



Asia

CEDD Contract GE/2005/45 Landslip Preventive Works at Po Shan Road – Drainage Tunnels

Description of Work

The construction of landslide preventive works (LPW) at Po Shan Road under CEDD Contract No. GE/2005/45 includes the construction of two 3.5m diameter drainage bored tunnels under Hong Kong Mid-Levels. The tunnels commence from a common adit formed by mechanical excavation at Po Shan Road close to the site of a major landslip. Construction of the adit tunnels requires the formation of a tunnel portal and subsequent tunnel excavation through soft ground prior to achieving full rock cover over the top of the tunnel. A 3.5m diameter tunnel boring machine was employed to form the drainage tunnels which also involved the installation of a large number of inclined raking drains along the crown of tunnels in an attempt to ensure long term control of groundwater drainage.

GCG (Asia) was employed by the contractor for these works to provide expert advice on a wide range of geotechnical issues during both the tender and construction stages of the project. This advice related to a detailed geological review, the development of tunnel construction methodology options leading to a preferred scheme, the prediction of groundwater inflow and ground settlement, the design of temporary and permanent tunnel support, the design of the tunnel portal and a review of construction operations. GCG (Asia) also managed the design for the temporary tunnel noise enclosure and carried out regular site inspections to review the support design in light of the ground conditions actually encountered during tunnel excavation.

Client: China State Construction

Dates: 2006 - ongoing

Estimated Project Cost: HK\$130M



Adit tunnel excavation underway showing temporary support system

