



REINFORCED CONCRETE DIAPHRAGM DESIGN

Hamilton
2 June 2026

North Shore
4 June 2026

Auckland
9 June 2026

Wellington
11 June 2026

Christchurch
16 June 2026

Queenstown
18 June 2026

DIAPHRAGM DESIGN SEMINAR: SECTION B4 MEDIUM-RISE EXAMPLE

The *Examples of Concrete Structural Design to NZS 3101* – commonly known as the *Concrete NZ Red Book* – provides worked examples demonstrating how to achieve compliance with NZS 3101:2006. It includes detailed model calculations covering a wide range of concrete elements and structural systems.

Section B4 focuses on the design of reinforced concrete diaphragms, primarily for structural wall buildings, while also addressing concrete frame structures. The calculations are presented in a clear, step-by-step format, illustrating a process that can be applied to projects of varying complexity.

This seminar, presented by Alistair Russell and Des Bull, walks through the Section B4 worked example, demonstrating diaphragm design for a medium-rise building. It explains key stages of the design process in line with NZS 1170.5:2004, including determining diaphragm forces using the pESA methodology, and deriving PGA and overstrength factors.

Topics include analysing seismic actions, modelling diaphragms to establish design forces, and detailing reinforcement to accommodate load paths, anchorage, and connections within the floorplate. The session also covers diaphragm behaviour, inertia and transfer forces, modelling approaches, and reinforcement detailing.

DATES & VENUES

- **Hamilton** - FMG Stadium, Tuesday 2 June
- **North Shore** - North Harbour Stadium, Thursday 4 June
- **Auckland** - Waipuna Hotel & Conference Centre, Tuesday 9 June
- **Wellington** - Naumi Hotel Wellington, Thursday 11 June
- **Christchurch** - Novotel Christchurch Airport, Tuesday 16 June
- **Queenstown** - Copthorne Hotel & Resort Lakefront, Thursday 18 June

REGISTRATION FEES

- **Concrete NZ Member** – \$550 + GST
- **Non-Member** – \$650 + GST, including complimentary membership of the Concrete NZ Learned Society through to 30 June 2027
- **Student** – \$120 + GST

HOW TO REGISTER

Spaces are limited and demand is strong for this practical, high-value training opportunity. To register, download the *Reinforced Concrete Diaphragm Design* seminar brochure from the Concrete NZ website – www.concretenz.org.nz



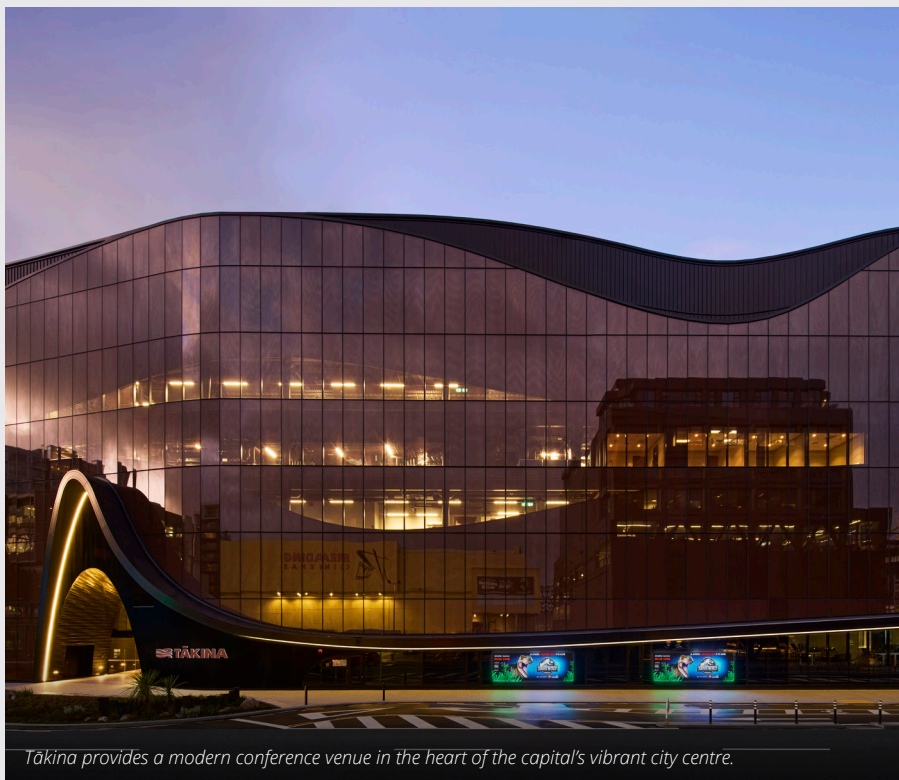
CONCRETE NZ CONFERENCE RETURNS TO WELLINGTON IN 2026

