

LOW CARBON CONCRETE SPECIFICATION & DESIGN

Presented by Concrete NZ – Learned Society

WHY YOU & YOUR EMPLOYEES SHOULD ATTEND THIS SEMINAR

Following water, concrete is the world's second-most abundant resource - or to put it another way, it is the most widely used manufactured substance on the globe. Its profound impact on shaping our world is rooted in its strength, durability, resilience, safety, and cost-effectiveness, making it indispensable for the construction of critical infrastructure.

Concrete plays a pivotal role in steering our global trajectory towards sustainable development, particularly in terms of mitigating and adapting to the effects of climate change, supporting the infrastructure necessary for clean energy initiatives and enhancing the energy efficiency of buildings - underlining its significance in the broader context of environmental consciousness and responsible construction practices.

This half-day seminar will help construction professionals to enhance buildings and infrastructure via a better understanding of the current building for climate change context, the constituent impacts of concrete, the intricacies of specifying (low carbon) concrete and the efficiencies that can be achieved in structural design.

THIS SEMINAR WILL COVER

- **Situational Context**
 - Cement & concrete in construction and emissions
 - NZ's carbon reduction goals and emissions budgets
 - NZ concrete industry's decarbonisation roadmap, including pathways
 - Life Cycle Assessment (LCAs) and the different stages
- **Materials**
 - Cements, Supplementary Cementitious Materials (SCMs), pozzolans and mineral additions:
 - Types, availability and other considerations
 - Performance of low carbon concrete
 - Recycling concrete and understanding carbonation

- **Specification**
 - What makes a good specification?
 - How to specify low carbon concrete and Supplementary Cementitious Materials (SCMs)
 - Examples of low carbon and SCM specifications
 - How to use Environmental Product Declarations (EPDs)
- **Design**
 - The role of designers in reducing embodied carbon
 - Structural implications of low carbon concrete
 - Designing Clever
 - Circular design – end-of-life strategy
 - Extending a structure's design life

OTHER BENEFITS

- Comprehensive resources provided through the seminar notes.
- Knowledgeable and experienced speakers.
- The opportunity to network with industry peers.

WHO SHOULD ATTEND

Structural Engineers, Graduate Engineers, Designers, Specifiers, Building Certifiers, Building Officials, Contractors, Architects and Architectural Designers.

This seminar offers 30 NZRAB CPD points.



INVESTMENT DETAILS

- **Concrete NZ member:** \$360 (GST exclusive) per person
- **Non members:** \$460 (GST exclusive) per person (includes complimentary Learned Society membership until 30 June 2025)
- **Student:** \$120 (GST exclusive) per person (includes complimentary Learned Society membership until graduation)

SEMINAR FEES INCLUDE

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



PROGRAMME

12.30 – 1.00 pm	Registration
1.00 – 1.10 pm	Introduction
1.10 – 1.45 pm	Session 1 Situational Context - Alistair Bennett • Cement & concrete in construction and emissions • NZ's carbon reduction goals and emissions budgets • NZ concrete industry's decarbonisation roadmap, including pathways • Life Cycle Assessment (LCAs) and the different stages
1:45 – 2:30 pm	Session 2 Materials - Alistair Bennett • Cements, Supplementary Cementitious Materials (SCMs), pozzolans and mineral additions: • Types, availability and other considerations • Performance of low carbon concrete • Recycling concrete and understanding carbonation
2.45 – 3.15 pm	Afternoon Tea
3.15 – 4.00 pm	Session 3 Specification – Harry Riley-Smith • What makes a good specification? • How to specify low carbon concrete and Supplementary Cementitious Materials (SCMs) • Examples of low carbon & SCM specifications • How to use Environmental Product Declarations (EPDs)
4:00 - 4:45 pm	Session 4 Design – Harry Riley-Smith • The role of designers in reducing embodied carbon • Designing clever • Structural implications of low carbon concrete • Circular design – end-of-life strategy • Extending a structure's design life

VENUES

AUCKLAND	Tuesday 30 April Waipuna Hotel & Conference Centre 58 Waipuna Road Mount Wellington, Auckland 1060
HAMILTON	Thursday 2 May Claudelands Events Centre Brooklyn Road, Hamilton 3214
WELLINGTON	Tuesday 7 May Naumi Wellington 213 Cuba Street, Wellington 6011
CHRISTCHURCH	Thursday 9 May Novotel Christchurch Airport 30 Durey Road, Christchurch Airport Christchurch 8053

SPEAKER PROFILES

Alistair Bennett

Alistair is a Senior Materials Manager at Firth Industries, where he has worked in a variety of engineering and operational roles since 1999. His work experience encompasses concrete specification, mix design, quality management, supply and construction. He has also contributed to the development of guides, standards, and publications for the New Zealand concrete industry. Alistair contributes to industry advancement as a Learned Society Council member; Readymix Sector Group Technical Committee member and a Sustainability Technical Working Group member; all under the auspices of Concrete NZ.

Harry Riley-Smith

Harry has over 10 years of structural engineering experience on projects in New Zealand and overseas. He has experience leading the structural engineering on a range of healthcare, commercial, and residential buildings across all project stages. Harry has expertise and a passion for embodied carbon in building structures. He is committed to sustainable structural engineering principals and educating other engineers as we transition to more sustainable design practices.

PRESENTERS

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

Alistair Bennett, Courtesy of Firth Industries
Harry Riley-Smith, Courtesy of Aurecon.



A) REGISTER ONLINE

Register online for the *Low Carbon Concrete Specification & Design* seminar at www.tickettailor.com/events/concretenz

B) REGISTRATION FORM

You can also register by filling out the form below:

Name(s): _____

Company: _____

Postal Address: _____

Postcode: _____

Phone: _____ Mobile: _____

Email(s): _____

Dietary Requirements: _____ NZRAB Number: _____

PLEASE INDICATE WHICH SEMINAR AND VENUE:

- | | | | |
|--|--|---|--|
| ☐ AUCKLAND
Tuesday 30 April | ☐ HAMILTON
Thursday 2 May | ☐ WELLINGTON
Tuesday 7 May | ☐ CHRISTCHURCH
Thursday 9 May |
|--|--|---|--|

PAYMENT DETAILS

No. of member registrants [] at \$414 GST inclusive = \$ _____

No. of non-member registrants [] at \$529 GST inclusive = \$ _____

No. of student registrants [] at \$138 GST inclusive = \$ _____

Total = \$ _____

☐ I wish to pay by credit card: ☐ Visa ☐ MasterCard

A receipt will be issued once payment is processed.

Card No:

Expiry Date: _____ Cardholders Name: _____

☐ I wish to pay by bank deposit

A tax invoice containing Concrete NZ's Bank Account details will be issued on receipt of your completed registration form.

Tax Invoice: GST Registration Number 122-984-249.

Please complete this form, take a copy for your records and email to: adam@concretenz.org.nz. For all enquiries phone 027 535 5144