

Under **THE COMMISSIONS OF INQUIRY ACT 1908**  
In the matter of the **CANTERBURY EARTHQUAKES ROYAL COMMISSION  
OF INQUIRY**

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**SUBMISSIONS ON BEHALF OF SIMON WALL  
RELATING TO 593 COLOMBO STREET**

**Dated the 30<sup>th</sup> day of January 2012**

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**BUDDLE FINDLAY**  
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**MAY IT PLEASE THE COMMISSIONERS:****Introduction**

1. Simon Wall holds a Bachelor of Engineering (with Honours) and a Master of Engineering Management from Canterbury University. He has 7 ½ years professional experience and is a member of the Institute of Professional Engineers of New Zealand (Structural) and a Chartered Professional Engineer.
2. On 5 September 2010 Mr Wall volunteered in his personal capacity to assist Civil Defence with Level 1 Rapid Assessments in the immediate aftermath of the earthquake on 4 September. Part of the area assigned to Mr Wall's assessment group was the block of unreinforced masonry buildings at 593-599 Colombo Street. Mr Wall carried out a Level 1 Rapid Assessment on these buildings.
3. Mr Wall completed two Level 1 Rapid Assessment Forms relevant to this assessment:
  - (a) A Level 1 Rapid Assessment Form for the address 187 St Asaph Street, which was the St Asaph Street frontage of the building at 593 Colombo Street.<sup>1</sup> Mr Wall gave the address at 187 St Asaph Street a yellow placard and recorded:

*"Parapet badly cracked.  
Risk of further collapse"*
  - (b) A Level 1 Rapid Assessment Form for the addresses 593-599A Colombo Street.<sup>2</sup> The form recorded minor damage only and allocated a green placard. A green placard was separately affixed to each of the addresses at 593 – 599A Colombo Street.
4. Mr Wall handed in his assessment forms to the Civil Defence headquarters and had no further involvement in the assessment of the building at 593 Colombo Street in any capacity.

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<sup>1</sup> BUI.COL593.0008C.1

<sup>2</sup> BUI.COL593.0008B.1

## Subsequent inspections

5. Mr Wall's Level 1 Rapid inspection was the first of a series of inspections of the building at 593 Colombo Street following the September 2010 earthquake.
- 5.1 On 24 September 2010 Alistair Boys from Holmes Consulting Group Ltd carried out a Level 2 assessment at the instruction of the owner and recorded the outcome of his inspection in a Level 2 Rapid Assessment form.<sup>3</sup> Curiously, Mr Boys records that the building had an existing yellow placard at the time of his inspection. No evidence presented to the Commission has established how this came to be. Regardless, Mr Boys reassessed the building and classified the building as Y1(Restricted Use, short term entry). He recommended further structural assessment. It appears that Mr Boys' written report which recorded the yellow status of the building was not passed to the owners' agents.
- 5.2 On 4 October 2010 Richard Seville and Paul Roberts of Holmes Consulting Group Limited visited 593 Colombo Street and prepared a written report of the same date.<sup>4</sup> The report records observed damage and recommendations for further investigations.
- 5.3 On 13 October 2010 the Council's Building Evaluation Transition Team carried out a more detailed assessment of the 187 St Asaph Street address. A Level 2 Rapid Assessment form was completed.<sup>5</sup> It recorded the existing placard as yellow and chose a new posting of Y2 (Restricted Use, no entry to parts until repaired or demolished). The primary damage recorded was a crack in the corner of the front parapet. The form also recorded the engineer's recommendation for further structural assessment and that the front footpath had been fenced off but access at the side was open. The Council completed a coversheet,<sup>6</sup> recording that an engineer was to provide a report on the safety of the building. It appears that no further inspection was carried out by the Council of the Colombo Street frontage of the building (apparently because the Council's system recorded this address as having a green placard).

