*[Date]*

*[NAME OF ENGINEER]
[ENGINEERING FIRM, CONSULTANCY, OR BUSINESS NAME]***By email**: [*EMAIL*]

## letter of engagement – assessment report – STRUCTURAL

## [address]

*[Name]* (**the homeowner/the insurer**) would like to engage you, under the terms and conditions set out in Schedule 3, to assess *[address]* (the **house**), identify any structural **damage** from *[specify the natural disaster event]* and recommend an appropriate reinstatement methodology for the house.

Please provide your assessment and recommendations in the form of a written report, using the framework in Schedule 2. All bolded words in this letter are defined in Schedule 1. Please use these definitions when completing your assessment and report.

If, after reading through the relevant documentation in Schedule 4 or your initial inspection, you find that you need to undertake any additional investigations, require input from another professional, or require any further information (such as geotechnical or survey information), please let us know as soon as possible.

## Your obligations

You should carry out your assessment objectively and not act as an advocate for any party. You must act without bias. Your role is to give your client technically accurate advice, regardless of whether that advice aligns with your client’s interests or opinion.

You must also comply with the Engineering New Zealand Code of Ethical Conduct when carrying out this work.

We are not asking you to interpret the Earthquake Commission Act, the insurance policy, comment on the cost of reinstatement, advise, comment or make decisions on the extent of Toka Tū Ake EQC or the insurer’s obligations.

To undertake this work, you should be a Chartered Professional Engineer or senior engineer with experience in structural engineering, and in assessments of damaged buildings. You should also have a strong knowledge of building regulatory requirements and how to apply them. You must only advise on matters within your area of competence as a structural engineer.

You may find that you have a conflict of interest and cannot carry out the assessment we are asking for. For example, if you or someone else at your firm has previously provided an assessment or reinstatement advice in relation to the house for another party. Please consider this carefully and if you might have a conflict of interest, let us know before you accept this engagement.

You should ensure that as part of your assessment you discuss with the home owner their observations of structural **damage** from the natural disaster event.

## Damage Assessment

After you review the background information about the house enclosed in Schedule 4, please carry out an onsite non-intrusive inspection of the **house.**

In your report, please make all reasonable efforts to identify and explain (with supporting evidence):

### Damage to structural elements from the natural disaster event

* any **damage** that has been caused by the natural disaster event; and
* any work that has been carried out to repair the **damage**, and any aspect of that work you consider is inadequate from a structural perspective.

This requires you to assess:

* whether a physical change has occurred to any structural element of the house;
* the cause of the physical change;
* the function of that element; and
* any change in function of that element due to the physical change it has suffered.

### Pre-existing conditions or damage

* any pre-existing conditions or damage that have been **exacerbated** by the natural disaster event; and
* anyconditions or damage you consider to be pre-existing and not **exacerbated** by the natural disaster event.

### Multiple events

* if there have been multiple natural disaster events more than 48 hours apart, apportionment of the **damage** sustained by the house in each natural disaster event and the remediation methodology required for each.

### Alterations or renovations

* any alterations or renovations to the **house** that addressed or failed to address, pre-existing conditions or damage.

## Supporting information

* Your report should contain photographs and diagrams to illustrate the points you are making including photographs of visible indicators of probable hidden damage.
* If appropriate, include a floor plan so that a reader can understand the house layout and damage locations.
* If the house may have moved or settled as a result of the natural disaster, the following information should be captured by you and be included in your report: (Delete as Appropriate)
	+ - Separate geotechnical report, if required;
		- Floor levels (at 2m centres and at obvious high and low points);
		- Ceiling Levels;
		- Window sill levels;
		- Benchtop Levels;
		- Door head levels;
		- Levels for any other fixed features deemed by you to be noteworthy such as tiling, external weatherboards or guttering;
		- Commentary/discussion around the levels, variance(s) and how this relates to damage or otherwise;
		- For two or more story dwellings, discussion around how the ground floor slopes correlate with upper floor slopes;
		- If floor slopes do not correlate how has the ground floor moved independent of the upper floor.

You should identify where you agree or disagree with any report/s provided by Toka Tū Ake EQC, the customer and/or private insurer’s expert(s) and provide reasons for why you agree or disagree.

## Reinstatement methodology

If you have identified either damage to structural elements or repair work that is inadequate from a structural perspective, please provide your opinion on whether the elements can be reinstated to **the required standard.**

As part of providing your opinion:

* if the **damage** cannot be remedied, explain why;
* if there are conditions, damage, alterations or renovations that predate the natural disaster event or prevent reinstatement to **the required standard**, please explain why.

