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5 October 2011

Our Ref: 5276

Mark Zarifeh  
Counsel Assisting  
Canterbury Earthquakes Royal Commission  
PO Box 14053,  
Christchurch Mail Centre 8544

Dear Mark

**309 Durham Street North (Durham St Methodist Church)**

We write in response to your letter dated 3 October 2011 requesting information on R D Sullivan and Associates Ltd involvement with the Methodist Church building at 309 Durham Street. The numbered paragraphs below relate to the numbering of your letter which is included as Appendix 1 of this letter.

- 1 (a) R D Sullivan was engaged in 2008 and 2009 to carry out reports on the three stone buildings (including the Church at 309 Durham Street).
- (b) In December 2008 R D Sullivan was engaged by C R Thomas & Associates Ltd (on behalf of the Methodist Church) to inspect and report on the condition of the roof structure over the music room. Our letter report is included in Appendix 2. We note that our report recommendations were not implemented by the Church.

In September 2009 R D Sullivan was engaged to write a structural condition report on the three stone buildings (including the church) at 309 Durham Street. Our report is included in Appendix 3.

In May 2010 R D Sullivan & Associates provided a fee submission (refer Appendix 4) for an earthquake strengthening report on the stone buildings of 309 Durham Street. Our fee offer had not been accepted prior to the September earthquake and no work on the earthquake strengthening report had been carried out.

- (c) As detailed in our structural condition report of September 2009 the Durham Street Church was considered earthquake prone and was likely to collapse in a moderate earthquake.

At the time of our report the Christchurch City Council had yet to adopt a policy on the upgrading of earthquake prone buildings. The Council had not finalised its policy on earthquake prone buildings but it had been active in requiring the upgrading of earthquake risk buildings which were either undertaking major alterations or a change of use. To the best of our

knowledge the Church had not had any recent alterations or change of use so no strengthening work had been carried out on the Church.

Timeframes for the implementation of strengthening earthquake prone buildings that had not undergone a change of use or major alterations were to be included in the CCC adopted earthquake prone building policy.

- 2 (a) Appendix 5 includes copies of our drawings and calculations for the temporary propping of the Durham St façade. Appendix 6 includes our report on the three stone buildings on the site dated 15/09/2010 and photos taken after the September earthquake. Appendix 7 includes copies of all our email correspondence on the Durham St Church after 4/09/2010.

(b) In the days after the September earthquake the Methodist Church requested R D Sullivan and Associates to carry out inspections of their Christchurch churches including the Durham St Church and report on our findings.

Arrow International were employed by the Methodist Church insurers who in turn engaged us to provide temporary propping designs for the churches we had reported on (including the Durham St Church). Refer Appendix 8 for Arrow International letter dated 22/09/2010. Our understanding of the temporary propping design was to reduce the risk of the building collapsing onto the footpath and into the neighbouring manse building.

On October 4 2010 the Methodist Church advised that our services were longer required. Refer Appendix 9. As of 4 October 2010 we had mostly completed a temporary propping design for the eastern façade of the Church and the west walls of the Annex and Hall. We had not carried out the propping designs of the north and south as recommended in our initial report dated 15 September 2010. Following cessation of our services and at the request of the client we provided copies of our propping details completed to-date. Some minor changes were made to our details over the following two weeks at the request of Arrow International

R D Sullivan and Associates' last involvement was on 18 October 2011 when at the request of Arrow we reduced the depth of the front façade to allow for footpath access on Durham Street. We were not engaged during erection of the temporary propping and did not carry out any construction observation.

(c) Our Report dated 15<sup>th</sup> September noted that the church was extensively damaged and recommended temporary propping with steel frames for all four walls. Decisions on whether the building could be saved were not made during the period of time RD Sullivan and Associates were involved.

- (d) (i) Due to the age of the building no construction plans exist. Arrow International provided us with a plan of the building (dated 1965) on 5/10/2011 which is included in appendix 10.  
 (ii) The building was built in 1864. Construction history of the building was not considered relevant to our design of the temporary propping of the front façade.