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<sup>3</sup> BUI.COL.593.0007G.1

<sup>4</sup> BUI.COL593.0055.15

<sup>5</sup> BUI.COL593.0008A.1

<sup>6</sup> BUI.COL593.0048.1

- 5.4 On 14 February 2011, Mark Ryburn, an Opus engineer contracted to the Council re-inspected at least the St Asaph Street frontage of the building.<sup>7</sup> His report notes severe damage to walls and parapets. He records that protective fencing is necessary to the passageway between 185 and 187 St Asaph Street. He categorised the building as "R(a)" (Significant damage, do not enter) and red stickered 187 St Asaph Street. .
- 5.5 Council records show that as at 16 February 2011 repair options for the building at 593 Colombo Street / 187 St Asaph Street had been designed and submitted to contractors for costing.<sup>8</sup>
6. It is noted that the 13 October and 14 February inspections and reclassifications by Council engineers either did not identify that the 187 St Asaph address was part of one building with another street frontage and addresses on Colombo Street or concluded that different classifications were appropriate for different parts of the building.

### Rapid Assessments

7. The Rapid Assessment process was implemented under the direction of Civil Defence in the state of emergency following the earthquake on 4 September 2010. In August 2009 the New Zealand Society for Earthquake Engineering published *Building Safety Evaluation During a State of Emergency: Guidelines for Territorial Authorities*<sup>9</sup> ("**Guidelines**") with support from the Department of Building and Housing and the Ministry of Civil Defence. The Guidelines cover the rapid assessment of buildings to be carried out during a state of emergency, and outline and develop inspection categories, including the Level 1 Rapid Assessment and the Level 2 Rapid Assessment. The Guidelines contemplate both Level 1 and Level 2 Rapid Assessments being carried out during the period of state of emergency, with the primary tasks being:
- (a) ascertaining the level of structural damage to individual buildings and note other hazards;
  - (b) assessing building safety and deciding the appropriate level of occupancy; and
  - (c) recommending security and shoring requirements.

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<sup>7</sup> BUI.COL593.0008M.1

<sup>8</sup> BUI.COL593.0008L.1

<sup>9</sup> ENG.DBH.004F.2

8. A Level 1 Rapid Assessment is typically based on an exterior inspection only, whereas a Level 2 Rapid Assessment is based on inspection of both the interior and exterior together with reference to available drawings. A Level 1 Assessment results in a placard being placed and the Level 2 Assessment may result in revised placards.<sup>10</sup> A Level 2 Rapid Assessment is referred to in the Guidelines as a "more considered" assessment<sup>11</sup> to be carried out in situations of size or complexity or where the Level 1 assessment identifies a need for a further inspection.<sup>12</sup>
9. The Level 1 and Level 2 Rapid Assessment phases are intended to be followed by a Detailed Engineering Evaluation, at the initiation of the building owners, insurance companies or territorial authority. The Detailed Engineering Evaluation is likely to involve review of construction documentation and the preparation of detailed engineering reports.<sup>13</sup>
10. Sample Level 1 and Level 2 Rapid Assessment Forms are set out in Appendix A to the Guidelines. Similar forms were adopted by the Council. The Level 1 Assessment forms used in this case direct the inspecting engineer to choose a posting based on the evaluation and team judgment. The options are green, yellow and red.
11. The Level 2 Rapid Assessment Form requires the inspecting engineer to record the existing placard on the building and to choose a new posting based on the new evaluation and team judgment. Additional classification categories are available for selection (G1, G2, Y1, Y2, R1, R2, R3) and the categories are explained on the form. The additional categories reflect enhancements to the Rapid Assessment process by the New Zealand Society for Earthquake Engineering in 2009 and 2010.<sup>14</sup>

### Discussion – Simon Wall

12. Mr Wall completed the Level 1 Rapid Assessment on 5 September 2010 under the direction of Civil Defence. Although he was not specifically aware of the Guidelines, the Civil Defence process was generally implemented in accordance with the Guidelines and engineer volunteers were given a verbal procedural briefing before commencing Level 1 Rapid Assessments.

