TOKA TŪ AKE EQC ASSESSMENT MANUAL

Version as at 13/09/2022

UNCLASSIFIED

Important note:
EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
These changes take place on and from 1 Oct 2022 to and including 30 Sep 2023.
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1. Introduction

a. Terminology

Throughout this document, when we refer to 'we/our/us' we mean Toka Tū Ake EQC. When we refer to 'you/your', we mean any of the people described in Section 1.c Application of Manual unless we have specified otherwise.

b. Purpose of Manual

This Manual sets out how to apply the *Earthquake Commission Act 1993 (EQC Act)* when assessing residential building and residential land claims. It also provides guidance on assessing these claims in a comprehensive, timely, effective and consistent manner, to:

- determine the customer's entitlement in accordance with the *EQC Act*; and
- deliver a great customer experience.

c. Application of Manual

This Manual is for Toka Tū Ake EQC and everyone authorised to deal with a residential building or land claim on our behalf:

- our staff and contractors;
- private insurers (acting as our agent under the *Natural Disaster Response Agreement* (dated 29 October 2020)) and their staff and contractors; or
- third-party providers (authorised to act on our behalf, either appointed by us or an insurer as permitted under the *NDRA*) and their staff and contractors.

When dealing with EQCover claims, you must act in accordance with the *EQC Act*, all other applicable laws, our delegations, this Manual and our instructions in relation to the application of the *EQC Act*.

Where damage is not covered by the *EQC Act*, you should consider whether it is covered by a private insurance policy. Where damage is covered by both the *EQC Act* and a private insurance policy, we typically cover the first loss, so you should consider the coverage under the *EQC Act* first. In some cases, damage may not be covered by either the *EQC Act* or a private insurance policy.

In all cases, you will need to comply with your organisation's own internal processes and delegations, including the *Fair Insurance Code*, and treat customers fairly, honestly and professionally, and in an empathetic and respectful manner.

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We may amend this Manual (or part of it) from time to time. Amendments will be in writing. This Manual sets out our interpretation of the *EQC Act* as at 1 December 2020, and therefore applies to claims made in relation to natural disasters occurring on or after 1 December 2020.

An amended part of this Manual may set out our interpretation of the *EQC Act* as at a later date, whether because of legal developments or otherwise. That date will be recorded against the amended part of the Manual. The amendment will be effective from the date recorded against the amendment, or otherwise from the date we notify the required party of the amendment.

d. Status of Manual

We must comply with the *EQC Act* and all applicable laws. This Manual sets out our interpretation of the *EQC Act* (as informed by relevant case law) as agreed by private insurers under the *NDRA* in accordance with the *Toka Tū Ake EQC Insurers Manual* development process under that agreement, and provides guidance as to, and examples of, how we apply the *EQC Act* to assessing claims for EQCover in practice. However, this Manual does not act as a substitute for the *EQC Act* because:

- claims will arise in a diverse range of fact situations; and
- the interpretation of the *EQC Act* may be contested.

Where this Manual (or the *EQC Claims Manual – Residential Buildings*, or *EQC Claims Manual – Residential Land*) does not clearly provide for the fact situation or circumstances at hand, or is capable of, or has been applied using more than one interpretation, you should escalate the matter to the appropriate Toka Tū Ake EQC representative.

e. Relationship with Toka Tū Ake EQC Claims Manual – Residential Buildings, Toka Tū Ake EQC Claims Manual – Residential Land and the Toka Tū Ake EQC Insurers Manual

Two separate manuals called the *EQC Claims Manual – Residential Buildings* and the *EQC Claims Manual – Residential Land* set out how we apply the *EQC Act* when dealing with residential building and land claims.

This Manual focusses on the process of assessing residential building claims and land claims for natural disaster damage. This Manual should therefore be read alongside those separate manuals, as well as all other instructions from Toka Tū Ake EQC.

In the case of insurers engaged under the *NDRA*, this Manual forms part of the *Toka Tū Ake EQC Insurers Manual*, which also includes a range of other manuals, guidelines and policies.

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f. Expectations of those involved in the claims assessment process

i. Overview

All people engaged in claims assessments must:

- be sufficiently experienced, qualified and skilled for the purpose, in each case meeting the expectations in the *Toka Tū Ake EQC Insurers Manual*;
- meet any applicable legal obligations (such as complying with health and safety obligations);
- always conduct themselves in a professional manner; and
- be appropriately trained.

The qualifications and experience of those involved with an assessment should align with that party's agreement or contract and be in line with the *Operating Elements* document, both of which lie outside of this Manual.

ii. Capabilities

Any person involved with receiving, assessing and settling an EQCover claim must have complied with all of our requirements in relation to personnel, experience and training as outlined in that party's agreement or contract, which lies outside of this Manual.

iii. Soft skills and communication style

We expect our staff and contractors, private insurers (including their staff and contractors) and third-party providers (including their staff and contractors) to communicate with Toka Tū Ake EQC customers in a fair, responsive, empathetic, straightforward and helpful manner.

All these people must:

- at all times be honest, transparent, respectful and professional in their dealings with our customers.
- be able to work in partnership with our resources and other suppliers and specialists.

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All communications must use a plain English style and avoiding jargon, technical terms and acronyms. Any template communication that refers to Toka Tū Ake EQC or uses the Toka Tū Ake EQC logo[1] must be pre-approved by us.

It is the assessor's role to explain to the customer what is and is not natural disaster damage and why, and to guide them through the claims process.

a. Keeping customers informed

You must regularly update customers on the status of their EQCover claim, in line with any of our standards about keeping customers informed. We will issue and notify you of these standards from time to time. You should also comply with your organisation's own internal processes, including the *Fair Insurance Code*.

At each stage where appropriate, advise the customer of the claims process and explain what the next step in that process is for their claim.

b. Communicating settlement outcomes

You must communicate settlement outcomes to our customers in accordance with *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 10.A.c Advising the Customer of the Outcome of the Residential Building Exposure*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 11.A.c Advising the Customer of the Outcome of the Residential Land Exposure*.

c. Customers experiencing vulnerabilities

You must take reasonable steps to identify whether a customer is experiencing vulnerabilities. In addition, you should comply with your organisation's guidelines for identifying and supporting a customer experiencing vulnerabilities, which includes prioritising their claim. You have a responsibility to identify customers experiencing vulnerabilities and record that information on the claim file so any other people who are dealing with that claim are aware and can cater to the customer's needs.

iv. Health and safety

You must comply with the *Health and Safety at Work Act 2015* and regulations under that act in all relevant respects. You must also act in accordance with your organisation's health and safety policies and processes.

Private insurers and third-party providers (acting as our agents) must also meet their health and safety obligations as outlined in that party's agreement or contract with us or our agent, which lies outside of this manual.

[1] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 11.e Use of Earthquake Commission Name and Logo*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 12.e Use of Earthquake Commission Name and Logo*

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a. Dangerous and insanitary buildings and land

You must comply with our *Dangerous and Insanitary Buildings and Land Policy* on this matter, regardless of the working environment.

Take the approach detailed in these sections of the policy:

- Assessing the Risk
- Notification of Dangerous or Insanitary Buildings or Land
- Other Notification Actions Required
- Follow-up Actions.

You are not expected to determine whether a building or land meets the legal definition of 'dangerous' or 'insanitary', only whether you believe it is too dangerous or insanitary for you to work safely. If you are unsure about whether it is safe to work on or occupy the building, you should engage an appropriate expert.[2]

If you believe that someone's health or safety is at risk due to a dangerous or insanitary building, you must notify the appropriate people as set out in our *Dangerous and Insanitary Buildings and Land Policy*. You must also advise the customer about your concerns, and you should keep them informed of any delays to the assessment of their claims that these issues may cause.

You must also manage all incidents, near misses and injuries according to our *Incident Management Plan*.

See also:

- *Section 9 Unsafe Properties*; and
- *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 11.b Dangerous and Insanitary Buildings*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 12.b Dangerous and Insanitary Buildings*.

[2] See Section 7 Engaging Experts.

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b. Sharing information to prevent or lessen a serious threat to health or safety

Generally, you should not disclose information about the property to anyone outside your organisation or Toka Tū Ake EQC. However, you may make available any information you have to relevant third parties (e.g. police, medical providers or relevant regulators) if you believe on reasonable grounds that doing so is necessary to prevent or lessen a serious threat to:

- public health or public safety; or
- the life or health of any individual.

Section 31A(3), EQC Act

In this context, 'serious threat' has the same meaning as in the *Privacy Act 2020*:

> **serious threat** means a threat that an agency reasonably believes to be a serious threat having regard to all of the following:
>
> (a) the likelihood of the threat being realised; and
>
> (b) the severity of the consequences if the threat is realised; and
>
> (c) the time at which the threat may be realised
>
> *Section 7, Privacy Act 2020 – Definition of 'serious threat'*

You do not need our prior approval to make this information available in these circumstances.

For further details on information sharing requirements, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 11.f.i Sharing Information*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 12.f.i Sharing Information*.

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g. Overview

The following diagram illustrates the steps involved in assessing and settling an EQCover claim. The questions that arise at each step are dealt with in the Manual sections indicated.

Is there an insured residential building or residential land?

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g. Terms used in this Manual

The following terms, which are used throughout this Manual, are explained in the locations indicated. Other Toka Tū Ake EQC terms are explained at the point in the Manual where they arise or in the *Toka Tū Ake EQC Glossary*.

Table 1: Terms used in this Manual

Term	Manual section
appurtenant structure	*Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.e What is an Appurtenant Structure?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 5.e What is an Appurtenant Structure?*
cap	*Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 8.e What is the Maximum Amount (or Cap) that can be Paid for a Residential Building Exposure?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 9.e What is the Maximum Amount (or Cap) that can be Paid for a Residential Land Exposure?*
contract of fire insurance	*Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 3.g, Was there a 'Contract of Fire Insurance' or Direct EQCover Over the Property Concerned in Force at the Relevant Time?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 3.g, Was there a 'Contract of Fire Insurance' or Direct EQCover Over the Property Concerned in Force at the Relevant Time?*
direct result	Section 2.c.v Is the Physical Loss or Damage as 'the Direct Result' of the Natural Disaster?/*Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.e Is the Physical Loss or Damage as 'the Direct Result of the Natural Disaster'?*
dwelling	*Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.c What is a 'Dwelling'*
erosion	Section 2.c.ii.d What is a 'Natural Landslip'?
imminent damage	Section 5 Imminent Damage *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.d.iii Physical Loss or Damage may be Imminent Physical Loss or Damage*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 6.d.iii Physical Loss or Damage may be Imminent Physical Loss or Damage*
indemnity value	*Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.iv Assessing the Area of Land that is Lost or Damaged* *Land Valuation Guide*

market value	*Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.iv Assessing the Area of Land that is Lost or Damaged* *Land Valuation Guide*
mortgagee cap	*Toka Tū Ake EQC Claims Manual – Residential Buildings Section 9.d.i When is the Mortgagee Entitled to the EQC Residential Building Claim Payment?*/*Toka Tū Ake EQC Claims Manual – Residential Land Section 10.d.i When is the Mortgagee Entitled to the EQCover Residential Land Claim Payment?*
multi-unit building (MUB)	Section 8.c.ii Determine whether there is a Multi-unit Building (MUB) and if so, Categorise it
natural disaster	Section 2.c.ii What is a 'Natural Disaster'? *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.b What is a 'Natural Disaster'?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 6.c What is a 'Natural Disaster'?*
natural disaster damage	Section 2.c Is there Natural Disaster Damage? *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.c 'What is 'Natural Disaster Damage'?* *Toka Tū Ake EQC Claims Manual – Residential Land, Section 6.c What is 'Natural Disaster Damage'?*
natural disaster fire	Section 2.c.ii.c What is a 'Natural Disaster Fire'?
natural landslip	Section 2.c.ii.d What is a 'Natural Landslip'?
physical loss or damage	Section 2.c.iv Is there Physical Loss or Damage? *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.d Is there 'Physical Loss or Damage'?* *Toka Tū Ake EQC Claims Manual – Residential Land, Section 6.d Is there 'Physical Loss or Damage'?*
replacement value	Section 2.d.i.a What is the Definition of 'Replacement Value'? *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.A.c What is 'Replacement Value'?*
residential building	Section 3.b Is there an Insured 'Residential Building'?
residential land	Section 4.b Is there Insured 'Residential Land'?
services	*Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.f What are the 'Services' (and Structures Appurtenant to them) that Serve the Dwelling?*
when new	2.d.i.a What is the Definition of 'Replacement Value?'

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2. Claimed damage assessment purpose and legislative components

a. Overview

This section:

- discusses the purpose of the claimed damage assessment process;
- sets out the definition of natural disaster damage and the basis of cover for residential buildings and associated residential land;
- introduces the grounds for declining a claim under *Schedule 3 of the EQC Act* and the considerations that must be applied when using this discretion to decline.

The main purpose of assessing the customer's claim for damage to a residential building and/or land is to find:

- whether the residential building and/or land has suffered natural disaster damage; and
- the extent of that damage (if any).

Damage to residential buildings or residential land includes any damage that is imminent as the direct result of the natural disaster that has occurred. In this section of the Manual, a reference to 'damage' includes any such imminent damage.[3]

[3] See Section 5 Imminent Damage.

Assessing residential buildings or land claims typically involves:

- engaging appropriate experts;[4]
- visiting the residential building[5] or land;[6] and
- assessing any natural disaster damage to the residential building[7] or land;[8]

In addition, assessing residential buildings typically involves costing the repair and/or replacement of residential buildings on the basis of the replacement value.[9]

Assessing residential land also typically involves:

- formulating a conceptual remediation strategy[10] for the damaged residential land;
- costing the repair of land damage; and
- valuing the damaged areas of insured land and damaged insured land structures.[11]

The claims assessment process[12] involves considering only relevant considerations and weighing the available evidence.

The output of the assessment[13] is full documentation recording the reasons underpinning, and the findings of, the assessment.

[4] See Section 7 Engaging Experts.

[5] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.A.e When must the Assessor Visit a Residential Building for an Assessment?* and *6.A.f What are the Requirements for Visiting a Residential Building for an Assessment?*.

[6] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.h When must the Assessor Visit the Residential Land for an Assessment?* and *7.A.i What are the Requirements for Visiting Residential Land for an Assessment?*.

[7] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.A.g Other Requirements for an Assessment of the Natural Disaster Damage to the Residential Building*.

[8] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.ii Assessing the Type and Extent of the Natural Disaster Damage to the Land and Land Structures on the Land Holding* and *7.A.c.iv Assessing the Area of Land that is Lost or Damaged*.

[9] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.A.g Other Requirements for an Assessment of the Natural Disaster Damage to the Residential Building*.

[10] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.v Assessing the Conceptual Remediation Strategy*.

[11] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.vii Assessing the Cost of Repair*.

[12] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.B.a What is the Process for the Assessment?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.B.a What is the Process for the Assessment?*.

[13] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.B.b What is the Output of the Assessment?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.B.b What is the Output of the Assessment?*.

Where there are multiple events, follow the principles for assessing claims for natural disaster damage under *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.C Principles for Assessment Where there are Multiple Events*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.C Principles for Assessment where there are Multiple Events*.

Where there is damage to multiple properties, e.g. shared land and/or multi-unit buildings, follow the principles for assessing claims for natural disaster damage under Section 8 Assessing Damage Across Multiple Properties.

This section does not address situations where a repair has been completed in relation to the current claim, and a residential building and/or land needs to be reassessed, e.g. because that remediation strategy has failed. Additional considerations[14] apply in such assessments.

b. What is the purpose of the claims assessment process?

The main purpose of a residential building assessment is to find:

- whether the residential building has incurred natural disaster damage; and
- the extent of any natural disaster damage and the customer's insurance entitlements.

The main purpose of a residential land assessment is to find:

- whether the residential land has incurred natural disaster damage;
- the extent of any natural disaster damage and the customer's insurance entitlements.

i. Has the property incurred natural disaster damage?

The property (residential building and/or residential land) will have incurred natural disaster damage where there is:

- 'physical loss or damage'[15] to a residential building … ;
- … occurring as 'the direct result'[16] of … ;
- … a 'natural disaster'.[17]

Section 2(1), EQC Act – Paragraph (a) of the definition of 'natural disaster damage'

[14] See the *Schedule 3 Declinature Guide*.

[15] See Section 2.c.iv Is there Physical Loss or Damage?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.d Is there "Physical Loss or Damage"?*.

[16] See Section 2.c.v Is the Physical Loss or Damage as "the Direct Result" of the Natural Disaster?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.e Is the Physical Loss or Damage "as "the Direct Result" of the Natural Disaster?*.

[17] See Section 2.c.ii What is a "Natural Disaster"?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.b "What is a Natural Disaster"?*.

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ii. What is the amount of the natural disaster damage covered?

For residential buildings, the cover available in respect of the natural disaster damage suffered is measured on the basis of the replacement value.

For residential land, the cover available in respect of the natural disaster damage suffered is assessed by determining:

- the cost of repair (typically); and
- the market value of the damaged areas of insured land (and, potentially other areas specified in the *EQC Act*) and the indemnity value of the damaged land structures. These values are key components in calculating the maximum amount (or cap) that can be paid for the residential land exposure.

c. Is there natural disaster damage?

i. Overview

In general terms, for 'natural disaster damage' (as defined in the *EQC Act*), there must be:

- 'physical loss or damage'[18] to the property …;
- … occurring as 'the direct result'[19] of …;
- … the 'natural disaster'.[20]

Section 2(1), EQC Act – Paragraph (a) of the definition of 'natural disaster damage'

The definition of natural disaster damage also covers a specific type of physical loss or damage that is a direct result of measures taken to mitigate the consequences of natural disaster.[21]

Section 2(1), EQC Act – Paragraph (b) of the definition of 'natural disaster damage'

[18] See Section 2.c.iv Is there Physical Loss or Damage?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.d Is there "Physical Loss or Damage"?*.

[19] See Section 2.c.v Is the Physical Loss or Damage as "the Direct Result" of the Natural Disaster?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings – Section 5.e Is the Physical Loss or Damage "as "the Direct Result" of the Natural Disaster?*.

[20] See Section 2.c.ii What is a "Natural Disaster"?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.b "What is a Natural Disaster"?*.

[21] See Section 2.c.vi What is Physical Loss or Damage as a Direct Result of Measures Taken under Proper Authority to Mitigate the Consequences of any Natural Disaster?.

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ii. What is a 'natural disaster'?

For there to be natural disaster damage, there must be a natural disaster.

a. What is the EQC Act definition of 'natural disaster'?

The *EQC Act* defines 'natural disaster' as follows:

> **natural disaster** means—
>
> (a) an earthquake, natural landslip, volcanic eruption, hydrothermal activity, or tsunami; or
>
> (b) natural disaster fire; or
>
> (c) in the case only of residential land, a storm or flood
>
> *Section 2(1), EQC Act – Definition of 'natural disaster'*

Residential buildings and residential land have EQCover for earthquakes, natural landslips, volcanic eruptions, hydrothermal activity, tsunamis and natural disaster fire. Only residential land has EQCover for storms and floods. In either case, EQCover only applies if the basic requirements[22] for an EQCover claim are met. These requirements include there being a relevant contract of fire insurance or direct EQCover in force at the relevant time.

b. Who determines whether there has been a natural disaster under the EQC Act?

You must determine whether there is a natural disaster under the *EQC Act*.

c. What is a 'natural disaster fire'?

The *EQC Act* defines 'natural disaster fire' as follows:

> **natural disaster fire** means fire occasioned by or through or in consequence of an earthquake, natural landslip, volcanic eruption, hydrothermal activity, tsunami, or (in the case only of residential land) a storm or flood
>
> *Section 2(1), EQC Act – Definition of 'natural disaster fire'*

In other words, a natural disaster fire is a fire that is occasioned by or through or as a consequence of:

- (in the case of EQCover for residential buildings, residential land), an earthquake, natural landslip, volcanic eruption, hydrothermal activity, tsunami; and
- (in the case of EQCover for residential land), storm or flood.

[22] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 3 Are the Basic Requirements for an EQCover Claim Met?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 3 Are the Basic Requirements for an EQCover Claim Met?*.

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
These changes take place on and from 1 Oct 2022 to and including 30 Sep 2023.
Text in yellow in this Manual reflects cap, premium and excess provisions.
See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

d. What is a 'natural landslip'?

The *EQC Act* defines 'natural landslip' as follows:

> **natural landslip** means the movement (whether by way of falling, sliding, or flowing, or by a combination thereof) of ground-forming materials composed of natural rock, soil, artificial fill, or a combination of such materials, which, before movement, formed an integral part of the ground; but does not include the movement of ground due to below-ground subsidence, soil expansion, soil shrinkage, soil compaction, or erosion.
>
> *Section 2(1), EQC Act – Definition of 'natural landslip'*

The central features of a natural landslip are:

- there must be movement (whether falling, sliding, flowing or a combination); and
- the material that has moved must be ground-forming. It must:
  - be composed of natural rock, soil, artificial fill or a combination of those materials; and
  - have formed an integral part of the ground.

A natural landslip does not include the movement of ground due to:

- below-ground subsidence;
- soil expansion, soil shrinkage, or soil compaction; or
- erosion, – which is defined under the *EQC Act* as follows:

> **erosion** means erosion by the normal action of the wind or sea or of a lake, river, or other body of water.
>
> *Section 2(1), EQC Act – Definition of 'erosion'*

A natural landslip may occur where human action is the trigger. The most common example of this is the failure of an excavated slope left unsupported. If the customer is responsible for this event, you may decline or limit their claim under *Schedule 3 of the EQC Act* due to for example, negligence; failure to meet construction standards; or failure to comply with any law or bylaw.[23]

Clauses 3 and 5, Schedule 3, EQC Act

iii. What is natural disaster damage?

a. What is the EQC Act definition of 'natural disaster damage'?

The *EQC Act* defines 'natural disaster damage' as follows:

> **natural disaster damage** means, in relation to property,—
> (a) any physical loss or damage to the property occurring as the direct result of a natural disaster; or
> (b) any physical loss or damage to the property occurring (whether accidentally or not) as a direct result of measures taken under proper authority to avoid the spreading of, or otherwise to mitigate the consequences of, any natural disaster, but does not include any physical loss or damage to the property for which compensation is payable under any other enactment

Section 2(1), EQC Act – Definition of 'natural disaster damage'

b. Components of paragraph (a) of the definition of 'natural disaster damage'

Paragraph (a) of this definition can be broken down into the following components. There must be:

- 'physical loss or damage'[24] to the property … ;
- … occurring as 'the direct result'[25] of … ;
- … the 'natural disaster'.[26]

Section 2(1), EQC Act – Paragraph (a) of the definition of 'natural disaster damage'

[23] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 8 What are the Grounds for Declining an EQCover Claim under Schedule 3, EQC Act?*.

[24] See Section 2.c.iv Is there Physical Loss or Damage?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.d Is there "Physical Loss or Damage"?*.

[25] See Section 2.c.v Is the Physical Loss or Damage as "the Direct Result" of the Natural Disaster?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings – Section 5.e Is the Physical Loss or Damage "as "the Direct Result" of the Natural Disaster?*.

[26] See Section 2.c.ii What is a "Natural Disaster"?. For further details, see *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.b "What is a Natural Disaster"?*.

c. Physical loss or damage that is a direct result of measures taken to mitigate the consequences of natural disaster

Paragraph (b) of the definition of natural disaster damage covers a specific type of physical loss or damage that is a direct result of measures taken to mitigate the consequences of natural disaster. An example is damage caused by Urban Search and Rescue (USAR) teams entering residential buildings by force after an earthquake in order to check on the safety of any person inside the building. The type of loss or damage covered by paragraph (b) is discussed separately.[27]

Section 2(1), EQC Act – Paragraph (b) of the definition of 'natural disaster damage'

iv. Is there physical loss or damage?

We cover 'physical loss or damage' occurring as the direct result of a natural disaster.

Section 2(1), EQC Act – Paragraph (a) of the definition of 'natural disaster damage'

a. What is the EQC Act definition of 'physical loss or damage'?

The *EQC Act* defines 'physical loss or damage' as follows:

> **physical loss or damage**, in relation to property, includes any physical loss or damage to the property that (in the opinion of the Commission) is imminent as the direct result of a natural disaster which has occurred
>
> *Section 2(1), EQC Act – Definition of 'physical loss or damage'*

This definition means that we cover both:

- physical loss or damage that has actually occurred; and
- in some circumstances, physical loss or damage that we (or an authorised person[28] acting on our behalf) consider will happen in the future. The scope of this future physical loss or damage is confined by the wording of the definition, in particular the word 'imminent'.

b. Loss or damage must be physical

Physical loss – not economic loss
Loss or damage in the context of the *EQC Act* means loss or damage to the physical materials or structure of the insured property.

[27] See Section 2.c.vi What is Physical Loss or Damage as a Direct Result of Measures Taken under Proper Authority to Mitigate the Consequences of any Natural Disaster?.

[28] This can be any of the people set out in the *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 1.b Application of Manual*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 1.b Application of Manual*.

For example, depriving a person the use of their home because of the threat of rockfall is not 'physical loss ... to the property' under the *EQC Act*. That is an economic loss – not a physical loss.

Material physical change that affects the utility or amenity value of the insured property
The physical loss or damage must be a material physical change that adversely affects the utility or amenity value of the insured property (from a structural, functional or aesthetic perspective). Material physical change includes change that is 'more-than-negligible', i.e. something beyond the minor, inconsequential or immaterial.

There may be physical changes to insured property caused by a natural disaster that are not material or do not adversely affect the utility or amenity value of the property. In that case, the change is not natural disaster damage.

It will be a question of fact in each case whether:

- there is a material physical change to the insured property; and
- the material physical change adversely affects the utility or amenity of the insured property.

c. *Physical loss or damage may be imminent physical loss or damage*

The definition of 'physical loss or damage' includes any physical loss or damage that the expert you have engaged has determined is 'imminent' as the direct result of a natural disaster that has occurred.

v. Is the physical loss or damage as 'the direct result' of the natural disaster?

We cover insured property against 'natural disaster damage', being any physical loss or damage occurring as 'the direct result' of a natural disaster.

Section 2(1), EQC Act – Paragraph (a) of the definition of 'natural disaster damage'

a. *Physical loss or damage must be 'the direct result' of the natural disaster*

Whether physical loss or damage is 'the direct result' of a natural disaster will be a question of fact to be resolved in the circumstances of the particular case. As a general rule, physical loss or damage to property is 'the direct result' of a natural disaster where the natural disaster is the direct or proximate cause of the physical loss or damage. This includes where the physical loss or damage does not occur promptly after the natural disaster because it was mitigated, but would have been considered 'imminent'[29] if it had not been mitigated.

Determining causation is a common-sense exercise rather than one involving any formal or strict legal tests. When considering whether the natural disaster was the direct or proximate

[29] See Section 5 Imminent Damage.

cause of the physical loss or damage to the property, you should consider whether, in light of all the evidence viewed as a whole, the natural disaster was more likely than not the cause of the damage.

In general, the natural disaster 'causes' the physical loss or damage to property where the natural disaster:

- leads inevitably, in the natural and ordinary course of events, to that kind of loss or damage; and
- without any break in the physical chain of causation.

The following examples illustrate where a natural disaster has 'caused' the damage.

Example 1: Damage to water pumps, taps and hot water cylinder in a residential building after a bore is damaged by earthquake
An earthquake has caused fine silt to be drawn into the water bore. Water from the bore is then pumped through the water supply system for the residential building. The silt in the water damages the cylinder, water pump and taps.

This damage is:

- the inevitable consequence of the earthquake, and it would occur in the natural and ordinary course of events; and
- there is no intervening cause that breaks the physical chain of causation.

The damage is therefore the direct result of the earthquake.

Example 2: Residential building with cracks in roof letting water in; section 124 notice means owners cannot access the residential building
An earthquake has caused cracks in the roof of a residential building. The cracks have let water in when it rained. The owners have been unable to access the residential building because a notice under *section 124 of the Building Act 2004* has been issued in respect of the property.

In this case, the water damage from the rain is:

- the inevitable consequence of the earthquake. It would occur in the natural and ordinary course of events; and
- there is no intervening cause breaking the physical chain of causation.

The water damage is therefore the direct result of the earthquake.

b. What if the physical loss or damage to a residential building is the direct result of a storm or flood after an earthquake or other natural disaster?

EQCover under the *EQC Act* for storms and floods is limited to physical loss or damage to residential land.

Sometimes there are two potential causes of the physical loss or damage to a residential building:

- a storm or flood; and
- another natural disaster under the definition of that term in the *EQC Act* (e.g., an earthquake or a natural landslip).

In this case it would be necessary to determine whether any physical loss or damage to the residential building was the direct result of the storm or flood **or** of the earthquake (or natural landslip). If the physical loss or damage was the direct result of:

- the storm or flood, there will be no EQCover for the physical loss or damage to the residential building;
- the earthquake or natural landslip, there will be EQCover available for the physical loss or damage to the residential building as provided by the *EQC Act*.

Sometimes multiple but separately insured natural disaster events cause damage to the building. See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.C Principles for Assessment where there are Multiple Events*.

vi. What is physical loss or damage as a direct result of measures taken under proper authority to mitigate the consequences of any natural disaster?

Paragraph (b) of the definition of 'natural disaster damage' in the *EQC Act* is as follows:

> (b) any physical loss or damage to the property occurring (whether accidentally or not) as a direct result of measures taken under proper authority to avoid the spreading of, or otherwise to mitigate the consequences of, any natural disaster, but does not include any physical loss or damage to the property for which compensation is payable under any other enactment

Section 2(1), EQC Act – Paragraph (b) of the definition of 'natural disaster damage'

a. Four components of paragraph (b) of 'natural disaster damage' definition

Paragraph (b) of the 'natural disaster damage' definition in the *EQC Act* can be broken down into four key components. For there to be 'natural disaster damage' under paragraph (b) of the definition:

1. there must be physical loss or damage to the property;
2. the physical loss or damage must occur (whether accidentally or not) as a direct result of measures taken under proper authority;
3. those measures must be to avoid the spreading of, or otherwise to mitigate the consequences of, any natural disaster;
4. there must not be compensation payable under any other enactment for the physical loss or damage.

For paragraph (b) of the definition to apply, all components must be met. Each component is discussed below.

1. There must be physical loss or damage to the property

The definition of 'physical loss or damage' is set out and discussed at Section 2.c.iv Is there Physical Loss or Damage?.

2. The physical loss or damage must occur (whether accidentally or not) as a direct result of measures taken under proper authority

The physical loss or damage to the property will be 'a direct result' of a measure taken under proper authority where:

- the measure has caused the physical loss or damage; and
- the physical loss or damage has occurred or is 'imminent'.[30]

In this context 'proper authority' could be authority derived from any enactment. An enactment is an Act or regulations.

An example is Urban Search and Rescue (USAR) teams (which come under Fire and Emergency New Zealand). They cause physical loss or damage by the measures they take to break down doors and enter residential buildings to check for the safety of the occupants of those buildings after an earthquake. They derive their authority from legislation governing Fire and Emergency New Zealand.

[30] See Section 5 Imminent Damage and *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 5.d.iii Physical Loss or Damage may be Imminent Physical Loss or Damage*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 6.d.iii Physical Loss or Damage may be Imminent Physical Loss or Damage*.

3. Those measures must be to avoid the spreading of, or otherwise to mitigate the consequences of, any natural disaster

The words 'to avoid the spreading of' contemplate measures for avoiding the spread of the natural disaster. However, the words 'or otherwise to mitigate the consequences of any natural disaster' are wider. They include, for example, measures taken to preserve life or otherwise assist people possibly hurt as a result of the natural disaster.

4. There must be no compensation payable under any other enactment for the physical loss or damage

For example, take the USAR team scenario. If the Civil Defence Emergency Management legislation provides for compensation for the physical loss or damage caused by the USAR team, there would be no EQCover for that loss or damage.

In each case it will be a matter of:

- identifying the particular physical loss or damage caused as a direct result of the measure; and
- ascertaining whether there is any alternative compensation available under any enactment for that loss or damage.

b. Who determines whether paragraph (b) of the definition of 'natural disaster damage' applies?

You must determine whether paragraph (b) of the definition of 'natural disaster damage' applies. Sometimes the authority (for measures for mitigating the consequences of natural disaster) will be granted by emergency legislation. You must determine whether paragraph (b) applies, in each case considering the specific facts and legal position at the relevant time.

d. What is the basis of cover?

i. Basis of cover for a 'residential building'

We insure a residential building against natural disaster damage for its replacement value.

The amount of the EQCover for a residential building is also subject to a maximum amount of insurance (sometimes referred to as the 'cap'[31]).

But before it can be determined whether the cap is reached, it is necessary to assess the amount of the natural disaster damage on the basis of the replacement value.

Section 18, EQC Act

[31] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 8.e What is the Maximum Amount (or Cap) that can be Paid for a Residential Building Exposure?*.

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These changes take place on and from 1 Oct 2022 to and including 30 Sep 2023.
Text in yellow in this Manual reflects cap, premium and excess provisions.
See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

a. What is the definition of 'replacement value'?

'Replacement value', in relation to a residential building, is defined in the *EQC Act* as follows:

> **replacement value**
> in relation to a residential building means any costs which would be reasonably incurred in respect of—
> (a) demolition and removal of debris, to the extent that is essential to enable the building to be replaced or reinstated; and
> (b) replacing or reinstating the building to a condition substantially the same as but not better or more extensive than its condition when new, modified as necessary to comply with any applicable laws; and
> (c) complying with any applicable laws in relation to the replacement or reinstatement of the building; and
> (d) other fees or costs payable in the course of replacing or reinstating the building, including architects' fees, surveyors' fees, and fees payable to local authorities;
> *Section 2(1), EQC Act – definition of 'replacement value'*

The replacement value definition can be broken down into four components.

Replacement value means costs that are reasonably incurred in doing all of the following:

- demolishing and removing debris. But this is only to the extent that the demolition and removal is essential to enable the residential building to be replaced or reinstated;
- replacing or reinstating the residential building to substantially the same as (but not better or more extensive than) its condition 'when new'. The when new condition is modified as necessary to comply with any applicable laws;
- complying with any applicable laws relating to replacing and reinstating the residential building; and
- paying other fees or costs in the course of replacing or reinstating the residential building.

Also relevant is *clause 9 of Schedule 3 of the EQC Act*:

> **9 Replacement of property**
> (1) The Commission may at its option replace or reinstate any property that suffers natural disaster damage, or any part thereof, instead of paying the amount of the damage, but—
> (a) the Commission shall not be bound to replace or reinstate exactly or completely, but only as circumstances permit and in a reasonably sufficient manner…

What does 'when new' mean?

Our obligation is to replace or reinstate a residential building to a condition 'substantially the same as but not better or more extensive than its condition when new'. Where we opt to do so by carrying out the relevant replacement or reinstatement work rather than cash settling, our obligation is to meet the 'when new' repair standard 'only as circumstances permit and in a reasonably sufficient manner'.

We are required to replace or reinstate a customer's house to a condition as similar as possible to when it was new. If a component only has a functional purpose, our obligation is met by restoring that functional purpose to its 'when new' condition. Where a component also has an aesthetic purpose, the remediation strategy must also restore the original aesthetic quality of the component. The restoration is not required to be to the same level as modern standards but rather to the same level as the original standard.

Common issues that might arise relating to the 'when new' repair standard include the following:

- Where a residential building was built with materials that are no longer available, the damaged parts of the building are to be repaired with comparable new materials so that those parts are returned to a condition that is substantially the same as, but not better or more extensive than, when the building was built.

- Where there have been changes to the building laws since the residential building was built, EQCover will meet the costs of complying with any laws applicable to the repair or replacement of the earthquake damaged parts of the building. For example, if the chimney of an older type residential building were damaged by an earthquake, and the *building code* required that the replacement chimney have a different specification than used when the building was built, the EQCover would meet the cost of the improvement.

We acknowledge that this standard might differ from the reinstatement obligations contained in some private insurance contracts, e.g. those that require the insurer to rebuild or restore a building to a condition 'substantially the same as new', or other formulations. The consequence of this is that different parts of a claim might be subject to different repair standards. In difficult cases, you should escalate to the appropriate Toka Tū Ake EQC representative.

b. Situation where reinstatement or replacement requires doing work on undamaged property elements

Because the replacement value includes the costs 'reasonably incurred' in replacing or reinstating a building, it is sometimes necessary to do work on an undamaged part of a residential building to meet the replacement value standard. An example of this is removing undamaged floorboards to repair foundations. This also applies when there is a pre-existing condition.[32] You should consider the coverage that EQCover and the customer's private insurance policy may provide in these circumstances.

[32] See Section 6 Pre-existing Conditions.

In these situations, EQCover includes the cost of:

- the work on the undamaged part of the residential building that is necessary to carry out the repair;
- reinstating the undamaged part if it was damaged in the course of the work being done on it; and
- modifying the undamaged part, if any laws or legal requirements, e.g. the performance standards in the *building code*, require the undamaged part to be modified as a result of the work being done on it.

Whether work on an undamaged part of the residential building is necessary to replace or reinstate the damage will depend on the particular circumstances of each damaged residential building.

Example
The following is an example of how the replacement value standard may apply in practice.

Following an earthquake, a brick chimney falls through the corrugated iron roof of a 1900s-era villa.

The falling chimney smashes through the ceiling, shattering a ceramic light fitting, whose wiring was not currently compliant but was functional before the earthquake.

To repair the roof, the corrugated iron in the area where the chimney fell would be replaced with new corrugated iron. If corrugated iron of the same type as the damaged iron is not available because it is no longer manufactured, the new corrugated iron would be a modern compatible product, which matches as closely as possible the profile of the damaged corrugated iron.

It will also be necessary to repair or replace undamaged parts of the roof that need to be removed to repair the earthquake damage, e.g. the iron ridging on the roof apex.

The repair work to the roof would be carried out to ensure that the work meets applicable laws such as the performance standards in the *building code*.

The light fitting would be replaced. If the existing wiring could not be safely reconnected to the light fitting, an electrical safety inspection would be required. The wiring would need replacing to a point where the electrician determines it can safely be reconnected, and to meet any legal requirements for that work.

Residential buildings with structural or design issues
Before finalising the assessment of a residential building with structural or design issues, e.g., weathertightness issues arising from the specific design or construction of the building, see Section 6 Pre-existing Conditions.

c. How does replacement value apply with respect to floor levels?

If the natural disaster damage includes floor dislevelment, the *EQC Act* determines whether relevelling is required. Any relevelling will be on the basis of the 'replacement value'[33] standard.

The replacement value standard does not mean that we must necessarily replace or reinstate a residential building exactly the same as it was when it was new. This is a particular issue where a residential building has floors that were not level before a natural disaster and the residential building has previously been altered to accommodate the floors not being level.

Completely re-levelling the floors could damage the other parts of the residential building that had previously been altered. In those circumstances a repair of the foundation system that does not result in the floors being completely level may be sufficient to meet the requirements of the *EQC Act*. What is required will depend on the circumstances of each residential building. Any remediation strategy must also comply with all applicable laws, e.g. the *Building Act 2004*.

d. How does the replacement value standard apply where there is a cash settlement?

If the claim is cash settled, the payment must be the replacement value of the property as defined in *section 2(1) of the EQC Act* (and otherwise in accordance with the provisions of the *EQC Act*, including the cap on the amount of the insurance). This replacement value standard of repair is the same whether the EQCover claim is cash settled or if the residential building is repaired.

ii. Basis of cover for residential land

We insure residential land against natural disaster on an indemnity basis. Unlike residential buildings, residential land is not insured against natural disaster damage for its replacement value.

The amount of the EQCover for residential land is subject to a maximum amount of insurance (sometimes referred to as the 'cap').

In summary, the cap is the sum of:

- the market value of the damaged or lost insured land (or other smaller specified area of land); and
- the indemnity value of the damaged insured land structures.[34]

[33] See Section 2.d.i.a What is the Definition of 'Replacement Value'?.

[34] See the *Land Valuation Guide*.

But before it can be determined whether the cap is reached, it is necessary to assess the amount of the natural disaster damage on the basis of:

- (typically) the cost of repair;[35] or
- (occasionally) the diminution of value (DOV).[36]

a. When should diminution of value be assessed?

Sometimes it may be appropriate for us to settle a residential land claim (or part of that claim) on the basis of the reduction of value to the property caused by the land damage. This mode of settlement is an alternative to settlement on the basis of the cost of repairing that damage. This reduction of value is called diminution of value (DOV).

When might it be appropriate to obtain a valuation of the DOV?
In general, it may be appropriate to settle a residential land claim (or part of that claim) by paying DOV (rather than the cost of repair) if:

- it is not feasible to carry out a repair of the damage;
- it is not possible to carry out the repair lawfully. For example, it may not be possible to get a resource consent to carry out the repair;
- you are satisfied that the customer does not intend to undertake the repair of the land within a reasonable period of time (if at all); or
- the cost of the repair work is disproportionate to the reduction of value to the property caused by the land damage. In this case, you should have regard for the particular circumstances of the customer (including their stated intentions in relation to repair of the land).

In the past, we have settled on the basis of DOV in some cases where there are certain types of complex land damage. For example, we have settled on the basis of DOV for some properties with increased liquefaction vulnerability (ILV) and increased flooding vulnerability (IFV) land damage.

You may settle on the basis of DOV where land has been lost (e.g., a cliff has collapsed) and cannot be restored.

For more details on settling a residential land claim (or part of that claim) by paying DOV, see the *Toka Tū Ake EQC Claims Manual – Residential Land Section 9.d.vii Diminution of Value (DOV)*. If it is identified that assessment on the basis of DOV may be appropriate, you must escalate the matter to the appropriate Toka Tū Ake EQC representative.

[35] See the *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.v Assessing the Conceptual Remediation Strategy*.

[36] See the *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.f When Should Diminution of Value be Assessed?*.

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e. Consequential Loss

We do not cover any consequential loss. The *EQC Act* states that 'consequential loss' includes loss by theft, vandalism, loss of profits, or business interruption. This list is not exhaustive.

Clause 2, Schedule 3, EQC Act

Sometimes the natural disaster may merely 'set the scene'. The physical loss or damage may, in fact, be as the direct result of human intervention, e.g., a vandal or a thief. We do not cover such physical loss or damage.

We do not cover loss of profits and business interruption. An example of this is when a landlord's residential rental property suffers natural disaster damage, resulting in the tenants having to move out for repairs to the dwelling. We do not cover this loss of rent because it is a consequential loss. In this case you should refer the homeowner to their private insurer to discuss their private insurance policy response.

We acknowledge that the application of consequential loss considerations may be different for various private insurers and the policies they hold. In difficult cases, you should escalate to the appropriate Toka Tū Ake EQC representative.

f. Pre-existing conditions

Natural disaster damage needs to be distinguished from damage that was pre-existing or otherwise resulted from other causes.

You must consider all available relevant evidence in deciding whether the physical change was the direct result of a natural disaster. Relevant evidence may include both expert evidence, and observations of the customer and those who saw the damage before the natural disaster.

We do not have any obligation to meet any costs other than those directly linked with a natural disaster. However, this does not mean that damage from other causes will never be reinstated by the EQCover. Sometimes it is necessary to repair that other damage in order to repair the natural disaster damage lawfully and properly. Whether this is necessary will be a question of fact in each case.

For full details, see Section 6 Pre-existing Conditions.

g. Grounds for declining an EQCover claim under Schedule 3, EQC Act

Schedule 3 of the EQC Act contains provisions under which we may decline a claim.

A decision to decline a claim under *Schedule 3 of the EQC Act* is discretionary. This means that when exercising the discretionary powers to decline a claim, you must ensure that your decision is lawful, procedurally fair, reasonable and made with an open mind.

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See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

For more information on considering a claim under *Schedule 3 of the EQC Act*, see the:

- *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 7 What are the Grounds for Declining an EQCover Claim under Schedule 3, EQC Act?*/*Toka Tū Ake EQC Claims Manual – Residential Land, Section 8 What are the Grounds for Declining an EQCover Claim under Schedule 3, EQC Act?*; and

- *Schedule 3 Declinature Guide*.

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See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

3. Identifying natural disaster damage to a residential building

Before following the guidance in this section, ensure that you are familiar with the *Toka Tū Ake EQC Claims Manual – Residential Buildings*, particularly *Section 4 Is there an Insured 'Residential Building'?*. An overview of this section is provided below.

a. Overview

Cover for natural disasters is available to any residential building in New Zealand, that has a current contract of fire insurance or direct EQCover in place.

It is necessary to identify first whether there is an insured residential building, and if so, whether there is natural disaster damage to the residential building.

b. Is there an insured 'residential building'?

The definition of residential building draws a line between those buildings, parts of buildings, appurtenant structures and certain services that are insured under the *EQC Act* and those that are not.

In general terms, to find what is an insured residential building, it is necessary to identify:

- a dwelling;[37]
- the building (or part)[38] that is a residential building. This building (or part):
  - may **be** the dwelling itself, or more than one dwelling; or
  - may **include** the dwelling or more than one dwelling;
- the buildings and structures that are appurtenant[39] to the dwelling;
- the services,[40] e.g. water supply, drainage and sewerage, that serve the dwelling or surrounding land and the structures appurtenant to those services.

[37] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.c What is a 'Dwelling'*.

[38] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.d What is Meant by a Building (or Part of a Building) or Other Structure that is or Includes One or More Dwellings?*.

[39] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.e What is an Appurtenant Structure?*.

[40] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.f What are the 'Services' (and Structures Appurtenant to them) that Serve the Dwelling?*.

Schedule 2 of the EQC Act lists items that are not covered by EQCover.[41] This Schedule has the effect of carving out some items that may otherwise be insured as components of the 'residential building'.

c. Distinguishing natural disaster damage from pre-existing conditions

To be covered by us, damage must be the direct result of the natural disaster as defined in the *EQC Act*.

When identifying natural disaster damage, you must also consider any pre-existing conditions[42], including any damage not caused by natural disaster.

If the cause of damage is not clear, engage appropriate experts[43] to provide advice.

d. Indicators of the extent of damage

It is important when you are assessing natural disaster damage, that you can identify and understand types of building damage, and the necessary actions that you need to take, based on the type of building damage you identify. Any remediation work must be scoped by people sufficiently experienced, qualified and skilled for the purpose.

We generally consider damaged buildings to fall into three categories – minor, moderate and severe.

Minor damage:

- Minor damage is always cosmetic in nature.
- It typically does not require an expert to be engaged for further quantification.

Moderate damage:

- Moderate damage contains structural or weathertightness issues.
- It generally requires an expert for further quantification.
- In some cases, it may require invasive investigations to quantify the damage.

[41] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.h What Property is not Insured by Virtue of Schedule 2 of the EQC Act?*.

[42] See Section 6 Pre-existing Conditions.

[43] See Section 7 Engaging Experts.

- Generally, buildings with moderate damage remain safe to live in or can be made safe with urgent works.[44]

Severe damage:

- Severe damage involves significant structural or weathertightness issues.
- It most often requires an expert[45] for further quantification.
- In some cases, it may require invasive investigations to quantify the damage.
- Often, buildings with severe damage are unsafe[46] to occupy and will remain so until substantive repairs are carried out.
- Severe damage may result in a total loss of the building.

Imminent damage[47] may exist in any of the three categories of damage. It is more common for land claims but can also occur in building claims.

Identifying which category of damage the property you are assessing falls into will help you determine and prioritise the appropriate next steps in your assessment. In any of the three categories, an element of another category may be present. In these cases, you should first address the most significant damage that you identify.

e. Factors that may determine the nature of natural disaster damage to a residential building

Many factors affect the type and extent of damage that natural disasters cause to a building. These can include:

- the natural disaster type;
- the original construction of the building including the style, footprint, number of levels, condition, construction type and materials;
- any changes to the original construction, i.e. modifications, additions, and level of maintenance; and
- the topography and ground conditions surrounding and supporting the residential building.

[44] See the *Urgent Works Guide*.

[45] See Section 7 Engaging Experts.

[46] See Section 9 Unsafe Properties.

[47] See Section 5 Imminent Damage.

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Damage types can also overlap. Common natural disaster damage to land elements is covered in Section 4 Identifying Natural Disaster Damage to the Residential Land.

The information below provides a summary of the damage you may identify in relation to specific building elements.

f. Features of natural disaster damage to a residential building

Some common features of natural disaster damage to a residential building are described below. These examples are provided as guidance or reference only, and are not intended to be exhaustive.

i. Common natural disaster damage to building elements

The below is not a complete list but provides an overview of the more common types of natural disaster damage that can occur. The resulting damage can range from minor to severe.

In all cases, consider dangerous or insanitary buildings.[48]

We do not cover damage to buildings arising from natural disaster storm or flood damage because we only provide cover to the residential land.

Earthquake:

- Impact damage
- Chimney damage, e.g. cracking, tilting, collapse
- Cladding damage, e.g. internal lining and external cladding movement, cracking at joins and connections
- Damage to services, e.g. water supply, drainage, sewerage, gas, electrical, and telephone services
- Foundation damage, e.g. settlement, cracking, movement of piles

[48] See Section 9 Unsafe Properties.

