

ICE Technical Meeting

‘Why is it so difficult to predict settlement of soft soils?’

Lessons learned from a trial embankment

Thursday 9th April 2026 at 6.00 pm Jakarta time (WIB)

Eastern Promise Pub & Restaurant, Jalan Kemang Raya No 5,
Jakarta Selatan, Indonesia

Registration Link for both On-line Meeting (via Zoom) and On-site Meeting:
<https://linktr.ee/icejla>

E: info@icejla2021@gmail.com

ICE Technical Meeting

‘Why is it so difficult to predict settlement of soft soils?’

Lessons learned from a trial embankment

Established in 1818 in London, the Institution of Civil Engineers (ICE) is the first professional engineering body in the world. Since obtaining its Royal Charter in 1828, it has expanded considerably and now has more than 90,000 members across the world. ICE celebrated its 200th birthday in 2018. “ICE 200” is about people, impact and the future.



Michael Dobie, CEng FICE

Technical Manager of PT Multi Patria Geoteknik

A geotechnical engineer with more than 45 years of experience, including 36 years working in SE Asia (Singapore, Malaysia and Indonesia). His experience includes working for consulting engineers and geotechnical specialists. In 1989/90 he helped establish a soil testing laboratory in Malaysia to provide geotechnical data for the North South Expressway project. Since early 2026 he has been Technical Manager of PT Multi Patria Geoteknik. A member of ICE since 1973, he became chartered in 1978. He lives in Indonesia and became involved in the activities of the ICE Jakarta Local Association more than 30 years ago and is currently the Chairman of the ICE SE Asian sub-committee.

Why is it so difficult to predict settlement of soft soils? Lessons learned from a trial embankment:

Is it difficult? Textbooks suggest that it is easy. Find, assess or measure some compressibility parameters, predict stress increase due to the applied load, and carry out some simple calculations. But how often do we get a chance to check that our calculations provide a representative result?

The Muar trial embankment, built in Malaysia as part of the geotechnical investigations for the North-South Expressway in 1988, has provided such an opportunity. In 2022 an International Symposium on “Practical Applications of Ground Engineering for Embankments on Soft Soil” was held in Kuala Lumpur, which included a competition to predict the settlement of two control embankments built as part of the 1988 trial. The predictors were provided with the full site investigation information and the recorded settlement data for the first 3.5 years from the start of construction and then required to predict settlement after 33 years. The predictors used a variety of methods to calculate settlement, but the results were generally far from correct.

This talk will summarise the performance of the Muar trial embankment controls, as well as the predicted performance. Site investigation data available at the time of the construction of the trial will be examined, with the aim of establishing which parameters are of greatest relevance to providing an accurate prediction of long-term settlement. It will be seen that simple calculations can provide reasonable predictions, provided that the input parameters are representative. The parameter of greatest importance is the preconsolidation pressure, which will be examined in detail. The simple conclusion is that high quality site investigation and testing is essential when considering the question above.

- **Prices (for those attending at Eastern Promise): Expats Rp150,000 per head, local engineers Rp75,000 (for food only)**
- **For inquiries please contact: icejla2021@gmail.com**

CPD: This event may be considered for contributing to a recognised Continuing Professional Development (CPD) scheme as part of personal development. Delegates should check their individual scheme requirements.