

Rumblings

FOR THE INSURANCE INDUSTRY

2006 Fulbright-EQC Award in Natural Disaster Research



Clinton Mexted-Freeman from Porirua is this year's recipient of the Fulbright-EQC Graduate Award in Natural Disaster Research. Clinton will complete a master of science degree, specialising in crisis, emergency and risk management, at the George Washington University in Washington DC.

The award, valued at US\$25,000, is one of the ways in which the Commission meets its statutory responsibility to facilitate natural disaster research.

"Through the award we are able to support the development of intellectual capital and fund outstanding young New Zealanders such as Clinton in areas of study which are of interest to EQC," says General Manager, David Middleton.

Clinton graduated from Victoria University of Wellington with a bachelor of commerce in 2004 and a bachelor of science in 2005. He received an Australian National University honours scholarship and an Australian Institute of Geoscientists honours bursary to complete his honours in physics of the Earth (majoring in seismology) at the Australian National University in Canberra in 2005.

Clinton plans to specialise his research in earthquake hazards, taking a multi-disciplinary approach to advance knowledge in the use of fault locations and earthquake magnitude for examining the dangers posed to people and infrastructure. To this end, he will examine areas of both government legislation and engineering principles. On returning to New Zealand he hopes to apply his knowledge either within the building and construction industry or through local and central government.

Further details about the Fulbright-EQC Award in Natural Disaster Research are available on line at www.fulbright.org.nz/awards/nz-ecq.html.

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San Francisco Earthquake 1906 Centenary Conference

The 100th anniversary of the 1906 San Francisco earthquake and firestorm was commemorated in a conference held in the city during April. The conference brought together more than 2,500 earthquake engineers, city planners, social scientists, disaster managers, decision makers and civil defence officials from 30 countries in order to celebrate what has been accomplished during the past century, showcasing best practices and research results in science, engineering, and emergency management.

Around 36 New Zealanders attended from Crown research institutes, universities, government departments, engineering and other speciality consulting

firms and there were New Zealand presenters in all earthquake science and engineering disciplines. EQC was represented by Commissioner George Hooper, General Manager David Middleton, Research Manager Hugh Cowan and Insurance Manager Lance Dixon.

Key themes of the conference were the need for communities to take greater individual responsibility for risk management and preparedness; for public agencies, owners and the professions to improve seismic resistant design of civil structures and our critical infrastructure; and, of course, for governments, the insurance industry and business to collaborate in the best interests of recovery.

To meet this challenge the need is to adopt the same approach irrespective of the hazard and agree strategies that embrace:

- Public education
- Policy for the protection of critical infrastructure and public facilities
- Research that offers a connection between scientific progress and improved resilience, and
- Codes and standards.

Such action needs to be coordinated across all agencies and at-risk communities to the betterment of all.



San Francisco after the 1906 earthquake.

Hawkes' Bay earthquake anniversary

Not too many New Zealanders know what it is to feel the ground beneath them heave and wave in a really big earthquake. We have been fortunate for a long time.

February this year was the 75th anniversary of the 1931 Hawke's Bay earthquake, New Zealand's most destructive quake. It was recorded at magnitude 7.8. It killed 256 people and left the twin towns of Napier and Hastings in ruins. Fires, particularly in Napier where the water supply was ruptured, caused still more damage.

The quake raised an area of land, some 90 kilometres long and 17 kilometres wide, by up to 2.7 metres.

As the earthquake moves out of living memory, the store of survivors' stories becomes an increasingly valuable insight into our past and to what may happen in the future, showing us that in a country sitting astride two of the world's tectonic plates, we must always be prepared for the earth to shake.

Mavis Rowe was 16 and working at a Shamrock Street home when the earthquake struck.

"It was a hazy, muggy sort of day. Two of us must have been up the front of the house ... and there was just this awful noise. For a minute you'd think a truck had run into the house," she said. "It was so noisy with the house creaking and groaning and the chimneys coming down. You couldn't in your wildest dream imagine what those quakes were like. There was stuff falling all the time. I grabbed Auntie."

