## BUILDINGS (OTHER THAN CTV AND PGC) THAT CAUSED FATALITIES OPENING

In the February 2011 earthquake there were 42 deaths as a result of building failures (other than the CTV and PGC Buildings).

The names of those 42 people were read out at the commencement of the Royal Commission's hearings on 15 October 2011 as part of the 181 people killed as a result of the earthquake. I will not name those people in this opening but will do so in opening each building hearing.

Thirty six of those 42 people killed were in the Central Business District.

The other 6 were in the suburbs.

The Commission will hold hearings into the failure of the buildings that caused those 42 deaths except for 1 building failure which resulted in the death of a 5 month old baby - already mentioned by His Honour Justice Cooper at the URM hearing in the week of 14 November, that death being caused by the collapse of an exposed brick internal chimney breast. Whilst that will not be the subject of a hearing, it has been the subject of inquiry by the Commission and will be covered in the Commission's report.

The buildings that failed and caused the deaths of the other 41 people will be the subject of the hearings which commence today and which will occupy most of this week and the weeks of 23 and 30 January next year.

These are important hearings because, all but one of the buildings involved, were older, unreinforced masonry buildings. The Commission has already heard evidence at some length about the potential danger of these building's.

These hearings will graphically illustrate'these potential dangers which, sadly, were realised on 22 February this year.

What these hearings will show as well, is that the problems unreinforced masonry buildings pose are not solely a problem for the owner or occupier of such a building.

Rather they are a problem for the community.

Of the 41deaths caused by those building failures, 36 of them were as a result of the façade or walls of buildings collapsing outwards onto pedestrians or motorists and, in 3 cases, onto people who had run out of a building to escape.

Thus, over $80 \%$ of these deaths were to members of the public going about their business, oblivious to the danger they were in on that day.

Of those 36 people - 6 were killed when an unreinforced wall from a neighbouring building collapsed and fell through the roof of the building they were in.

Of the 4 people killed inside an unreinforced masonry building:

- $\quad 3$ were workmen who were assisting in the removal of a pipe organ from the Durham St Methodist Church.
- The other one was a woman who was at work with 7 or 8 work colleagues at the Christchurch Press on the top floor of the historic Press Building. She died sheltering under her desk when the roof collapsed.

The one person killed by the failure of a building that was not an unreinforced masonry building was a woman who was killed as she sat in her car talking on her cell phone. When the earthquake struck, a 6 tonne concrete facade panel on a carpark building in Lichfield St, held by only 4 bolts, fell to the ground crushing her and her vehicle.

The fact that over $80 \%$ of the deaths caused by these building failures were in relation to people outside the buildings - in the main, pedestrians and motorists highlights that the issue of what we are to do about URM buildings is a very real community problem.

It also graphically highlights the futility of a Territorial Authority or Local Council having a passive earthquake prone policy and the need to urgently implement policies throughout New Zealand to, at the very least, address the potential dangers these buildings pose from collapsing facades, walls and parapets.

These hearings will also address other issues raised by the Royal Commission's Terms of Reference including:

- The inspection and assessment of buildings following a large earthquake - in this case the September 2010 earthquake.

In particular the unreinforced masonry building failures highlight the need to look closely at the way these buildings are assessed and the need to take into account the potential for collapse in a significant aftershock.

Another issue that will come through in some of these hearings is the issue of cordons in front of a damaged building following a significant earthquake. In particular the need to ensure the placement of such cordons provides protection of the public by blocking, off footpaths or, if necessary, roads in the event of a significant aftershock.

Another important issue some of these hearings will address is the strengthening or retrofitting of unreinforced masonry buildings and the need for retrofit or strengthening measures to be able to provide effective protection and not fail in a significant earthquake.

An issue of communication will also be addressed. The importance of communication of potential dangers posed by a building after a significant earthquake to relevant authorities and to potentially affected neighbouring properties.