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Figure 1 Pile settlement due to loss of support

- Roofing damage, e.g. loose fixings, damaged framing, cladding and impact damage
- Racking, twisting, hogging and bulging of various building elements, e.g. superstructure, walls, doors, floors
- Total building failure (extreme cases)

Natural landslip:

- Impact damage from falling, sliding or flowing of debris
- Foundation, cladding or roofing damage
- Racking, twisting and bulging of various building elements
- Loss of building support due to evacuated land
- Moisture damage from wet material sitting against the building
- Total loss of building due to inundation or being displaced by land movement

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Figure 2 Natural landslip resulting in undermining of dwelling foundation

Tsunami:

- Debris inundation
- Impact damage from debris and water
- Water damage to electrical fixtures, fittings and supply
- Inundation and water damage to inground services, e.g. septic and water storage tanks
- Corrosion of building materials
- Undermined building foundations due to high-speed water flow and pressure
- Total loss of the building due to impact from debris in the water or being swept away

Figure 3 Total loss of dwelling due to tsunami impact

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Hydrothermal activity:

- Heat damage from expulsion of gases and/or hydrothermal activity, e.g. cupping of flooring, failed electrical wiring and insulation
- Water or moisture damage, e.g. warping/swelling of kitchen cabinetry, mould
- Impact damage from ejecta
- Foundation settlement from softened subsoils and voids that are the direct result of the hydrothermal activity

Figure 4 Heat damage to cladding from hydrothermal activity

Volcanic eruption:

- Heat damage from proximity to lava flow
- Impact damage from ballistics
- Degradation of finishes due to prolonged exposure to chemically reactive ash and particulate
- Roof deformation due to ash inundation
- Compromised effluent disposal fields due to ash inundation
- Total loss of the building due to destruction from volcanic eruption

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Figure 5 Lava flow from volcanic eruption impacting dwelling

Natural disaster fire:

- Smoke damage
- Water damage
- Heat damage
- Fire damage
- Damage caused by fire-fighting measures

Figure 6 Natural disaster fire damage

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ii. Common natural disaster damage observations to specific exterior cladding types

The following building material types relate to the most common building construction types found in New Zealand and generally to single dwelling (or non-complex multi-unit building)[49] construction. Building materials not mentioned here may require further guidance or specialised assessment. See also Appendix 1 Building Components and Repair Considerations.

Lightweight cladding
Weatherboard claddings made of timber, fibre-cement, PVC or aluminium:

- Movement and cracking

Figure 7 Weatherboard movement and cracking

- Moisture damage from debris resting against the dwelling, e.g. liquefaction or landslip debris

[49] For more information about multi-unit buildings, see Section 8 Assessing Damage Across Multiple Properties.

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Figure 8 Moisture damage to weatherboards

Metal claddings with various profiles, colours and finishes:

- Buckling, stretching and warping, e.g. due to impact damage or shaking

Figure 9 Impact damage to metal cladding

- Corrosion, e.g. due to chemical exposure (particularly susceptible)

Sheet and panel materials made from plywood and fibre-cement, with a variety of treatments and facings:

- Cracking across the sheet compromising its integrity
- Cracking to the coating enabling moisture to reach the backing fibre cement or plywood

Exterior insulation and finishing systems (EIFS):

- Cracking across the sheet compromising its integrity
- Cracking to the coating of the panel allowing water ingress, and ultimately complete failure of the panel, e.g. cracking to a plaster finishing system

Figure 10 Cracked EIFS panel (BRANZ)

Medium and heavyweight cladding (mass greater than 30 kg/m^2 of wall)

Stucco more than 25mm thick – cracking (older products are more susceptible to cracking, do not tolerate movement well)

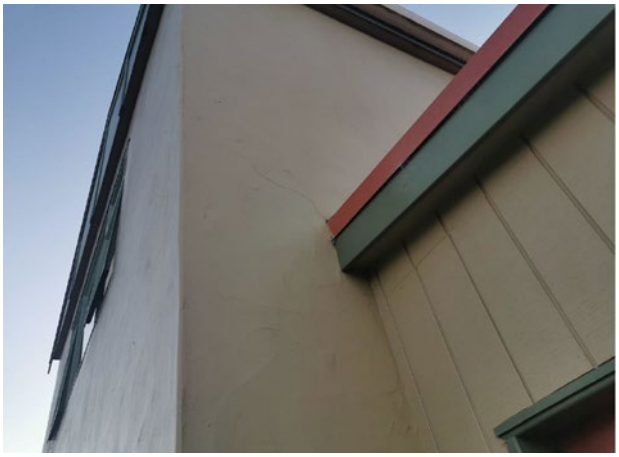

Figure 11 Cracked stucco panel

Some aerated concrete panels:

- Cracking at panel joints or connections
- Misalignment of panels

- Panels becoming detached

Figure 12 Cracked concrete panel

Precast concrete panels:

- Cracking in the panel
- Cracking at panel joints or connections
- Misalignment of panels
- Panels becoming detached

Brick and stone veneers (timber or steel framing):

- Step cracking from movement, e.g. ground movement from earthquake or other natural disaster
- Loosening of brick ties
- Cracking of stone veneers
- Total detachment of brick cladding
- Dislodgement of sill blocks

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Figure 13 Step cracking to brick cladding with detachment

Un-reinforced masonry:

- Total failure due to low structural integrity (nonductility)
- Step cracking from movement, e.g. ground movement from earthquake or other natural disaster

Figure 14 Severely cracked brick wall

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iii. Common natural disaster damage observations to specific interior lining types

The following building material types relate to the most common building construction types found in New Zealand and generally to single dwelling (or non-complex multi-unit building) [50] construction. Building materials not mentioned here may require further guidance or specialised assessment.

See also Appendix 2 Land Components and Repair Considerations.

Plasterboard:

- Non-structural cracking at sheet joins and openings
- Structural damage

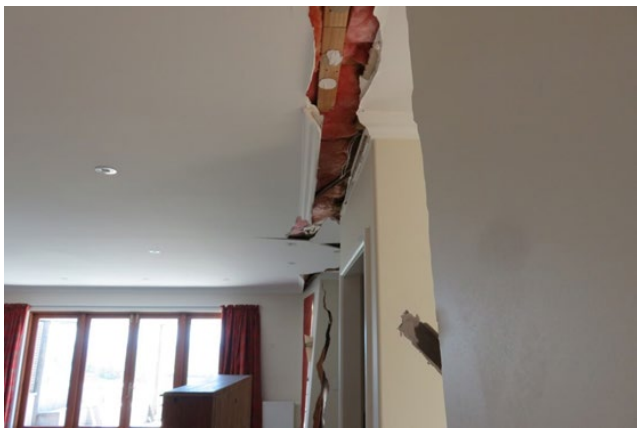

Figure 15 Structural cracking

Figure 16 Structural cracking

[50] For more information about multi-unit buildings, see Section 8 Assessing Damage Across Multiple Properties.

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Figure 17 Structural cracking

- Impact damage
- Moisture damage

Figure 18 Moisture damage

Lath and plaster:

- Cracking
- Detachment of large patches of the plaster from the lath (drumminess)
- Moisture damage

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Figure 19 Cracking and detachment damage to a lath and plaster wall

Hardboard:

- Cracking at joins, particularly where beads have been removed and plaster used on the joins
- Sheet cracking or breaking off from wall frame movement
- Moisture damage

Softboard:

- Collapsed ceiling tiles
- Moisture damage (very susceptible)
- Buckling

'Tongue and groove' (T and G) – This building element is generally affected by more severe global building damage. T and G lining more commonly suffers damage to paint finishes.

iv. Common natural disaster damage observations to foundations

There are three main types of foundations seen in NZ homes —suspended timber floor with concrete perimeter foundation, suspended timber floor supported only on piles and slab on grade. See Appendix 1 Building Components and Repair Considerations, Section a Overview.

Suspended timber floor structures with concrete perimeter foundation:

- Localised settlement of piles resulting in floor dislevelment

Figure 20 Loss of support resulting in settlement

- Piles tilting (rotation), settling or collapsing and no longer having contact with bearers, resulting in springy or structurally compromised floors

Figure 21 Pile detachment and rotation

- Localised dislevelment
- Lateral ‘stretching’ of unreinforced concrete perimeter foundation, resulting in structural damage
- Bulging of subfloor due to debris (inundation)

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- Cracking:

Figure 22 Cracked foundation

- Cosmetic cracking to render finishes

Figure 23 Cracked render finish

Suspended timber floor supported only on piles:

- Pile foundation damage as listed above for suspended timber floor structures with concrete perimeter foundation

- Damage to subfloor bracing, e.g. failed bracing connections

Slab on grade:

- Cracking to a polished concrete floor resulting in cosmetic damage
- Cracking including vertical or horizontal displacement

Figure 24 Cracking with vertical displacement

- Loss of support due to changes in ground condition, e.g. evacuation of land or liquefaction-induced ejecta

v. Common natural disaster damage observations to specific chimney types

Un-reinforced masonry:

- Horizontal cracking and/or displacement

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Figure 25 Chimney cracked at roofline with temporary supporting repairs

- Step-cracking below roof line
- Loss of chimney pot
- Collapse (partial or total)

Figure 26 Total collapse of chimney with temporary waterproofing measures

- Impact damage to other insured property

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Reinforced masonry:

- Step-cracking and/or displacement of blocks
- Loss of chimney pot
- Rotation (tilting) of chimney from superstructure
- Oscillation damage to other insured building elements

Steel flue:

- Buckling or crushing of flue

Figure 27 Disconnected flue with temporary waterproofing measures

- Corrosion due to chemical exposure, e.g. ash
- Disconnection of flue and/or fastenings (partial or complete)

Pre-cast concrete:

- Loss of chimney pot
- Rotation (tilting) of chimney from superstructure
- Cracking or displacement at construction joints

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Figure 28 Pre-cast chimney

- Oscillation damage to other insured building elements
- Differential settlement of chimney from the superstructure

In addition to the above, for any cladding type over a timber or steel framed chimney, see Section 3.f.ii Common Natural Disaster Damage Observations to Specific Exterior Cladding Types.

vi. Common natural disaster damage observations to specific services

Services covered by the *EQC Act* include water supply, drainage, sewerage, gas, electrical and telephone services and structures appurtenant to those services.

- Collapse
- Displacement (vertical or horizontal)
- Cracking
- Rupture
- Cable disruption
- Inundation

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Figure 29 Displacement of septic tank

See also Appendix 1 Building Components and Repair Considerations, Section i Exterior Cladding.

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4. Identifying natural disaster damage to residential land

Before following the guidance in this section, ensure that you are familiar with the *Toka Tū Ake EQC Claims Manuals – Residential Land*, particularly *Section 4 Is there Insured 'Residential Land'?*. An overview of this section is provided below.

a. Overview

Cover for natural disasters is available to any residential building in New Zealand that has a current contract of fire insurance or direct EQCover in place for the residential building and any associated residential land.

It is necessary to identify first whether there is an insured residential building to determine whether there is insured residential land, and if so, whether there is natural disaster damage to the residential land.

This section discusses visible land damage only. If you identify non-visible land damage, i.e. increased liquefaction vulnerability (ILV) or increased flooding vulnerability (IFV), you must escalate this to a Toka Tū Ake EQC representative.

b. Is there insured 'residential land'?

The definition of 'residential land' draws a line between land that is insured under the *EQC Act* and land that is not.

In general terms, to find what is the insured residential land, it is necessary to identify:

- the residential building involved. That is because identifying the residential building (which may include several appurtenant buildings and structures) is critical to identifying the insured residential land;[51]
- the land holding[52] the residential building is lawfully situated on;
- the land the building is situated on;[53]
- the land within 8 metres, in a horizontal line, of the residential building;[54]

[51] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.c Identifying a 'Residential Building' is Critical to Determining Whether there is 'Residential Land'*.

[52] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.d What is a 'Land Holding'?*.

[53] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.e What is 'Land on Which the Building is Situated'?*.

[54] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.f What is 'Land within 8 metres in a Horizontal Line of the Building'?*.

- the main access way to the residential building and land supporting the main access way;[55]

- the bridges[56] within the insured area of land;

- the culverts[57] within the insured area of land;

- the relevant retaining walls[58] and their support systems.

Schedule 2 of the EQC Act lists items we do not cover.[59] This schedule has the effect of carving out some items that may otherwise be insured as components of residential land.

The following diagram provides a high-level illustration of what is and what is not covered as residential land.

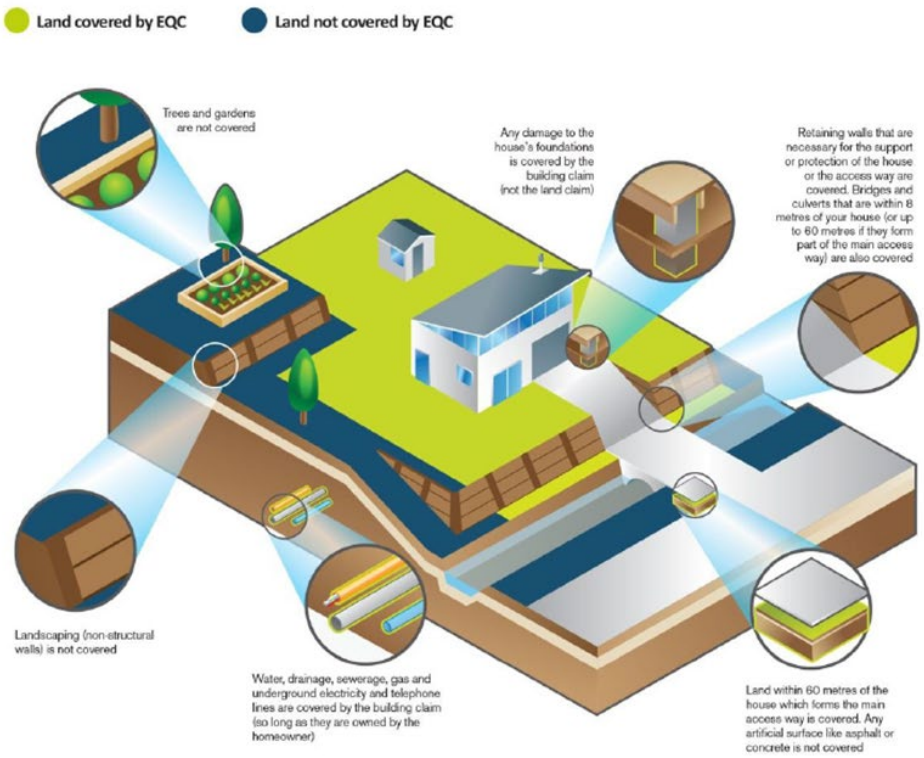

Figure 30 Residential land we cover

[55] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.g What Access Way (or Part of an Access Way) is 'Residential Land'?*.

[56] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.h What Bridges are 'Residential Land'?*.

[57] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.i What Culverts are 'Residential Land'?*.

[58] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.j What Retaining Walls are 'Residential Land'?*.

[59] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.k What Property is Not Insured by Virtue of Schedule 2 of the EQC Act?*.

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c. Distinguishing natural disaster damage from pre-existing conditions

To be covered by us, damage must be the direct result of the natural disaster as defined in the *EQC Act*.

When identifying natural disaster damage, you must also consider any pre-existing conditions,[60] including any damage not caused by natural disaster.

If the cause of damage is not clear, engage appropriate experts[61] to provide advice.

d. What are the steps in the assessment?

In general terms, there are seven steps involved in assessing a residential land claim. You must assess:

- the extent of the land holding;[62]
- the type and extent of the land damage to the land holding;[63]
- the extent of the insured residential land;[64]
- the area of insured residential land that is lost or damaged;[65]
- the conceptual remediation strategy for damage to the insured residential land;[66]
- the cost of repair for damage to the insured residential land;[67] and
- the value, at the site of the damage, of the damaged areas of insured land and the indemnity value of the damaged insured land structures.[68]

More details on each of these seven steps are set out below. If you require specialist advice to complete any step in the assessment, see Section 7 Engaging Experts.

[60] See Section 6 Pre-existing Conditions.

[61] See Section 7 Engaging Experts.

[62] See Section 4.d.i Assessing the Extent of the Land Holding.

[63] See Section 4.d.ii Features of Natural Disaster Damage to Residential Land.

[64] See Section 4.d.iii Assessing the Extent of the Insured Residential Land.

[65] See Section 4.d.iv Assessing the Area of Land that is Lost or Damaged.

[66] See Appendix 2 Land Components and Repair Considerations.

[67] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.vi Assessing the Cost of Repair*.

[68] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.vii Assessing the Relevant Land Values*.

i. Assessing the extent of the land holding

First, you must identify the extent of the land holding. *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.d What is a Land Holding?* sets out in detail how to identify the land holding of the property. In general, the 'land holding' consists of all the land within the boundaries shown on the record of title for that property. However, land outside those boundaries may also form part of the land holding in two situations[69] as follows:

- where there is an easement providing access over neighbouring land;
- where it is appropriate to treat two or more records of title as one.

ii. Assessing the type and extent of the natural disaster damage to the land and land structures on the land holding

Next, you must identify the type and extent of natural disaster damage to the land and land structures within the land holding.

What is the natural disaster damage?
The residential land will have incurred natural disaster damage where there is:

- 'physical loss or damage'[70] to the residential land … ;
- … occurring as 'the direct result'[71] of … ;
- … a 'natural disaster'.[72]

Section 2(1), EQC Act – Paragraph (a) of the definition of 'natural disaster damage'

In each case, there will be land damage where:

- the residential land has been materially physically changed as a direct result of a natural disaster; and
- that change has adversely affected the utility or amenity value of the land.

Material physical change includes change that is 'more-than-negligible', i.e. something beyond the minor, inconsequential or immaterial.

[69] For more information, see the *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.d.i Is the Land Holding Always the Same as the Area of Land Shown on the Record of Title?*.

[70] See Section 2.c.iv Is there Physical Loss or Damage?.

[71] See Section 2.c.v Is the Physical Loss or Damage as 'the Direct Result' of the Natural Disaster?.

[72] See Section 2.c.ii What is a 'Natural Disaster'?.

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Identifying damage to both insured and uninsured land

At this stage of the assessment, you should identify and record damage to all land and land structures on the land holding. This means that the assessment will include damage to both:

- the insured area of residential land and the insured land structures; and
- any uninsured land and land structures on the land holding.

We cover only the insured area of residential land and the insured land structures. But it is useful to us to also have information about any damage to the uninsured land and land structures on the land holding. That information may (where relevant) support the assessment of the current or a future EQCover claim related to the property.

Some typical types of land damage

Typical types of land damage from different natural disasters include (but are not limited to) those identified in the table below.

Table 2: Typical types of land damage

			NATURAL DISASTER TYPE							
			Earthquake	Natural landslip	Volcanic eruption	Hydrothermal activity	Tsunami	Storm*	Flood*	Natural disaster fire
LAND DAMAGE TYPE	Land	Evacuation (including scouring)	X	X	X	X	X	X	X	
		Inundation (falling, sliding, flowing or ejection)	X	X	X	X	X	X	X	X
		Cracking (lateral spreading)	X	X		X				
		Cracking (oscillation movement)	X							
		Undulating land	X	X						
		Local ponding	X							
		Local settlement	X	X						
		Groundwater springs	X	X			X			
		Contamination	X	X	X	X	X	X	X	
	Land structures (bridges, culverts, retaining walls)	Impact	X	X	X	X	X	X	X	
		Cracking	X	X	X	X	X	X	X	
		Rotation	X	X	X	X	X		X	
		Collapse	X	X	X	X	X		X	
		Washed away			X		X		X	

* Residential land only

Imminent damage

In assessing any imminent damage, the engineer engaged (or other assessor) should provide their best estimate of the further natural disaster damage expected to occur to the residential land (if any):

- as a direct result of the original natural disaster; and
- during the 12-month period following that natural disaster.[73]

That assessment should be based on the following assumptions:

- normal weather patterns with no extraordinary events; and
- no remediation or mitigation of the original natural disaster damage.

For further details, see Section 5 Imminent Damage.

As at what date must the damage be assessed?

The damage must be assessed as at the date that the natural disaster occurred, not as at the date of the assessment. This includes assessing:

- the damage that has occurred; and
- any imminent damage.

For example, the customer may have started repairs (such as debris removal) before the damage assessment. But in this case, the damage must nevertheless be assessed as at the date of natural disaster, rather than at the date of the assessment.

Situation where there is both residential land and residential building damage

Sometimes (particularly for a natural landslip), the natural disaster damage to the residential land may also affect the residential building on the land holding. For example, this may be the case where the land damage has resulted in imminent damage to the residential building.

In this situation, you must consider whether and how the decision to settle the residential land exposure will affect settlement of the residential building exposure.

Recording the type and extent of the natural disaster damage

The type and extent of the natural disaster damage to the land and land structures on the land holding should be recorded using a land sketch[74] and accompanying report.

[73] See Section 2.c.iv.c Physical Loss or Damage may be Imminent Physical Loss or Damage.

[74] For more details about the land sketch, see Section 13.d.iii Site Assessment Documentation Standards.

iii. Assessing the extent of the insured residential land

You must identify the extent of the insured residential land. We only cover natural disaster damage to insured residential land.

How is the insured residential land identified?
Section 4.b Is there Insured 'Residential Land'? sets out in detail how to identify the insured residential land. In summary, the insured residential land is defined under the *EQC Act* to mean certain property within the land holding which comprises:

- the land that comes within the residential land insured under the *EQC Act*; and
- any bridges, culverts or retaining walls that are insured as residential land under the *EQC Act*. These bridges, culverts or retaining walls are called 'land structures' in this Manual.

Section 4.c Distinguishing Natural Disaster Damage from Pre-existing Conditions sets out details on assessing the extent of the residential land in different situations.

Section 2(1), EQC Act – Definition of 'residential land'

What if there is doubt about whether any particular property is insured residential land?
Sometimes there may be doubt whether a particular area of land or land structure comes within the definition of the insured residential land under the *EQC Act*. For example, there may be doubt about:

- whether a specific area of land supports the main access way[75] of the property; or
- whether a particular wall on the property is an insured retaining wall[76].

If you doubt that a particular area of land or land structure comes within the residential land at the property, you should:

- record the exact location and footprint of that particular area of land or land structure;
- obtain photographs of the damage situation; and
- note in writing why that particular area of land or land structure is or is not part of the residential land.

In the first instance, you should refer that information to an engineer to see whether they can resolve the doubt. If, after obtaining the engineer's advice, you still have doubts about whether the area of land or land structure is insured residential land, you should escalate the matter to the appropriate Toka Tū Ake EQC representative.

[75] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.g What Access Way (or Part of an Access Way) is 'Residential Land'?*.

[76] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.j What Retaining Walls are 'Residential Land'?)*.

Recording the type and extent of the insured residential land

You should record the extent of the insured residential land (including any particular areas of land or land structures that are in doubt) using a land sketch[77] and accompanying report.

iv. Assessing the area of land that is lost or damaged

You must identify the area (or areas) of insured land that are actually lost or damaged. The value of the area of insured land that is lost or damaged is a key component in calculating the maximum amount (or cap) that can be paid for the insured land component of a residential land claim.

The area of insured land that is actually lost or damaged includes any area of land where physical loss or damage is, in our opinion, imminent[78] as the direct result of the natural disaster.

You should identify the area of insured land that has actually been lost or damaged early in the assessment process.

For instructions on preparing a land sketch, see Section 13.d.iii Site Assessment Documentation Standards.

For an example of a land sketch, see Appendix 4 Documentation Examples, Section e Land Sketch.

For further information about how natural disaster damage to land is assessed, see *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7 How is the Natural Disaster Damage Assessed?*.

e. Indicators of the extent of damage

It is important when you are assessing natural disaster damage, that you can identify and understand different types of land damage and the actions that you need to take based on these.

We generally consider damaged land to fall into three categories – minor, moderate and severe:

Minor damage:

- Minor damage only affects the residential land, not the residential building.
- It generally does not require an expert to be engaged for further quantification.

[77] For more details about the land sketch, see Section 13.d.iii Site Assessment Documentation Standards.

[78] See Section 2.c.iv.c Physical Loss or Damage may be Imminent Physical Loss or Damage.

- The damage generally does not affect a land structure.
- It does not include natural landslips.

Moderate damage:

- The damage affecting the residential land is likely to also affect the residential building.
- It may require an expert for further quantification and remediation strategy.
- The claim may involve damage to a land structure.

Severe damage:

- Severe damage almost always affects the residential building.
- It will require an expert for further quantification and remediation strategy.
- Land structures may have suffered significant damage.
- Sometimes, land with severe damage makes the property unsafe to occupy[79] and it will remain so until substantive repairs are carried out.
- Severe damage may result in total loss of the insured land.

Imminent damage[80] may exist in any of the three categories of damage, however, it is more likely in moderate or severe damage.

Identifying which category of damage the property you are assessing falls into will help you determine and prioritise the appropriate next steps in your assessment. In any of the three categories, an element of another category may be present. Where there are multiple categories of damage, you should always address the most significant damage first.

f. Features of natural disaster damage to residential land

Some common features of natural disaster damage to residential land are described below. These examples are provided by way of guidance and reference only, and are not intended to be exhaustive.

i. Natural disaster land damage

The most common types of natural disaster land damage are as follows. For further examples, see Appendix 5 Case Studies.

[79] See Section 9 Unsafe Properties.

[80] See Section 5 Imminent Damage.

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Evacuation

Evacuation means the displacement of land either by falling, sliding, flowing or movement of land as a direct result of a natural disaster as defined by the *EQC Act*. Examples include land lost through landslip, explosivity (hydrothermal), scouring due to high-speed water flow and pressure from a tsunami, and crater damage from volcanic ballistics.

Figure 31 Evacuation due to landslip

Inundation

Inundation is a phenomenon where the existing land in a location has not moved or been damaged itself but has been covered with debris that has travelled from another location. Examples include liquefaction silt, building debris not arising from the insured residential building, volcanic ash or lava flows, silt debris from flood or tsunami action, and fallen trees from storms or flood.

Figure 32 Silt inundation due to flooding

Cracking (lateral spreading)

Cracking means the spreading or cracking of land induced by stressors on the land that occur in earthquake, landslip, and hydrothermal events.

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Figure 33 Cracking (lateral spreading) due to earthquake

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Cracking (oscillation movement)

Cracks to land can result from both lateral spreading (see above) and oscillation (backwards and forwards movement of land and buildings during earthquake shaking). Cracks resulting from oscillation are typically minor and isolated.

Figure 34 Cracking (oscillation movement of dwelling) due to earthquake

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Undulating land

Undulating land is caused by the uneven settlement of the ground surface as a result of the ejection of sand and silt, and, to a lesser extent, the uneven settlement of liquefied soils below ground. This can also be caused by horizontal and vertical displacement of soil and/or rock as a result of a natural landslip.

Figure 35 Undulating land due to earthquake

Localised ponding

Localised settlement or lowering of the land resulting in water forming ponds on the ground surface for extended periods in locations where it did not pond before the earthquake.

Figure 36 Localised ponding due to earthquake

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Localised settlement

This can occur in areas affected by earthquake where one area of residential land settled more than the adjacent land. Horizontal and vertical movement of soil and/or rock during a natural landslip can also result in localised settlement of the ground surface.

Figure 37 Localised settlement due to rotated retaining wall (obscured)

Groundwater springs

New groundwater springs can emerge and start flowing over the ground surface where this was not happening before the natural disaster. The spring usually occurs at a specific location on residential land. In almost all cases, you will require a geotechnical engineer to assess whether a groundwater spring is the direct result of a natural disaster.

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Figure 38 Inundation from groundwater spring due to earthquake

Contamination

A natural disaster may sometimes cause residential land to become temporarily contaminated, e.g. where sewage seeps to the surface of the land. In these cases, the contamination often breaks down to safe levels over a short period, e.g. because the bacteria in the sewage break down in the sunshine or normal rainfall. Where the land has self-repaired in this way, or will self-repair in the short term, you do not need to cost any land damage repair unless there are other types of damage to the insured land. However, where this type of contamination cannot self-repair, e.g. contamination under the dwelling where sunshine or rainfall cannot reach, you must cost an appropriate repair.

Where the land contamination is caused by something other than natural disaster, e.g. aged asbestos cladding, we do not cover it. However, if there is a valid claim for land damage, we will cover any appropriate costs relating to the contaminated land as required to repair the natural disaster damage to the insured residential land. We are not responsible for addressing the effect of the contamination on the site itself. For detailed guidance about pre-existing conditions, see Section 6 Pre-existing Conditions.

For more details on common remediation strategies, see Appendix 2 Land Components and Repair Considerations.

ii. Natural disaster damage to land structures (retaining walls, bridges and culverts)

The most common types of natural disaster damage to land structures are as follows. For further examples, see Appendix 5 Case Studies.

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Impact damage

Impact damage is damage arising from debris moved by the natural disaster impacting the land structure. Examples of this damage include rockfall from a landslip impacting a bridge, volcanic ejecta impacting a land structure, and debris in floodwaters impacting land structures.

Figure 39 Impact damage to a bridge abutment from flood debris

Cracking

Cracking to a land structure is the physical manifestation of cracks to the materials that make up a structure. Examples include cracking to the footings of a bridge placed under pressure by flood waters, earthquake cracking to a concrete retaining wall caused by shaking.

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Figure 40 Retaining wall that has cracked due to earthquake

Rotation

Rotation of a land structure refers to a loss of structural integrity as a result of the structural members rotating beyond their original configuration. One example of this is a retaining wall that has rotated forwards as a result of land movement (landslip) upslope putting pressure on the wall.

Figure 41 Timber retaining wall that has rotated due to land movement during a heavy rain event

Collapse

Collapse of a land structure is the total failure of a land structure. One example of this is a retaining wall that has failed structurally in an earthquake and collapsed.

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Figure 42 Timber crib retaining wall that has collapsed due to earthquake

Washed away

This refers to when a large volume of water washes away a structure, e.g. a bridge. It can apply to all or part of a structure, e.g. when some of a bridge's structural members wash away in a flood.

Figure 43 Stacked stone retaining wall washed away by flood waters

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5. Imminent damage

a. Overview

The *EQC Act* states that 'physical loss or damage, in relation to property, includes any physical loss or damage to property that (in the opinion of the Commission) is imminent as a direct result of a natural disaster which has occurred.'

Section 2(1), EQC Act – definition of 'physical loss or damage'

When referring to physical loss or damage that we consider imminent, we commonly use the terms 'imminent damage', 'imminent risk' or the shorthand term 'IR'. For simplicity, we have referred to this as 'imminent damage' within this Manual.

The Act does not define 'imminent'. However, for practical purposes, we consider whether further damage is expected to result from that event during the 12 months after it. When making that assessment, we assume there will be normal weather conditions during the 12-month period (i.e. no extraordinary conditions) and no remediation or mitigation of the original natural disaster damage.

If any further damage were to occur within 12 months following the original natural disaster as a result of extraordinary weather conditions (i.e. not normal conditions), this is not considered to be imminent damage. However, we may cover this damage as a separate natural disaster event, where the relevant requirements of the *EQC Act* are met. The customer should lodge a new claim for this damage.

In assessing any imminent damage, the engineer (or other assessor) should provide their best estimate of the further natural disaster damage expected to occur to insured property (if any) based on the above criteria.

When assessing imminent damage, you must confirm that all of the following apply:

- The property is insured by the *EQC Act*.
- A 'natural disaster'[81] as defined in the *EQC Act* has occurred.
- 'Physical loss or damage'[82] to insured property is imminent.
- The imminent damage is a 'direct result'[83] of the natural disaster.

[81] See Section 2.c.ii What is a 'Natural Disaster'?.

[82] See Section 2.c.iv Is there Physical Loss or Damage?.

[83] See Section 2.c.v Is the Physical Loss or Damage as 'the Direct Result' of the Natural Disaster?.

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b. What we cover

If our assessment is that there is imminent damage, it must be covered in accordance with the relevant cover, i.e. for residential buildings or residential land. A repair basis for the settlement will factor in either:

- the cost to prevent the imminent damage from happening (if this is possible); or
- the likely cost to reinstate any damage once it happens.

Remediation work to prevent imminent damage may include:

- containing the threat, e.g. building a retaining wall to contain a landslip
- removing the threat, e.g. removing a dislodged boulder, or removing a fallen tree threatening the main access way
- relocating threatened property, e.g. moving a dwelling threatened by a landslip

We only pay or contribute to prevention costs that are necessary and actual. We may also settle imminent damage on a valuation basis.

c. Limitations

Certain types of damage linked to the original natural disaster are not imminent damage, e.g.:

- New damage caused by an aftershock following an earthquake is not imminent damage under the claim for the original earthquake. We cover aftershocks as separate earthquake claims, where the relevant requirements of the *EQC Act* are met.
- Natural disaster damage (whether from one or more types of natural disaster) that has occurred within 48 hours of the initial damage (or 7 days for natural disaster fire) is not covered as imminent damage. Rather, such damage is physical loss or damage occurring as the direct result of the initial natural disaster event.

d. Other considerations

As mentioned above, imminent damage means that further damage to the property is expected to occur within the next 12 months as a direct result of the original event. Imminent damage only relates to residential property that is covered by the *EQC Act*. It does not include imminent risk to life or risk to people's safety which is the local territorial authority (TA)'s responsibility.

Anyone assessing a claim on our behalf is responsible for notifying the TA (and other appropriate people as set out in the *Dangerous and Insanitary Buildings and Land Policy*) if they are concerned that a building or land may be dangerous or insanitary, and the health and safety of people are potentially at risk. The TA will then carry out its own investigation to decide what action it will take, if any. We cannot make any decisions about building safety for occupants. See Section 9 Unsafe Properties.

e. How to identify loss

We do not cover any loss that is not physical loss or damage or imminent damage as the direct result of a natural disaster. For example:

Economic loss
Loss or damage in the context of the *EQC Act* means loss or damage to the physical materials or structure of the insured property. Economic loss, e.g. depriving a person of the use of their home because of the threat of rockfall is not a 'physical loss… to the property'. The *EQC Act* does not cover economic loss.[84]

Consequential loss
The *EQC Act* states that 'consequential loss' includes loss by theft, vandalism, loss of profits, or business interruption. This list is not exhaustive.

We do not cover any consequential loss.

Clause 2, Schedule 3, EQC Act

For a more detailed discussion of consequential loss, see Section 2.e Consequential Loss.

f. Calculating imminent damage settlement

When calculating the amount of imminent damage, we use the market value for land areas, indemnity value[85] for land structures, and the replacement value[86] for buildings. The estimated repair cost for imminent damage will consider:

- the cost to prevent the imminent natural disaster damage from occurring (where this is possible);
- the cost to reinstate the imminent natural disaster damage[87] once it has occurred.

[84] See Section 2.c.iv.b Loss or Damage Must be Physical.

[85] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 7.A.c.iv Assessing the Area of Land that is Lost or Damaged*.

[86] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 6.A.c What is 'Replacement Value'?*.

[87] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 8.d.ii Imminent Loss or Damage* and *Toka Tū Ake EQC Claims Manual – Residential Land Section 7.A.c.vi Assessing the Cost of Repair*.

We only reimburse necessary and actual costs (up to the cap[88] for the overall claim less excess). Ensure that any proposed remedy is lawful and practical, and document it fully.

i. Complex scenarios

When there is physical loss or damage and imminent damage affecting multiple properties (land or building), with different owners and/or insurers, additional considerations apply. See Section 8 Assessing Damage Across Multiple Properties.

In certain circumstances, it is possible to 'top up' the land repair costing using the balance of the imminent damage repair costing for the building (up to a maximum of the cap). This might occur where:

- a natural disaster causes damage to residential land; and
- that damage causes imminent damage to the residential building.

If the amount of cover for the residential land is less than the cost to repair the land damage, the land repair costing might be topped up by the amount available for the imminent damage to the residential building (up to the cap for residential building cover).

In difficult cases, you should escalate to the appropriate Toka Tū Ake EQC representative.

See the *Calculating Settlement Guide* for more information on settling EQCover land claims.

[88] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 8.e What is the Maximum Amount (or Cap) that can be Paid for a Residential Building Exposure?*/*Toka Tū Ake EQC Claims Manual – Residential Land Section 9e What is the Maximum Amount (or Cap) that can be Paid for a Residential Land Exposure?*.

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6. Pre-existing conditions

a. What are pre-existing conditions?

Cover for natural disasters is available to any residential building in New Zealand that has a current contract of fire insurance[89] or direct EQCover in place. There is also cover for associated residential land.[90]

After a natural disaster, you must identify first whether there is an insured residential building,[91] and if so, whether there is natural disaster damage[92] to the residential building and/or residential land.

To be covered us, damage must be the direct result[93] of a natural disaster.[94] Therefore, EQCover may not be available for pre-existing conditions.

Common types of pre-existing conditions include:

- damage from an earlier natural disaster (whether there is a valid claim or not);
- design and/or construction-related matters;
- damage not covered by the *EQC Act*;
- damage due to 'age, wear and tear';
- existing land conditions.

Where damage is not covered by the *EQC Act*, you should consider whether it is covered by a private insurance policy. Where damage is covered by both the *EQC Act* and a private insurance policy, we typically cover the first loss, so you should consider the coverage under the *EQC Act* first. In some cases, damage may not be covered by either the *EQC Act* or a private insurance policy.

[89] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 3.g Was there a 'Contract of Fire Insurance' or Direct EQCover Over the Property Concerned in Force at the Relevant Time?*.

[90] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 3.g Was there a 'Contract of Fire insurance' or Direct EQCover over the Property Concerned in Force at the Relevant Time?*.

[91] See Section 3.b Is there an Insured 'Residential Building'?.

[92] See Section 2.c Is there Natural Disaster Damage?.

[93] See Section 2.c.v Is the Physical Loss or Damage as 'the Direct Result' of the Natural Disaster?.

[94] See Section 2.c.ii What is a 'Natural Disaster'?.

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b. Distinguishing pre-existing conditions from natural disaster damage

When identifying natural disaster damage, you must consider any pre-existing conditions that may affect the insured property being assessed. In some cases, there may be grounds to decline a claim in part or in full.[95]

If it is not clear whether the damage is the direct result of the natural disaster that relates to the current claim, engage appropriate experts[96] to provide advice.

The customer needs to prove, on the balance of probabilities, the loss they believe they have sustained is the result of a natural disaster.

In all cases where pre-existing conditions are identified, you must record a full and clear explanation of the findings.[97]

c. The amount of the natural disaster damage covered

The amount of the natural disaster damage to a residential building is measured on the basis of replacement value.[98]

We insure residential land against natural disaster on an indemnity basis. Unlike residential buildings, residential land is not insured against natural disaster damage for its replacement value. The amount of the EQCover for residential land is subject to a maximum amount of insurance (sometimes referred to as the cap). In summary, the cap is the sum of:

- the market value of the damaged or lost insured land (or other smaller specified area of land); and
- the indemnity value of the damaged insured land structures.

[95] See Section 2.g Grounds for Declining an EQCover Claim under Section 3, EQC Act.

[96] See Section 7 Engaging Experts.

[97] See Section 13 Assessment Documentation Standards.

[98] See Section 2.d.i.a What is the Definition of 'Replacement Value'?.

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d. When pre-existing conditions are included in the repair of natural disaster damage

In general, Toka Tū Ake EQC repairs should only address the natural disaster damage, i.e. not damage from any pre-existing conditions. However, pre-existing conditions may be included in the repair of natural disaster damage where:

- elements with pre-existing conditions, which have not been damaged by natural disaster, will be damaged and need to be repaired as the result of a lawful and practical repair of the natural disaster damage; and/or

- a natural disaster has exacerbated a pre-existing condition in a way that has made it materially worse and it is not possible, practical, or lawful to repair the natural disaster damage only, i.e. separately to any damage from pre-existing conditions. In the case of homes with weathertightness issues, there must also have been no legal requirement[99] at the time that the natural disaster occurred for the homeowner to carry out works on the pre-existing conditions. If there was such a legal requirement, and the homeowner had not carried out the works, and that failure caused or exacerbated the natural disaster damage, that would provide grounds for us to decline the claim. For further details on grounds for declinature, see the *Schedule 3 Declinature Guide*.

Material physical change includes change that is 'more-than-negligible', i.e. something beyond the minor, inconsequential or immaterial. To determine whether the pre-existing condition has been made 'materially worse', consider the specific facts, using judgement and common sense, and having regard for all the circumstances. If you are unable to determine this, seek advice from a more experienced assessor or engage an expert. If you are still unsure, escalate to the appropriate Toka Tū Ake EQC representative.

e. Common types of pre-existing conditions in a residential building

i. Overview

The detail below is a guide only and each case will turn on its own facts.

When you assess a property, there may be indicators that, either collectively or individually, indicate that there are pre-existing conditions. Take a holistic approach and consider all relevant factors together, not in isolation.

[99] Any such legal requirement can only be imposed by the Weathertight Homes Tribunal.

If in doubt, engage an appropriately qualified expert,[100] such as a licensed building practitioner, a geotechnical engineer or (in some cases) a structural engineer, to determine what natural disaster damage occurred, or whether the state of the residential building results from a pre-existing condition.

ii. Damage from an earlier natural disaster

Only new natural disaster damage is covered under the current (new) claim. Where the pre-existing conditions are damage from an earlier natural disaster, this damage is not covered by the current claim when:

- there is a prior claim relating to the earlier damage, but that claim is not valid.
- there is no prior claim relating to the earlier damage, and the current damage has been notified more than 2 years after the earlier damage.
- there is no prior claim relating to the earlier damage, and the current damage notification occurred within 2 years of the earlier damage. In this case, consider whether a new claim should be opened for the earlier damage.
- there are one or more prior claims relating to the earlier damage, and the current damage has occurred without sufficient time to repair the earlier damage.

Where we have settled for previous damage and the customer has had sufficient time but they haven't carried out the repair, consider grounds to decline the current (new) claim under *Schedule 3 clause 3a*. In such cases, additional considerations will apply.[101]

iii. Design and/or construction-related matters

Design and/or construction-related matters are not natural disaster damage. These matters are often interdependent, but there will be cases where the matter relates to only one:

- Building additions at different times, with different standards and/or materials, e.g. variation in foundation type, addition to stucco or roughcast plaster cladding
- Displacement due to wind loading, e.g. stress on structure due to prevailing wind conditions
- A heating source amplifying natural thermal changes, e.g. cracking to interior linings due to expansion and contraction caused by heat from a chimney flue or heat pump

[100] See Section 7 Engaging Experts.

[101] See Section 2.g Grounds for Declining an EQCover Claim under Section 3, EQC Act.

a. Weathertightness

Weathertightness issues can commonly be caused by design, construction, materials, or any combination of these. Common examples of these causes include:

- ingress of external moisture within the building envelope;
- insufficient spouting and/or rainwater discharge;
- insufficient ground clearance.

Common examples of areas where weathertightness issues are seen include:

- internal guttering;
- Klass fascia;
- penetrations, e.g. pipes, flues, electrical conduit;
- decking additions (where attached to the superstructure of the dwelling).

Leaky building syndrome

Due to design, construction, and building material issues, some houses that were built from the late 1980s to early 2000s were not weathertight and did not meet the New Zealand *building code*. When water or moisture entered between the cladding and the framework and could not escape, it caused damage, e.g. fungal growth and rot. This is commonly referred to as leaky building syndrome.

We do not have any obligation to meet repair costs associated with leaky building syndrome. However, it is difficult to separate the costs to remedy the natural disaster damage from the costs to repair damage caused by leaky home syndrome. As such, anyone involved in this work needs to have a clear understanding of what damage is the likely result of leaky building syndrome to distinguish it from damage occurring as the result of a natural disaster.

b. Schedule 3 considerations for buildings

In all cases where you have identified design or construction-related matters, you must also consider *Schedule 3 of the EQC Act* and the potential grounds to decline a claim, including:

- any works associated with the residential building that do not comply with applicable laws or bylaws. Consider grounds to decline under *Schedule 3 clause 3b*.[102]
- any services and/or appurtenant structures to the residential building that have not been constructed to standards considered appropriate at the time of construction. Consider grounds to decline under *Schedule 3 clause 3c*.[102]

[102] See Section 2.g Grounds for Declining an EQCover Claim under Section 3, EQC Act.

iv. Damage caused by an event not covered by the EQC Act

We can only cover damage caused by natural disaster as defined in *Section 2 of the EQC Act*. In cases where damage has occurred from something other than a natural disaster, we do not cover this damage. For example:

- fire not caused by natural disaster; or
- impact damage such as a car hitting the building; or
- frost damage, e.g. a burst pipe; or
- storm or flood damage to the residential building.

v. Damage due to 'age, wear and tear'

Where building materials have degraded over time due to age, wear and tear, this damage is not covered under the *EQC Act*. For example:

- weathertightness issues, e.g. to exterior plaster finishes;
- rot and moisture damage, e.g. to weatherboards;
- corrosion, e.g. to roof claddings and flashings;
- failure of concrete cover over reinforcing steel due to expansion of reinforcing steel as a result of corrosion (spalling);
- borer damage;
- concealed damage, e.g. leaking internal pipes.

vi. Existing land conditions

Examples of existing land conditions that can affect the residential building include:

- swelling associated with expansive soils, e.g. clay;
- shrinking associated with organic soils, e.g. peat and plastic soils such as clay;
- below-ground subsidence (tunnel gulley erosion);
- poorly draining soils;
- settlement due to ground deformation as a result of geotechnical characteristics;
- voids.

vii. Other considerations

Other considerations include:

- age wear and tear, exceeding expected durability period of materials;
- expansion and contraction of materials, e.g. timber, tiles, concrete due to changes in temperature or moisture content, i.e. the expected behaviour of materials in specific conditions;
- vibration from local external factors, e.g. railway lines or neighbouring earthworks;
- vibration from internal factors, e.g. door slamming (occupancy load);
- localised stress on any building elements caused by attachments or loading, e.g. aerials, heavy mirrors, or items stored in a roof space.

f. Common types of pre-existing conditions in relation to residential land

Residential land includes insured land areas and land structures, i.e. bridges, culverts and retaining walls.

i. Damage from an earlier natural disaster

Only new natural disaster damage is covered under the current claim. Where the pre-existing conditions are damage from an earlier natural disaster, this damage is not covered by the current claim when:

- there is a prior claim relating to the earlier damage, but that claim is not valid.
- there is no prior claim relating to the earlier damage, and the current damage has been notified more than 2 years after the earlier damage.
- there is no prior claim relating to the earlier damage, and the current damage notification occurred within 2 years of the earlier damage. In this case, consider whether a new claim should be opened for the earlier damage.
- there are one or more prior claims relating to the earlier damage, and the current damage has occurred without sufficient time to repair the earlier damage.

Where we have settled for previous damage and the customer has had sufficient time but they haven't carried out the repair, consider grounds to decline under Schedule 3 clause 3a.[103] In such cases, additional considerations will apply.

[103] See Section 2.g Grounds for Declining an EQCover Claim under Section 3, EQC Act.

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ii. Design and/or construction-related matters

Design and/or construction-related matters are not natural disaster damage. Examples include:

- issues with fill, including:
  - inappropriate material, e.g. organic and/or compressible material;
  - the site not being properly prepared before fill placement, e.g. soft compressible organic soils not stripped away before filling;
  - material not being placed to an appropriate engineering standard, e.g. not compacted properly or with inadequate consideration of drainage;
  - placement of fill in a configuration that reduces slope stability, e.g. placement of fill on the top of a slope;
- temporary or permanent excavations and cut batters that are too steep for the local geological conditions (and where temporary or permanent retaining structures should have been considered), resulting in land instability;
- poor stormwater management, e.g. stormwater discharging directly onto a slope, resulting in slope instability;
- placement of structural building loads (surcharge) without due consideration of the site geology, e.g. shallow foundations instead of piles in soft soil.

a. Schedule 3 considerations for land

In all cases where you have identified design or construction-related issues, you must consider *Schedule 3 of the EQC Act* and the potential grounds to decline a claim, including:

- any works associated with insured land and/or land structures that don't comply with applicable laws or bylaws. Consider grounds to decline under Schedule 3 clause 3b.[104]
- any insured land structures that have not been constructed to the standards considered appropriate at the time of construction. Consider grounds to decline under Schedule 3 clause 3c.[104]

[104] Section 2.g Grounds for Declining an EQCover Claim under Section 3, EQC Act.

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iii. Damage excluded under the EQC Act

- Movement of ground due to below-ground subsidence
- Soil expansion (heave)
- Soil shrinkage (desiccation)
- Soil compaction
- Soil erosion

iv. Damage due to deferred maintenance

We only cover loss or damage that is the direct result of a natural disaster, so it is not available for damage caused by deferred maintenance.

There may be little that can be done to effectively maintain some land structures, e.g. culverts and retaining walls. However, bridges are generally above ground, making them more accessible to maintain. Land structures are covered for their indemnity value under the *EQC Act*. The valuation methodology that is applied for indemnity value includes consideration for the age and condition of the land structure.

