

## Project Profile

### Express Rail Link

Maxwell GeoSystems were appointed as lead consultant on the Independent Monitoring Consultancy for the Express Rail Link (XRL); a HKD\$65 billion rail project requiring 26 kilometres in tunnel and a station terminus in Kowloon, Hong Kong.



The role of Maxwell GeoSystems was to provide construction monitoring advice to the MTRC and in particular comment on results provided by instrumentation contractors serving the 14 main contracts along the alignment. Maxwell GeoSystems also independently monitored instrumentation across the alignment as part of quality assurance and risk mitigation. The MGS Mission Portal formed the basis for the United Web database which served the entire project.

Contract 8010 focuses on the iconic station and its approach tunnels constructed within Hong Kong's largest ever retained excavations. The MGS team have worked closely with MTRC engineers to design systems to address the various challenges faced by the construction including the implementation of systems to compare movements against predictions and excavation progress and sophisticated tracking of structural distortions of utilities and buildings.

Contract C8011 monitors the tunnel portion of the project which are excavated using a combination of retained excavation, bored tunnel and drill & blast. The systems have to accommodate a variety of monitoring types including strut monitoring of existing structures, ground vibration and convergence.

The UWD provides for alarm notifications with links to UWD and an online weblog for recording commentary. The system is highly valued by all parties to the project.

Sector	Urban Railway Construction	Location	Hong Kong SAR, China
Client	Mass Transit Railway Corporation MTR	Budget	HKD\$ 65 Billion