

Appendix A, 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.

Technical Investigation into the Performance of Buildings in the Christchurch CBD in the 22 February Christchurch Aftershock

Terms of Reference

The Canterbury region suffered a severe earthquake on 4 September 2010 and an aftershock on Boxing Day. This was followed by another, more damaging aftershock on 22 February 2011. The magnitude 6.3 aftershock on 22 February 2011 caused significant damage to Christchurch, particularly the CBD, eastern, and southern suburbs, the Port Hills, and Lyttelton.

The high intensity of ground shaking led to a number of collapsed or seriously damaged buildings and a large number of people killed or seriously injured. It is important for New Zealanders that the reasons for the damage to buildings generally in the CBD, and to some particular buildings, are definitively established.

Matters for investigation

The buildings specified for detailed analysis include the: Pyne Gould Corporation; CTV; Forsyth Barr and Hotel Grand Chancellor buildings. Others may be specified for detailed analysis as information comes to hand during the investigation.

The purpose of this technical investigation into the performance of buildings in the Christchurch CBD during the 22 February aftershock, is to establish and report on:

- the original design and construction of the buildings;
- the impact of any alterations to the buildings;
- how the buildings performed in the 4 September 2010 earthquake, and the Boxing Day aftershock, in particular the impact on the buildings;
- what assessments, including the issuing of green stickers and any further structural assessments, were made about the buildings' stability/safety following the 4 September 2010 earthquake, and the Boxing Day aftershock; and
- why these buildings collapsed or suffered serious damage.

The investigation will take into consideration:

- the design codes, construction methods, and building controls in force at the time the buildings were designed and constructed and changes over time as they applied to these buildings;
- knowledge that a competent structural / geotechnical engineer could reasonably be expected to have of the seismic hazard and ground conditions when these buildings were designed;
- changes over time to knowledge in these areas; and
- any policies or requirements of any agency to upgrade the structural performance of the buildings.

The investigation will use records of building design and construction, and will also obtain and invite evidence in the form of photographs, video recordings and first-hand accounts of the state or the performance, of the buildings prior to, during, and after the 22 February 2011 aftershock.

Matters outside the scope of the investigation

The investigation and report is to establish, where possible, the cause or causes of building failures. It is not intended to address issues of culpability or liability arising from the collapse of the building. These matters are outside the scope of the investigation.

Report required

The Department will prepare a detailed written report, setting out the conclusions drawn from this investigation about the matters referred to in the above section by 31 July 2011.