Other examples of deferred maintenance include:

- blocked stormwater systems;
- flood damage due to restricted watercourse, e.g. failure to properly maintain an appropriate unobstructed channel within the customer's property.

v. Existing land conditions

We only cover loss or damage that is the direct result of a natural disaster, so it is not available for existing land conditions, which might include:

- soil types, e.g. clay, peat that can change with prevailing conditions;
- existing or historical known hazards, e.g. site is in an area of known potential slope instability.

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vi. Other considerations

Other considerations include:

- soil settlement, i.e. progressive downward vertical movement of soil;
- removal of vegetation contributing to increased stormwater surface runoff and land instability;
- tree planting and/or removal resulting in a change to the land conditions, e.g. soil water content, ground volume.

g. Exacerbation of pre-existing damage

We only cover damage that has occurred as a direct result of a natural disaster, so it is not available for any other causes, e.g. pre-existing conditions.

When determining whether natural disaster damage has occurred,[105] you should consider whether:

- there has been a material physical change to the insured property;
- the physical change is the direct result[106] of a natural disaster; and
- the physical change has adversely affected the utility of the insured property.

If there is pre-existing damage, consider whether there is any new observable damage that has resulted in a material physical change over and above the pre-existing damage. Material physical change includes change that is 'more-than-negligible', i.e. something beyond the minor, inconsequential or immaterial. If the pre-existing damage is such that minor additional damage makes no material change to the utility (functionality or amenity) of the property, it is unlikely to be considered natural disaster damage under the *EQC Act*.

[105] See Section 2.c Is there Natural Disaster Damage?.

[106] See Section 2.c.v Is the Physical Loss or Damage as 'the Direct Result' of the Natural Disaster?.

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7. Engaging experts

a. Overview

In situations where an expert is necessary, depending on the type of natural disaster damage, such experts can include:

- structural engineers;
- geotechnical engineers;
- registered valuers;
- estimators;
- surveyors;
- any other appropriate expert.

For further information on when to engage specific experts, see Section 7.e Types of Experts.

b. When may an expert need to be engaged?

For a building claim, you will most commonly require expert input when you are unable to determine:

- the full extent of the damage;
- whether any particular damage is the direct result of natural disaster; or
- a lawful and practical remediation strategy for the natural disaster damage, e.g. one that complies with the *Building Act 2004*.

You should consider a structural engineering assessment in situations including when:

- the building has suffered structural damage to the foundation or superstructure, indicated by e.g.:
  - cracking to the concrete perimeter foundation, indicating lateral stretch, out-of-plane displacement (see Figure 44 below), or differential settlement.
  - lateral movement of the building superstructure relative to the foundation, indicated by building moving in relation to its foundation or rotation of foundation elements, e.g. piles or concrete perimeter foundation.
  - structural or load-bearing elements that are out of plumb.

- a pattern of broken, binding, swinging or inoperable doors and windows, indicating potential racking or settlement.
- damage to the foundation or superstructure near a chimney.
- separation between different parts of the building, e.g. at the interface between additions, alterations or balconies.
- distortion of the roof cladding or damage to roof members.

- the supporting or surrounding land has damage (e.g. land cracking caused by lateral spreading, or inundation by ejected sand and silt) near the building footprint.
- floor levels have materially changed after the natural disaster event, adversely affecting the utility or amenity value.
- there are unstable and potentially dangerous building elements, e.g. damaged unreinforced brick or block walls or chimneys.
- interior linings have been damaged to an extent that bracing performance is likely to have been reduced.
- a geotechnical engineer advises that a structural assessment is required.

Figure 44 Out-of-plane displacement

In addition to the above, it is more likely that you will require structural engineering advice when assessing buildings that are not constructed in accordance with the New Zealand Standard 3604:2011 Timber-framed Buildings (NZS 3604). Examples include when there is damage to a building with:

- an irregular configuration, e.g. split level, hillside property or multistorey building with large openings; or

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- non-standard construction materials (e.g. pre-cast tilt panel, reinforced concrete construction or concrete masonry walls).

For a land claim, you will typically engage certain experts, e.g. geotechnical engineer and valuer, directly. Situations where this will arise include:

- any landslip affecting insured land;
- imminent damage[107] considerations;
- significant structural foundation damage.

Typically, you will engage experts as part of your post-site assessment actions.[108] Sometimes, it will be appropriate to engage an expert to carry out their site visit with you or, if the situation is urgent, before you.[109]

Your organisation may also receive event information from us that provides an early indication of the likely technical and expert resources needed to assess properties within certain geographical areas. You should use this information to guide and support your event response planning and assessment approach. For more information, see Section 10.b.ix Review Event Information.

In some cases where you are unable to assess certain building or land elements, you may advise the customer that they should engage appropriate experts to assess for natural disaster damage. This might arise in situations where there are:

- health and safety issues, e.g. heights;
- access issues, e.g. inground service.

You must explain to the customer that reimbursement of fees[110] for professional services is not guaranteed.

c. Who may be engaged as an expert?

Experts engaged by us (or any person authorised to deal with claims on our behalf) must:

- be engaged on arm's-length commercial terms;
- be appropriately qualified and experienced;

[107] See Section 5 Imminent Damage.

[108] See Section 12 Post-site Assessment Actions.

[109] See Section 10 Planning for a Site Assessment.

[110] See *Toka Tū Ake EQC Claims Manuals – Residential Buildings Section 11.o Reimbursing Fees Incurred by Customers Where a Claim is Reassessed*/ *Toka Tū Ake EQC Claims Manuals – Residential Land Section 12.o Reimbursing Fees Incurred by Customers Where a Claim is Reassessed*.

- be independent of our customer; and
- not be subject to any conflict of interest that would, in the circumstances, reasonably be considered to prevent the professional from providing services to us in relation to our customer's claim or claims generally.

When engaging experts, consider the above along with any other relevant factors, e.g. location of the property and the distance, time, and any guidance that we may issue from time to time.

d. How to engage an expert

In all cases when you engage experts, their reports must be for our use and the use of our agents. The reports must be able to be relied on by us. They will also be available to customers.

The expert you instruct may need to report on the damage being responded to under both the *EQC Act* and the private insurance policy. Both insurance responses can be covered by one report, however once you receive the report, you must be able to clearly identify what damage is responded to under the *EQC Act* and what damage relates to the private insurance policy. This will be important for calculating settlement of the claim.

When engaging an expert, you should issue formal instructions setting out your specific requirements. For all engagements, you must provide general information to the expert, e.g.:

- damage location;
- customer contact details;
- loss details;
- any other relevant matters, e.g. vulnerabilities customers are experiencing, health and safety, timeframe.

When engaging experts, you should also consider any other relevant factors, e.g. property location, travelling distance, time, and any other guidance that we may issue from time to time.

For each individual expert, you will need to provide more specific information. For examples, see Appendix 4 Documentation Examples. The expert will review and accept these instructions. You should also discuss and agree an indicative cost for their services.

Sometimes an expert does not accept the instructions. This can happen if the expert has a conflict of interest or the request is outside their scope of expertise, e.g. for uncommon and complex loss types. The expert may also recommend a different expert, based on the time and cost of travelling to the loss. However, these situations are rare because you will consider these factors when deciding which expert to engage.

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e. Types of experts

i. Geotechnical engineer

a. Purpose of engaging a geotechnical engineer

For land claims, the geotechnical engineer's role is to assess how the land has been damaged and how it can be reinstated to the standard required.

The geotechnical engineer will be expected to have the expertise to provide the information that is necessary for:

- the valuer to provide a valuation of the insured property that has been damaged by natural disaster;
- the estimator or quantity surveyor to provide an appropriate scope of works; and
- us (or any authorised person dealing with the claim) to use with the valuation and scope of works to determine the customer's land claim settlement amount.

For building claims, you will sometimes need geotechnical engineering advice to determine a lawful and practical remediation strategy for the building damage. When you have engaged a structural engineer, that structural engineer may require further input from a geotechnical engineer to help understand how the building has or will perform in the localised ground conditions. In such cases, you may need to provide the structural engineer with further instructions to engage a geotechnical engineer for advice.

a. Instructions to give the geotechnical engineer

Give a clear and concise brief indicating the areas of damaged land, damaged land structures, and risk of imminent damage to insured land and land structures requiring an assessment. Your instructions will include requesting:

- a site plan showing relativity of dwelling, appurtenant buildings, access ways, land structures, and services within property boundaries;
- the property's legal description;
- a general description of the property and key features;
- identification of damage to land and land structures;
- a summary of any associated damage to the residential building;
- the proximate cause of the damage;

- any factors that we may need to consider that involve grounds to decline the claim under *Schedule 3* or *5*,[111] or any grounds to consider pursuing subrogated recovery action against any liable third parties;

- a conceptual remediation strategy for land, land structures and residential buildings, in enough detail for the conceptual repair to be costed; and

- identification of any imminent damage to insured land, land structures, and/or residential buildings.

b. Requirements from the geotechnical engineering report

You will require the geotechnical engineering report to include all information that you have requested as above. The geotechnical engineering report includes a written description of the damage identified, supported by visual aids and summarised in table format.

The report should also comply with any general documentation standards[112] that we will advise of from time to time.

ii. Registered valuer

a. Purpose of engaging a valuer

The purpose of engaging a valuer is to:

- apply a value to each of the damaged land elements, consistent with the geotechnical engineering report that is used by us (or authorised agents) to settle the EQCover land claim;

- provide the values needed to calculate the land cap[113], i.e. the maximum amount we can pay for a land claim; and

- provide information to determine the correct basis for settling the EQCover land claim, i.e. repair cost or valuation land cap.

b. Instructions to give to a valuer

Your instructions will include requesting the:

- property's record of title reference, legal description and zoning;

- actual site area;

[111] See the *Schedule 3 Declinature Guide*.

[112] See Section 13 Assessment Documentation Standards.

[113] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 9.e What is the Maximum Amount (or Cap) that can be Paid for a Residential Land Exposure?*.

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- area of the minimum sized site prescribed in the district plan;
- market value for the site as per the requirements set out in *section 19 of the EQC Act* (if there is a district plan, the value of land equal to the minimum area allowable, an area of land of 4000 m^2, or the area of land that is actually lost or damaged, whichever is the smallest);
- market value for damaged insured land;
- indemnity value for damaged land structures;
- market value for any land that is considered to have imminent damage risk;
- indemnity value for any land structures that are considered to have imminent damage risk.

For the valuer to begin their assessment, you will need to provide them with either:

- the geotechnical engineering report being used for settling the EQCover claim, in particular, the Summary of Damage table; or
- your assessment report, where there is no geotechnical engineering report.

Sometimes, you will need to engage a valuer, but you will not have a geotechnical engineering report or assessment report to provide to them, e.g. for notional valuation[114] requests. It is the valuer's responsibility to conduct their own thorough investigation and obtain all other relevant and necessary information that they need to complete their valuation report using the appropriate valuation methodologies and professional industry standards.

c. Requirements from the valuer's report

You will require the valuer's report to include all information that you have requested as above. The valuer's report includes a description and quantification of all insured land areas and land structures that have been damaged, presented in a table format. The report should also comply with any general documentation standards[115] that we will advise of from time to time.

[114] For more information on notional valuations, see *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.vii Assessing the Relevant Land Values*.

[115] See Section 13 Assessment Documentation Standards.

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iii. Estimator and quantity surveyor

a. Purpose of engaging an estimator or quantity surveyor

Generally, you will be able to determine the proposed remediation strategy and quantify the cost in relation to building and land claims. You will quantify the cost of the remediation strategy that is provided in the engineering report. However, depending on your organisation's processes and/or the circumstances of the claim, you may engage an estimator or quantity surveyor to create a scope of works.

Where you are not costing the repair, it is expected that an estimator will be able to prepare a scope of works for most claims. However, there may be some cases where it is appropriate to consider engaging a quantity surveyor where a scope of works is required for more complex property types.

The estimator or quantity surveyor will:

- inspect the site if required;
- prepare costings to remediate natural disaster damage based on engineering advice.

Typically, the scope of works will be peer reviewed and approved by an appropriate person.

b. Instructions to give to an estimator or quantity surveyor

Your instructions will include requesting a scope of works suitable for remediating damage as detailed in the assessment report or the engineering report, to the standard required under the *EQC Act* and other relevant legislation, including:

- any additional enabling or access works required;
- relevant professional and compliance fees;
- relevant preliminary and general costs;
- required health and safety costs.

For further details on what the costing must include, see Appendix 3 Remediation Strategy, Standards and Costing.

c. Requirements from the estimator or quantity surveyor's report

You will require the estimator or quantity surveyor's report to include all information that you have requested as above. Their report includes a detailed line item costing of the remediation strategy. The report should also comply with any general documentation standards[116] that we will advise of from time to time.

[116] See Section 13 Assessment Documentation Standards.

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iv. Survey specialist (for a building)

A survey specialist, i.e. a Registered Professional Surveyor (RPSurvs), for a building is rarely required. You will most commonly require a survey specialist for complex buildings, e.g. buildings exceeding two storeys.

a. Purpose of engaging a survey specialist for a building

A survey specialist for a building will typically provide verticality surveys, floor level surveys and other levels, e.g. kitchen benchtop, ceiling and windowsills.

b. Instructions to give a survey specialist for a building

Request that the survey specialist for building provide their survey results.

c. Requirements from the survey specialist for a building

You will require the survey specialist's report to include all information that you have requested as above. The survey specialist for a building will provide a building plan depicting the necessary information. The report should also comply with any general documentation standards[116] that we will advise of from time to time.

v. Survey specialist (for land)

A survey specialist for land is rarely required. Before determining whether a survey is required, you should obtain and consider (at a minimum):

- copies of the relevant records of title (particularly showing the location of the boundary); and
- any relevant information from the TA file for the properties in question.

If you still cannot determine the location of the insured land from this information with reasonable confidence, you should obtain a survey to confirm the location.

a. Purpose of engaging a survey specialist for land

A survey specialist for land will provide a cadastral survey plan detailing the property boundaries and the location of any relevant land structures.

b. Instructions to give a survey specialist for land

Request that the survey specialist for land provide a survey plan that clearly shows the location of the land structures in relation to the property boundary.

c. Requirements from the survey specialist for land

You will require the survey specialist's report to include all information that you have requested as above. The survey specialist for land will provide a plan showing the location of the land structures in relation to the property boundary. The survey specialist's report will include an aerial or site map detailing the property boundaries and the location of land

structures in relation to the property boundaries. The report should also comply with any general documentation standards[117] that we will advise of from time to time.

vi. Structural engineer

a. Purpose of engaging a structural engineer

In some cases where the damage is structural and the appropriate repair is not clear, you will require expert input. See Section 7b When an Expert may need to be Engaged for examples.

The structural engineer's role is to assess the residential building damage and how it can be reinstated to the standard required. They should have the expertise to provide the information that is necessary for:

- the assessor, estimator or quantity surveyor to provide an appropriate scope of works; and
- us (or any authorised person dealing with the claim) to use with the scope of works to determine the customer's building claim settlement amount.

b. Instructions to give a structural engineer

For building claims requiring structural engineering input, give a clear and concise brief indicating the damaged residential buildings and risk of imminent damage to insured residential buildings requiring an assessment. Your instructions will include requesting:

- a general description of the property and key features;
- identification of damage to the dwelling, appurtenant structures, and services as applicable;
- the proximate cause of the damage;
- any factors that we may need to consider that may involve grounds to decline the claim under Schedule 3 or 5;[118]
- a proposed remediation strategy to the residential building, in enough detail for the proposed repair to be costed; and
- identification of any imminent damage to the insured residential building.

[117] See Section 13 Assessment Documentation Standards.

[118] See the *Schedule 3 Declinature Guide*.

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c. Requirements from the structural engineering report

You will require the structural engineering report to include all information that you have requested as above. The structural engineering report includes a written description of the damage identified, supported by visual aids.

The report should also comply with any general documentation standards[119] that we will advise of from time to time.

vii. Other appropriate experts

Sometimes, you will need to obtain advice from other appropriate experts to determine the type and extent of natural disaster damage when you are unable to determine it yourself, e.g.:

- Licensed Building Practitioner (can be licensed in any of the following):
  - Carpentry
  - Roofing
  - Brick and block laying
  - Exterior plastering
  - Foundations
- Asbestos testing and repair specialist
- Subfloor inspector
- Crack repair specialist/concrete coring service
- Electrician
- Plumber (licensed by the PGDB)
- Gasfitter (licensed by the Plumbers, Gasfitters and Drainlayers Board (PGDB))
- Drainlayer (licensed by the PGDB)
- Scaffolder
- Carpet layer
- Cladding specialist
- External moisture management systems (waterproofing) specialist
- Glazing specialist
- Air conditioning/ mechanical engineer
- Elevator technician
- Utility locator
- Environmental tester (e.g. mould)
- Fire engineer
- Specialist drone operator
- Commercial abseiler
- Building or resource consent specialist
- Retaining wall, bridge or culvert construction specialist
- Earthworks contractor
- HAIL site testing and repair specialist
- Arborist
- Geophysicist (concrete scanning)

[119] See Section 13 Assessment Documentation Standards.

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f. Reviewing expert reports

When you receive the expert's report, check it to ensure the expert has complied with your instructions and that the findings are within the expert's scope. If the report comments on areas outside of the expert's area of expertise or the scope of your instructions, e.g. how the *EQC Act* should be interpreted regarding the claim, return it to the expert for amendment.

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8. Assessing damage across multiple properties

a. Overview

Assessing multiple properties is similar to assessing a single property, but you must also consider the impact of the damage and any remediation strategy for one property on adjoining properties. The following multiple property types are discussed in this section:

- properties that have multiple dwellings within one or more residential buildings;
- properties containing residential building or land components that serve more than one building;
- neighbouring fee simple properties that are affected by the same natural disaster.

b. Principles of assessing multiple property claims

The following principles apply to assessing all multiple property claims:

- For residential building claims, EQCover is provided at a residential building level, so you must assess natural disaster damage for each residential building separately.
- If a residential building contains more than one dwelling, you must assess the natural disaster damage to the building as a whole, rather than as individual dwellings.
- If a building contains more than one residential building, you must assess the natural disaster damage to the building as a whole, rather than individual residential buildings.
- If there is more than one residential building, you must separately determine the insured residential land (and assess the natural disaster damage to that land) in relation to each residential building (which may, for these purposes, include appurtenant structures but not services).[120]
- When assessing residential building elements or land areas that serve more than one dwelling or non-residential property, we consider the insurable interests of other affected parties.

These principles are explained in more detail below.

[120] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.b.i 'Residential Land' is in Relation to a 'Residential Building'*.

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c. Process for assessing damage across multiple properties

When you have identified a potential multiple property situation with damage, before you complete your assessment, your organisation must where possible:

- identify insured and uninsured property that has been damaged;
- identify who insures the insured damaged property;
- in the case of shared property, determine who will lead the assessment. See the *Shared Building Guide* and *Shared Land Guide* for details.

For land claims, it may not be possible to complete these steps before a site assessment takes place, e.g. because:

- an expert may be required to identify the type and extent of natural disaster damage, including which properties are affected;
- it may not be immediately clear which land areas overlap and which are exclusive;
- there may be imminent damage that is unknown to the owner or insured.

To assess multiple properties, follow the steps outlined below. The specific circumstances of the property you are assessing will determine how you carry out these steps.

1. Identify each residential building (Section 8.c.i).
2. Determine whether there is a multi-unit building, and if so, categorise it (Section 8.c.ii).
3. If there is a land claim, identify the residential land in relation to each residential building (including appurtenant buildings and structures, but excluding services) (Section 8.c.iii).
4. Identify any natural disaster damage (Section 8.c.iv).
5. Document the natural disaster damage in relation to each residential building (Section 8.c.v).
6. Determine a suitable remediation strategy, or engage an appropriate expert for further assessment of the property (Section 8.c.vi).
7. Create a scope of works for the remediation strategy (Section 8.c.vii).
8. If there is a land claim, determine the appropriate valuation (site-specific or notional) (Section 8.c.viii).
9. Create a settlement recommendation (Section 8.c.ix).

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
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See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

i. Identify each residential building

Identify each residential building by first identifying each:

- dwelling.[121] Identifying whether there is a dwelling is critical to determining whether there is a residential building.
- residential building.[122] Identifying the residential building is critical to both determining whether EQCover applies to all or part of the building and identifying any related residential land.

The next section provides detailed guidance on determining whether EQCover applies to all or part of the building (the '50% rule').

Whether there is a residential building is determined when:

- the new contract of fire insurance or direct EQCover for the property is entered into; or
- the contract of fire insurance or direct EQCover is renewed.

If, part way through the period of the cover under the contract of fire insurance or direct EQCover, the building no longer meets the definition of residential building in the *EQC Act*, EQCover will nevertheless continue. The cover will continue for that building until:

- the contract of fire insurance for that building ceases to be in force (e.g. expires or is cancelled or suspended by the private insurer); or
- when the contract of fire insurance comes to an end (whether for renewal or otherwise) the building no longer meets the definition of residential building; or
- we cancel the EQCover for that building.[123]

a. Consider whether EQCover applies to all or part of the building (the '50% test')

Where a building contains facilities for both residential and non-residential purposes, you must consider whether EQCover applies to the whole building or part of it.

If the area of a building comprising one or more dwellings (the 'dwellings area') is 50% or more of the total building area, the whole building is a residential building. EQCover applies to the entire building (assuming all other requirements under the *EQC Act* are met). This applies even if some of the building is for non-residential use.

[121] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4.c What is a 'Dwelling'*.

[122] See *Toka Tū Ake EQC Claims Manual – Residential Buildings, Section 4 Is there an Insured 'Residential Building'?* and *Toka Tū Ake EQC Claims Manual – Residential Land Section 5, Is there an Insured 'Residential Building'?*.

[123] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 3.h Has the EQCover Claim been Cancelled or Limited in any Way?*.

Even if the dwellings area does not constitute 50% or more of the total building area, any part of that building is a residential building (and covered by us) if:

- the part comprises or includes one or more dwellings; and
- the dwellings area is 50% or more of the total area of the part.

When calculating the dwellings area, you must only include the floor area of the dwelling (i.e. the area behind the front door of each dwelling and not the common areas such as lobbies, corridors, or stairwells used to access dwellings, and also not including the carparks or any appurtenant structures) in your calculations. However, it would include any outbuildings that are essential to the definition of a dwelling, such as an outside toilet.

You must escalate all questions about what is part of a building (including what infrastructure relates to the part) to the appropriate Toka Tū Ake EQC representative.

The flowchart below illustrates the 50% test.

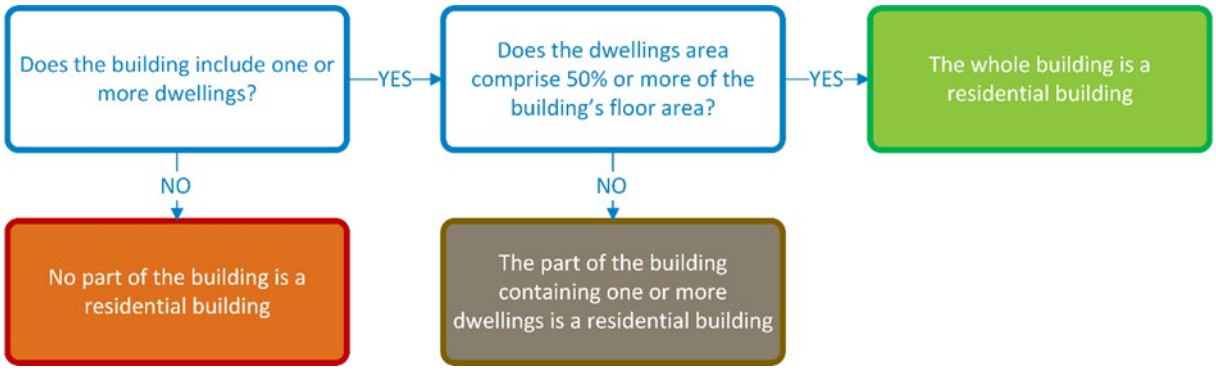

Figure 45 The 50% test

For examples of applying the 50% test, see Section d Examples of Applying the '50% Test'.

ii. Determine whether there is a multi-unit building (MUB) and if so, categorise it

To apply the general assessment steps outlined above to a residential building assessment, you must understand what a multi-unit building is and how we categorise them. A multi-unit building (MUB) is a complex set of properties that are often all housed within one building.

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To ensure a consistent approach to managing MUB claims, we break these down into the following four categories:

- MUB1: Attached and semi-detached houses;
- MUB2: Residential buildings that are on a unit title and/or part of a body corporate;
- MUB3: Mixed-use buildings;
- MUB4: Long-term accommodation for the elderly.

The flowchart below illustrates the considerations when categorising MUBs. For more details on each MUB type, see the sections below.

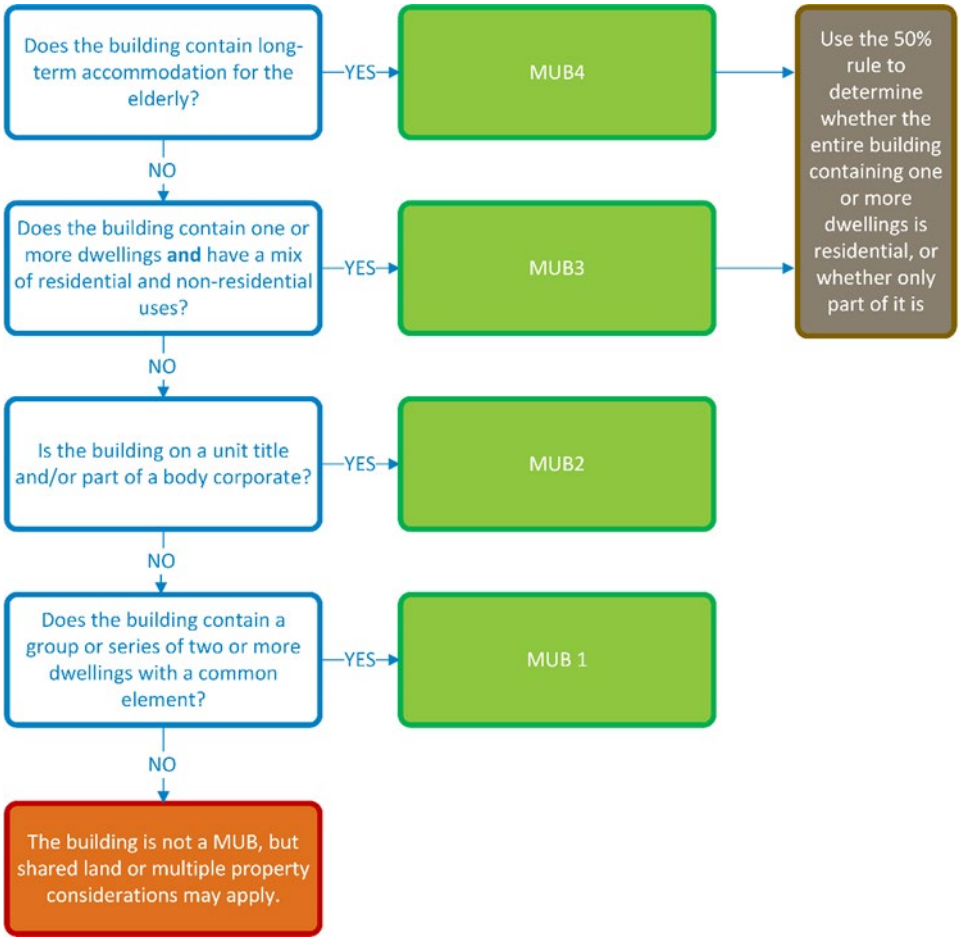

Figure 46 Categorising multi-unit buildings

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a. MUB1 – Attached and semi-detached houses

MUB1 refers to houses that are:

- attached or semi-detached, meaning a group or series of two or more dwellings that have a common building element (e.g. a shared roofline, foundation or firewall; and
- separately owned and insured.

b. MUB2 – Residential buildings that are on a unit title and/or part of a body corporate

MUB2 refers to residential buildings that are on a unit title and/or part of a body corporate, and insured collectively under one insurance policy. This category includes:

- apartment buildings, i.e. a building with two or more dwellings that have a common building element (e.g. a shared roofline, foundation or firewall). Buildings of this type often have common areas (e.g. lift shafts and/or lobbies) that are not owned by one individual.
- where two or more residential buildings are on the same land holding.

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c. MUB3 – Mixed-use buildings

MUB3 refers to any mixed-use building[124], meaning any building, part of a building or other structure:

- that comprises or includes one or more dwellings; and
- where there is a mix of residential and non-residential uses (e.g. commercial use) within that building, including, e.g. where the ground floor has a non-residential use, and there are residential uses on the floors above.

d. MUB4 – Long-term accommodation for the elderly

MUB4 refers to any buildings, parts of any buildings or structures that provide long-term accommodation for the elderly.

[124] For more details on mixed-use buildings, see *Toka Tū Ake EQC Claims Manual – Residential Buildings Section 4.d What is Meant by a Building (or Part of a Building) or Other Structure that is or Includes one or more Dwellings?*.

This category also includes any one or more residential buildings that are:

- on the same land holding; and
- part of a larger complex that forms a rest home, retirement village, aged care facility (or similar).

We cover these facilities because they are specifically included under the *EQC Act*.[125]

Identifying long-term accommodation for the elderly

A facility that provides long-term accommodation for the elderly can contain a rest home, a retirement village, or a combination of the two. The key factor in identifying long-term accommodation for the elderly is assessing whether the building comprises of dormitory-style accommodation for elderly people. This is found in many rest homes, and includes accompanying facilities. This type of accommodation is distinct from self-contained accommodation (e.g. self-contained villas and apartments in a rest home complex), which are instead covered under paragraph (a) of the 'residential building definition'.

If a facility provides only short-term respite or hospital care, it does not meet our definition of a residential building. However, if a facility provides a combination of both short- and long-term care, EQCover may apply to the whole building or to a part of it.

Whether you identify a property as a rest home, a retirement village, a combination of the two, or a combination of short-term and long-term care, you must consider whether EQCover applies to all or part of the building (the '50% test').[126]

iii. Identify the residential land associated with each residential building (land claim only)

Generally, you must identify the insured land area in relation to any residential buildings (excluding services) lawfully situated on the land holding. Once you have identified each residential building[127], you must determine:

- the land holding each residential building (excluding services) is lawfully situated on; and
- the residential land in relation to each residential building.

The flowchart below illustrates the high-level process for identifying the residential land associated with each residential building. This process is described in more detail in the sections below.

[125] See *Toka Tū Ake EQC Claims Manual – Residential Buildings Section 4.g How Does Toka Tū Ake EQC Insure 'Long-term Accommodation for the Elderly'?*.

[126] See Section 8.c.i.a Consider Whether EQCover Applies to All or Part of the Building (the '50% Test').

[127] See Section 8.c.i Identify Each Residential Building.

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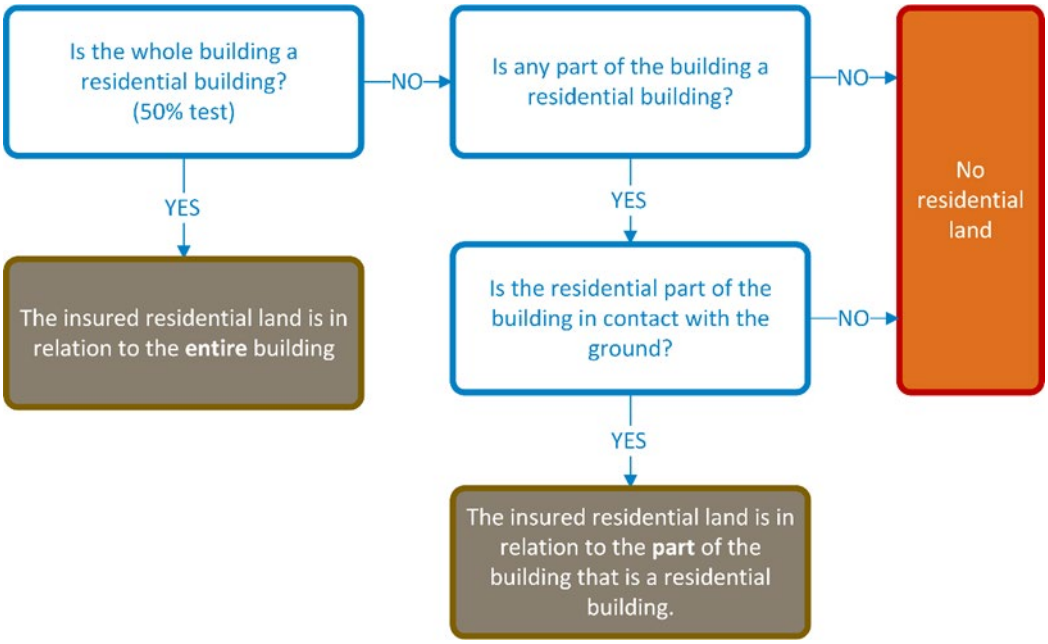

Figure 47 Identifying the residential land associated with each residential building

a. Determine the land holding the residential building is lawfully situated on

In general, the land holding consists of all the land within the boundaries shown on the record of title for that property. However, land outside those boundaries may also form part of the land holding in situations where:

- there is an easement providing access over neighbouring land;
- it is appropriate to treat two or more records of title as one.

For the purpose of determining the extent of the land holding, an encroachment licence or occupation licence is not equivalent to an easement. For example, if the customer has an encroachment licence or licence to occupy neighbouring land that a garage is situated on, that garage is not to be treated as being within the land holding.

Although it is rare, in some situations it may be appropriate to treat the land within a single record of title as two (or more) separate land holdings under the *EQC Act*.

For detailed instructions on how to identify the land holding, see *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.d What is a 'Land Holding'?*.

b. Determine the insured residential land in relation to the residential building

To determine what property comes within the residential land definition, it is necessary to identify that property in relation to each residential building (excluding services) lawfully situated on the land holding.

How is the residential land identified?

For details on how to identify residential land, see the *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.b What is 'Residential Land'?*.

Identifying the extent of the residential land is generally straightforward where a land holding contains:

- a single residential building comprising any number of dwellings; and
- the dwellings area is 50% or more of the total area of the building.

In these cases, you can assess the residential land claim for the entire residential building (including any appurtenant buildings and structures, but excluding any water supply, drainage, sewerage, gas, electrical, or telephone services).[128]

Identifying the extent of the residential land is more complex where a land holding contains:

- cross-lease properties; and/or
- more than one residential building on a land holding; and/or
- mixed-use (MUB3) buildings.

These situations are described below.

c. Identify insured residential land on cross-lease properties

Where cross-lease properties[129] are damaged following a natural disaster event, there is often overlapping damage in relation to the same residential land or common elements of each building. It is therefore important to identify cross-leases, the different insurance policies and the damage in question.

Cross-lease ownership involves two or more people owning a part but undivided share in the freehold title of a property. Although owned as one lot, a number of cross-lease properties have a division in ownership. The leases in a cross-lease development normally require each dwelling owner to have insurance, but do not usually require a common policy. Where a cross-leased property contains multiple dwellings in a single building, the dwellings involved are often separately insured by different private insurers.

In a cross-lease situation, identify the extent of the residential land depending on how many separately insured residential buildings there are.

[128] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.c.iv Situation Where There is a Residential Building with a Single Dwelling* and *4.c.v Situation where there is a Residential Building with Multiple Dwellings*.

[129] See *Toka Tū Ake EQC Claims Manual – Residential Land Sections 3.b.v What about Notifying Damage on a Neighbouring Cross-lease Property?* and 4.c.vi Situation where there is more than one Residential Building on the Land Holding.

A single building with multiple dwellings insured as a single building

Sometimes in a cross-lease property, the dwellings are located in one building that is insured as a single residential building under the *EQC Act*. In that case, identify the extent of the residential land by reference to that single residential building.[130]

A cross-lease building where each dwelling is separately insured

More typically in a cross-lease property, there is a single building comprising multiple dwellings, but each dwelling is separately insured as a residential building in its own right. In that case, identify the area of the residential land separately in respect of each residential building.

There will be areas of overlap between the areas of residential land for the different residential buildings. Take this overlap into account when assessing the residential land, as further considerations apply.[131]

Land structures on a cross-lease property

A single land structure (i.e. bridge, culvert or retaining wall) may come within the area of residential land for more than one residential building. Take this scenario into account when settling the residential land exposure, as further considerations apply.[131]

For more information on cross-lease properties, see *Toka Tū Ake EQC Claims Manual – Residential Land Sections 3.b.v What about Notifying Damage on a Neighbouring Cross-lease Property?* and *4.c.vi Situation where there is more than one Residential Building on the Land Holding*

d. *Identify insured residential land where there is more than one residential building on a land holding*

If there is more than one residential building lawfully situated on the land holding, you must determine the insured residential land in relation to each residential building (excluding services).

The residential land areas for different residential buildings often overlap. Take this overlap into account when assessing the residential land, as further considerations apply.[131]

e. *Identify insured residential land for mixed-use (MUB3) buildings and long-term accommodation for the elderly (MUB4)*

The insured residential land (if any) in relation to a mixed-use building or long-term accommodation for the elderly depends on whether the part of the building that comprises the residential building is in contact with the ground.

[130] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.c.v Situation where there is a Residential Building with Multiple Dwellings*.

[131] See Section 8.c.iv.a Assessing Damage to Overlapping Insured Residential Land.

If the part of the building that comprises the residential building is:

- in contact with the ground, the residential land area is in relation to that part. There may also be access way land – if the residential building:
  - includes an external doorway, the main access way to that doorway is residential land.
  - does not include an external doorway (i.e. the part is on the ground floor, but the only access is through non-residential parts of the larger building), generally there is no access way land.
- not in contact with the ground, there is generally no residential land. There is no main access way land in this situation as there is no land forming a main access way leading to the doorway to the part of the building that is the residential building on the upper floor.

f. Identify land structures situated on the boundary between two properties

To be covered, the land structure must be within the insured areas of residential land. This includes being within the land holding.

If the land structure is located wholly or partly outside the land holding, none of the land structure is covered under the *EQC Act*. In this context, the land holding includes any neighbouring land the customer has an easement over (or equivalent right).

If a land structure is located wholly or partly outside the boundary of the customer's property, the land structure is still within the land holding if the customer has an easement (or equivalent right) over the whole (or part) of the land structure outside the boundary.

For the purpose of determining the extent of the land holding, an encroachment licence or occupation licence is not equivalent to an easement.

For more information on the land holding, see Section 8.c.iii.a Determine the Land Holding the Residential Building is Lawfully Situated on.

Additionally, for retaining walls, if a section of the retaining wall that is within the land holding can be considered a retaining wall in its own right, that section is covered – if it meets the requirements for cover in paragraph (e) of the 'residential land' definition. This section of the retaining wall is covered even if it is attached to another section of the wall that is outside the land holding and also a retaining wall in its own right. If you are uncertain, consider obtaining advice from an appropriate expert[132] (e.g. a geotechnical engineer).

[132] See Section 7 Engaging Experts.

See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 4.j.v.ii What if the Retaining Wall is Situated on the Boundary of the Land Holding?* for more information on retaining walls situated on the boundary of the land holding, including what to do if:

- it is not clear where the boundary lies in relation to the retaining wall; or
- there is a disagreement about the boundary's location in relation to the retaining wall.

iv. Identify any natural disaster damage

See Section 3 Identifying Natural Disaster Damage to the Residential Building and Section 4 Identifying Natural Disaster Damage to the Residential Land.

a. Assessing damage to overlapping insured residential land

Where there is more than one residential building on the land holding, consider any overlapping land areas and/or land structures between residential buildings. If you identify that there is:

- no overlap, you can assess the residential land claim for each residential building separately. [133]
- an overlap but no land damage within the overlapping areas, you can still assess the residential land claim for each residential building separately.[133]
- an overlap and there is land damage within the overlapping area, further considerations apply as described below.

Examples of overlapping land damage considerations:

- Consider who has an insurable interest in the applicable land areas and/or land structures, including any parties who are not insured.
- Consider how each party with an insurable interest is affected and to what extent. [134]
- If different insurers cover the residential buildings associated with the damaged land and/or land structures in overlapping residential land areas, consider whether you should trigger the process for determining a lead insurer. [135]

[133] See *Toka Tū Ake EQC Claims Manual – Residential Land Section 4.c.v Situation where there is a Residential Building with Multiple Dwellings*.

[134] See Section 8.c.v Document and Allocate the Natural Disaster Damage to the Correct Property.

[135] See the *Shared Building Guide* and *Shared Land Guide*.

- If there is a cross-lease[136] or any other legal contract, e.g. residential lease or ground lease, consider whether its terms provide guidance, e.g. on the obligations of lessees and lessors.

- Settlement considerations[137] may also apply.

If you are unsure about assessing damage on overlapping residential land, escalate to the appropriate Toka Tū Ake EQC representative.

b. Complex land damage scenarios

Large-scale landslips

Large-scale landslips typically affect a wide land area and they may also be deep. They frequently affect multiple properties, especially in urban areas. There is often clearly visible damage from a large-scale landslip, however it is often more subtle damage, e.g. tension cracks or minor slumping damage, that shows the full extent of the landslip. This damage can be outside the land holding and, in many cases, several properties away from the property where the main visible damage has occurred.

You must identify any potential large-scale landslip as early in your assessment as possible. Obtain advice from an appropriate expert, e.g. a geotechnical engineer, to determine the full extent and cause of the landslip (including any imminent damage) and a conceptual remediation strategy. The engineer often needs to investigate beyond the immediate property boundary. In rare cases, they may recommend site-specific investigations, e.g. installing and monitoring ground-measuring equipment. Consider these requests based on the claim-specific facts, and if required, escalate to the appropriate Toka Tū Ake EQC representative for advice.

Large-scale landslips are often associated with a slow-moving landslip feature. If you suspect this is the case, you must obtain advice from an appropriate expert[138] (e.g. geotechnical engineer) to help determine whether the landslip is natural disaster damage.

Other complexities associated with large-scale landslips include the possibility of:

- multiple private insurers being involved;

- TAs applying dangerous building (section 124) notices;

- subrogated recovery action;

- global managed repair;

- interest from the wider public and media.

[136] For information on cross-lease properties, see Section 8.c.iii.c Identify Insured Residential Land on Cross-lease Properties.

[137] For settlement considerations, see Section 8.c.ix Create a Settlement Recommendation.

[138] See Section 7 Engaging Experts.

These complexities can make it more difficult to communicate effectively with affected parties and co-ordinate the assessment activities. Consider whether managing the associated claims together will provide a better outcome for all affected customers.

If you are unsure about assessing damage where you identify there is a potential large-scale landslip, escalate to the appropriate Toka Tū Ake EQC representative.

Imminent damage-only claims

Although it is not common, a customer can have a valid EQCover claim where the only damage to their property is imminent damage.[139]

For example, a retaining wall on Owner A's property has rotated during heavy rainfall with some evacuation behind the wall on their property. The retaining wall is near the boundary with their downslope neighbour, Owner B, who is aware of the damage and is worried that if the retaining wall collapsed then their property would be inundated, close to their dwelling. Owner B notifies their insurer (as our agent) of the situation. In this case, the damage to Owner B's property may be considered imminent.

Often, either you or the expert[140] you engage (e.g. geotechnical engineer) will identify the risk to Owner B's property during the assessment of Owner A's claim for the damage that has already occurred. In these cases, you should make Owner B aware of the facts so they can decide whether to make a claim.

v. Document and allocate the natural disaster damage to the correct property

Follow the assessment processes and standards set out under Section 10 Planning for a Site Assessment, Section 11 Carrying Out a Site Assessment and Section 13 Assessment Documentation Standards to document the natural disaster damage.

If required, engage an appropriate expert, e.g. a structural or geotechnical engineer to further assess the building and/or land.[140]

To allocate damage to the correct property, identify common and exclusive elements as described below.

[139] See Section 5 Imminent Damage.

[140] See Section 7 Engaging Experts.

a. Documenting and allocating damage to the building

Allocate all damage to insured areas within a residential building. Identify exclusive and common:

- building elements;
- appurtenant structures;
- services.

Where common elements are damaged, our obligation is only to cover the damage once, not to separately cover each customer for the same damage. In practice, we may allocate damage equally between the affected customers or determine an alternative appropriate allocation based on the claim-specific facts.

You should typically allocate and document damage according to the MUB category as follows.

All MUB categories
If any residential building contains more than one dwelling, document the damage to each dwelling separately.

Follow the additional guidance for the specific MUB category below.
MUB1
Document the damage to the:

- exclusive building elements for each residential building; and
- common building elements belonging to two or more residential buildings (e.g. intertenancy walls and foundations).

For intertenancy walls, you should generally allocate damage equally between the associated residential buildings. For foundations, other considerations may apply, e.g. the proportion of the footprint belonging to each residential building.

MUB2
Document all the damage to the entire residential building.

If there is more than one residential building, document the damage to each building separately.

MUB3 and MUB4
There are key differences between MUB3 and MUB4 buildings,[141] however the process for documenting and allocating damage is the same.

[141] For MUB categories, see Section 8.c.ii Determine Whether there is a Multi-unit Building (MUB) and if so, Categorise it

Document damage according to whether the entire building, or only part of the building, is a residential building.

If the entire building is a residential building:

- document the damage to the entire building; and
- record any damage to non-dwelling areas (i.e. common areas, commercial/non-residential areas) separately.

If only part of the building is a residential building, document the damage to any:

- exclusive building elements for the part of the building that is the residential building; and
- common building elements belonging to the residential and non-residential parts of the building (e.g. intertenancy walls, foundations).

For intertenancy walls, you should generally allocate damage equally between the associated parts of the building, e.g. residential and non-residential. For foundations, other considerations may apply, e.g. the proportion of the footprint belonging to the part of the building that is the residential building. In most cases, you will be able to determine the damage that should be documented to each residential building without engaging an expert. Where it is not clear (e.g. whether two or more MUB3 buildings on a single land holding are connected by a basement) you should seek advice from an appropriate expert[142] (e.g. a structural engineer).

You do not need to assess any stand-alone non-residential buildings, but you should record them in your site assessment documents.

b. Documenting and allocating damage to the land

All MUB categories

Allocate all damage to insured residential land for each residential building (excluding services) separately. Then, identify and record the damage to:

- the exclusive and any overlapping land areas; and
- land structures situated within exclusive and overlapping land.

If it is not clear which land components are exclusive and which are overlapping, record as much information as possible for further review and engage any appropriate experts.[142]

Follow the additional guidance for the specific MUB category below.

[142] See Section 7 Engaging Experts.

MUB1 or MUB2

For each residential building (excluding services), clearly record all land damage that falls within the residential land cover for that residential building separately and make clear which land damage:

- exclusively falls within the residential land of that residential building.
- overlaps with the residential land of more than one residential building.

MUB3 or MUB4

If there is one building and:

- the entire building is a residential building, document the damage to the residential land, including land structures.
- only part of the building is a residential building, document the damage to the residential land, including land structures associated with the part of the building that is a residential building.

If there is more than one residential building, and any residential land overlaps with more than one residential building, document separately for each residential building:

- the exclusive land damage; and
- any overlapping land damage.

vi. Determine a remediation strategy

Determine a suitable remediation strategy for the residential building or land, engaging an expert if necessary. Where damage cannot be assessed safely, the customer will need to consider engaging an expert, e.g. to assess exterior building elements on a high-rise building. For most land claims, you should engage certain experts, e.g. geotechnical engineer and valuer, directly.

If the damage is cosmetic, follow the processes in Appendix 1 Building Components and Repair Considerations and Appendix 2 Land Components and Repair Considerations.

If the damage is structural, consider what impact the remediation strategy will have on adjoining residential buildings.

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For general guidance on:

- determining a suitable remediation for the residential building, see Appendix 1 Building Components and Repair Considerations;
- determining a suitable remediation for the residential land, see Appendix 1 Building Components and Repair Considerations;
- engaging an expert, see Section 7 Engaging Experts.

vii. Create a scope of works for the conceptual remediation strategy

For general guidance on creating a scope of works, see:

- Section 12 Post-site Assessment Actions; and
- Appendix 3 Remediation Strategy, Standards and Costing.

a. Create a scope of works for the building

All MUB categories
If any residential building contains more than one dwelling, either:

- create a separate scope of works for each dwelling; or
- separate each dwelling clearly within one scope of works.

Follow the additional guidance for the specific MUB category below.

MUB1
For each residential building, prepare a scope of works that includes the repair cost for damage to:

- exclusive building elements; and
- any common building elements belonging to more than one residential building (e.g. intertenancy walls and foundations).

MUB2
If there is one residential building, create a scope for the entire building.

If there is more than one residential building, create a scope for each building separately.

MUB3 and MUB4

There are key differences between MUB3 and MUB4 buildings[143], however the process for creating a scope of works is the same.

Create a scope of works according to whether the entire building, or only part of the building, is a residential building.

If the entire building is a residential building, create a scope of works for the entire building. If the building contains non-dwelling areas (i.e. common areas or non-residential areas) either create a separate scope of works for each of these different areas, or separate these areas clearly within one scope of works.