The Concrete NZ Conference 2026 will take place from 21-23 October at Tākina Wellington Convention and Exhibition Centre, bringing together professionals from across New Zealand’s concrete and construction sectors.

Following the success of last year’s refreshed format, the conference will again feature a dynamic two-day technical programme showcasing leading local and international speakers, alongside Lightning Talks and opportunities for delegates to present their work.

The event will also include an extensive trade exhibition, the President’s Reception and conference dinner, where industry awards will be presented, including the recognition of outstanding individuals.

For registration and sponsorship details visit – www.concretenz.org.nz



Tākina provides a modern conference venue in the heart of the capital’s vibrant city centre.

CONFERENCE PATRONS



GOLD SPONSORS



SILVER SPONSORS



CONFERENCE SUPPORTERS



COMPLIMENTARY CONFERENCE REGISTRATIONS FOR STUDENTS AND EARLY CAREER PROFESSIONALS



Fraser Beggs and Isabella Cattermole of WSP present at the 2025 Concrete NZ conference in Auckland.

The Learned Society is offering 10 complimentary registrations for students and early career professionals to attend this year's Concrete NZ Conference, held 21-23 October at the Tākina Wellington Convention and Exhibition Centre.

This initiative supports those within 3-5 years of graduation, or currently studying, who are building careers in concrete, engineering or architecture. Recipients will gain full access to conference sessions and networking events, with the requirement to deliver a five-minute presentation on their work or study during the programme.

Nominations must be submitted by a Learned Society member by 5pm, Friday 21 August. Please send nominations to the Society's Convenor (Adam Leach – adam@concretenz.org.nz) for Council review, including: nominator (plus email), member organisation, nominee (plus email), and a 50-100 word summary of the nominee's work or study, along with a proposed presentation title and brief description.

2026 CONCRETE NZ CONFERENCE AWARDS – ENTRIES NOW OPEN

Entries for the 2026 Concrete NZ Conference Awards are now open, providing an opportunity to recognise excellence.

A highlight of the Conference formal dinner on 22 October at Tākina Wellington, the awards celebrate outstanding contributions from individuals, teams and organisations across all Sector Groups and the Learned Society.

From technical excellence and innovation through to health, safety, sustainability and industry leadership, the awards reflect the strength and diversity of our sector. Members are encouraged to submit entries now.

Full details, including submission forms and category information, are available from the Concrete NZ website – www.concretenz.org.nz.



SLABS & SHRINKAGE SEMINAR SERIES NOW AVAILABLE ONLINE

The popular *Slabs & Shrinkage: Design Tips & Tricks* seminar series, delivered in late 2025, is now available online for paid access, giving construction professionals the opportunity to revisit or access this practical content on demand.

Concrete floor slabs are fundamental to modern construction, but achieving durable, crack-free and cost-effective outcomes requires an integrated approach to design, materials and site execution. This seminar series responds directly to that challenge, combining technical guidance with real-world insights.

Led by Kent Huxford (Lewis Bradford Consulting Engineers) and Alan Ross (CERTUS Consulting), the sessions cover key topics including load analysis, shrinkage behaviour, jointing strategies and the limitations of common design tools. Additional focus is given to flatness, subgrade preparation, curing practices and the role of low-carbon concretes.



Available as an online video, this seminar is a valuable resource for engineers, architects and specifiers seeking to improve slab performance.

To access the seminar video library visit www.concretenz.org.nz

ACCESS THE LEARNED SOCIETY SEMINAR SERIES LIBRARY

The Society also offers a video library of seminars featuring research and technical insights from across the construction sector. These sessions support the development and adoption of best practice in concrete design, construction, maintenance and repair.

