

# HUESKER geosynthetics ensure firm foundation for valuable storage space at Hamburg's Rodewisch Harbour



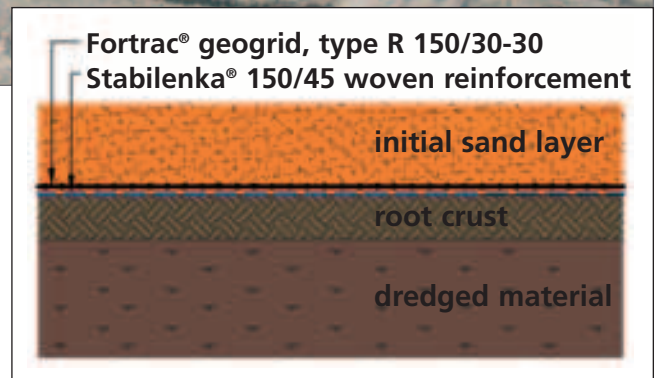
Overview: Rodewisch Harbour during the placement of the initial sand layer

## Background

The former harbour basin at Rodewischhafen in Hamburg (Germany) had been in long-term use as a temporary storage site for pumped dredge material. Over the years, a thin crust of sparse plant growth had been established on the dredged sludge. The objective was to allow the material to dry out and then prepare to receive important sand fill.

## Construction

Before placing the geosynthetics, the existing vegetation was cleared whilst retaining as much as possible of the established root crust as a stabilisation layer. A high strength woven geotextile, **Stabilenka**<sup>®</sup> 150/45, was laid transversely. As the fine grained sediment had such a low shear strength and was unable to support site traffic without stabilisation, the selected geosynthetic had to fulfil two functions: the **Stabilenka**<sup>®</sup> woven geotextile had



Cross section: surface build-up

to act as a separation layer as well as a reinforcement. Its high tear resistance was key to allowing the use of high performance earthmoving equipment. This factor was crucial in meeting the required construction time, during which 150,000 m<sup>3</sup> of sand had to be placed.

Subsequently the **Fortrac**<sup>®</sup> geogrid, type R 150/30-30, was laid. The two geosynthetics in combination guaranteed the stability of the earthworks structure and the safety of the mechanical filling operations. In a few years, the former harbour basin and canal will be in use again – as valuable warehouse space for the Port of Hamburg.

**HUESKER geosynthetics ensure firm foundation for valuable storage space at Hamburg's Rodewisch Harbour**



*Rodewischhafen harbour before surface preparation*



*Spreading sand-fill over geosynthetic reinforcement*



*Installation of Stabilenka® geotextile*



*Rodewischhafen after ground preparation*



*Installation of Fortrac® geogrid*

**Project/location:** Rodewischhafen in Hamburg (Germany)

**Client:** City of Hamburg

**Planning, design and site supervision:** ibw Ingenieurgesellschaft, Hamburg

**Contractor:** Hermann Wellmann, Tief- und Straßenbau, Hamburg

**Constructed:** March – May 2004

**Products:** **Stabilenka® 150/45**  
**Fortrac® R 150/30-30**

**HUESKER Synthetic GmbH**

Fabrikstraße 13-15 • D-48712 Gescher/Germany  
Phone: +49 (0)25 42 701-0 • Fax: +49 (0) 25 42 701-499  
Internet: [www.huesker.com](http://www.huesker.com) • E-mail: [info@huesker.de](mailto:info@huesker.de)

