

STEEL FUTURES



Latest Industry & SCNZ News

December 2016

In this issue:

[SCNZ Welcomes New Manager](#)

[SCNZ Christmas Message and Holiday Closure Dates](#)

[Earthquake Damage Concerns](#)

[Comments Required on New Composite Design Standard](#)

[New Structural Steel Fabrication And Erection Standard, AS/NZS 5131](#)

[SCNZ Mourns Death of Dedicated Industry Expert Kevin Spring](#)

[SCNZ Recognises Achievements of Steel Design Student](#)

[Go Online to SCNZ Technical Support](#)

[New Members](#)

SCNZ WELCOMES NEW MANAGER

As reported in the October issue of Steel Futures, we have recently welcomed a new Manager to SCNZ.

Darren O'Riley took on the role at the end of October, replacing Alistair Fussell who stepped down after 11 years with SCNZ. Alistair has started a structural engineering consultancy based in Hastings, Tangent Consulting Ltd, and will continue his association with SCNZ on a contract basis.

Darren has 28 years of experience in sales and marketing and business development, gained largely in the building and construction industry. He comes to SCNZ from Fletcher Aluminium, a division of Fletcher Building Ltd, where he has worked for the last 16 years. Before that he held positions at BHP NZ Steel, Solid Energy, Marley NZ and Plyco Doors. Darren has also just completed 12 years on the board of another industry organisation, the Window Association NZ, which he chaired for seven years.



Darren says: “I am delighted to be joining such a progressive industry. In the last decade, the New Zealand structural steel sector has invested significantly in people, equipment and technology to boost capacity, quality and efficiency. It has proactively introduced steel fabricator certification, an industry-led quality initiative, to set itself apart from offshore suppliers.

“The present climate presents both challenges and opportunities. I’m looking forward to supporting the industry on the next phase of its journey as it continues to grow and develop.”

Darren is based in our Auckland office and can be contacted on phone: 09 262 6684 or email: darren.o'riley@scnz.org.

SCNZ CHRISTMAS MESSAGE AND HOLIDAY CLOSURE DATES

“With the holidays upon us and 2016 drawing to a close, it is important to reflect on what has at been at times a challenging but rewarding year for our industry. I am confident that 2017 will be an exciting year for SCNZ and that the Building and Construction Industry will continue to thrive.

I would like to take this opportunity to recognise and thank those who serve on the SCNZ Executive and those who are involved in other aspects of SCNZ’s work, for giving up their time during what has been a busy year to represent our industry.

In November we bid farewell to Senior Structural Engineer (Industry), Chris Burns. It is with pleasure that I can report that the Burns family survived the long flight back to England and are enjoying catching up with family and friends in the run-up to Christmas after their two year stint in New Zealand. We wish them well for the future.

On a personal note, it is great to be part of the SCNZ team and I look forward to meeting many of you in the coming months. In the meantime, on behalf of SCNZ, I wish you and yours a safe, prosperous and enjoyable Christmas and New Year.”

Please note the SCNZ office will close Friday 23 December and will reopen on Monday 9 January.

**Darren O’Riley
SCNZ Manager**



EARTHQUAKE DAMAGE CONCERNS

SCNZ is concerned about the number of modern buildings in central Wellington that have been badly damaged as a result of the recent Kaikoura earthquake.

As the full extent of the damage and the building materials involved are not yet known, it is not appropriate to comment on any of the structures under scrutiny.

However, structural steel buildings – as opposed to concrete structures with steel reinforcing – performed very well in both the September 2010 and February 2011 Canterbury earthquakes. These buildings suffered little or no damage and were able to be reoccupied soon after the earthquakes.

SCNZ is ready to offer support and expertise to investigations as they progress, as we did following the Canterbury earthquakes.



NEW ZEALAND COMMENTS REQUIRED ON NEW COMPOSITE DESIGN STANDARD TO MULTI-STORY BUILDINGS AS/NZS 2327

The first joint New Zealand and Australian composite design standard DR AS/NZS 2327 has recently been published for public comment.

The public comment period will continue until 24 January 2016 and electronic copies of the draft standard can be freely downloaded (click [here](#)).

Work on the development of this new standard commenced in 2012 and, once published in its final form, it is intended that AS/NZS 2327 will replace NZS 3404, Section 13, as well as some parts of Section 11 and 12. It is also hoped that this work may pave the way for bringing together the existing AS 4100 (AS 4100 1998) and NZS 3404.1 (NZS3404.1 1997) into a joint Australian and New Zealand steel structures standard.

As well as providing rules for composite beams which are similar to NZS 3404.1, Section 13, AS/NZS 2327 gives specific design provisions for: composite columns; composite slabs; composite joints; system behaviour for floor design (including human-induced vibrations); fire resistance; seismic performance; and beams with web-openings.

Owing to the fact that higher strength materials are permitted (specified strength of concrete $f_c \leq 100$ MPa and nominal yield strength of structural steel $f_y \leq 690$ MPa), the scope of AS/NZS 2327 was much wider than other international composite design standards. As a consequence of this, rigorous structural reliability analyses according to AS 5104 and ISO 2394 were undertaken by NZ and Australian Committee members to ensure that new provisions delivered the target margins of safety.

This collaborative effort between NZ and Australia has also led to rules that go beyond international standards; for example, in fire design where the slab panel methodology (which permits some beams within a floor to be left unprotected), has been formalised.

It is strongly encouraged that NZ users review DR AS/NZS 2327 and provide comment as, in some cases, there are significant departures from current practice.

Please note that comments on draft joint standards **must** be submitted to Standards Australia. To do this, please click [here](#) (note, any emails or forms sent to Standards Australia by fax or mail will not be considered by the Committee when it reviews the Public Comment received).

