TENCATE Geotube®

PROJECT REFERENCE

Woven geobags for riverbank erosion protection

Sungai Choh, Selangor Malaysia

Project Data

Project	:	Sungai Choh, Selangor, Malaysia
Client	:	Drainage and Irrigation Department
Product Used	:	Geotube® Geobag GB400MX4

Overview

High surface runoff from nearby housing developments near Sg. Choh in Selangor, Malaysia have resulted in a rapid increase in the volume of water carried by the river. Severe scouring of approx 200m of riverbank threatened to result in the collapse of a long stretch of the riverbank.

To rectify this problem the Malaysian Dept of Drainage & Irrigation (DID) evaluated various erosion protection methods before settling on an option using a combination of Gabions and large Geobags. The woven Geobags from TenCate were the preferred option due to their overall cost effectiveness and ease of filling and handling.

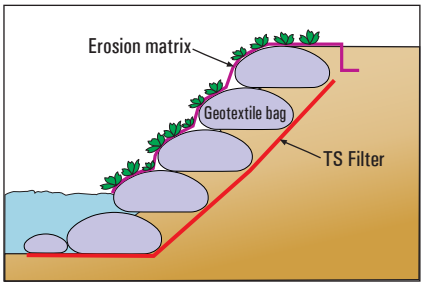
TenCate Geobags

Filled Geobags are heavy and usually subjected to rough handling during installation. To ensure that every TenCate Geobag delivered to site can withstand installation stresses without bursting, each bag is fabricated and tested to exacting standards. The Geobags are manufactured from heavy duty woven tapes, and sewn in such a manner that the seams can withstand rough handling without bursting. Additionaly the fabric used to manufacture the bags is designed to ensure retention of soil particles under varied hydraulic and dynamic and abrasive stresses.

Installation

Prior to installation of the Geobags the section of river to be repaired was trimmed back and a layer of Polyfelt® filter geotextile laid over the trimmed soil. The Geobags were then laid in an overlapping shingle style, to ensure maximum stability of the embankment. To facilitate efficient filling, TenCate provided the sub-contractor with a simple filling frame. Nylon lifting straps were used to lift and position the bags.

Finally, once laid the bags were covered by a layer of soil, compacted, and protected by a layer of Polymat Erosion Protection matting. Soil was placed in the matting which was then hydoseeded. To protect the hyroseed from rain, a light dusting of topsoil was then placed over the top surface.



Typical cross section of Geobags riverbank protection.

Project site prior to Geobags riverbank erosion protection works.

Completed installed geobags at project site.

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