Workshop and Lectures on Piled Foundations- Prof. Dr. Bengt Fellenius Approach

Organised by: Centre for Infrastructure Engineering and Management and Griffith School of Engineering, Griffith University Gold Coast Campus

Date: 28 November 2008

Venue: Griffith University Gold Coast Campus, Room G16 1.08

PLEASE NOTE THAT ONLINE REGISTRATION IS AVAILABLE. FOLLOW THE LINK BELOW:

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See Online Registration Details Inside this Bulletin

For additional information please contact (preferably by e-mail)
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INTRODUCTION

A one day Workshop on Piled Foundations will be given by Prof. Dr. Bengt Fellenius.
Dr.Bengt H.Fellenius, formerly Professor of Civil Engineering at the University Of Ottawa, is an internationally recognized foundation engineering consultant and the author of more than 250 technical papers. His professional experience comes from a wide variety of assignments that encompass foundation design for industrial plants, water and sewage treatment facilities, bridges and highway projects, marine structures, and urban area development, as well as participation in special investigations, instrumented field tests, etc. Dr.Fellenius has given lectures and courses to several universities and international conferences throughout America, Europe, and South-East Asia. He currently lives in Calgary, Canada.

The primary intent of the course is to provide information that will enable the attendees to recognize that deep foundation practice is a good deal more than finding some value of capacity, and to show what data one must pull together and what processes of analysis and calculations that are necessary for a design of a specific project. The presentation includes both broad generalities and in-depth details. Aspects of how to install instrumentation, perform a test, and analyze the test data are addressed. Settlement analysis is of vital importance to the design of piled foundations and the course addresses the principles of settlement analysis, and some of the mechanics of actually calculating settlement. Some details are included of construction aspects as well as aspects of Limit States Design, LSD (Ultimate Limit States, ULS, and Serviceability Limit States, SLS), by Canadian terminology and Load and Resistance Factor Design, LRFD, by US terminology. The time allotted has made it necessary to exclude all aspects of pile dynamics.

DAILY PROGRAMME

Day 1: Friday, 28 November 2008

Stability and Deformation Analysis

08:30 – 09:00am Registration

09:00 – 10:15 am The Static Loading Test: Performance and Determining Capacity

Method of testing and interpretation; Pile instrumentation and factors influencing recorded data. Determining pile elastic modulus. The importance of residual load and how to include its effect in the analysis.

10:15 – 10:450am Coffee

10:45 – 11:45am The Bi-directional test — the O-cell Test

Principles of the bi-directional test (the O-cell test) and how to analyze the results. Examples of test showing lessons learnt for load and resistance distribution, pile shaft and pile toe response, residual load and capacity extrapolations.

11:45 - 12:45 pm Brief Background to Basic Principles Applicable to Piled Foundations

Soil classification, Effective stress, Stress distribution, Compressibility, Settlement, Shear strength, Bearing capacity; Site exploration methods (with emphasis on the CPT); Determining capacity from in-situ tests.

12:45 – 01:30pm Lunch

01:30 – 02:45pm Piles and Pile Groups — Long-Term Behavior and how we know what we know

Important case histories presenting studies that demonstrated the actual long-term response of piles to load and observed settlement of piles.

02:45 – 03:15pm Coffee

03:15 – 04:30pm Analysis of Load Transfer and Capacity of Piles

Bearing capacity and load-transfer by beta, alpha, and lambda methods; Set-up and relaxation.

4:30 - 5:30 pm Unified Design of Piles and Pile Groups

Design for capacity (choice of factor of safety, and rules of LRFD and Limit States Design); Design for structural strength (including **drag load**); Settlement of single piles and pile groups due to load directly on the piles and due to influence from adjacent activity (**downdrag**); Aspects of Canadian, US and European Codes and,

guidelines and standards with examples; Choice of factor of safety, and rules of LRFD and Limit States Design. Axial design for liquefaction. Design of piled rafts and piled pads ("inclusion piling")

Griffith UNIVERSITY **Registration Can Now Be Done Online**

Geotechnical Engineering Practice: Piled Foundations- Prof. Dr. Bengt Fellenius Approach

ON LINE REGISTRATION AND PAYMENT:
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(A) SIMPLY FOLLOW THE LINK; YOU WILL BE REQUIRED TO FILL IN YOUR DETAILS AS BELOW:

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City/Suburb:
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***Please note that password is also required. You will use this password to log into the User Admin area and modify your registration if necessary.**

(B) BY CLICKING "NEXT STEP", YOU WILL BE ABLE TO SELECT THE MODULE YOU INTEND TO ATTEND.

- □ **AUD $ 390 –Friday : 28 November**

By ticking the box, you are now registered for the day you selected.

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- □ **CREDIT CARD (VISA/ MASTERCARD/ AMEX)**
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Bio-data

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