

IN THE MATTER OF
THE CANTERBURY EARTHQUAKES ROYAL COMMISSION

BRIEF OF EVIDENCE OF ALUN TREVOR WILKIE
(CTV Building)
Dated 10 May 2012

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1. My full name is Alun Trevor Wilkie, I am a registered architect living in Christchurch.
2. I have been in practice as a registered architect for 36 years. I worked as an architectural graduate for four years prior to becoming registered, having graduated from Auckland University in 1972. Apart from one year working in London during the early part of my career, I have worked exclusively in Christchurch.
3. I am currently a director and shareholder of Wilkie Bruce Registered Architects Limited. At the time of the construction of the building at 249 Madras Street, I was trading under Alun Wilkie Associates Limited, of which I was the sole director and shareholder.
4. I have been asked to prepare this brief of evidence for the Royal Commission of Inquiry into building failure caused by the Canterbury Earthquakes, particularly 249 Madras Street (the CTV building). I set out below my recollection of my involvement with the building and respond to queries which have been put to me by Counsel Assisting the Commission.

Initial involvement with CTV Building

5. After 26 years since the building's construction in 1986, I am struggling to recall many of the details relating to the people engaged with the development of the building.
6. I confirm that I have no files at all relating to the design and construction of the building. I do still retain the original architectural plans. I may have previously advised the Department of Building and Housing investigators (assuming they were Messrs Hyland and Smith) that I did not hold the plans. I cannot recall whether that question was asked of me. I do not think that it was, as I would have responded that the plans may have been stored in our offices which at that time were still in the Red Zone of the CBD. Since the time of the DBH investigation, I have retrieved the plans from our old office.
7. Prior to 1982 I was employed by Industrial Holdings Limited, a company which was engaged in the construction of a number of small office developments in Christchurch. From 1982 I formed my own practice and for a period of some years after that continued to do the design work for Industrial Holdings Limited. It was during this period that I met a gentleman whose surname I cannot now recall, but his first name was Neil, who was a property manager for Waitaki Refrigeration Company who, through their pension fund, invested in Industrial Holdings Limited developments. At about the same time I commenced my



practice, Neil started his own property investment company, and my recollection is that it was called Prime West, or similar.

8. In the period from the early to mid 1980s, there was a reasonable level of development of office buildings in Christchurch city. This period saw a move away from owner/occupier buildings to leased office space. As a consequence, the design and construction of office blocks became more orthodox or more generic in nature. There were fewer purpose-built buildings for owner/occupiers.
9. In Mr Mills QC's letter to me of 27 March 2012 (refer document) he alluded to a comment attributed to me, when I was interviewed by Mr Hyland and Mr Smith on 5 April 2011 in relation to the CTV building. I understood them both to be consulting engineers, and I now understand were advising in respect of the DBH investigation, although I am unclear on that. The notes apparently record me as referring to the CTV building as a "standard developer's office building". I have been asked what the characteristics of that description might be. I respond as follows.
10. The CTV building was rectangular in plan, each floor was a repeat. It had standard suspended grid ceilings, the second exit stair was external and all ventilation was achieved with opening windows. It had a small entrance foyer. The building was constructed with exposed aggregate panels to the exterior.
11. The above description describes a building that does not have a complex form. It was not air-conditioned, it had no feature ceilings and it did not have any other architectural embellishments. It was, therefore, what I earlier described as a standard developer's office building. It was a building which was very much in the mould of what developers constructed during that period. In my view, it was similar in its overall architectural design to others constructed in the 1980s.
12. My description as above, is reflected also in the comments noted in the Holmes Consulting Group structural report dated January 1990 under the heading "Conclusions" at section 3.0. In particular, at subparagraphs 1 and 2, the authors of that report stated:
 - (1) The building is in a condition appropriate to its age and the contractor-as-developer form of construction.
 - (2) The layout and design of the building is quite simple and straightforward and generally complies with current design loading and material code.
13. As to who I received my instructions from to proceed with the architectural drawings for the building, I cannot now recall whether it was the gentleman Neil, to whom I have referred to above, or someone else. It has recently been suggested to me (Mr Mills QC's letter dated 27 March 2012) that I might have had some involvement with Mr Michael Brooks, the managing director of Williams



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Construction, at the time the CTV building was designed. It is my understanding that Mr Brooks has advised Counsel Assisting the Commission that after he had prepared what was referred to as a "back of the envelope sketch", showing a plan view, he (Mr Brooks) approached me with this sketch and instructed me to prepare the architectural drawings for the building.

14. Given the period of time since these alleged discussions took place, I cannot recollect what has been suggested. I can recall Mr Brooks. However, I do not recollect Mr Brooks instructing me to prepare architectural drawings. Unfortunately, again given the effluxion of time, I simply cannot recall the exact nature of the original briefing process. The reality of the situation is that, at that time, there was a considerable volume of work in the Christchurch market. There were a large number of office blocks being designed and built at that time, many of which I was involved with, in addition to a large residential design practice. I would of course been assisted by reference to my files, but they have long since been destroyed.

Contractors

15. In terms of the contractors, until recently I could not recall the firm engaged. Messrs Hyland and Smith reminded me that the contractors were Shirtcliff & Scott.

Contours Building

16. In about 1981 when I was the company architect at Industrial Holdings Limited, I designed the Contours building, previously sited at 299 Durham Street North. That building has now been demolished. The Contours building was a three storeyed building and had a different plan configuration and a different parapet/roof design than the CTV building. Its exterior column, spandrel and fenestration composition had similar architectural features to the CTV building.
17. By Mr Mills QC's letter to me of 27 March 2012 I was asked to comment on whether I was asked to design the CTV building with the same architectural features as the Contours building. I cannot recall whether I was given that instruction.

