SCNZ STEEL CONSTRUCTION NEW ZEALAND

# STEEL FUTURES

## SCNZ MEETS MINISTER

The Minister of Building and Construction, Hon. Maurice Williamson, met with the SCNZ Executive Council over lunch, during their meeting in Wellington on 12th March. It was a special occasion for SCNZ as an industry group, and the Minister made a very favourable impression with everyone. The SCNZ Council was encouraged with his willingness to abolish the current requirement for government funded buildings up to 4 stories high to have a mandatory design option in timber. It is the SCNZ view that each industry should compete to promote their best options to consumers without government favouritism.

*Hon. Maurice Williamson (in suit), Minister of Building and Construction, with members of the SCNZ Executive Council - Bob Hawley, Brendon Smith, Wolfgang Scholz, John Frear, Scott Miller, Evan Kroll, Chris Kay, Dave Munro, Steve Stickland and Clark Hyland*

It was put to the Minister that the steel construction industry in New Zealand is well placed to continue to provide the best value for money for construction, to both commercial and government developers for many years to come. SCNZ represents a revitalised industry that has put behind it the troublesome years of the 70's, and embraces the latest of technology available in the 21st century.

We enjoy competing on an equal footing for total value delivered with any international competition, and simply ask that regulatory compliance issues are weighed upon the shoulders of our international competitors, in the same manner as they are upon our New Zealand based companies.

SCNZ looks forward to working with the new government, as it did with the previous, providing a reliable source of advice related to all steel construction related matters.

We wish Hon. Maurice Williams well with his portfolio.

## STEEL DESIGN FOR FIRE PROVISIONS UNDER REVIEW

In recent years there have been significant advances in the structural fire design of multi-story steel buildings. The aim of the revised design for fire section of the Steel Structures Standard is to incorporate all these currently used fire design approaches into one compliance document to help the passage of steel building projects through the consent process.

A feature of the revised Steel Structures Standard, NZS 3404 will be the change of format. The standard will now be sub-divided into seven parts with the commentary clauses incorporated into the body of the standard. The fire provisions will now be designated as NZS 3404 part 5, Design for Fire.

SCNZ convened a meeting, chaired by SCNZ Councillor Scott Millar, recently held in Wellington with leading Fire and Structural Consulting Engineers engaged in the design of multi-story steel buildings, representatives from Auckland and Victoria University, Standards New Zealand along with Structural Engineers from Steel Construction New Zealand. This meeting was convened to scope out the content of the Design for Fire section (part 5) of the Steel Structures Standard. It is proposed amongst other things to include guidance on the design of passive protection systems (intumescent coatings, board encasement etc), methods for calculating the capacity of elements of structure at elevated temperature, a frame work for undertaking advanced analysis such as finite element modeling, clarification of the performance requirements for car parking buildings and the structural stability of boundary fire walls and the recognition of the new fire design procedures (Slab panel and radiation barrier methods).

Standards New Zealand is in the process of convening a Steel Structures Standard Design for Fire sub-committee to prepare a draft document for consideration by the full Standards committee. The sub-committee will consists of Engineers from the recent scoping meeting along with representatives from the Department of Building and Housing and the Fire Service. It is hoped to have the revised Design for Fire section out for public comment by the end of the year.

## IN THIS ISSUE



## UPCOMING EVENTS

**2009**

**April 23 — Members Event, Hawkes Bay**

## MEMBERS EVENT—23 APRIL

Preparations for the members event to be held in the Hawkes Bay on 23rd April are well underway.

The day will start at 1pm, when all attendees will meet at Weldwell for a industry tour. While there, attendees can try out their racing skills around the carpark on Go-Racer GT battery powered, ride-on, motorised fun vehicles!

When all have completed the tour, attendees will go by bus to the meeting venue, where a SCNZ meeting will take place, followed by a guest speaker and networking.

Dinner will be held around 8pm (venue will be confirmed upon knowing registration numbers).

SCNZ is currently investigating a group discount for accommodation, and should have more information over the next week.

Watch your 'Inbox' for an email containing a registration form for this event. Please get your registrations in quickly.

