

The Great Belt Link linking Denmark

- based on Fibertex Geotextiles

The Great Belt Link, Denmark

- The 18 km Great Belt fixed link comprises two bridges and one tunnel
- 6 million m³ of sand, clay and stones used for land reclamation
- More than 1.5 million m² of Fibertex Geotextiles used for separation in the subbase and for filtration at the coastline



The Great Belt Link

The project

In 1997 a fixed link across the Great Belt connected East and West Denmark. The project comprises three different construction tasks: The Eastern Bridge for road transport, a 6,790 m long suspension bridge with a free span of 1,624 m, the Eastern Tunnel for rail transport, an 8,000 m long immersed rail tunnel between Zealand and Sprogø and the 6,611 m long Western Bridge for combined road and rail transport.

The Fibertex solution

To stabilize the subbase in the land reclamation, Fibertex F-2B was installed between the construction layers as a separator. Fibertex F-4M was chosen as a filtration layer for the coastline surrounding the islands. Furthermore, Fibertex F-2B was used to stabilize access roads and parking areas, as well as temporary roads

and storage areas at the building sites. More than 1.5 million m² of Fibertex geotextiles were used at the site.



Separation



Filtration

Geotextile functions

To ensure the stability of the construction a geotextile is placed between the layers to prevent migration and mingling of materials, yet allowing free movement of water.

A geotextile with high static puncture resistance to resist the strains of installation and use is needed in the reclaimed areas. At the coastline a geotextile with excellent hydraulic properties to prevent fines from being washed out by the waves while maintaining free movement of water is decisive for the load-bearing capacity of the construction.

Fibertex F-2B and F-4M were chosen for the project.

