

STEEL FUTURES

A LEADER KNOWS THE WAY, SHOWS THE WAY AND GOES THE WAY

SCNZ is an incorporated society governed by an Executive Council made up of elected industry representatives. With our 2015 Council elections imminent, it is timely to reflect on the significance of governance to organisations and the role of our Councillors.

Internal governance is important because it explores who we are and where we are going, whilst management is about how we get there. SCNZ exists to advance the interests of the New Zealand structural steel industry. Governance of SCNZ therefore offers an opportunity to look into and shape the future of our sector.

To do this effectively, the Executive Council needs Councillors who can think strategically at an industry-level and determine what activities SCNZ should undertake to best position industry to meet the challenges and opportunities of the future.

The current healthy position of our sector is the legacy of the visionaries who chartered the course of industry from its dark days post-construction of the BNZ building. The immediate future looks rosy as industry enjoys an unprecedented demand for structural steel. In such a climate, reluctance to commit to industry leadership is



understandable. However in several years time it is likely that construction will be in decline and what then? We need to be thinking now about life beyond the boom and where we need to be to meet this new – and inevitable – reality.

Therefore you are encouraged to think carefully about the members you nominate for the vacant Council positions. It is not just about making up the numbers. Only people who have the right leadership skills to serve industry should seriously consider standing. Ultimately what is good for New Zealand Inc is good for your individual companies.

Who do you trust to shape the future of our sector? Please think about who you wish to nominate and approach them to see if they would be willing to stand for the vacant Council

positions (two Steel constructors, two Steel distributors and one professional).

Nomination letters will be sent to members in July. If more eligible nominations are received than vacant positions, candidate selection will be by election. The positions of Chairperson and Vice Chairperson will be ratified at the AGM, to be held in Auckland on 3rd September. Please pencil this event, which forms part of the Metals NZ Conference, into your diary.

COMING TO A SCREEN NEAR YOU....

We currently have three short films in production which will be made available to all our members.

Two of the films will focus on the Steel Fabricator Certification (SFC) scheme, one exploring the benefits of becoming a certified fabricator and the second highlighting why structural engineers, builders and developers should specify a certified fabricator.

The third film examines the Christchurch rebuild; investigating the role steel is playing, explaining why the rebuild is providing a blueprint for the rest of New Zealand and telling the story of how SCNZ members are adding value to projects.

Release date to be announced shortly.

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FINAL SPEAKER AND SPONSORS CONFIRMED FOR STEEL INNOVATIONS 2015

SCNZ is proud to announce that Brendon McNiven will be joining the already impressive line-up of international key speakers for the biennial Steel Innovations 2015 Conference, which will take place on the 3rd and 4th September at the Aotea Event Centre in Auckland.

Brendon is a structural engineer with specialist skills in lightweight steel structures. He leads Arup's Building Structures group in Melbourne, having recently returned to Australia after eight years leading the buildings practice in Arup's Singapore office.

In his keynote address, Brendon will share his experiences of working in Singapore and provide an insight into the design of a number of recent steel 'mega' projects. These include The Singapore Flyer (until recently the tallest Observation wheel in the world at 165m), the skyline-changing Marina Bay Sands Integrated Resort (incorporating the longest habitable cantilever in the world at 65m), and the recently completed Singapore Sports Hub (a new stadium enclosed by a 315m diameter steel dome). SCNZ is delighted to welcome and thank HERA, Vulcan Steel, D&H Steel Construction, ACRS (the Australasian Certification Authority for Reinforcing and Structural Steels)



Key note speaker, Brendon McNiven—Arup

and Grayson Engineering as major sponsors for Steel Innovations 2015.

Get involved – if you are interested in building your profile and making new contacts we still have some exciting sponsorship and exhibition opportunities for you to benefit from. Visit our website for more information.

The conference offers the opportunity to learn from top local and international experts, gain valuable professional development hours, and network with fellow professionals. Walterio López (Principal at Rutherford + Chekene in California), Dr Roberto T. Leon of Virginia Tech and Assistant Professor Lydell Wiebe of McMaster University in Canada have already been confirmed as keynote speakers. Delegates will be able to choose from over 50 presentations covering seismic design, steel-concrete composite construction, fire engineering, durability, sustainability and steel bridges.

