

Signed

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

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**STATEMENT OF EVIDENCE OF ALEXANDER SHANE FAIRMAID**

**Dated 8<sup>th</sup> August 2012**

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## **STATEMENT OF EVIDENCE OF ALEXANDER SHANE FAIRMAID**

1. My full name is Alexander Shane Fairmaid. I reside in Christchurch. I am a project manager working in the commercial and residential development area.

### **Background**

2. I worked as a draughtsman for Alan Reay Consulting Engineer ("ARCE") from 1981 until 1986.
3. I left ARCE in late 1986 to become a project manager working in the commercial and residential development area and have been in that role for 25 years. For 14 years I worked for Arrow International and in 2004 I founded my own project management and development company called Momentum Projects Limited which I continue to operate.
4. I have been asked by Mr Palmer of Buddle Findlay to give evidence on my recollections of:
  - (a) Observations of the ARCE work environment;
  - (b) Working on the CTV Building; and
  - (c) How Dr Reay operated in that environment.
5. At the Commission's request, I have provided a previous statement of evidence to counsel assisting the Royal Commission. That evidence is essentially incorporated into this statement.

### **Observations of ARCE work environment**

6. In the later time that I worked for ARCE we worked in a small / medium sized open plan office with Alan's office the only private office. Alan's office, whilst private, was behind a full glass wall with a glass door that was invariably open for discussions as required. It was a very professional and well ordered office environment where we were able to operate in a very effective manner.
7. I found Alan to be a good employer whom I respected. He was always very approachable and enjoyed the process of debating design solutions with the team. This would sometimes play-out at smoko breaks when there would be sound debates on the merits of different engineering solutions.

He did have quite firm views on professional engineering design issues and was prepared to defend those views.

8. As employees we were always encouraged to participate and to produce quality documentation, generally above industry standard, for which Alan's office had a reputation for doing. I believe the office culture was such that we all worked hard to achieve high professional standards and I thoroughly enjoyed and valued my time there.
9. Since ARCE and then ARCL have been in business, they would have designed a very large number of buildings in Christchurch, possibly more than any other structural engineering firm in Christchurch.

### **Work on the CTV Building**

10. I do recall the CTV Building passing through the office and that it was one of the more basic and non-descript multi-story buildings undertaken by the office at the time. It was not part of the ARCE design innovation systems.
11. As noted in previous evidence I recall that David Harding was the ARCE engineer who designed the CTV Building.
12. I have been informed that Wayne Strachan has given evidence that he did most of the drafting on the CTV structural plans but that ARCE time sheets for 1986 show that instead it was Terry Horn who did most of the drafting and that I also accrued approximately 130 hours on the project. As noted on previous occasions I have no recall of having worked on the project. My specialist area was in the precast panels and structural steel detailing and so I can only presume that if I did anything on the project then it may have been in these areas.
13. Terry Horn and I were both senior draughtsmen but we had different experiences base and Terry was more senior to me. I note from the time-sheets that Terry charged out at \$35/hour and I was at \$30/hour. Terry had come from a background in documenting reinforced concrete frame structures such as the CTV building whereas I'd worked much more on precast panel and warehouse type structures so it was usual for Terry to undertake the multi-story projects and for me to document the industrial projects such as warehouses. So it did not surprise me to see Terry's timesheet indicating that he'd undertaken significant work on the project. However, I was a little surprised to see that I had committed 130 hours however, as noted previously, it is not out of the question.

**Observations of Dr Reay**

14. In my 25 year career as a project manager I have worked with many of this country's top structural engineers and I still regard Dr Reay as one of the best I've worked with. Alan always demonstrated a significant passion about engineering innovation and he built a strong market reputation as an engineer that could deliver innovative solutions. Perhaps the most well-known innovations that Dr Reay has been associated with is the tilt-slab & precast panel techniques that he championed into the Christchurch market in the early 1970's for which he has won numerous engineering awards.
15. He had a strong client base and during my time with Alan we experienced many clients returning time and time again to request new projects under the direction of Alan's office. Clearly the market liked Alan's approach to engineering. I also recall Alan noting once to me that as a student he'd spend time in the weekends going around construction sites to look at how engineering solutions were being delivered. He was always extremely dedicated and interested in not only the engineering but also the buildability of solutions. Alan was a very practical engineer and in my view that was one of the key reasons that Alan held a good base of builder / developer clients who would commission Alan to design their own development warehouses and commercial building solutions. Alan understood construction very well, not only from an engineering perspective, but also from a practical construction perspective.
16. I also recall many years after leaving ARCL I met one of Alan's old clients in Dunedin. He was by then essentially retired and living a less busy life on his own farm in North Canterbury. I recall that day he clearly indicated to me that the reason that he and his family were able to buy the farm was because of the work that "The Doctor" had done for him over the years. In context this was used as a term of respect. In my experience Alan was a very good engineer and one that was respected by his peers, his clients and contractors alike.
17. I have been told that Mr Horn recalls that Alan referred to Graeme Tapper by a nickname he used for him, being "Colonel Tapper". This is the first time I have heard this. It was not a name I recall Alan using in my presence. My recollection of Alan was that he could have quite a focused manner with people in defending his point of view and that he was very articulate and professional in discussing issues. He was no slouch when it

