

**LPMITP WORKS IN SHAM WAT ROAD, WEST LANTAU
SHAM WAT WAN, ISLAND DISTRICT, NEW TERRITORIES, HONG KONG**

Dynamic Barriers

Problem

In 2010, the GEO launched the Landslip Prevention and Mitigation Programme (LPMitP) to systematically deal with the landslide risk associated with both man-made slopes and natural hillside. Under the LPMitP, the most deserving man-made slopes and natural hillside catchments are selected for studies each year in accordance with a risk based priority ranking system. The necessary landslide prevention and mitigation works, as identified by the studies, for man-made slopes and natural hillside catchments under Government's maintenance responsibility are implemented under the LPMitP.

Sham Wat Road connects Sham Wat Village and Luk Wu Village and it is the only vehicle accessible road that connects to Tai O town. In recent years numerous landslide incidents above the road has been reported and investigation has been made by the authorities.

GEO has called for a study be done on the landslide risk and rectification measures for Sham Wat Road unstable slopes under the works contract GE/2013/16. Arup-Frugo Joint Venture (AFJV) has been appointed as the detail design consultant and oversee the completion of contract works. Kwan On Construction Company Limited has been awarded the contract to carry out the construction works.

Based on AFJV findings, a rockfall barrier with a capacity of 8589 kJ was required.

Solution

Maccaferri 8,600kJ capacity dynamic barrier was proposed as it has undergone ETAG 027 assessment and proven to be a competent barrier. After rigorous screening and qualification in terms of product performance and quality compliance, the proposal was approved and accepted for use by GEO.

The barriers were also designed to suit the terrain with minimal impact to the surrounding green environment and as such, had to be custom-made with four different panel span in 25m, 32m, 61m and 69m. The barrier heights varied from 6.5m to 7.0m.

As a form of value added service, the Maccaferri team assisted in preparation of barrier installation and maintenance method statement to guide the contractor in their works. Site concerns during installation works by the Client and Contractor was also addressed promptly.

Client: Geotechnical Engineering Office (GEO)

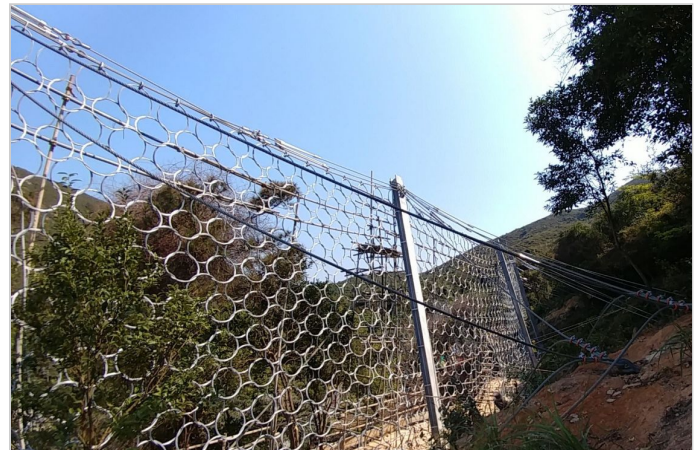
Designer / Consultant: Arup-Frugo Joint Venture

Contractor: Kwan On Construction Company Limited

Products used (Qty.)

- Dynamic Barriers
- E:8,600kJ L:
187m H:6.5 -
7.0m

Date of construction: 10/2016 - 07/2017



Complete installation of dynamic barrier (view from upslope)



Complete installation of dynamic barrier (aerial view)