If only part of the building is a residential building, create a scope of works for any:

- exclusive building elements for the part of the building that is the residential building; and
- common building elements belonging to both the residential and non-residential parts of the building (e.g. intertenancy walls, foundations), in accordance with how that damage has been allocated.[144]

If there are any common building elements, separate these clearly within one scope of works.

b. Create a scope of works for the land

If there is one building, and:

- the entire building is a residential building, prepare a scope of works for all land damage in relation to the entire building (excluding services).
- only part of the building is a residential building, prepare a scope of works for all land damage in relation to the part of the building that is a residential building (excluding services).

If there is more than one residential building:

- prepare a separate scope of works for all land damage that has been allocated to each residential building (excluding services).
- allocate the repair cost of any land damage that overlaps between the insured land of multiple residential buildings to each residential building in accordance with how that damage has been allocated.[145]

[143] For MUB categories, see Section 8.c.ii Determine whether there is a MUB and if so, Categorise it.

[144] For more information on allocating the damage, see Section 8.c.v Document and Allocate the Natural Disaster Damage to the Correct Property.

[145] For more information on allocating the damage, see Section 8.c.v Document and Allocate the Natural Disaster Damage to the Correct Property.

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viii. Determine the appropriate valuation (land claim only)

For land claims, in addition to the above, you will require a land valuation for the damaged property. Generally, an independent valuer provides this value, however in some cases, it may be a notional valuation.[146]

For further guidance on determining the appropriate valuation, see the *Land Valuation Guide*.

ix. Create a settlement recommendation

After completing the steps above, you will have all the information required to prepare a settlement recommendation for each residential building and the land relating to it. The scope of works and valuation details will form the basis for your settlement recommendation.

If the insured residential land areas for different residential buildings overlap and there is land damage within the overlapping area, further considerations apply, e.g. who has an insurable interest in the damaged land.

These are not the only considerations. For more information on claim settlement, see:

- *Toka Tū Ake EQC Claims Manual – Residential Buildings Section 9 How is the EQCover Claim Settled?*/*Toka Tū Ake EQC Claims Manual – Residential Land Section 9 How is the EQCover Claim Settled?*;
- the *Calculating Settlement Guide*; and
- the *Reinstatement and Replacement Guide*.

d. Examples of applying the 50% test

The 50% test[147] is used to determine whether all or part of a building is a residential building.

The following examples provide guidance on how to consider the parts of the building that make up the whole when applying the 50% test. For each MUB category, at least two examples are provided – one where the entire building is a residential building, one where only part of the building is a residential building, and for MUB3s, a third example is provided to elaborate on bed and breakfast accommodation.

i. Mixed residential/non-residential properties (MUB3)

The following scenarios are examples of applying the 50% test, where a part of the building is not residential.

[146] For details on when a notional value is applicable, see *Toka Tū Ake EQC Claims Manual – Residential Land Section 7.A.c.vii Assessing the Relevant Land Values*.

[147] For more information on the 50% test, see Section 8.c.i.a Consider whether EQCover Applies to All or Part of the Building (the '50% Test').

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Example 1 – the entire building is a residential building

The building pictured has one owner and is insured under a single policy. It contains five levels of apartments (dwellings) and one level is a retail shop.

Because the dwellings area is 50% or more of the total building floor area, the entire building is a residential building, so EQCover applies to all of it. Because the entire building is a residential building, residential land cover is also available.

Example 2 – only part of the building is a residential building

The building pictured has one owner and is insured under a single policy. It comprises one retail shop, four floors of offices, and one floor containing an apartment. The retail shop and offices comprise 83% of the total building floor area, and the apartment accounts for 17% of the total building floor area.

EQCover does not apply to the whole building, because the dwellings area comprises less than 50% of the total floor area of the building. However, EQCover does apply to the top floor because the dwellings area in this part of the building is 50% or more of the floor area of that part. However, there is no residential land cover because the part of the building that is a residential building is not in contact with the ground.

Example 3 – only part of the building is a residential building (B & B)
The ground floor of a two-level B & B is devoted to guests. The guest floor contains two bedrooms and is otherwise self-contained, with a total floor area of 100 m^2 .

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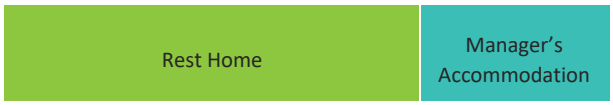
The top floor is reserved for use by the owner. It has a separate external access, two bedrooms and is otherwise self-contained with a total floor area 90 m^2.

EQCover does not apply to the whole building, because the area reserved for use by the owner is less than 50% of the total area of the building as a whole. However, EQCover does apply to the top floor, because it is a part of a building and 50% or more of the floor area of that part (i.e. the top floor) comprises a dwelling as defined by the *EQC Act*. However, there is no residential land cover because the part of the building that is a residential building is not in contact with the ground.

ii. Long-term accommodation for the elderly (MUB4)

The principles of the 50% test do not change for a rest home or retirement village, but the types of structure may be different.

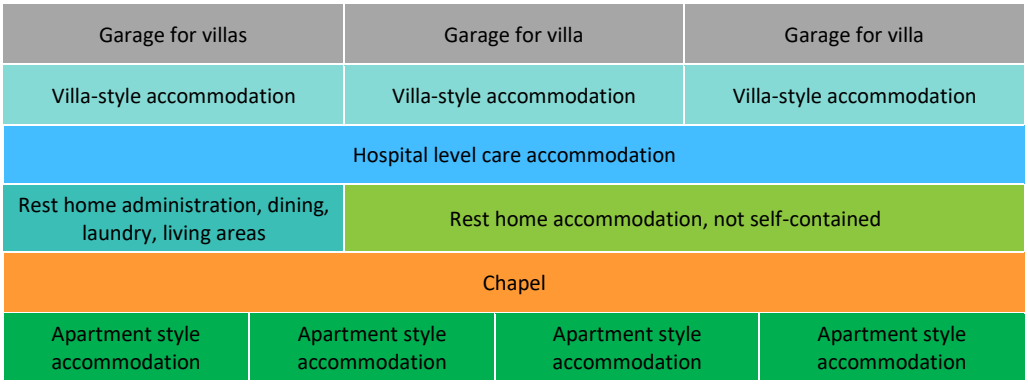
Example 1 – the entire building is a residential building



The building pictured contains a rest home, with dormitory-style accommodation and full accompanying facilities, as well as self-contained accommodation for the owner or manager.

This building is a residential building containing two dwellings, so the whole building is covered. Because the entire building is a residential building, residential land cover is also available.

Example 2 – only part of the building is a residential building



This example illustrates a complex that contains a rest home, i.e. long-term accommodation for the elderly, retirement village and various other buildings typically associated with these.

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The example pictured can be broken down as in the following table:

Table 3: 50% test in long-term accommodation for the elderly

Area	Dwelling/residential building or appurtenant structure	50% test
Villa-style accommodation	Residential building: Each villa is a dwelling. This is one residential building containing three dwellings.	Yes
Detached garages for villas	Appurtenant structure: The garages are included in cover for villas because they are used for the residents' purposes.	No
Hospital – respite care only	Typically, a hospital is not a residential building because it only provides short-term treatment and respite care. However, if the hospital provides more than short-term treatment or respite care, i.e. it is the resident's long-term accommodation, it may be a residential building. Appurtenant structure: When a hospital is not a residential building, it may still be included in cover for the rest home, provided it is used for the residents' purposes and is appurtenant to the main building.	No
Rest home accommodation, not self-contained	Residential building: The rest home (providing long-term accommodation for the elderly) is a residential building. This includes rest home administration, dining, laundry, living areas.	Yes
Chapel	Appurtenant structure: Included in cover for the villas and rest home, if used for the purposes of the residents.	No

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9. Unsafe properties

a. Overview

During the assessment, you may identify concerns about safety. You may need to address these concerns with the customer, occupants, neighbours, or in some cases, a relevant authority. Whenever a potential safety risk is identified, you must clearly record on the claim file all relevant details including conversations with customers, TAs, and any other relevant parties.

In this section, unsafe properties include those that:

- are not safe to assess;
- may not be safe to occupy until urgent works are carried out;
- meet the definition of dangerous and/or insanitary buildings (*section 121* or *123* of the *Building Act 2004*).

b. Properties that are not safe to assess

You will sometimes determine that it is unsafe to start or continue a site assessment. This may be due to the pre-existing condition of the property and/or any natural disaster damage that has affected it. Your concerns may be in relation to the condition of either the building or land on the property to be assessed, or the condition of a neighbouring property that may be affecting the property to be assessed. You may identify these concerns during your initial contact with the customer, when arriving at site or at any time during your site assessment.

Whenever you identify any safety concerns, you must stop the assessment immediately and resolve these issues appropriately (in accordance with our policies, your company's policies and any relevant legislation) before continuing. In some cases, you will need to request further expert[148] assistance. This resolution may include:

- eliminating the risk or, if elimination is not reasonably practicable, appropriately minimising it, e.g. ensuring the power is turned off if exposed electrical wires are identified, or avoiding an area at risk of rockfall;
- considering whether urgent works (see below), e.g. installing props to stabilise a retaining wall, are appropriate and would allow you to safely return and continue your assessment;
- considering whether you need to notify the relevant TA of a potential dangerous or insanitary building (see below), e.g. where failure of unreinforced masonry walls is likely.

[148] See Section 7 Engaging Experts.

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c. Properties that are not safe to occupy

While completing your site assessment, you will sometimes identify natural disaster damage or a pre-existing condition that may make the property unsafe to occupy. In these cases, you should consider whether the customer can reasonably carry out urgent works to make the property safe, e.g.:

- turning off electricity when there are exposed wires;
- propping up a retaining wall at risk of collapse.

You should advise the customer of your findings and any reasonable steps that they should consider taking to address the safety concerns for their property. Again, this may require expert assistance. See the *Urgent Works Guide* for further information, particularly if the customer does not have the means to carry out necessary work.

In some cases, you may identify a safety concern at the property that you are assessing that is caused by the condition of a neighbouring property. You should still inform the customer of your findings so they can take appropriate and reasonable steps to address the issue. This will likely involve:

- the customer engaging with their neighbour; or
- informing the neighbour yourself.

Where you have identified safety concerns but it is still safe to carry out your assessment, you should continue.

Although it is rare, you will sometimes identify a property that you consider may meet the definition of a dangerous, affected or insanitary building as defined in *sections 121*, *121A* and *123* of the *Building Act 2004*. For example, an insanitary building may include disorganised hoarding or an infestation of vermin or insects.

i. Dangerous, affected or insanitary buildings under the Building Act 2004

TAs may issue a 'section 124' *Building Act 2004* notice if they consider a building is dangerous, affected or insanitary. To make their decision, the TA investigates the property, gathers information and may seek advice to determine if it is safe to occupy.

When a TA issues a section 124 notice on a building, they specify why, and what repair work the property owner needs to do to have the notice lifted. When the property owner has taken

the required action, the TA reassesses the building in accordance with its dangerous building policy. Only the TA can lift the notice as the authority that placed it.

A section 124 notice may warn people not to approach the building, or it may restrict entry and require certain work to be carried out to make the building safe. The notice is issued under *section 124 of the Building Act 2004* when a TA is satisfied that a building is dangerous, affected or insanitary as defined in *sections 121*, *121A* and *123* of the *Building Act 2004*.

a. Dangerous buildings (section 121)

A building is 'dangerous' for the purposes of the *Building Act 2004* if:

(a) in the ordinary course of events (excluding the occurrence of an earthquake), the building is likely to cause:
  (i) injury or death (whether by collapse or otherwise) to any persons in it or to persons on other property, or
  (ii) damage to other property, or
(b) in the event of fire, injury or death to any persons in the building or to persons on other property is likely.

Section 121, Building Act 2004 – Meaning of dangerous building

b. Affected buildings (section 121A)

A building is 'affected' for the purposes of *section 121A of the Building Act 2004* if it is 'adjacent to, adjoining or nearby' a dangerous building as defined in section 121 of the *Building Act 2004*.

c. Insanitary buildings (section 123)

A building is 'insanitary' for the purposes of the Building Act 2004 if it:

(a) is offensive or likely to be injurious to health because –
  (i) of how it is situated or constructed; or
  (ii) is in a state of disrepair; or
(b) has insufficient or defective provisions against moisture penetration so as to cause dampness in the building or in any adjoining building: or
(c) does not have a supply of potable water that is adequate for its intended use: or
(d) does not have sanitary facilities that are adequate for its intended use.

Section 123, Building Act 2004 – Meaning of insanitary building

ii. Other types of notices

Various agencies use systems to assess properties for safety and other reasons, e.g. Urban Search and Rescue and local TAs in times of emergency response. These systems are not notices issued under *section 124 of the Building Act 2004* and so do not confirm that a building is dangerous, affected or insanitary. However, they are an indicator of safety or damage to a property which you must consider in your assessment of the property.

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iii. Identifying potentially dangerous, affected and/or insanitary buildings

If at any time during an assessment, you have concerns about a risk to people's safety or a risk of damage to a property due to the condition of any building or surrounding land, you must consider whether the property may meet the definitions of a dangerous, affected or insanitary building under the *Building Act 2004*. If so, you must stop your assessment immediately and proceed with notification as detailed below. Examples include a building or people at risk from:

- impact from rockfall;
- ongoing land movement (slow-moving or sudden);
- landslip regression;
- collapse of a retaining wall.

iv. Notification of dangerous or insanitary buildings

If there is no section 124 notice issued on a building, but during the assessment process you consider that the property is potentially dangerous, affected or insanitary, you must immediately notify the relevant TA of your concerns by following our *Dangerous and Insanitary Building and Land Policy*.

Record all relevant information necessary to inform the relevant authority of your concerns. For an example form, see Appendix 4 Documentation Examples. Documenting your concerns signifies that you have identified a property that in your opinion may pose a threat to personal safety by being dangerous, affected or insanitary, and that you have notified the relevant authority. You should also:

- take all reasonable steps to ensure the safety of occupants and any members of the public;
- inform the customer and any other affected party such as occupants and, if necessary, neighbours of your concerns and the steps you are taking;
- contact emergency services if required;
- notify the relevant authorities (as above);

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- notify us; and
- record the circumstances on the claim file and notify the claims manager.

Section 31A of the EQC Act allows any person dealing with an EQCover claim to make available any information that they have if they believe on reasonable grounds that doing so is necessary to prevent or lessen a serious threat to:

- public health or public safety; or
- the life or health of any individual.

In this context, 'serious threat' has the same meaning as in the *Privacy Act 2020*. Under these circumstances, you can share any information that you believe is necessary without our prior approval.

The relevant authority will assess the building. If they determine that the property meets the criteria, they will apply the section 124 notice. Only the relevant authority that placed the notice can lift it.

The relevant authority may also apply a section 124 notice when the danger is from a risk that is likely to occur but has not yet happened, e.g. the risk of rock fall or cliff collapse.[149] The section 124 notice may warn people not to approach the building, or it may restrict entry and require certain work to be carried out to make the building safe.

You should determine how you can carry out a safe assessment of the property, considering all the information you have about its dangerous, affected or insanitary status. In developing this plan, refer to our *Dangerous and Insanitary Building and Land Policy*.

The claims manager will keep the customer informed on the status of their claim and you should arrange a suitable time to assess their property when you can do this safely.

[149] See Section 5 Imminent Damage.

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10. Planning for a site assessment

Before following the guidance in this section, ensure that you are familiar with the *EQC Claims Manuals – Residential Buildings* and *Residential Land*, and all sections within this Manual. In all customer interactions, use appropriate soft skills.

a. Overview

Planning is an essential step in the assessment process. It ensures a complete record of the natural disaster damage is captured efficiently. Effective planning will also help to achieve timely claim resolution for the customer.

You should consider whether the assessment is within your experience and capabilities[150] and whether you have the necessary knowledge of relevant legislation, e.g. the *EQC Act* and the *Building Act 2004*. You should also consider whether you will need support from a more experienced assessor; sometimes it will be appropriate to reassign the claim to them.

It is important to develop a plan that is appropriate based on what you know about the type and extent of the loss, the information that you will need to gather, the activities that you will need to carry out and any experts who you may need to engage. Consider how you might assess any damage that may be responded to under the private insurance policy at the same time. You should also consider any agreed timeframes and reporting requirements. Start planning the moment you are assigned the claim and continually review your plan throughout the assessment. Your plan needs to be flexible to allow for all new information as it becomes available.

Your plan should include:

- reviewing the claim file, e.g. existing claim information, insurance and claimant details;
- researching the property;
- checking the priority of the assessment;
- considering health and safety matters;
- establishing whether the customer is experiencing vulnerabilities;
- reviewing the loss details;
- checking the background, including whether previous claims have been made;

[150] See Section 1.e.ii Capabilities.

- confirming that the basic requirements of the claim are met;
- reviewing event information.

b. Assessment preparation

i. Review claim file

Before contacting the customer, you must be familiar with the claim facts as reported by the customer to date. Obtaining these includes:

- reviewing the general claim information, e.g. date of loss, notice date, natural disaster type;
- reading all file notes before contacting the customer;
- reviewing any information supplied by the customer.

The purpose is so that you can clarify and confirm these facts and obtain any necessary additional information during the assessment.

ii. Research the property

Obtain publicly available information:

- to review the property for age, type, and materials, construction method, section size and any notable geographical features;
- to establish whether there are multiple properties that have been affected by the same natural disaster damage. In such cases, additional considerations will apply.[151]
- for efficient and effective assessment planning, e.g. for remote properties or assessing multiple claims in a particular area, to determine travel times, timing of appointments or access;
- as an assessment tool, e.g. to measure an access way or as the basis of the site sketch.

[151] See Section 8 Assessing Damage Across Multiple Properties.

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Some examples of sources for the above information include:

- the record of title – to understand the extent of the land holding (e.g. easements, shared access, size and shape) and identify any notices that may affect the claim (e.g. give grounds to decline[152], limit or cancel EQCover, or identify other interests[153] in the claim).
- *Google Street View*;
- *Oneroof.co.nz*;
- *Homes.co.nz*;
- the local TA's geographic information system (GIS) viewer – to see if clear aerial information is available;
- GNS data – for earthquake claims, to review for events matching the date of loss.

iii. Check the priority of the assessment

The claims manager will indicate the expected timeframe for contacting the customer and the reasons why, e.g.:

- health and safety issues;[154]
- vulnerabilities the customer is experiencing;
- the type and extent of damage.

You must consider these factors throughout the assessment process because they may change or become more evident as the assessment progresses.

[152] See Section 2.g Grounds for Declining an EQCover Claim under Section 3, EQC Act.

[153] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 9 With Whom is the EQCover Claim Settled?*/*Toka Tū Ake EQC Claims Manual – Residential Land Section 10 With Whom is the EQCover Claim Settled?*.

[154] See also Section 9 Unsafe Properties.

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iv. Review health and safety information

At this stage of the assessment, things to consider when deciding whether it is safe to visit include:

- checking the claim file for any noted hazards;
- considering the information the customer has provided;
- reviewing information supplied by other parties, e.g. section 124 notice, red and yellow stickers (building placards);
- reviewing any other expert advice, e.g. initial structural assessment (ISA report).

We have classified hazards in the following way:

- Contamination:
  - liquefaction;
  - sewage;
  - asbestos;
  - broken or disrupted gas mains;
  - silica dust;
  - volcanic ash;
  - storing of toxic substances;
  - methamphetamine;
- Restricted access:
  - section 124 notice;
  - dangerous building requiring TA assessment;
  - military cordon;
  - police or TA restrictions;
- Unstable building:
  - damaged or fallen chimney;

- debris;
- unstable structures;
- confined spaces with liquefaction, mould, live wires, or debris;

- Unstable land:
  - damaged access way;
  - rock fall or mud slides;
  - uneven ground;
  - undulating ground;
  - overgrown land.

Use this information to make the customer aware of their responsibilities for their safety and that of others.[155]

v. Establish whether the customer is experiencing vulnerabilities

Any person dealing with an EQCover claim:

- must take reasonable steps to identify whether a customer is experiencing vulnerabilities and to prioritise claims for all people experiencing vulnerabilities.
- should comply with your organisation's guidelines for identifying whether a customer is experiencing vulnerabilities.

You should record on the claim file any information about vulnerabilities the customer is experiencing that is necessary to manage the claim. You should also discuss this with the claims manager to determine the priority of the assessment and any particular customer needs, to progress the claim in an appropriate and timely manner.

vi. Review the loss details

Look for:

- photos of damage;
- correspondence between the customer and insurer about the claim;
- quotes;

[155] See also Section 9 Unsafe Properties.

- invoices and the claims lodgement form filled out by the customer;
- the date of loss (DOL).

vii. Check the background/whether previous claims have been made

- Check prior building and/or land claims for anything relating to previous assessments that might affect the current claim.
- If there are prior claims, look for any similar damage to the current claim and check assessment reports, statement of claim, photos, engineering reports, legends, sketches, scope of works and settlement documents.

viii. Confirm that the basic requirements of the EQCover claim are met

Typically, it will have been confirmed before the assessment that the basic requirements[156] of the EQCover claim have been met. However, in some instances, e.g. an urgent assessment, this may not occur. If at any time during the assessment you identify that a claim may not meet these requirements, gather all relevant information for the claim file and notify the claims manager so they can decide the claim outcome.

ix. Review event information

We routinely gather information about natural disaster damage that is likely to occur or already has. We will share this information with your organisation (subject to *section 31A of the EQC Act*). You should use it to guide and support your event response planning and assessment approach.

This information can provide:

- an early indication of the location and likely extent of damage;
- a general view of the type of damage that may be expected to properties within those areas; and
- a clearer understanding of the situation over time.

The types of information and organisations we gather information from include those in the following table.

[156] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 3 Are the Basic Requirements for an EQCover Claim Met?*/*Toka Tū Ake EQC Claims Manual – Residential Land Section 3 Are the Basic Requirements for an EQCover Claim Met?*.

Table 4: Information sources and types of information

Source	Type of information
Private insurers and our claims teams	Field observations, claims call volumes, number and nature of claims made
Partner structural and geotechnical engineers	Area-wide assessment information, e.g. field observations, aerial photography and light detection and ranging (LiDaR)
• GNS Science Te Pū Ao • *GeoNet*	Characteristics of the natural disaster (earthquake, landslip, volcanic activity or eruption, hydrothermal activity)
MetService	Severe weather warnings or situation awareness
National Emergency Management Agency (NEMA)	Warning and impact information, particularly for tsunamis and severe flooding
• Local authorities • Civil Defence Emergency Management (CDEM) • Supporting agencies, e.g. New Zealand Police, Fire and Emergency New Zealand (FENZ), Urban Search and Rescue (USAR), Waka Kotahi NZ Transport Agency (NZTA)	Information regarding local impacts, including flood reports, e.g. group situation reports.
United States Geological Survey (USGS)	Ground shaking maps

We will analyse the data it has gathered and provide your organisation with the relevant outputs, e.g.:

- claim lodgement analysis, which provides data on claim lodgement volume over time and other relevant claim information.
- loss modelling, which:
  - for earthquakes, analyses the characteristics of the earthquake to estimate the likely claims volume and extent of damage that can be expected by groupings and geographic boundaries; and
  - for other natural disasters, provides loss estimates using available information and cross-referencing with existing geographic information system (GIS) data.
- strata modelling, which:
  - provides a visual representation of the loss modelling to highlight the worst affected areas based on the expected levels of structural damage within an area unit.
  - enables triaging of customers based on the expected extent of property damage within geographical areas (strata) to help determine the priority, appropriate damage assessment methodology, and claim management approach.

- provides planning indicators including the likely technical resources needed to assess properties within a strata band.
- alongside other critical information, supports determining the extent of invasive assessment required to identify non-visible structural damage.

c. Customer/assessor first contact

i. Review key information (list of information that you should have before calling)

- Current claim details
- Previous claim details including photos, sketches, and specialist reports
- Property details
- Notes on vulnerabilities the customer is experiencing
- Details of site hazards
- Any other relevant notes and documents

ii. Make the call

The purpose of the call is to:

- inform the customer about the claims assessment process;
- validate the information on the claim file and obtain additional information from the customer relevant to the claim;
- where necessary, arrange a site assessment to progress the claim.

The detail discussed and the direction of the phone call will be guided by the specifics of the claim and the needs of the customer. Take any vulnerabilities the customer is experiencing that were noted on the file into account. During the call, you will determine the amount of information required to progress the claim and which information that can be obtained at a later stage.

Any customer contact must adhere to privacy requirements and any other applicable standards, which we may advise you of from time to time and/or may form part of the third party's processes. For further details, see the *Privacy Act Guide*.

Gather information to prepare for the assessment. This will include the types of equipment you will need to take to site and the time to allow for the assessment. At this stage of the claims process, this is the type of information that is commonly gathered:

- Determine the type and extent of damage to the property, including:
    - whether the damage extends beyond their property;
    - whether any repairs have been completed at the property;
    - whether the customer is aware of any prior claims;
    - whether there are any emergency works that the customer has carried out or is intending to carry out;
    - any safety concerns the customer may have.
- For land damage, determine its location in respect of the residential building.
- Gather general property information:
    - the size of the dwelling;
    - whether there are multiple properties or shared damage;
- Confirm directly with the customer any health and safety concerns and update the claim file.
- Determine whether there has been any change to vulnerabilities the customer is experiencing and update the claim file if required.
- Determine whether a site assessment is required. You should be able to determine this based on the information obtained, e.g. no natural disaster damage, or if minor damage and repairs have already been carried out by the customer.

Be aware of, and let customers know of any external support agencies that may be helpful for a customer in the particular circumstances, e.g. Red Cross, Rural Support Trust, Citizen's Advice Bureau, Grey Power or their local TA.

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d. Site visit preparation

i. Consider whether a second assessor or specialist is required

Consider whether the claim requires a second assessor or a specialist at the first visit. Reasons for this can change and can include factors such as safety, technical expertise, access and efficiency for large and/or complex assessments. For example, if there is severe land and building damage, consider engaging a geotechnical engineer and structural engineer (if applicable), and whether invasive investigations are required. In all cases, you should make this decision in accordance with guidance that we will issue from time to time. See Section 7 Engaging Experts.

ii. Gather equipment

In all situations, consider all of the available information in determining what equipment you will require for your assessment, e.g. if you consider that a floor level check is likely to be needed, ensure you have a zip level altimeter with you. The decisions will be shaped by the technology and other capabilities that your organisation may have, e.g. digital or paper-based.

Take time to consider what you already know about the property, the type of natural disaster, and the damage that has occurred. Then consider the equipment that you will need. This will include your identification card, phone, camera, good quality LED torch, pen or pencil, graph paper, measuring tape, and personal protective equipment (PPE) if required (in which case the minimum requirement is a high visibility vest, safety boots, hardhat, overalls, safety glasses, gloves, mask, hand sanitiser and gumboots).

Always check that the equipment is appropriate and fully functioning, e.g. calibrated, and that you know how to use it.

Common equipment you should consider for assessments includes but is not limited to:

- laser measure;
- zip level altimeter;
- spirit level or digital level;
- a self-levelling laser (preferably with a receiver);
- ladder;
- crack gauge;
- binoculars;

- measuring wheel;
- laser rangefinder.

iii. Consider health and safety

Any person dealing with an EQCover claim must comply with the *Health and Safety at Work Act 2015* in all relevant respects. See:

- Section 1.e.iv Health and Safety for further details on health and safety expectations of those involved in the assessment process; and
- Section 9 Unsafe Properties.

Consider health and safety at each stage of planning for an assessment.

Based on the information obtained so far, record anything that is relevant in your risk assessment for the property and planned site visit.

iv. Consider urgent works

If in your review of the claim file you identify a situation where the customer should consider carrying out urgent works to make their property safe, sanitary, secure, and/or weathertight, and it is safe for them to do so, advise the customer of your concerns and any steps they should consider taking. Examples of urgent works include:

- turning off power where there are exposed wires;
- repairing a blocked toilet;
- boarding up a broken window;
- putting tarpaulins over holes in the roof or walls;
- placing a tarpaulin over a landslip headscarp to redirect overland water flow.

When advising the customer, consider urgent works in the context of the overall circumstances and condition of the property to ensure that urgent works are not undertaken unnecessarily.

Advise the customer that they will need to pay for any urgent works that they authorise and/or carry out. If the customer does not have the means to pay for urgent works, see the *Urgent Works Guide*. Any reimbursement of the cost for urgent works is always subject to acceptance of the claim and that the basic requirements of the claim have been met.

If you consider that a property is unsafe, see Section 9 Unsafe Properties. For more information about urgent works, see the *Urgent Works Guide*.

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11. Carrying out a site assessment

Before following the guidance in this section, ensure that you are familiar with the *Toka Tū Ake EQC Claims Manuals – Residential Buildings* and *Residential Land*, and all sections within this Manual. In all customer interactions, use appropriate soft skills.

a. Arrive at site

1. Before entering the property, stop on the street outside and check for obvious hazards.
2. Arrive early and park in an appropriate location, ensuring you can exit easily.
3. Ensure page 1 of your *Site Risk Assessment* form is completed.
4. Ensure you have your ID card, equipment, the customer's file, and other relevant documents.[157]
5. As you approach the property:
    - look at the dwelling and land in general;
    - note any immediate health and safety issues;
    - observe exit pathways.
6. Greet the customer and introduce yourself, showing your ID card at the same time.
7. Briefly explain the site assessment, ask any relevant questions before starting, e.g. who is present, and ensure all are aware of your presence. Explain that you will be making notes and taking photographs (and in some cases, video) for use in the claims review process.
8. Confirm existing known health and safety issues with the customer and check for any new issues.

b. Discuss the claim with the customer and complete the relevant forms with them

1. Obtain the customer's account of the natural disaster event and when they first noticed the damage. Listen and clarify.
2. Confirm as much information as possible about the property, including how it is used, previous claims, damage and repairs. Most customers know a lot about their property and can provide supporting documents, e.g. receipts, invoices, TA documents, scopes of completed work, site plans, photos, specialist reports. You should take a copy of any

[157] For further details, see Section 10 Planning for a Site Assessment.

relevant customer-supplied documents and upload them to the claim file with the customer's permission.

3. Ask the customer for any relevant information about the immediate area, e.g. recent infrastructure work or geological features. This information can provide useful context.

4. Take note of anything else that might be relevant, e.g. vulnerabilities the customer is experiencing.

5. Ensure you have a good understanding of the circumstances of the claim before determining whether damage is covered or not.

c. Complete the site assessment

1. Have the customer accompany you on the inspection if it is appropriate, practical and safe to do so, and invite them to show you where the damage is on the property.

2. Inspect all the damage reported by the customer first, systematically working your way from one end of the property to the other and being guided by the needs of the customer. Check and ensure that you have completed a full assessment.

3. Consider whether it is appropriate to do a walkthrough of the entire property to confirm the customer's description of natural disaster damage, e.g. if the customer is unsure whether they have any other damage.

4. Look for any building or land element[158] that appears to have suffered a material change as a result of the natural disaster event. Material physical change includes change that is 'more-than-negligible', i.e. something beyond the minor, inconsequential or immaterial. Consider any damage in the context of the specific event, e.g. type and extent, including the appearance of age in relation to the date of loss. Keep an open mind.

5. If, at any time during your assessment, you identify a situation where the customer should consider carrying out urgent works to make their property safe, sanitary, secure, and/or weathertight, and it is safe for them to do so, advise the customer of your concerns and any steps they should consider taking.

   Examples of urgent works include:

   - turning off power where there are exposed wires;
   - repairing a blocked toilet;
   - boarding up a broken window;

[158] See Section 3 Identifying Natural Disaster Damage to a Residential Building and Section 4 Identifying Natural Disaster Damage to Residential Land.

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- putting tarpaulins over holes in the roof or walls;
- placing a tarpaulin over a landslip headscarp to redirect overland water flow.

When advising the customer, consider urgent works in the context of the overall circumstances and condition of the property to ensure that urgent works are not undertaken unnecessarily.

Advise the customer that they will need to pay for any urgent works that they authorise and/or carry out. If the customer does not have the means to pay for urgent works, see the *Urgent Works Guide*. Any reimbursement of the cost for urgent works is always subject to acceptance of the claim and that the basic requirements of the claim have been met. However, the customer's insurer may also choose to arrange urgent works on the customer's behalf, and deduct the cost from the settlement.

If you consider that a property is unsafe, see Section 9 Unsafe Properties. For more information about urgent works, see the *Urgent Works Guide*.

6. You should prioritise the assessment (including engaging any appropriate experts) if you have concerns that there is:
   - a risk of serious imminent damage to the dwelling or injury to people; or
   - the potential for damage to affect other properties.
7. Consider whether invasive investigations are required to accurately assess the damage and appropriate remediation strategy, i.e. if you believe, based on your observations or expert advice, there is concealed damage that is likely to change the remediation strategy.
8. Identify any appurtenant structures to the residential building.
9. Consider whether any further damage would be expected to occur in the next 12 months as a result of the natural disaster (imminent damage).[159]
10. If there is damage to multiple properties, e.g. shared access ways, additional considerations will apply.[160] You should continue your assessment of the property, and advise the customer that you may not be able to finalise it until you have a clear understanding of the full extent of the damage, including any damage beyond the land holding.

[159] See Section 5 Imminent Damage.

[160] See Section 8 Assessing Damage Across Multiple Properties.

11. Determine which experts[161] are required. Some typical experts engaged in assessing claims are:

    - structural engineer
    - geotechnical engineer
    - registered valuer.

d. Record damage

The damage that must be recorded is described in more detail in Section 3 Identifying Natural Disaster Damage to the Residential Building and Section 4 Identifying Natural Disaster Damage to the Residential Land.

You must make a full and accurate record[162] of your assessment, recording all relevant and necessary information to make your settlement recommendation.

Document the natural disaster damage to the property, and then make a record of any other relevant damage assessed, e.g. damage not caused by a natural disaster, or not caused by the natural disaster claimed for.

- Take detailed notes of your observations and all relevant claim facts that you collect.
- Complete a sketch recording the damage to the residential building and any associated residential land where applicable.
- Take photographs (optionally supported by video) to support your assessment report findings of any damage that has or has not occurred as a direct result of a natural disaster.

i. Photographs and videos

Photographs are part of the information you must collect during your site assessment to support your visual observations, sketch and assessment report. You may also record video.

Advise the customer that you will be taking photographs (and recording video, if applicable), obtain their permission, and tell them that they are entitled to a copy of any photos or video taken. All photographs (and any video) must have a clear purpose and be relevant to your assessment. Some customers may want to move personal items so they are not included in the photographs (and any video) taken.

[161] See Section 7 Engaging Experts.

[162] See Section 13 Assessment Documentation Standards.

Your photographs (and any video) may be used for assessing the claim, identifying and costing works required and related purposes including the following:

- As evidence of natural disaster damage;
- As evidence of pre-existing conditions;
- To record structural building issues that may need expert advice;
- To record land damage that may need expert advice;
- To provide accurate service request quotes (for experts);
- To prepare a costed scope of works;
- To resolve customer queries;
- To engage experts (e.g. engineer, builder or contractor) to carry out repairs.

Photographs (and any video) may be shared with a range of people for the purposes of assessing and responding to the claim, including:

- claims manager;
- structural engineer;
- geotechnical engineer;
- valuer;
- Toka Tū Ake EQC;
- surveyor;
- customer.

How many photographs you take (and how much video you record, if applicable) will depend on the type, extent and complexity of the damage being assessed. If there has been no damage or minor damage, you might take only a few mid-range and close-up photographs (and a short video, if applicable) of any areas of interest. For more severe damage, you should take a greater number of photographs (and amount of video) in a more structured manner.

1. Consider site access requirements and associated costs for any potential remediation strategy recommended by the expert, e.g. enabling works, specialised machinery.

2. Record in writing any comments from the customer about non-accepted damage, including their agreement or disagreement.

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e. Explain findings to customer

When explaining your assessment findings to the customer, make it clear that you are collecting the facts that will form the basis of your recommendation to the claims manager. Before we (or our agent) make our final decision, the claims manager reviews the entire claim (including the assessment report and other property information such as the record of title, and claim details such as the date of notice) and ensures all legislative requirements have been met.

In completing the steps described in this section, you must consider the individual circumstances of the customer and the claim and tailor your discussion to their needs.

It is the assessor's role to inform the customer about what is natural disaster damage and what is not. Explain your findings clearly in language that the customer understands. Be prepared to try another approach or rephrase if the customer does not understand.

Make sure the customer knows the assessment recommendation:

- Accepted
- Partially accepted
- Invalid

These recommendations are defined in the next section.

In cases where you have not reached a decision for any aspect of your assessment outcome, advise the customer that you will need to seek clarification from appropriate experts, and agree the timeframe for this. For example, this may occur in relation to:

- a building or structure's appurtenance to the residential building;
- an unfamiliar building element;
- the extent of the land holding;
- any information obtained during the assessment that may require further investigation in accordance with *Schedule 3 of the EQC Act*.[163]

[163] See the *Schedule 3 Declinature Guide*.

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i. Definitions of assessment outcomes

You may recommend that the claim be accepted (in full or in part), not accepted, or found invalid. These outcomes are defined as follows:

Accepted
The exposure is:

- settled by payment of a cash amount;
- settled by reinstatement, replacement, or relocation;
- below the amount of the applicable excess, therefore no amount is paid;
- nil, as the contract of fire insurance provides 'ground up' cover. The private insurer has paid for all the natural disaster damage within the terms of the contract and there is nothing else for us to pay; or
- accepted in part. The exposure is accepted in part and the other part of the exposure is declined.

Invalid
The exposure is not valid for one or more of the following reasons:

- there is no natural disaster damage to the residential building;
- an insured person with an insurable interest in the property concerned did not give the notice of the natural disaster damage (or authorise another party to give it);
- the notice does not say that natural disaster damage has occurred to insured property, i.e. property covered by the *EQC Act*;
- the notice has not been given to us or another person authorised by us within the two-year time limit;
- there is no contract of fire insurance or EQCover over the property concerned in force at the relevant time;
- the EQCover has been cancelled;

ii. Recommending that damage be accepted (in full or in part)

If your recommendation is that the damage be accepted in full:

- clarify each area of damage that you consider should be accepted and explain your reasoning.
- ask the customer if they have any questions about the acceptance recommendation.

If your recommendation is that the damage be accepted in part:

- show the customer each area of damage that you consider should be partially accepted and each area that you consider should not be accepted. Explain your reasoning thoroughly.

- ask the customer if they have any questions about the partial acceptance recommendation. If the customer challenges your recommendation of partial acceptance, advise them that you will follow the internal processes to help address their concerns.

iii. Recommending that damage not be accepted

1. Show the customer each area of damage that you consider should not be accepted as natural disaster damage, and thoroughly explain why.

2. Ask whether they have any questions about your recommendation that the damage not be accepted.

3. If the customer challenges your recommendation that the damage not be accepted, advise them that you will follow the internal processes to help address their concerns.

iv. Recommending that the claim be found invalid

There are a number of reasons why a claim may be invalid. Of these, you will typically recommend that a claim be found invalid because there is no natural disaster damage.

1. You should inspect all areas of the property before advising the customer that there is no natural disaster damage. This will ensure you have taken all observations into account.

2. If there is no natural disaster damage to the property, explain this thoroughly at the time of the inspection.

3. If the customer challenges your finding that the claim be found invalid, advise them that you will follow the internal processes to help address their concerns.

v. Quantifying dwelling damage

Advise the customer of the assessed natural disaster damage to the building based on your visual assessment. Make sure you include any specific requirements, e.g. asbestos testing.

For the majority of dwelling claims, you can provide guidance on the extent of the remediation strategy on site.

For more complex building claims, e.g. damage to at-risk building systems, where the remediation strategy is restricted building work, or structural damage, consider consulting appropriate experts.[164]

vi. Quantifying land damage

In some cases, the remediation strategy is conceptual, e.g. where it has been provided by a geotechnical engineer for a land claim.

For minor land claims (removal of debris only, flooding inundation, scour, cracking):

- it is unlikely that you will need to engage an engineer;
- if the repair cost of the damage is less than the excess or it is clear that the repair cost will be significantly less than the value of the damaged land, you do not usually need to engage a valuer;
- you can usually provide guidance on the remediation strategy onsite.

For all other land claims:

- in almost every situation, you will need to engage an engineer;
- the engineering report will provide a conceptual remediation strategy that will repair the physical damage and remove any imminent damage risk;
- once the engineering report is received, a valuer will be engaged.

For all land claims, the maximum we can pay is determined by *section 19 of the EQC Act*. See the *Calculating Settlement Guide*. Provide the customer with an overview of this to give them context of why a valuer is being engaged. The claims manager will have already provided the customer with information on land settlement requirements.

f. Conclude the assessment visit

1. Summarise other key facts in relation to their claim, e.g. basis of settlement (remediation versus valuation), excess, cash settlement vs repair.
2. Explain the next steps and the timeframe for each:
    - You will prepare an assessment report.
    - The engineer and/or valuer will prepare reports (if required).

[164] See Section 7 Engaging Experts.

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- A scope of works will be prepared.
- You will send your recommendation to their claims manager.
- Their claims manager will contact the customer to discuss their finalised claim.

3. Give any relevant information sheets to the customer.
4. Check all forms are complete, information is complete and equipment is accounted for.
5. Ask whether the customer has any further questions and address them before leaving site.
6. Leave the site before completing paperwork.
7. If follow-up is required, do so within the agreed timeframe.

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12. Post-site assessment actions

Before following the guidance in this section, ensure that you are familiar with the *EQC Claims Manuals – Residential Buildings* and *Residential Land*, and all sections within this Manual.

a. Update the claim details

Update the claim with a file note confirming that the assessment has been completed. Detail who was present, damage sighted, your findings, and next actions. Update the claim file with any noted hazards[165] if required. Provide a brief overview of the assessment and next steps and timeframes to the customer and claims manager if required.

b. Prepare the assessment report

For all claims, ensure that:

- the report is completed within agreed timeframes;
- the claim number, customer details, date and your name are on the report;
- all relevant property information is accounted for, e.g. age, foundation, cladding, roof, chimneys;
- the damage description is clear, concise, and unambiguous;
- if the damage is not accepted as natural disaster damage, your reasoning is clear;
- diagrams of the damage (whether accepted or not) are clear and well defined;
- visual aids, e.g. photographs, are included where required;
- the next steps are clearly outlined;
- your assessment report adheres to our documentation standards.[166]

For land claims, also ensure that your sketch details the location of the damage as well as the location of the damaged land in relation to the dwelling and/or appurtenant structures. The sketch should indicate the property boundary, identify any insured land structures and main access way (if applicable) and adhere to our documentation standards.[166] For land claims, a sketch may be an aerial photograph from the territorial or local authority's geographic information system (GIS) records.

[165] See Section 9 Unsafe Properties.

[166] See Section 13 Assessment Documentation Standards.

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c. Determine the assessment outcome

Your assessment report will confirm the outcome of your site assessment and the next actions required. You will either:

- have sufficient information to prepare a scope of works (where applicable) and make a settlement recommendation; or
- require further information from appropriate experts[167], e.g. geotechnical engineer and land valuer for land claims.

d. Review expert reports

Where you have engaged an expert and have received their draft report, check that:

- your instructions have been followed;
- the expert has not commented outside their area of expertise, e.g. how the *EQC Act* should be interpreted regarding the claim;
- the expert's report complies with our general documentation standards.[168]

If necessary, return the report to the expert for amendment.

Other details depend on the type of expert report.[167]

[167] See Section 7 Engaging Experts.

[168] See Section 13 Assessment Documentation Standards.

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i. Geotechnical report

Check the report for the following:

- Property details – confirm:
  - that any prior EQCover claims that have been identified are summarised;
  - that the property boundary and extent of the land holding are shown;
  - that where the report identifies a residential building (including any appurtenant structures) that identification is correct;
  - the general description of the land and natural features, e.g. soil type, elevations, cliffs, streams;
  - that any grounds to consider declining[169] a claim in full (or in part) under *Schedule 3 of the EQC Act*, or any grounds to consider pursuing subrogated recovery action against any potentially liable third parties, have been identified and are summarised.
- Damage – confirm:
  - that you are satisfied that the correct loss cause has been identified;
  - that the report correctly identifies any natural disaster damage as defined by the *EQC Act*;
  - that the description of damage accurately records any damage to land, land structures, and/or residential buildings;
  - whether the engineer has identified and quantified any imminent damage to residential buildings or land.
- Conceptual remediation strategy – check that the report provides a conceptual remediation strategy that:
  - repairs the actual damage to the residential land by restoring its utility to immediately before the natural disaster;
  - removes any imminent damage risk that has been identified;
  - is of sufficient detail to enable accurate costing.
- Visual aids – check that the report includes visual aids, e.g. photographs and sketches, that support both the damage identified and the recommended remediation strategies.

[169] See the *Schedule 3 Declinature Guide*.

Seek clarification from the expert if:

- there is an error;
- any part of the report findings is not clear; or
- you are unsure of the report conclusions, e.g. remediation strategy, appurtenant structures, or imminent damage risk.

If necessary, have the report amended.

ii. Structural engineering report

Check that the purpose and scope of the report is clearly stated as well as the following:

- Property details – confirm:
  - that any prior EQCover claims that have been identified are summarised;
  - that if the report identifies residential buildings or land, that identification is correct;
  - the general description of the building and any key features, e.g. specific design, construction and materials.
- Damage details – confirm:
  - that the report correctly identifies any natural disaster damage as defined by the *EQC Act*;
  - that the description of damage accurately records the damage to any residential building;
  - that the description of damage (location, size, extent) is consistent with your observations, e.g. the location and/or distribution of cracks in a concrete perimeter foundation;
  - whether the engineer has identified and quantified any imminent damage to any residential building;
  - that the expert has assessed all areas of concern for natural disaster and fully documented their findings, with supporting information, e.g. photographs, where required;
  - that the report provides a clear rationale for the engineer's conclusions about whether natural disaster damage has occurred.

- Remediation strategy – check that the report provides:
  - a remediation strategy[170] that reinstates the damaged building to the standard required under the *EQC Act* and meets all applicable legislative requirements, e.g. *Building Act 2004*, *building code*;
  - details of whether building elements require repair or replacement;
  - full and clear explanation of the recommendations and repair options;
  - sufficient detail to enable accurate costing.
- Visual aids – check that the report includes visual aids, e.g. photographs and sketches, that support the damage identified and the recommended remediation strategies.

Seek clarification from the expert in any situation where:

- there is an error;
- any part of the report findings is not clear; or
- you are unsure of the report conclusions, e.g. the determination about whether damage is the direct result of natural disaster.

If necessary, have the report amended.

iii. Valuation report

Check that the report includes:

- property details – confirm that the record of title reference, legal description, zoning, actual site area and either the value of the minimum sized site, or a 4,000 m^2 site, whichever is applicable, are provided.
- damage details – confirm that:
  - the site values have been provided as required in *section 19 of the EQC Act*;
  - the full extent of any damaged land areas and/or land structures that have been valued match the details stated in either the engineering report or your report, where applicable;
  - there is a description of any insured land and/or land structures that are damaged.

[170] See Appendix 3 Remediation Strategy, Standards and Costing.

Seek clarification from the expert if:

- there is an error;
- any part of the report findings is not clear; or
- you are unsure of the report conclusions, e.g. a land structure has been left out, or the area of land valued is not consistent with the engineering report.

If necessary, have the report amended.

iv. Survey specialist (for building)'s report

Check that the report:

- shows the floor level surveys, verticality surveys and other levels that are in question, e.g. kitchen benchtop, ceiling and windowsills; and
- includes any necessary legend details, e.g. date of survey, scale used, direction of north.

v. Survey specialist (for land)'s report

Check that the report:

- shows the land structures and/or buildings that are in question, clearly showing their locations in relation to the property boundary; and
- includes any necessary legend details, e.g. date of survey, scale used, direction of north.

vi. Other reports

For any other expert reports, you must ensure the expert has complied with your instructions, suitably addressed the matters the report was obtained for and complied with our general documentation standards.[171]

[171] See Section 13 Assessment Documentation Standards.

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e. Prepare scope of works

For all claims, consider the following factors when preparing a remediation strategy[172] for the natural disaster damage to insured property, including any imminent damage:

- site access issues;
- the quantity of work for any given repairer, as smaller jobs for certain trades attract minimum charges;
- the number of visits required to effect repair;
- travel and/or accommodation costs relating to visiting remote locations;
- the need for a specialised repairer, geotechnical engineer, structural engineer, architect or designer to prepare a remediation strategy for specialised repairs;
- professional and compliance fees where applicable;
- any specialist testing requirements, e.g. asbestos or electrical testing;
- health and safety requirements;
- enabling works or works necessary to effect the required repair, e.g. in repairing a deck that will require a handrail to comply with the current *building code*.

Base your remediation strategy on the damage information you have, including any assessment reports, specialists' reports, and any additional supporting information, e.g. photographs, diagrams and sketches.

A Licensed Building Practitioner should scope any restricted building work. At a minimum, the draft scope of works must be approved by a Licensed Building Practitioner. Restricted building work is work that is critical to make a home structurally sound and weathertight. You must use Licensed Building Practitioners to design this work, and they must either carry out this work or supervise it.

