

# Shorts

## Profile

### In the right place

**NEW ZEALAND HAS SCORED** a coup with the appointment of Professor Ken Elwood to the new position of MBIE Chair in Earthquake Engineering at the University of Auckland. The MBIE Chair will facilitate collaboration in earthquake engineering research between New Zealand and international partners, furthering New Zealand's international reputation for excellence in this field.

Ken has a PhD in Civil Engineering from the University of California, Berkeley, and was at the University of British Columbia in Canada.

#### **An early passion**

Earthquake engineering appealed to Ken as a young engineer. He saw designing for earthquakes as the single greatest challenge for structural engineers.

'Since observing the disastrous effect the 1999 earthquake in Turkey had on older concrete buildings not built to stringent building codes, I have been passionate to better understand the seismic performance of existing concrete buildings,' he says.

Apart from Turkey, Ken has personally experienced major earthquakes in Indonesia, China and Chile. He was in Christchurch during the February 2011 earthquake, giving

him unique insights into the city's challenges.

New Zealand's standing in earthquake engineering and the 'ground-truthing' from the Christchurch earthquakes makes us a desirable partner for international researchers, he says.

#### **Collaboration under way**

Collaboration with the US, Japan and Chile has already begun. A National Science Foundation-funded Virtual International Institute for Seismic Performance Assessment of Concrete Wall Systems has been established linking researchers from Pacific Rim countries undertaking complementary research on the seismic performance of concrete buildings.

Ken says a lesson from Christchurch is that buildings needed demolishing despite meeting basic life-safety performance objectives.

'We need to understand the factors driving decisions to demolish buildings and consider if engineers should target better performance in future earthquakes.

'New Zealand has an opportunity to take a leadership role in addressing this.'

#### **Challenges for MBIE**

Ken says that, for the Building System Performance Branch of MBIE, the biggest



**Professor Ken Elwood.**

challenges include providing guidance on the assessment of damaged buildings and keeping a long-term outlook on development of the Building Code and standards.

'There is very little direction internationally on how to reliably evaluate the residual capacity of damaged buildings, and yet this is a critical operation to get the city back on its feet,' he says. 'Collaboration between researchers and engineers is needed to develop consensus.'

Deficiencies in building codes and standards have been identified by MBIE, and work is under way to address these issues in collaboration with Code committees.

For Ken, the opportunities and challenges in seismic risk reduction in New Zealand are unparalleled. 'I count myself fortunate to be able to participate in this dynamic environment.' ◀