I, PAUL ARTHUR CAMPBELL of Auckland, Structural Engineer, state:

- 1. I hold a BSc, BE (Civil) (Hons). I am a member of IPENZ, and am a Chartered Professional engineer. I have 14 years experience as a Structural Engineer. From 1997 to the present I have been employed by Opus International Consultants Limited ('**Opus**') and hold the position of Principal Structural Engineer. I am a member of the New Zealand Society for Earthquake Engineering (NZSEE), and a member of the Structural Engineering Society New Zealand (SESOC) of which I am also a member of the Management Committee. I am a past chairman of the Auckland Structural Group (ASG) 2005 2008.
- 2. From 27 December 2010 to 22 February 2011 I was seconded to the Christchurch City Council ('the Council) to carry out inspections under the direction of its Building Recovery Office ('BRO'). The Council warranted me for this purpose and I held a warrant card confirming this.
- 3. The inspections I carried out for the Council and which are the subject of this inquiry were all reinspections of buildings that had previously been inspected by other engineers or building inspectors. The inspections I carried out were limited in scope and generally involved only exterior observations. They were not detailed structural engineering evaluations. Nor did they involve calculations of structural capacity or strength assessment, and I was not provided with building plans or drawings.
- I did not have information from GNS or other sources about likely future earthquake or aftershock events other than what was publicly available. I assumed that aftershocks would continue according to a normal aftershock sequence, namely a sequence involving decaying or diminishing aftershocks. I did not anticipate that the Christchurch CBD would be subjected to a greater shaking intensity event than it received in September 2010.
- 5. The Council provided me with a copy of the form entitled "Engineers Re Inspection of Damaged Buildings" completed by the Council as to the addresses of properties to be inspected.
- 6. I was aware of the Council's Earthquake Prone Building policy, however my reinspections were not designed to quantify building strength according to that policy. Reinspections were intended to identify any obvious change in building status such as remedial works or

demolition, confirm damage caused by the September event or aftershocks, to make an assessment of the existing placard on the building and change it to a more serious status if this was appropriate, to check existing cordoning and if appropriate recommend changes or additions to cordons. Some inspections were specific to a particular issue, for example to check whether works which a building owner had been instructed to carry out had been completed.

7. I generally spent most of my time while seconded to the Council in the city inspecting buildings. I met with other inspectors and Council staff most mornings to be briefed on any current issues and to receive the documents relevant to the buildings which I was required to inspect. The Council staff specified which buildings I had to inspect. After inspections were carried out, my completed reinspection forms were handed back to Council staff to process recommendations and to make decisions on enforcement action such as issuing Building Act notices.

601/601A Colombo Street

- 8. I have been advised that the areas of interest for counsel for the Commission are about the adequacy of the protection fencing around this property.
- On 31 January 2011 and 14 February 2011, I conducted inspections of a property at 601/601A Colombo Street. I completed "Engineer's Re-inspection of Damaged Buildings" reports for that property.
- I recorded in my report dated 31 January 2011 [BUI.COL.601.0017] that the building was"very badly damaged esp Mollett St facade and back elevation".
- 11. In the check list I noted moderate and severe damage to structural features. I could not get into the building to replace the existing red placard. The reason we were replacing red placards is because previously issued placards were due to expire and the council needed current and valid placards to have any enforcement powers.
- 12. I recommended: "Req[uired] eng[ineering] report on Colombo St facade & any temp[orary] works req[uired] to move barriers." By this recommendation it was my intention that the building owners' engineer should carry out sufficient structural inspection and investigation to confirm the status and stability of the Colombo St façade,

including its parapet. Furthermore before the barriers could be moved I was of the opinion that temporary works may be required. Typically these temporary works could include removal of the hazard (loose masonry, parapet etc) and securing of the façade.

- 13. I recommended that the existing cordons remain. I refer [annexure] to a photograph I took at the time of one of my inspections on 31 January or 14 February (I am the figure in the photograph). Two rows of cordon are visible in front of 601 and 601A. The outer row is the pedestrian lane in the road, and the inner row is the fencing preventing entry to the footpath area. This inner row of cordon extended approximately to the boundary of number 601 to the left of the photograph, and to the right of the photograph preventing access to Mollett Street.
- 14. Cordoning of the building against access being gained from the west end of Mollett Street had been effected by shipping containers. I have located a photograph on the Council file which shows this [annexure]. I may have taken this photograph at the time of one of my inspections.
- 15. From my external visual inspection I considered that the existing cordoning was adequate pending a structural evaluation and any recommended remedial works. It was adequate in my view because all of Mollett Street below the worst affected area of the building was cordoned. The cordoning along the Colombo Street frontage extended to about the edge of the car parking lane, recognizing that the parapet was damaged and could fail.
- 16. My 14 February report [BUI.COL.601.0017] check list again noted moderate and severe damage to structural features. I noted that the building represented a "serious danger to Mollet St".
- 17. I recommended for urgent action that "loose tin flashing down Mollet St should be removed in case the wind blows them off" and that this was a danger to the public.
- 18. I recorded that the wall on Mollet Street, the roof, and the interior (upper floor) were badly damaged. I recommended that an urgent report by a Chartered Professional Engineer was required.
- 19. I noted that the north end, which had the address 601A Colombo, had more damage than number 601 but I noted that "all one structure so building as a whole is compromised".

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20. The rear of the building and Mollett Street showed the most significant damage. There had been no material change to the building since my inspection on 31 January and I remained satisfied with the existing cordoning.

21. I was not involved in the original decisions about the placement of cordoning.

Dated December 2011

Paul Campbell



