The Institution of Engineers, Malaysia

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Technical Talk on "Load Bearing Bridge Abutments"

(Organized by Geotechnical Engineering Technical Division IEM)

BEM Approved CPD/PDP Hours: 2 **Ref Number: IEM19/HQ/444/T**

REGISTRATION STRICTLY VIA ONLINE ONLY.

Date : **23rd September 2019 (Monday)**
Time : **5.30pm to 7.30pm**
Venue : **Puteri Ballroom 1, Four Points by Sheraton, Puchong**
Speaker : **Mr. Mike Dobie**

SYNOPSIS

The use of polymer geogrids to reinforce fills for the construction of retaining walls and steepened slopes has become common-place, and may be found in many public works projects, as well as private developments. The use of these techniques to construct bridge abutments, in which the dead loads and live loads from the bridge are transmitted through the reinforced fill mass to the supporting foundation soils, is less common. However it is not new, and such techniques were first being used more than 35 years ago. In some regions, such as UK and USA, there has been a recent acceleration in their use, in particular with integral abutments, taking advantage of the resulting reduction in construction and maintenance costs. These facts were highlighted during a 2018 IGS Workshop held in Munich, where a half-day session was dedicated to providing information and a discussion forum about this form of structure. This presentation will provide some of this historical data, and then look in detail at some of the important issues, illustrating them with actual examples. A few words about durability will be included, being especially important where the polymer reinforcement is providing such a critical function, as well as SLS checks. Special attention will be given to the seismic design case, for which the performance of reinforced soil structures has been examined using shaking table tests. Two specific tests carried out by UCSD (University of California San Diego) will be described, one being a 6m full height retaining wall, the other a half-scale load bearing bridge abutment. Both tests illustrate the excellent performance of this form of structure under extreme loading, which can be largely attributed to the ductility of such a system.

SPEAKER'S BIODATA

Mike Dobie is a geotechnical engineer, graduating in civil engineering from Bristol University (UK) and later obtaining a master's degree in soil mechanics from Imperial College, London. He is a Chartered Engineer and a Fellow of the Institution of Civil Engineers (UK). Since graduating in 1973, he has worked in the field of geotechnical engineering for British consultant WS Atkins & Partners, the Delft Soil Mechanics Laboratory in the Netherlands and Singapore, and American specialist consultant Dames & Moore. More recently he has worked for Acer Consultants (now Hyder Consultants, previously Freeman Fox & Partners), being seconded to establish the Central Soils Laboratory in Bangi, Malaysia to provide high quality soil testing for the North-South Expressway project. Mike joined Tensar International in 1991 and currently is the Regional Manager (Asia Pacific) based in Jakarta with responsibilities for the development of design methods and software for both reinforced soil structures and mechanical stabilisation techniques. Mike lived previously in Kuala Lumpur in 1989-93 and has been making regular visits over the last 25 years, conducting workshops and seminars in reinforced soil techniques.

FEE ANNOUNCEMENT

(Effective: 1st October 2017)

Members:
(i) Registration Fee: No Charge
(ii) Administrative Fee:
(a) Online RM15
(b) Walk-In RM20

Non-Members:
(i) Registration Fee: RM50
(ii) Administrative Fee: RM20

- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- To secure your seat, kindly register online at www.myiem.org.my

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