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## Pressurised Tunnel Boring Machines and their interaction with weathered rock

*Presented by Mr. Nick Shirlaw*

Date: 7<sup>th</sup> July 2016 (Thursday)

Time: 6:30 pm to 8:00 pm

Venue: Conference Room, 3/F, Mariner's Club, Tsim Sha Tsui

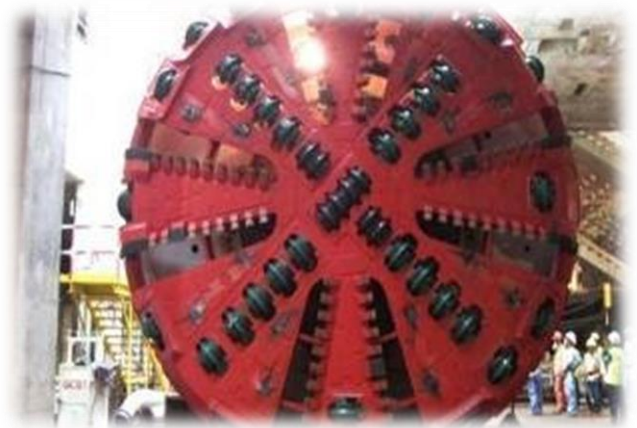
Seminar Fee: Free of charge

Registration: No prior registration is required.

For enquiry, please email Mr Jonathan YAN at [jonathan.yan@aecom.com](mailto:jonathan.yan@aecom.com)

### Synopsis:

Pressurised TBM Tunnelling in mixed face conditions resulting from weathering presents a number of challenges. One of those challenges is that rockhead profiles interpolated from boreholes are often very inaccurate. Once the tunnel has been driven, the actual ground conditions encountered can be established by assessing the data from the TBM and the regular exposures available during interventions. The data can then be used to understand how changes in the ground conditions affect TBM advance rates, cutter wear, and the time required for interventions. Case studies are presented to show how slurry and EPB TBMs interact with soil, mixed face and rock conditions, and how this information can be used to improve TBM selection and tunnelling procedures, and reduce the risk of sinkholes. The strength of the rock encountered when the TBM is in a full face of rock can also be analysed from the TBM data, and compared with data from the investigations. The talk will be an expanded version of a keynote lecture given at the TBMDigs Conference in Singapore.



### About the Speaker:

Mr. Nick Shirlaw has worked for various contractors, consultants and client organisations for 40 years. He has been involved in the geotechnical aspects of Pressurised TBM tunnelling since 1986, focusing on underground construction for urban metro projects, including Hong Kong, Singapore, Taipei and Toronto. He is also the principal author of GEO Report 249, Ground Control for slurry TBM tunnelling, and now is a senior consultant in Golder Associates (Hong Kong) Limited.

*CPD Certificate will be available at the end of the seminar.*