CASE HISTORY
Ref: MM051 - Rev 00, March 2014

ROCKFALL PROTECTION SYSTEM
BUKIT PAK APIL, KUALA TERENGGANU, TERENGGANU, MALAYSIA

MACCAFERRI ROCKFALL PROTECTION SYSTEM (MAC.RO™)
Product: STEELGRID® BO300

Problem
Bukit Pak Apil is one of the tourist attraction area located in the South of Kuala Terengganu city centre. It is located in a high-trafficked area, between Jalan Kemajuan and Jalan Cerong Lanjut. Besides housing a motel on top of the hill, there are recreational areas and restaurants in the heart of its green surroundings.

During year-end raining seasons, heavy rain befalls the East Coast of Peninsular Malaysia, thus affecting Terengganu as well. This causes massive slope erosion and even failures in unprotected areas. Consequently, Bukit Pak Apil suffered the same fate and the hill toe eroded badly, with fractured rocks exposed loosely on the surface. Hazard to road users is imminent should the fractured rocks detach from the slope surface and fall to the roadside. This prompted the Public Works Department of Kuala Terengganu District to act immediately to protect the safety of road users.

Solution
Maccaferri proposed Steelgrid® BO300 to be laid on top of the rock slope, with rock bolts anchoring system at every 3m spacing. It acts to strengthen and prevent detachment of loose rocks from the slope surface. Steelgrid® is a geocomposite netting consist of steel cables weaved longitudinally and transversely into wire mesh. This increases the drapery stiffness, thus effectively transfer stresses to connecting rock bolts.

Client:
JABATAN KERJA RAYA KUALA TERENGGANU
Main contractor:
JUTA MAS CONSTRUCTION
Products used:
800 m² STEELGRID® BO300
Date of construction:
APRIL 2013 - MAY 2013