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<sup>10</sup> Page 9, Table 1

<sup>11</sup> Page 8, Section One, 1.2

<sup>12</sup> Page 12, 1.4

<sup>13</sup> Page 9, Table 1

<sup>14</sup> *Building Safety Evaluation Following the Canterbury Earthquakes*, New Zealand Society for Engineering, section 2.4, pages 12-13 (ENG.NZSEE.0001.1)

13. Mr Wall had no subsequent involvement with this property in any capacity. His inspection was followed by (at least) four subsequent and more detailed engineering inspections. Even in the case of the Colombo Street frontage, which was given a green placard, it was the responsibility of the owner to follow up on the Level 1 Rapid assessment. The green placard form states that a building has received a brief inspection only and that owners are encouraged to obtain a detailed structural engineering assessment as soon as possible. Indeed, this occurred here.
14. The hearing in respect of 593 Colombo Street has highlighted shortcomings in communications between Council, engineering advisors and owners in respect of post-quake assessments. This is highlighted both the fact that the (typewritten) Holmes report of 24 September 2010 never came to the attention of Council or the owners' agents and that the building was apparently further assessed and given a yellow placard sometime between 5 and 24 September 2010. Fundamentally:
  - (a) The owners' agents (NAI Harcourts) apparently did not know the 593 Colombo Street address had been yellow stickered;<sup>15</sup> and
  - (b) The owners' engineering advisors (engaged by NAI Harcourts), Holmes Consulting Group Limited, did not know that tenants were in occupation.<sup>16</sup>
15. Mr Wall was questioned about his decision to allocate different placards to different street frontages. He gave a yellow placard to the St Asaph Street frontage (187 St Asaph Street) and a green placard to the Colombo Street frontage (593 Colombo Street). It is submitted that no criticism can be directed at Mr Wall in this respect:
  - (a) The yellow placard was given to 187 St Asaph Street because of a badly cracked parapet which was at risk of further collapse. Damage of this nature did not affect the Colombo Street frontage, which had its own parapets separately assessed.
  - (b) Like any Level 1 Rapid Assessment, Mr Wall's physical inspection was by nature relatively superficial and without reference to the building plans.

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<sup>15</sup> TRANS.20111212.98, lines 20 to 28 and TRANS.20111212.102, lines 25 to 34

<sup>16</sup> TRANS.20111212.136, lines 23 to 24, TRANS.20111212.141, lines 4 to 5, TRANS.20111212.146, lines 29 to 32

- (c) Other engineers accepted in evidence that in the context of a Rapid Assessment, it may not have been apparent that the separate tenancies were part of the same building.<sup>17</sup>
- (d) Inspections by the Council engineer on 13 October 2010 and by Mark Ryburn on 14 February 2011 related to the 187 St Asaph Street frontage only. Each inspection reclassified the 187 St Asaph Street address (on 13 October as "Y2" and on 14 February as 'R(a)', both classifications imposing entry and use restrictions). Apparently neither of those inspections observed that the addresses at 187 St Asaph Street and 593 Colombo Street were the same building. If they did, neither commented on it. Mr Ryburn has no recollection of whether he inspected the Colombo Street frontage<sup>18</sup> but noted that if he had seen something worth noting, he would have commented on it.<sup>19</sup> Notably, Mr Ryburn gave a red placard to the St Asaph Street frontage and, had he applied the principle that all tenancies in a building should have the same status, then the Colombo Street frontage ought to have had a red sticker also. The fact it did not suggests that Mr Ryburn assessed the separate frontages as different buildings or addresses and having different levels of damage.

These subsequent inspections were, of course, conducted under substantially less time pressure than that of Mr Wall on 5 September 2010.

16. It is submitted that Mr Wall responsibly and professionally completed the task that was asked of him on 5 September 2010 and that his Level 1 Rapid Assessment in no way contributed to the tragic loss of life in the building on 22 February 2011.

