

CPD-accredited lecture:

Soil Reinforcement with Geosynthetics

The use of tensile components to reinforce soil is a technique that has been used for more than 6 000 years. What the reinforcing elements are made of has changed over this period, from woven fascines of reed and brush, to today's modern high-strength geosynthetics. Some very substantial structures are now being built, and this talk is designed to illustrate the techniques used, and using case histories, present the *caveats* that prudent designers should keep in mind when using these materials.

This illustrated introduction is intended as a follow-on lecture to the initial "**Introduction to Geosynthetics**" lecture (which we recommend should precede this lecture) and concentrates on basic design concepts around how geosynthetics behave in soil reinforcement applications. **This SAICE CPD-accredited lecture is presented free of charge to professionals in the engineering and architectural fields.**

CPD Credits 0.2 (two hours) apply for ECSA & SACAP registered persons.

An attendance certificate will be issued to each delegate.

This can be used to claim CPD points and to motivate corporate Skills Development Levy (SDL) Refund Claims.

PROGRAMME

± 2 hours (including discussion) with one mid-point break

Brief Introduction: Kaytech Engineered Fabrics – South African manufacturers of geosynthetic products
How local nonwoven geotextiles are made from recycled polyester bottles.

1. A 6 000 Year History of Soil Reinforcement Using Geosynthetics.
2. Facts about Geosynthetics Used in Soil Reinforcement.
3. The Components of a Geosynthetic Reinforced Soil Wall.
4. The Use of Geogrids vs. Geotextiles in Reinforcement Systems.
5. Concrete Block Face Systems
6. Green facings and Wrap-Around Systems.
7. Basal Reinforcement
8. What Causes Failures!
9. Codes of Practice and Standards.
10. Comparative Costs of Different Wall Systems.
11. Discussion

The lecture(s) can be presented at your premises or Kaytech's in Johannesburg (Isandovale), Cape Town (Stikland), East London, Port Elizabeth, & Durban (Pinetown).

Course Presenter

Peter Davies

MIGS · MGIGSA · SFIWMSA · MSANCOLD · MIAIAAsa

Peter works for the Kaymac Group (founded 1945) and is based at Kaytech's head office in Pinetown, Kwazulu-Natal, in South Africa. Here, he serves as Senior Consultant: Geosynthetic Applications. He has been involved in geotechnical engineering and geosynthetics for over 50 years.



- In 2014 he was appointed honorary *Technical Advisor* to the South African Institute of Waste Management (IWMSA).
- He is a Senior Fellow of, and has served two-year terms each, as National Secretary, Vice President and President of the South African Institute of Waste Management (IWMSA). Here, he has represented the Institute on a number of waste-related initiatives, including the steering committee for all editions of the *Minimum Requirements for Waste Management Facilities* document. He has served on the Project Steering Committee and the Specialist Working Group engaged in landfill design requirements, in particular in updating the section on Geosynthetic Clay Liners. He is a committee member of the IWMSA KZ-N Branch Landfill Interest Group (LIG) and has served as its Vice Chairman and Chairman.
- He is an honorary life member, and has been the Vice-President and newsletter editor of GIGSA, the Geosynthetics Interest Group of South Africa, which is affiliated to the South African Institution of Civil Engineers and is the local chapter of the International Geosynthetics Society (IGS). He was the Technical Chair of the IGS/GIGSA GeoAfrica 2009 conference held in Cape Town over 2 – 5 September 2009. This was the first IGS Regional conference to be held in Africa.

Peter has authored, and co-authored, numerous peer-reviewed technical papers on a wide range of geosynthetics topics, presented at a number of South African and international conferences.



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