Your scope of works must be practical and meet the statutory requirements of the *EQC Act* and other relevant legislation. In all cases, you must follow our requirements[172] for approving scopes of work that we will advise you of from time to time.

If you are unsure of the correct remediation strategy, consider seeking expert advice.[173]

[172] See Appendix 3 Remediation Strategy Standards and Costing.

[173] See Section 7 Engaging Experts.

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f. Prepare a settlement recommendation

The steps you have taken in planning and carrying out your assessment and post-site assessment actions will mean that you now have all the necessary information required to make your settlement recommendation.

The scope of works and valuation details will form the basis for your settlement recommendation. For more information on claim settlement, see *Toka Tū Ake EQC Claims Manual – Residential Buildings Section 8 How is the EQCover Claim Settled?*/*Toka Tū Ake EQC Claims Manual – Residential Land Section 9 How is the EQCover Claim Settled?*.

g. Upload documents for the customer's claims manager

Ensure all documents you have collated during your assessment are available on the claim file.

For information on how to complete the settlement calculation, see the *Calculating Settlement Guide*.

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13. Assessment documentation standards

Before following the guidance in this section, ensure that you are familiar with the *EQC Claims Manuals – Residential Buildings* and *Residential Land*, and all sections within this Manual.

a. Overview

For each assessment, the person dealing with the claim must complete and have available full documentation and evidence recording the findings of the assessment and the reasons for those findings.

We may notify, from time to time, the type and level of documentation that is required to be provided to us for each claim. Where there is a difference between our requirement and this Manual, our requirement will prevail.

b. Assessment documentation requirements

This section explains the minimum documentation standards required in the assessment of EQCover claims. To comply with these requirements, you must retain any documentation used to assess an EQCover claim in accordance with the *Public Records Act 2005* and associated Toka Tū Ake EQC policy and standards. For further details, see the *Recordkeeping Guide*.

Any organisation dealing with an EQCover claim must:

- keep full, complete and accurate records for that claim (and any other Toka Tū Ake EQC matters they are working on), compile and have the full claim file and any other information we require available for us;
- ensure that all damage recorded in an assessment and the resultant supporting information, whether natural disaster-related or not, is supported by evidence. If possible, no assumptions are to be made. In cases where assumptions are necessary, they must be based on evidence, and the appropriate expert necessary to assess damage must be engaged. All reports presented to the customer must meet our required quality standards; and
- act in compliance with all relevant Toka Tū Ake EQC policies and associated standards, and any applicable legislation.

In all cases, you will need to comply with your organisation's own internal processes and delegations, including the *Fair Insurance Code*.

In gathering or preparing the assessment documentation, consider our requirements[174] of communications by private insurers acting on our behalf. One such requirement is that the communication may be:

- in two communications (one covering the residential building exposure and one covering the building component that is covered by the private insurer for the same property); or
- in one communication (covering both), provided the two components can clearly be understood separately.

The private insurer must set out clearly the different consequences of the respective decisions to decline where:

- a private insurer is dealing with an exposure on our behalf and the relevant EQCover claim is declined under one of the grounds set out in *Schedule 3 of the EQC Act*; and
- the private insurer also declines the claim under the contract of insurance for the same property.

c. Assessment documentation purpose and outputs

Section 31A of the EQC Act explains when we may collect information and how it may be used:

> (1) The Commission may collect information for any of the following purposes:
> (a) administering this Act:
> (b) performing its functions:
> (c) facilitating natural disaster preparedness, response, or recovery (including settlement of insurance claims by insurance companies)
> (2) Information collected by the Commission for any of the purposes referred to in subsection (1) is taken to have been collected—
> (a) for all of those purposes; and
> (b) if it is property-related information, for the purpose of making the information available (including to the public).

Some examples of situations where we may use information collected in the course of carrying out an assessment include:

- settling a claim;
- natural disaster event planning; and
- research and education.

[174] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 10.A.c Advising the Customer of the Outcome of the Residential Building Exposure*/*Toka Tū Ake EQC Claims Manual – Residential Land Section 11.A.c Advising the Customer of the Outcome of the Residential Land Exposure*.

All decisions are also subject to audit by us. Assessment documentation serves as the basis for audit processes.

We share information:

- as permitted or required by the *Official Information Act 1982*, the *Privacy Act 2020*, and *section 31A of the EQC Act*; and
- with parties who may require the information to complete, plan or quantify repairs.

d. Assessment information capture

Information capture relating to the assessment occurs before, during and after the site assessment.[175] This information may be gathered by us and anyone authorised to deal with a claim on our behalf, in particular:

- the claims manager;
- the assessor; and
- any applicable third parties, including any experts engaged in assessing the claim.

When gathering information, anyone authorised to deal with a claim on our behalf must at all times be aware of the requirements of the *Privacy Act 2020*, including (among others) to:

- notify the customer of the information being collected and the purpose of that collection;
- use the information collected only for the purposes it was collected for; and
- use reasonable security safeguards to protect the information against loss, improper access and other misuse.

For further details regarding the requirements of the *Privacy Act*, see the *Privacy Act Guide*).

In gathering this information, you should apply certain documentation standards as follows.

i. General documentation standards

All documents that are created in assessing an EQCover claim must:

- have correct claim identifying details, e.g. damage location, customer contact details, loss details;
- be concise, complete, accurate and factual;

[175] For details, see Section 10 Preparing for a Site Assessment, Section 11 Carrying Out a Site Assessment and Section 12 Post-site Assessment Actions.

- be professional and use correct spelling and grammar;
- comply with any privacy requirements[176] and any other applicable standards, which we may advise you of from time to time and/or may form part of your processes;
- be suitable and robust for all uses that the assessment documentation may be required for, e.g. claim settlement, managing queries, information requests, Toka Tū Ake EQC quality assurance and reporting functions.

Any visual aids, e.g. sketches, photographs, or diagrams, that are provided must be clearly labelled. For land claims, a sketch may be an aerial photograph from territorial or local authority geographic information system (GIS) records.

ii. Assessment planning documentation standards

When first contacting the customer, record:

- the time and date of the call (if this is not system managed);
- that the person spoken to is authorised to act on the claim;
- the name of the person who will be attending the site visit;
- the customer's account of the event and damage relating to the claim;
- any health and safety concerns that the customer raises;
- whether any specialist tools, equipment or experts are required to access and assess the damage; and
- the time and date of the planned visit (where applicable).

If you determine that a site visit is not required, clearly record the reasons.

iii. Site assessment documentation standards

When completing the site assessment, record:

- details of the building elements (where applicable), e.g. foundation, wall and roof cladding type and materials;
- details of the land elements (where applicable), e.g. land structures, property boundaries, appurtenant structures;

[176] See the *Privacy Act Guide*.

- a summary of the customer's concerns and their view of the damage to their property. Make special note of areas the customer says are damaged, but which are not considered natural disaster damage;
- each issue you observe and your findings about the cause of the damage;
- each area of damage, noting the product or material type;
- clear sketches and relevant photographs (see standards below) of areas of damage, both accepted and non-accepted, and any other property where appropriate; and
- the details of your conversation informing the customer of the assessment outcome and the next steps with the claim.

a. Standards for sketches

Residential building claims
For residential building claims, your building/room sketch must include:

- the basic footprint of each damaged room;
- the relevant scale or dimension for each damaged room;
- the damage the customer has reported;
- the location and extent of damage in each room, e.g. the length of cracks, area of collapsed ceiling tiles;
- the location of relevant openings or penetrations, to help with orientation.

If the extent or location of the damage requires a footprint of the whole house, include the direction of north. For larger or more complex building types, e.g. multi-unit buildings, you may wish to request a copy of the building plans from the owner or body corporate to record this information more efficiently.

Residential land claims
For residential land claims, your sketch must include:

- the extent of the land holding;
- the type and extent of the land damage. This includes natural disaster damage to:
  - the insured land and land structures; and
  - any uninsured land and land structures within the land holding.
- the location and scale of any residential buildings;

- the extent of the insured residential land in relation to any residential building (including insured land structures) that is lost or damaged, including any imminent damage.

Your sketch must be presented in a format that includes the following details. It must:

- be drawn to scale;
- identify the boundary of the land holding (including dimensions);
- indicate the dimensions of the house and any appurtenant structures;
- indicate (with the red dotted line) the insured land area within 8 metres of the house and any appurtenant structures;
- identify the main access way (including its distance from the house);
- identify the areas of damaged land that are covered and not covered;
- include details of the location and type of the retaining walls;
- identify the street name; and
- show the direction of north.

For an example of a land sketch, see Appendix 4 Documentation Examples Section e Land Sketch.

b. Standards for photographs and video

When you are taking photographs (and recording video, if applicable) of the customer's property, ensure the customer is aware of this and you have their permission.

Avoid including people and any potentially sensitive items in your photographs (and any video), e.g.:

- washing on a clothesline;
- documents, books or magazines on shelves or tables;
- photographs or certificates on walls and shelves;
- any personal items in bedrooms or bathrooms;
- vehicle licence plates.

For video, also avoid including potentially sensitive audio, e.g. private conversations.

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Generally, you should take a series of photographs (and videos, if applicable) progressing from general to specific, using three vantage points:

- long-range
- mid-range
- close-up.

If there has been no or minor damage, you might take only a few mid-range and close-up photographs (and a short video, if applicable) of any areas of interest. For more severe damage, you should take a greater number of photographs (and amount of video) in a more structured manner.

- Long-range photographs of the insured property may be, e.g. an aerial view of the entire property, the four compass point views of the insured residential building exterior, or a view of the entire length of the main access way showing any relevant residential buildings and/or land structures.
- Mid-range photographs may be, e.g. a view of an exterior elevation to record the damage across the entire elevation, or a view of the length of a hallway showing the various entrances and exits.
- Close-up photographs will provide a view of the specific damage that you want to record and may include a measuring tool to illustrate the relative size of the damage. For example, the detail of a hairline crack in the exterior cladding (which is clear and shows the size) may be vital when determining whether it is natural disaster damage if challenged.

The interpretation of long-range, mid-range and close-up depends on the type and extent of damage, as well as the specifics of the property you are assessing.

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iv. Post-site visit documentation requirements

Upon receiving expert reports, check that:

- the legal description of the property is recorded;
- they comply with your instructions and meet the requirements for assessing and settling claims under the EQC Act;
- the appropriate sign-off is included;
- they have a draft watermark unless they are the final report;
- the report is either addressed to, or states it is for Toka Tū Ake EQC, meaning it can be relied upon for settling EQCover claims;
- any limitations of the report have been clearly stated, e.g. restricted access;
- the facts and assumptions used as the basis for conclusions are clearly stated and reasoning is provided.

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APPENDICES

Appendix 1. Building components and repair considerations

a. Overview

The purpose of this appendix is to provide people assessing EQCover claims with a general understanding of common remediation strategies to natural disaster damage to residential buildings. The common remediation strategies described are intended to provide guidance only, and are not intended to be exhaustive. You may need to engage experts.[177]

The remediation strategies discussed in this section are substantive repairs, not urgent works.[178]

b. Key considerations for remediation

Remediation strategies identified and costed for natural disaster damage to residential buildings fall into two categories:

- Exempt work;
- Restricted building work.

Any work undertaken must:

- meet the *EQC Act* requirements;[179]
- be lawful;[180]
- be fit for purpose;
- be practical and achievable;
- take into consideration any site, access, logistical and professional investigation issues relevant to the specific damage location and any relevant enabling works;

[177] See Section 7 Engaging Experts.

[178] For details about urgent works, see the *Urgent Works Guide*.

[179] See Appendix 3 Remediation Strategy, Standards and Costing, Section b Reinstatement Standards under the EQC Act.

[180] See Section c Exempt Building Works (Consent not Required) and Section d Restricted Building Works (Consent Required) of this appendix.

- consider any other properties[181] and how they may affect the remediation strategy for the property you are assessing;
- comply with the *Health and Safety at Work Act 2015* and regulations under that act;[182]
- take into consideration the risk of contamination exposure, e.g. asbestos;
- consider any other relevant factors that you may identify;
- meet our repair standards.[183]

c. Exempt building works (consent not required)

New Zealand legislation allows for exemptions to building consents in a variety of situations. The most applicable exemptions to natural disaster claims are summarised below.

Section 41 of the Building Act 2004 exempts certain building work from the requirement to obtain a building consent. The most common exemptions are those outlined in sub clauses (b) and (c)

Section 41(1)(b) refers to any building work described in *Schedule 1* that does not require a building consent. Among other things, this exemption allows building owners to maintain their buildings without obtaining a building consent by allowing any component or assembly associated with the building to be repaired, maintained or replaced, provided comparable materials are used and the replacement is in the same position.

Section 41(1)(c)(i) relates to any building work where a building consent cannot practicably be obtained in advance because the work had to be carried out urgently to:

- save or protect life or health; or
- prevent serious damage to property.

However, *section 17 of the Building Act 2004* still requires building work to be carried out in accordance with the *building code* even if no building consent is required.

Section 112(2) of the Building Act 2004 enables a TA to allow an alteration to an existing building where the building does not comply with the provisions of the building code specified by the TA, if the TA is satisfied that:

- the alterations would not take place if the building were required to comply with those provisions of the *building code*;

[181] See Section 8 Assessing Damage Across Multiple Properties.

[182] See Section 1.e.iv Health and Safety.

[183] See Section d.i.a What is the Definition of 'Replacement Value'?.

- the alteration will improve either the means of escape from fire, or access and facilities for people with disabilities; and

- the benefits of the alteration will outweigh any detriment likely to result from not complying with the relevant provisions of the building code.

For further information see the design consideration tables for each building element below.

d. Restricted building works (consent required)

This section has been adapted from Restricted Building Work (RBW) which is licenced under CC BY by the Ministry of Business, Innovation and Employment.

i. Definition of restricted building work

Restricted building work is work that is critical to make a home structurally sound and weathertight. You must use Licensed Building Practitioners (LBPs) to design and carry out this work. LBPs are registered and required to keep their skills and knowledge up to date. They are also licensed for the type of work they do. These licence classes include:

- design;

- carpentry;

- roofing;

- brick and block laying;

- external plastering;

- foundations.

Restricted building work is any work that:

- requires a building consent; or

- involves or affects a home's primary structure, weathertightness, or certain fire safety design.

a. Work to a dwelling's primary structure

Any work or design that alters the primary structure of a dwelling is restricted building work. This is work that contributes to the resistance of vertical and horizontal loads.

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Table 5: Primary structure building elements

Examples of primary structure building elements	Types of primary structure building elements
Foundations and subfloor framing	Slab on grade, piles (including braces), foundation walls, strips, rafts, pads, jack studs, bearers, stringers
Floors	Slabs, joists, trusses, composite flooring systems
Walls	Studs, lintels, solid construction, piers
Roof	Rafters, purlins, trusses
Columns and beams	Timber, steel, concrete, masonry
Bracing	Cross bracing, sheet bracing, shear walls, diaphragms

b. Work to a dwelling's weathertightness

Work or design intended to keep water out or help control moisture within the building fabric is restricted building work. It is also called work to 'external moisture management systems'.

Table 6: Areas where external moisture management systems may be found

Examples of external moisture management systems	Areas where these may be found
Damp-proofing	• Floors in direct contact with ground moisture • Subfloor/suspended floors and solid walls exposed to moisture in the air and including damp-proofing protection
Roof or wall cladding and roof or wall cladding systems (attached to the outside of framed or solid walls or roofs)	• Building wrap • Drained cavities • Cladding • Fixings • Windows, doors and skylights • Ventilators • Openings and penetrations • Flashings and seals • Joints and junctions • Surface treatments (e.g. waterproof coating) • Waterproofing (waterproof coatings)
Waterproofing	• Waterproof coating to solid walls and roofs exposed to airborne moisture • Waterproof membranes to deck or balcony areas

In all instances, if the proposed work entails affecting any exterior element other than for minor aesthetic reasons, you should ask the relevant TA whether a consent is required.

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c. Fire safety design

This generally applies to mixed-use buildings, apartment buildings and rest homes (which may include townhouses).

Design work on fire safety systems must be done or supervised by an LBP with the correct licence class. It ensures protections such as warning systems, escape routes and precautions against the spread of fire are included in the design.

Table 7: Areas where fire safety systems might be found

Examples of fire safety systems	Areas where these may be found
Emergency warning system	Automatic or manual emergency warning systems
Evacuation and fire service operation systems	• Electromagnetic or automatic doors or windows • Emergency lighting systems • Fire service lift control • Escape routes • Final exits • Signs • Fire hose reels • Fire separations • Smoke separations • Refuge areas
Suppression or control systems	• Automatic systems for fire suppression • Mechanical or passive ventilation or air handling systems • Pressurisation systems • Smoke control systems • Dampers • Fire hose reels • Building hydrant systems • Fire separations, smoke separations
Other parts of design	• Interface with systems • Fire systems centre • Emergency power supply

e. Foundations

i. Common foundation remediation considerations

The foundation repair may not require a consent from the relevant TA and may be carried out as part of exempt works. If you are unsure whether a consent is required, you should ask the relevant TA.

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Table 8: Suitability of common foundation remediation strategies

Examples of observed damage	Considerations	Common remediation strategies
Minor damage – damage to decorative coating, e.g. splatter coat, paint or plaster	Whether a specialist repairer is required	Re-plaster splatter coat, re-paint
Minor-to-moderate damage – discernible differential and uniform settlement of the dwelling and noticeable floor slope between any two points	• Whether there is adequate subfloor access • Whether it can be jacked and packed • Whether ground conditions are suitable for the proposed remediation strategy • Whether conventional crack repair methods, e.g. high- or low-pressure injection, are appropriate	• Ground injection • Mechanical jacking of concrete perimeter foundation • Jack and pack • Epoxy injection
Minor damage – minor lateral extension or 'stretch' of the floor and foundations	• Whether the foundation is repairable • Whether the crack repair will restore foundation geometry • Whether underfloor services will be disrupted	Localised foundation repair
Moderate damage – discernible: • lateral extension or 'stretch' of the floor and foundations; or • differential and uniform settlement	• Whether the underfloor services will be disrupted • Whether there is adequate subfloor access • Whether engineering and/or design input is required • Whether ground conditions are suitable for the proposed remediation strategy • Whether it can be jacked and packed 100 mm or greater	• Localised replacement of any specified system (concrete perimeter foundation, timber pile) • Ground injection • Mechanical jacking of concrete perimeter foundation • Jack and pack • Partial or full foundation rebuild

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Moderate damage – localised structural damage to a foundation element	• Whether there is adequate subfloor access • Whether ground conditions are suitable for the proposed remediation strategy • Whether engineering and/or design input is required • Whether underfloor services will be disrupted • Whether floor coverings will be affected	Partial replacement of a specified element not requiring consent
Moderate damage – Localised pile tilting.	• Whether there is adequate subfloor access • Whether ground conditions are suitable for the proposed remediation strategy • Whether engineering and/or design input is required • Whether underfloor services will be disrupted • Whether floor coverings will be affected	Replacement of affected pile
Severe damage: • extensive lateral extension or 'stretch' of the floor and foundations; or • significant differential and uniform settlement	• Whether there is adequate subfloor access • Whether ground conditions are suitable for the proposed remediation strategy • Whether engineering and or design input is required • Whether underfloor services will be disrupted • Whether floor coverings will be affected • Whether the repair is economically viable • Whether the repair will restore superstructure geometry	Full replacement of any specified system, e.g.: • Slab on grade • Concrete perimeter foundation • Piles or poles

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ii. Foundation design considerations

Table 9: Key foundation design considerations

Key foundation design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	Sections B1 Structure, B2 Durability, E1 Surface Water and E2 External Moisture
Expert input	Structural engineering and geotechnical engineering input will generally be required.
Whether damage is aesthetic or structural	Structural damage will generally require engineering input and/or consents. Aesthetic damage may require remediation work to undamaged areas to reinstate the amenity value.
Pre-existing conditions (see Section 6 Pre-existing Conditions)	In some cases, a performance-based lift may be required. This is where a floor cannot be reasonably restored to level without unduly damaging the building. Performance-based lifting is only appropriate where it will sufficiently restore the functionality, aesthetic quality and amenity value of the dwelling.
Other considerations	Substantial replacement of any specified system that contributes to a building's structural behaviour or fire-safety properties will trigger a building consent.

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f. Roof

i. Common roof remediation considerations

Table 10: Suitability of common roof remediation strategies

Examples of observed damage	Considerations	Common remediation strategies
Minor damage – dislodged mortar capping, dislodged roofing tiles (concrete, slate, clay)	• Whether a specialist repairer is required • Access requirements	• Localised repointing of ridge capping • Localised reset of dislodged roofing tiles
Minor damage – scratched paint on rolled metal roofing from impact, popped fixings	• Whether a specialist repairer is required • Access requirements	• Painting roof to ensure colour match • Re-fixing roof to purlins
Moderate damage – broken ridge capping, broken roofing tiles (concrete, slate, clay)	• Whether replacement tiles are available • Whether trade knowledge is available to effect repairs • Access requirements	• Partial replacement of damaged roof area • Total replacement of roof if materials are not available
Moderate damage – dented rolled metal roofing from impact, normally a chimney	• Whether the roofing material is still available • Access requirements	• Replacement of damaged sheets or metal tiles • Roof painting
Severe damage – roof framing members broken, no structural support for roofing materials	Access requirements	• Full rebuild of roof from stud top plate • New trusses or rafters and purlins • New roof to suit – may mean a heavy concrete tile roof is replaced with a lightweight rolled metal roof

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ii. Roof design considerations

Table 11: Key roof design considerations

Key foundation design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	Sections B1 Structure, B2 Durability, E1 Surface Water and E2 External Moisture
Whether damage is aesthetic or structural	Structural damage may require engineering input and/or consents. Aesthetic damage may require remediation work to undamaged areas to reinstate the amenity value.
Pre-existing conditions (see Section 6 Pre-existing Conditions)	The pre-event state of the roof in some cases will mean that a repaint is not required, e.g. if the owner had undertaken repairs to the roof resulting in mismatched colours of roofing material, there would be no requirement to paint the roof if one or more sheets had to be replaced after damage caused by a natural disaster event.
Other considerations	Substantial replacement of any specified system that contributes to a building's structural behaviour or fire-safety properties will trigger a building consent.

g. Chimneys

i. Common chimney remediation strategies

Chimneys are either constructed externally to the superstructure of the dwelling or internally within the superstructure. In older residential buildings, they are commonly constructed in situ from either brick or masonry, which can be either reinforced with steel or unreinforced. Modern homes more commonly use steel flues. These can additionally have clad timber or steel-framed structures to form the look of a chimney.

Table 12: Key considerations for common chimney types

Chimney type	Key considerations
Masonry and pre-cast concrete chimneys	Extent or width of cracks Relevant TA requirements Structural integrity Aesthetics
Steel flue chimneys	Serviceability

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Table 13: Suitability of common chimney remediation strategies

Description of observed damage	Considerations	Common remediation strategies
Minor cracking of mortar or masonry element	• Whether the cracking is aesthetic or structural • Unreinforced masonry structures require careful development of an appropriate remediation strategy (structural engineering input required)	• Repointing • Re-plastering/repainting • Epoxy injection
Minor damage – loss of secondary component: • Loss of chimney pot • Loss of plaster cap	Whether suitable components are available	• Replacement of pot • Replacement of plaster cap • Alternative remediation strategy (if suitable components not available)
Moderate-to-severe damage: • Partial displacement of brick chimney (above roofline) • Partial displacement of brick chimney (inside roof cavity)	• Whether the damaged chimney is affecting weathertightness • Whether emergency works are required to waterproof • Which TA requirements apply • Whether there is damage to ceiling and/or roof linings • Unreinforced masonry structures require careful development of an appropriate remediation strategy (structural engineering input required)	Structural engineering input is required to determine whether partial or full replacement is the appropriate remediation strategy.
Severe damage: • Displacement of external chimney from dwelling • Displacement of internal chimney • Crushing damage to steel flue	• Which TA requirements apply • What engineering and architectural input is required • Whether external cladding is damaged • Whether there is damage to internal linings/flooring • Whether the original components are available • Unreinforced masonry structures require careful development of an appropriate remediation strategy (structural engineering input required)	• Replacement of chimney • Replacement of foundation • Repair of cladding • Replacement of insulation • Repair or replacement of roof linings including flashings • Removal and/or repair of internal linings and/or floor linings • Full replacement of damaged flue and flashings

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ii. Chimney design considerations

Table 14: Key chimney design considerations

Key chimney design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	E.g. Sections B1 Structure, B2 Durability, C2 Prevention of Fire Occurring, and E2 External Moisture
Whether the damage is aesthetic or structural	• Aesthetic damage – may require remediation work to undamaged areas to reinstate the amenity value. • Structural damage – may require engineering input and/or consents.
Pre-existing conditions (see Section 6 Pre-existing Conditions)	• Non-compliant fires e.g. open fires • Pre-existing cracks
Specialists	Designer or engineer may be required
Internal/external chimney	Access limitations for internal chimneys
Materials	Availability
Category 1 and 2 historic buildings	Requirement to repair or replace in accordance with the Heritage New Zealand Pouhere Taonga Act 2014
Consent conditions	• Double-burning wood burners • Local government clean air regulations

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h. Superstructure (walls)

iii. Common superstructure remediation strategies

The wall repair may not require a consent from the relevant TA and may be carried out as part of exempt works. If you are unsure whether a consent is required, you should ask the relevant TA.

Table 15: Key considerations for common superstructure remediation strategies

Superstructure type	Key considerations
• Timber framing • Light gauge steel framing • Structural insulated panels (SIPs)	• Whether intrusive investigation is required to view connections • Whether geometry change has occurred
• Reinforced concrete • Reinforced concrete masonry • Precast tilt panel	• Extent or width of cracks • Aesthetics • Waterproofing system integrity • Whether a specialist repairer is required • Pre-existing conditions, e.g. construction and design issues, corrosion • Whether geometry change has occurred
Unreinforced masonry, e.g.: • Double or triple brick • Unfilled concrete block • Stone	• Relevant TA requirements • Extent of repairs required to reinstate function and amenity value • Pre-existing conditions, e.g. construction and design issues • Adequacy and condition of lateral restraint at floor and roof levels • Effectiveness of connection between masonry wall elements • Adequacy and condition of the foundations • Condition of the mortar • Whether geometry change has occurred
Structural steel	• Whether intrusive investigation is required to view connections • Pre-existing conditions, e.g. construction and design issues, corrosion • Whether geometry change has occurred

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Table 16: Suitability of superstructure remediation strategies

Description of observed damage	Considerations	Common remediation strategies
Framing – joints between members have pulled apart	Whether internal linings are showing signs of severe distress – this type of damage is only expected if they are	• Reinstate and refix members. • Bent and buckled framing members must be replaced.
Framing – bottom plate fixing has lifted or shifted from its original position	Whether thick floor coverings could be disguising damage – careful inspection is required if linings show obvious signs of distress	• Remove linings and refix wall to floor connections • Repair will vary depending on floor type (suspended timber or concrete slab)
Framing – wall elements out of plumb	Whether the damage structural or aesthetic	If racked, remove linings and realign framing or replace as required.
Cracking or displacement of unreinforced masonry walls	Unreinforced masonry structures require careful development of an appropriate remediation strategy (structural engineering input required)	• Strengthen with surface-mounted reinforcement • Full replacement
Cracking to concrete masonry	• Whether grouting and reinforcement are present • Width of cracking • Effect of cracking on reinforcement durability • Moisture ingress • Whether access is an issue	• Epoxy injection and repointing • New grouting and reinforcement • Partial or full replacement • Repair or replacement of waterproofing system
Cracks to precast concrete panels	• Whether reinforcement is hard drawn wire mesh • Severity of cracking • Condition of panel fixings	• Repair – epoxy injection, plaster, paint • Strengthening with additional structural elements or fibre-reinforced polymer (FRP)

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iv. Superstructure design considerations

Table 17: Key superstructure design considerations

Key superstructure design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	Sections B1 Structure, B2 Durability, E1 Surface Water and E2 External Moisture
Expert input	Structural engineering input will generally be required

Pre-existing conditions (see Section 6 Pre-existing Conditions)	• Construction and design issues e.g.:
	  • undersized wall members
	  • insufficient bracing capacity
	  • inadequate reinforcement
	• Rotten framing
	• Corrosion
	• Deterioration of waterproofing system

Consent conditions	Substantial replacement of any specified system that contributes to a building's structural behaviour or fire-safety properties will trigger a building consent.

i. Exterior cladding

i. Common exterior cladding remediation strategies

Table 18: Key considerations for common exterior cladding remediation strategies

Cladding type	Key considerations
Lightweight cladding, e.g. timber, fibre-cement, exterior insulation and finish systems (EIFS), PVC/vinyl, aluminium, metal	Extent of repairs required to reinstate function and amenity value
Medium and heavy weight cladding (mass > 30 kg/m^2 of wall, brick, block, stucco, fibre cement panel, autoclaved aerated concrete (AAC)), brick slip on fibre cement sheet, pre-assembled fibreglass	Extent of repairs required to reinstate function and amenity value
Unreinforced masonry, e.g. double or triple brick, unfilled concrete block, stone, schist)	• Relevant TA requirements • Extent of repairs required to reinstate function and amenity value • Unreinforced masonry structures require careful development of an appropriate remediation strategy (structural engineering input required)

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Table 19: Suitability of common exterior cladding remediation strategies

Description of observed damage	Considerations	Common remediation strategies
Minor-to-moderate cracking to paintwork	• Whether the paint can be colour matched • How much of the area needs to be repainted for amenity value	Gap-fill, sand and painting
Minor-to-moderate cracking to EIFS	Whether the system is direct fixed or cavity batten	Localised re-meshing and plastering/painting
Minor-to-moderate cracking to mortar joints	• Width of cracking • Whether coloured mortar can be matched	• Grinding out and repointing • Removal, cleaning, and reinstatement of bricks
Moderate damage – dislodgement of mechanical fixings	Whether existing bricks can be reused	Removal, cleaning, and reinstatement of bricks
Minor-to-moderate cracking to aerated or precast concrete cladding panels	Width of cracking	• Epoxy injection/plaster/paint • Localised replacement of damaged cladding
Minor-to-moderate cracking to fibre cement	Whether the system is direct fixed or cavity batten	Localised replacement of damaged cladding
Severe damage to any specific cladding	• Consent – substantial replacement of any specified system will trigger a consent • Whether the system is direct fixed or cavity batten	• Full replacement of specified system • Replacement of joinery

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ii. Exterior cladding design considerations

Table 20: Key exterior cladding design considerations

Key exterior cladding design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	• E.g. Sections B1 Structure, B2 Durability, C2 Prevention of Fire Occurring, and E2 External Moisture • Exemptions
Expert input	For partial or full replacement, architectural design input may be required.
Pre-existing conditions (see Section 6 Pre-existing Conditions)	Construction and design issues e.g.: • leaky building syndrome • rotten framing
Materials	Availability
Category 1 and 2 historic buildings	Requirement to repair or replace in accordance with the Heritage New Zealand Pouhere Taonga Act 2014
Consent conditions	E.g. insulation

j. Interior linings

i. Common interior lining remediation strategies

Table 21: Key considerations for common interior lining remediation strategies

Lining types	Key considerations
Plasterboard	• Whether damage is aesthetic or structural • Bracing
Lath and plaster	Delamination of plaster from laths Supporting bracing
Hardboard	Supporting bracing
Softboard	Supporting bracing
Tongue and groove (T and G)	Availability Supporting bracing
Fibre cement board	Supporting bracing

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Table 22: Suitability of common interior lining remediation strategies

Description of observed damage	Considerations	Common remediation strategies
Minor cracking to plasterboard, hardboard, softboard, T and G, fibre cement	• Whether there are additional cosmetic linings to consider, e.g. wallpaper, lining paper	• Rake, re-stop, plaster and redecorate • Re-screw sheets around perimeter • Reinforcing tape, e.g. FibaFuse
Severe damage to plasterboard, hardboard, softboard, T and G, fibre cement	• Bracing • Wall coverings • Whether services will be affected	• Removal and disposal of damaged lining material • Realigning or packing wall framing • Replacement with a modern equivalent (if original not available)
Minor cracking to lath and plaster	• Whether plaster is still fixed to laths (drumminess) • Whether there are additional cosmetic linings to consider, e.g. wallpaper, lining paper	Rake, re-stop, plaster and redecorate, with the inclusion of reinforcing tape, e.g. FibaFuse
Moderate-to-severe damage to lath and plaster	• Bracing • Wall coverings • Replacement with suitable alternative • Whether services will be affected	• Removal and disposal of damaged lining material • Realigning or packing wall framing • Replacement with a modern equivalent (if original not available)

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ii. Interior lining design considerations

Table 23: Key interior lining design considerations

Key interior lining design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	E.g. Sections B1 Structure, B2 Durability, C2 Prevention of Fire Occurring, E2 External Moisture and E3 Internal Moisture
Pre-existing conditions (see Section 6 Pre-existing Conditions)	Construction and design issues, e.g.: • leaky building syndrome • rotten framing
Materials	• Matching
Category 1 and 2 historic buildings	Requirement to repair or replace in accordance with the Heritage New Zealand Pouhere Taonga Act 2014
Consent conditions	E.g. insulation

k. Joinery

i. Common joinery remediation strategies

For any joinery type, the key things you must consider are:

- Weathertightness
- Glazing
- Access
- Availability
- Condition

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Table 24: Suitability of common joinery remediation strategies

Description of observed damage	Considerations	Common remediation strategies
Minor damage to panels, glass cupboard door, hardware and benchtop	Whether off-site action is required to reinstate joinery	• Replacement of glazing unit • Adjustment or reset of unit • Replacement of components (to the extent necessary) • Repainting
Moderate damage to a joinery component	• Whether similar products are available • Whether plumbing, drainage and/or electrical work are required	Isolated replacement of joinery units
Severe damage to multiple joinery components	• Whether similar products are available • Whether plumbing, drainage and/or electrical work are required	Full replacement of joinery units

ii. Joinery design considerations

Table 25: Key joinery design considerations

Key joinery design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	E.g. Sections B1 Structure, B2 Durability, C2 Prevention of Fire Occurring, and E2 External Moisture
Pre-existing conditions (see Section 6 Pre-existing Conditions)	Construction and design issues, e.g.: • leaky building syndrome • rotten framing
Materials	• Availability • Matching
Category 1 and 2 historic buildings	Requirement to repair or replace in accordance with the Heritage New Zealand Pouhere Taonga Act 2014

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l. Floors

i. Common floor remediation strategies

Table 26: Key considerations for common floor types

Floor type	Key considerations
Timber	• Subfloor insulation • Floor coverings • Aesthetics
Concrete (including polished)	• Width of crack • Reinforced or unreinforced • Floor coverings • Aesthetics

Table 27: Suitability of common floor remediation strategies

Description of observed damage	Considerations	Common remediation strategies
Minor cosmetic damage to timber floor component	• Whether there is adequate subfloor access • Whether floor coverings will be affected • Whether the damaged component can be replaced with a suitable alternative • Whether joinery needs to be moved	• Filling, sanding and polyurethane application • Replacement of floor coverings • Replacement with a modern equivalent (if original not available)
Minor cosmetic damage to concrete floor component	• Whether floor coverings will be affected • Whether an aesthetic repair can be achieved • Whether joinery needs to be moved	• Grinding out epoxy fill • Replacement of floor coverings • Polishing and sealing
Moderate damage to timber floor	• Whether there is adequate subfloor access • Whether floor coverings will be affected • Whether the damaged component can be replaced with a suitable alternative • Whether joinery needs to be moved • Whether services will be affected • Whether insulation will need to be replaced	Removal, disposal and replacement of timber flooring

Moderate damage to concrete floor	• Whether floor coverings will be affected • Whether an aesthetic repair can be achieved • Whether joinery needs to be moved • Whether services will be affected • Whether insulation will need to be replaced	Removal, disposal and replacement of section of concrete slab
Severe damage to timber floor	• Whether floor coverings will be affected • Whether joinery needs to be moved, including trims and architraves • Whether services will be affected • Whether insulation will need to be replaced	Full replacement of floor
Severe damage to concrete floor	• Whether floor coverings will be affected • Whether joinery needs to be moved, including trims and architraves • Whether services will be affected • Whether insulation will need to be replaced	Full replacement of floor

ii. Floor design considerations

Table 28: Key floor design considerations

Key interior lining design considerations	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	E.g. Sections B1 Structure, B2 Durability, C2 Prevention of Fire Occurring, and E2 External Moisture
Pre-existing conditions (see Section 6 Pre-existing Conditions)	Construction and design issues, e.g.: • leaky building syndrome • rotten framing
Materials	• Availability • Matching
Category 1 and 2 historic buildings	Requirement to replace in accordance with the Heritage New Zealand Pouhere Taonga Act 2014
Consent conditions	

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m. Services

i. Common remediation strategies to services

You must determine a remediation strategy based on the natural disaster damage you have observed visually. In some cases, when carrying out the repair to the damaged service, the customer's contractor or other expert may identify that a more substantial repair is necessary. In these cases, the customer will need to provide you with supporting information to consider whether the additional repair is necessary to remediate the natural disaster damage.

ii. Design considerations for services

Table 29: Key design considerations for services

Key design considerations for services	Comments
Building Act 2004	Consider required consents or exemptions.
Building code	E.g. Sections B1 Structure, B2 Durability, C2 Prevention of Fire Occurring, E2 External Moisture, G Services and Facilities
Pre-existing conditions (see Section 6 Pre-existing Conditions)	Construction and design issues e.g. access or availability
Materials	Availability, matching
Category 1 and 2 historic buildings	Requirement to replace in accordance with the Heritage New Zealand Pouhere Taonga Act 2014

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Appendix 2. Land components and repair considerations

a. Overview

The purpose of this appendix is to provide you with a general understanding of the common types of conceptual remediation strategy recommended by geotechnical engineers to remediate natural disaster damage to residential land.

The remediation strategies discussed in this section are substantive repairs, not urgent works.[184] The photographs provided in this section are intended only as examples of each of the most common types of remediation strategy.

This section discusses repair considerations for visible land damage only. If you identify non-visible land damage, i.e. increased liquefaction vulnerability (ILV) or increased flooding vulnerability (IFV), you must escalate this to a Toka Tū Ake EQC representative.

b. Key considerations for remediation

Some types of land damage do not require an engineered conceptual remediation strategy (e.g. undulation, scour or inundation), but when this is required, you should engage the appropriate expert to determine or design these types of remediation strategies. You should have a good knowledge of the common remediation strategies that an engineer will recommend and their typical design features. This will help you to ensure that the engineer has provided a comprehensive conceptual remediation strategy that is suitable for the purposes of settling an EQCover claim.

When you have engaged a geotechnical engineer to carry out a site assessment, their report will provide:

- their findings in relation to the natural disaster damage that has occurred (if any)
- a conceptual remediation strategy that will reinstate the damage to insured land and remove any risk of imminent damage[185], including the relevant design considerations.

When recommending a remediation strategy[186], the geotechnical engineer will consider:

- the property insured under the *EQC Act*;
- the type and extent of natural disaster damage;

[184] For details on urgent works, see the *Urgent Works Guide*.

[185] See Section 5 Imminent Damage.

[186] See Appendix 3 Remediation Strategy, Standards and Costing.

- reinstatement standards under the *EQC Act* and other applicable legislation, regulations and compliance;
- site access;
- ground conditions;
- design fees, consenting, surveying and compliance fees.

All land structures must be constructed in accordance with the *building code*, regardless of whether they require resource or building consents. All earthworks must be undertaken in accordance with the *Resource Management Act 1991*, regardless of whether a resource consent is required.

c. Retaining walls

i. Definition of 'face area'

In relation to land structures, the term 'face area' can be used to quantify the natural disaster damage that has occurred (including risk of imminent damage) and to determine the required repair of that damage. The measurement is carried out from an elevation view (horizontal). The face area requiring repair can be larger than the area of natural disaster damage, because retaining walls are constructed as a system that relies on the sum of its parts to function properly.

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ii. Common retaining wall remediation strategies

a. Timber pole retaining wall

Figure 48 Timber pole retaining wall

A timber pole retaining wall is a common strategy to remediate land damage in soils or replace a damaged retaining wall. The timber poles are embedded down into stable material below the failure surface to support the unstable material above. Unlike palisade walls, timber pole retaining walls also extend above the ground surface, so they are suitable to re-establish the existing ground profile where significant displacement of evacuated land has occurred.

Timber poles may be driven into the ground or cemented in bored holes. Bored holes are generally preferred in urban environments because driving timber poles generates significant noise and vibration. Driven poles are generally only preferred on sites with very soft soils where bored holes are prone to collapsing, or in environmentally sensitive areas where concrete should be avoided.

A hand-operated post hole borer may be used to bore holes for retaining walls with small retained heights (generally no greater than 1 m). However, for most walls an excavator or drill rig is required, so consider accessibility constraints and any overhead obstructions.

Timber pole walls are typically suitable for retained heights of up to 3 m. For greater retained heights, timber poles often do not provide sufficient strength capacity or length. In this case, adding ground anchors may be suitable to increase capacity and reduce embedment. If ground anchors are not suitable, alternative pile materials such as steel or reinforced concrete may be

used. Alternative pile materials cost more than timber poles so are generally only used when their available strength or length is required.

Steel piles are generally I-beam or hollow circular sections that are driven into the ground. Sections may be welded together onsite to form longer piles. Reinforced concrete piles are usually cast in situ in bored holes.

Table 30: Suitability of timber pole retaining walls

Cases where timber pole retaining walls are suitable	Cases where timber pole retaining walls are not suitable
• Where there has been significant lateral and vertical land displacement and an above-ground wall is required to reinstate the ground profile • Where near-surface soils are weak, but they are underlain with more competent soil or rock at relatively shallow depths • For sites where there is steep sloping ground in front of the proposed retaining wall location	• Where existing underground obstructions exist e.g. buried services, underground structures or shallow hard rock, which could make drilling difficult • Sites where there is limited access for machinery, e.g. stairs or narrow pathways • Sites where it may be difficult to transport long timber poles, e.g. driveways with tight corners • Sites with overhead obstructions, e.g. crawl spaces or below decks • Walls with large retained heights (generally greater than 3 m)

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b. Crib retaining wall

Figure 49 Concrete crib retaining wall

Figure 50 Timber crib retaining wall

Crib retaining walls are modular retaining walls which comprise interlocking timber elements assembled to create box-like structures. These are then filled with granular fill (gravel). Crib retaining walls are gravity walls which utilise the self-weight of the infilled box structures to support the unstable ground behind. They are founded on shallow foundations which typically only require minimal embedment (less than 0.5 m). They require a flat and component-founding platform which is typically constructed of compacted hardfill or concrete.

Crib retaining walls are generally suitable for retained heights of 1 to 5 m. For retained heights less than 1 m, alternatives such as keystone block walls may be more economical and compact.

Crib retaining walls can be constructed using concrete elements rather than timber. In most circumstances, however, timber is the preferred material as it is more economical and easier to construct because the lightweight elements can easily be placed by hand. Concrete elements are generally only selected when a section of an existing concrete crib retaining wall has been damaged by a natural disaster.

Table 31: Suitability of crib retaining walls

Cases where crib retaining walls are suitable	Cases where crib retaining walls are not suitable
• Where existing underground obstructions exist, e.g. buried services, underground structures or shallow hard rock, which could make installation of pole retaining walls difficult • Where site access for machinery is limited, as materials may be transported and placed by hand • Where large retained heights are required • Outside of urban areas because specialist contractors are not required • In environmentally sensitive areas where concrete should be avoided	• Where near surface soils are very weak, because it may be difficult to form a stable founding platform • Deep-seated natural landslips where slip surfaces may extend below the base of the retaining wall; • Where steep sloping ground is present in front of the proposed wall – it may be difficult to cut a level founding platform which remains stable under the weight of the wall • Where the wall foundation is under water, e.g. stabilising stream banks, as dewatering and/or stream diversion would be required • In tight areas where retaining wall width must be minimised, e.g. stabilising a slip along a property boundary where a narrow access path runs between the boundary and dwelling

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c. Gabion basket retaining wall

Figure 51 Gabion basket scour protection

Figure 52 Gabion basket retaining wall

Gabion basket retaining walls comprise modular steel wire baskets which are filled with rock and stacked to form a wall arrangement. Like crib retaining walls, gabion retaining walls utilise the self-weight of the infilled baskets to support unstable ground behind.

Gabion basket walls are founded on shallow foundations and can be placed directly on the natural ground surface as long as there is a level platform. This makes gabion walls suitable for stream or coastal environments as the wall may be able to be constructed without dewatering or stream diversion.

Gabion basket walls are typically suitable for retained heights of 0.5 to 3 m. Retained heights greater than 3 m are possible, however they usually require multiple rows of gabion baskets on the first layer. This results in a wide retaining wall footprint and a large quantity of rock being required.

Table 32: Suitability of gabion basket retaining walls

Cases where gabion basket retaining walls are suitable	Cases where gabion basket retaining walls are not suitable
• In environments where the retaining wall may be submerged in water – this is because the wall may be able to be constructed without dewatering and the gabion baskets can provide energy dissipation and scour protection • For slopes with high groundwater levels and/or seepage, because the gabion baskets can be free-draining • Where existing underground obstructions exist, e.g. buried services, underground structures or shallow hard rock, which could make installation of pole retaining walls difficult • Where site access for machinery is limited, because materials may be transported and placed by hand	• Where near surface soils are very weak, because it may be difficult to form a stable founding platform • Deep-seated natural landslips where slip surfaces may extend below the base of the retaining wall • Where steep sloping ground is present in front of the proposed wall – it may be difficult to cut a level founding platform which remains stable under the weight of the wall • In tight areas where retaining wall width must be minimised, particularly for large retained heights • In areas where rock is not readily available

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d. Concrete block retaining wall

Figure 53 Concrete block retaining wall

Concrete block retaining walls are modular walls which can be constructed without large machinery. They consist of hollow precast concrete blocks which are generally stacked over vertical and horizontal steel reinforcing bars. The hollow cavities are then filled with concrete onsite. The blocks are founded on a shallow foundation usually with minimal embedment (less than 0.5 m). The foundation generally involves a layer of compacted hardfill and often includes a concrete pad. The concrete pad is structurally tied into the block wall and forms a 'L' shape, which makes the wall less susceptible to toppling over.

The concrete pad foundation may extend in front of or behind the wall, beneath the backfill. When the concrete pad extends behind the wall, it provides more resistance against toppling over but requires more earthworks to backfill above the concrete pad.

Since the concrete pad foundations are buried, the final exposed concrete block wall is narrow. This is a key advantage of concrete block walls over gabion and crib wall alternatives.

Concrete block retaining walls are generally more efficient for smaller retained heights up to 2 m. For larger retained heights, significant steel reinforcement and wide concrete pad foundations are required. This can require a large amount of earthworks and space to construct the wall.

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Table 33: Suitability of concrete block retaining walls

Cases where concrete block retaining walls are suitable	Cases where concrete block retaining walls are not suitable
• For sites that require a thin low-profile finished wall, e.g. where a narrow pathway must be maintained between a retaining wall and dwelling • Where existing underground obstructions exist, e.g. buried services, underground structures or shallow hard rock, which prevent the construction of a pole retaining wall • Where site access for machinery is limited, because materials may be transported and placed by hand • Where there are overhead obstructions, e.g. within basements or crawl spaces • Where the retaining wall needs to be integrated with another structure, e.g. to merge with the structural wall of a dwelling	• Where near-surface soils are very weak, because it may be difficult to form a stable founding platform • Deep seated natural landslips where slip surfaces may extend below the base of the retaining wall • Where steep sloping ground is present in front of the proposed wall – it may be difficult to cut a stable level platform • For large retained heights greater than 2 m where crib or gabion walls may prove more efficient • Where the wall foundation is under water, e.g. stabilising stream banks, as dewatering and/or stream diversion would be required – strict environmental controls would also need to be in place when pouring concrete • For sites with high groundwater levels – concrete block walls may require waterproofing with an impermeable membrane and require comprehensive and durable drainage behind the wall

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e. Palisade wall

Figure 54 Reinforced concrete palisade wall holes

Figure 55 Reinforced concrete palisade wall – complete

Palisade walls are in-ground retaining walls which consist of a line of closely spaced buried piles. These walls are suitable for stabilising natural landslips that have deep failure surfaces. Piles are embedded down into stable material below the failure surface and provide an underground wall to retain the unstable material above. Palisade walls are commonly used to protect a dwelling or appurtenant structure against a deep-seated retrogressive natural landslip that poses a risk of imminent damage by evacuation.

Palisade walls also have a common application in EQCover claims of stabilising land behind an existing damaged retaining wall where the retaining wall itself cannot be remediated. A common example of this is where a retaining wall outside a customer's property boundary has failed and has caused evacuation of insured land within the customer's property. A palisade wall may be constructed within the boundary of the customer's property and protect their land against the risk of imminent land evacuation damage.

