DEBRIS FLOW MITIGATION WORKS AT TNB SWITCHYARD, BENTONG

BENTONG, PAHANG, MALAYSIA

Debris Flow Barriers

Problem

In recent years, Malaysia has experienced frequent debris flow event especially along road and highway located on mountainous terrain. This case history describes channelized DFB project in Malaysia.

Site is characterized by descending steep channel with rock outcrops on the channel. The debris snout has modified the existing channel alignment one. Mitigation works were required to reroute the channel back to its original alignment and protect the existing switchyard from future debris flow event.

It provides cost effective solution, especially in challenging and difficult terrain. They are light and easy to install. The structure itself is transparent and fit better into the landscape.

Solution

Integrated solution with a combination of Sabo Dam, Debris Flow Barrier and training works with gabion and mattress to manage future debris flow event.

2 Nos. of DFB (80kPa and 100kPa) installed viz. with and without post. Both DFB height is 4m with channel width between 15 and 20m. They are customized to suit the dimensions of the project, the anticipated debris material and the expected volume of the flow and incorporate specific energy absorption elements to restrain the flow.

Client: Tenaga Nasional Berhad
Designer / Consultant: MRSA Consultant
Contractor: MMA Tech Engineering
Products used (Qty.)

- Debris Flow Barriers — 80kPa and 100kPa

Date of construction: 06/2023 - 10/2023

Google Maps Google Earth



T Fast Anchor on the channel banks.



Channelised DFB. Note Sabo Dam upstream



DFB installation in progress

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