They found they couldn't get out of the back of the house, so they hurried back down the long hall toward the front door. But the quake had jammed the door shut. "I was all prepared to get a shoe and break a window in the bedroom and push Auntie out. But another big jolt started and the door flew open. I pushed her down the hall and she never flew down those steps so fast in all her life!"

Outside, a wooden fence was swaying down and touching a lemon tree before swaying back up again. "I thought, the ground will open up and swallow us, but there's nothing we can do about it," she says. Across the road, a woman was calling 'my crystal, all my crystal'. Mavis said "I thought: what does she want crystal for? It's the end of the world, she won't need that".

"The Shock Of '31—The Hawke's Bay Earthquake"
Author: Conty, Geoff. Published by A. H. & A. W. Reed
Sydney, Australia 1980.

Eminent scientist retires as EQC research director



Ivan Skinner

The eminent earthquake scientist, Ivan Skinner, has retired as EQC's research director.

Ivan held this position for 11 years following a long career with the Department of Scientific and Industrial Research (DSIR).

His studious and active directorship ensured that EQC fulfilled its mission to support natural disaster research in New Zealand. Ivan says that working under the general management of David Middleton was always a rewarding experience and provided a very supportive environment.

While EQC's main function is to run the natural disaster insurance scheme and manage the associated Natural Disaster Fund, it is also required by statute to involve itself in natural disaster management in other ways, such as the facilitation of research. This facilitation includes providing the funding for research projects, relevant academic positions and GeoNet, New Zealand's hazard monitoring network.

New Zealand has been at the forefront of natural disaster risk management for many years, in particular with regard to earthquakes. Knowledge expands, applications are improved and demands become more complex in a never-ending process.

"Returns on research and applications aimed at reducing the impacts of New Zealand and overseas natural disasters are on a steeply rising curve, with some promise of even more rapid advances. Since built environments are increasing in size and complexity, sustained and expanded research to reduce New Zealand natural disaster impacts is fully justified," Ivan says.

After obtaining his BE (Hons) degree at Canterbury University in 1951, Ivan went to work for DSIR in Gracefield, Lower Hutt. He began in the basic radar section of the Physics and Engineering Laboratory (PEL) collaborating on a range of physical and engineering research projects like the adaptation of radar systems for aural and ionospheric research and the development of a system to isolate an electron microscope from background vibrations.

Although he began with a primary interest in electric and electronic research, Ivan soon diversified into the range of physical and engineering activities at PEL. By 1959 he was leading its engineering seismology section. He gave high priority to the development of a high performance severe earthquake recorder for ground level installation throughout New Zealand.

By the mid-1960s the MO2 earthquake recorder had been developed and was being installed. By the 1990s advances in solid-state electronics were resulting in higher performance severe earthquake recorders and at this stage EQC became involved. EQC provided funds to enable the new recorders to be installed to supplement the New Zealand network.

Earthquake Commission support for such research tools has since expanded further to include funding GeoNet. While this latest expansion took place some years after Ivan had left the DSIR it took place on his watch as research director at the Commission.

Meanwhile, and as his reputation grew, Ivan's involvement with the research communities beyond DSIR also grew. He became a regular figure at national and international conferences, often presenting papers, being part of conference organisation, and networking with colleagues. The World Conference on Earthquake Engineering is held every four years. Ivan attended 11 out of 13 of these over a 48-year period.

At the same time, he was involved with the work taking place on developing special components to be added to structures to control their motion during earthquakes and reduce damage. An important application of this approach was to provide flexibility and shock-absorbing action in the supports of the structure to isolate it as much as possible from earthquake forces. This of course is the "base isolation" approach for which New Zealand has become famous.

In 1993, Ivan, with co-authors Bill Robinson and Graeme McVerry, wrote the original book on seismic isolation. It became an international best seller in its field and has been translated into Chinese and Japanese.

