

Nature restoration Western Scheldt

MODELLING HYDRODYNAMICS & MORPHOLOGY

The Province of Zeeland has as goal to upgrade 300 ha of estuarine nature in the Western Scheldt. Part of this nature restoration package is measures for outer-dike nature restoration on several peat banks. Svašek Hydraulics has performed the hydrodynamic and morphological modelling for i.a. the areas Knuitershoek and Baalhoek.

Peat banks in the Western Scheldt are areas where a hard peat layer has reached the surface as a result of erosion of the beds top layer. Because of this, the area is not suitable for benthos anymore and the area becomes ecologically less valuable. By recovering the area with a sediment layer, the ecological function can be restored.

By placing several dams, the flow velocity in the area is reduced and sedimentation takes place. This way, benthos can re-establish itself on the peat banks and is the ecological value restored.

Svasek Hydraulics has studied the hydrodynamic and morphological aspects of several peat banks in the Western Scheldt, commissioned by the Province of Zeeland. Therefore the hydromorphodynamic model FINEL is used. The model is calibrated on actual morphological developments. Subsequently, the configuration of the dams is optimised by means of the model outcomes.

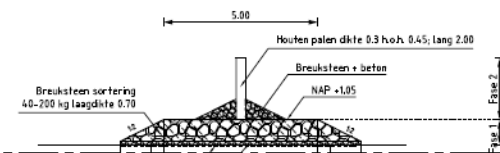
Extensive and frequent monitoring should provide in feedback on the restoration of the ecological values.

CLIENT
Provincie Zeeland

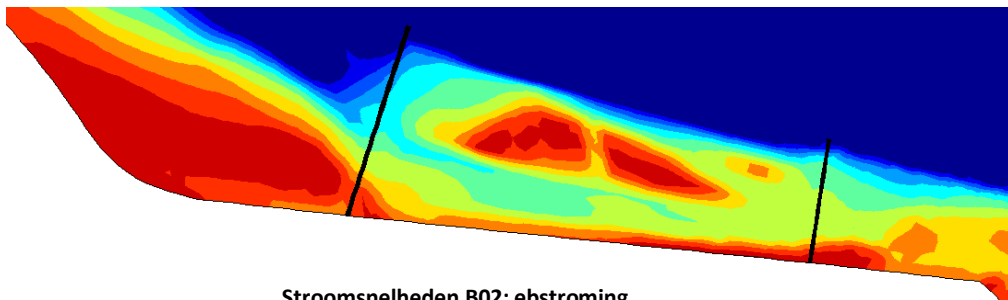
LOCATION
The Netherlands

DATE
2008-2017

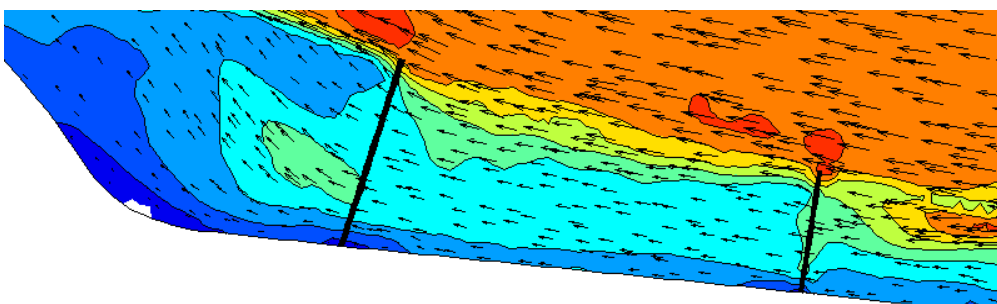
SERVICES
Morphodynamic modelling
Hydrodynamic modelling
Design optimisation



Bodemligging B02: Dammen op 0m NAP, na 10 jaar



Stroomsnelheden B02: ebstroming



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