*****Register for Steel Innovations 2015 before 20th July and receive the earlybird special. Please visit [Steel Innovations Conference](#) for more information******



STILL TIME TO ENTER: 2015 EXCELLENCE IN STEEL AWARDS

Entries for the biennial Excellence in Steel Awards, celebrating excellence in the field of steel construction, close on **31st July 2015**.

Are you a fabricator, architect, engineer or builder who has been part of a successful building project in the last two years that you feel deserves national recognition? Then you might have what it takes to be one of our 2015 winners.

The Awards identify projects that showcase the exceptional design and execution possible when steel is used as the principal construction material in buildings and infrastructure projects. As well as highlighting the versatility of steel, the Awards also recognise the significant capability of New Zealand's structural steel industry.

Why enter?

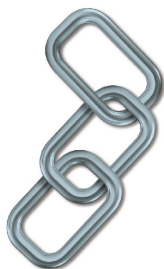
The winners will be announced at the Metals NZ Awards Gala Dinner in September. Hosted at the Aotea Centre in Auckland, this highly anticipated event will be attended by

industry professionals, academics and international guests. Winners will be commended for their considerable expertise by industry peers and endorsed by SCNZ, as well as promoted to the media and the building industry as specialists in steel construction solutions.

Eligibility & Judging

The judging criteria has been widened for 2015 to reflect the reality that a successful building project is a team effort comprising architects, engineers, builders and fabricators. Projects nominated for an award must feature steelwork fabricated in New Zealand by an SCNZ steel fabricator and have been completed between 1st February 2013 and 31st March 2015. The independent judging panel will comprise notable and successful professionals across structural engineering, architecture, construction and structural steel fabrication.

Entry forms and full details of the entry criteria are available [here](#).



SCNZ 2015 EXCELLENCE IN STEEL AWARDS

UNDERSTANDING THE VALUE OF STEEL

Assessment of all the data collated from our member fabricators via questionnaires and price summaries as part of this new project (which aims to ensure that all parties can price steelwork reliably) has given us a valuable insight into industry averages and where the market currently lies.

Based on this information Chris Burns, Senior Structural Engineer (Industry), has developed a strategy to roll out a suite of pricing tools to best support both Professional Quantity Surveyors and our own industry members in estimating structural steelwork.

As part of that strategy, demonstrations of a UK based software tool to members of the SCNZ estimating working group (consisting of seven member fabricators of varying sizes) have resulted in very positive feedback. Further testing and development is now underway – watch this space for exciting updates and announcements.

If you are interested in making sure your pricing is accurate and efficient, please contact Chris Burns (email: chris.burns@scnz.org or phone: 09 262 6684) to find out more.



SCNZ Senior Engineer Chris Burns demonstrates new estimating tools at the 2015 NZIQS conference.

As a result of an article placed by SCNZ in the NZIQS February newsletter, several QS volunteers have come forward to offer their expertise on this issue, together with contacts at Rawlinsons and Aecom. We have met with the majority of these volunteers and tabled our proposed strategy, which has been greeted with resounding positivity.

SCNZ sponsored the NZIQS Annual Conference in Hamilton which took place on 17th-19th June. Chris Burns spoke at the conference and used the opportunity to explain and promote this project; updating delegates on our progress in developing the suite of tools that we intend to roll out and emphasising that labour content is more important than \$/Tonne.

Nic Davies, a semi-retired quantity surveyor who has experience of developing charge out rate models, is currently conducting detailed investigations to help finalise an industry charge out rate model/template for presentation to Professional Quantity Surveyors, which will be an additional tool to help the industry understand how fabricators build up their costs.

VOTE TO ADD NEW STANDARD TO COMPOS

Good progress has been made in developing the new steel -concrete Composite Structures Standard AS/NZS 2327. A request has been put to software company, Oasys, who already provide design software to other international standards, to participate in the final



stages of the development by implementing the new Standard within their Compos software.

We need you to support this proposal.

Please click [here](#) to register

your vote.