- (iii) Refer our 2009 building condition report which confirmed that the Church was earthquake prone.
- (v) The damage to the Church was extensive. Our report of the 15<sup>th</sup> September recommended the building required temporary propping of all four walls. As mentioned previously, our involvement in this building ceased before we had completed propping designs all walls of the Church.
- (vi) Information on future aftershocks became more widely available after our involvement on the project ceased.
- (vii) Refer (vi)
- (viii) The Church was red stickered as part of the Civil Defence/CCC rapid assessment procedure. Based on the observed damage we considered this to be an appropriate assessment. The building was still red stickered at the time our involvement in this project ceased.

Yours Faithfully



RD Sullivan  
Director



PJ Sullivan  
Director

## APPENDIX 1



## Canterbury Earthquakes Royal Commission Te Komihana Rūwhenua a te Karauna

3 October 2011

R D Sullivan  
Consulting Engineer  
PO Box 21185  
CHRISTCHURCH 8143

Email: [rdsull@xtra.co.nz](mailto:rdsull@xtra.co.nz)

Dear Sir

### **309 Durham Street North (Durham Street Methodist Church) Information request**

The Royal Commission of Inquiry into building failure caused by the Canterbury Earthquakes is currently inquiring into the failure of a number of buildings in the CBD, including the building that was situated at 309 Durham Street North, known as the Durham Street Methodist Church (the Building).

I understand that you had some involvement with the Building both before and after the 4 September 2010 earthquake. Would you therefore please provide the following information, by **7 October 2011**:

1. I understand that several years before the 4 September 2010 earthquake, the Church sought reports from you on the structural strength and upgrading options for the Building.
  - (a) Could you please confirm this is the case.
  - (b) Could you please provide copies of any reports prepared by you, including any calculations, drawings or photographs.
  - (c) What was your understanding of the status of the Building in relation to the Christchurch City Council's earthquake prone policy as at the time of the 4 September 2010 earthquake? In your understanding how was the Council's earthquake prone policy been applied to the Building?
2. Following the 4 September 2010 earthquake I understand that you inspected the Building for damage and provided a report dated 15 September 2010.
  - (a) Please provide any other documentation, calculations or photographs that relate to that inspection of the Building. Please note, I already have the following:

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- Your report of 15 September 2010.
  - Tim Fahy's email to you of 23 September 2010 and your reply to him.
  - An email from you to Judith Becker and Tim Fahy dated 1 October 2010 and 5 drawings.
  - Email from you to Tim Fahy dated 7 October 2010 attaching 2 drawings.
  - Email from you to Tim Fahy dated 14 October 2010 attaching drawing.
  - Email from you to Tim Fahy dated 18 October 2010 attaching 2 drawing.
- (b) What was your understanding as to what was required of you in relation to that inspection?
- (c) Were you asked at any stage to comment on the structural integrity of the Building? If so, please provide details.
- (d) In carrying out the inspection of the Building and subsequently coming to conclusions on the Building did you give any consideration to:
- (i) The Building's plans.
  - (ii) The construction history of the Building.
  - (iii) The Christchurch City Council's earthquake prone policy and whether the Building complied with that.
  - (iv) Any structural strengthening that had been carried out on the Building before the September earthquake.
  - (v) The impact of the 4 September 2010 earthquake and subsequent aftershocks on the structural integrity of the Building and, in particular, whether the Building capacity to withstand further aftershocks was diminished as a result. If so, please explain how this was taken into account.
  - (vi) Information from GNS or any other source about the likelihood, location or extent of further aftershocks. If so, please provide details of this information.
  - (vii) The possibility of an aftershock approximately 1 magnitude less than the 4 September 2010 earthquake. If so, please provide details of what knowledge was known of this possibility and whether that was taken into account in carrying out the inspection/assessment.
  - (viii) Information from the Christchurch City Council relating to building standards or the inspection of buildings following an earthquake. If so, please provide details of this information.

- (ix) Information from any other person or body relating to building standards or the inspection of buildings following an earthquake. If so, please provide details of this information.
3. Were you involved any further in post September 2010 assessments of the Building and in particular its structural integrity? If so, could you please provide copies of any further reports or assessments completed by you.

The above information is requested pursuant to the Royal Commission's powers of investigation under s 4C Commissions of Inquiry Act 1908.

Yours faithfully

  
Mark Zarifeh  
Counsel Assisting  
Canterbury Earthquakes Royal Commission