As his career with the DSIR developed, Ivan was often taken away from the organisation for stints as an earthquake engineering expert for UNESCO including 20 months at the International Institute for Seismology and Earthquake Engineering in Japan from early 1969. He spent two months at an earthquake institute in Yugoslavia in 1973, worked on setting up an earthquake research institute in Greece, and went on lecture visits and tours to Mexico (1972) and China (1985). UNESCO also supported Ivan's engineering studies of several destructive earthquakes including two that damaged Manila in the Philippines (1968 and 1970).

Other engineering studies of earthquake damage included Rabaul (Papua New Guinea) in 1967 and Caracas (Venezuela), also in 1967. The results of his Caracas study appeared as DSIR Bulletin 191 and detail a number of findings including that of "dramatic microzone effects" thus emphasising the "urgency of microzone studies".

"Major, highly informative natural disasters of particular relevance to New Zealand are somewhat infrequent worldwide and quite infrequent in New Zealand, therefore efforts should be made to ensure that New Zealanders continue to join in studies of such disasters," he says.

In 1980 Ivan was appointed chief engineer and became one of the three-person PEL management team, positions he held until 1985. From 1986 he focused strongly on research and applications of seismic isolation in New Zealand. He left the DSIR in 1988 but continued working on projects with them by mutual agreement.

He was made a Fellow of the Royal Society of New Zealand in 1977 and received the Queen's Medal in 1990 for 'services to New Zealand'.

Since Ivan's retirement EQC has initiated an award – the EQC/NZSEE Ivan Skinner Award for the Advancement of Earthquake Engineering Research. The annual award is funded by EQC and administered by the New Zealand Society for Earthquake Engineering (NZSEE). The first recipient of this award is Dr Stefano Pampanin from the University of Canterbury.

Ivan has been succeeded as research director by Dr Hugh Cowan.

Neville Young retires as chairman

After nine years on the EQC Board and eight as chairman, Neville Young retired from the Commission on July 25.

During his time with EQC, the Natural Disaster Fund had its investment strategy extended to allow up to one-third of the Fund to be invested in offshore equities. A revised investment programme, involving the selection of several offshore investment management companies, was implemented and the Fund has grown to over \$5 billion.

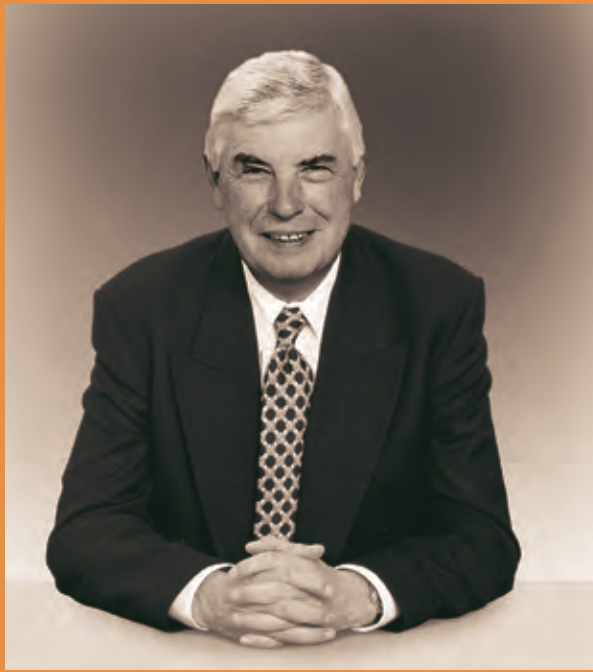
Another important initiative to take place on Mr Young's watch was the ten-year agreement entered into with the GNS Science in 2001 to completely redevelop, modernise, operate and maintain the nation's geological hazard monitoring network. The network – GeoNet – provides information about earthquakes,

tsunamis and volcanic activity, and places New Zealand among the world's leaders in this area of science.

