

Brightlingsea Harbour

Environmental Impact Assessment Dredging Plan

Brightlingsea Harbour Commissioners face the task of maintaining the required depth in Brightlingsea Waterside Marina. Located in an estuary, careful dredging methodology and planning is required from an environmental point of view. Exo Environmental and Svašek Hydraulics joined forces to assist Brightlingsea Harbour Commissioners to create an optimal dredging plan from both a financial and an environmental perspective.

Brightlingsea Waterside Marina is an independent entity within the Brightlingsea Harbour. Initially the intention was to reuse dredged material to build a wall in front of the marina. Svašek Hydraulics performed a short morphological impact study of this dam showing that this was not an optimal solution. Brightlingsea Harbour Commissioners then asked Svašek Hydraulics and Exo Environmental to assist in creating a dredging plan that served both Waterside Marina and other parts of the harbour.

In the new vision dredged material would be discharged in Brightlingsea creek and after that the silt would be dispersed through the creek by tidal currents. Excessive sedimentation at vulnerable oyster beds was marked as a risk, but in other places the dispersed silt could be helpful in revitalising salt marshes.

As a part of the dredging plan a hydrodynamic survey and a model study were carried out. Svašek Hydraulics constructed the model with its in-house-developed hydrodynamic software suite FINEL2D to calculate silt dispersion.

The combination of a hydraulic survey and hydraulic modelling proved to be successful. On the one hand survey data was used to improve the results of the model, on the other hand model results were helpful in planning the monitoring locations.

Based on the survey and modelling a time table of the dredging plan was determined. The actual dredging will be executed in 2016.

CLIENT

Brightlingsea Waterside Marina/
Brightlingsea Harbour Commissioners

LOCATION

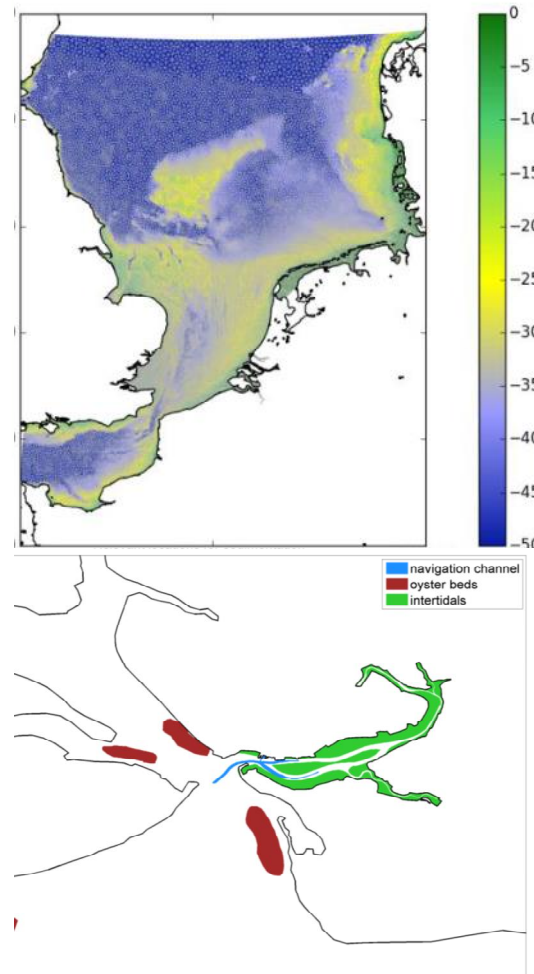
England

DATE

2015

SERVICES

Modelling Silt Dispersion
Environmental Impact Assessment



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