

UNDER THE COMMISSIONS OF INQUIRY ACT 1908

IN THE MATTER OF ROYAL COMMISSION OF INQUIRY INTO BUILDING FAILURE CAUSED BY CANTERBURY EARTHQUAKES

**STATEMENT OF EVIDENCE OF MICHAEL QUENTIN DOIG IN RELATION TO
32 CATHEDRAL SQUARE**

DATE OF HEARING: 30 JANUARY 2012

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- 1 My name is Michael Quentin Doig. I am the New Zealand Development and Business Director of Ganellen Pty Ltd ("Ganellen").
- 2 I have a Bachelor of Commerce and Administration and a Bachelor of Tourism and Service Management, and over 12 years experience in the commercial property industry.
- 3 Ganellen is a construction and investment company that manages the redevelopment of various commercial assets within the Christchurch CBD, originally purchased from Fairfax Media limited in 2007. This included the Grade 1 listed The Press Building at 32 Cathedral Square ("The Press Building") on behalf of the owner, 32 Cathedral Square Limited. Additional assets under management include 146 Gloucester Street, 148-154 Gloucester Street, 156 – 158 Gloucester Street and 160 Gloucester Street on behalf of their respective ownership entities.
- 4 On behalf of Ganellen, I wish to express our sincere sympathies to the family and friends of Ms Lindsay and those employees of The Press who were injured in the building on 22 February 2011.
- 5 Neither 32 Cathedral Square nor Ganellen obtained an engineering report on the Press building before it was purchased by 32 Cathedral Square Ltd.
- 6 My involvement with Ganellen commenced in June 2010, when I was appointed to manage the development of the four phase mixed-use regeneration scheme known as The Press Precinct. The first phase of this project was construction of an 8 storey commercial building at 156-158 Gloucester St, that was to become the new corporate headquarters for The Press newspaper.
- 7 The second phase of The Press Precinct was the redevelopment of The Press Building. Prior to the September earthquake we had investigated a variety of different end uses for the building including sympathetic refurbishment into A Grade commercial offices, 5 star Hotel, strata office suites to name a few.
- 8 Ganellen commissioned the following reports in respect of the redevelopment of The Press Building:
- (a) Baber Kavanagh Architects;
 - (b) A Conservation Plan (dated October 2009) by Fulton Ross Team Architecture and Heritage Management Associates Ltd which included a Building condition report by Fulton Ross Team Architecture dated September 2009.
- 9 To our knowledge no form of detailed structural analysis had been undertaken on the building to ascertain its capacity against the current building code. To my

- knowledge, the only earthquake strengthening prior to the September earthquake, was the steel reinforcing and bracing of the parapets on the roof many years ago.
- 10 I was aware based on the findings of the Conservation Plan that the main parapet over the entrance and finials on the roof were removed in the 1960's in the interests of earthquake safety. This report similarly contained no mention of any additional strengthening.
- 11 After the September 4 earthquake, I was informed by Phil Marshall-Lee of The Press that the CCC had inspected the building the same morning and given it a Green Sticker. To my knowledge The Press took reoccupation of the building that day, on the basis of that initial assessment.
- 12 I inspected the building with Ganellen Contracts Manager, Nick Jennings, on Monday the 6th September and we were both immediately concerned about the damage sustained to the north-western corner of level 3, known as the payroll office. We immediately requested Ash Wilson of Lewis Bradford, consulting engineers on our adjacent construction site at 158 Gloucester, to come to The Press Building to undertake a basic inspection.
- 13 Mr Wilson immediately restricted access to the Payroll office and cleared an area on level 2, immediately below the payroll office. Under the instructions of the engineer, the damaged wall was braced by a steel lattice system, with works completed by Ganellen in the late evening of the 6th September. Lewis Bradford inspected and accepted the works on the 7th September, and instructed that access to the area was to remain restricted until a permanent solution could be affected.
- 14 Lewis Bradford further instructed Ganellen to remove the iron railing from the turret on the South Western corner, as many of the fixings had sheared. These works were completed on the 7th of September.
- 15 On the 8th of September The Press vacated the building after a particularly sizeable aftershock. Lewis Bradford were called in to inspect the whole building on the 9th September. They noted further deterioration to cosmetic and structural elements.
- 16 On the 9th of September the Press Reinstatement Committee was formed, constituted primarily of myself and Phil Marshall- Lee, plus other senior members from Ganellen and Fairfax on various occasions. The purpose of the committee was to enable full disclosure of all information pertaining to the effects of the earthquake and remediation action undertaken, and ensure the timely and safe return of The Press to their building.
- 17 Ganellen instructed Baker Kavanagh to undertake a full photographic dilapidation survey of all architectural elements. This survey was undertaken on the 10th, 14th