If the **damage** can be remedied, describe the methodology needed to reinstate the **damage** to **the required standard**, and the scope of works. If there is more than one possible methodology for reinstatement to **the required standard**, please describe the functional advantages and disadvantages of each possible methodology.

Your recommended remediation methodology should be sufficiently detailed to allow an estimator to prepare a costed scope of works based on your report.

## Facilitation

If there is disparity between your report and the report of an engineer for another party, you may be asked to participate in an Engineering New Zealand Facilitation process with that other engineer. You are obliged to participate openly and professionally in that process at an agreed additional fee if asked.

## Expert witness

If there is a dispute between the parties, you may be asked to attend a dispute resolution process such as a facilitation, determination, or tribunal or court proceedings. Before you issue your report, please ensure you have read, understood and complied with the High Court Code of Conduct for Expert Witnesses, enclosed in Schedule 4.

## Fees

The *[homeowner/insurer]* will pay you *$xx* [hourly rate or fixed fee to be agreed with engineer] for services provided under this letter of engagement.

## Engagement

You may not assign or subcontract this engagement without *[name]*’s prior written consent.

After you issue your report, you may be engaged under a new contract with the homeowner to carry out your reinstatement methodology, including issuing a PS1 and PS4 if necessary.

Please contact *[name]* if you need to discuss any part of this letter. Otherwise please sign below and return by email by *[date]* or as otherwise discussed. Thank you for assisting us in this matter.

Yours sincerely

*[Name]*

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I am a suitably competent engineer to undertake this work and I accept the terms as set out in this letter of engagement.

*[signature of engineer]*

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
[NAME – ENGINEER]
DATE*

# schedule 1: definitions

### “House”

The insurance policy will define what structures on the property are covered by the policy and what are not. For example, the dwelling, garages, glasshouse, swimming pools, retaining walls, driveways, and so forth. Residential house policies do not provide cover for land.

 Some policies refer to the term “house” when defining what structures are covered by the policy. Other policies may refer to the term “building”. Whatever term is used, please check the policy to see what structures on the property should be considered in your assessment and recommendations. In particular, cover for retaining walls varies between policies and should be checked.

### “Damage”

A structural element is **damaged** by a natural disaster event if,

* its physical state has been measurably or visibly altered by the natural disaster event in a negative way; and
* that alteration is more than de minimis (meaning trivial or minimal); and
* that alteration affects the original functionality of the structural element.

### "Exacerbation”

Where there is pre-existing damage and deterioration or where a **house** is already in a dilapidated state, the additional physical effects caused by a natural disaster must make a material difference to the value or usefulness of the house to be damage the Earthquake Commission Act or policy will respond to.

**“Natural Disaster”**

Natural disaster means—

* an earthquake, natural landslip, volcanic eruption, hydrothermal activity, or tsunami; or
* natural disaster fire; or
* in the case only of residential land, a storm or flood.

### “the required standard”

Where damage from the natural disaster event has occurred to a structural element, or previous repair work to the damaged structural element is inadequate, your reinstatement methodology, whether it involves repair or replacement, must meet the following requirements:

1. the reinstatement methodology of a structural element must restore the functionality and durability equivalent to when it was originally constructed, usually to “a condition substantially the same as but not better or more extensive than its condition when new.”
2. Where the structural building element also has an aesthetic purpose, the reinstatement methodology will also need to restore the former aesthetic to its condition when originally constructed.
3. the reinstatement methodology of a structural element does not have to make the damaged structural element an exact replica of the original; and
4. most policies require current materials and methods to be used; and
5. the reinstatement work must meet current building regulatory requirements, including the Building Code to the extent required by the Building Act; including
	1. There is no general obligation to upgrade the structure of the House even if it doesn’t comply with current Building Code requirements.
	2. The reinstatement work must not make the **house** less compliant with the Building Code than it was before the **damage** and reinstatement work;
	3. The reinstatement work must not accelerate or worsen a natural hazard on the land or any other property.

# schedule 2: reporting framework – STRUCTURAL

Engineering New Zealand recommends that engineers reporting on damage assessments and reinstatement set out their reports using the following framework.

The purpose of this framework is to provide greater consistency in the way engineers report their assessments of damage from a natural disaster event and reinstatement methodologies. This helps homeowners and insurers more easily compare reports and identify where their engineers agree and disagree.

Engineering New Zealand recommends that engineers set out their reports using the following headings, and make sure that, at a minimum, they address the points in the explanatory notes for each heading.