ALERT NOTICE

HERA Report R4-103:2005 Design Guide for Openings in Composite Beams Incorporating COMBEN Composite Beam Penetration Design Software

SCNZ advises that the composite beam penetration design software, **COMBEN (all versions), must not be used**. Two errors have been found that can result in significant overestimates of strength in stiffened/unstiffened openings being calculated:

1. The T-section plastic neutral axis is incorrectly determined when the plastic neutral axis of the T-section is located within the web. The formula to determine the T-section plastic neutral axis, taken from the source document used to develop HERA Report R4-103 and COMBEN, has been found to be incorrect. The COMBEN software has the potential to overestimate the flexural capacity of the T-section by up to 1.4-1.5 times depending on the configuration.
2. COMBEN incorrectly determines the T-section elastic neutral axis when there are double sided stiffeners placed around the web openings.

We will provide further advice at a later date about the design implications of these errors.

If designers have concerns about previous beam penetrations designed using COMBEN, or if they need to check the adequacy of penetrations for new projects, alternative software provided by FABSEC is available from John Fredrickson at D&H Steel Construction Ltd.

THE NASHVILLE STEEL CONFERENCE - CHAIRMAN'S REPORT



In March I travelled to Nashville Tennessee with Alistair Fussell, SCNZ Manager, and Wayne Carson from D&H Steel for the biennial International Steelwork Contractors Group (ISCG) meeting.

The ISCG is made up of

steel associations representing New Zealand, Australia, the UK, the USA and Canada. This year's event was hosted by the American Institute of Steel Construction (AISC), and was run alongside AISC's annual conference, NASCC: The Steel Conference, which caters for practicing structural engineers, academics and industry.

This massive event really brought home to me how much technology has moved forward in recent years (whilst due to the GFC, investment by most industry participants has been minimal). The development of software that interacts with the various detailing software packages and creates files that directly communicate with machinery without the need to create shop drawings and files is a big step forward for our industry in both time and cost.

While the effects of the GFC have limited the ability of most fabricators to invest in new plants, machinery manufacturers appear to have accelerated their research and development activity. The speed of cutting and drilling has increased significantly and software development is allowing machines to better communicate with each other requiring less operator input. While the movement towards bespoke robotic fabrication has some way to go yet and the cost benefit needs to be improved, it will obviously play a part in the future of our industry.

A session on the progress of Building Information Modeling (BIM) emphasised that there is still a long way to go until the benefits are fully achieved. It noted that our industry has been leading construction using this technology for 20 years; yet we are letting others take the lead in the implementation of BIM. Our focus needs to be on developing processes for model sharing and who should take ownership and responsibility for the master model; otherwise we risk

implementation being driven by participants less knowledgeable than ourselves and outcomes that don't suit our processes.

In a breakout group of steel fabricators it was interesting to see that the large operators were very willing to share their knowledge with the small guys. Their attitude was that our industry benefits by enhancing skills and knowledge across the whole of industry rather than in parts. Our recent work within SCNZ and HERA to introduce the Steel Fabricator Certification (SFC) scheme is not dissimilar.

The main topic of discussion in the group was pricing and measuring work content in man hours (not tonnes) and ensuring robust back-costing of the work against the estimate, all of which the Americans are very strong on. Again it is clear that SCNZ is at the forefront of international thinking with its current work to develop better industry pricing tools around measuring man hours and educating our professional Quantity Surveyors along similar lines.

Ultimately the issues we face in the Steel industry are similar worldwide and the knowledge sharing we gain from our overseas sister organisations is invaluable. The British have offered us the opportunity to participate in their excellent training programmes for our trades rather than reinventing the wheel ourselves. The Canadians are doing a lot of work around the dumping of Chinese fabricated steel in their market, which is useful to us at a political level. We also arranged an industry session with our Australian counterparts to explore how they might help us with capacity during peak demand, which will take place in July.

It would be great if we could get a bigger group together for future international meetings as the knowledge and experience gained expands our horizons. The next ISCG meeting in two years will be hosted by the UK so I urge you to note this in your calendar. It is also tax deductible!



Mike Sullivan
SCNZ Chairman

NEW MEMBERS

SCNZ welcomed fourteen new members during the second quarter ending June 2015.

