



# Three Pacific Place Link Pedestrian Tunnel Excavation Rock Quality Assessment and Temporary Support Design

## ***Description of Work***

A pedestrian tunnel has been constructed in Hong Kong between the existing MTR Admiralty Station and a new development named Three Pacific Place in Queen's Road East. The tunnel is some 280m long with a relatively shallow vertical alignment and consequently was constructed mainly within weathered granite. Where relatively hard rock was encountered the excavation method was drill and blast and the excavated material was essentially self supporting with little requirement for robust temporary support systems. In places however the rock mass within the excavation comprised preferentially weathered elements, in the form of soil seams, areas with heavy water seepage and/or fault-influenced zones. In these situations it was essential that rapid quantitative geological assessments were carried out and tunnel support designed and installed to ensure construction safety and constant production cycles.

GCG (Asia) was employed by the tunnelling sub-contractor to provide independent expert advice on a wide range of geotechnical issues relating to the classification of the excavated rock conditions and also advice on the temporary tunnel support design. A detailed review of the ground investigation and tunnel excavation records was undertaken together with regular site inspections of the front face of excavation. An independent report on the processes associated with rock excavation and the temporary support working cycles was provided to the contractor as a reference document.

***Client:*** Kane Tunnelling Ltd.

***Dates:*** 2005

***Estimated Project Cost:*** N/A

