

SeS-O-C NEWS

Issue 3 • October 2007

Welcome to the third edition of SESOC NEWS. For general information regarding the NZ Structural Engineering Society (SESOC) and for committee contact details refer www.sesoc.org.nz

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Melbourne Train Station.

SESOC
Structural Engineering Society of New Zealand

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SESOC News

CPEng

When the SESOC management committee met in August, the major topic of discussion concerned the assessment of candidates for CPEng. The importance of CPEng cannot be downplayed. It's governed by a 2002 act of parliament, administered by IPENZ with a CPEng Council responsible for assessment and registration. IPENZ has asked for submissions on the assessment process following a decline in standards discovered by its Task Force in 2003.

Why is this decline happening? No one can be sure. It may be attributable to modern consumer conditioning which calls for an instant response. Instant coffee. Instant key cutting etc. Competence in structural engineering is not achieved in an instant. Combine that attitude with changes in technology which occur rapidly. This means knowledge goes out-of-date rapidly. So lots of learning is required, a fact which is not confined to the engineering profession of course.

Or does the decline stem from university attitudes? Universities train engineers. But their courses have tended to become less technical and more generalised. Other strands of civil and resource engineering have also emerged to compete with structural engineering for students. The role of universities was debated at some length by the committee and it was decided that SESOC needs to define a suitable strategy to work with universities to better promote structural engineering.

When students do graduate there's often not much mentoring or incentive to spend years improving professional skills. Many young designers also lack site experience and generally you cannot become a proficient designer until you've had site experience, overseeing the construction of your own work.

The SESOC committee is fortunate in having Gordon Hughes as a member, for Gordon is also a structural practice area assessor for the CPEng qualification. So the committee has some first-hand knowledge of what is expected – and first-hand knowledge of some of the problems assessors face. Gordon's notes to the committee on the subject of assessment formed the basis of a recent SESOC submission to IPENZ about CPEng.

It's well known that the qualification is valid for only five years and after that time anyone holding CPEng must re-apply and verify that their knowledge is still current. The aim of the qualification is to protect members of the public from errors made by incompetent structural engineers, something that Gordon feels may only be found out after a major earthquake has occurred. Not everyone agreed with this. Others thought for example that serviceability issues such as excessive deflection of beams or floors were more common.

The IPENZ Structural Review Task Force concluded that competence assessment of structural engineers must be stringent (requiring strict attention to rules, procedures and detail). Therefore the rules, procedures and details for competence assessment need to be clearly defined to provide the expected outcome i.e. competent engineers.

The competence model relies heavily on the subjective review of assessors to gauge performance against the standard expected of a reasonable professional engineer. Therefore the availability, selection and training of assessors are paramount to the success of the process. Assessors themselves must be competent in the work of assessment. SESOC has assisted IPENZ by providing a list of names from our membership who in our opinion would make competent structural practice area assessors. If you are contacted by IPENZ to assist with this we would encourage you to get involved.



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CRoMiE Confidential Reporting on Matters in Engineering

Is this 'dobbing in' your mates? Far from it. It's a concept that has been implemented by IPENZ based on the CROSS (confidential reporting on structural safety) programme that has been operating successfully in the United Kingdom. IPENZ has implemented the procedure across all engineering disciplines. However, at SESOC's request, there is a separate form for structural safety issues because of the specific information required. The idea is that confidential reporting flags an issue. It's not a complaint. It's about structural safety and so follows the SESOC vision to improve standards of structural engineering design.



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Anyone can submit a report to IPENZ. An engineer, an architect, a builder, a member of the public. As long as it's meaningful information. The information will be verified and de-identified, and can then be used for research or as suggested in the previous paragraph, flagged as part of a trend. It should be noted that gathering this information follows a world wide trend to do so. Whether or not such a system would have prevented loss of life when that bridge fell down in Minneapolis is impossible to say. Closer to home, it might have prevented loss of life if someone had advised that the platform at Cave Creek was nailed instead of bolted.

Please visit <http://www.ipenz.org.nz/ipenz/practicesupport/CROMIE/>

IStructE and SESOC

With the signing of the new agreement between SESOC and IStructE earlier this year it is important that SESOC takes the initiative to further develop the relationship.

You will be pleased to know that the joint SESOC/IStructE Committee has been exploring suggestions for creating more dialogue and interaction with IStructE. Naturally increased dialogue will benefit all members of SESOC not just the IStructE members of SESOC.

One matter that we are interested in is the opinion of IStructE members, and any new members of SESOC, who are recent immigrants to New Zealand - what is your interest on training specifically related to the upskilling of structural engineers not familiar with New Zealand structural engineering practice, e.g. seismic design?, codes of practice?, the building consent process?, structural detailing? etc. Please email your opinions to Geoff Bird (geoff.bird@beca.com) or Neil Horsfield (neil.horsfield@beca.com).

