



Ref: 5/311

2 October 2010

Dave Brunsdon
Kestrel Group
PO Box 5050
WELLINGTON

Dear Dave

As previously discussed, there is a likely need for numbers of structural engineers to support EQC's lead geotechnical engineers, Tonkin & Taylor, and insurance loss adjusters as they assess the many significantly damaged residential buildings following the 4 September 2010 Canterbury earthquake.

EQC is seeking a better understanding of where these structural engineers will be sourced from, the adequacy and appropriateness of these resources and how they will be briefed. EQC is also wishing to understand how this process will dovetail with the structural engineers being engaged by private insurers for dealing with cases that exceed the EQC cap. An associated, but broader issue is how the wider scientific, geotechnical and structural engineering professions, with whom EQC has a long-standing relationship through research facilitation, can best be engaged to inform decision-making criteria and repair techniques for the reinstatement of damaged homes in areas of significant liquefaction and ground damage.

EQC wishes to commission pragmatic and focused advice to facilitate effective use of relevant knowledge and efficient use of expertise. We anticipate that the interactions and methods adopted and data gathered in the course of such work may assist not only EQC with its decision-making, but potentially that of other agencies including private insurers and local authorities involved in earthquake recovery in Canterbury.

Since early September, you have assisted me with preliminary efforts in support of these objectives and I would like to confirm your continued assistance to EQC. We see the duties associated with this work as:

- a) Assisting me with Terms of Reference.
- b) Assisting me with a strategy to accomplish the broad objectives outlined above, including selection of sector and discipline expertise; liaising with key groups and individuals, keeping me informed of progress and in particular any impediments being encountered.
- c) Reviewing and advising EQC on the outputs of formal technical discussions, workshops and ad-hoc interactions, ensuring that reports and recommendations are completed to meet agreed timelines and terms of reference.
- d) Reporting to the Executive Management Team and/or the Board of the Commission in support of your advice, if required.

I hope this letter provides you with a sufficiently clear idea of what is expected. We have already discussed elements of the scope of work, which take us from 15 September to the end of October.

Please let me know if you have any further queries. I would appreciate your confirmation that you can continue this work for EQC, and a proposal including indicative costs for your involvement.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Hugh Cowan', written over a light grey grid background.

Hugh Cowan
Research Manager

24 October 2010

Dr Hugh Cowan
Research Manager
Earthquake Commission
P O Box 790
WELLINGTON

Kestrel Group Ltd
www.kestrel.co.nz

Level 1
114 Lambton Quay
PO Box 5050
Wellington
New Zealand

PO Box 29066
Christchurch

Dear Hugh

Canterbury Earthquake: Engineering Process Advice to EQC

Thank you for your letter of 2 October seeking input in relation to engineering processes and resourcing following the Canterbury Earthquake. I am pleased to be able to assist EQC at this challenging time, and apply learnings from overseas earthquakes, in addition to drawing upon established relationships with NZ practitioners and researchers.

The enclosed spreadsheet provides an indication of the likely budget for the consulting members of the Engineering Advisory Group through until the completion of the document in mid-November. The different agreed charge-out rates for these members is indicated. I will update this budget at the beginning of November with the actual times and costs associated with the initial invoices from the Group members.

As Rob Robinson does not currently have a company set up, we propose that Kestrel Group will engage him as a sub-consultant. The others (John Hare, Barry Brown and John Snook) are to be engaged directly by EQC, with their invoices being approved by myself.

The scope of my role has continued to evolve with different areas of emphasis and focus with each new week. By the end of October, a clearer view regarding the scope and duration of this role is likely to emerge, as the scale of the tasks ahead of the Engineering Advisory Group becomes quantifiable. As previously advised, my time during the period to date of 15th to 30th September was 41 hours (2.5 days per week), and for the first three weeks of October has been 106 hours (4 days per week). Given that I have taken up the role of editor of the Guidance Document in addition to the project management of the Group members, this level of involvement is likely to continue through until the completion of the document in mid-November.