- and 15th of September, whilst the building was unoccupied, with the final report received on the 26th September.
- 18 On the 13th September, wall linings were removed to enable more detailed examinations of the central shear wall on levels 1, 2 and 3, the interior of the southern western turret on level 3, and the area on level 2 directly below the payroll office to enable detailed inspection. In all instances Lewis Bradford were happy that damage was minimal and would not prevent reoccupation.
- 19 Lewis Bradford instructed that the parapet above the main entrance be secured by steel bracing and access to the entrance below was restricted until these works were completed on the 15th September.
- 20 The Press employed structural engineers Harrison Grierson to undertake a peer review of the building, particular focus was afforded to the damaged areas. Harrison Grierson noted concern about the cracking to the north eastern wall on Level 3 outside the Avenues office. This area had already been inspected by Lewis Bradford and was deemed to be structurally sound, with no remediation required.
- 21 On the 16th of September John Higgins, Neil Carrie and Kate Askew of the CCC's Building Recovery office inspected all of the works undertaken to date. Council authorised the repair of cosmetic elements that had been requested by The Press, including re-plaster and painting of internal cracking in the main stairwell. Resource and Building Consent was recommended to repair structural damage to the north western wall of the payroll office.
- 22 Lewis Bradford provided written authorisation that the building was fit for reoccupation on the 16th of September.
- 23 In response to Harrison Grierson's concerns, interior wall linings were removed in the Avenues Level 3 office and the interior and exterior of the wall was inspected by Craig Lewis and Ash Wilson of Lewis Bradford on the 18th September. The engineers deemed the structural integrity of the wall to be intact and created numerous monitoring points to check for further deterioration. Lewis Bradford provided written confirmation of their findings, stating that the building was fit for reoccupation. This letter was forwarded to The Press on the 20th September.
- 24 Cosmetic repair work was undertaken to all interior wall linings and plaster cracking in the central stairwell, upon the request of The Press.
- 25 The Press reoccupied the building during the week commencing 20th September.
- 26 A detailed inspection of all external stonework was undertaken by EPR Construction after the building was re-occupied, with a report provided to Ganellen on about the 28th of September that all elements were secure. (This was included as Appendix E

- to the Lewis Bradford Structural Damage report dated October 2010 referred to below).
- 27 On the 30th September Lewis Bradford submitted their first full structural evaluation report, stating that the building had performed surprisingly well. The report recommended that further detailed structural assessment be undertaken, prior to effecting permanent repairs to damaged structural items to return the building to recommended levels.
- 28 In response to this recommendation, Ganellen instructed Lewis Bradford on the 7th October to undertake a more detailed structural assessment to include the following:
- (a) Structural defects, all cracks to masonry/concrete/stonework but not limited to;
 - (b) Specification – remedial actions to rectify these works;
 - (c) Individual photos of all cracks/ defects linked to building drawings.
- 29 This report was provided to Ganellen on the 13th October, and formed the basis of our initial insurance claim and was used to tender recommended works to a series of trusted subcontractors.
- 30 In early October, Ganellen elected to incorporate the base refurbishment of the building along with resource consent and building consents for structural remediation. We appointed Baker Kavanagh, Planit Associates and Heritage Management Associates (HMA) to assist us with the preparation of the application for resource consent to submit to Council. Cosgroves were appointed, at a later time, as Services Consultants.
- 31 Pre-application meetings were held in Ganellen offices with Historic Places Trust (13th October) and Council (14th October) to discuss concept plans and earthquake issues. Both entities were taken on an inspection through the building, after each meeting concluded.
- 32 During the final week of October, we were contacted by Dave Margetts of Historic Places Trust extending the assistance of their specialist structural engineer, Win Clark, who was visiting Christchurch from Wellington. I made arrangements for Ash Wilson of Lewis Bradford to take myself, Win Clark, Dave Margetts and Jenny May of HMA through the building. The purpose of the inspection was to detail the damage sustained to the building and discuss recommended repair methodologies in the context of the building's Category 1 Heritage listing. During this inspection Mr Clark indicated that Holmes Consulting Group ('Holmes") had a modelling technique specifically suited to strengthening and repair of unreinforced masonry

buildings and we should speak with them, prior to affecting any permanent structural repairs on the building.

