

# Specifications, Quality Assurance and Performance of Concrete

**Presented by** The New Zealand Concrete Society

## Why You & Your Employees Should Attend This Seminar

The performance of concrete as a material has been under scrutiny in recent years and existing specifications are currently under review by many designers. Many new specifications have been developed that now raise performance and reduce risk. At the same time, quality assurance required for projects has become vital for all parties and it is important that these new specifications are interpreted correctly.

Ensuring the quality and long-term performance of concrete structures requires practical specifications that clearly identify the critical factors important for required performance. Designers should also have a clear understanding of what quality assurance documentation is now available and how to interpret this information correctly. Similarly, contractors and suppliers should know how to avoid early-age problems with concrete such as cracking.

This half day seminar will comprehensively cover new approaches to specifications, interpretation of quality assurance documentation and avoiding early-age problems in concrete. This information will be based on NZ issues but will also discuss trends coming from Australia and elsewhere. The material covered will provide specifiers, suppliers and contractors with a clearer understanding of how to achieve better concrete structures.

### Other Benefits

- Comprehensive resource through the seminar notes, including model specifications and guidelines
- Knowledgeable experienced speakers with good platform skills
- The opportunity to network with industry peers

### Who Should Attend

Designers, Specifiers, Site Engineers, Contractors, Building Certifiers, Local Authorities, Consulting Engineers, Project Managers, Graduate Engineers, Building Owners, Property Developers.

### Investment details

NZCS Members \$260 (GST exclusive) per person  
Non NZCS Members \$360 (GST exclusive) per person  
(includes one year complimentary membership)

### Seminar fees include:

- Tea and coffee on arrival
- Afternoon tea
- Comprehensive seminar notes

## Venues

### Wellington

**Monday 15 April 2013**

Wellington Convention Centre  
111 Wakefield Street, Wellington

### Christchurch

**Tuesday 16 April 2013**

Sudima Hotel  
550 Memorial Ave  
Christchurch

### Auckland

**Thursday 18 April 2013**

Ellerslie Events Centre  
80-100 Ascot Avenue (Ellerslie Racecourse),  
Greenlane, Auckland

## Programme

**12.30pm – 1.00pm**

Registration

**1.00pm – 1.10pm**

Welcome

**1.10pm – 1.40pm**

Introduction (Rob Gaimster)

- New statutory environment in New Zealand
- Royal Commission recommendations and NZCS/CCANZ initiatives
- Revisions to structural/loadings/concrete standards
- Need for quality assurance documentation

**1.40pm – 2.40pm**

Specifying Concrete for Performance (Daksh Baweja)

- Performance and prescriptive specifications and trends in these areas
- Concrete specifications in Australia and elsewhere around the world
- Specifying performance that can be measured and is also relevant
- Guidelines for producing practical specifications for modern construction

**2.40pm – 3.00pm**

Afternoon Tea

**3.00pm – 4.00pm**

Quality Assurance of Reinforced Concrete (Dene Cook)

- Converting specifications into appropriate concrete mix designs
- NZRMCA plant audit scheme overview and relevance to specifications
- Quality assurance – cement
- Quality assurance - concrete production
- Quality assurance - reinforcement
- Controlling the strength of concrete in terms of maximum over-strength
- Controlling construction practice

**4:00 – 5:00 pm**

Avoiding Early-age Problems (James Mackechnie)

- Theoretical background to understand young concrete properties
- Interaction between material, construction and environmental factors on concrete
- Cracking mechanisms of concrete at early-ages
- Delamination and other surface imperfections
- New material and technologies to mitigate these problems

**5:00 – 6:00 pm**

Discussion, Networking & Refreshments

## Speakers Profiles

### Daksh Baweja

Daksh Baweja is Director of Engineered Material Solutions, a specialist group that provides strategic advice in areas relating to civil engineering materials. He is also Associate Professor of Civil Engineering at the University of Technology in Sydney. Daksh is actively involved in knowledge management, marketing and commercial R&D and is the author of over 100 research papers into aspects relating to concrete materials, structural design, concrete durability and serviceability in major infrastructure. He is a Past President of the Concrete Institute of Australia and is a Fellow of The Institution of Engineers, Australia. He is a member of the Green Building Council of Australia Concrete Expert Reference Panel currently reviewing the Concrete Materials credit, and received an award for sustained and outstanding contributions to concrete technology from the American Concrete Institute in 2007.

### Dene Cook

Dene is the Technical Manager for Fletcher Building Infrastructure Product Division which includes Golden Bay Cement, Firth Industries, Winstone Aggregates, Humes, Pacific Steel, and Fletcher Reinforcing. Dene is a Fellow of the Institute of Professional Engineers of NZ, a former President of the Concrete Society, and on the management board of the Cement and Concrete Association and the Concrete Masonry Association. He is the chairman of the concrete design standard (NZS3101) and has actively been involved in numerous concrete related standards. Dene was the author of the CCANZ publication on the design of industrial floor slabs, and MS03 the NZ guide to specifications for concrete production and concrete construction.

### Rob Gaimster

Rob Gaimster is CEO of the Cement & Concrete Association of New Zealand, the Executive Officer of the NZ Ready Mixed Concrete Association and Chairman of the CCIAG. He is a Chartered Civil Engineer, a past president of the Institute of Concrete Technology and has an MBA. He relocated to NZ from the UK in 2006, where he was employed by CEMEX as national technical manager, covering technical, R & D and operational aspects of the business. In 2007 Rob was the recipient of the Sandy Cormack Award at the NZ Concrete Industry Conference.

### James Mackechnie

James Mackechnie is the South Island plant engineer for Allied Concrete and is also adjunct research fellow at the University of Canterbury. His research interests are in concrete technology and new materials used in concrete construction.

**The NZ Concrete Society acknowledges the following supporting organisations for making this seminar series possible:**

## Presenters

**Daksh Baweja**, Courtesy of University of Technology Sydney

**Dene Cook**, Courtesy of Fletcher Building Infrastructure Products

**Rob Gaimster**, Courtesy of CCANZ

**James Mackechnie**, Courtesy of Allied Concrete

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### Please indicate which seminar and venue:

☐ **Wellington**, Monday 15 April 2013

☐ **Christchurch**, Tuesday 16 April 2013

☐ **Auckland**, Thursday 18 April 2013

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NOTE: Full payment must be received prior to each seminar.