Professional (Engineer)

Engenium Ltd, Christchurch

JMG² Limited, Napier

Cook Costello Ltd, Christchurch

Blue Barn Consulting, Auckland

Pengelly Engineers Ltd, Auckland

Warren Engineering, Auckland

Sawry Consulting Engineers, Lower Hutt

Affiliate (General)

Industrial Minerals (NZ) Ltd, Auckland

Full (Steel Constructor)

Napier Engineering, Napier

Pinnacle Steel Ltd, Dunedin

Fitzroy Engineering Group Ltd, New Plymouth

Allwin Steel Enterprises, Auckland

Full (Steel Distributor)

Primero Profiles, Auckland

Associate (Detailer)

Building and Infrastructure Solutions Ltd, Auckland

CHARACTERISING THE NZ METALS ENGINEERING INDUSTRY

As reported in the February issue of Steel Futures, at the end of 2014 the HERA Executive supported a HERA research activity to engage in a steel construction benchmarking exercise as the first step of a wider industry characterisation study.

The aim of the activity is to gather reliable financial metrics to enable HERA and SCNZ to better inform government, clients and the media about the capacity and capability of our industry in the face of increased scrutiny.

The exercise has also been endorsed by the SCNZ Council. The data generated (particularly subsector specific data) will be extremely useful to SCNZ members, enabling you to confidentially benchmark your financial performance against other companies and make informed planning and investment decisions to help ensure sustainability in the face of competition from imports.

Following an appeal for members to take part in the benchmarking exercise, we are pleased to report that by the end of March, 11 fabricators had agreed to get involved (with another two or three indicating their interest in coming on board in due course).

This level of industry participation was adequate for the project to proceed. Researchers from the Waikato University Management School are currently developing an online questionnaire, which will be finalised by the end of July.

JULY REGIONAL FABRICATOR FORUMS

Don't forget that the SCNZ Fabricator Forums – covering the Northern, Central and Southern regions of the country - will take place in July.

Each Forum is run by local members and will discuss important commercial issues. These quarterly events are must-attend occasions for any fabricator serious about developing and growing their business.

To register for your local event, please contact Rebecca Symonds, SCNZ Marketing Administrator (email: rebecca.symonds@scnz.org or phone: 09 263 5635).

WE WANT TO HEAR YOUR GOOD NEWS

Would you like to benefit from an increased industry profile?

It is well recognised that there are many major advantages to getting the name of your business known. The opportunity to build your reputation as industry-leading, innovative and successful company will give you the competitive advantage and help you to sell more steel. However, many companies in our industry don't have the time or the resources to invest in PR or marketing help.

The good news is that membership of SCNZ allows you to tap into our PR know-how and resources. All you need to do is share your good news stories with us: big contract

Participating companies will be asked to register in the first week of August and will have five weeks to complete the questionnaire when it officially opens at the end of August (allowing firms with 30 June financial year ends to participate). The resulting reports will then be available for companies to download at the end of November.

HERA Director, Wolfgang Scholz, comments: "We have stipulated that additional questions will be included which will assist HERA and SCNZ in arguing our industry's contribution under the Government Rules of Sourcing balanced decision-making criteria, for which a template is currently being prepared in co-operation with BERL (Business and Economic Research Limited). In my view annual participation in this benchmarking study will give individual companies their relevant figures and will enable us to argue what the industry delivers in this regard."



HERA Director, Wolfgang Scholz

It is not too late to get involved. Don't miss out on this unique opportunity to really understand your company's competitive position and support your industry's future success and sustainability. Your input will require minimal additional effort or cost and every participant will strengthen the findings.

Please contact Wolfgang Scholz, HERA Director (email: exec@hera.org.nz or phone: 09 262 4848), today to indicate your interest in participating.

Southern Chapter Forum

Wednesday 15th July, 5pm-7pm at the Commodore Airport Hotel in Christchurch.

Northern Chapter Forum

Wednesday 22nd July, 5pm-7pm at the Claudelands Conference Centre in Hamilton.

Central Chapter Forum

Wednesday 29th July, 5pm-7pm at the Hotel Coachman in Palmerston North.

wins, new technology, exciting collaborations, etc.

Right now we are looking for stories to illustrate:

- Local industry capability and content
- Smart, high-tech industry
- Seismic resilience
- Strong commercial and design benefits.

Tell us what you have been doing and we'll do the hard work for you.

