

1-1 AUG 2011

5 August 2011

Justice Mark Cooper
 Chairperson
 Royal Commission
 PO Box 14053
 Christchurch Mail Centre
 CHRISTCHURCH



Dear Justice Cooper

Re: Response to Royal Commission – Canterbury Earthquakes

In response to your letter dated 1 July 2011 we would like to provide the following views on the matters raised. The context of our response is the 2 year New Zealand Diploma in Civil Engineering and the 3 year Bachelor of Engineering Technology (Civil) degree which we deliver in the Department of Civil Engineering at Unitec Institute of Technology. The diploma is part of the New Zealand Board of Engineering Diplomas (NZBED) suite of qualifications and the degree is part of the Metro IPT developed programme. Graduate competencies for these qualifications centre around well defined and broadly defined problems respectively.

Our general view is that all engineers should have a basic introduction to earthquake engineering. This should bring together in an integrated way, both geology and geotechnology and the structural aspects and effects on the overall built structure of earthquakes. A possible current weakness in the qualifications is that these three topic areas are taught separately and not in an integrated manner.

Therefore for 1st year courses a basic understanding as mentioned, 2nd year courses should develop a good understanding of earthquake resistant structural design (especially ductility); 3rd year a full understanding for students of the inter-relationship between the foundation and structure in terms of its earthquake resistant design (integration of geotechnical and structure in design); and at a higher level, which could be a CPD course or Graduate Diploma course at Unitec a specialist course in the latest research, thinking and practical application in industry. Previously in our Unitec Bachelor of Engineering Technology (Civil) degree a specialist high level earthquake engineering course existed which would benefit all engineers providing more specialist knowledge, however it would be difficult to make this compulsory in the current Metro IPT programme as many students wish to specialise in other areas.

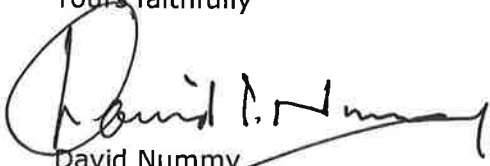
An important aspect for Unitec students is also in the supervision of construction projects and ensuring these are undertaken and completed as per design specifications. Unitec diploma and degree students (e.g. technicians and technologists) are likely to be part of an overall engineering and construction team environment and they should be able to contribute by having an appropriate understanding of the key areas: Geological, geotechnical and structural and the integrated aspects of these in terms of earthquake engineering.

The NZBED diploma has basic understanding embedded, but the inter-relationship between the geotechnical and structural needs, requires review to ensure integration. In terms of the Metro ITP BEng Tech the current situation also requires improvement and this is in process, and a basic integrated understanding will be introduced in 2012. The Institution of Professional Engineers New Zealand (IPENZ) review of the BEngTech at Unitec in 2010 identified that more aspects concerning foundations are required in structural courses. Also students taking the structural specialisation in the degree should take the geotechnical courses as electives to broaden their knowledge. Likewise students in the geotechnical specialisation should take some structural courses.

Unitec is open to and receives ongoing feedback from industry in this area of learning to ensure our graduates can deliver on the requirements of industry and society.

Thank you for this opportunity to contribute to this review.

Yours faithfully

A handwritten signature in black ink, appearing to read 'David Nummy', written over a light grey circular stamp.

David Nummy
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Cc: Dr Rick Ede, Chief Executive
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