For further information, please visit the [Standards New Zealand website](#) or contact Kevin Cowie, Senior Structural Engineer - Technical Development (email: kevin.cowie@scnz.org or phone: 09 262 6685).

NEW STRUCTURE STEEL FABRICATION AND ERECTION STANDARD, AS/NZS 5131

The AS/NZS 5131 Structural Steel Fabrication and Erection Standard was published on 8 December 2016.

Developed by a joint Australian and New Zealand technical committee, the new Standard sets out the minimum requirements for the construction of structural steelwork involving:

- Fabrication including bolting and welding;
- Preparation of steel structures for corrosion protection;
- Corrosion protection comprising painting and galvanising;
- Erection and modification of steelwork;

- Enhanced product conformity requirements including quality assurance measures (personnel and procedures); and inspection and test plans.

It applies to complete structures, individual members and components, and manufactured components pre-fabricated for inclusion in steel structures. AS/NZS harmonises existing sections of other standards to provide a dedicated document on fabrication and erection requirements.

The standard also introduces the fundamental concept of a 'construction category'. This is risk-based, fit for purpose categorisation of a structure or parts.

This document provides the standards framework for the Steel Fabricator Certification scheme launched by HERA and SCNZ in 2014.

A process of stakeholder consultation will be undertaken with a view to having this document cited in the Building Code as a verification method for fabrication and erection of steel structures designed using NZS 3404, AS/NZS 2327 (Composite Building Standard) and AS/NZS 5100.6 (Composite Bridge Standard).

SCNZ MOURNS DEATH OF DEDICATED INDUSTRY EXPERT KEVIN SPRING

Former HERA Executive Board member, Kevin Spring, has passed away at the age of 83.

Kevin had a close association with HERA and SCNZ for many years, first in the form of being an advocate for steel construction from a structural engineer's perspective, and then in a governance role as a member of the HERA Executive from 1994 until 2006.

This equates to 12 consecutive years of service on the HERA Executive; and Kevin actively continued his involvement, serving on the HERA Steel Research Panel until his death.

In the 1980s, structural steel had zero market share in multi-storey buildings, with the material and the industry in a parlous state. However, a small group of experienced, articulate and outgoing engineers worked strenuously to change that. Kevin was one of the key people in that knowledgeable group, keen to share his knowledge and passionate about the future of structural steel in New Zealand.



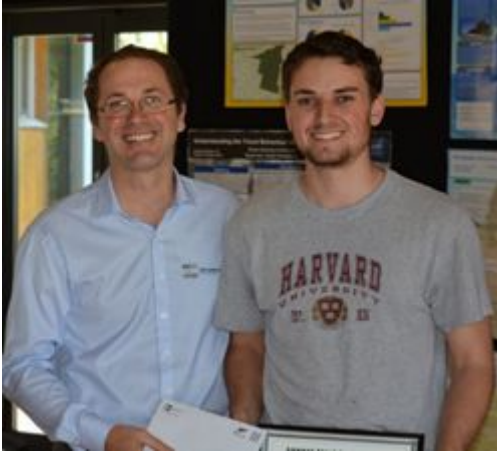
Kevin Spring

In 1985 he and George Butcher published a key foundation piece, from which the steel industry has expanded to its current dominant position in New Zealand. Entitled *Introduction and Philosophy*, this paper was the first section of the output from the deliberations of the NZ National Society for Earthquake Engineering's 'Study Group for the Seismic Design of Steel Structures'.

The excellent performance of steel structures in Christchurch in the 2010/2011 earthquake series is testament to how good Kevin's understanding was back in 1985.

Our thoughts are with his family and friends at this difficult time.

SCNZ RECOGNISES ACHIEVEMENTS OF STEEL DESIGN STUDENT



SCNZ was delighted to recognise the achievements of a budding structural steel designer at the University of Auckland, Civil and Environmental Engineering School end of year prize giving ceremony in November.

The \$1000 prize for the top steel design student in the final year Civil Engineering Design class was awarded to Jono Ward, who was described by his lecturer, Colin Nicholas, as “a fine student who well deserves recognition as the SCNZ scholar of 2016”.

Congratulations to Jono, we wish him all the best in his future career.

GO ONLINE FOR SCNZ TECHNICAL SUPPORT

We have now extended the scope of our Technical Help Desk to enable enquiries to be submitted through the SCNZ website.

SCNZ Structural Engineers are here to help you with your technical questions. If you can't find the information you are looking for on our website, then let us dig into it for you.

The new Technical Help Desk area of our website can be accessed directly from the Home Page and enables anyone to directly contact our engineers by submitting an enquiry form online.

Either visit the Technical Help Desk page on our website or call to speak directly to one of our engineers on 09 263 5635.

STESSA '18 - CALL FOR PAPERS



The ninth STESSA Conference, sponsored by SCNZ, will be held on 14-17 February 2018 at the University of Canterbury, Christchurch.

STESSA is the international speciality conference focussed on the seismic design of steel structures.

STESSA '18 will bring together academics, researchers and engineers from around the world to discuss the latest international developments related to the behaviour of steel structures in seismic areas.

About 300 delegates from 25 countries participated in the STESSA '15 conference. In all, 204 papers were presented and published in the conference proceedings.

All paper abstract submissions must be made by the **30 March 2017**.

Further information on STESSA '18 (including details on paper submissions) will be made available [here](#).

NEW SCNZ MEMBERS

SCNZ welcomed five new members during the second quarter ending December 2016.

Professional (Engineer)

Edge Consulting Engineers, Auckland
Peter Swan Ltd, Auckland
Pon Consultants, Auckland
Structus Consulting, Auckland

Professional (Quantity Surveyor)

ARA Institute of Canterbury, Christchurch

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