- 33 I met with John Hare, Director of Holmes during the week commencing Monday 1st November, where he introduced their Non-Linear Time History (NLTH) model and we inspected the building together. John indicated they (Holmes) had prior involvement with the building during ownership of The Press.
- 34 Ganellen made the decision to tender the ongoing structural involvement with the building and asked Lewis Bradford, Holmes and Newcastle (Australia) based engineer, Tony Izzat, to submit proposals.
- 35 It appeared that Holmes' NLTH model would provide a better structural solution for the repair of the building than a standard linear ETABS analysis, and Holmes was formally appointed on the 10th November (and not June 2010 as stated by Spencer Holmes Ltd, Page 3). On 10 November Lewis Bradford and Tony Izzat were informed that they had not been successful. All documentation prepared to date was turned over to Holmes.
- 36 Holmes undertook numerous inspections of the building during November and December, as they prepared their model and provided their initial findings on the building on the 23rd December. They recognised that, in the buildings existing configuration, the building's performance was 50% of the existing building code and would sit outside the Council's Earthquake Prone Building Policy.
- 37 Following the Boxing Day earthquake, the building was red stickered and The Press were required to move their operations out of the building. Holmes inspected the building on the 26th and noted further damage to the north wall at level 3, damage to the Central shear wall at level 3, damage to the base of the brick turret at roof level and damage to the brick piers of the South wall on levels 1, 2 and 3. They instructed Ganellen to remove wall linings and loose plaster in all these areas to enable a more detailed inspection to take place. They further noted the significant damage caused by adjacent buildings, in particular the large section of the neighbouring Worcester Tower (Britten building) parapet that had fallen into the Press Building light well, with further dislodged masonry remaining, creating a significant fall hazard.
- 38 Once necessary linings had been removed, Holmes completed a more detailed inspection on 27th December and instructed Ganellen to prop and shore the damaged piers upon the South Face using profile cut timber and 4 x 2.5 tonne straps. Similar shoring was required to the eastern most pier of the north wall of level 3 (outside Avenues). Loose plaster was to be removed from the central shear wall on level 3, and the fire door eased to enable access but no further strengthening required.

- 39 Holmes paid significant attention to the previously damaged north-western corner of the Payroll office, where the cracks were observed to have moved a further 10mm. The engineers were satisfied that the steel bracing was still secure and no further strengthening/securing works were recommended in this area.
- 40 Similarly Holmes closely inspected the north eastern wall outside the Avenues office, however no displacement was observed.
- 41 The neighbouring building owner was contacted regarding the dangerous parapet above the stairwell and this was removed by their contractors.
- 42 Andrew Boyle of Fairfax attended the Holmes' initial inspection of the building post Boxing Day, was kept constantly informed throughout the remediation works and had full access to the engineer throughout this period. Similarly, Ganellen and Fairfax worked together to devise a series of cosmetic treatments to ease staff's peace of mind upon reoccupation, including the canvas drop cloths in the central stair well.
- 43 All works were signed off by Holmes Consulting on the 7th January and the building was deemed safe to reoccupy. The Press reoccupied shortly thereafter, on the basis of written confirmation from Holmes.
- 44 Holmes undertook the responsibility of liaising with Council to remove the red sticker listing from the building. On the 12th of January Ben Dare of Holmes emailed an Earthquake Occupation Certificate application to James Clark of the Council's Building Recovery Office, stating that the building "is now secure and safe to re-occupy and that the existing red safety notice can be removed". Council replied the same day that the sticker had been removed and normal operations can resume.
- 45 The Boxing Day earthquake was deemed to be a separate event by our insurers, therefore an additional insurance claim was required. Ganellen accordingly instructed Holmes and Baker Kavanagh to undertake a second set of structural and architectural damage surveys of the building. Both reports included detailed photographic record of all damage to structural and cosmetic elements. These in turn were compared against the original set of reports from the September earthquake to ascertain additional damage.
- 46 Both Ganellen and Holmes continued to monitor damaged areas during the continued moderate aftershocks of January. Following an inspection by the engineer on the 21st of January, threaded rods were applied to secure damaged brick piers on the north wall of the light well, outside the female toilets on level 3.
- 47 Throughout these events, Holmes worked diligently on finalising their NLTH model, to provide us with the permanent structural concept to submit to Council. I

