



Hydrodynamic and morphological model Vlissingen-oost

The expansion and modification of the Sloehavens at Vlissingen-oost (part of Zeeland Seaports) may affect the siltation in the port. Svašek Hydraulics was asked to investigate the possible consequences for the dredging activities and the environment. For this purpose the planned harbour modifications are modelled to determine the effects on hydrodynamics and siltation.

Svašek has incorporated the proposed changes of the harbour shape and depth into its existing Western Scheldt estuary model. This procedure proved relatively simple given the unstructured grid used in FINEL2D.

The model simulation has been able to simulate the vortex in the harbour entrance, which transports much silt into the harbour. The siltation patterns that followed from the model simulation were consistent, both with earlier studies and showed a reasonable match with the actually observed distribution of deposited silt.

The model results with the modified harbour configuration showed that minor effects regarding hydrodynamics and the distribution of deposited silt are likely to occur.

Client
Zeeland Seaports

Location
Sloehavens (port),
Western Scheldt estuary

Date
2009

Services
FINEL2D silt