## damage assessment and REINSTATEMENT reporting framework

|  |  |  |
| --- | --- | --- |
| Section  | Content | Explanatory notes |
| 1.  | **Scope of engagement** | Reference the standard set out in the policy, as well as the definition of the standard from the instruction. Limitations/disclaimers  |
| 2. | **Summary of inspections undertaken** | Date, scope of inspection and personnel involved |
| 3. | **Documentation reviewed** | Any previous assessments; geotechnical reports |
| 4.  | **Building and site description** | Include age and type of construction; main dwelling and other structures |
| 5. | **Geotechnical considerations** | Key relevant points from geotechnical reports, e.g. general topography, types of soils present and soil characteristics, site performance, presence of uncontrolled fill/compressible soils etc as well as disaster specific factors e.g. bearing capacity, SLS settlement, lateral stretch status after an earthquake or proximity of waterways and drainage issues after a flood or landslip.. |
| 6. | **Summary and discussion of damage from the natural disaster event and any previous repairs** |  |
| 6.1 | Homeowner comments | Relevant damage observations from the homeowner as well as any information provided by the homeowner about previous repairs, alterations and renovations. |
| 6.2 if earthquake | Earthquake damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the earthquakes, and differentiating from non-earthquake damage, with supporting evidence.  |
| 6.2 if inundation | Flood damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the flood, and differentiating from any non-flood damage, with supporting evidence. Also consider the risk of secondary damage due to contamination and mould growth.  |
| 6.2 if landslide | Landslide damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the landslide, and differentiating from any non-landslide damage, with supporting evidence. Consider xyz (to come) |
| 6.2 if volcanic activity | Volcanic activity damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the volcanic activity, and differentiating from any non-volcanic damage, with supporting evidence. Consider xyz (to come) |
| 6.2 if natural hazard fire | Fire damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the fire, and differentiating from any non-fire damage, with supporting evidence. Consider xyz (to come) |
| 6.2 if tsunami | Tsunami damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the tsunami, and differentiating from any non-tsunami damage, with supporting evidence. Consider xyz (to come) |
| 6.2 if hydrothermal activity | Hydrothermal damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the hydrothermal activity, and differentiating from any non-hydrothermal damage, with supporting evidence. Consider xyz (to come) |
| 6.2 if storm | Storm damage to structural elements | Identify current damage, establishing what was caused or exacerbated by the storm, and differentiating from any non-storm damage, with supporting evidence. Consider xyz (to come) |
| 6.3 | Pre-existing condition of structural elements | Include photographs and any other information about the pre-disaster condition of the property |
| 6.4 | Multiple natural disaster events | If there have been multiple natural disaster events more than 48 hours apart, allocate the damage and remediation methodology between those events and seek supporting evidence e.g. photographs before and after each event if possible. |
| 6.5 | Any previous repairs undertaken | Identify the nature and effectiveness or otherwise of any previous repairs |
| 6.6 | Other reports | Provide comment on whether you agree or disagree with any other damage assessment reports on the property and explain why. |
| 7. | **Reinstatement methodology** |  |
| 7.1 | Definition of required standard applied |  |
| 7.2 | Recommended remediation | Outlining how the damage attributable to the natural disaster event is to be remedied (taking into account any previous repairs) in order to meet the required standard |
| 7.3 | Further investigations or information required |  |
| 7.4 | Further engineering design input required |  |
| 8. | Summary | Summarising the key findings and recommended remediation approach (options) |

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# schedule 3: short form conditions of engagement

