

COPY

Dave Harding


File CERC
20 September 2011

Stephen Mills QC
P O Box 14053
Christchurch 8544

Dear Sir,

**Royal Commission of Enquiry
Information Request**

Further to your letter of 19 September, I enclose information as requested.

Firstly, I accept that I was the engineer who prepared the structural calculations for this building. I do not accept that I was the engineer responsible for the structural design, as the layout of the building, structural form and details of the construction of this building were determined by Dr Reay. I note that the preparation of the structural drawings was by structural draughtsmen specifically recruited by Dr Reay from Holmes Consulting Group because of their experience in multi-storey buildings, and they were under continuous supervision by Dr Reay to confirm that his standard of drawing procedures and content were followed.

In respect to the questions enumerated in your letter, I reply as follows.

- 1 (a) I was an employee of Alan Reay Consultants. At that time I had been employed at the firm for about five months as a structural engineer, starting in early 1986.
- (b) I ceased employment in November 1988.
- (c) i. No
ii. No
iii. No
- (d) I had no involvement with any of these issues.
- (e) I was not involved in the preliminary design of this building. However I understand that the layout of the building was determined by the design build contractor, who wished the building to have the same Architectural features and structural layout as the existing building at 299 Durham St. This is at the north west corner of the intersection of Durham St and Armagh Streets. I understand that 299 Durham St was designed by Alun Wilkie Architects, and so that firm was engaged to prepare Architectural drawings for this Building. The main design features which were to be replicated included the offset lift shaft, the facade detailing including the round columns, precast facade panels, the recessed glass line, and the layout and spacing of the round columns. It was required by Alan Reay that the floor slabs be designed using Fletcher Brownbuilt Bondek tray sheeting.

I was presented with the Architectural drawings and asked to design the structure in a similar manner to a building which the firm had recently completed. This was an office building at 287 Durham St, at the north west corner of Durham St and Gloucester St. This building also had an offset lift shaft, with columns and glazed walls on three sides, and it had been designed by Alan Reay's previous structural engineer, John Henry, who had left the firm just before I started.

In order to reduce the torsional eccentricity of the building, I requested the inclusion of a coupled shear wall on the south elevation to partially balance the lift shaft on the north wall. This was accepted.

(f) I know of no as built plans.

(g) I believe the building was built as per the consent drawings.

(h) I made some site visits during the building construction. I do not recall the number of visits, and I am not aware of any agreement made with the contractor.

2 (a) I do not recall this letter. I do not know if there was a written reply.

(b) The notation is not mine. To me it looks like Alan's.

(c) I do not recall this request.

(d) I do not recall this letter, or any conversation with Mr Tapper.

(e) I do not think they are my ticks.

(f) I do not recall this letter.

(g) I do not recall this letter.

(h) I had no discussions with the owner or the contractor at the design stage.

3 This is the first time I have seen this Holmes Report.

(a) I expect that the drawings which Holmes commented on were the same as the consent drawings.

(b) I accept that the use of potentially non ductile mesh in the floor is now an area of concern. In this light I agree that this matter should be treated seriously.

(c) N.a

(d) I am not aware of any steps made during construction to address this area of concern.

(e) I believe that the code requirements of the time were met.

(f) The letter of 2 February is not mine.

(g) N.a

(h) I have not previously seen this report or Mr Banks's letter. I do not know whether the recommended remedial measures were taken. I received a telephone call from Dr Reay at about the time of the Holmes report. He asked me whether I had made any alterations to the design of the building during construction to introduce "drag ties" into the floor. I said that I had not.

Yours faithfully



Dave Harding

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