

High Strength Polyester Geotextile for Basal Reinforcement

Tidal Basin Infill, Tilbury Docks, Essex

Stabilenka®

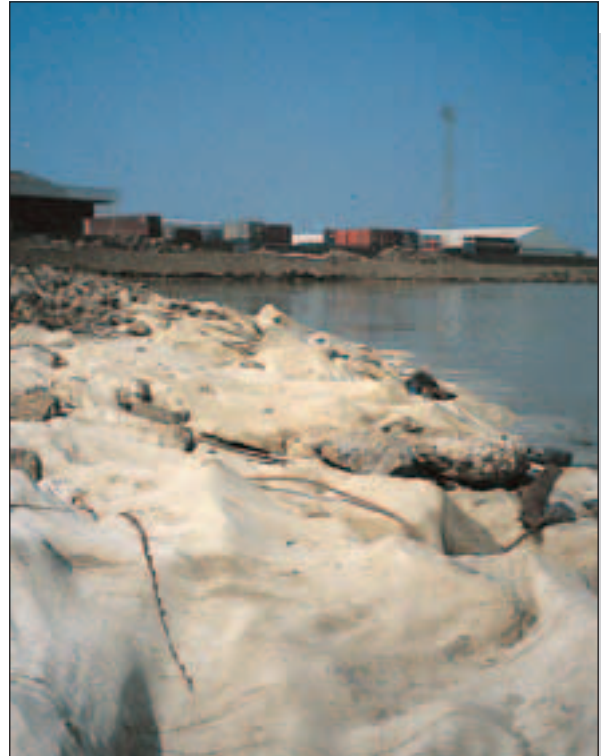
Tidal Basin Infill, Tilbury Docks

During 1997 Forth Ports decided to undertake the infilling of the area known as the 'Tidal Basin' at Tilbury Docks, Essex.

The project to infill the Tidal Basin would generate two benefits. Firstly, it would increase the 'on site' storage area in a very busy and congested port. Secondly, it would create an outlet for excess spoil, originating from building projects around the South East of England, which were offering useful fill material.

Due to alluvial deposition and the termination of dredging operations, the basin had filled with a thick layer of very soft silty clay, which became exposed at low tide. Embankment construction on such material immediately identified itself as presenting major stability issues. A full analysis of the problem dictated the requirement for a high strength geosynthetic basal reinforcement, to prevent the creation of a failure mechanism within the soft underlying strata.

The construction sequence obtained from the design process involved the creation of an



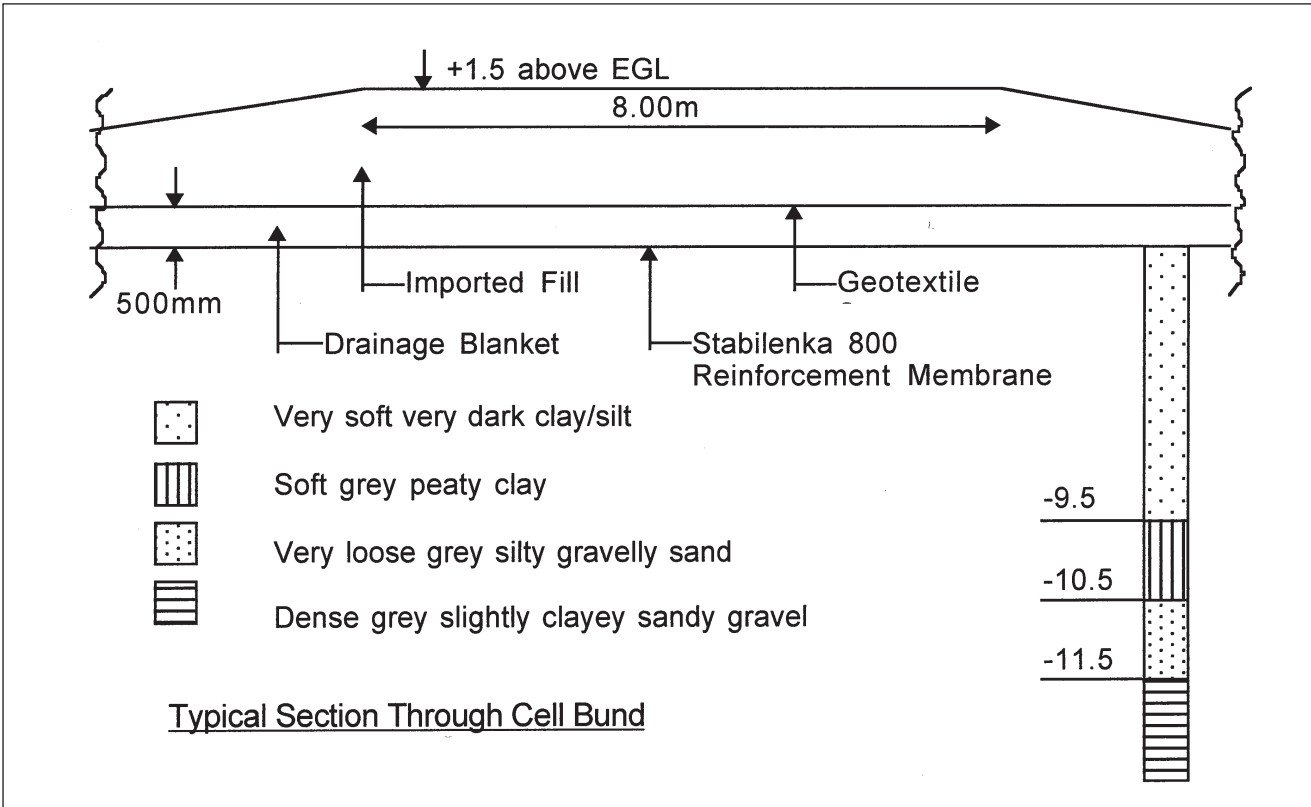
impermeable clay closure bund (to 5.0 m A.O.D.) across the mouth of the basin. On completion of the closure bund a number of smaller bunds (to 1.5m E.G.L.) are constructed within the basin forming a series of cells. The filling of the cell areas is undertaken using general excavated material in 0.25 m thick layers with the finished ground level being reached at 5.0 m A.O.D.

The geotechnical design generated the requirement for **Stabilenka® 800/100** at the base of the bunds, with **Stabilenka® 100/100** under the cell areas.

The construction operation began in May 1998 with a contract period of 3 years.

Contractor: WAM (GB) Ltd
Consultant: Entec (UK) Ltd
Client: Forth Ports

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Stabilenka® is part of HUESKER'S range of soil reinforcement products.

Stabilenka® is a high quality woven made from high modulus polyester yarn in the length (warp) direction and polyamide, or polyester in the transverse (weft) direction.

Stabilenka® can withstand high tensile force at low elongation as well as offer very low creep potential.

Stabilenka® is permeable and provides long term resistance to microbial, chemical and mechanical damage.

Stabilenka® is a registered trademark of Colbond b.v.

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