

High-profile tunnelling by Brokk 90 in Hong Kong

Brokk is quite commonly used in tunnelling jobs such as subway tunnels and sewage tunnels. Especially so for tunnel excavations close to the surface or close to other tunnels. But it is mainly the larger models Brokk 180 or Brokk 330 that are used. In Hong Kong however, Brokk 90 was recently used in the construction of the high-profile skyscraper One Island East.



In the construction of the building, there was a need for a cooling pipe from the basement of One Island East to the basement of the neighbouring building. The pipe was 1 meter in diameter and needed to go underneath the road separating the two buildings. The rock was classified as Grade III (moderately hard). To complicate things further, the access to where the pipe was to be placed was very limited and there were already a number of pipes and cables in the ground. The excavation of the tunnel for the pipe had to be conducted very carefully. Yet, the project was under time pressure and had to be complete quickly.

Shui Wing Engineering Co. Ltd. was contracted to do the excavation. Due to the time constraints and safety requirements, it

did not leave many options for equipment. Manual jackhammers would take too long time and mini-excavators would be too dangerous for the staff. For Shui Wing, a user of Brokk since January 2006, this was an obvious job for Brokk 90. Hand-held rock-drills were used for pre-drilling in order to make the rock easier to break. A small mini-excavator was used for removing the debris for the job site.



“Brokk 90 proved to be extremely efficient for rock breaking in confined spaces. Meanwhile, Brokk 90 provides a much safer working environment”, says Mr. Allison Chan, Director of Shui Wing. Mr. Chan estimates the progress was 3-5 times faster than with traditional methods.