Other highlights in an eventful chairmanship include EQC's hugely successful sponsorship of Te Papa and latterly, a sponsorship agreement with Auckland War Memorial Museum to develop a new permanent exhibit, based on volcanoes. This exhibit was opened by the Prime Minister in 2005 and has achieved much media attention and interest from the public.

And, in a process of continuous improvement, EQC is now much better prepared to meet the challenges it would face following a severe natural disaster than it was nine years ago.

Michael Wintringham has replaced Mr Young as chairman.



Offshore placements

Sometimes an intermediary in New Zealand or overseas arranges offshore cover for residential property located in New Zealand.

EQCover still applies in this situation and remittance of the EQC premium is made directly to EQC, generally within 60 days of the inception/expiry date of the cover (unless other arrangements have been made).

EQCover direct with EQC

There are situations where clients don't want fire insurance cover on their residential property or are unable to purchase insurance via an insurance company, but still wish to have the cover provided by EQC.

In situations like this EQC corresponds either directly with the client or through an intermediary.

EQCover provided in this manner is exactly the same as that provided as part of a fire contract through an insurance company. Any exclusions or property title notations, such as Section 74 of the Building Act, still apply.

There is a surcharge on the normal EQC premium for placing cover directly with EQC.

Details required are:

- Client's name
- Postal address
- Address of the property to be insured (dwelling and contents)
- The amount of replacement cover required, including whether there are one or more units in a residential building or a lower contents amount than the EQC limits
- Period of insurance.

If you have any enquires or would like further information about either offshore placements or cover direct with EQC, please contact:

Derek Gibb
EQC Premium Compliance Manager
Phone: 04 978-6410 or
Email: dwgibb@eqc.govt.nz

Reinsurance renewed

EQC's reinsurance negotiations were successfully completed during May.

Following last year's hurricanes in the United States, EQC expected a hardening market for the 2006 negotiations.

Instead, a more sophisticated approach from reinsurers saw significant premium rises confined to areas where losses had occurred. Reinsurers were also looking to diversify their portfolios to include risk in areas outside the US and perils unrelated to hurricanes and storms. EQC fitted this profile perfectly and consequently the price EQC negotiated was only slightly higher than last year.

Reinsurance, or insurance for insurers, enables one company to transfer some of the risk it has taken to another, the reinsurer.

EQC uses reinsurance because the Natural Disaster Fund – EQC's capital and reserves – is not large enough

to cover every foreseeable possibility. A major quake in Wellington could cost the Commission up to \$7 billion. Reinsurance means EQC will be able to pay out more than it has in reserve before it has to call on the government guarantee. Reinsurance also provides a buffer against a reduction of the fund to dangerous levels, something that may be caused by an increase in seismic activity over a period of time, not necessarily just a single catastrophic event.

Following a major disaster, access to the large amount of offshore funding provided by reinsurance will be of considerable benefit to the New Zealand economy. Studies have shown that the rate of recovery of a community following such an event is heavily influenced by the extent to which external resources can be commanded. This principle is also reflected in the Commission's investment portfolio, a third of which is in global equities.

Obituary: Jeremy Dwyer, EQC Commissioner



The much respected and well liked EQC Commissioner Jeremy Dwyer died in December last year.

Mr Dwyer joined the Board in June 2001 and made a valuable contribution during his tenure, particularly as chair of the Catastrophe Response Committee.

The Commission's General Manager, David Middleton, says that Mr Dwyer's concern for people over processes was always evident and that he was very supportive and encouraging.

Prior to being appointed to EQC's Board Mr Dwyer had been mayor of Hastings for 15 years. He also contributed greatly to Sister Cities New Zealand and was a regional councillor for Hawke's Bay.

"His extensive background in local government was new to the EQC Board and this was a great asset," says Mr Middleton.

"He brought a great deal to the Commission and his death is a very sad loss."