In terms of budget, based on a proposed rate of 9(2)(j) plus GST, this corresponds to a figure of up to 9(2)(j) per week plus the expenses associated with one visit and two to three nights accommodation in Christchurch per week. The estimated budget for Rob Robinson is approximately 9(2)(j) plus GST, plus weekly travel and accommodation.

The engagement of Rob and myself through Kestrel Group will be based on the same form of agreement as the other consulting members of the Group, as per a separate letter.



I trust this set of arrangements and overall budget is acceptable at this stage.

Thanks again for the opportunity to assist EQC.

Yours sincerely

Dave Brunson

Director

db@kestrel.co.nz

Ph 499 4433

Kestrel EQC Letter of Acceptance 20101024

Engineering Advisory Group on House Repairs and Reconstruction Following the Canterbury Earthquake

Terms of Reference Phase 1: Feasibility and Indicative Content

31 October 2010

Background

Following the Darfield, Canterbury Earthquake of 4 September 2010, the Earthquake Commission (EQC) established an Engineering Advisory Group to consider the range of technical issues the recovery of residential dwellings, and to establish the feasibility and indicative content of a Guidance Document to be produced by the Department of Building and Housing (Phase 2).

Objectives of the Advisory Group

- (i) To establish the engineering requirements and regulatory linkages necessary to expedite the house repair and reconstruction process following the agreement on land remediation issues.
- (ii) To identify the engineering requirements for various repair and reconstruction options and techniques.
- (iii) To establish the elements and Terms of Reference of an ongoing Engineering Advisory Group to be established by the Department of Building and Housing to produce a Guidance Document

Particular Areas of Work

The areas of work being addressed by the Engineering Advisory Group in the scoping phase (Phase 1) include:

1. Establishing appropriate structural and geotechnical engineering approaches to repair and reconstruction;
2. Consulting with Christchurch City, Waimakiriri District and Selwyn District Councils on the regulatory issues and processes to be followed;
3. Consultation on the technical objectives and processes to the engineering profession, the wider construction sector, and other affected agencies;
4. Consideration of suitable engineering resources in support of the recovery operations.

Structure and Composition of the Engineering Advisory Group

The Engineering Advisory Group is to comprise a small group of leading engineers and remediation specialists including representatives from the following organisations:

- EQC
- Department of Building and Housing
- BRANZ (incl. representing the NZS3604 Committee)
- Structural Engineering Society (SESOC)
- Tonkin and Taylor

The Engineering Advisory Group reports during Phase 1 to Dr Hugh Cowan, Research Manager, EQC.

Arrangements for Group Members

Those members representing government agencies (EQC, DBH) are providing their input directly. Other members are to be engaged on a commercial basis by EQC.

Engineering Advisory Group on House Repairs and Reconstruction Following the Canterbury Earthquake

Terms of Reference (Draft 1)

Phase 2: Production of Guidance Document

1 November 2010

Background

Following the Darfield, Canterbury Earthquake of 4 September 2010, an Engineering Advisory Group was established to consider the range of technical issues involved in the recovery of residential dwellings.

After the feasibility and content scoping stage facilitated by EQC during October, the production of a Guidance Document is to be co-ordinated by the Department of Building and Housing.

Objectives of the Advisory Group

- (i) To document the engineering requirements and regulatory linkages necessary to expedite the house repair and reconstruction process following the agreement on land remediation issues.
- (ii) To provide guidance to EQC, commercial insurers, the Canterbury Earthquake Recovery Commission and Christchurch City, Selwyn District and Waimakiriri District councils on the engineering requirements and regulatory issues and processes.
- (iii) To convey the engineering requirements for various repair and reconstruction options and techniques to the insurance, design and construction sectors.