#### **Mr Wall's brief of evidence**

17. It is noted for completeness that the version of Mr Wall's brief of evidence available on the document database (WIT.WAL.001.1) was superseded by a version handed up to the Commission at the time Mr Wall gave evidence.

<sup>17</sup> for example, see TRANS.20111212.41, lines 1 to 20 – Peter Smith

<sup>18</sup> TRANS.20111213.35, lines 1 to 2

<sup>19</sup> TRANS.20111213.43, lines 1 to 3

The revised version is also **attached** to these submissions, and is recorded in full in the transcript.<sup>20</sup>

Dated at Christchurch this 30<sup>th</sup> day of January 2012

A handwritten signature in black ink, appearing to read 'W J Palmer', is written over a horizontal line.

**W J Palmer**

Counsel for Simon Wall

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<sup>20</sup> TRANS.20011212.74ff



In the matter of the **CANTERBURY EARTHQUAKES ROYAL COMMISSION  
OF INQUIRY**

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**BRIEF OF EVIDENCE OF SIMON JAMES WALL**

**Dated the 12<sup>th</sup> day of December 2011**

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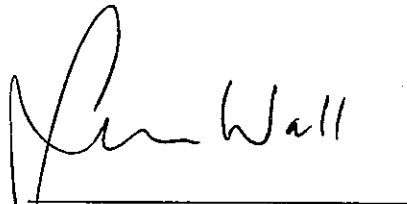
**BRIEF OF EVIDENCE OF SIMON JAMES WALL**

1. My full name is Simon James Wall. I reside in Addington, Christchurch. I am a structural engineer.
2. I have a Bachelor of Engineering (with Honours) and a Master of Engineering Management from Canterbury University. I qualified in March 2004 and I have since had 7 ½ years professional experience. I have been a member of the Institute of Professional Engineers of New Zealand (Structural) since March 2004 and a Chartered Professional Engineer since October 2007. I am employed as a senior structural engineer.
3. On 5 September 2010 I volunteered in my personal capacity to assist Civil Defence with Level 1 Rapid Assessments in the immediate aftermath of the September earthquake. I was not engaged in any capacity to provide professional engineering services or advice. As a volunteer I was placed in a group together with a Council building inspector and a member of the fire service. We were given a bundle of documents mainly comprising inspection forms and placards and assigned a block of properties.
4. The Level 1 Rapid Assessments were an initial emergency assessment process to identify and record visible damage to buildings which could be obtained from an external review. Once my team had completed assessment of all buildings in a block, we would return to Civil Defence headquarters at the Art Gallery and return the forms and receive our next assigned block. I understood the forms would then be used by Civil Defence and other authorities to direct and prioritise further action.
5. Generally the Level 1 Rapid Assessments were exterior only. In some cases, where access was available and appropriate, the interior may have been assessed also. Level 1 Rapid Assessments were an urgent first assessment and the completion of the elements specified in the reporting form in general did not require any lengthy time.
6. As part of this Civil Defence assessment I carried out a Level 1 Rapid Assessment on the properties at 187 St Asaph Street and 593-599A Colombo Street. I completed Level 1 Rapid Assessment Forms for these properties **[document ref]**.
7. Records show I placarded the address at 187 St Asaph Street as yellow (restricted use). I placarded each of the separate addresses at 593-599A Colombo Street as green. The Royal Commission has suggested the

building at 187 St Asaph Street is the same building as 593 Colombo Street. While the two street addresses related to parts of the same physical building, they had different street frontages, and so were assessed separately, and in terms of a Level 1 assessment had sustained differing levels of damage.

8. Each of the buildings at 593-599A were separately assessed and were issued with their own placard, green in each case. I recorded each of these separate inspections in a single Level 1 Rapid Assessment form for ease of documentation.
9. I did not have any further involvement with the assessment of 187 St Asaph Street or 593-599A Colombo Street, either as a volunteer or in a professional capacity.

Dated this 12<sup>th</sup> day of December 2011



S J Wall