## FAREWELL TO ROY

Roy Kane has worked for Steel Construction New Zealand as Communications Officer since April 2005. However due to the recent down turn in steel construction volumes and therefore SCNZ's income, Roy's employment with SCNZ has regretfully come to an end.

Over the last four years he wrote articles and worked in conjunction with graphic designer Godward Design Ltd, for the steel construction case-study periodical, "SCNZ", which has been published every four months since November 2005. A successful "Careers in Steel" booklet was also developed, followed by a "Careers in Steel DVD" in 2007. Roy worked closely with the video production house, Digital Masters Ltd, to produce a high quality DVD that has been well received by the industry, schools and students.

***Roy Kane***

Roy also took an active and creative role in organising gatherings for members, with memorable successes being the social events for the Pacific Steel Structures Conference 2007 in Wairakei, and the Inaugural Excellence in Steel Construction Awards in 2008. Roy has shown a flair for capturing the essential technical issues and anecdotes from our members relating to their steel construction work. This has made the case-study periodical "SCNZ" an enjoyable and informative read for everyone.

We wish him well with his future.

## CONSULTANT VISITS

A recent series of visits to Consulting Engineers in Auckland, Wellington and Christchurch by Steel Construction New Zealand's structural engineer Alistair Fussell, has confirmed the economic recession is impacting on many companies. Based on anecdotal evidence this impact is worse in Auckland than in Wellington and Christchurch. Some companies have responded to the situation by working reduced hours, others have reduced staff numbers. The scale of redundancy in the Engineering Consultancy sector appears small in comparison with the Architectural sector. Only a very small minority report they are still very busy. Even companies with good work loads indicated the size of projects they were working on tended to be smaller and the forward work loads were shorter than those of the past few years.

These visits were helpful in identifying a number of issues that engineering practitioners were keen to see addressed either at a Steel Structures Standard level or in terms of design guidance. These included designing steel structures for situations involving fatigue loading, the design of eccentrically braced frames for seismic loading, and structural fire design. A common view expressed by Engineers was their desire to see Steel Construction New Zealand produce worked design examples, particularly of seismic resisting systems.

Some interesting and innovative use of structural steel was noted. This included the use of precast ribbed flooring systems on steel beams to achieve shallow floor depths, and the practice of reducing beam sections in moment frames adjacent to column supports to reduce over strength actions.

In addition to Consulting Engineers, a limited number of builders were also visited. Their views on tolerance limits for holding down bolts were of interest in view of proposed changes to Steel Structures Standard provisions. Builders can work to tighter tolerances than the current 6mm value. However, their preference is for the use of sleeved holding down bolt details that allow some adjustment. Builders are being made more accountable by some local authorities for the durability of steelwork. They were pleased to see the soon to be released Part 1 of the Steel Structural Standard (Materials, fabrication and construction) would provide more guidance on coating system selection.

## 90-DAY TRIAL PERIOD FOR NEW EMPLOYEES

From 1 March employers in small to medium sized businesses will have the option of taking on new staff on a trial period for up to 90 days. For detailed information please visit www.dol.govt.nz.

## TRADES @ SCHOOL - AUCKLAND REGION

A total of 18 students from seven secondary schools have started the two year programme that will make them ready for work by 2011. Included in the 18 is the first female.

The students will spend the first half of the year (1 day a week) at Manukau Institute of Technology preparing for their one day a week in industry in the second half of 2009.

## TRADES @ SCHOOL - QUEENSTOWN

The industries in Queenstown are very keen in setting up a Trades @ School programme with their local secondary school, Whakatipu High school.

In attendance at a meeting in the school was four representatives from industry, the Head of Engineering, Southern Institute of Technology, Chairman of the school board of Trustees, the school Principal and the head of careers. The concept was well received after the Auckland model was presented and six companies were prepared to start engaging students. John Kotoisuva spoke to a group of year 12 students and the first question from the students was, "Where do I sign?". It is clear that the Queenstown model will be different from Auckland but still achieving the same objective.

