

SAICE Geotechnical Division presents a lecture on

Geotechnical Investigations for Non-Geotechnical Engineers



Thursday 15 February 2018

Registration: 12:00 | Lecture: 13:00 - 17:00

Central University of Technology (CUT),
20 President Brand St, Westdene,
Bloemfontein

We are in the process of applying for ECSA CPD points for the lecture.

Minimum requirements for geotechnical investigations with specific reference to housing developments on expansive clays

– Peter Day

From the days of Jennings, Brink and Williams, South Africa has a well-established competency in geotechnical investigation. The expertise, equipment and facilities exist within our country. Why then should we still find ourselves in a position where so many projects go wrong because of inadequate geotechnical information?

In most such cases, it is not that no geotechnical investigation was carried out, but that the scope of the investigation was inadequate for the particular project. Does the problem lie with reluctance of developers to spend the money, poor specification of the investigation requirements or the mistaken belief that the industry already knows the geotechnical conditions likely to occur in a certain area?

This lecture will deal with the various regulatory (legal) and normative (standardised) requirements for geotechnical investigations and the level of investigation required for various categories of development. It will highlight the need to ensure that the investigation provides the information required for the planning, design, pricing, construction and management of projects. Examples will be presented of a number of projects that have incurred significant cost overruns, delays or damage on account of inadequate investigation.

Particular attention will be paid to the problem of expansive soils in the Free State province. This will include the origins of the expansive soils, investigation requirements, prediction of heave movements and appropriate foundation types. Problems regarding the specification and procurement of geotechnical investigations for housing developments will be discussed.

The lecture will end with a discussion session on what the geotechnical profession can do to assist clients, planners and project managers to specify and procure investigations that are appropriate for the project at hand.



Peter Day

Jones & Wagener

Dr Peter Day is a geotechnical engineer with 40 years' experience in geotechnical consulting. He is the retired chairman of Jones & Wagener and Adjunct Professor of Geotechnical Engineering at the University of Stellenbosch.

He has played a role in the writing of many codes and standards including SANS 1936 (development on dolomite land), SANS 10160-5 (basis of geotechnical design and actions), the SAICE lateral support code and the SAICE site investigation code of practice. He chairs the SABS technical committee on structural and geotechnical design standards.

Peter is frequently appointed to act as a review consultant on major geotechnical projects or to carry out investigations into geotechnical problems on projects.

Can we afford to continue testing soils by standard methods?

-Philip Stott

This lecture examines the suitability of current South African standard testing methods for assessing engineering soils. So many failures have occurred, especially in low cost housing, that we need to ask the question "why are all these economic calamities happening?" The current standards were developed specifically for testing roads construction materials; and they may be adequate for these predominantly granular soils. Nevertheless, even roads are experiencing severe problems because of the underlying sub-grade soils, which are not adequately assessed by the standard procedures. The tests generally known as the "foundation indicators" are probably adequate only for the least problematic kinds of soil. It looks as if the whole philosophy behind the current tests may be fundamentally flawed; some aspects of soil behaviour which seriously impact foundation problems appear to be completely ignored. These weaknesses of the standard tests are examined and some alternatives are put forward for consideration.

Registration Costs

SAICE Geotechnical members	R500.00
Non members	R750.00
Students	R100.00
Group Registration and Co-Operative Sponsor	R10 000.00

(This allows for a maximum of 10 registrations and being one of the sponsors of the lecture.)

Programme

Registration:	12:00 - 13:00
Lectures:	13:00 - 17:00
Networking opportunity:	17:00



Kindly complete the attached registration form and return to info@selahproductions.co.za
For more information, please contact **Yolandé van den Berg** on +27 82 323 3910.



Philip Stott Central University of Technology

Philip Stott studied civil engineering at Manchester University, where he obtained B.Sc. Hons and M.Sc. degrees. He lectured in Civil Engineering at Ahmadu Bello University, Nigeria, and lectured in Structural Engineering at the University of the Witwatersrand before becoming a consulting engineer. He has been a member of the Soil Mechanics Research Group at the Central University of Technology since its inception and a senior engineer at Y10 consulting. He is currently researching the problem of damage caused by expansive clays to light structures, particularly Government subsidy houses. He has been awarded the D.Eng degree from the Central University of Technology. He has published papers in technical journals on structural engineering and soil mechanics and has received the Henry Adams award from the Institution of Structural Engineers and the J.E. Jennings award from the Geotechnical Division of the South African Institution of Civil Engineering.