came to debating engineering solutions and this no doubt may have been unnerving for people who were perhaps not as researched as Alan was.

18. I have also been told that Mr Horn has an awareness it was Dr Reay's practice to resolve issues with Graeme Tapper by going over his head to the City Engineer, Bryan Bluck. I do recall Alan mentioning Bryan Bluck's name and I think it fair to conclude that Alan did from time to time talk directly to Bryan Bluck. I cannot recall Graeme Tapper's name being mentioned, however, that is not to say that lower level Council Engineers would not have had to deal with Alan as well on occasions.
19. I have also been told that Mr Horn has said Dr Reay was referred to by some clients and colleagues as "The Doctor" and that he believed this was a reference to the perception of the importance he seemed to attach to his doctorate. I would not necessarily disagree with Terry's comment that he was referred to by some clients and colleagues as "The Doctor" but this should not be at all surprising as of course Alan held a Doctorate in Civil Engineering. I never heard it used as or associated with a derogatory comment in regard to Alan Reay, quite the contrary I've only ever heard it used as a term of respect.

**Further comment since hearing the evidence of Terry Horn and Wayne Strachan.**

20. In closing my evidence and since listening to the evidence of Terry Horn and Wayne Strachan and news reports of it on Monday 6<sup>th</sup> August I wish to give some additional evidence which I prepared on 7<sup>th</sup> August.
21. I wish to clarify that I was a senior draughtsman working for Alan Reay and had been for a number of years. Whilst I was trained by Wayne Strachan, I had already spent a number of years working as the lead draughtsman on projects where I reported directly to Alan Reay.
22. Wayne Strachan's evidence was that if he did not complete the draughting then it was my work as he trained me and the drawings look like the style of his or my drawings. Wayne also trained other draughtspeople in the office either directly or indirectly and so it could have been other draughts-people as well that documented the project. Gail (whose surname I cannot recall), Tanya Bruce and Terry Horn were all other draughts-people that apparently recorded time to the project.

23. I was told by the Commission's lawyers that Terry accrued approximately 140 – 150 hours on the project according to the timesheets. Terry indicates in his evidence that he only documented the foundations. In reviewing the plans with the Commission's Lawyers last week it appeared that the building was founded on a shallow reinforced concrete foundation with no basement. I estimate that to document foundations of the complexity and scale of the CTV building would have taken between between 20 & 30 hours so in my view Terry Horn must have had further involvement in the documentation than he indicates in his evidence.
24. Terry Horn indicates in his evidence that he documented a number of other high rise buildings for Alan Reay prior to the CTV project. This is consistent with my recollection of his experience and his role at Alan Reay's.
25. Terry Horn was by far the most experienced draughtsman when it came to high rise buildings and he was the draughtsman that recorded the most time of any draughts-people on the project.
26. If I did spend time on the project it would be extremely unlikely that I took a leading role in the documentation as I had not documented any other high rise structures for Alan Reay.
27. In my opinion based on reading the timesheets that Dave Harding was the lead engineer (he accrued the most time) and I along with Gail and Tanya Bruce were called in to work under Terry and Dave to complete the documentation to meet timeframes. That seems logical from all of the evidence that I've read.
28. Regardless of who documented the building it is quite clear to me that none of the draughts-people who accrued time to the project had any design responsibility on the CTV building. That role would always have fallen with the registered engineer who designed and who ultimately signed off the engineering design for building consent.

Dated this 8<sup>th</sup> day of August 2012



A S Fairmaid