Particular Areas of Work

The areas of work to be addressed by the Engineering Advisory Group include:

1. Documenting appropriate structural and geotechnical engineering approaches to repair and reconstruction;
2. Obtaining consensus across the insurance sector on the technical objectives and recommended approaches;
3. Obtaining agreement with Christchurch City, Waimakiriri District and Selwyn District Councils on the regulatory issues and processes to be followed;
4. Communication of the technical objectives and processes to the engineering profession, affected agencies and to the wider construction sector;

Principal Output of the Advisory Group

The principal output of the Engineering Advisory Group is a Guidance Document addressing the following aspects:

1. A summary of relevant insurance principles and requirements, and regulatory issues and requirements

2. Future performance expectations for foundations and floor systems for both repaired and reconstructed dwellings
3. Principal options and methods for major re-levelling work for houses to be repaired
4. Recommended foundation and flooring systems for houses being completely rebuilt
5. Proposed arrangements for structural and geotechnical engineering input prior to and during construction work

This guidance document is to be produced as soon as practicable, including appropriate peer review processes, and taking account of required consultation. The target date for a final draft document for the Department is mid-November.

The Engineering Advisory Group may be called upon for other involvement and outputs throughout the recovery process.

Structure and Composition of the Engineering Advisory Group

The Engineering Advisory Group is to comprise a small group of leading engineers and remediation specialists including representatives from the following organisations:

- EQC
- Department of Building and Housing
- BRANZ (incl. representing the NZS3604 Committee)
- Structural Engineering Society (SESOC)
- Tonkin and Taylor

The Engineering Advisory Group is to have access to and the ability to task other practitioners, researchers and agency representatives whose inputs would be of value to them.

The Engineering Advisory Group is to be set up as a committee appointed by the Department's Chief Executive, and reports to Dave Kelly, Deputy Chief Executive.

Arrangements for Group Members

Those members representing government agencies (EQC, DBH) are providing their input directly. Other members are to be engaged on a commercial basis by the Department of Building and Housing.

Draft Letter of Engagement for Consultant Members of the Engineering Advisory Group

Individual letters to:

Barry Brown
Fraser Thomas Ltd
P.O.Box 23 273
Hunters Corner
Papatoetoe 2155

John Hare
Holmes Consulting Group Ltd
PO Box 25355
Christchurch 8144

John Snook
John Snook Consulting Limited
PO Box 3839
Christchurch 8140

Dave Brunson (covering Rob Robinson as sub-consultant)
Kestrel Group Ltd
P O Box 5050
Wellington 6045

29 October 2010

Participation in the Engineering Advisory Group Following the Darfield, Canterbury Earthquake – Letter of Engagement

Thank you for your participation as a member of the Engineering Advisory Group, and the contribution that you have made to date. This letter confirms your engagement, and the terms and conditions of your appointment.

Scope of Involvement

The scope of your involvement is as outlined in the Terms of Reference for the Engineering Advisory Group (refer Appendix 1).

The principal output and focus of the Group is the Guidance Document. After this has been prepared, there may be other tasks that EQC will seek your involvement in.

Conditions of Engagement

Your engagement is in accordance with the standard IPENZ Short Form Agreement (refer Appendix 2).

With respect to liability, Clause 11 is modified by the liability waiver statement in Appendix 3. This statement confirms that TBA

Payment

Payment for your involvement in the activities of the Engineering Advisory Group is to be on a time and expense basis.

You have indicated that a rate of \$xyz per hour exclusive of GST is to apply for your involvement (John Hare - \$280/ hr; Barry Brown \$210/ hr; John Snook \$120/ hr; Dave Brunsdon \$140/ hr and Rob Robinson \$110/ hr).

All reasonable travel, accommodation and incidental expenses incurred in the course of this work will be reimbursed, with invoices to be submitted monthly via Dave Brunsdon.

Confidentiality

Given the requirements of the EQC Act and the sensitive nature of aspects of this work, you are asked to treat information received in the course of the work of the Group as confidential, unless advised otherwise.

Once again, I would like to convey the appreciation of the Earthquake Commission for the contribution you are making towards the recovery of Canterbury region, and in particular those with affected houses.

