



# WEBINAR ON PERFORMANCE OF DEEP EXCAVATION IN LIMESTONE FORMATION ADJACENT TO RAILWAYS PROTECTION ZONE



**Speaker :**  
**Ir. Chow Chee Meng**

**MONDAY, 7 DECEMBER**  
**2020**  
**2PM - 4PM**

**BEM APPROVED CPD/PDP: 2 REF. NO.: IEM20/HQ/262/T (W)**

**Registration Fees**  
**(effective 1st August 2020)**

**IEM Members : RM 15.00**

**IEM Non Members : RM 70.00**

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# SYNOPSIS

A proposed development in the KL Golden Triangle area requires a two levels basement with maximum excavation depth of approximately 10m in limestone formation. Limestone bedrock is encountered at depths ranging from 10m to 33m below existing ground level. Overburden soil mainly consists of loose silty SAND or sandy SILT/CLAY with SPT-N values of less than 10. Two tunnels, i.e. stacked Northbound and Southbound tunnels for future MRT cut across the site at depths of about 20m to 36m below ground level and as such, the excavation works have to comply with stringent criteria stipulated in the Railways (Railway Protection Zone) Regulations 1998 (PU(A) 367 1998).

Due to the loose overburden soil and the importance to control deformation of the proposed retaining wall for basement excavation, a comprehensive subsurface investigation (SI) programme was implemented for this site. The SI programme includes seismic tests to obtain small strain stiffness which is critical for the design of retaining wall especially for stiff wall where movement is controlled to prevent damages to adjacent buildings and services. This presentation summarises experiences on the design of retaining wall adjacent to Railways Protection Zone and the use of seismic tests in determining soil stiffness for design of deep excavation retaining wall with a critical review of the results of instrumentation monitoring carried out at site.

## SPEAKER'S BIODATA

Ir. Chow Chee Meng obtained his Bachelor of Engineering (Civil) from University of Malaya in 2001 and started his career with G&P Geotechnics, an independent consulting company specialising in Geotechnical and Geo-Environmental Engineering before joining Technip, the largest integrated offshore and onshore engineering contractor in South East Asia for the design and construction of hydrocarbon field development, oil refining, gas processing, petrochemicals and industrial plants and facilities.

He has written numerous papers and given lectures on engineering subjects ranging from R&D to geotechnical engineering in international and local conferences and journals and his research interests includes deep excavation, jack-in pile, piled raft and soil nails.

Throughout his career as a geotechnical engineer, he was fortunate to be involved in a number of award-winning projects such as Bandar Botanic, Klang (ACEM Silver Award of Merit), Sg. Damansara Flood Mitigation (ACEM Gold Award of Special Merit) and was awarded the Outstanding Performance Award from Sunrise Berhad for geotechnical consultancy.

He is currently the Director of G&P Geotechnics after re-joining them in 2005 and is a key member of the Sungai Buloh-Kajang KVMRT design team (in association with Mott MacDonald) responsible for the design of geotechnical works for the underground stations and foundation for viaducts from Pasar Rakyat to Plaza Phoenix, Cheras.

He is a committee member of the Geotechnical Engineering Technical Division of the Institution of Engineers, Malaysia (IEM) from 2008 to 2013. He is also currently serving the Board of Engineers, Malaysia (BEM) as Investigating Committee Member on Professional Practice (since 2014) and is also a Member of the Industry Advisory Panel (IAP) for the Faculty of Engineering and the Built Environment, SEGi University (since 2016).