1. The Consultant shall perform the Services as described in the attached documents.
2. 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. However, 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. In providing the Services the Consultant must use the degree of skill, care and diligence reasonably expected of a professional consultant providing services similar to the Services.
4. The Client shall provide to the Consultant, free of cost, as soon as practicable following any request for information, all information in the Client’s 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.
5. As soon as either Party becomes aware of anything that will materially affect the scope or timing of the Services, the Party must notify the other Party in writing and where the Consultant considers a direction from the Client or any other circumstance is a variation the Consultant shall notify the Client accordingly.
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 due on the 20th of the month following the month of issue of each GST Invoice or at such other timing as stated elsewhere in this Agreement. If the Client fails to make the payment that is due and payable and that default continues for 14 days, the Consultant may provide written notice to the Client specifying the default and requiring payment within 7 days from the date of the notice. Unless payment has been made by the Client in full, the Consultant may suspend performance of the Services any time after expiration of the notice period. The Consultant must promptly lift the suspension after the Client has made the payment. Regardless of whether or not the Consultant suspends the performance of the Services in accordance with this clause, the Consultant may charge 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 the nature of the Services is such that it is covered by the Construction Contracts Act 2002 (CCA) and the Consultant has issued a payment claim in accordance with the CCA, the provisions of the CCA shall apply. In all other cases, if the Client, acting reasonably, disputes an invoice, or part of an invoice, the Client must promptly give the reasons for withholding the disputed amount and pay any undisputed amount in accordance with clause 8.
10. 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.
11. 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.
12. 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 minimum of $100,000 and a maximum limit of $NZ500,000.
13. Without limiting any defences a Party may have under the Limitation Act 2010, neither Party shall be considered liable for any loss or damage resulting from any occurrence unless a claim is formally made on a Party within 6 years from completion of the Services.
14. The Consultant shall take out and maintain for the duration of the Services a policy of Professional Indemnity insurance for the amount of liability under clause 12. The Consultant undertakes to use all reasonable endeavours to maintain a similar policy of insurance for six years after the completion of the Services.
15. 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.
16. Intellectual property prepared or created by the Consultant in carrying out the Services, and provided to the Client as a deliverable, (“New Intellectual Property”) shall be jointly owned by the Client and the Consultant. The Client and Consultant hereby grant to the other an unrestricted royalty-free license in perpetuity to copy or use New Intellectual Property. The Clients’ rights in relation to this New Intellectual Property are conditional upon the Client having paid all amounts due and owing to the Consultant in accordance with clauses 7 and 8. Intellectual property owned by a Party prior to the commencement of this Agreement (Pre-existing Intellectual Property) and intellectual property created by a Party independently of this Agreement remains the property of that Party. The Consultant accepts no liability for the use of New Intellectual Property or Pre-existing Intellectual Property other than to the extent reasonably required for the intended purposes.
17. The Consultant has not and will not assume any duty imposed on the Client pursuant to the Health and Safety at Work Act 2015 (“the Act”) in connection with the Agreement.
18. 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 that has not been remedied within 14 days of receiving the other Party’s notice of breach) either suspend or terminate the Agreement by notice to the other Party. If the suspension has not been lifted after 2 months the Consultant has the right to terminate the Agreement and claim reasonable costs as a result of the suspension. Suspension or termination shall not prejudice or affect the accrued rights or claims and liabilities of the Parties.
19. The Parties shall attempt in good faith to settle any dispute themselves but, failing that, by mediation.
20. 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.

# schedule 4: high court code of conduct for expert witnesses

## Duty to the court

1. An expert witness has an overriding duty to assist the court impartially on relevant matters within the expert’s area of expertise.
2. An expert witness is not an advocate for the party who engages the witness.

**2A** If an expert witness is engaged under a conditional fee agreement, the expert witness must disclose that fact to the court and the basis on which he or she will be paid.

**2B** In subclause 2A, **conditional fee agreement** has the same meaning as in [rule 14.2(3)](http://www.legislation.govt.nz/regulation/public/2016/0225/latest/link.aspx?id=DLM6952105" \l "DLM6952105), except that the reference to legal professional services must be read as if it were a reference to expert witness services.

## Evidence of expert witness

1. In any evidence given by an expert witness, the expert witness must—
	1. acknowledge that the expert witness has read this code of conduct and agrees to comply with it:
	2. state the expert witness’ qualifications as an expert:
	3. state the issues the evidence of the expert witness addresses and that the evidence is within the expert’s area of expertise:
	4. state the facts and assumptions on which the opinions of the expert witness are based:
	5. state the reasons for the opinions given by the expert witness:
	6. specify any literature or other material used or relied on in support of the opinions expressed by the expert witness:
	7. describe any examinations, tests, or other investigations on which the expert witness has relied and identify, and give details of the qualifications of, any person who carried them out.
2. If an expert witness believes that his or her evidence or any part of it may be incomplete or inaccurate without some qualification, that qualification must be stated in his or her evidence.
3. If an expert witness believes that his or her opinion is not a concluded opinion because of insufficient research or data or for any other reason, this must be stated in his or her evidence.

## Duty to confer

1. An expert witness must comply with any direction of the court to—
	1. confer with another expert witness:
	2. try to reach agreement with the other expert witness on matters within the field of expertise of the expert witnesses:
	3. prepare and sign a joint witness statement stating the matters on which the expert witnesses agree and the matters on which they do not agree, including the reasons for their disagreement.
2. In conferring with another expert witness, the expert witness must exercise independent and professional judgment, and must not act on the instructions or directions of any person to withhold or avoid agreement.

# schedule 5: additional information about the house