Yours sincerely

Hugh Cowan
Research Manager
Earthquake Commission

Signed in Acknowledgement by Consultant:

Appendix 1 Terms of Reference for Engineering Advisory Group

Appendix 2 IPENZ Short Form Model Conditions Of Engagement

1. The Consultant shall perform the Services as described in the attached documents.
2. Nothing in this Agreement shall restrict, negate, modify or limit any of the Client's rights under the Consumer Guarantees Act 1993 where the Services acquired are of a kind ordinarily acquired for personal, domestic or household use or consumption and the Client is not acquiring the Services for the purpose of a business.
3. The Client and the Consultant agree that where all, or any of, the Services are acquired for the purposes of a business the provisions of the Consumer Guarantees Act 1993 are excluded in relation to those Services.
4. In providing the Services the Consultant shall exercise the degree of skill, care and diligence normally expected of a competent professional.
5. The Client shall provide to the Consultant, free of cost, as soon as practicable following any request for information, all information in his or her power to obtain which may relate to the Services. The Consultant shall not, without the Client's prior consent, use information provided by the Client for purposes unrelated to the Services. In providing the information to the Consultant, the Client shall ensure compliance with the Copyright Act 1994 and shall identify any proprietary rights that any other person may have in any information provided.
6. The Client may order variations to the Services in writing or may request the Consultant to submit proposals for variation to the Services. Where the Consultant considers a direction from the Client or any other circumstance is a Variation the Consultant shall notify the Client as soon as practicable.
7. The Client shall pay the Consultant for the Services the fees and expenses at the times and in the manner set out in the attached documents. Where this Agreement has been entered by an agent (or a person purporting to act as agent) on behalf of the Client, the agent and Client shall be jointly and severally liable for payment of all fees and expenses due to the Consultant under this Agreement.
8. All amounts payable by the Client shall be paid within twenty (20) working days of the relevant invoice being mailed to the Client. Late payment shall constitute a default, and the Client shall pay default interest on overdue amounts from the date payment falls due to the date of payment at the rate of the Consultant's overdraft rate plus 2% and in addition the costs of any actions taken by the Consultant to recover the debt.
9. Where Services are carried out on a time charge basis, the Consultant may purchase such incidental goods and/or Services as are reasonably required for the Consultant to perform the Services. The cost of obtaining such incidental goods and/or Services shall be payable by the Client. The Consultant shall maintain records which clearly identify time and expenses incurred.
10. Where the Consultant breaches this Agreement, the Consultant is liable to the Client for reasonably foreseeable claims, damages, liabilities, losses or expenses caused directly by the breach. The Consultant shall not be liable to the Client under this Agreement for the Client's indirect, consequential or special loss, or loss of profit, however arising, whether under contract, in tort or otherwise.
11. The maximum aggregate amount payable, whether in contract, tort or otherwise, in relation to claims, damages, liabilities, losses or expenses, shall be five times the fee (exclusive of GST and disbursements) with a maximum limit of \$NZ250,000.
12. Neither Party shall be liable for any loss or damage occurring after a period of six years from the date on which the Services were completed.
13. The Consultant acknowledges that the Consultant currently holds a policy of Professional Indemnity Insurance for the amount of liability under clause 11. The Consultant undertakes to use all reasonable endeavours to maintain a similar policy of insurance for six years after the completion of the Services.
14. If either Party is found liable to the other (whether in contract, tort or otherwise), and the claiming Party and/or a Third Party has contributed to the loss or damage, the liable Party shall only be liable to the proportional extent of its own contribution.
15. The Consultant shall retain intellectual property/copyright in all drawings, specifications and other documents prepared by the Consultant. The Client shall be entitled to use them or copy them only for the works to which the Services relate and the purpose for which they are intended. The ownership of data and factual information collected by the Consultant and paid for by the Client shall, after payment by the Client, lie with the Client. The Client may reproduce drawings, specifications and other documents in which the Consultant has copyright, as reasonably required in connection with the project but not otherwise. The Client shall have no right to use any of these documents where any or all of the fees and expenses remain payable to the Consultant.
16. The Consultant has not and will not assume any obligation as the Client's Agent or otherwise which may be imposed upon the Client from time to time pursuant to the Health and Safety in Employment Act 1992 ("the Act") arising out of this engagement. The Consultant and Client agree that in terms of the Act, the Consultant will not be the person who controls the place of work.
17. The Client may suspend all or part of the Services by notice to the Consultant who shall immediately make arrangements to stop the Services and minimise further expenditure. The Client and the Consultant may (in the event the other Party is in material default) terminate the Agreement by notice to the other Party. Suspension or termination shall not prejudice or affect the accrued rights or claims and liabilities of the Parties.
18. The Parties shall attempt in good faith to settle any dispute by mediation.
19. This Agreement is governed by the New Zealand law, the New Zealand courts have jurisdiction in respect of this Agreement, and all amounts are payable in New Zealand dollars.

