



Ref: 6888 L04

28 October 2011

Sara Jamieson
Legal Analyst
Canterbury Earthquakes Royal Commission
PO Box 14053
CHRISTCHURCH MAIL CENTRE 8544

Dear Sara

Royal Commission of Inquiry into Building Failures caused by the Canterbury Earthquakes: Hotel Grand Chancellor, 161 Cashel St

I'm in receipt of your letter dated 20 October and I confirm that I will be available to present to the public hearings and answer questions during the week of the 5th December.

In response to your specific questions I comment as follows:

The critical vulnerabilities in the structure that we have listed in our report were identified primarily from a combination of three methods:

- Observation of damage on site.
- Review of the original structural construction documentation (drawings, specifications, calculations, construction records etc).
- Modelling and analysis of the structural performance (based on the structure as defined in the drawings).

I would note that some of the vulnerabilities are reasonably obvious (e.g. the eccentricities resulting from the cantilever over Tattersalls Lane) but that often they are not immediately obvious from a review of the drawings only (e.g. the effectiveness of the confinement in the end zones of the shearwall that failed).

Where failure/damage has occurred the reviewing engineer is obligated to explain the failure and will generally seek the answers through analysis of the structure. His/her analysis will typically be based on information contained in the drawings and specifications together with site observation and testing where appropriate.

Such a review will not necessarily uncover all vulnerabilities but hopefully all those that have contributed to the observed failures. Therefore in answer to part (b) of your question, the vulnerabilities we have identified could have been identified

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from the drawings prior to 22 of February 2011 but that very vigorous and in-depth analysis would most likely have been required to do so.

You have also asked us to submit additional information and correspondence. While I have no qualms about doing so we do have an enormous amount of information relating to the Canterbury Earthquakes generally and it would be quite time consuming and costly to separate all the information relating to the work of the panel.

I note the following:

- Holmes Consulting Group supplied us with the original construction documentation (drawings, calcs, specification etc) but apart from that we have had no correspondence with them relating to the performance of the Hotel Grand Chancellor.
- Preliminary versions of our report were supplied to the Department of Building and Housing [DBH] (who commissioned our report) and we understand that all these earlier versions have been made available to the Royal Commission.
- A "Provisional Final" copy of our report was sent by DBH to interested parties, including Holmes Consulting Group. We are advised that copies of the provisional report and comments from Holmes (and the Christchurch City Council) relating to the report have been made available to the Royal Commission.

Is it permissible to us to ask if there are any issues that are of concern to the Royal Commission? This may help us to identify relevant correspondence etc. If **all** documentation is required then we will need further time to provide it, say by 8 November?

I trust this is satisfactory.

Yours faithfully



Adam Thornton
DIRECTOR

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