



Alan Reay Consultants

24 February 2012

Dr David Hopkins  
Department of Building and Housing  
PO box 10729  
**WELLINGTON**

**Email: David.Hopkins@dbh.govt.nz**

Dear Dr Hopkins

### **Canterbury Television Building Investigation**

Thank you for forwarding the final reports into the collapse of the CTV Building.

You may have read media reports that refer to a press release made by ARCL. I **enclose** a copy of the press release in full for your reference. It will be evident that ARCL is very concerned with the content of the final reports. Despite the provision of a thorough and detailed response from ARCL that raised significant issues about aspects of the draft reports, the final reports are largely unchanged from the drafts. At best the draft reports have undergone limited almost inconsequential amendment to reflect some of ARCL's comments. However, that has been done without any acknowledgment of the seriousness of the issues raised and the possible implications for the reports' conclusions.

There are a number of issues outside the content of the reports themselves that ARCL wishes to raise with the DBH and on which a response is sought. These issues are discussed below.

#### **Site and Materials Report**

In your email to me sent at 1.10 pm on 3 February 2012, you advised that the Site and Materials Report had not changed and would therefore not be included in the reports provided to ARCL ahead of the public release. Contrary to this advice, on 8 February 2012, you forwarded by email replacement pages for the Executive Summary and Conclusion sections of the Site and Materials Report. In your email you advised that these pages included changes made to the Site and Materials Report. You did not refer to the balance of the Report, suggesting this remained unchanged, consistent with your earlier advice.

Innovation  
by design

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Having now reviewed the Site and Materials Report on the DBH website, it is apparent that this Report has, in fact, been significantly amended from the draft Site and Materials Report previously provided. I note that the Site and Materials Report is dated 16 January 2012 which means that the modifications must have already been complete at the time of your 3 February email to me. We seek an explanation from DBH as to why ARCL was told the Site and Materials Report had not changed (with the exception of the Executive Summary and Conclusions) when this was not the case.

Further, an email from Vicky Newton received at 1.45 pm on 8 February 2012 advised that a hard copy of the Site and Materials Report would be couriered out to me that night. I have not received a hard copy of the report from the DBH.

Finally, I note that you previously advised that the reports would not name any of the parties involved (letter dated 7 December 2011). However, on page 17 of the Site and Materials Report there is a reference to ARCL.

#### **Covering letter**

The final reports were delivered to ARCL on 8 February 2012 in CD format. The CD included a covering letter addressed to Mr David Coatsworth at CPG New Zealand Limited. I am unaware of CPG's interest in the CTV Building investigation but I anticipate that organisation may have preferred the fact of its interest to remain confidential. Presumably you prepared a similar letter to ARCL. Could you please inform me to whom ARCL's letter was sent. I am surprised that a mistake of this nature should be made on a matter of such importance.

#### **Official Information Act 1982 requests**

I note that the DBH has referred the final reports to the Police and the Institute of Professional Engineers of New Zealand. Could you please advise whether ARCL's 22 December 2011 response to the draft reports was also provided to these organisations.

Pursuant to section 12 of the Official Information Act 1982, we request copies of all other documentation apart from the publically released reports themselves, including letters, emails and other records of communications with the Police and IPENZ, together with any other reports and all other ancillary information provided by the DBH to the Police and/or IPENZ which is in any way related to the DBH reports and their provision to those entities. If there have been unwritten communications between the DBH and the Police and/or IPENZ (such as discussions or meetings), please also provide details of such communications.

We also request copies of any communications with Compusoft Engineering Limited and/or Dr Barry Davidson, including (but not limited to) instructions and invoices (and whether or not such communications involve the DBH or not).

With your letter dated 16 February 2012 you included the *Non-Linear Seismic Analysis Report by Compusoft* and the *Geotechnical Advice by Tonkin & Taylor*. In particular the *Non-Linear Seismic Analysis Report by Compusoft* is a revised version, revised after release of the draft reports. We require the version of this report used for the draft reports that you sent to us last year. Please provide a copy of the relevant version/s of the *Non-Linear Seismic Analysis Report by Compusoft* referred to by the authors of the DBH draft reports.



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In accordance with the Act, ARCL is willing to pay any reasonable costs of compiling the information the subject of this request if necessary.

ARCL looks forward to hearing from you as soon as reasonably practicable and in any event within 20 working days in relation to the Official Information Act requests.

I look forward to hearing from you on the various matters raised in this letter.

Yours faithfully

Dr Alan Reay  
On behalf of  
Alan Reay Consultants Ltd

enc.

## Media statement from Alan Reay Consultants Limited (ARCL)

*At this point the Royal Commission has not set a date for the CTV building hearing. Dr Alan Reay has requested to be heard at the hearing and has no further comment at this stage. He will be available for comment after the hearing.*

**9 February 2012**

### **CTV building structural engineers contest DBH findings**

Dr Alan Reay, Director of Alan Reay Consultants Limited (ARCL), disagrees with several findings in the technical investigation reports released today by the Department of Building and Housing (DBH) into the CTV building's collapse and believes further technical investigation and research is required.

The initial structural design of the CTV building was carried out in 1986 by ARCL.

Dr Reay says, "Personally I feel incredibly torn. I have huge empathy for the families waiting for answers, but these reports are technically inadequate. We owe it to the families of those who died in the CTV building to conduct a robust and thorough investigation using the best technologies and methodologies available. This has not occurred.

"ARCL is extremely disappointed with the process the DBH has followed, and the subsequent conclusions in the reports. It has not carried out the investigations it should have. Some of the assumptions made in the reports are highly questionable. As a consequence the reports' findings are not conclusive. In fact in many areas they may be flawed.

Dr Reay emphasises, "For ARCL the issue is not whether its design had any errors, but whether the DBH reports are complete and correct.

"I am most concerned that the reports conclude that the columns are one of the primary causes of the collapse of the building, given the limited forensic investigation undertaken by the DBH. Investigations of the columns and shear walls, using more appropriate investigative analysis and methodology, must be a priority to determine if they indeed played a role in initiating the building's failure.

"The DBH reports should also have referenced capacity deficiencies of reinforced concrete which are apparent in some other reinforced concrete structures following the earthquakes in Christchurch.

"We need to remember that the standards of the day, when the building was designed and constructed, were not intended to withstand the magnitude and type of earthquake, together with the resulting vertical acceleration, experienced on 22 February.

Dr Reay also states, "Contrary to international best practice, there has been no on-site monitoring of aftershocks to best assess the actual seismic forces experienced by the CTV building on 22 February 2011. ARCL believes this monitoring is needed to best understand the building's reaction to the earthquake. To redress the DBH's omission, ARCL has procured the equipment needed to carry out this testing and is waiting sign off from CERA for installation.

"Significantly, the experts responsible for the DBH reports are divided in their views of the causative factors influencing the collapse. The detail of their division is not explained.

Regrettably this creates uncertainty and diminishes confidence in their conclusions. Paragraph four on page 34 of the *Structural Performance of Christchurch CBD Buildings in the 22 February 2011 Aftershock* report highlights the point that '...some Panel members and the consultants are not of one mind in relation to some of the details presented in the consultants' report...'"

Dr Reay says, "The Royal Commission has made it clear that while the reports from the DBH will assist them, they will be forming their own views and completing their own investigations. The DBH's reports will be contestable in the Commission's hearing process. ARCL will be participating in the Royal Commission hearing and providing technical information to assist the Commissioners.

"Knowledge gained from the Royal Commission investigation will inform both the engineering and the wider construction industry and ultimately contribute to the rebuild of a stronger Christchurch."

-Ends-