Appendix 3 Liability Exclusion

This bookmark is an extract from the NZFS Urban Search and Rescue Contract with Task Force Engineers

- 9.1 The Contractor shall not be liable for any loss or damage suffered by NZFS whatsoever arising whether in contract, tort or otherwise, in relation to or as a result of the services, with the exception of any wilful and intentional acts, or gross negligence by the Contractor and/or its secondees, and NZFS shall make no claim against the Contractor in relation to the quality and standard of the services provided.
- 9.2 If, however, the Contractor should otherwise be held liable to NZFS under this contract, damages payable by the Contractor, in respect of any such breach, wilful and intentional acts, or gross negligence by the secondee, shall be limited to \$10,000 in the aggregate taking all claims together.
- 9.3 NZFS shall indemnify and hold harmless the Contractor against any claims by NZFS or third parties in respect of the timeliness, quality, commercial performance, and/or fitness for purpose of the services.
- 9.4 NZFS shall not make any claim against the secondee or against any other employee of the Contractor for costs, loss, or damage sustained by NZFS in relation to the services, or anything flowing there from, this provision being for the benefit of the secondee or other employees of the Contractor as the case may be.



8 November 2010

David Kelly
Deputy Chief Executive
Department of Building and Housing
P O Box 10-729
WELLINGTON

Dear David

Technical Advice for Repairing and Reconstructing Houses Damaged in the Canterbury Earthquake

I am writing to initiate with you the migration of an EQC-sponsored engineering advisory group to the Department's stewardship, to guide certain aspects of the engineering requirements for residential recovery in Canterbury. As we have previously discussed, technical complexities associated with the repairs and reconstruction of houses damaged by the 4 September earthquake are apparent. In addition to the variability in the response of the land, a range of structural effects on dwellings has occurred due to liquefaction and ground shaking.

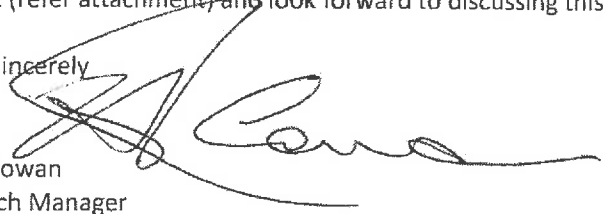
In late September, EQC established an engineering advisory group to consider the technical issues and processes associated with the recovery for residential dwellings, with the group engaged along similar lines to our collaboration on the statutory review of earthquake prone building policy. The group comprises representatives from BRANZ and selected industry leaders from the Structural Engineering Society, in addition to key people from EQC and its geotechnical engineering consultant Tonkin & Taylor, plus Mike Stannard from the Department. Collectively they represent a significant body of knowledge and experience in the disciplines of earthquake, structural and geotechnical engineering, and building remedial work.

The engineering advisory group has quickly developed a consistent and convergent technical philosophy and approach. A sixty page draft document has been produced, and a clear view established as to the steps involved in producing a final draft version by mid-November. The organisations and individuals briefed to date (the three local councils, AMI insurance, Fletcher Construction, local structural and geotechnical engineers) reportedly are very positive about the potential of a future guidance document.

EQC has co-ordinated and funded this feasibility phase of work during October as part of our role to facilitate the transfer of information from the research domain towards operational application. However, you will recall at the early stages of the group's deliberations, we agreed in principle that any guidance material should be issued by the Department.

To progress this we now need to formalise the arrangements under which the Department will co-ordinate the work of the group as it migrates to the production phase. I have taken the liberty of asking the group to prepare the attached draft Terms of Reference for the production phase of this project (refer attachment) and look forward to discussing this at your earliest convenience.

Yours sincerely


Hugh Cowan
Research Manager