 million cubic metres, the total annual dredge volume within the maintenance dredge licences not yet expired is six million cubic metres, historic and existing alternative use projects are estimated to use 46,800 DT of silt (used for restoration works) by 2022, and 12,000 DT of sand deposited annually.

Conclusions and recommendations

The resulting data was reviewed and a need for more strategic oversight has been identified to more efficiently coordinate the re-use of dredged material instead of disposal at sea. Although there are several constraints, such as material suitability, there are clear opportunities for much greater re-use in all the marine plan areas reviewed.

MMO comments

The project datalayers and report are valuable in the development of an evidence base for marine planning purposes. The outputs can be used to aid decision makers and applicants in finding opportunities for the alternative use of dredge material and therefore implement marine plan policies. This work is an important step towards improving the marine environment and the aspirations of the UK Government's 25 year Environment Plan. The report notes where additional information can be sourced to add value to datalayers and includes caveats and limitations to help stakeholders achieve the policy aspirations.

MMO recently completed a separate project to investigate the location, condition and features of significant sites for habitat restoration or creation around the UK coast – project MMO1135. Together these two projects represent a comprehensive assessment to aid the re-use for dredge material.

Further information

Please direct any correspondence to the Evidence Team (evidence@marinemanagement.org.uk)