

T&T Ref: 52000.400
07 October 2011

Canterbury Earthquake Royal Commission
PO Box 14053
Christchurch Airport
Christchurch 8544

Attention: The Commissioners

Dear Sirs

Submission

Foundations on Deep Alluvial Soils

We wish to provide the Commission with a submission relating to the hearings set down for 25 October 2011 to address, *Soils in the Christchurch CBD, their susceptibility to liquefaction, appropriate foundation structure systems and land improvement*. It is appropriate that practitioners in the engineering field provide input to the Royal Commission that assists with the definition and resolution of issues that arise under the Commission's terms of reference. We understand that the hearing is intended to partially address Issue 1 – Seismicity, and that further hearings will address the remaining issues.

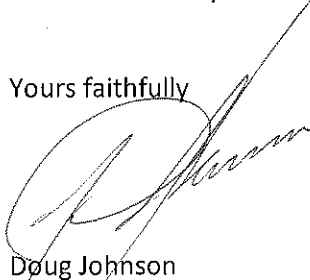
All comments provided in this submission are solely the opinion of Tonkin & Taylor and may not be taken as associated with any commercial engagements held by Tonkin & Taylor in the Canterbury recovery.

This submission confirms that we have undertaken a review of the Technical Report, *Foundations on Deep Alluvial Soils* by Misko Cubrinovski and Ian McCahon. We consider that this report provides a good overview of the complex technical issues associated with ground and foundation behaviour in the Christchurch CBD area. The observations of land damage expressed are generally consistent with those made by our staff working in Canterbury.

We note that there may be some minor points of technical detail that we would discuss with the authors in an interactive process. However, discussion of those in this submission would not provide any significant change for the Commissioners or others reading the report.

We have further interest in providing comment and submissions as appropriate to address Issues 4 to 6 as defined by the terms of reference, and look forward to that opportunity.

Yours faithfully



Doug Johnson
Managing Director (New Zealand)

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