



## MTR expansion (XRL, KTE, SCL, WIL), Hong Kong

The Mass Transit Railway (MTR) system in Hong Kong is a heavily patronized railway network consisting of nine lines, a total route length of around 175 kilometres and 82 stations. The network carries about 3.6 million passenger trips per day.

To meet the increasing transport needs of Hong Kong's growing population growth in a sustainable manner, the Government is proceeding with the implementation of three railway lines: the South Island Line (East), the Kwun Tong Line Extension and the Shatin to Central Link. In addition, MTR is also building the Hong Kong section of a new high speed rail line to connect it with the Chinese Mainland.

The expansion projects currently under construction or in advanced planning on these lines are the West Island Line (WIL), Gauangzhou-Shenzhen-Hong Kong Express Rail Link (XRL), Shatin to Central Link (SCL), and Kwun Tong Line Extension (KTE).

### Evans & Peck's role

Evans & Peck provides Mass Transit Railway Corporation (MTRC) with:

- partnering (start up) workshops for all its major contracts
- constructability advice and program reviews
- procurement advice and tender assessment

### Partnering workshops

Evans & Peck has been providing Mass Transit Railway Corporation (MTRC) with start-up partnering workshops on each of its major projects since 2009. These have involved assisting the team on each project communicate and interface effectively through an understanding of individual parties' needs. The partnering workshops generally involve a morning session focussing on relationship building - how the team can work collaboratively using a partnering approach to achieve a higher team performance and an afternoon session discussing project issues and challenges.

The workshops are held in either Cantonese or English as required by the participants.

### Constructability advice

Evans & Peck also provided constructability advice to designers working for MTR including AECOM, Atkins and Hyder Consulting. This has involved considering how things can be built, choices in the permanent works relatively to constructability, program risk and the interface between the different contracts.

On specific projects this has involved:

- constructability and program review for the terminus station on the XRL line, the biggest single construction contract ever awarded in Hong Kong where there are 15 high speed tracks entering the terminus 30 metres below ground in a massive open cut. The station footprint is about 600-metres long and 220-metres wide and it has an architectural feature roof that sweeps up over a massive void in the structure.
- constructability advice for the Hung Hom station on the SCL line, an existing east rail station which contains the tracks for the now-defunct freight rail. The new SCL line requires a new station being established underneath the old one and Evans & Peck is providing advice on the extensive underpinning required to the existing station while the new one is created underneath it.

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### FACTS AND FIGURES

Client: MTR Corporation Limited

Project value: approx HK\$200 billion

E&P involvement: 2009 - 2014

Providing procurement risk advice on a HK\$200 billion rail expansion program in Hong Kong



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## MTR expansion, Hong Kong (continued)

- an audit of the target costs on one of a target cost tunnelling project on the WIL line that is currently under construction to check the cost forecasts are accurate.
- advice on a station on the KTE line that is in an area of rock close to the Whampoa ship, a Hong Kong landmark, and very busy shopping district, highly pedestrianised with very limited street space. For this station Evans & Peck is advising on how to form an underground station in the rock mass below with minimum disturbance.

### Procurement

Evans & Peck has been working with MTR on the tender assessment process. Our role is as an independent adviser to scrutinise the various construction proposals and techniques that the tenderers are proposing and to work with the MTR team to make an assessment of risk, risk of late delivery or areas where we can see risk of underpricing or cost risk.