**Annex**

**"Tunnelling Project of the Year between €50M and €500M" Award**
**Construction of Fort Canning Station and Tunnels in Singapore**

Hailed as the project which "moved the Singapore River", the construction of Fort Canning Station and tunnels entailed more than the usual challenges of constructing deep underground MRT infrastructure. Abandoned debris and obstruction which laid below the Singapore River due to historical land use complicated the project. The Singapore River had to be diverted for the removal of these obstruction to facilitate smooth tunnelling works. Construction underneath the Singapore River also meant that LTA had to maintain adequate hydraulic flows to prevent flooding upstream and keep the water clean as it is connected to Marina Reservoir. The tunnels were successfully completed in 2015 and the original waterway was reinstated thereafter (refer to Annex Pictures A and B).

The project also faced very tight construction space, as tunnels were built just one metre above the North East Line tunnel, three metres below the Circle Line tunnel, six metres beside the underground Central Expressway tunnel and eight metres below the North South Line tunnels (refer to Annex Picture C). With such engineering challenges, the team's meticulous attention to details and rigour edged out finalists "Urban Rail Transit Line 9 Tunnel and Underground Engineering in Shenzhen City" from China, and "Venda Nova III Repowering Project" from Portugal to win the "Tunnelling Project of the Year" Award.

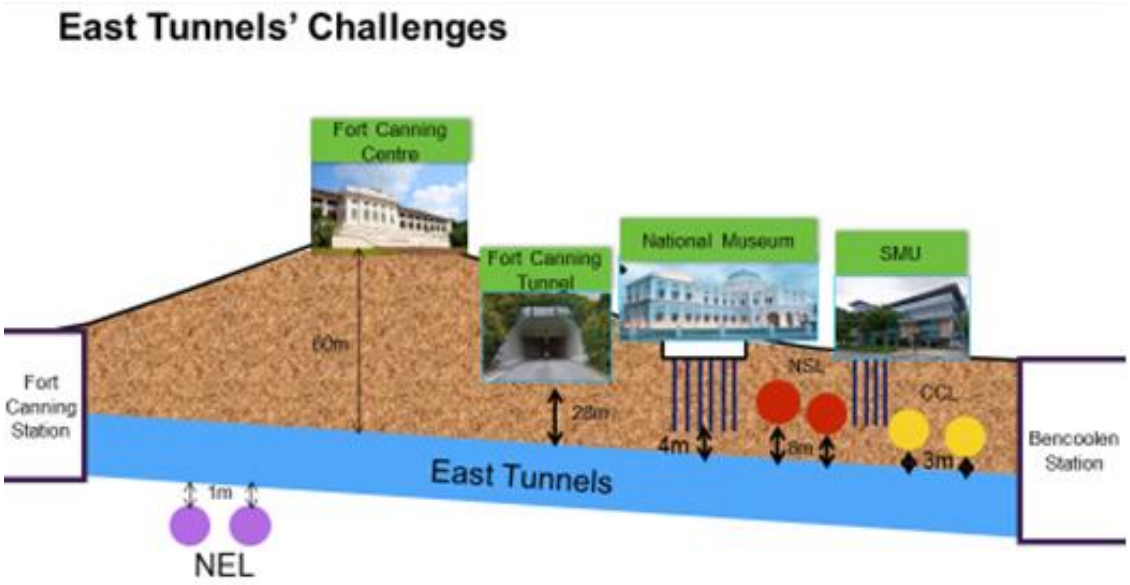
**"Renovation-Upgrading Project of the Year" Finalist**
**ION Orchard Link - Upgrading of Underground Link between Orchard MRT and Tang Plaza**

In land-scarce Singapore where there is no room to sprawl, a lot of thought was put into increasing the capacity of the popular underground link between Orchard MRT and Tang Plaza. In this upgrading project, the project team had to contend with a very tight construction space, restricted by the Stamford Canals on either side of Orchard Road. To complete this project, the team had to deploy innovative solutions like horizontal beam ramming and mining to construct a new underground structure abutting the original 60 metres-long underpass.

The successful expansion of pedestrian capacity of the underpass in 2015 connecting Orchard MRT and Tang Plaza, and introduction of retail spaces have allowed pedestrians to enjoy a more holistic commuting experience. It was a finalist in the "Renovation-Upgrading Project of the Year" Award, with other noteworthy entries like France's Rive De Gier Tunnel and United Kingdom's Vauxhall Station Upgrade Project; with the latter clinching the award.


*Picture A: Construction of Fort Canning Station and Tunnels in Singapore – Singapore River diverted*


*Picture B: Construction of Fort Canning Station and Tunnels in Singapore – Singapore River diverted and original waterway later reinstated*




*Picture C: Construction of Fort Canning Station and Tunnels in Singapore – Challenges of East Tunnel and its close proximity to other tunnels and national monuments*