Recent titles include *Assessment & Retrofit of Precast Floors* and *Precast Walls & Connections*, alongside seminars on *Industrial Floors*, *Prestressed Concrete 101*, *Strut & Tie*, *C5 Guidelines*, *Low Carbon Concrete Specification & Design* and *Slabs & Shrinkage*.



**All seminar videos are available for purchase, with access provided for a three-month period.
Visit the Concrete NZ website – www.concretenz.org.nz**

CURRENT LEARNED SOCIETY COUNCIL AND PORTFOLIO RESPONSIBILITIES

The Concrete NZ Learned Society Council brings together professionals from across the construction sector to help guide the Society's technical leadership, member engagement and industry contribution.

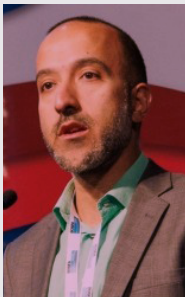
Representing designers, engineers, academics, contractors and product suppliers, the Council supports a broad programme of activities focused on advancing concrete knowledge, promoting best practice and encouraging industry collaboration.

The current Council portfolios reflect the wide-ranging interests and responsibilities of the Learned Society. Tim Blackburn and Cain Stratford lead **Young Member Engagement**, helping strengthen connections with universities and supporting opportunities for students and emerging professionals. Sara Broglio and Kent Huxford oversee **Standards & Practice - Technical**, while Alistair Bennett and Allan Scott focus on **Standards & Practice - Material**, and Derek Bilby leads **Standards & Practice - Construction**. Alistair Russell oversees

Seminars & Events, supporting the ongoing development of the Learned Society's technical seminar programme. Adam Leach manages the **Membership** portfolio.

The Council also maintains important international and industry linkages. Moustafa Al Ani serves as **fib** delegate supported by Deputy Delegate Giuseppe Loporcaro (University of Canterbury), while Dave McGuigan is the **Concrete Institute of Australia (CIA)** delegate and Rick Henry the **American Concrete Institute (ACI)** delegate.

Members interested in engaging with the Learned Society, contributing ideas, or learning more about portfolio activities are encouraged to contact the Convenor at learnedsociety@concretenz.org.nz



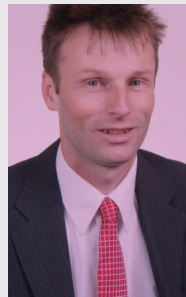
Moustafa Al-Ani
President
NZ Transport
Agency Waka Kotahi



Alistair Russell
Vice President
Holmes



Rick Henry
Immediate Past President
University of Auckland



Dave McGuigan
Ex Officio
Concrete NZ



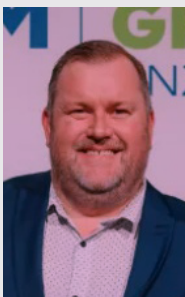
Sara Broglio
Councillor
Aurecon



Timothy Blackburn
Councillor
WSP



Derek Bilby
Councillor
Contech



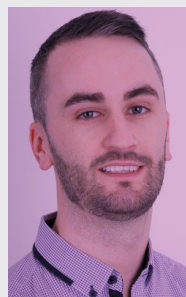
Dave Darlow
Councillor
Holcim
(New Zealand)



Kent Huxford
Councillor
Lewis Bradford
Consulting Engineers



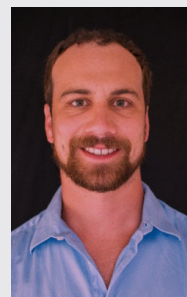
Alistair Bennett
Co-Opted Member
Firth Industries



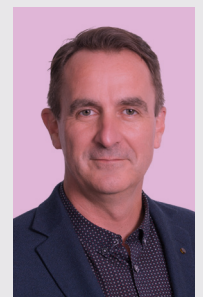
Cain Stratford
Co-Opted Member
Holmes
Consulting LP



Allan Scott
University Liaison
University of Canterbury



Lucas Hogan
University Liaison
University of Auckland



Adam Leach
Convenor
Concrete NZ