Contact Rebecca Symonds, SCNZ Marketing Administrator (email: rebecca.symonds@scnz.org or phone: 09 263 5635), now to share your news.

SFC SCHEME CONTINUES TO GROW

We are pleased to announce that a further five companies have officially applied for certification as part of the Steel Fabricator Certification (SFC) scheme.

The applications come following the highly successful seminar series on quality management of structural welding fabrication. Jointly organised and delivered by the New Zealand Welding Centre (part of HERA) and SCNZ across New Zealand in March, the seminars gave attendees a fresh impetus to sign up to the SFC scheme.

The companies will now be audited and, if successful in their application for certification, will be recognised at the Steel Innovations Conference which is part of the prestigious Metals Week NZ in September and is attended by over 200 key industry stakeholders (including engineers).



Eight fabricator companies became the first to be certified at our Steel Agenda conference last year with the support of the Ministry of Business Innovation and Employment. SCNZ is fully committed to successfully growing the SFC scheme in terms of the number of certified fabricators and encouraging the specification of certified fabricators for local projects. If you are interested in becoming certified this year, don't delay! With limited time to get audits arranged prior to the Steel Innovations

Conference in September, it is imperative that you put your application in ASAP.

Please contact Chris Burns, Senior Structural Engineer (Industry), today (email: chris.burns@scnz.org or phone: 09 262 6684) to get the ball rolling.

CAREERS IN STEEL

As reported in the February issue of Steel Futures, with the increasing demand for structural steel which looks set to continue over the next few years, SCNZ is once again investing in the promotion of careers in steel.

Research undertaken by contractor Dawn Headley has revealed that over recent years the careers, education and training landscape has become very complex and disjointed. Dawn has started filtering through the many players, creating new relationships and strengthening existing ones. It is an ongoing process, as is getting SCNZ on the radar so that we can input into relevant websites, mobile apps, events and initiatives.

It is clear that influencers (family, careers advisors, teachers, Gateway co-ordinators, community, peers, etc) and skills/education organisations are out of touch with our industry's current market share and opportunities. In response to these findings, SCNZ has a number of initiatives in the pipeline to educate and raise awareness:

Steel Abassadors Toolkit: Although some of our members are very active in this area, often members find it difficult to know where to start or struggle to find the time to take action. SCNZ is launching this toolkit in July to give you ideas and materials to begin or improve your local networking.

SteelCon Careers Update 2015 is happening during Metals Week on Tuesday 1st September, 1.00-3.00pm, at the Aotea Centre in Auckland. The event is aimed at influencers, tertiary education and training providers, and tertiary-level students. The programme for this inaugural event is being finalised but the first hour is likely to include a robust debate about university/tertiary education versus

working education, video clips showcasing young people in various roles and their successes, and a Q&A panel of

representatives across all aspects of our industry. The second hour will see employers and skills/training providers exhibiting with a specific focus on Steel Construction.

Coincidentally, the inaugural [Got A Trade Week](#) (GATW) is being held a week earlier (21st-28th August).

Hosted and promoted by a collective of Industry Training Organisations, GATW aims to raise the profile and validity of trade careers. SteelCon Careers Update will be promoted as part of this initiative so we can benefit from their wider promotional activities. SCNZ members may be involved in GATW locally, providing 'discovery tours' or talks about their businesses.

Inzone Experience: We are excited to have agreed SCNZ's involvement with a mobile careers unit, currently called the *Inzone Experience*. The unit originally toured New Zealand schools and communities until redeployment as a communication centre after the Christchurch earthquake and as a tool for job seekers in the rebuild. It's now in the process of being rebranded ready for relaunch in August/September. The state-of-the-art bus will boast 26 touch screen units showing clips of careers information and will tour New Zealand for 30 weeks, taking in large-scale events. You'll be updated about SCNZ's involvement as details are finalised.

Feedback about your successes, frustrations, tips, initiatives, etc, is extremely valuable as it helps paint a picture of what's working, and flag up consistent problems and find solutions. The greater the awareness of our industry, the more people will be tempted to join, the deeper the pool of quality candidates from which to select. **There's no quick fix ... it's a long-term strategy so if you have any ideas or feedback, please contact Dawn Headley (phone: 09 262 6686 / 027 435 8922 or email: dawn.headley@scnz.org).**



LAYING SOLID FOUNDATIONS FOR THE FUTURE

We are pleased to announce that SCNZ will be undertaking two important technical projects over the course of 2015-2016, which will play a significant role in shaping our industry.