Mr Tapper

18. I have been referred to a letter dated 27 August 1986 from Mr GL Tapper on behalf of the City Engineer. I understand, from advice received from the Commission, that Mr Tapper was the person at the City Works & Planning Department who had principal responsibility for dealing with the permitting of the CTV building.

19. My office may have applied for the building permit, but I cannot recall this. It is not uncommon now, as it was not uncommon then, for architectural consultants to submit applications for a building permit (now referred to as building consents) on behalf of building owners.
20. I have no recollection of dealing with the City Council during the processing of the permit and dealing with the questions raised by Mr Tapper in the letter referred to.
21. The letter is addressed to Alan Reay Consulting Engineers. There is no indication that it was copied to me, and it would have been highly unusual for it to have been copied to me during that period. Further, all of the matters in the letter relate to the building's structural design, which did not require any input from me as architect.

The Structural Engineer

22. Prior to the design for the CTV building, I had not worked with Alan Reay Consulting Engineers, as far as I recall. I did not have any knowledge relating directly to the specifics of the engineering and structural design or calculations. It is likely that I would have worked with the structural engineer in respect of how he was designing the overall structure. That is, the column centres, the lengths of the walls, the floor to floor heights, etc. In other words, the general "spatial" characteristics of the building structure. As a registered architect, I had no legal mandate to do any specific "design work" on the structural aspect of the building. This was always exclusively done by the structural engineer, as with this construction project. As I did not have any knowledge relating to the specific structural design issues, at no stage did I have any concerns about any aspect of the structural design. It was simply not an area that I was engaged in at all.

"Supervision"

23. I have been asked by Mr Mills QC (his letter of 13 September 2011) about the question of supervision during the construction period. To the best of my recollection, neither I, nor anyone else in my practice, supervised the construction work on site. I have no recollection of regular site meetings. Unfortunately I cannot recall attending the site during construction at all, but even if I did, and evidence to that effect emerges, this does not constitute "supervision". At most, my office may have been involved with "contract observation". At no stage throughout my 36 year career working in Christchurch city have I "supervised" a project. That term implies a high level of site attendance, at very regular intervals, for all facets of the work. Architectural observation, if we were engaged to do that, only entails observing architectural elements which are primarily incorporated within the building beyond the structural construction phases. I reiterate that I had no involvement in the observation of any structural work.

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24. As I was not engaged in supervision of construction (nor can I recall even the contract observation role for architectural work) I cannot comment on any concerns I may have held about any aspect of the work being carried out by the contractors. Suffice to say, to the best of my recollection, I cannot recall having any concerns about any aspect of the contractors' work.

Holmes report January 1990

25. I have referred above to this report. I have no knowledge of it and had not seen a copy of it prior to it being provided to me by Counsel Assisting the Commission.

North shear core

26. The floor plan layout for the CTV building had a north core located abutting the northern face of the building
27. The location of the entrance to the building on the north side ensured that the lifts, the lift shafts' walls, toilets and main staircase were grouped on the north face of the building. It is standard design practice to group these elements together.
28. I have no recollection of receiving any instruction as to where the lifts/stairwells were to be located. Again, it was common design planning practice for a building of this gross floor area to locate the vertical access elements (and toilets) to one side. This is particularly so when the floor plate was of a size that did not efficiently permit a central core design, such as the Price Waterhouse Centre or the Clarendon Tower.
29. The balance, or distribution, of any building's shear walls: their location, length, thickness, configuration, reinforcement and foundation design is solely the structural engineer's decision.
30. I cannot recall any discussion about the reasons for locating the north core shear wall in the position it was located, but that is not surprising, because it was a common design practice to locate the core services in such a location. The principal reason for designing a non-central core building, I believe, is related to achieving a single open plan type office space. The overall gross floor area of each floor is really much the same, whichever concept a client adopts.
31. The floor plan layout adopted for buildings of this type can be a functional collaboration between the client and/or a tenant, a structural engineer, a fire engineer (e.g. maximum lengths to exit ways) and the quantity surveyor. I cannot recall any discussion or consideration in relation to the CTV building about the location of the north core shear being driven by achieving maximum lettable space, a question posed to me by Mr Mills QC in his letter dated 27 March 2012.

32. Prior to designing the CTV building, I had designed other buildings with the same configuration, namely a shear core outside the four walls of the building. For example, before the design of the CTV building, I designed a multi-storey building at 123 Victoria Street (which later became known as the Pacific Brands building). It had a two lift shaft and a main stairway configuration extending out from the south side and an opposing structural wall on the opposite northern face of the building. The northern face also had an external second exit stair.
33. In addition, I designed two 3-storey rectangular buildings near the corner of Victoria Street and Kilmore Street (the latter building was known as 161 Kilmore Street) adjoining Riverlands House. Both of these buildings had projecting lift/stair/toilet cores on one side and a structural wall on the opposing side of the building.

Seismic performance

34. I cannot recall any discussion about the seismic performance of the CTV building. As a registered architect, I have no knowledge or any design mandate to carry out structural engineering calculations. The seismic performance of a building is always for the structural engineers to calculate and determine. It is their specific field of expertise. Following the determination of the structural elements, we would as architects then follow his design parameters/requirements and introduce these design requirements into the overall plans. As I have already noted, architects generally, and specifically for this project, play no part in the structural calculations whether they be wind loading, dead (or vertical) loading or seismic loading.
35. This statement is true to the best of my knowledge and belief and was made by me knowing that it may be used as evidence for the purposes of the Canterbury Earthquakes Royal Commission of Inquiry.

Dated at Christchurch this 10th day of May 2012.



Alun Trevor Wilkie