Palisade walls are generally constructed of either reinforced concrete piles or timber poles. Reinforced concrete piles may be required for larger deeper slips, while timber poles are generally sufficient and more economical for smaller scale natural landslips, generally with slip surfaces of 3 m or less in depth. Palisade walls may also include a capping beam which ties together the piles at surface level. Capping beams may be required to increase wall capacity or facilitate ground anchors. For details on applying anchors, see Appendix 2 Section c.iii.e Palisade Wall Design Considerations.

Table 34: Suitability of palisade retaining walls

Cases where palisade retaining walls are suitable	Cases where palisade retaining walls are not suitable
• Natural landslips with deep failure surfaces which may undermine other retaining wall types • Natural landslips with small displacements – these may be identified as slips which show tension cracking but do not have large amounts of inundation or changes to the ground profile. A palisade wall may stabilise the slip and reinstate the land without the need for significant earthworks. • Where an existing retaining wall has been damaged, but the wall itself is unable to be remediated, e.g. a damaged wall outside the customer's property boundary.	• For shallow natural landslips, surficial rockfall or scour • For natural landslips where an above-ground remediation strategy is required to reinstate evacuated land – generally, this occurs when the evacuated soil mass has had significant displacement and earthworks are required to reinstate the existing ground profile • Where there are existing underground obstructions, e.g. buried services, underground structures, or shallow hard rock • Where site access for a piling rig is limited, e.g. behind a dwelling where the only access is across stairs or a narrow path • Where there are overhead services or obstructions

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f. Sprayed concrete and pinned mesh retaining wall

Figure 56 Sprayed concrete retaining wall

Figure 57 Pinned mesh retaining wall

A flowable concrete mix can be sprayed directly onto a slope using a specialised concrete pump. Sprayed concrete is generally only suitable on hard rock slopes because it can adhere to the rock face, often with the assistance of a steel reinforcement mesh. For weathered rock or soil slopes, pinned mesh is a suitable alternative to sprayed concrete that involves fixing a steel mesh into the slope face using short anchors.

Sprayed concrete and pinned mesh walls provide support and confinement to materials at the exposed face of a slope and therefore are suitable to prevent loosening and failure of near-surface materials. They are commonly used to prevent rock spalling and rock fall on steep fractured rock faces. For this purpose, these solutions are generally more economical than constructing a separate retaining wall structure.

Before sprayed concrete or pinned mesh is installed, it is common for rock scaling to be undertaken. Rock scaling is the process of removing existing loose rock from slopes which is generally carried out by abseilers using pry-bars and picks.

Sprayed concrete and anchored mesh solutions are not suitable for large deep-seated natural landslips because they do not provide the slope with resisting forces to support large heavy unstable soil or rock masses.

g. Soil nail, rock bolt and rock anchor retaining walls

Figure 58 Soil nail retaining wall

Soil nails, rock bolts and rock anchors are all slope remediation strategies that involve steel rods or strands cemented into angled drilled holes in a steep slope face. These solutions drill though potentially unstable exterior material and anchor to stable interior soil or rock behind. They require directional drilling machinery, so are most suitable when there is easy construction access and local specialist contractors available. They may not be suitable if there are obstructions in the ground, e.g. piled building foundations, a building basement or infrastructure upslope of the slip.

Rock bolts are post-tensioned short steel bars that may be utilised to stabilise localised areas on fractured rock slopes. They are often used in conjunction with sprayed concrete in areas where sprayed concrete alone does not provide sufficient forces to support larger unstable rocks. Rock bolts are only suitable in hard rock slopes and are not suitable for soil slopes, large scale or deep failure mechanisms.

Soil nails are used for soil or soft weathered rock slopes. They involve cemented steel bars that are installed into the slope face in a grid pattern. They are suitable for remediating steep slopes that have undergone shallow slumping failures. Generally, soil nails are paired with a surface mesh.

Rock anchors are long, high-capacity post-tensioned strands. They may be installed in a grid pattern on rock slopes and used to stabilise larger scale failures. Rock anchors are also commonly used in conjunction with piled retaining walls. They are suitable where there is shallow rock on a site to embed the anchors into and can be effective in increasing the wall capacity and reducing wall deflections.

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iii. Retaining wall design considerations

a. Timber pole retaining wall design considerations

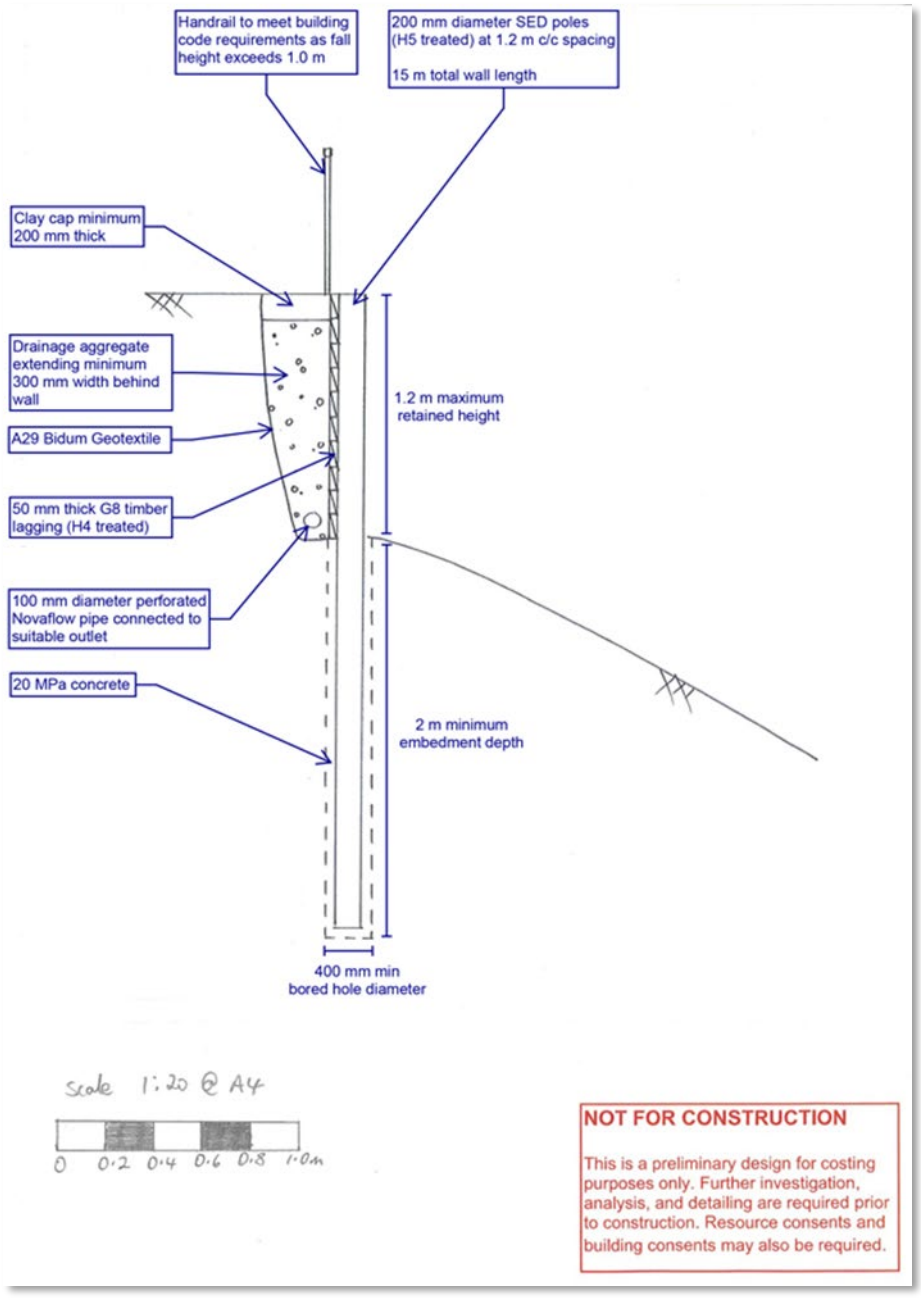

Figure 59 Key design elements of a timber pole retaining wall

Figure 59 provides an example of a remediation strategy sketch identifying the key design elements of a timber pole retaining wall. Key design considerations are also summarised in Table 35 below.

Table 35: Timber pole retaining wall design considerations

Key design components of timber pole retaining walls	Comments
Wall length	Wall length should span across both evacuated land and land at risk of imminent damage by evacuation
Retained height	The conceptual remediation strategy should be provided for the maximum retained height.
Embedment depth	Required embedment depths vary greatly but they generally range from 1 to 3 times the retained height.
Pole diameter	Generally cylindrical small end diameter (SED) poles are utilised. They are available in diameters ranging from 150 to 500 mm. For walls with short retained heights, 100 mm or 150 mm square posts may be an alternative.
Hole diameter	Not applicable if driven timber poles are proposed. Bored hole diameters should be a minimum of 150 mm larger than the pole diameter.
Concrete strength	Typically, 20 to 30 MPa concrete specified for bored holes.
Pole spacing	Generally, a pole spacing of 3 times the hole diameter provides a suitable and efficient wall design. Pole spacing is measured centre to centre.
Lagging size and strength	G8 grade rough-sawn timber 50 to 100 mm thick is generally suitable for a pole spacing up to 1.5 m. For larger pole spacings SED poles may be required for lagging.
Timber treatment	Generally, poles require H5 treatment and lagging requires H4 treatment.
Drainage	In most circumstances, subsoil drainage is recommended behind the wall. This generally comprises a perforated pipe at the base of the wall and granular drainage aggregate extending the full height of the wall, wrapped in reinforced geotextile. This is generally topped with a thin clay cap or impermeable paving at ground surface.
Handrail	The *building code* requires a handrail or fall barrier where there is a fall/retained height of 1 m or more.

Specific circumstances may require additional design features associated with a timber pole wall, e.g.:

- scour protection such as riprap (e.g. angular rock or concrete), planting or geomat at the base of the wall in coastal or stream environments;
- ground anchors or tiebacks for walls with large retained heights or strict wall deflection limits;
- surface stormwater control such as diversion channels or cesspits.

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b. Timber crib retaining wall design considerations

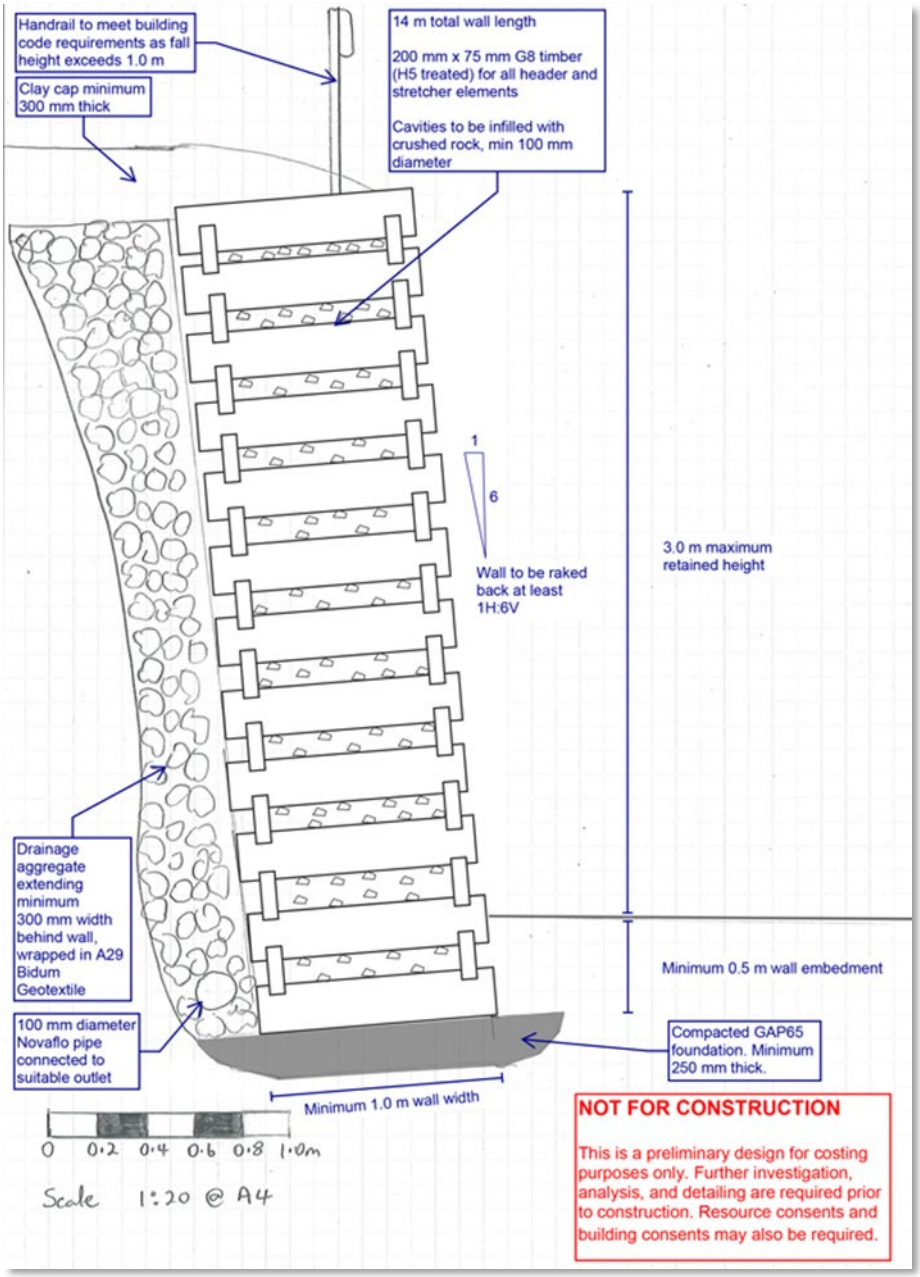

Figure 60 Key design elements of a timber crib retaining wall

Figure 60 provides an example of a remediation strategy sketch identifying the key design elements of a timber crib retaining wall. Key design considerations are also summarised in Table 36 below.

Table 36: Timber crib retaining wall design considerations

Key design components of timber pole retaining walls	Comments
Wall length	Wall length should span across both evacuated land and land at risk of imminent damage by evacuation
Retained height	The conceptual remediation strategy should be provided for the maximum retained height.
Wall width	Wall width is controlled by the length of the 'header' timber elements. The wall width determines the quantity of granular backfill required.
Timber elements	The cross-sectional size, strength grade and treatment grade should be specified for the stretcher and header elements.
Footing detail	The width, thickness and material of the wall footing should be specified. The footing is generally constructed of compacted hardfill or concrete.
Granular fill	The granular fill type should be specified for infilling the timber cells.
Drainage	In most circumstances, subsoil drainage is recommended behind the wall. This generally comprises a perforated pipe at the base. The granular backfill in the wall cells is commonly extended behind the wall to create a full height vertical drain, wrapped in reinforced geotextile. This is generally topped with a thin clay cap or impermeable paving at ground surface. The perforated pipe should be connected to a suitable stormwater outlet, to prevent the collected water from discharging on to slopes.
Handrail	The *building code* requires a handrail or fall barrier there is a fall/retained height of 1 m or more.

Specific circumstances may require additional design features associated with a timber crib wall. These may include:

- Scour protection such as riprap, planting or geomat at the base of the wall in coastal or stream environments;
- Surface stormwater control such as diversion channels or cesspits.

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c. Gabion basket retaining wall design considerations

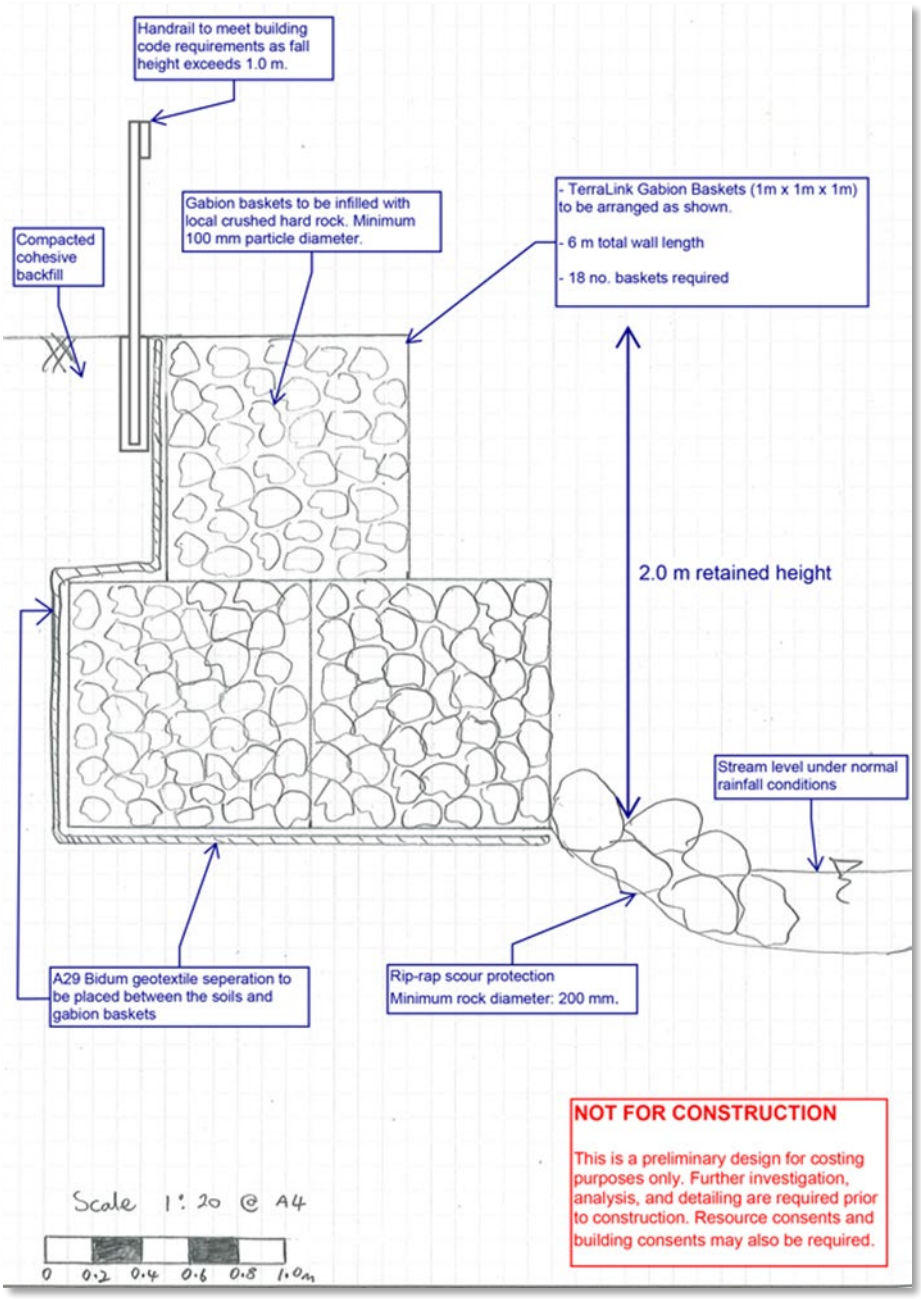

Figure 61 Key design elements of a gabion basket retaining wall

Figure 61 provides an example of a remediation strategy sketch identifying the key design elements of a gabion basket retaining wall. Key design considerations are also summarised in Table 37 below.

Table 37: Gabion basket retaining wall design considerations

Key design components of gabion basket retaining walls	Comments
Wall length	Wall length should span across both evacuated land and land at risk of imminent damage by evacuation.
Retained height	The conceptual remediation strategy should be provided for the maximum retained height.
Gabion basket size and configuration	The indicative width, height and arrangement of gabion baskets should be identified. Multiple rows of gabion baskets may be required on the lower layers to provide a sufficiently wide foundation. Any required embedment of the lower level of baskets should be specified.
Crushed rock type and size	Identification of the type and size of crushed rock used to fill the Gabion baskets will assist in pricing the remediation strategy. Locally sourced materials are more practical and economic to transport to site.
Scour protection	Gabion basket walls are common remediation strategies in stream or coastal environments. Riprap may be commonly specified as scour protection in front of the wall. A rock mattress may also be specified beneath the gabion basket wall to prevent scour undermining the wall.
Drainage	Since gabion baskets are highly permeable, a separate drainage system is generally not required behind the wall, i.e. no perforated pipe or drainage aggregate. However, a reinforced geotextile is recommended across the back face of the wall to prevent soils migrating into and clogging the gabion baskets.
Handrail	The *building code* requires a handrail or fall barrier there is a fall/retained height of 1 m or more.

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d. Concrete block retaining wall design considerations

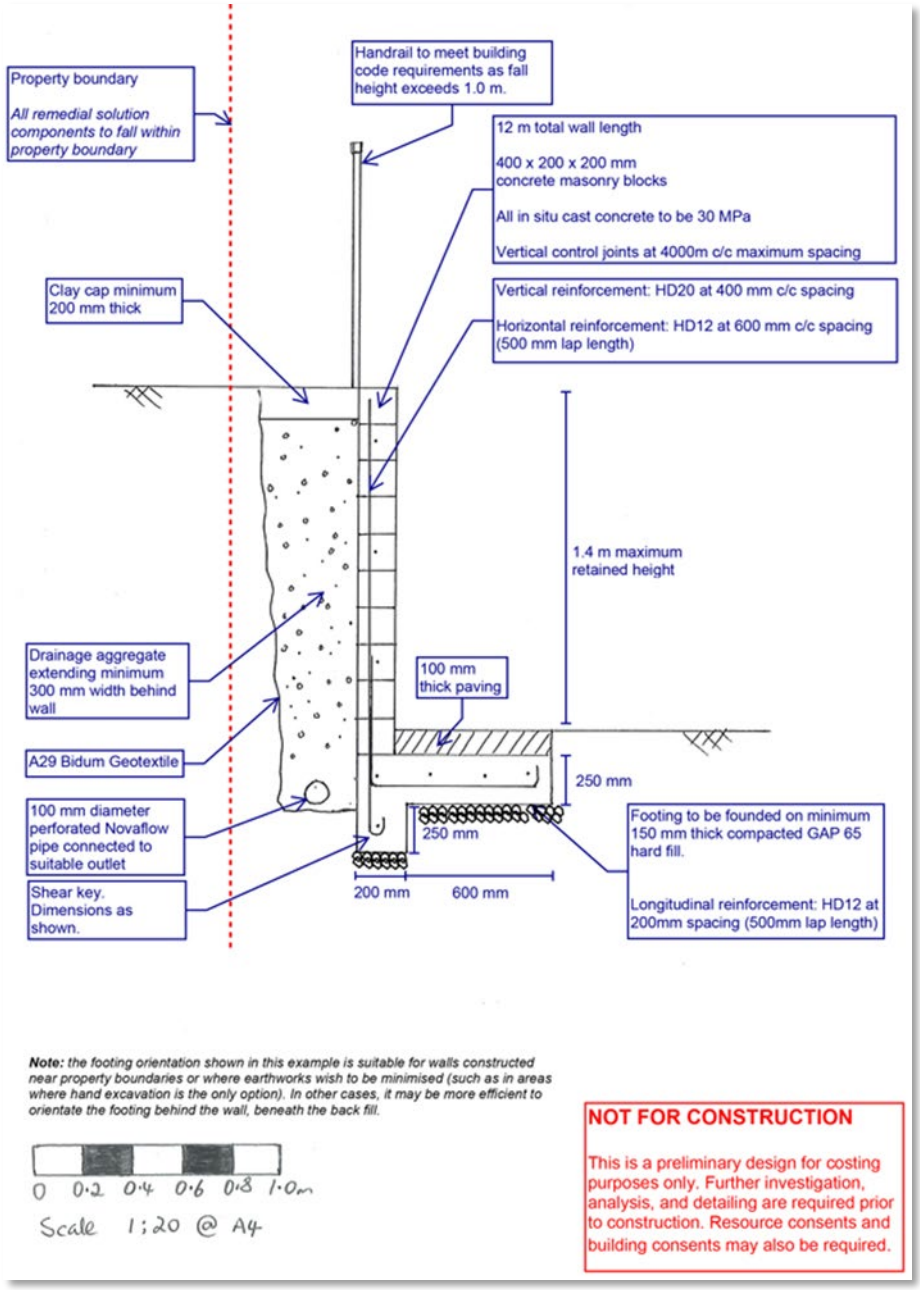

Figure 62 Key design elements of a concrete block retaining wall

Figure 62 provides an example of a remediation strategy sketch identifying the key design elements of a concrete block retaining wall. Key design considerations are also summarised in Table 38 below.

Table 38: Concrete block retaining wall design considerations

Key design components of concrete block retaining walls	Comments
Wall length	Wall length should span across both evacuated land and land at risk of imminent damage by evacuation.
Retained height	The conceptual remediation strategy should be provided for the maximum retained height.
Foundation dimensions	The width, thickness, embedment and orientation of the concrete foundation should be specified. The founding material should also be specified. This may be natural soils or compacted hardfill.
Steel reinforcement	The diameter, grade and spacing of structural steel reinforcement should be identified. For 'L' shaped walls the reinforcement should form a structural connection between the wall and the foundation.
Concrete	The concrete strength should be specified for the block cavities and the foundation. Typically, 20 to 30 MPa concrete is specified.
Backfill and drainage	Backfill materials should be specified. This may be able to include natural landslip inundation. Subsoil drainage is usually specified behind the wall. This generally comprises a perforated pipe at the base of the wall and granular drainage aggregate extending the full height of the wall, wrapped in reinforced geotextile. This is generally topped with a thin clay cap or impermeable paving at ground surface. The perforated pipe should be connected to a suitable stormwater outlet, to prevent the collected water from discharging on to slopes.
Handrail	The *building code* requires a handrail or fall barrier there is a fall or retained height of 1 m or more.

Specific circumstances may require additional design features associated with a concrete block wall, e.g.:

- when base sliding is anticipated to be the critical failure mechanism of the wall, a shear key is often specified. This is an additional small concrete section that extends below the foundation base.

- when there are high groundwater levels, waterproofing is often proposed on the back side of the wall. This comprises an impermeable membrane that is painted or sprayed onto the wall. This is a common requirement for basement retaining walls within dwellings.

- surface stormwater control such as diversion channels or cesspits.

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e. Palisade retaining wall design considerations

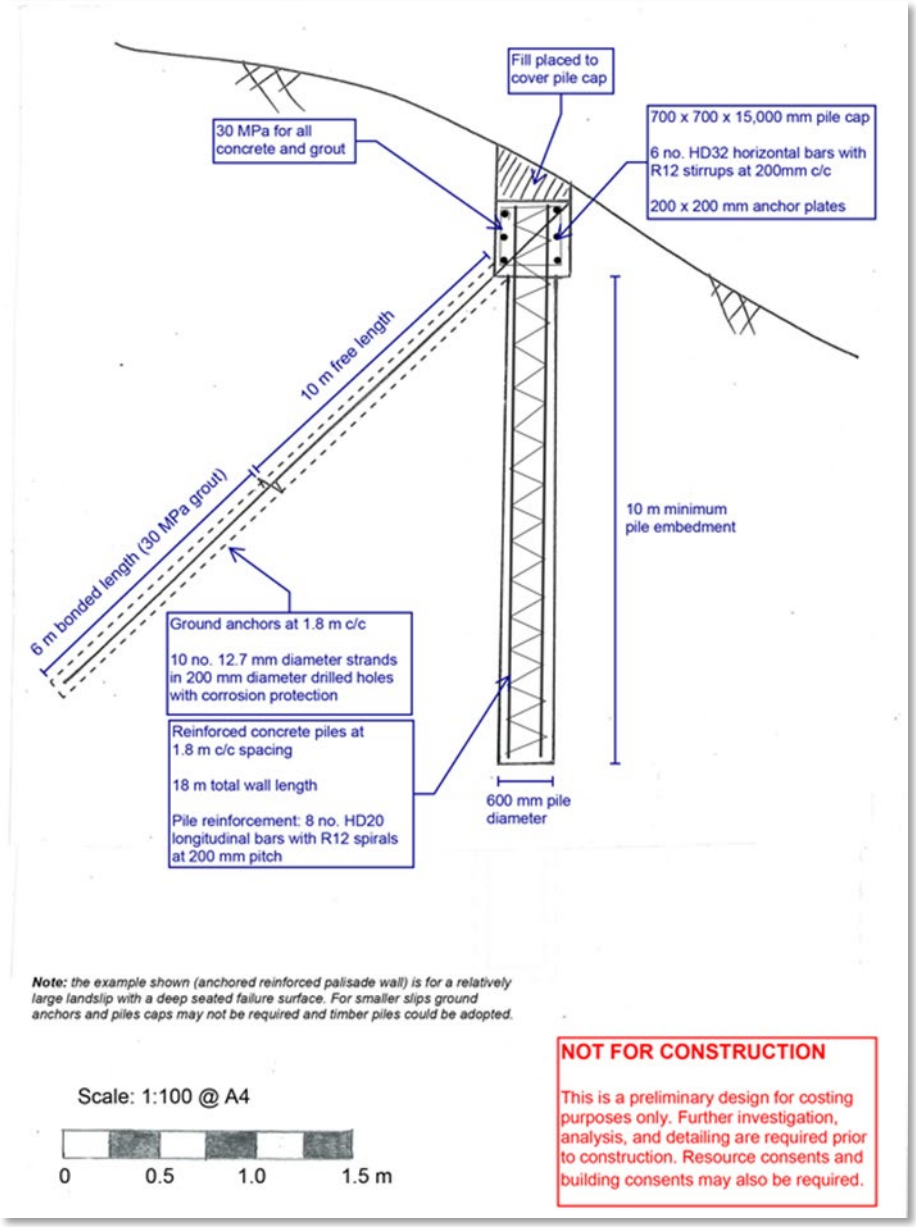

Figure 63 Key design elements of a palisade retaining wall

Figure 63 provides an example of a remediation strategy sketch identifying the key design elements of a palisade retaining wall. Key design considerations are also summarised in Table 39 below.

Table 39: Palisade retaining wall design considerations

Key design components of palisade retaining walls	Comments
Wall length	Wall length should span across both evacuated land and land at risk of imminent damage by evacuation.
Pile length	The piles should extend beneath the inferred failure surface to embed into underlying stable ground. Required embedment depths into stable ground vary greatly but they generally range from 1 to 3 times the depth of the overlying unstable ground.
Hole diameter	Bored holes are typically adopted for both timber and reinforced concrete palisade walls. For timber palisade walls, the hole diameter should be at least 150 mm greater than the pole diameter.
Pile spacing	Typically, a pile spacing of 3 times the hole diameter provides a suitable and efficient wall design. Pole spacing is measured centre to centre.
Pile specifications	For timber piles – timber pole diameter, timber treatment grade (usually H5 treatment) and concrete strength. For reinforced concrete piles – concrete strength, number, size and grade of longitudinal bars, size and pitch of spiral shear reinforcement.

Specific circumstances may require additional design features associated with a palisade retaining wall, e.g.:

- a capping beam may be specified to tie together the piles at surface level. Capping beam dimensions and reinforcement details should be specified.
- ground anchors may be specified for an anchored palisade wall. A capping beam is required if ground anchors are adopted. See Appendix 2 Section c.ii.e Palisade Wall for ground anchor details.
- surface protection measures such as planting, geomat or riprap may be specified to prevent erosion or scour exposing the buried wall.

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f. Sprayed concrete and pinned mesh retaining wall design considerations

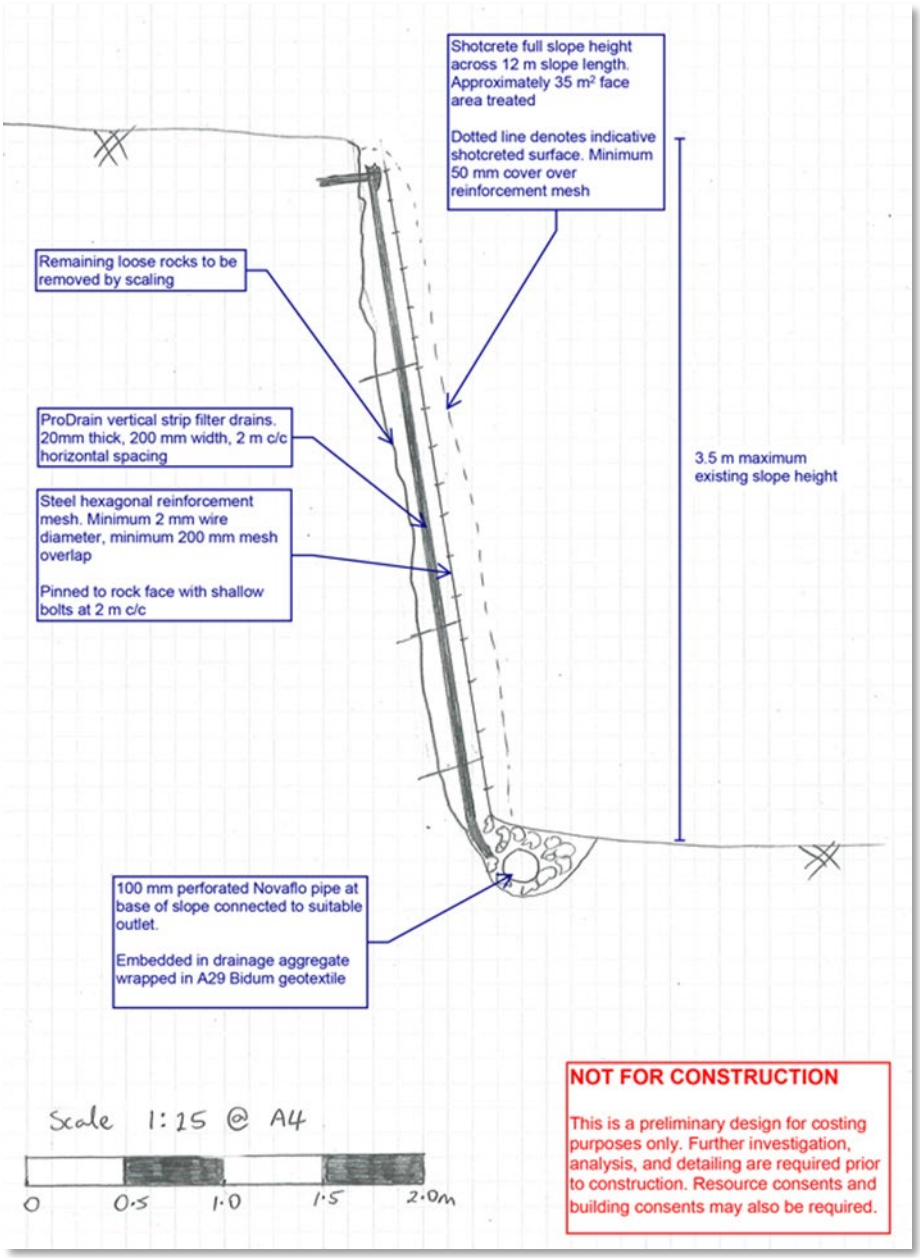

Figure 64 Key design elements of a sprayed concrete retaining wall

Figure 64 provides an example of a remediation strategy sketch identifying the key design elements of a sprayed concrete retaining wall. Key design considerations are also summarised in Table 40 below.

Table 40: Sprayed concrete retaining wall design considerations

Key design components of sprayed concrete retaining walls	Comments
Wall area	The area of the slope face requiring sprayed concrete treatment should be specified. This area should cover the area of the slope at risk of imminent damage by evacuation as a direct result of the natural disaster event.
Rock scaling and preliminary works	The extent of any rock scaling or clearing of debris should be specified before carrying out sprayed concrete treatment.
Steel reinforcement	A steel reinforcement mesh should be specified if required.
Drainage	A drainage system may be installed to prevent build-up of water pressures behind the sprayed concrete facing. Drainage systems usually comprise vertical fabric strip drains placed on the rock face beneath the sprayed concrete. Alternatively, horizontal weep holes may be drilled into the slope.

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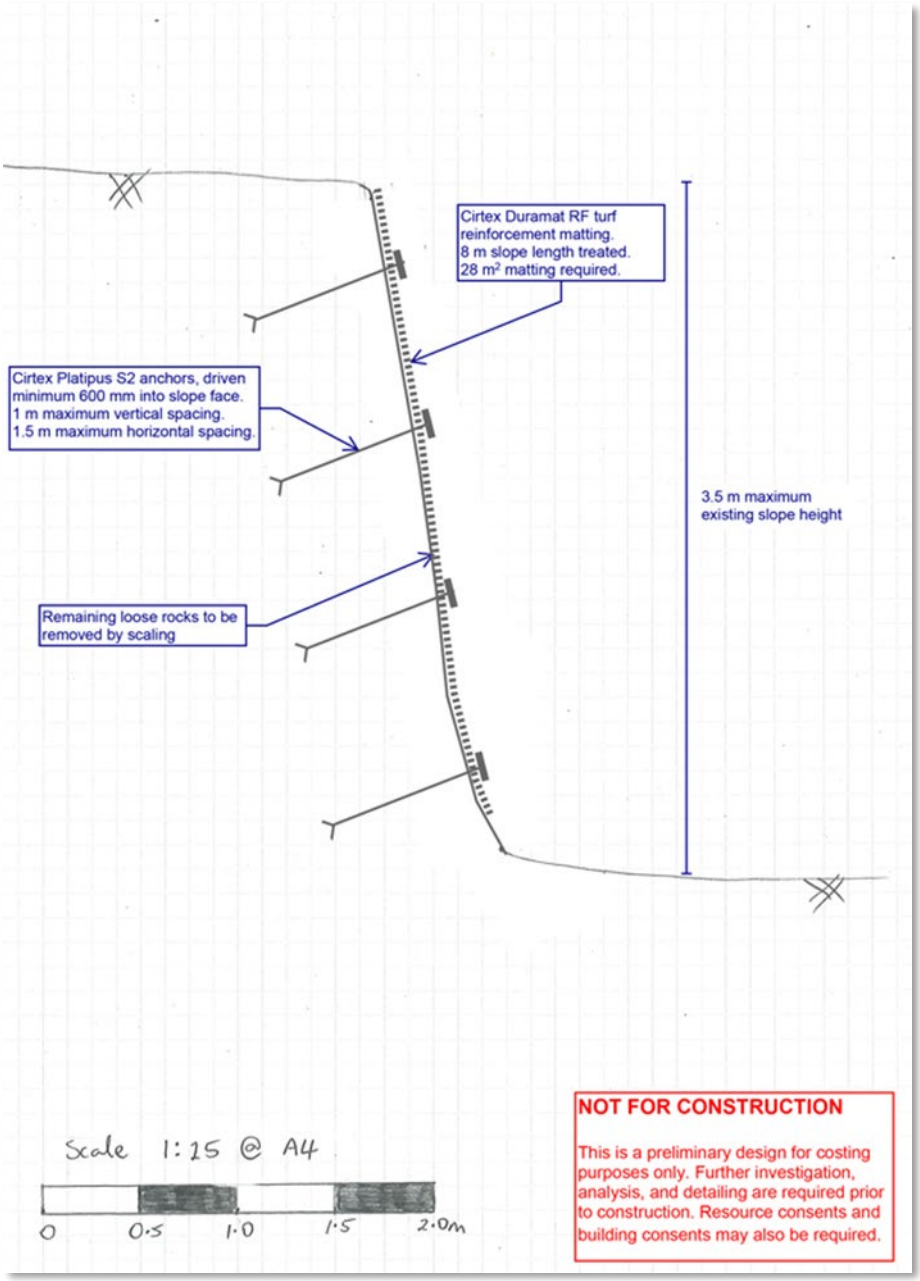

Figure 65 Key design elements of a pinned mesh retaining wall

Figure 65 provides an example of a remediation strategy sketch identifying the key design elements of a pinned mesh retaining wall. Key design considerations are also summarised in Table 41 below.

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Table 41: Pinned mesh retaining wall design considerations

Key design components of pinned mesh retaining walls	Comments
Wall area	The area of the slope face requiring pinned mesh treatment should be specified. This area should cover the area of the slope at risk of imminent damage by evacuation as a direct result of the natural disaster event.
Mesh type	Geomat is commonly used for soil slopes. Steel mesh may be adopted on rock slopes.
Anchor details	Anchor type, layout and embedment should be specified.

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g. Soil nail, rock bolt and rock anchor retaining wall design considerations

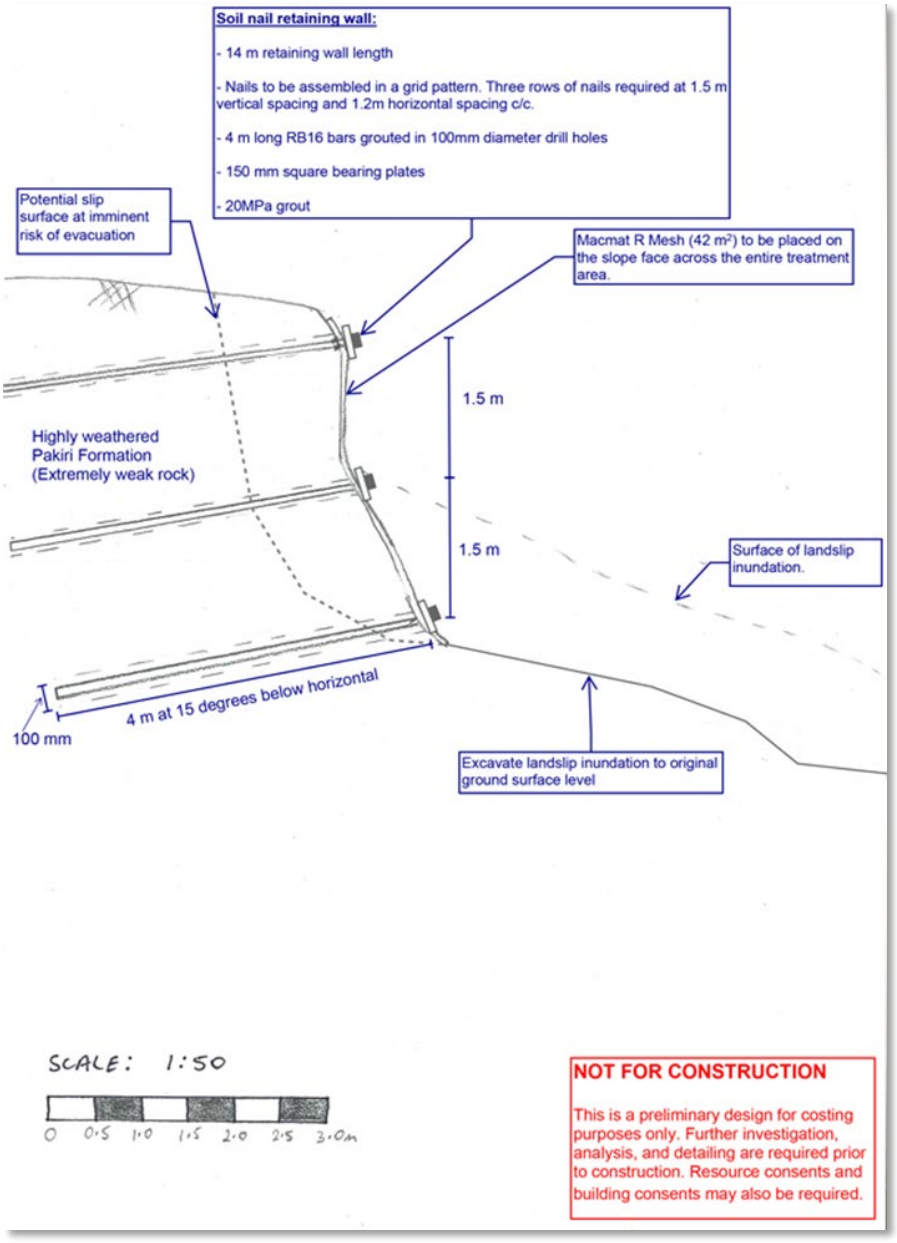

Figure 66 Key design elements of a nail/anchor retaining wall sketch

Figure 66 provides an example of a remediation strategy sketch identifying the key design elements of a nail/anchor retaining wall. Key design considerations are also summarised in Table 42 below.

Table 42: Soil nail, rock bolt and anchor retaining wall design considerations

Key design components of soil nail, rock bold and anchor retaining walls	Comments
Wall area	The area of the slope face requiring treatment should be specified. The treatment should stabilise evacuated land and land at risk of imminent damage by evacuation.
Nail/anchor layout	The required number of rows should be specified along with the anchor spacing along the length of the slope.
Nail/anchor dimensions	The total length of the nail or anchor should be specified, along with the drilled hole diameter and indicative hole inclination.
Nail/anchor materials	The grade and diameter of the nail or anchor strands should be specified. Soil nails consist of single steel bars whereas anchors comprise multiple steel strands.
Grouting	Grout strength should be specified. Rock anchors are not grouted along their entire length, so their grouted 'fixed' length and un-grouted 'free' length should also be specified.
Slope face components	Components are required on the slope face to distribute the support between the discrete anchors. Each nail or anchor requires a bearer plate. Geomat or steel mesh is also commonly installed across the treated slope face.

d. Bridges and culverts

i. Common bridge and culvert remediation strategies

Bridges and culverts are used when a pedestrian or vehicle crossing is required across a waterway.

Culverts are suitable for sites with smaller spans (bank to bank) and smaller flows. Concrete box culverts are commonly used, and standard sizes are available from precast concrete manufacturers. Single barrel circular culverts are an alternative option, but generally only suitable for narrow stream widths.

Figure 67 Culvert

A bridge remediation strategy is generally more suitable if:

- a waterway is wider than 2 m (bank to bank);
- the site has an annual rainfall of greater than 1800 mm; or
- the site has a large rainfall catchment area (e.g. at the bottom of a large gully).

Single-span beam bridges are generally sufficient for residential applications. They are most economical for spans less than 10 m. Timber beams are usually adopted for short spans and lightly loaded bridges. For longer spans and bridges facilitating vehicle crossings, steel or concrete beams may be adopted.

Figure 68 Rural residential bridge

Bridge foundations also require design to transfer load from the bridge into the stream banks. If the existing bridge has been damaged due to a natural disaster and the stream banks are stable, shallow concrete footings may be suitable. More commonly, stream banks are unstable due to a natural landslip or scour and require a retaining wall to stabilise the bank. Bridge abutments may be integrated with common retaining wall remediation strategies, e.g. gabion basket walls or piled retaining walls.

ii. Bridge and culvert design considerations

Table 43: Bridge design considerations

Key design components of bridges	Design considerations
Bridge span	The bridge should span to suitable bridge abutment locations and not constrict the existing stream width. For spans of less than 10 m, single span bridges are suitable. For larger spans, central piers may be a suitable option. However, the impact on the central pier on stream flows needs to be considered.
Bridge superstructure materials	Timber beams and decking prove economical for short span, lightly loaded bridges. For bridges with longer spans and/or vehicle loading, steel or precast concrete beams may be required.

Bridge height	Bridge height is generally controlled by flood levels. Generally, bridges should be designed to clear a 1-in-100-year flood event.
Bridge abutments	For stable banks, shallow concrete footings may be suitable. Timber or concrete piled foundations are common where steeply sloping banks are present.
Retaining wall	A retaining wall may be required to stabilise natural landslips or scour in stream banks. Gabion basket or piled retaining walls are common options (see Appendix 2 Section c.ii.a Timber Pole Retaining Wall and Section c.ii.c Gabion Basket Retaining Wall). Bridge abutments may be separate to, or integrated with, retaining wall remediation strategies. For example, a concrete piled retaining wall may be constructed to stabilise the stream bank and support the vertical loading from the bridge deck above.
Scour protection	Scour protection is often required to prevent future flood events undermining the bridge abutments. Common scour protection methods include riprap, gabion baskets or planting.
Handrail	The *building code* requires a handrail or fall barrier if fall heights exceed 1 m.

Table 44: Culvert design considerations

Key design components of culverts	Design considerations
Waterway width	Culverts are generally only suitable for waterways less than 2 m wide. Culverts should be selected to avoid constricting the width of the stream as this may result in increased water velocities and potential flooding. Box culverts are commonly adopted, or single barrel circular culverts may be suitable for narrow waterways.
Culvert size	The culvert should be sized to accommodate flows during flood events. Major culverts are typically designed for a 1-in-100-year event, while minor culverts may be able to be designed for smaller flood events. Design for flooding requires consideration of rainfall in the area and rainfall catchment size or properties.
Culvert length	The length of the culvert will generally be governed by the required cross width above.
Ecological considerations	The culvert should be designed to accommodate any fish or other species that occupy the waterway.
Culvert strength	The culvert must have the structural capacity to support loads from above. These loads commonly include permanent loading from soil and temporary vehicle loading.
Scour protection	Scour protection may be required, particularly at the entrance of the culvert to prevent scour undermining the structure. Riprap, rock mattresses or geomat may be suitable remediation strategies. Scour protection should consider ecological considerations.
Handrail	The *building code* requires a handrail or fall barrier if fall heights exceed 1 m.

e. Inundated land (falling, sliding, flowing or ejection)

Inundation[187] is a phenomenon where the existing land in a location has not moved or been damaged but has been covered with debris that has travelled from another location. The subsequent sections focus on remediating inundation from soil and rock debris.

i. Common inundation remediation strategies

a. Retaining wall for inundation

Where the natural landslip results in evacuation and inundation of insured land, the geotechnical engineer will typically recommend a remediation strategy involving removing the debris and constructing a retaining wall. In addition to removing any identified imminent damage risk of new inundation and/or re-inundation, this remediation strategy would also reinstate the evacuated land. For further details, see the section above on retaining walls.

b. Catch fence for inundation

Where the natural landslip has resulted in inundation to insured land only (i.e. no evacuation of insured land), engineers typically recommend a repair involving the removal of debris and constructing a catch fence.

