Secutex®
Soft Rock

River embankment protection

Project name
PKNS Seri Selangor Golf Club

Client
Selangor State Development Corporation (PKNS)

Installer
Huls Engineering Sdn. Bhd.

Products
Secutex® Soft Rock R 601
Secutex® H

Naue

Fig. 1: Eroded natural earth embankment

Fig. 2: Secutex® Soft Rock sand containers as erosion control measure

Challenge

The Seri Selangor Golf Club (KGSS) located at Damansara, Selangor is an 18-hole golf course wholly owned by the Selangor State Development Corporation (PKNS). Near hole no. 18 a natural stream crosses the golf club area. It adjoins the coffee house at the main entrance where a grand view of the overall KGSS Golf course is given.

At the left side of the riverbank, the existing natural earth embankment has been eroding over the years (Fig. 1). In addition, heavy rainfall endangered the stability of the embankment. The embankment had to be reinforced due to the unpleasant view and possible danger to the golfers. On the other side of the bank, an existing rubble pitching wall sitting on piles was also experiencing scouring hence compromising the overall stability of the wall.

Solution

Naue undertook a detailed study and proposed to adopt the Secutex® Soft Rock design mechanism. With this approach, the sand containers were first used to form the base of the wall and were then subsequently installed. In order to avoid the existing earth being washed away, a Secutex® H nonwoven geotextile was installed at the lower base, in between the slopes and sand containers. This completed the revetment system.

Added Value

This design proposed by Naue completely ruled out the use of any form of conventional concrete reinforcing element. Secutex® Soft Rock sand containers blend with the natural environment, prevent erosion, scouring and are a fast, cost-effective solution compared to the construction of a reinforced concrete wall.

Fig. 3: Secutex® Soft Rock sand containers blend with the natural environment and act as an effective erosion protection system

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