# STEEL STRUCTURES AUTUMN SEMINAR SERIES

*Time out for a lunch break at the historic Fairfield House in Nelson*

Steel Construction New Zealand Engineers Clark Hyland, Kevin Cowie and Alistair Fussell in conjunction with Associate Professor Greg MacRae from the University of Canterbury have just completed a six centre seminar series attended by approximately 180 Engineers from around New Zealand and Asia with three Engineers from Indonesia in attendance. This was a very pleasing turnout in light of the current economic climate.

The series began at a beautiful location on the shores of Lake Taupo before heading north for two seminars in Auckland. The southern leg of the series kicked off in Wellington followed by venues in Christchurch and Nelson. The historic house used for the Nelson venue was a particularly memorable facility. The turnout from structural engineering fraternity in the Nelson/Marlborough area was outstanding.

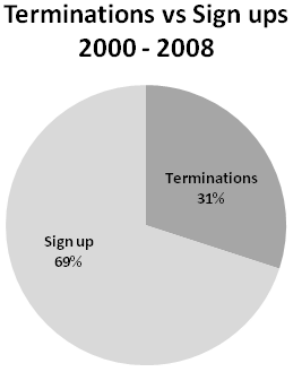
There was a very positive reaction from Engineers to the return to the traditional technically focused steel structural seminars after a two year lay off. The topics covered included an overview of the revisions to the soon to be published part one of the Steel Structures Standard (Materials, Fabrication and Construction), extended direct analysis; a new method for analyzing structural stability, the design of various moment resisting frame systems and the stability of deep rafters. Each seminar closed with project case studies by SCNZ Steel Constructor members from around the country. The projects included a 90m long bridge structure, several multi-storey buildings each with their own challenges and a complicated dome roof structure and stair case completed in the new Supreme Court building currently under construction in Wellington. These were well received by seminar participants who appreciated the practical insights shared by each of the presenters.

*Engineers at the Christchurch seminar*

A highlight of the Wellington seminar was the opportunity to hear presentations from the steel constructor and structural designer of one of New Zealand's first steel buildings featuring damage avoidance lateral load resisting systems. In this project moment frames with sliding hinge joints and concentrically braced frames with rocking foundations were used. These presentations complemented those given by Dr Greg MacRae and Kevin Cowie who addressed research and design aspects of the sliding hinge joint detail which was originally developed by Dr Charles Clifton formerly of HERA.

With the on-going steel structures standard development there will be plenty of good technical material for structural engineers for the next steel structures seminar series planned for the end of the year. Watch this space for details of this series.

# REPORT FROM THE COMPETENZ SECTOR ADVISORY GROUP (SAG)




The Competenz Sector Advisory Group for Engineering Fabrication has expressed concern at the high termination rate in fabrication apprenticeships. It is believed that the high termination rate occurs around the first 12 to 18 months of the apprenticeship. The focus of the discussions was mainly around the entry into apprenticeship. This maybe the result of ill prepared young people coming into the trade and signing a year one apprenticeship when they have low literacy and numeracy, or lack motivation or are still on a fact-finding mission. The Sector Advisory Group will be considering in the next meeting an aptitude assessment to be conducted for anyone wanting to be an apprentice.

**Steel Construction Strand**

The Sector Advisory Group has approved a Steel Construction Strand in the National Certificate in Heavy Fabrication L4, which takes effect in the third year of the apprenticeship. This strand includes steel construction site work, involving basic rigging, health & safety on site and processes of sitework/workshop. The Steel Construction Strand is an option for the apprentice.

**Detailing**

SCNZ is in a process of completing the criteria of a stand alone Diploma in Structural Detailing. These criteria are set by Competenz who after viewing our reply will call for the first advisory group meeting.

**Rigging Review**

A big thanks to those companies who have contributed to the review points during John Kotoisuva's visit some three weeks ago. We have forwarded our interest regarding the review to the Opportunity ITO through Dick Parsons.

# LICENSE BUILDING PRACTITIONER (LBP)

The Department of Building and Housing has commented positively on the idea of preparing LBP applicants in the two-day seminar that we intend to hold through out the country. However, they have recommended that this "road show" (as they put it), be held once:

- The Department of Building and Housing has completed consultation with the general public concerning the Steel Structure Licensing Class; and
- The Government has approved the holding of the Steel Structure Licensing Class.

