

## WATER SENSITIVE URBAN DESIGN PERMEABLE INTERLOCKING CONCRETE PAVING

INTRODUCING HYDRAULIC AND STRUCTURAL PAVEMENT SOFTWARE

### TECHNICAL CONTENT

Permeable interlocking concrete paving was first applied in Europe almost 20 years ago. It has recently been introduced into South Africa.

**LOCKPAVE®** software for the structural design of concrete block paving has been in use in South Africa for many years.

**PERMPAVE®** was first developed in Australia which has a similar climate to that of South Africa. It has recently been modified to specifically be suitable for the rainfall conditions in major centres of South Africa.

This work, taken in conjunction with overseas investigations, means that there is now a substantial body of information that can be used in the design and application of permeable interlocking concrete paving under South African conditions.

The seminar begins by exploring the options for water sensitive urban pavement design. Permeable pavement systems provide sustainable options for stormwater management – flood control, water quality and water harvesting. Design criteria for these options are included in the **PERMPAVE®** software.

**PERMPAVE®** software has been developed by the CMA and the University of South Australia to provide the hydrological design inputs and requirements for concrete segmental permeable pavements incorporating storm data from South Africa.

**LOCKPAVE®** software – structural design for concrete segmental pavements, is discussed. This software has recently been upgraded by Dr Brian Shackel to incorporate design procedures, methodology and material specifications for PICP's.

**NOTE:** Each delegate will receive the **PERMPAVE/LOCKPAVE** package included in the registration fee.

### PROGRAMME

- 13.00 pm** REGISTRATION
- 13.30 pm** INTRODUCTION – SANS 1058  
John Cairns
- 14.00 pm** PERMPAVE® SOFTWARE –  
AN OVERVIEW  
Simon Beecham
- 15.15 pm** Break
- 15.30 pm** PERMEABLE CONCRETE  
SEGMENTAL PAVEMENT DESIGN  
Brian Shackel
- 16.45 pm** Q & A
- 17.15 pm** DRINKS AND SNACKS

- Date:** 4th November 2008.
- Time:** 13.30 pm – 17.30 pm
- Venue:** Bytes Conference Centre  
Bytes Business Park  
Block C – 241 Third Road  
Halfway Gardens  
Midrand, Gauteng



## PERMEABLE INTERLOCKING CONCRETE PAVING

INTRODUCING HYDRAULIC AND STRUCTURAL PAVEMENT SOFTWARE

### SPEAKERS

#### John Cairns B.Sc (Honors) Civil Engineering

Director of the Concrete Manufacturers Association, A graduate in Civil Engineering from the University of Nottingham, UK, a member of the International SEPT committee who has presented several papers on concrete block paving and involved in the upgrading of SANS1058, The standard for concrete pavers.

#### Simon Beecham

Professor of Sustainable Water Resources, University of South Australia.

Simon is also Head of Civil Engineering and Director of SA Water Centre for Water Management and Reuse. His research interests include WSUD, the effects of climate change on total water cycle management and siphonic roofwater harvesting and reuse. Since 1998 he has been Australia's representative on the International Water Association's

International Group on Urban Rainfall. He is Chair of the Standards Australia committee developing Australia's first national code on siphonic roof drainage.

#### Dr Brian Shackel

Visiting Professor Civil and Environmental Engineering UNSW - BEng(Civil), MEngSc in Highway Engineering, PhD.

He has lectured on pavement engineering in some 23 countries worldwide and is author of many learned technical papers. His book on Concrete Block Pavements has been republished in both Japanese and German editions. Dr Shackel also developed the LOCKPAVE ® concrete segmental pavement design software, now used and licensed in Australia, Europe, USA, Africa, Japan and Asia.

Continuing Professional Development (CPD) Attendance may be credited towards ECSA and other organisations' CPD requirements.