A catch fence may be an appropriate remediation strategy when the imminent risk of new inundation and/or re-inundation causes imminent damage risk to the residential building. However, a catch fence does not eliminate imminent damage of new inundation and/or re-inundation to the land. Instead, it 'catches' the new inundation and/or re-inundation, which must later be removed.

[187] For more information on inundation, see Section 4 Identifying Natural Disaster Damage to the Residential Land.

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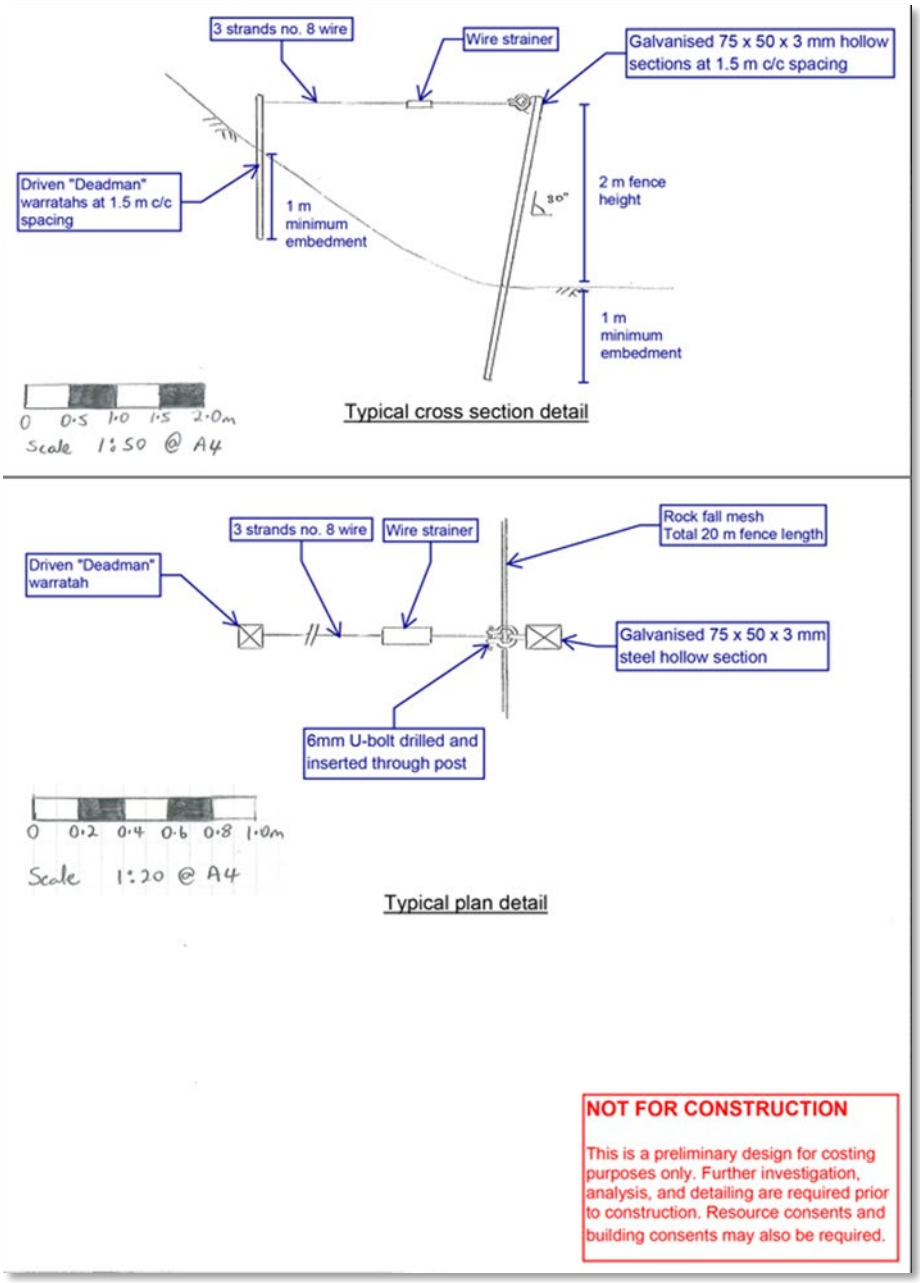

Figure 69 Key design elements of a rockfall catch fence

Figure 69 provides an example of a remediation strategy sketch identifying the key design elements of a rockfall catch fence that removes the imminent damage risk of inundation. Key design considerations for inundation are summarised in Table 45 below.

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c. Removing debris

Following on from the above, when there is no imminent damage risk to the residential building, consider a remediation strategy that removes the inundation debris that has already occurred as well as removing the imminent damage inundation debris (on the basis that it would occur). This remediation strategy is typically more cost-effective, but more importantly, it fully repairs the natural disaster damage to insured land, whereas a catch fence does not.

Where the inundation debris has been caused by volcanic eruption, the remediation strategy generally includes removing the debris. However, if the inundation debris is unrepairable[188] (e.g. debris from lava flow), you must consider DOV. For other natural disaster types, there is generally no imminent damage risk and the remediation strategy involves removing only the debris that has actually occurred.

In all cases, when determining which remediation strategy to apply, consider any applicable risks[189] to the occupants and general public.

[188] For more information on unrepairable land, see Section 2.d.ii Basis of Cover for 'Residential Land'.

[189] See Section 9 Unsafe Properties.

ii. Design considerations for removing inundation

Table 45: Inundation removal design considerations

Key design considerations for removal of inundation	Comments
Method of inundation removal	Consider whether there is available access for an excavator. In confined spaces or spaces with poor accessibility, inundation may need to be removed by hand. In areas where there is risk of damaging existing services, vacuum excavation may be considered.
Land contamination	Inundation debris may be contaminated from existing land contamination, e.g. asbestos, lead or hydrocarbons in near-surface soils. The remediation strategy for the natural disaster damage must consider the contaminated land only in respect of repairing the damage to insured land. We are not responsible for addressing pre-existing contamination to the site, but we will remediate any confirmed land contamination as required to repair natural disaster damage to the insured residential land.
Re-use of material	The cost of the remediation strategy depends on whether the inundated material must be disposed offsite. Any contaminated material must be disposed offsite in an approved facility. Uncontaminated natural landslip inundation may be able to be reused as backfill if a retaining wall is constructed as a remediation strategy.
Source of inundation	Once existing inundation has been cleared, the method to reduce the risk of imminent damage from additional inundation depends on the source of the inundation. If the source is outside the property boundary, the remediation strategy cannot stabilise the source. Instead it must protect the insured residential land and buildings within the subject property. In this case, a solution such as a catch fence, bund or trench is generally the most applicable remediation strategy. This will help protect the property against damage from future inundation that is imminent as a direct result of the natural disaster that has occurred. If the source of inundation is a natural landslip within the property boundary, it is generally best to construct a retaining wall that will stabilise the slope and remove the risk of imminent damage from future evacuation. This subsequently will remove the risk of imminent damage from inundation.

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f. Evacuated land (including scouring)

i. Common evacuated land remediation strategies

Evacuation of land due to a natural landslip is usually remediated using a retaining wall. The type of retaining wall selected depends on the nature of the natural landslip, the ground conditions and the construction constraints. See Appendix 2 Section cii Common Retaining Wall Remediation strategies, which outlines common retaining wall remediation strategies for natural landslips.

Occasionally, it will be sufficient and more economical to remediate evacuated land without constructing a retaining wall. Small shallow natural landslips in soft soils may be able to be remediated by excavating evacuated material and replacing it with a more component material such as hard fill or flowable fill. Slopes with high groundwater conditions may also be stabilised using subsoil drainage, e.g. counterfort drains or horizontal weep holes. Care should be taken if drainage alone is adopted as a long-term remediation strategy. This is because the stability of the slope is reliant on the drainage remaining operational across the design life. Subsoil drainage regularly becomes blocked or damaged without scheduled maintenance.

In some claims it may not be feasible to remediate[190] evacuated land. This is common when evacuation occurs at the top of cliffs.

Evacuation due to scour is generally remediated by reinstating the original ground profile. For areas of minor scour planting or geomat are generally suitable remediation strategies. For larger scale scour riprap, gabion baskets or other retaining walls may be suitable.

ii. Evacuated land design considerations

Table 46: Evacuated land design considerations

Key design considerations for evacuated land	Comments
Depth of natural landslip, slope angle, site access constraints, surcharge, ground conditions	The common recommended remediation strategy is a retaining wall. See Appendix 2 Section c.iii Retaining Wall Design Considerations which outlines the design considerations for retaining wall remediation strategies. The table below outlines design considerations specifically for remediating evacuation caused by scour.

Table 47 below outlines design considerations specifically for remediating evacuation caused by scour.

[190] For more information on unrepairable land, see Section 2.dii Basis of Cover for 'Residential Land'.

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Figure 70 Riprap scour protection

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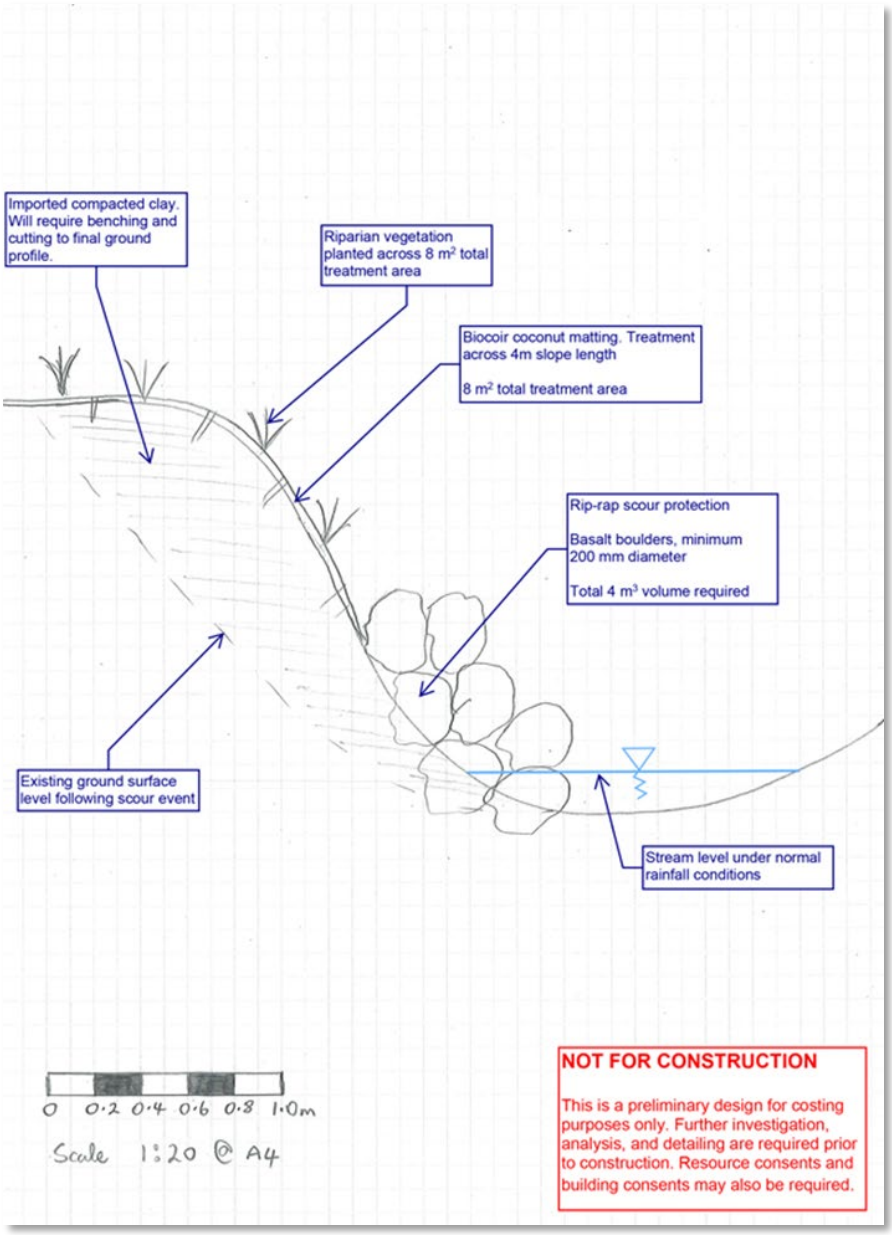

Figure 71 Key design elements of riprap scour protection

Figure 71 provides an example of a remediation strategy sketch identifying the key design elements of riprap scour protection. Key design considerations are also summarised below in Table 47.

Table 47: Design considerations for remediating evacuation due to scour
This table is for instances where a retaining wall would not be required.

Key design considerations for evacuation due to scour	Comments
Flow rates	The type of scour protection and remediation depends on the velocity and flow rate of surface water during a flood event. Smaller flows may be remediated using planting, geomat or small riprap. As flow rates increase, larger riprap, gabion baskets and rock mattresses may be required.
Scale of damage	For small-scale scour damage, it may be more economical to remove soils prone to scour (e.g. an area of loose sand fill) and replace with more resilient materials such as hardfill of flowable fill. For larger scale failures, it is generally more economical to construct a scour protection layer or structure such as gabion walls or riprap.
Ecological conditions	In ecologically sensitive areas such as waterways that house aquatic species, 'hard engineering' solutions such as riprap and concrete may not be suitable. Alternative solutions such as coconut matting and planting may be required.

g. Cracking (lateral spreading and oscillation movement)

i. Common cracking remediation strategies and design considerations

Cracks formed as a result of lateral spreading or oscillation movement can generally be infilled by means of backfill. Backfill might involve gravel, flowable fill or bentonite slurry. The type of backfill should be selected based upon the crack location, crack size and environmental conditions. Cracks that are narrow or difficult to access may be best suited to flowable fill which can infill narrow cracks and form a solid material without requiring compaction. Flowable fill should be avoided in environmentally sensitive areas such as near streams or in aquifers.

Lateral spreading may result in differential settlement of building foundations. See Appendix 2 Section f Evacuated Land (Including Scouring) for remediation strategies for differential settlement.

In rare circumstances, the movement of land due to lateral spreading may cause residential land to be at risk of imminent damage from further movement due to a natural landslip in the next 12 months. In this case, an in-ground palisade wall may also be required to protect and stabilise the land.

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h. Undulating land

i. Common undulating land remediation strategies and design considerations

Undulations in land occur when compression forces cause 'buckling' of land. Land undulation may be observed as a result of a natural landslip. For remediation strategies for this type of claim, see Appendix 2 Section f Evacuated Land (Including Scouring) and Section c Retaining Walls.

Undulating land can also be caused by compression forces during an earthquake event. If undulation has occurred in a lawn area, this generally only requires regrading using an excavator to return the insured land to its existing ground profile.

Undulation beneath an existing residential building may cause differential movement of the foundations and potential structural damage. If structural damage is minor, the building may be able to be underpinned, jacked up and packed with flowable fill or similar. If more significant structural damage has occurred to the foundations or superstructure of the building, it may not be practical to remediate the building and it may be considered a total loss.

i. Localised ponding

i. Common localised ponding remediation strategies and design considerations

Ponding is generally caused by a local depression forming on the land surface. This may be caused by liquefaction-induced settlement, or it could be a depression formed behind a rotated retaining wall where land evacuation (i.e. a natural landslip) has occurred.

Localised ponding can generally be remediated by regrading the landform so that surface water runs off towards an outlet. This may require importing some fill to infill the localised depression. Outlets may include existing catch pits, existing streams or existing gutters.

Where it is difficult to regrade the landform, a soak pit could be installed in the location of ponding. A soak pit is an underground chamber of granular material, typically wrapped in geotextile. The soak pit allows surface water to percolate into the granular material during heavy rainfall, which can then slowly dissipate into the surrounding ground over time.

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j. Localised settlement

i. Common localised settlement remediation strategies and design considerations

Localised settlement is generally only observed in earthquake damage claims where liquefaction has occurred on the site or, less commonly, in hydrothermal claims where the soil has been softened and the ground surface has permanently subsided.

These forms of localised settlement that have not caused damage to an existing structure can simply be remediated by placing fill to return the ground surface to its previous level.

k. Contaminated land

Contaminated land is defined under the *Resource Management Act 1991* as land with a hazardous substance in or on it that has, or is reasonably likely to have, significant adverse effects on the environment.

i. Key considerations for remediation

There are generally two types of contamination encountered in EQCover claim assessments:

a. Temporarily contaminated land

A natural disaster may cause residential land to become temporarily contaminated, e.g. by sewage that has flowed onto the surface of the land. In these cases, the contamination often breaks down to safe levels over a short period, e.g. the bacteria in the sewage breaks down under exposure to ultraviolet light (sunshine) and rainfall. In these situations, a land repair is not required because the land has 'self-repaired', or will do so in the short term.

Where the land has not self-repaired, or will not do so in the short-term, e.g. when sewage has flowed onto the land under a residential building where sunshine or rainfall cannot reach, you must provide an appropriate remediation strategy e.g. applying lime to the affected area.

b. Potentially contaminated land

Potentially contaminated land refers to residential land that is identified on a local or regional authority register as potentially being contaminated from previous land use. It is not the result of a natural disaster.

This type of land contamination has mainly been caused by past practices where hazardous substances have been used, stored or disposed of in an unsafe way. These substances may seep through the soil into groundwater or be carried to nearby land and waterways in rainwater or as dust.

To help with identifying potentially contaminated land, the Ministry for the Environment has compiled a list of activities and industries commonly associated with contaminated land. This list is called the Hazardous Activities and Industries List (HAIL), and it can be used to identify potentially contaminated sites. You must investigate individual HAIL sites further to determine whether they are contaminated.

Include remediation of any confirmed land contamination in the EQCover land claim as required to repair natural disaster damage to the insured residential land. We are not responsible for addressing the contamination to the site. In these situations, you should typically engage an appropriate expert (in contaminated land) to carry out a site-specific assessment and provide an appropriate remediation strategy. The expert can also provide advice on complying with the requirements of the *Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011*.

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Appendix 3. Remediation strategy, standards and costing

a. Overview

The purpose of this appendix is to provide practical guidance on preparing and costing your remediation strategy.

When preparing the remediation strategy, consider the requirements for the strategy to:

- meet the *EQC Act* requirements;[191]
- be lawful;[192]
- be fit for purpose;
- be practical and achievable;
- take into consideration any site, access, logistical and professional investigation issues relevant to the specific damage location and any relevant enabling works (Additional funds may be required to achieve this.);
- consider any other properties[193] and how they may affect the remediation strategy for the property you are assessing;
- take into account any other relevant factors that you may identify.

When costing the remediation strategy, use your construction knowledge and experience to identify actual costs that form the remediation settlement (as opposed to contingency costs based on what might happen). If, during the actual repair, additional repairs and/or costs are identified, information supporting this should be provided for your consideration. If you do not have construction knowledge and experience, seek guidance from appropriate experts.[194]

[191] See Appendix 3 Section b Reinstatement Standards Under the Act.

[192] See Appendix 3 Section c Regulations and Compliance.

[193] See Section 8 Assessing Damage Across Multiple Properties.

[194] See Section 7 Engaging Experts.

Consider factors that may affect the repair cost and/or how the remediation strategy can be achieved practically, e.g.:

- logistics of getting labour and materials to site;
- constraints on labour and materials;
- need for specialist expertise.

b. Reinstatement standards under the EQC Act

During the assessment process,[195] you will have established the extent of natural disaster damage (if any). This is essential to determine a remediation strategy that will replace or reinstate the property to the standard required by the *EQC Act*, and the cost of doing so.

This section outlines some of the key *EQC Act* considerations.

i. Building repair considerations

We insure residential buildings against natural disaster for their replacement value[196] up to a statutory cap.

ii. Land repair considerations

We insure residential land on an indemnity basis (subject to a maximum amount of insurance).[197]

When preparing a remediation strategy for land, the following considerations may also apply.

a. One repair method that repairs several types of damage

When determining the residential land repair, you should also consider that one repair method may repair several types of land damage. Under the conceptual remediation strategy, the repair method for repairing land for one type of land damage may also repair other land damage types at the same time. For example, repairing evacuated land may fully or partially remove the risk of imminent damage from further evacuation and inundation.

[195] See *Toka Tū Ake EQC Claims Manual – Residential Building Section 6 How is the Natural Disaster Damage Assessed?*.

[196] See Section 2.d.i Basis of Cover for a 'Residential Building'.

[197] See Section 2.d.ii Basis of Cover for 'Residential Land'.

b. Land damage that is unrepairable or that is unlikely to be repaired

Residential land damage may not be able or likely to be repaired in the following situations:

- where a repair of the damage is not practical and achievable;
- where a lawful repair is not possible, e.g. it may not be possible to get a resource consent to carry out the repair;
- where we are satisfied that the customer does not intend to undertake the repair of the land within a reasonable period (if at all); or
- where the cost of the repair work is disproportionate to the reduction of value to the property caused by the land damage. In this case, we consider the customer's circumstances (including their stated intentions in relation to repair of the land).

In these cases, it may be appropriate to settle a residential land claim (or part of that claim) on the basis of the reduction of value to the property caused by the land damage. This mode of settlement is an alternative to settlement on the basis of the cost of repairing that damage. This reduction of value is called diminution of value (DOV).

In the past, we have settled on the basis of DOV in some cases where there are certain types of complex land damage. For example, we have settled on the basis of DOV for some properties with increased liquefaction vulnerability (ILV) and increased flooding vulnerability (IFV) land damage. We may settle on the basis of DOV where land has been lost, e.g., a cliff has collapsed, and cannot be restored. For more information on settling a residential land claim (or part of it) by paying DOV, see *Toka Tū Ake EQC Claims Manual – Residential Land Section 9.d.vii Diminution of Value (DOV)* and the *Land Valuation Guide*.

c. Land that is potentially contaminated

If land contamination is temporary, you do not need to provide a remediation strategy because the contamination will self-repair. For example, a natural disaster may cause sewage to seep onto the land surface, however the contamination often breaks down to safe levels over a short period in sunshine or normal rainfall. However, if this type of contamination is unable to self-repair, e.g. because it is under the dwelling and not exposed to sunshine and rainfall, an appropriate repair and costing is required.

If the land contamination is not temporary, e.g. Hazardous Activities and Industries List (HAIL) sites, additional considerations[198] apply.

[198] See Section 4 Identifying Natural Disaster Damage to the Residential Land and Appendix 2 Land Components and Repair Considerations.

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c. Regulations and compliance

When choosing a remediation strategy, you must consider applicable regulations and legislation. The main pieces of legislation are listed below, but this is not an exhaustive list.

From an engineering perspective, compliance with the following is the absolute minimum:

- All new building work or building repair work must comply with the requirements of the *Building Act 2004*, in particular:
    - the New Zealand *building code*, which is contained in regulations under the *Building Act 2004*.
    - *section 17*, which states that all building work must comply with the building code to the extent required by the *Building Act 2004*.
    - *section 175*, which relates to the building advisory panel chief executive issuing guidance to the industry. This advice, however, does not constitute *EQC Act* policy response, e.g. *MBIE Guidance on Repairing and Rebuilding Dwellings Affected by the Canterbury Earthquakes*.
- All repair work must also comply with the environmental obligations of *Resource Management Act 1991*. This includes aspects such as earthworks, sediment and erosion control, vegetation clearance, maintaining site stability, and heritage considerations.

Other legislation that is commonly considered for repair work includes:

- the *Heritage New Zealand Pouhere Taonga Act 2014*, e.g. when repair work is required to heritage listed buildings or structures, or to land that is, or is suspected to be, of archaeological significance.
- the *Health and Safety at Work Act 2015*, which all physical operations required to complete the repair work must comply with. This is especially important for reinstatement and replacement. For further details, see the *General Health and Safety Guide*.

All regions and cities have their own district plans, policies and bylaws that you must also review and consider for repair work. However, these always refer back to the *Building Act 2004* and *Resource Management Act 1991*.

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d. Which costs are involved?

When considering the costs involved you must apply:

- all findings that you identified when determining the remediation strategy, e.g. local TA requirements, building materials that have been damaged, age of the residential building;
- substantive works;
- preliminary and general costs (P and G), margin and GST.

Where applicable, include:

- enabling works;
- professional and compliance fees;
- additional health and safety costs;
- travel costs.

Regardless of the severity of damage, all costings will include some substantive works, P and G, margin and GST, however for moderate and severe damage, additional costs are likely to be incurred. The applicable costs will depend on the facts of the specific claim.

The amount of P and G and margin is to be in line with accepted industry standards.

All invoices received for work already carried out will be inclusive of any applicable P and G, margin and GST.

i. Substantive works

Substantive works are the repairs required to reinstate the property damaged by a natural disaster. In some cases, carrying out substantive works will affect part of the residential building or land that was not damaged by a natural disaster. In these cases, EQCover includes the cost of:

- the work on the undamaged part of the property that is necessary to carry out the repair;
- reinstating the part if it was unavoidably damaged in the course of the work being done on it; and
- modifying the part if any laws require it to be modified as a result of the work being done on it.

You must also consider any restricted building work.

a. Restricted building work

Restricted building work should be scoped and costed by a person who is sufficiently experienced, qualified and skilled for the purpose. Restricted building work is any work that:

- requires a building consent; and
- involves or affects a home's primary structure, weathertightness, or certain fire safety design.

ii. Preliminary and general costs (P and G)

Preliminary and general costs cover any additional requirements to facilitate the repair of natural disaster damage. Depending on the type of job being costed, this can be added as a percentage on the entire job, or as individual line items. It must always be clear what makes up your P and G.

P and G is applied to the total cost of the repair up to this point, but it should not be added to any P and G item that has been costed as a separate line item. P and G is applied before the margin and GST components.

iii. Margin

A margin is a cost added to a builder's estimate or scope of works where the final cost is not known yet. The margin is applied to the total repair cost (which includes P and G) before GST is added.

iv. Goods and services tax (GST)

When assessing the cost of repair for the residential building and/or land, the GST component that has been paid or will be payable by the customer when carrying out the repair must be set out in the scope of works.

Section 29(3), EQC Act

v. Enabling works

Enabling works are usually works required to facilitate substantive repairs. They are generally related to gaining access to the site, but in rare cases can include things like removing a garden shed, or tree and garden protection. They can also be used when they will make a repair more efficient or cost-effective to complete, e.g. building a platform to place a larger excavator on a site may be more cost-effective than using a smaller excavator over a long period of time.

Examples of enabling works include:

- constructing an earth platform to position a digger for excavation;
- decontaminating a site where required under the *Resource Management Act 1991*;
- removing and storing a large fitted bookshelf to repair a damaged wall.

You must also consider any restricted building work requirements as noted in Appendix 3 Section d.i Substantive Works.

vi. Professional and compliance fees

Professional and compliance fees are the costs associated with design, consent and investigation that are necessary to repair the natural disaster damage. This type of cost is required to assess the extent of the damage and does not form part of the scope of work.

Examples include:

- consent fees;
- engineering fees (design and investigation);
- architect's fees;
- surveyor's fees;
- construction monitoring.

For land claims, the geotechnical engineering report provides an estimate of these costs.

vii. Additional health and safety costs

Health and safety costs are incurred by the main contractor for complying with the *Health and Safety at Work Act 2015* and other relevant legislation. You should only apply these costs in situations where:

- there are multiple contractors on a site requiring a managed site-specific health and safety plan; and
- they are not already covered by the P and G allowance.

Remediation work for a claim with minor cosmetic repairs such as plastering and/or painting involving one contractor should not incur health and safety costs that are not already covered by the P and G allowance.

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viii. Asbestos testing

Where a damaged building element is suspected of containing asbestos, you must include the cost of the necessary testing in the scope of works. The customer will arrange to have the testing carried out, but their private insurer may also choose to arrange this on their behalf. If the asbestos test is positive, a specialist licensed removal contractor will need to quote for the works. You must consider this and revise the scope of works and associated costing accordingly.

ix. Land contamination testing

If any insured damaged land is suspected of being contaminated, e.g. the property is registered on the Ministry for the Environment's Hazardous Activities and Industries List (HAIL), you must include the cost of the necessary testing in the scope of works. The customer will arrange to have the testing carried out.

If the contamination test is positive, you should typically engage an appropriate expert (in contaminated land) to carry out a site-specific assessment and provide an appropriate remediation strategy. The expert can also provide advice on complying with the requirements of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011. You must consider this and revise the scope of works and associated costing accordingly.

If the land contamination is caused by something other than natural disaster, e.g. prior land use contamination, we do not cover it. However, if there is a valid claim for land damage, we will cover any appropriate costs related to the contaminated land as required to repair the natural disaster damage to the insured residential land. We are not responsible for addressing the effect of the contamination on the site itself.

e. Reviewing quotes and invoices

In most cases, you should prepare a costed scope of works, which is an estimate of the cost of repair. This is the most common means for determining the cost of natural disaster damage. However, in some cases, you should obtain or receive:

- a quote for the work that is required; or
- an invoice for work that has already been carried out.

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Where the customer has provided an invoice or quote for repairs, consider whether it is in sufficient detail to determine:

- whether the invoice or quote includes only the costs to repair the natural disaster damage that has occurred; or
- if other repairs are included, which of the repairs were necessary to repair the natural disaster damage; and
- whether the costs for repairing the natural disaster damage are fair and reasonable.

A quote is considered to include P and G and margin, whether this is specifically itemised or not. Invoices are for actual costs only, and you should not apply any additional costs. Both quotes and invoices will include GST where required (not all contractors are registered for GST) and costs must be itemised.

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Appendix 4. Documentation examples

a. Overview

The purpose of this section is to provide illustrative examples of the common types of documentation used during an assessment.

Toka Tū Ake EQC assessments identify diverse sets of facts. The following examples are not intended to represent every scenario you may encounter when carrying out assessments on our behalf. In reviewing these documents, you should consider how they apply to the various situations you may encounter, and the information that you will need to record during the assessment. These document examples are based on historical claims information. They are intended to illustrate our current assessment documentation standards, however in some cases, they do not fully comply. Where there is a difference between these examples and Section 13 Assessment Documentation Standards, Section 13 will prevail.

For detailed guidance on who completes these documents, why they are needed and any applicable standards, see Sections 7 Engaging Experts, 10 Planning for a Site Assessment, 11 Carrying Out a Site Assessment, 12 Post-site Assessment Actions and 13 Assessment Documentation Standards.

Nothing in this appendix should be construed as being legal advice from us. Seek legal advice on the contents of this appendix if you require it.

The following documents are illustrated using three example properties.

Example property 1 – Units 1 and 2, 24 Example Street, Foxton:

- Building assessment report
- Building sketch
- Statement of claim checklist – damage report
- Scope of works

Example property 2 – 24 Example Street, Avalon, Lower Hutt:

- Land assessment report
- Site risk assessment
- Land sketch
- Geotechnical engineer instruction
- Geotechnical engineering report

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- Valuer instruction
- Valuation report
- Notification of a potentially dangerous building form

Example property 3 – 1 Main Street, Example Town:

- Structural engineer letter of engagement
- Structural engineering report example
- Structural engineering report – floor plan and repair diagrams

b. Building assessment report

On the following page is an example building assessment report for a duplex multi-unit building (MUB1), which the assessor uses to record information in their assessment of natural disaster damage. Also included are the related building sketch (floor plan), statement of claim – damage report, and scope of works examples.

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i. Building assessment report, Unit 1

EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Natural Disaster Event Assessment Report			
Loss Adjuster:	Michele Brown	Claim Number:	EQC/2020/234567
Organisation:	EQC	Customer Name:	Michael Holmes
Date of Assessment:	25/06/2020	Damage Address:	Unit 1/24 Example Street, Foxton
Date of Loss:	22/05/2020		
Cause of Loss:	Earthquake		

Loss Details: Magnitude 5.2 earthquake occurring at 3.04pm, Friday 22nd May 2020. This event was located 8 km north-west of Paraparaumu at a depth of 10 km. Customer reports cracking damage to the plasterboard wall lining in bedroom 2 as well as a crack in the hallway ceiling. The plasterboard over the intertenancy (firewall) between the two units also has a crack in it.

Attendance on Site: Customer Michael Holmes and EQC Loss Adjuster Michele Brown.

Property Details: The property is legally described as LOT 7 DP 1039 UNIT 1 WITH A ½ SHARE IN 800M2 SECTION. This is a multi-unit, single level building with two residential dwellings sharing a common intertenancy (fire rated) wall. The building was constructed mid 2000's, slab on grade, timber framed, weatherboard cladding with a rolled metal roof situated on a flat 800m2 section. The units themselves are both 80m^2. There is a separate detached single garage for each unit situated to the rear of the building. The unit has recently been redecorated pre-loss making colour matching internal linings easily achievable.

As the building was constructed post 2000, there are no asbestos concerns.

Assessment Observations:

Upon assessing the property on 25th of June 2020, the following damage was noted:

Building Interior:

Hallway – 2.4LM crack to painted plasterboard ceiling. EQ related.

Bedroom 2 – 1.2LM crack to one painted plasterboard wall. Visibly aged. Not EQ related.

Living Room- Adjoining intertenancy with Unit 2 – 2LM structural crack through plasterboard linings with painted anaglypta wall coverings on the intertenancy wall only. EQ related.

1.0LM step cracking to intertenancy wall concrete blockwork mortar. EQ related.

The intertenancy wall is common to both units and accordingly, both unit owners' with valid claims are entitled to a 50% share of the repair costs for that element alone.

Earthquake Commission
Level 11, Majestic Centre
100 Willis Street
Wellington 6011, New Zealand

Corporate Mail: PO Box 790, Wellington 6140
Claims Mail: PO Box 311, Wellington 6140
Telephone: (04) 978-6400 Fax: (04) 978-6431
www.eqc.govt.nz

Figure 72 Building assessment report, Unit 1 (Page 1)

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EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

The total cost of accepted damage to Unit 1 with the 50% share for the intertenancy wall included, is $4,773.50 including P&G, Margin & GST.

All of the relevant documents have been uploaded to the claim to allow for a peer review.

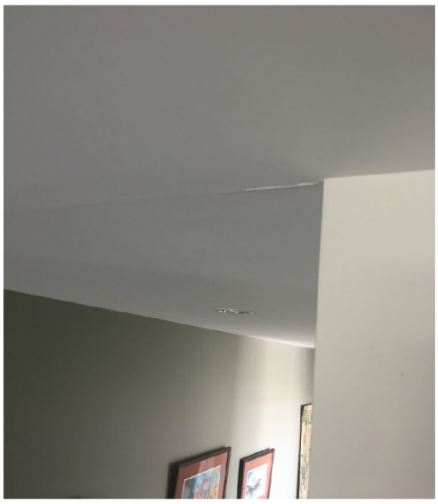
Post Assessment Meeting with Customer:

- All concerns expressed by the customer were addressed on site.
- The customer was advised of the claim process post assessment.
- The claim exposure excess was discussed with the customer.
- The Customer appeared satisfied with my inspection and explanations.

Assessment Recommendation:

Recommend claim is accepted and claim cash settled based upon the costed scope of works, less any applicable excess.

Damage Photo Schedule:



Hallway – 2.4 LM painted plastered ceiling crack. EQ-related

Earthquake Commission
Level 11, Majestic Centre
100 Willis Street
Wellington 6011, New Zealand

Corporate Mail: PO Box 790, Wellington 6140
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Figure 73 Building assessment report, Unit 1 (Page 2)

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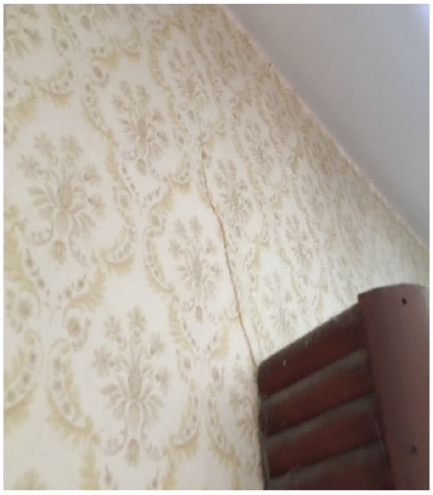
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Bedroom 2 – 1.2 LM crack to painted plastered wall. Discoloured & aged. Not event-related.



Living room - 2.0 LM structural tear / crack to wallpapered plasterboard intertenancy wall. EQ-related.

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Figure 74 Building assessment report, Unit 1 (Page 3)

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EARTHQUAKE COMMISSION
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Living room – Adjoining intertenancy concrete block wall with Unit 2 – 1.0 LM step crack in wall mortar. EQ-related.

NB: Anaglypta-covered plasterboard linings of wall already removed.

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Figure 75 Building assessment report, Unit 1 (Page 4)

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Text in yellow in this Manual reflects cap, premium and excess provisions.
See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

ii. Building sketch (floor plan), Unit 1

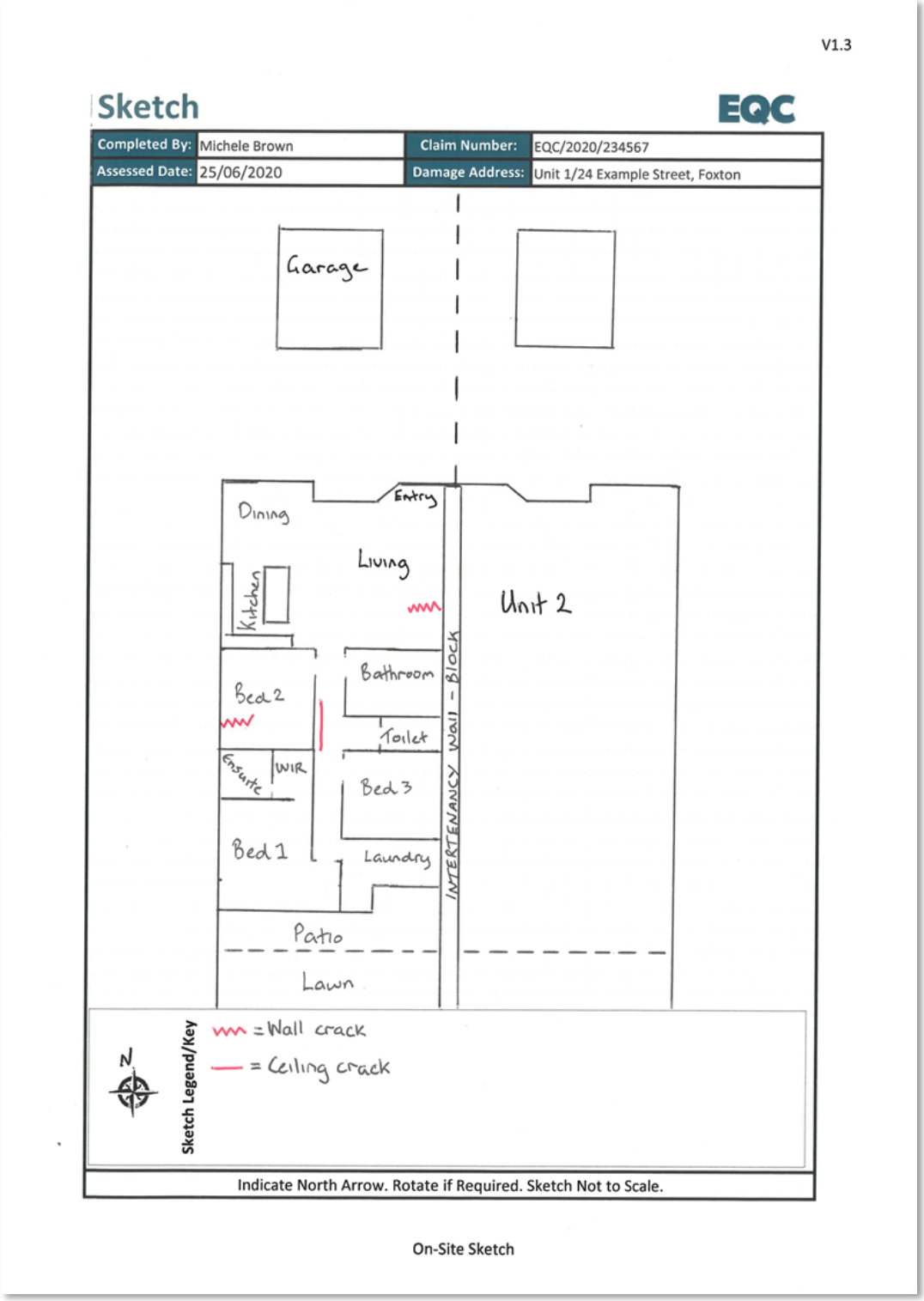


Figure 76 Building sketch (floor plan), Unit 1

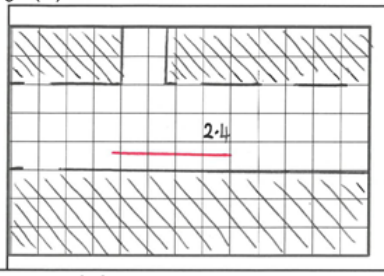
EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
These changes take place on and from 1 Oct 2022 to and including 30 Sep 2023.
Text in yellow in this Manual reflects cap, premium and excess provisions.
See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

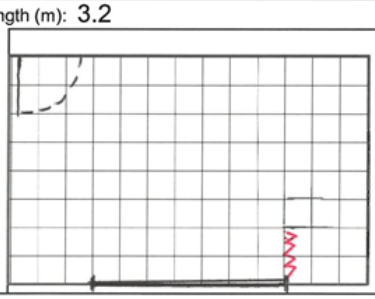
iii. Statement of claim checklist – damage report, Unit 1

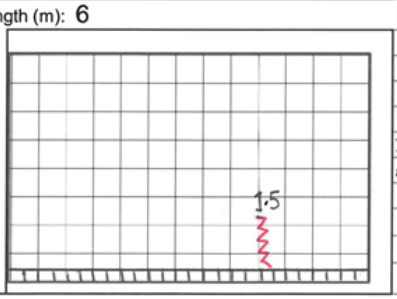
V1.3

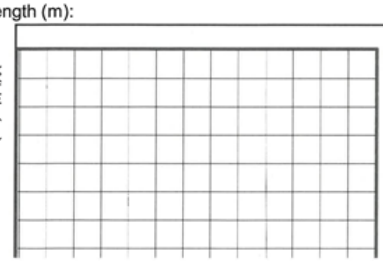
Statement of Claim Checklist - Damage Report EQC

Claim Number:	EQC/2020/234567	Completed By:	Michele Brown
Assessment Date:	25/06/2020	Customer Name:	Michael Holmes
Dwelling Name:	Main Dwelling	Situation of Loss:	Unit 1/24 Example Street, Foxton

EQC Covered Damage:	Length (m): 12	Name: Hallway
X Yes / No	Width (m): 1.1	List Damage: 2.4lm crack in painted plasterboard ceiling - EQ
Stud height (m): 2.4		

EQC Covered Damage:	Length (m): 3.2	Name: Bedroom 2
Yes / X No	Width (m): 3.1	List Damage: 1.2lm crack in painted plasterboard wall lining. Visibly aged. NOT EQ
Stud height (m): 2.4		

EQC Covered Damage:	Length (m): 6	Name: Living Room
X Yes / No	Width (m): 5.4	List Damage: 1.5lm crack in block intertenancy wall - EQ. NOTE: IT wall only has plasterboard linings with painted anaglypta wall paper
Stud height (m): 2.4		

EQC Covered Damage:	Length (m):	Name:
Yes / No	Width (m):	List Damage:
Stud height (m):		

Statement of Claim of pages

Figure 77 Statement of claim checklist – damage report, Unit 1

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iv. Scope of works, Unit 1

Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	EQC/2020/234567
		Customer Name:	Michael Holmes
Role:	LOSS ADJUSTER	Address:	1/24 Example Street
Date:	26/06/2020		Foxton

Description	This Scope of Works addresses all accepted event related damage

Page 1 of 1

Element:	Description	Units	Qty	Rate	Cost
Building Identifier	UNIT 1				
Internal Area	Hallway			Element Cost	$495.52
Ceiling	Plasterboard:Repair plasterboard cracks (lm)	lm	2.4	$13.00	$31.20
Ceiling	Tradesman Required-Plasterer.	hr	2	$50.00	$100.00
Ceiling	All Types:Paint only	m2	13.2	$23.60	$311.52
Floor	All Types:Temporary Protection:Supply, install, remove, dispose	m2	13.2	$4.00	$52.80
Internal Area	Living Room			Element Cost	$2,031.20
Wall Lining	Plasterboard:Std:Remove, dispose, supply, install	m2	2.88	$42.50	$122.40
Wall Lining	Tradesman Required - Plasterer	hr	4	$50.00	$200.00
Wall Lining	All Types:Paint only	m2	14.4	$21.00	$302.40
Trim	All Types Std:Remove, dispose, supply, install.	lm	12	$23.00	$276.00
Trim	All Types Std:Gap fill, paint	lm	12	$13.00	$156.00
Wall Lining	All Types:Wallpaper:Medium Spec Spec:Remove, dispose, supply, size, hang.	m2	14.4	$61.00	$878.40
Floor	All Types:Temporary Protection:Supply, install, remove, dispose	m2	24	$4.00	$96.00
Electrical Fixtures	Fittings:All Types:Loosen/disconnect/reconnect for other trades (Electrician per hour)	hr	4	$65.00	$260.00
Wall Framing	50% share of repairs to intertenancy wall	No	1	$678.00	$678.00

Page Sub Total	$3,464.72
Page Preliminaries & General	$277.18
Page Margin	$374.19
Page GST	$617.41
TOTAL	$4,733.50

Figure 78 Scope of works, Unit 1 (Page 1)

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
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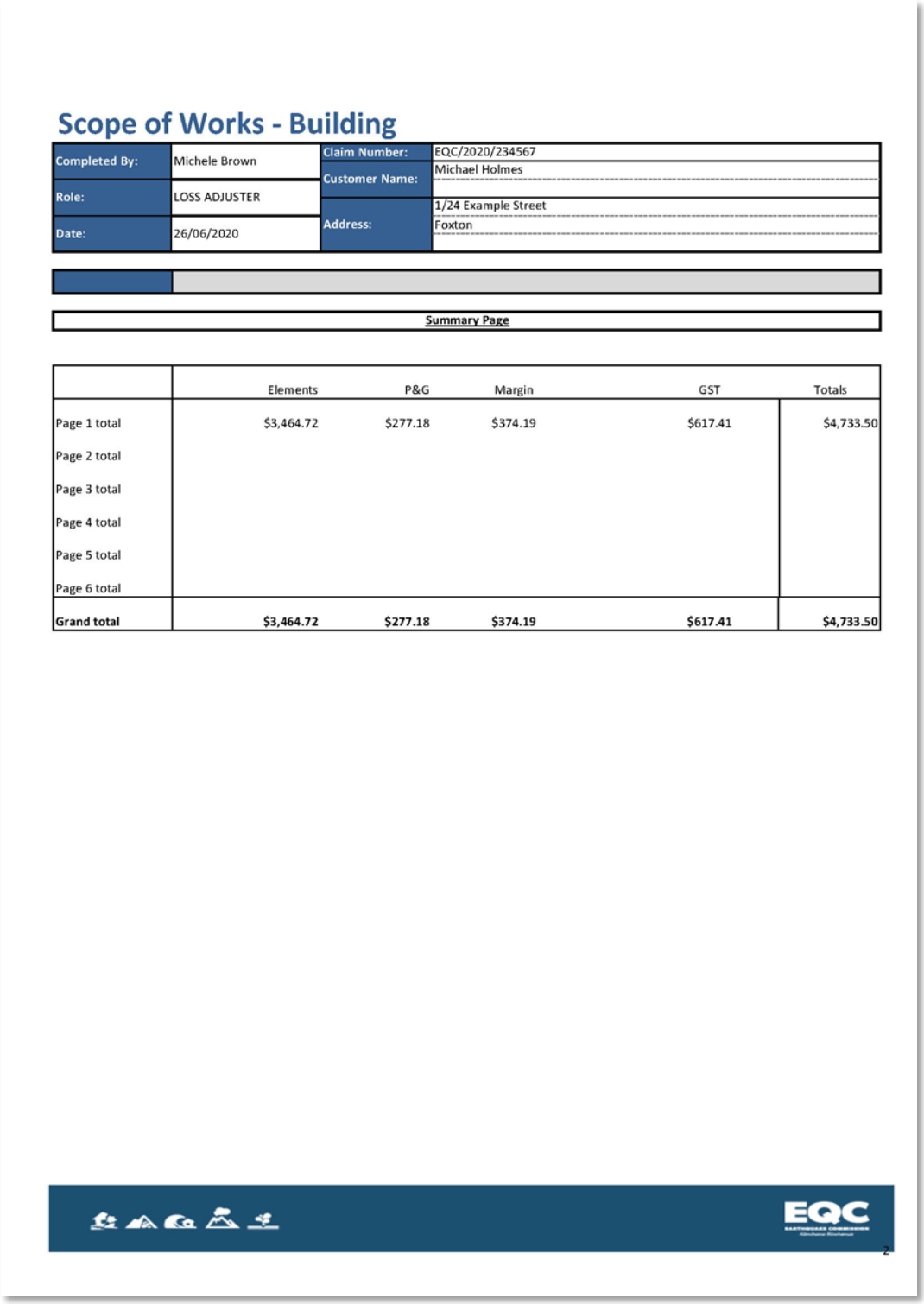

Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	EQC/2020/234567
		Customer Name:	Michael Holmes
Role:	LOSS ADJUSTER	Address:	1/24 Example Street
Date:	26/06/2020		Foxton

Summary Page

	Elements	P&G	Margin	GST	Totals
Page 1 total	$3,464.72	$277.18	$374.19	$617.41	$4,733.50
Page 2 total					
Page 3 total					
Page 4 total					
Page 5 total					
Page 6 total					
Grand total	**$3,464.72**	**$277.18**	**$374.19**	**$617.41**	**$4,733.50**

EQC

2

Figure 79 Scope of works, Unit 1 (Page 2)

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
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v. Building assessment report – Unit 2

EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Natural Disaster Event Assessment Report			
Loss Adjuster:	Michele Brown	Claim Number:	EQC/2020/123456
Organisation:	EQC	Customer Name:	Sam Davis
Date of Assessment:	25/06/2020	Damage Address:	Unit 2/24 Example Street, Foxton
Date of Loss:	22/05/2020		
Cause of Loss:	Earthquake		

Loss Details: Magnitude 5.2 earthquake occurring at 3.04pm, Friday 22nd May 2020. This event was located 8 km north-west of Paraparaumu at a depth of 10 km. Customer reports cracking damage to the plasterboard wall linings in the external garage, bedrooms 1 and 2 and the plasterboard over the intertenancy (firewall) between the two units also has a crack in it.

