

# HEDWIGE POLDER

## EXPECTED BED DEVELOPMENT HEDWIGEPOLDER AND SURROUNDINGS IN CASE OF PERMANENT INUNDATION

The Dutch government has decided in December 2012 to permanently inundate the Hedwigepolder on the border of the Western Scheldt. A model study on the morphological development of the Hedwigepolder after inundation has been performed.

The model simulations are performed by means of the numerical flow model FINEL2D, in which both the sand and silt fraction are included. The model is recently calibrated and validated on multiannual morphological developments of the Western Scheldt.

The results of the model simulations show that the Hedwigepolder and the adjacent Prosperpolder are subject to significant sedimentation. The contribution of the silt fraction is by far the largest. The sedimentation speed is according to the model such that half of the polders have after 20 years reached a height above the mean high water level. By performing simulations with different parameter settings, a band width in the sedimentation speed is created.

Because the siltation is still ongoing after 20 years, the outlined view of the polders does not show the final situation, but a development stage of the polders only. Reduction of intertidal area and increasing bed levels will continue until the polder has been filled completely.

### CLIENT

Mieras Juridisch Advies

### LOCATION

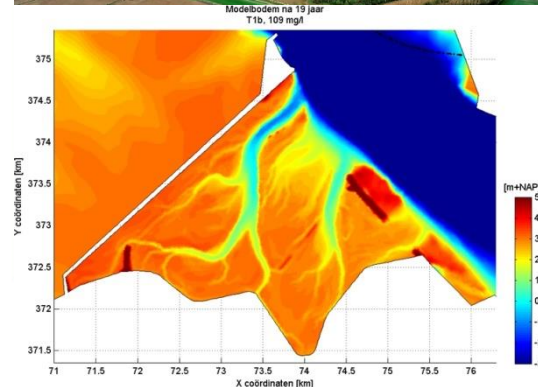
Hedwigepolder, the Netherlands and Prosperpolder, Belgium

### DATE

2013

### SERVICES

Morphological modelling  
Sand-silt interaction  
FINEL2D



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