

## HUESKER geotextiles stabilize the base of new island in Amsterdam



Aerial view of Steigereiland, IJburg

Location: Amsterdam, The Netherlands  
IJburg, Steigereiland,  
Island on soft subgrade

Consultant: Ingenieursbureau Amsterdam  
and OMEGAM

Contractor: Combinatie IJburg (Ballast Nedam,  
HAM and others)

Year of  
Construction: 2001

Product: **HaTe® PES 400/50**



Placement of **HaTe® PES 400/50**

The islands are built up using sand-layers to a total thickness of 4.00 to 6.00 m placed on the bed of the IJmeer, which is comprised of 0.50 to 2.00 m thick sludge layers and a total compressible depth of approx. 8.00 m. An acceptable bearing capacity is reached around 10.00 m beneath the first sand-layer.

In September 1996 the municipality of Amsterdam decided to build the new district IJburg, on eight newly made islands in the IJmeer east of Amsterdam city. Between 2001 and 2012 more than 18,000 houses for approx. 45,000 inhabitants will be created.

On the Steigereiland, one of the eight islands, an embankment construction was planned along the edge. The stability analysis showed that, when the sand construction reached its final height, the embankment would be unstable. As a result a

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Sewing large panels



Hydraulic fill operation

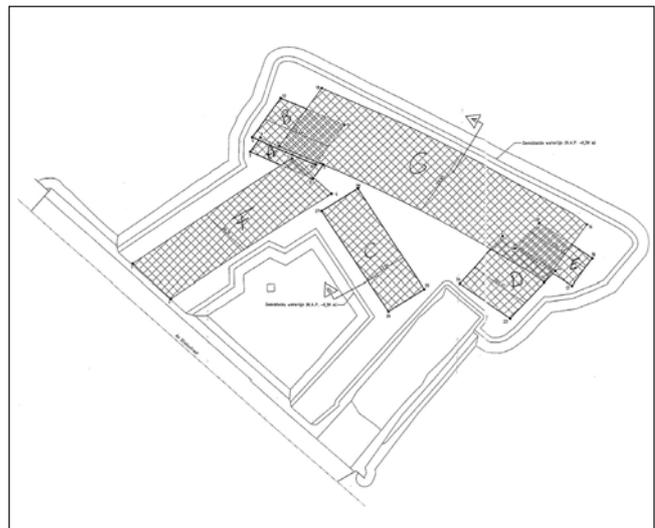
woven polyester with an ultimate tensile strength of 400 kN/m was required.

In August 2001 HUESKER Synthetic delivered more than 125,000 m<sup>2</sup> of their woven **HaTe® PES 400/50**. The 5,00 m width geotextile was supplied in lengths specified by the layout plan of the contractor Combinatie IJburg to minimise installation losses. Roll lengths varied from 68 m to 114 m and each roll was in addition to the normal label specially marked to assist identification on site.

On site the geotextile was placed on the first sand layer above water-level and then sewn together using portable sewing machines to form large panels.

Due to the strict time-frame 125,000 m<sup>2</sup> was delivered, placed and sewn together in three weeks.

After placing the geotextile the area has been enclosed by small dykes and brought up to level using hydraulic fill.



Geotextile lay-out plan

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