Owing to the change of government, the Department has been busy briefing the Minister about the regulatory schemes under the Building Act 2004. Pending Ministerial approval, the consultation document is expected to be released in mid-2009.

However, the compulsory requirement can be introduced no earlier than 30 November 2010 with the introduction of the Restricted Building Act. The Minister of Building and Construction is supportive of the scheme, and some minor adjustments to the overall scheme are likely, but Government is busy legislatively with other matters at the moment hence the deferral of the introduction of voluntary licensing.

This means that the scheduled dates we had arranged in May for the two day seminars have been postponed until the Department of Building and Housing gives us the all clear.

We will keep you updated on further development in this area.

**Want to know more?** Just tick the box of the subject you would like more information about and fax back to 09 263 5638 and we will contact you.

- ☐ Licenced Building Practitioner Training
- ☐ National Cert. in Steelwork Detailing
- ☐ National Certificate in Heavy Fab
- ☐ Members Event—23 April
- ☐ National Cert. in Rigging
- ☐ Steel Structures Seminar

«Contact Name (Prefix First Last)»
«Account»
«Address1»
«Address2»
«Address3»
«City/State/Zip»

SCNZ Member #:
«SCNZ_Member_No»

Would you like to become a SCNZ member? For an annual subscription of only $100 + GST you can enjoy the benefits of belonging to an association dedicated to the advancement of steel construction.
Please tick the box below and fax back to the above number.

☐ Yes I would like to become a SCNZ member.

# STEEL IN ARCHITECTURE 2009

In continuation of our efforts to promote greater use of steel in architecture, SCNZ invited a leading Australian architect to give a series of talks to Kiwi architects. Peter Stutchbury accepted and addressed audiences in Auckland, Wellington and Christchurch during the first week of March. A total of 200 attended, the split being 73, 56 and 71 respectively. Compared with similar events in the past, these numbers are considerably lower. Nevertheless, they represent keen interest in spite of the impact of the recession on architecture as a profession.

In 2008, the Peter Stutchbury practice was chosen, by a prominent jury of world class architects, as the 2008 winner of the Living Steel international architecture competition. This is the first time that an Australian practice has won the competition since its inception in 2005. And it's a huge success, especially when we remember that Peter's practice beat 11 other finalists chosen from 246 proposals from a total of 52 countries! What attracted SCNZ's interest was the fact that Peter's Cherepovets proposal involved the use of steel in an extreme climate. (Cherepovets is situated between St Petersburg and Moscow and its winter temperature plummets to -48°C and in summer it rises to 39°C.) "In addition to the strengths of steel as a structural component," explained Peter, "we used steel for its radiant and conductive qualities. Double walls of steel sheets filled with earth provided effective insulation. A primary radiant wall, part filled with sand, captures, stores and balances heat generated by cooking, lighting, people, cars and wastewater. By utilising continuous air ducting, we were able to reduce energy loads by up to 70%."

*The last of the talks and time to relax with fellow Architects at the Christ Church Crowne Plaza.*

*At the School of Architecture, Victoria University of Wellington, Peter fields questions.*

Each talk lasted two hours and dealt with a wide range of architectural projects. SCNZ took full advantage of the opportunity to inform each audience of the benefits of using steel that is fabricated by our members in New Zealand to best practice standards that guarantee reliability.

# SCNZ REGIONAL GET TOGETHER - WELLINGTON

A convergence of meetings involving SCNZ staff and the Executive Council in Wellington last month afforded the opportunity for an informal social gathering of SCNZ members at the iconic Backbencher Pub and Cafe.

The addition of some local Wellington fabricators and HERA staff swelled the number of attendees to 15. In addition to enjoying a good pub meal the group was entertained by a live political debate which is broadcast from the Backbencher. Those of you who watched the Back Benches show that night would have noticed a familiar face offering views on the management of our countries prisons during a segment sampling audience opinion.

The regional meeting concept worked well with local fabricators having an opportunity to meet Steel Construction New Zealand Staff and Councillors. A hot topic for the evening was the recession and its impact on the steel construction sector. It is hoped this get together will provide the blue print for future regional gatherings of SCNZ member companies.