



Talk on Design and Construction Challenges of the Crossrail Canary Wharf Station: 7th August 2015

Reported by Ir. Yee Yew Weng, Secretary General, MGS

Malaysian Geotechnical Society (MGS) and Geotechnical Engineering Technical Division, Institution of Engineers (GETD IEM) jointly organized a talk on “Design and Construction Challenges of the Crossrail Canary Wharf Station” on 7th August 2015 at Tan Sri Prof. Chin Fung Kee Auditorium, Wisma IEM. MGS and GETD IEM were glad that Dr. Yeow Hoe Chian from Flint & Neill (F&N) London accepted the invitation to be the speaker for this talk.

Dr. Yeow H.C. started his presentation with self- introduction. He worked for Arup for more than 23 years and had been involved in many building and infrastructure projects in the UK and the Far East. He also introduced COWI Group and talked about his current portfolios. He shared the history of Canary Wharf and some key facts of the Crossrail project. The Crossrail Project costs about £16 billion, having 118km of railway and 42km of tunnels. It was aimed to reach the capacity of commuting 54,960 pph.

Dr. Yeow H.C. explained further on the site history of Canary Wharf. According to soil investigation report, the soil for the station box area typically formed by Lambeth Beds-clay at the top layer, followed by Lambeth Beds-sand and Thanet sand. He also highlighted some design issues of the station box such as high uplift pressure on base slab, effects of ground movements on adjacent buildings, sway of retaining structures, etc. The job was challenging because of top-down construction with 18m deep excavation and installation of plunge column pile of 2.1m in diameter. As one of the solutions to the challenges, new construction method using Giken walling system was introduced. This was the first use of such wall system in the UK. He elaborated about the complex construction sequence of the station box in a marine environment.

Towards the end of his presentation, Dr. Yeow H.C. showed a lot of construction progress photos and shared some important lessons learnt from this project. After question and answer session, the talk ended at 7.30pm with memento presentation to Dr. Yeow H.C.



Dr. Yeow H.C. showing his presentation outline



Memento presentation by Ir. Dr. Ooi T.A.