- understand that the model was constantly refined to take account of additional damage that was sustained during Boxing Day and subsequent aftershocks.
- 48 On the 28th January Holmes sent through their proposed structural concept for the building. On 3rd February Holmes produced supporting information for the application for resource consent in respect of the building's capacity measured against the Building Code. These documents were part of our draft resource consent that was submitted to both Council (Mel Smith) and Historic Places Trust (Dave Margetts) by Planit Associates on the 10th of February. (The Holmes memorandum dated 3 February is incorrectly referred to by Spencer Holmes Ltd as being dated 3 March (Page 6)).
- 49 Matt Bonis of Planit met with Mel Smith at her house on the 18th February when she indicated there were no apparent issues with our application. It was the intention of Planit to tidy up some loose ends and submit the final resource consent application the following week.
- 50 Our final act prior to the earthquake on 22 February was made by Alistair Boyes of Holmes who on the 21st of February made arrangements with Fulton Hogan to undertake a series of invasive testing on structural elements of the building during 14th -18th March. This included but was not limited to Brick Shear tests, Cavity Coring and Concrete Strength testing, the purpose being to assist Holmes to further refine their NLTH model.
- 51 The February 22 earthquake was significantly larger and more devastating than its predecessors. At the time I was having lunch with other colleagues on Gloucester Street. After the shaking stopped we quickly ran down the street to clear our building site and help assemble members of The Press. Having been informed by Press employees that the roof above the Cafeteria had collapsed and staff members were inside, I ran back up to the Art Gallery where I managed to find a member of Civil Defence, stressing the need for assistance from USAR. At the same time Nick Jennings, Mitchell Blunden and Casey Donovan of Ganellen, along with some of our subcontractors, re-entered our newly constructed building and jumped across on the collapsed roof of The Press building and assisted many of The Press employees out of the wreckage.
- 52 Three hours later USAR had established a team on site, and our staff finally left the building after making a significant contribution to the rescue efforts.
- 53 On the 3rd of March Holmes submitted a preliminary seismic assessment report to Ganellen and Christchurch City Council to comment on the further damage that had occurred in the February 22 earthquake, and make a recommendation for repair or demolition. As the building had partially collapsed an internal assessment was impossible, however Holmes based their report on an external review of the

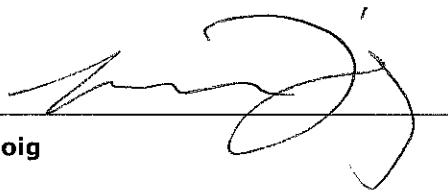
structure, anecdotal evidence of a USAR Engineer who was in the building during the event and their own findings and recommendations. The report noted the following (quoted):

- (a) The upper level had collapsed entirely onto the fourth floor.
- (b) Most of the parapets were immediately dropped, with the exception of the south wall parapet, which has subsequently been removed by USAR.
- (c) The corner tower roof has toppled back onto the fourth floor, with the masonry under it completely collapsed.
- (d) The south facade has suffered further cracking and damage.
- (e) The west facade has also cracked, and has an outwards lean over the central portion above the roof level.
- (f) Internally, it is understood that the main brick shear wall is severely cracked with significant permanent offsets at all level, in the region of up to 50mm wide. The rear light well has suffered considerable damage also, and is understood to be severely compromised.

54 Holmes felt the building was irretrievably damaged and recommended demolition. This was summarily accepted by Christchurch City Council and Demolition Consent was granted shortly thereafter.

DATED this 19th day of January 2012

M Q Doig

A handwritten signature in black ink, appearing to be 'M Q Doig', written over a horizontal line.