



Department of
Building and Housing
Te Tari Kaupapa Whare

**Exhibit A and Appendix A to Briefing to
Royal Commission of Inquiry into
building failure caused by the Canterbury
Earthquakes about the building
regulatory framework**

May 2011

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Exhibit A

- (i) The relationship between building regulation, structural design and standards and building methods since the Napier earthquake (referred to in paragraphs 3.3 and 4.5 of the Briefing to Royal Commission of Inquiry into building failure caused by the Canterbury Earthquakes about the building regulatory framework

Appendix A

Section 2: The building regulatory system

- (i) Performance-Based Building Regulatory Systems, Principles and Experiences: A Report of the Inter-jurisdictional Regulatory Collaboration Committee February 2010

Section 3: The development of structural design and standards

- (i) Overview timeline of Standards relating to determination of loads and methods of determining loads, compiled by Standards New Zealand 2011

Section 4: Building Act tools for the upgrading of the structural performance of buildings

- (i) Earthquake-Prone Building Provisions of the Building Act 2004 – Policy Guidance for Territorial Authorities, Department of Building and Housing
- (ii) Assessment and Improvement of the Structural Performance of Buildings in Earthquakes: Recommendations of a NZSEE Study Group on Earthquake Risk Buildings, New Zealand Society for Earthquake Engineering June 2006

Section 5: Rapid assessment of buildings during a state of emergency

- (i) Building Safety Evaluation During a State of Emergency – Guidelines for Territorial Authorities, New Zealand Society for Earthquake Engineering, August 2009

Section 6: The Department's investigation into the building collapses

- (i) Terms of Reference for the Technical Investigation into the Performance of Buildings in the Christchurch CBD in the 22 February Christchurch Aftershock.

Exhibit A

- (i) The relationship between building regulation, structural design and standards and building methods since the Napier earthquake (referred to in paragraphs 3.3 and 4.5 of the Briefing to Royal Commission of Inquiry into building failure caused by the Canterbury Earthquakes about the building regulatory framework



BUILDING LEGISLATION



Napier earthquake triggered development of earthquake design standards
Model building bylaws adopted by some but not all local authorities for new buildings, so no national building standard

Powers to local authorities with respect to earthquake-prone buildings

Model building bylaws adopted by some but not all local authorities for new buildings, so no national building standard

Powers to local authorities with respect to earthquake-prone buildings (regulations/powers replicated from Local Government Act 1974)

Performance based building regulation

Performance based building regulation

Powers to local authorities with respect to earthquake-prone buildings

REGULATION OF EARTHQUAKE-PRONE BUILDINGS

Strengthening requiring of buildings likely to be dangerous in a moderate earthquake

Legislation applied to unreinforced masonry buildings that fail to meet one half of the loads specified in NZS 1900: 1965 for a new building

Strengthening required of buildings likely to be dangerous in a moderate earthquake

Legislation applies to all buildings (with the exception of some residential) that fail to meet one third of the current code for a new building

STRUCTURAL DESIGN STANDARDS

NZS 95: 1935 (Amendments 1939, 1955)
Model Building Bylaw
Part IV Basic loads to be used in design and methods of application

NZS 1900: 1965 (Amendments 1976)
Model Building Bylaw
Part 8 Basic design loads

NZS 4203: 1976 (Amendments 1984, 1992)
Code of practice for the general structural design and design loadings for buildings

NZS 1170.0, NZS 1170.1, NZS 1170.3: 2002
NZS 1170.3: 2003
NZS 1170.5: 2004
Structural design actions

Unreinforced masonry explicitly prohibited

Loading codes updated to reflect new knowledge and techniques

Loading codes linked to material codes with concept of capacity design

BUILDING MATERIAL AND DESIGN PRACTICES

