**IN THE MATTER OF**
**THE CANTERBURY EARTHQUAKES ROYAL COMMISSION**

---

**BRIEF OF EVIDENCE OF RUSSEL IAN WESLEY PITT**
Dated 22 February 2012

---

**WHITE FOX & JONES**
(H C Matthews)
Barristers and Solicitors
P O Box 1353
Telephone (03) 353.0650
Facsimile (03) 353.0652
**CHRISTCHURCH NZ**

---

27909\238\DT2HCM:LH

1 My full name is Russel Ian Wesley Pitt. At the time that Chas S Luney Limited (Luneys) was undertaking the building work for Ballantynes at 43 Lichfield Street I was the Project Manager for Luneys managing a project at Christs College. Shortly after this I moved into the Contracts Manager role at Luneys.

2 Counsel assisting the Commission, Mr Zarifeh, has written to Luneys by email of 8 February 2012 asking for a statement outlining Luneys involvement in the building and a response to the issue raised by Mr Cusiel (the engineer) in relation to "*the pre-cast ties from the spandrels to the floor topping*".

3 Mr Cusiel of LSC Consulting undertook the design of the structural elements for the building. He was engaged by Luneys for that purpose. Luneys had used Mr Cusiel over many years and have high regard for Mr Cusiel's engineering advice and professionalism.

4 The plans were submitted to and approved by the Christchurch City Council (Council). Regular Council inspections occurred during construction.

**SPANDRELS FACING LICHFIELD STREET**

5 Rising up from the ground at the base of the building on Lichfield Street are pre-cast panels three (3) of which contain arched windows each of which is individually made up of two pre-cast panels. The panel section detail and fitting detail for those ground floor panels at 1st floor level is shown on Mr Cusiel's plan **SG6** as Section 12. What is evident from that Section 12 in the drawings (and is reflected in the construction) is a small gap (approximately 20mm) which has been designed between the back of the pre-cast panel and the framework of the building including the first level floor slab of the car parking above.

6 The design at Section 12 shows this as a deliberate gap which I assume was to allow for movement, likely to include seismic movement, in the structure.

7 That same design of a 20mm gap between the pre-cast panels and the structure including the floor slab has been continued on the engineer's plan at Section 1 which is the plan of the pre-cast facia spandrels (to face Lichfield Street).

8 This design feature (20mm gap between facia panels and structure) on the front face (Lichfield Street) of this building is consistent from the ground level upwards.

9 On the engineer's plan **SP7** there is a typical cross section of the pre-cast spandrel panels S4, S5 and S6 which shows these spandrel panels and

their connection by weld plates (TCM20 concrete inserts) cast into the panels then being bolted onto the building columns, with each of the panels being secured by 4 such bolts.

10 This method of securing concrete spandrel panels by TCM20 concrete inserts cast into the panels themselves and then being bolted onto columns or other structural elements of the building was at the time a common method of construction and of fixing such panels. There was at the time nothing unusual in that design.

**EAST & WEST SPANDRELS**

11 The design and construction of the panels and their method of fixing was specified by the engineer to be different for the east and west sides of the building. No gap was provided for between the spandrel panels and the floor slab or any other element of the building, so that the spandrel panels were up against the structure and floor slabs.

12 The design for the fixing of these spandrel panels was different and shown in typical section pre-cast spandrel panels S1, S2 & S3 Plan **SP7**. That provides for reinforcing steel ties ties to be cast into the spandrel panels. Following the placement of the spandrel panels those ties would be cast into the concrete floor slab.

**CONSTRUCTION**

13 All spandrels were pre-cast in accordance with the plans:-

13.1 The east and west facing panels having reinforcing steel ties cast in.

13.2 The Lichfield Street facing panels having TCM 20 concrete inserts cast in for bolting.

Luneys construction of the building followed Mr Cusiel's design and drawings.

14 My understanding is that the floor slabs were poured leaving a gap on the east and west sides (of possibly up to 1 metre) but was poured fully to the front (Lichfield Street) side. The gap on the east and west sides was to allow for the side spandrels to be installed and for their ties to be subsequently cast into the remaining construction of the floor slab.

15 Detailed inspections by the engineer occurred throughout the construction of this building. Those inspections would have occurred pre-pour for each floor slab where the gap left on the east and west sides for the spandrel ties to be placed and covered by the subsequent concrete pour would have been plainly visible, as was the complete pour of the slab to the Lichfield Street end. This would also have been obvious throughout the construction process, as the erection of the spandrels

occurred at a late stage in the construction process and after the initial pour of all of the floor slabs had been undertaken.

16 Given the method that was specified for the connection of the Lichfield Street facing spandrels (by bolting) and the gap designed between those panels and the floor slab Luneys would not have anticipated there being reinforcing steel ties running from the spandrel panels across the gap and then cast into the floor slab.

17 The detail for the east and west side spandrels did not provide for them to be bolted but provided for them to be secured by their reinforcing steel ties to be cast into the floor slab. The building design meant that there were in fact no columns or other structure elements to which those spandrels could be bolted in any event.

18 I am not aware of there being any questions of Mr Cusiel, nor discussions with him at the time, regarding the difference between the methods of attachment of the spandrels. That does not surprise me. The construction followed the two (2) different design methods for attachment that appeared to follow a different engineering design choice between different sides and elements of the building. There was nothing unusual in design to what was then common building practice, with each appearing to have a different method of attachment relevant to the building design. There was no reason for Luneys to question the reasoning for those design differences.

19 It was not until January 2012 that Luneys became aware that a fatality occurred when one of the spandrels fell on a vehicle in Lichfield Street. Luneys extends its sincere condolences to the victim's family.

20 This statement is true to the best of my knowledge and belief and is made by me knowing that it may be used as evidence for the purposes of the Canterbury Earthquakes Royal Commission of Inquiry.

**DATED** this 22nd day of February 2012

Russel Pitt