Other SESOC members may also be interested to know that 2008 is the IStructE's centenary year (1908 - 2008). One of the events being planned to mark this occasion is a conference in Hong Kong titled "Turning Ideas into Reality". The conference is planned as a two and a half day programme from Thursday 24th to Saturday 26th January 2008. It will be held at the Hong Kong Convention & Exhibition Centre. Conference topics include:

- Work of IStructE
- Buildings
- Bridges & Transport
- International Practice
- Special Structures
- Risk, Reliability, Robustness
- Research & Innovation
- Education & Training
- The Future of Structural Engineering

As you would expect, there is a very interesting line-up of eminent speakers.

For further information please visit: www.istructe.org/centenary/conference to access other information.

Richard Aitken (richard.aitken@beca.com) has copies of the conference pamphlet for anyone who would like a copy.

IStructE Young Structural Engineers' International Design Competition

This is a competition in structural design to encourage ingenuity, imagination and inventiveness in young structural engineers. The brief is to produce a legacy use for an Olympic Stadium and the site on which it is built. The competition is open to structural engineers and to individuals who are taking or have successfully completed a recognized civil and/or structural engineering course of study. Candidates shall not have reached their 30th birthday on 4 July 2008. Submissions from individuals or 3-person teams are acceptable. There are four prizes totaling £9,500.

For further information and a copy of the design brief and competition rules please contact John Gartly at john.gartly@actrix.co.nz



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BeamDes Seminar and software release update

NZCS and SESOC are now planning a joint one-day seminar series in February 2008 on the new NZCS "Red Book" and the SESOC BeamDes computer program. It was agreed this joint one-day format would be better for members than two separate seminars, given that a lot of the theory is common to both topics.

The Red Book will contain worked examples of reinforced concrete structures designed to the new Standard NZS 3101:2006. This will be a valuable reference for designers. In parallel with revision of the Red Book SESOC has developed the BeamDes computer program that covers the design of reinforced concrete beams in accordance with the new Standard, including beam / column joints and all aspects of capacity design. The program is to be made available free of charge to financial SESOC members.



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Reminder ASEC Melbourne 2008

SESOC is actively promoting the Australasian Structural Engineering Conference (ASEC) to be held in Melbourne, Australia from 26 to 27 June 2008. This two-day conference has been specifically organised for practising structural engineers and ASEC 2008 will provide a time-out for structural engineers to meet, share ideas, learn about new technologies and to broaden their technical skills.

This biennial Australasian conference has traditionally been held in several Australian states and in New Zealand on a rotation basis. The conference host this year is Engineers Australia and it is expected that international members of IStructE and SESOC will attend. The conference is being supported by Concrete Institute of Australia, the Australian Steel Institute, IStructE and IABSE.

Abstracts for papers have now been received and the conference programme is currently being developed to include 128 technical papers and three plenary presentations where invited eminent international and local speakers will share their experiences. Keynote speakers include Professor Werner Sobek from Stuttgart, Germany who is internationally renowned for his work in lightweight structures, and Dr Donald Charrett who has had a distinguished career teaching and researching at Monash University, working with leading consulting engineers and more recently as a barrister for structural disputes. A conference dinner and an engineering presentation are planned for the Thursday evening.



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We encourage SESOC members to attend. Please visit www.asec2008.com

Changes to SESOC rules

It's known by all members that SESOC is a learned society established primarily to serve its members in an educational capacity and to promote the science, art and practice of structural engineering. Some members may even know that SESOC became an incorporated society in 1999. Probably fewer know that the rules which govern incorporated societies are laid down by the Incorporated Societies Act 1908 and that the requirements are quite specific. However within that framework SESOC has the power to write its own rules and what might have been adequate in 1999 is now turning out to be somewhat restrictive. So the rules need to be changed. But it's not that easy.

For a start the rules can only be changed according to the way the existing rules say that changes can be made. Executive Officer John Gartly has been through the present rules very thoroughly. He recommends changes that will produce generic statements thus allowing the committee more operational flexibility. Be assured that the changes mean the way that SESOC is run is still clearly spelled out in the society's rules.

The wording of the changes and even the meanings of the proposed words were thoroughly debated at the June committee meeting. An example of the proposed changes? There was general agreement in committee, that as New Zealand is a modern country and that as this is the 21st century, electronic communication is now the norm. Production and delivery via electronic means (like this newsletter) is cheaper, faster and more environmentally friendly. Therefore it is proposed that the requirements for postal communications in the existing rules be removed. Voting via the website, as has been practised over the last two years will also be formally written into the rules.



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At a Special General Meeting the changes will be presented to members and voted for adoption. It's worth noting that the changes do not take effect until after they have been registered with the Registrar of Incorporated Societies. In the meantime a draft of the proposed rule changes has been posted on the SESOC website for the information of members. Any comments on the proposed rule changes would be welcomed by the committee and should be sent to Executive Officer John Gartly at john.gartly@actrix.co.nz