

SLOPE SURFACE PROTECTION AT LE ORCHID VILLAS PATONG DISTRICT, PHUKET PROVINCE, THAILAND

Slope Protection

Problem

The management of Le Orchid Villas planned to build luxury villas at the foot of hilly forest near the famous Patong beach in Phuket. The location of the proposed villas is very close to hill side which requires the existing hill to be trimmed to almost 60 degree inclination. The slope was cut approximately 22 m in height and 120 m length to make way for the construction of the villas. The global stability of the slope is not the main concern to the client because the bare slope consist of mainly granite rock, but the slope is exposed to surface erosion if it is not protected immediately. Shotcreting the surface is not an options because the client was also looking for green finish which will look more pleasant and blends with the surrounding environment.

Solution

Maccaferri proposed MacMat®. MacMat® is a geomat consisting of a three-dimensional structure having a biconical cuspated shape made from polypropylene filaments. MacMat® geomat is used to prevent erosion and surface planar failure phenomena on slopes.

Client: LE ORCHID RESIDENCE, THAILAND

Designer / Consultant: NA

Contractor: KENBER GEOTECHNICS CO, LTD.

Products used (Qty.)

- MacMat 1,800 m2

Date of construction: 05/2007 - 05/2007



Before construction (July 2006)



After construction (May 2007)



After construction (May 2007)



After construction (May 2007)