

# SILT DISPERSION ANALYSIS

## LAND RECLAMATION PROJECT IJBURG

Ingenieursbureau Amsterdam (IBA) is designing the land reclamation project IJburg 2. IJburg is a residential neighbourhood constructed in the east of Amsterdam, the Netherlands. It is situated in the IJ Lake and is being built on artificial islands which have been raised from the lake.

The land reclamation is executed first in wet conditions in the water and later on in dry conditions. During the land reclamation in wet conditions a little amount of silt is suspended in the ambient water.

This suspended silt can be transported by ambient currents, which causes siltation around the land reclamation area. In this area mussels are found (driehoeksmosselen), they cannot handle too much siltation. Therefore, it is important to know the amount of siltation around the land reclamation area.

Svašek Hydraulics first has compared sand sieve curves of the sand during transport and of the sand at the previous reclamation site (previous site used the same sand).

From a mass balance the amount of silt available for suspension transport out of the reclamation area is found. With an analytical analysis both silt fall velocities in water and the rate of spreading around a point source are calculated.

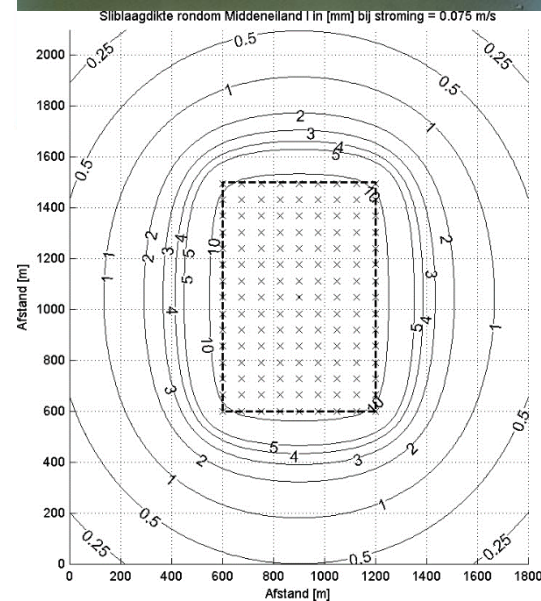
The resulting siltation layer thickness around the land reclamation area is presented in order to assess whether the mussels can survive.

CLIENT  
Ingenieursbureau Amsterdam

LOCATION  
IJburg, Amsterdam

DATE  
2008

SERVICES  
Analytical analysis silt dispersion



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