These projects will result in the development of guides for the compliance of steelwork (including the additional requirements for imported steelwork utilising steels not recognised in the Steel Structures Standard NZ 3404); and for the design of Buckling Restrained Braces (BRB's).

Compliance of Steelwork

The globalisation of the structural steel supply chain has sparked concern over the quality of fabricated steelwork in New Zealand building projects when sourced from low-cost economies and the impact on the local fabrication market.

Many of you will be aware of projects which have used imported prefabricated steelwork which has either failed to prove it meets AS/NZ standards or failed on-site testing; and had to be removed and repaired or replaced altogether.

Demonstrating compliance of imported material can be very challenging as typically steel grades not recognised in the steel structures standard are used, making it difficult to demonstrate that the material and welding are compliant with New Zealand's rigorous fabrication standards.

SCNZ is working to address these big challenges facing

our industry. An industry working group has been set up comprising SCNZ, HERA, structural engineers and regulators which will develop guidelines to ensure the compliance of steelwork with New Zealand's rigorous fabrication standards, regardless of origin.

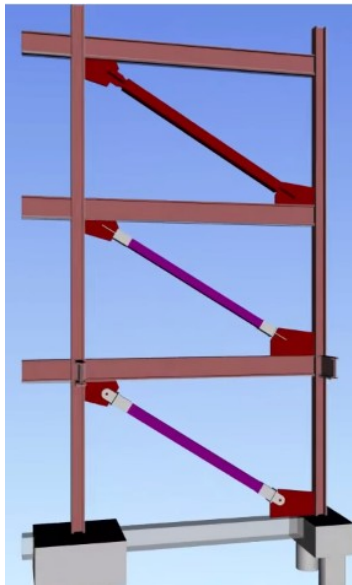
This robust system will ensure standards are met, creating a level playing field for New Zealand fabricators and overseas' suppliers to operate on.

BRB's

Buckling Restrained Braced Frames (BRBF's) are a relatively new type of concentrically braced frame system that uses steel braces capable of inelastic yielding in both tension and compression. New Zealand does not currently have a standard that covers the design of BRBs, despite such elements becoming an increasing popular form of seismic load resisting system for steel buildings.

SCNZ will address this gap by forming a working group to develop a New Zealand BRB Design Guide with Walterio López, who is a keynote speaker at the 2015 Steel Innovations Conference, acting as an international peer reviewer.

Draft standards provisions will also be developed as part of this project that will be used as a basis for provisions to be included in the next revision of the steel structures standard.



Buckling restrained braced frame

FORECASTING STEEL DEMAND

With the construction sector experiencing the biggest building boom in 40 years, we have a real challenge on our hands to convince clients that our industry has the capacity to satisfy demand. If we fail to do so, we risk driving clients to source alternative supplies offshore.

You were recently contacted by Chris Burns, Senior Structural Engineer (Industry), for help with sourcing data on future building projects from structural engineers. The purpose of this exercise is to address these issues by giving our fabricator members a clearer view of potential forward workloads; allowing you to make more informed commercial decisions and helping us to gauge industry capacity.

To develop a sound forecast for steel demand in the most efficient way, we need you to approach your structural engineer contacts for the following data:

- Project name & region
- Number of storeys/levels

- Estimated contract value
- Estimated construction start date.

In addition, the following information (if available), would allow for a more accurate steel demand prediction:

- Building type (if known)
- Project floor area
- Predominant construction material for the project.

Meanwhile SCNZ will target additional sources of information not covered by industry to complete the picture.

Confidentiality will be respected for any commercially sensitive information. To avoid double ups, please advise us which structural engineers you intend approaching.

Your help with this request is greatly appreciated. Please provide your information to Zahid Hamid, Structural Engineer (email: zahid.hamid@scnz.org or phone: 09 262 6681), by 24 July.

UNDER CONSTRUCTION

www.scnz.org is getting a make-over. Watch this space for more information about the launch of the brand new site which promises to be an essential "one-stop-shop" for busy people.