Attendance on Site: Customer Sam Davis and EQC Loss Adjuster Michele Brown.

Property Details: The property is legally described as LOT 7 DP 1039 UNIT 2 WITH A ½ SHARE IN 800M2 SECTION. This is a multi-unit, single level building with two residential dwellings sharing a common intertenancy wall. The building was constructed mid 2000's, slab on grade, timber framed, weatherboard cladding with a rolled metal roof situated on a flat 800m2 section. The units themselves are both 80m^2. There is a separate detached single garage for each unit situated to the rear of the building. The unit has recently been redecorated pre-loss making colour matching internal linings easily achievable.

As the building was constructed post 2000, there are no asbestos concerns.

Assessment Observations:

Upon assessing the property on 25th of June 2020, the following damage was noted:

Building Exterior:

External Garage – 2.4LM crack to one painted plasterboard wall. EQ related.

Building Interior:

Bedroom 1 - 1.0LM crack to one painted plasterboard wall. EQ related.

Bed 2 – 0.5LM crack to one painted plasterboard wall. EQ related.

Living Room- Adjoining intertenancy with Unit 1 – 1.5LM structural crack through painted plasterboard linings on intertenancy wall. EQ related. Wall linings for the affected wall is painted plasterboard decorated as a feature wall.

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Figure 80 Building assessment report, Unit 2 (Page 1)

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EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

1.0LM step cracking to intertenancy wall concrete blockwork mortar. EQ related.

The intertenancy wall is common to both units and accordingly, both unit owners' with valid claims are entitled to a 50% share of the repair costs for that element alone.

The total cost of accepted damage to Unit 2 with the 50% share for the intertenancy wall included, is $4,643.74 including P&G, Margin & GST.

All of the relevant documents have been uploaded to the claim to allow for a peer review.

Post Assessment Meeting with Customer:

- All concerns expressed by the customer were addressed on site.
- The customer was advised of the claim process post assessment.
- The claim exposure excess was discussed with the customer.
- The Customer appeared satisfied with my inspection and explanations.

Assessment Recommendation:

Recommend claim is accepted and claim cash settled based upon the costed scope of works, less any applicable excess.

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Figure 81 Building assessment report, Unit 2 (Page 2)

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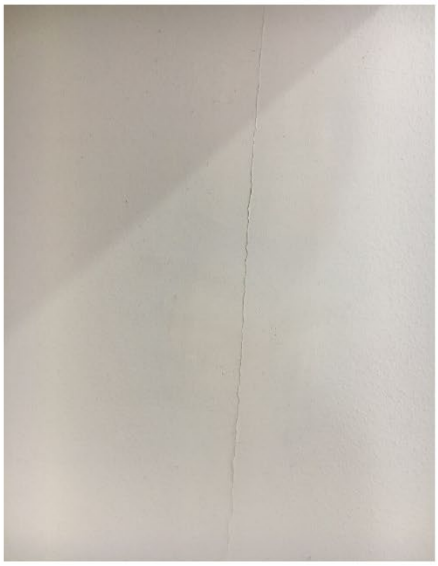
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Damage Photo Schedule:



External garage – 2.4 LM crack to painted plastered wall. EQ-related.

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Figure 82 Building assessment report, Unit 2 (Page 3)

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EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Bedroom 1 – 1.0 LM crack to painted plastered wall. EQ-related.

NB: 3.0 M high stud.

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Figure 83 Building assessment report, Unit 2 (Page 4)

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EARTHQUAKE COMMISSION
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Bedroom 2 – 0.5 LM crack to painted plasterboard wall. EQ-related.

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Figure 84 Building assessment report, Unit 2 (Page 5)

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EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Living room – 1.5 LM structural crack in painted plasterboard intertenancy wall. EQ-related.

Intertenancy wall between Unit 1 & 2 – 1.0 LM structural crack through concrete block mortar. EQ-related.

NB: Plasterboard lining has been removed to expose wall.

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Figure 85 Building assessment report, Unit 2 (Page 6)

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vi. Building sketch (floor plan), Unit 2

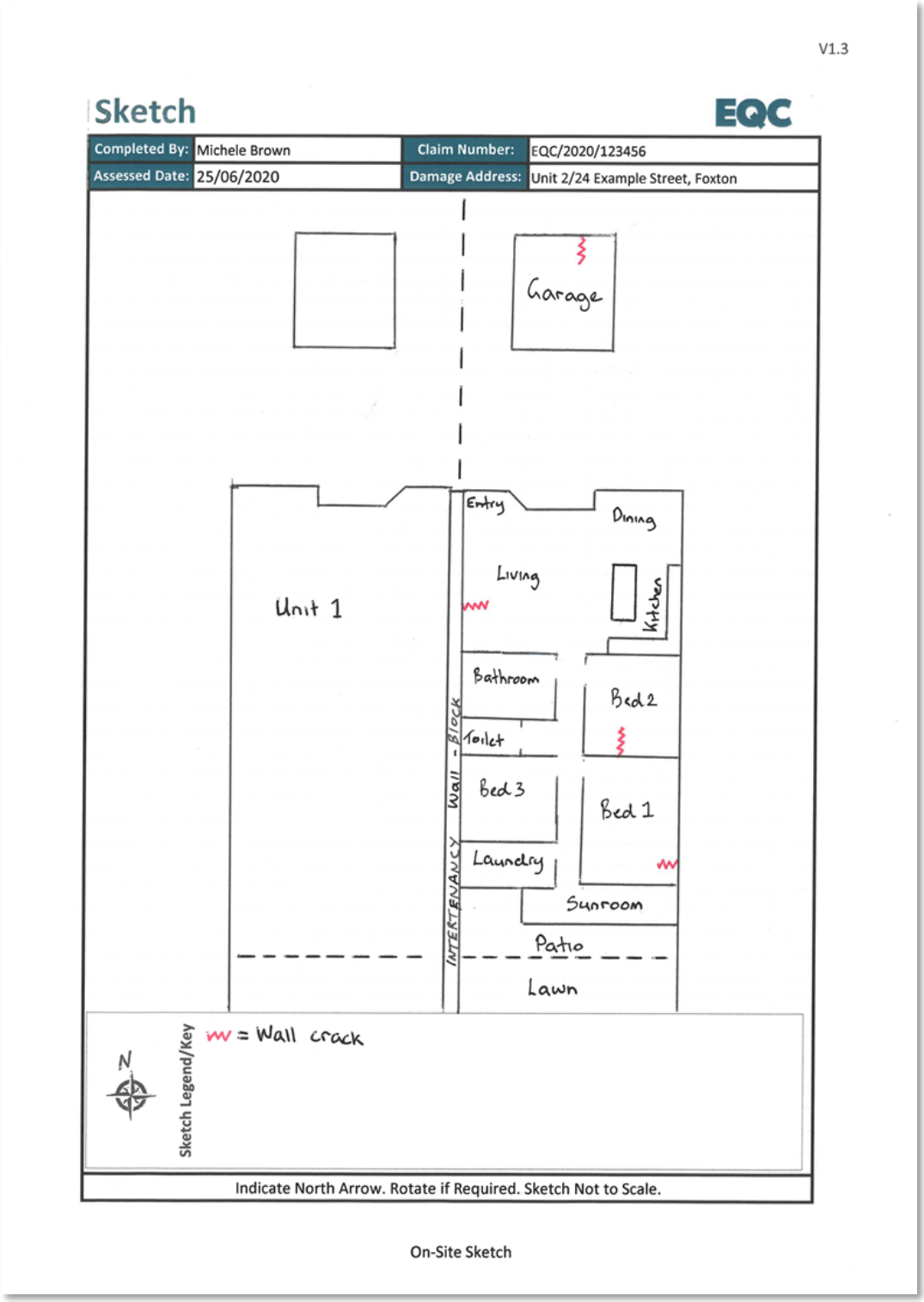

Figure 86 Building sketch (floor plan), Unit 2

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
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Text in yellow in this Manual reflects cap, premium and excess provisions.
See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

vii. Statement of claim checklist – damage report, Unit 2

V1.3

Statement of Claim Checklist - Damage Report EQC

Claim Number:	EQC/2020/123456	Completed By:	Michele Brown
Assessment Date:	25/06/2020	Customer Name:	Sam Davis
Dwelling Name:	Main Dwelling	Situation of Loss:	Unit 2/24 Example Street, Foxton

Length (m): 4.8	Width (m): 3.1	EQC Covered Damage: X Yes / No	Stud height (m): 2.4
Name: Bed One			
List Damage: 1lm crack to one painted plasterboard wall - EQ			
Length (m): 3.2	Width (m): 3.1	EQC Covered Damage: X Yes / No	Stud height (m): 2.4
Name: Bed 2			
List Damage: .5lm crack to one painted plasterboard wall - EQ			
Length (m): 6	Width (m): 5.4	EQC Covered Damage: X Yes / No	Stud height (m): 2.4
Name: Living Room			
List Damage: 1.5lm crack to block IT wall with painted plasterboard wall linings - EQ			
Length (m): 6	Width (m): 6	EQC Covered Damage: X Yes / No	Stud height (m): 2.4
Name: External Garage			
List Damage: 2.4lm crack to painted plasterboard wall - EQ			

Statement of Claim of pages

Figure 87 Statement of claim checklist – damage report, Unit 2

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viii. Scope of works, Unit 2

EQC EARTHQUAKE COMMISSION

06/04/2020

Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	EQC/2020/123456
		Customer Name:	Sam Davis
Role:	LOSS ADJUSTER		
		Address:	2/24 Example Street
Date:	26/06/2020		Foxton

Description	This Scope of Works addresses all accepted event related damage

Page 1 of 1

Element:	Description	Units	Qty	Rate	Cost
Building Identifier	UNIT 2				
Internal Area	Bedroom 1			Element Cost	$381.72
Wall Lining	Plasterboard:Repair plasterboard cracks.	lm	1	$11.00	$11.00
Wall Lining	Tradesman Required - Plasterer	hr	2	$50.00	$100.00
Wall Lining	All Types:Paint only	m2	11.52	$21.00	$241.92
Floor	All Types:Temporary Protection:Supply, install, remove, dispose	m2	7.2	$4.00	$28.80
Internal Area	Bedroom 2			Element Cost	$292.90
Wall Lining	Plasterboard:Repair plasterboard cracks.	lm	0.5	$11.00	$5.50
Wall Lining	Tradesman Required - Plasterer	hr	2	$50.00	$100.00
Wall Lining	All Types:Paint only	m2	7.4	$21.00	$155.40
Floor	All Types:Temporary Protection:Supply, install, remove, dispose	m2	8	$4.00	$32.00
Internal Area	Lounge			Element Cost	$1,786.40
Wall Lining	Plasterboard:Std:Remove, dispose, supply, install	m2	2.88	$42.50	$122.40
Wall Lining	Tradesman Required - Plasterer	hr	4	$50.00	$200.00
Wall Lining	All Types:Paint only	hr	14.4	$65.00	$936.00
Trim	All Types Std:Remove, dispose, supply, install.	lm	12	$23.00	$276.00
Trim	All Types Std:Gap fill, paint	lm	12	$13.00	$156.00
Floor	All Types:Temporary Protection:Supply, install, remove, dispose	m2	24	$4.00	$96.00
Wall Framing	50% share of repairs to intertenancy wall	no	1	$678.00	$678.00
Electrical Fixtures	Fittings:All Types:Loosen/disconnect/reconnect for other trades (Electrician per hour)	hr	4	$65.00	$260.00
Building Type	External Garage			Element Cost	
Wall Lining	Plasterboard: Repair plasterboard cracks.	lm	2.4	$11.00	$26.40
Wall Lining	Tradesman Required - Plasterer	hr	2	$50.00	$100.00
Wall Lining	All Types:Paint only	m2	14.4	$21.00	$302.40
Floor	All Types:Temporary Protection:Supply, install, remove, dispose	m2	9	$4.00	$36.00

Page Sub Total	$3,863.82
Page Preliminaries & General	$309.11
Page Margin	$417.29
Page GST	$688.53
TOTAL	$5,278.75

Figure 88 Scope of works, Unit 2 (Page 1)

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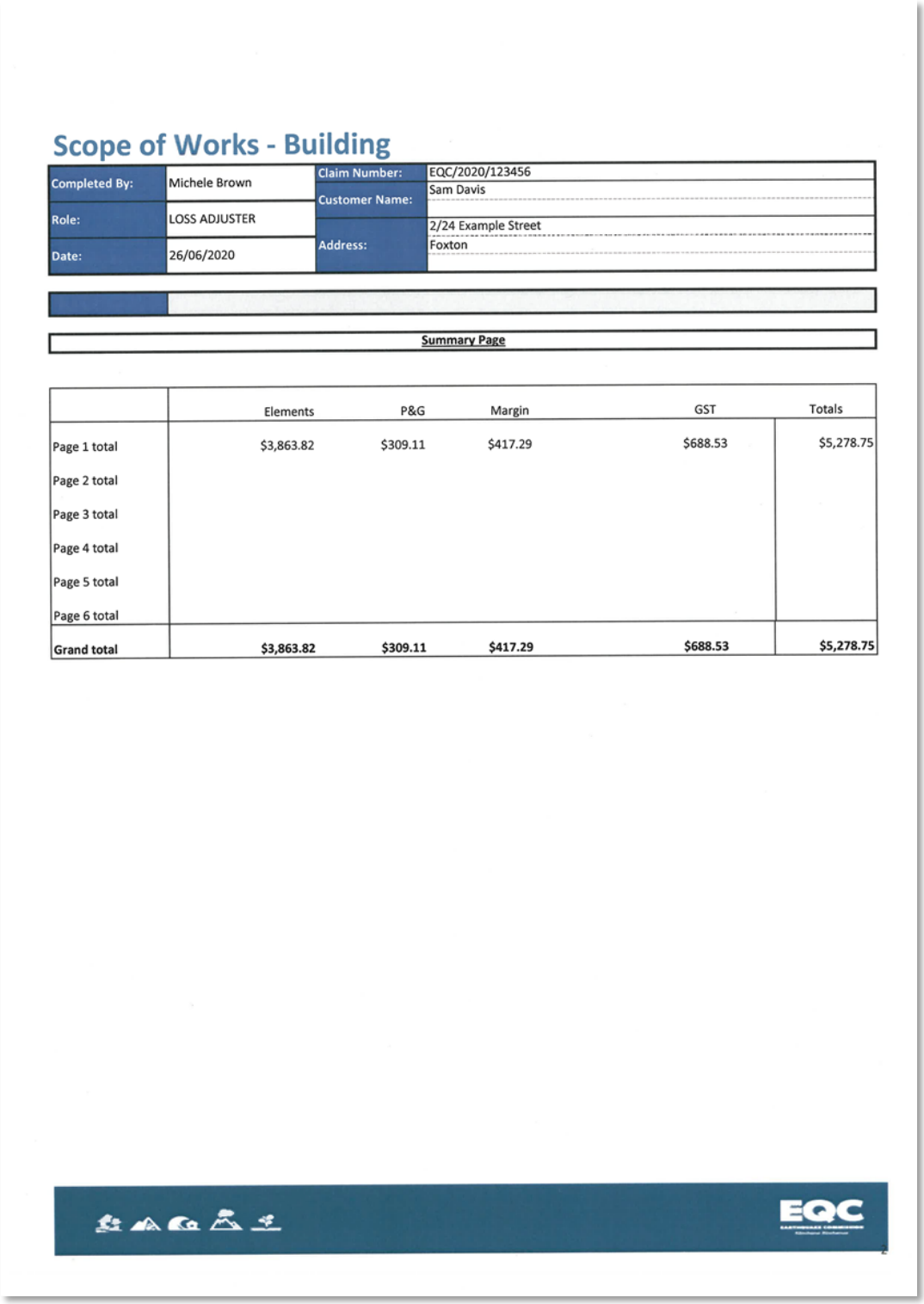

Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	EQC/2020/123456
		Customer Name:	Sam Davis
Role:	LOSS ADJUSTER	Address:	2/24 Example Street
Date:	26/06/2020		Foxton

Summary Page

	Elements	P&G	Margin	GST	Totals
Page 1 total	$3,863.82	$309.11	$417.29	$688.53	$5,278.75
Page 2 total					
Page 3 total					
Page 4 total					
Page 5 total					
Page 6 total					
Grand total	**$3,863.82**	**$309.11**	**$417.29**	**$688.53**	**$5,278.75**

EQC

Figure 89 Scope of works, Unit 2 (Page 2)

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c. Land assessment report

The following is an example land assessment report, which the assessor uses to record information in their assessment of natural disaster damage.

EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Natural Disaster Event Assessment Report			
Assessor/Loss Adjuster:	Michele Brown	Claim Number:	EQC/2020/12345
Organisation:	EQC	Customer Name:	John Smith
Date of Assessment:	26/11/2020	Damage Address:	24 Example Street, Stokes Valley, Lower Hutt
Date of Loss:	10/10/20202		
Cause of Loss:	Landslip		

Loss Details:

A land slip has moved part of a retaining wall following heavy rain on the 10/10/2020.

Property Description:

The property is legally described as LOT 1 DP 12345. It is a single storied, 90m^2 timber framed building on a concrete ring foundation with weatherboard cladding and concrete tiled roof situated on a sloping 538m^2 site, constructed in the 1960's[1].

Attendance on Site:

Michele Brown from EQC

Owner – John Smith

Assessment Observations:

Land: A landslip has occurred to insured land immediately behind a timber post/timber lagging RTW that runs along the rear of the dwelling (southern elevation) following a heavy rain event which has caused the RTW to partially rotate along a 7m section of the wall. The head scarp is approx. 6m in length with the area of insured land evacuated measuring approx. 10-12m^2. There is no inundation from this event.

Land Structures: Other than the damaged RTW, there are no other land structures on the land holding. The damaged RTW is approx. 20m in length with an average retained height of 1.2m. The RTW is located on the southern elevation and runs east to west, parallel with the rear of the dwelling. The entire retaining wall is within the EQC-insured land area, with an estimated insured face area of 24m^2.

Building/services: There is no visible nor reported damage to either building or services.

[1] Property information sourced from Council records via homes.co.nz

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Figure 90 Land assessment report (Page 1)

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EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Damage to Insured Appurtenant Structures: There is no visible or reported damage to any appurtenant structures.

Post Assessment Meeting with Customer:

- All concerns expressed by the customer were addressed on site.
- The customer was advised of the next steps in the claim process post assessment.
- The claim exposure excess was discussed with the customer.
- The settlement calculation as per s19 of the EQC Act was explained to the customer, (Remediation v Valuation) who advised he understood the two possibilities for compensation.

Assessment Recommendation:

The landslip has occurred to land within 8m of a residential building therefore cover would be afforded under the Act. Recommend a geotechnical engineer is engaged to advise on the following:

- Type and extent of damage including any imminent damage
- Proximate cause of the damage
- Provide a conceptual remedial solution that reinstates both the damaged land and land structure and removes any imminent damage (if any)

Damage Photo Schedule:

RTW looking west

Earthquake Commission
Level 11, Majestic Centre
100 Willis Street
Wellington 6011, New Zealand

Corporate Mail: PO Box 790, Wellington 6140
Claims Mail: PO Box 311, Wellington 6140
Telephone: (04) 978-6400 Fax: (04) 978-6431
www.eqc.govt.nz

Figure 91 Land assessment report (Page 2)

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
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EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

RTW rotating towards dwelling

Red line denotes assumed headscarp

Earthquake Commission
Level 11, Majestic Centre
100 Willis Street
Wellington 6011, New Zealand

Corporate Mail: PO Box 790, Wellington 6140
Claims Mail: PO Box 311, Wellington 6140
Telephone: (04) 978-6400 Fax: (04) 978-6431
www.eqc.govt.nz

Figure 92 Land assessment report (Page 3)

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d. Site risk assessment

The following is an example of a site risk assessment form used before, during and after a site assessment. Its purpose is to record identified risks and steps to manage those risks.

V1.3

EQC — **Site Risk Assessment**

Date of Assessment:	26/11/2020	Assessor(s):	Michele Brown
Claim Number:	EQC/2020/123456	Address:	24 Example Street, Avalon, Lower Hutt

Please Note: This form is to be completed by all EQC staff required to enter a customer's property
Pandemic specific checks before leaving the office:
o Ask the customer if they (or anyone else on site) have travelled overseas within the last month
o Ask the customer what date they returned to New Zealand
o If the customer (or anyone else on site) has returned to New Zealand after the 15th March 2020, please check they have completed the mandatory 14-day self- isolation period.
NB – If the customer indicates they are in self -Isolation or feeling unwell after returning to New Zealand, please **DO NOT PROCEED** with the site visit

Prior to leaving for assessment:

Check CMS for any hazards or updated information on the customer or property damage.	Yes
Are you attending this assessment with any other person?	No
Other Attendee's Role(s)	N/A
Other Attendee's Name(s)	N/A
Check and confirm all PPE required for assessment is in your vehicle:	Yes
Check and confirm all PPE required for assessment is fit for purpose:	Yes
Are there any high-risk activities associated with this assessment:	N/A
If other:	

Upon arrival at address: ***Ensure you are wearing your EQC identification and it's visible to the customer.***

Assess the requirement for PPE prior to entering property.	Safety Footwear
Aggressive animals or livestock are restrained during assessment:	N/A
Plan for WHAT IF? Identify and confirm egress from site and muster point (i.e. Vehicle?)	Yes

During Assessment:

Have any H&S concerns presented themselves to you during your assessment?	No
Comment:	
Did you perform a roof inspection?	N/A
How did you perform this roof inspection?	N/A
Did you perform a roof space inspection?	No
How did you perform this roof space inspection?	N/A
Adequate ventilation and a clear crawl space to allow inspection?	N/A
Did you perform a subfloor inspection?	N/A
Adequate ventilation and a clear crawl space to allow inspection?	N/A
Was the appropriate PPE clothing / equipment employed to conduct the above inspections?	N/A
State what PPE was used:	
Are there any ASBESTOS concerns with the property?	N/A

It is expected that all EQC staff conducting assessments have reviewed and are aware of the relevant EQC SOPs and guidelines for conducting work which could be deemed hazardous or high risk. If unsure of anything, do not continue with the assessment.

Signature: _____

Site Risk Assessment

Figure 93 Site risk assessment

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e. Land sketch

The following is an example of a land sketch completed during a site assessment, which provides visual guidance to the extent of EQCover and the location of damage.

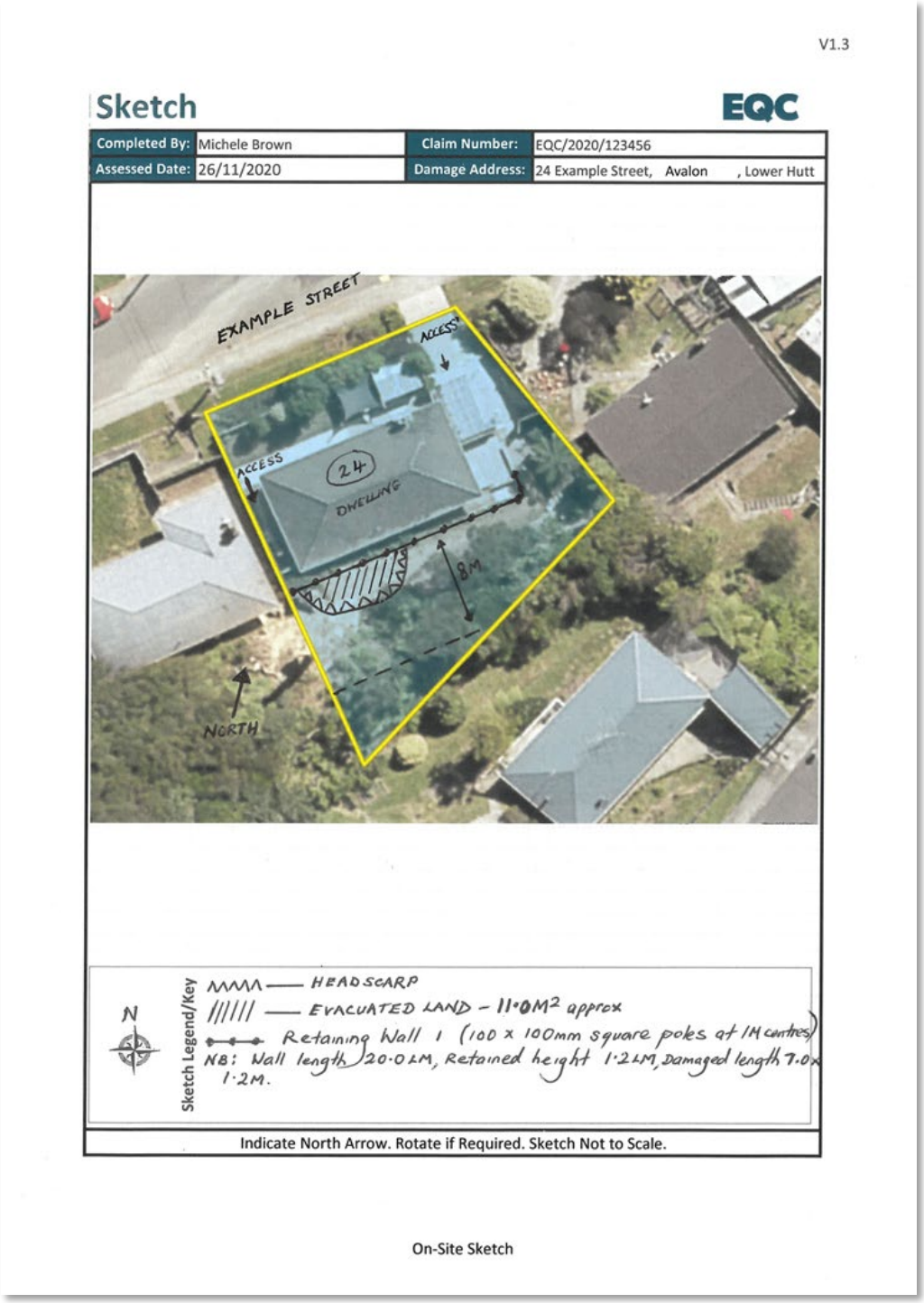

Figure 94 Land sketch

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f. Instructions for the geotechnical engineer

The following is an example instruction typically prepared by the assessor, which sets out their requirements to the engineer for assessing and reporting of natural disaster damage and providing a suitable conceptual remediation strategy. The engineer uses this to provide a service fee quote for the assessor's approval.

EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

SPECIALIST SERVICE REQUEST FORM
Geotechnical Services – Claims (Standard)

Part A – Client's request for proposal *Client to complete*

Consultant's name and Agreement number	ABC Geotechnical Engineering Limited	Urgency	☐Urgent ☒Not urgent If urgent, please contact requestor immediately to discuss
Part A submission date	30/11/2020	Requestor's name	Michele Brown
Requester's phone	0274 555 555	Requester's email	mbrown@eqc.govt.nz
EQC cost centre		Claim number	EQC/2020/123456
Customer name	John Smith	Address of damage	24 Example Street, Avalon , Lower Hutt
CMS specialist service request number	123456	Part A version number	V01

Brief

Event type	☐ EQ ☒ Landslip ☐ Storm/flood ☐ Hydrothermal ☐ Volcanic
Request type	☐ Desktop ☒ Site visit ☐ Peer review ☐ Challenge
Known issues	Retaining walls ☒Y ☐N Evacuated land ☒Y ☐N Inundated land ☐Y ☒N Spring ☐Y ☒N Potential dwelling damage ☐Y ☒N Potential services damage ☐Y ☒N Other ☐Y ☐N If yes, please provide details:
Additional information/ instructions for Consultant	Refer to Assessment Report and Inspection documents. RTW at rear of the dwelling has suffered partial rotation with area of evacuated land immediately behind the RTW. Easy access. No building/services damage. Please provide standard report to – • Identify the proximate cause of the loss • Quantify land damage including imminent damage within EQCover • Provide conceptual remedial solution

Supporting documents

☒ Assessment report ☒ Land sketch ☒ Photos

SSR Form_Geotech_Standard Claims_Final V2_20191023

Figure 95 Instructions for the geotechnical engineer

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g. Geotechnical engineering report

The following is an example geotechnical engineering report, which meets the assessor's requirements as set out in their original instructions.

ABC Geotechnical Engineering Limited

Job No: 000760.1234
18 December 2020

Earthquake Commission
Via email

Claim for Natural Disaster (Landslip) Damage
John Smith, 24 Example Street, Avalon, Lower Hutt
EQC/2020/123456

1 Introduction

As requested, ABC Geotechnical Engineering Limited inspected the subject property on 11 December 2020 to assess the claim for natural disaster damage. In particular the visit was undertaken to determine whether physical loss or damage to property is imminent as a direct result of the natural disaster that has occurred.

This claim relates to a rain event that occurred in early October 2020.

2 Site description

The property is located on a slightly sloping, north-facing site on Example Street in Avalon, Lower Hutt. The dwelling is one storey and located on a cut platform in the middle of the site. A timber retaining wall (RTW1) is located 1.4 m away from the dwelling and supports a level lawn area on the southern side.

A landslip has occurred upslope of the southern side of the dwelling as a result of heavy rainfall. The landslip has resulted in the evacuation of insured land.

The landslip was likely triggered by high water pressure behind RTW1 due to heavy rainfall.

The published geology of the area[1] indicates that the site is underlain by sandstone and mudstone of the Rakaia Terrane. Clayey silty fill was observed on the landslip headscarp and behind RTW1.

The location of the landslip and the extent of the damage are shown on the attached sketches and photographs. The conclusions and recommendations in this report are based on a visual assessment of the site only. It must be appreciated that subsurface conditions may vary from those inferred in this report.

Property boundaries are based on LINZ information overlain on aerial imagery.

[1] Begg, J.G., Johnston, M.R. (compilers) 2000: Geology of the Wellington area. Institute of Geological & Nuclear Sciences 1:250,000 geological map 10. 1 sheet + 64 p. Lower Hutt, New Zealand. Institute of Geological & Nuclear Sciences Limited

Figure 96 Geotechnical engineering report (Page 1)

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3 Property damage

The damage to the property consists of a 6 m wide landslip adjacent to the southern side of the dwelling which has resulted in:

- Evacuation of insured land; and
- Rotation of 7 m length of RTW1.

4 EQC considerations

We consider the damage bullet-pointed above to be natural disaster (landslip) damage as defined by the Earthquake Commission Act 1993 (EQC Act).

5 Imminent risk

Within the following 12 months (under normal annual rainfall conditions) and as a direct result of the landslip that has occurred there is an imminent risk of regression of the landslip headscarp resulting in:

- Evacuation of additional insured land; and
- Further rotation of 1 m length of RTW1.

The dwelling has not been damaged and is not considered to be at imminent risk as a direct result of the natural disaster (landslip) that has occurred.

There may be a risk of landslips on adjacent slopes due to future large storm or earthquake events. However, this risk is not considered imminent within the next 12 months as a direct result of the landslip that has occurred. We recommend that the owners consider engaging a geotechnical specialist to assess the stability risk of the adjacent slopes and implement remedial work if required.

6 Conceptual remedial works

The information in the following section is provided solely to EQC for claim settlement purposes. The conceptual works are for EQC cost estimation only, to enable EQC to assess the likely costs of repairing the damaged insured property and/or, the cost of preventing damage to insured property that is considered imminent as a direct result of the natural disaster that has occurred. The conceptual scope of works, and drawings, are NOT FOR CONSTRUCTION.

There may be an alternative remedial works solution which is more cost effective or appropriate for the customer and wider property (beyond EQC insured land). It may be possible to implement an alternative solution.

A conceptual remedial works solution that reinstates the land damage to a similar condition and/or removes imminent risk to insured property, would comprise the following:

- Remove debris and affected retaining wall, working from the top down and dispose off-site
- Prepare the working area
- Construct a timber pole retaining wall having the following dimension/characteristics/properties:
  - 9 m long wall – tied into existing wall
  - 1.2 m maximum retained height
  - Minimum pole embedment 1.8 m, 3 m total pole length
  - 300 mm H4 treated SED timber poles at 1 m centres
  - 75 mm H4 treated timber lagging

Figure 97 Geotechnical engineering report (Page 2)

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- Drainage metal wrapped in A29 Bidim geotextile
- 110 mm diameter novaflo wrapped in filter fabric connected to existing stormwater system.

- Hand rail to Building Code requirements (required if someone could fall more than 1 m)

Drawings of this conceptual remedial works solution are shown in Sketches 3 and 4.

Additional information for cost estimation:

Construction Issues	Easy	Moderate	Hard	N/A
Construction Access	☒			
Earthworks required	☒			
Constructability/Reinstatement	☒			

All remedial solutions should consider safety in design. Any construction works should be undertaken in a safe and appropriate manner, including the allowance for all necessary protection and temporary stabilisation works as required to ensure the safety of all persons working or present on site during construction.

We estimate the cost (excluding GST) to design and consent the proposed solution will be as follows:

Geotechnical engineering investigation, design and drawings	$4,500
Survey	Nil
Building/Resource consents	Nil
Construction observations and Producer Statements	$1,500
Project Management	$500
TOTAL (Excluding GST)	**$ 6,500 ***

*The construction cost estimate for the proposed solution will be provided by an EQC cost estimator.

Figure 98 Geotechnical engineering report (Page 3)

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7 Summary of information

Is this natural disaster damage?	Yes (Landslip)
Land within 8 m of dwelling or appurtenant structures	
Area of insured land **damaged**:	
Evacuated:	11 m^2
Inundated:	Nil
Area of insured land **at imminent risk**	
Evacuation:	4 m^2
New inundation:	Nil
Re-inundation:	Nil
Main access way within 60 m of dwelling	**N/A**
Retaining Walls supporting or protecting insured buildings and/or land located within 60 m of Dwelling (or an appurtenant Structure)	
Timber pole retaining wall – 100 x 100 mm square poles at 1 m centres:	
Whole wall length:	20 m
Retained height:	1.2 m
Damaged: (insured face area):	8.5 m^2
Imminent damage: (insured face area):	1.5 m^2
Insured wall: (face area):	24.0 m^2
Total wall: (face area):	24.0 m^2
Dwelling and appurtenant structure(s)	
Has the dwelling or appurtenant structure been damaged as a result of the natural disaster?	No
Is damage to the dwelling (or appurtenant structure) imminent as the direct result of a natural disaster?	No
Services within 60 m of dwelling	**N/A**
Bridges or culverts situated on insured land	**N/A**
Conceptual remedial works:	
Remediate damage to remove imminent risk to insured land. Remove landslip debris and affected retaining wall and dispose off-site. Construct a cantilevered timber pole retaining wall tied into existing wall.	$6,500 + construction costs* (excluding GST)

*To be assessed by an EQC cost estimator

Figure 99 Geotechnical engineering report (Page 4)

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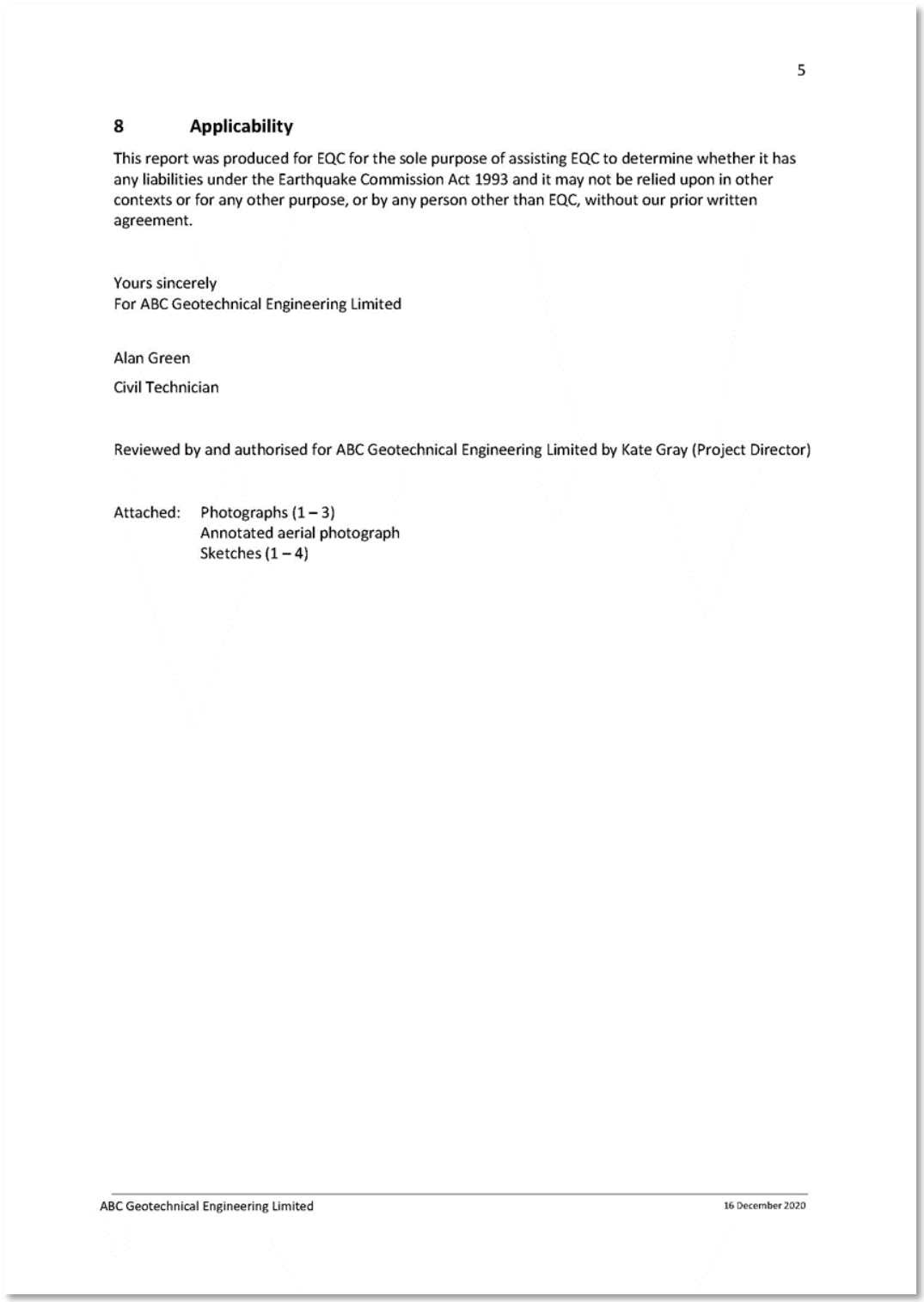

5

8 Applicability

This report was produced for EQC for the sole purpose of assisting EQC to determine whether it has any liabilities under the Earthquake Commission Act 1993 and it may not be relied upon in other contexts or for any other purpose, or by any person other than EQC, without our prior written agreement.

Yours sincerely
For ABC Geotechnical Engineering Limited

Alan Green

Civil Technician

Reviewed by and authorised for ABC Geotechnical Engineering Limited by Kate Gray (Project Director)

Attached: Photographs (1 – 3)
Annotated aerial photograph
Sketches (1 – 4)

ABC Geotechnical Engineering Limited 16 December 2020

Figure 100 Geotechnical engineering report (Page 5)

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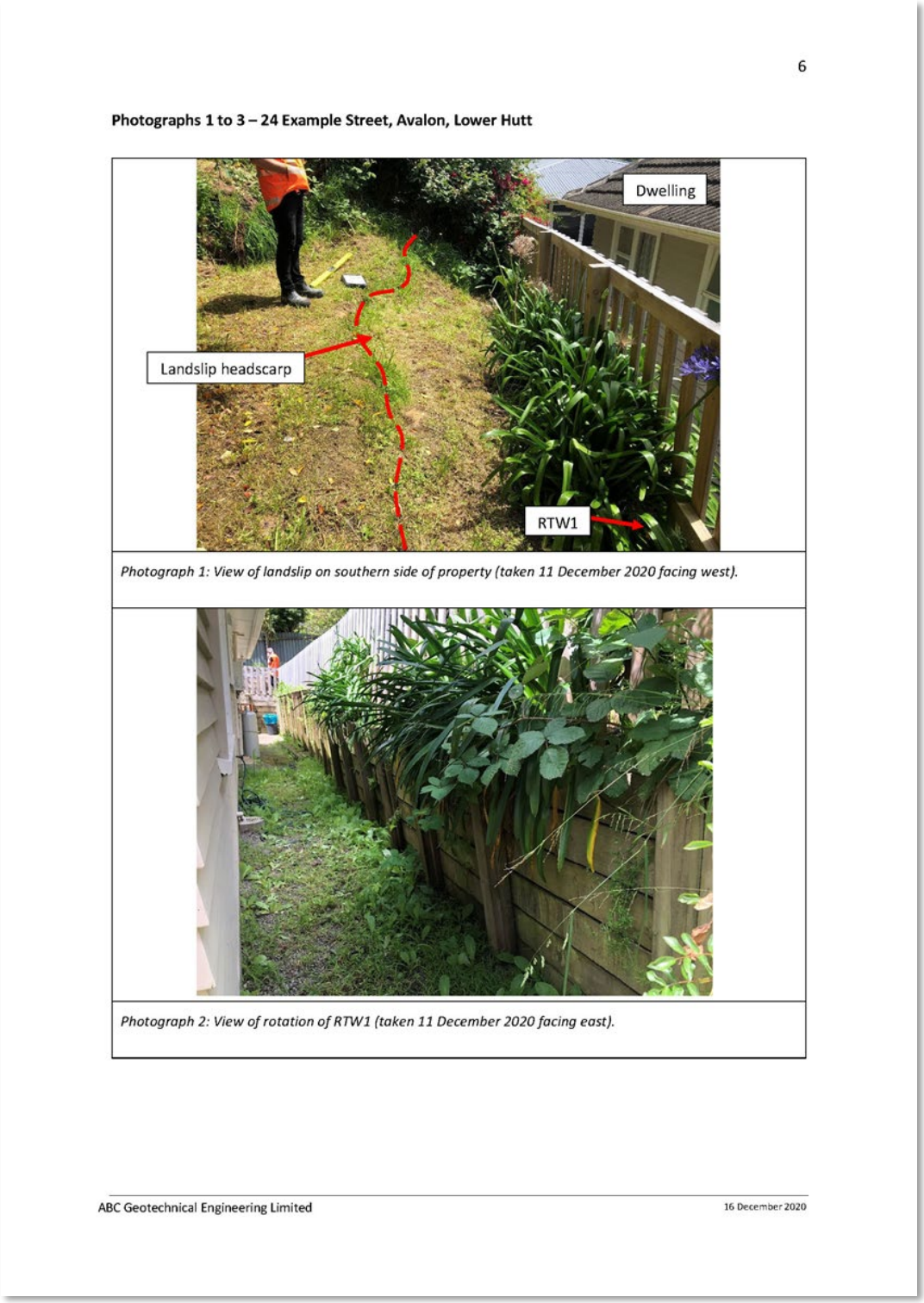

6

Photographs 1 to 3 – 24 Example Street, Avalon, Lower Hutt

Photograph 1: View of landslip on southern side of property (taken 11 December 2020 facing west).

Photograph 2: View of rotation of RTW1 (taken 11 December 2020 facing east).

ABC Geotechnical Engineering Limited 16 December 2020

Figure 101 Geotechnical engineering report (Page 6)

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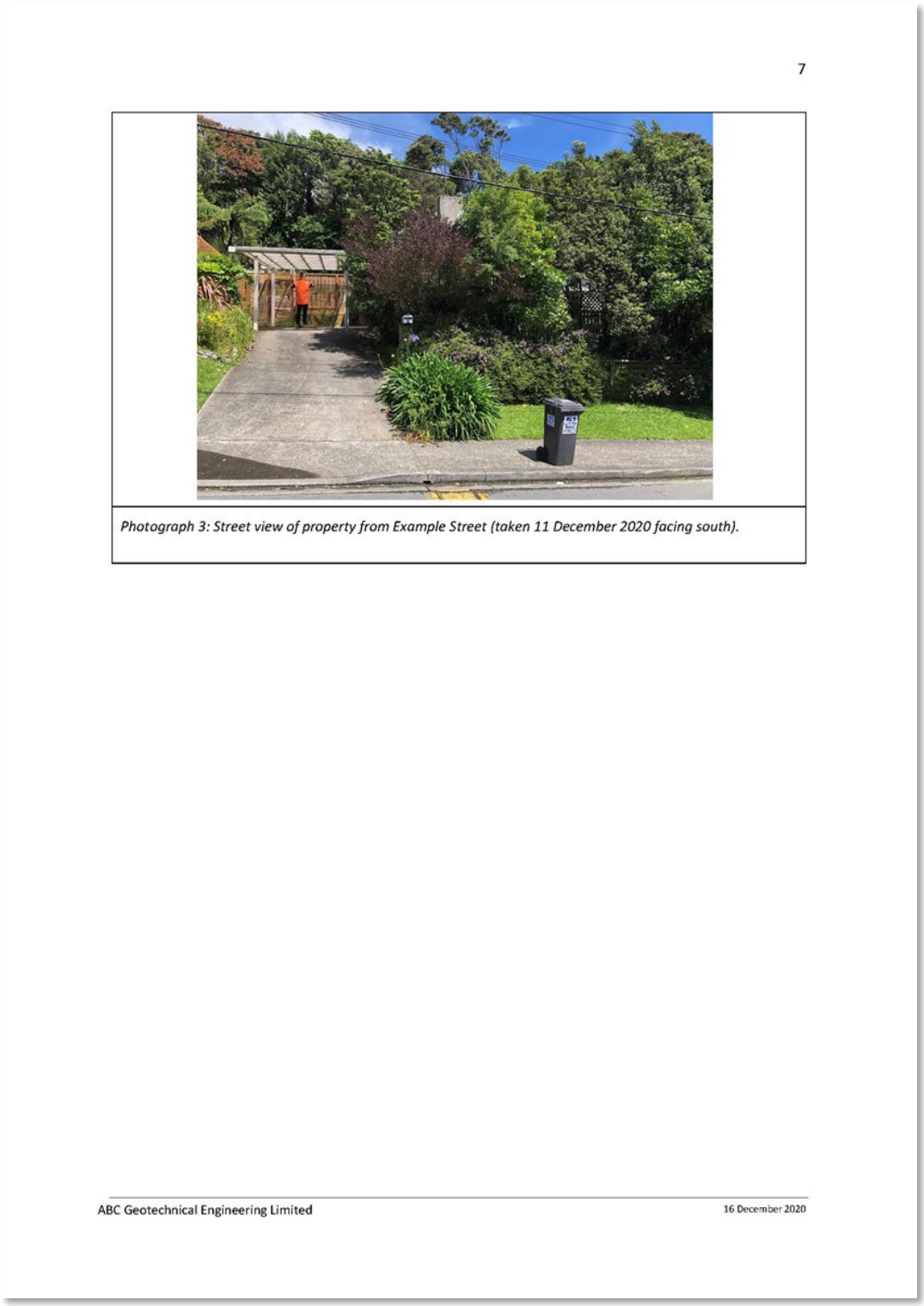

7

Photograph 3: Street view of property from Example Street (taken 11 December 2020 facing south).

ABC Geotechnical Engineering Limited 16 December 2020

Figure 102 Geotechnical engineering report (Page 7)

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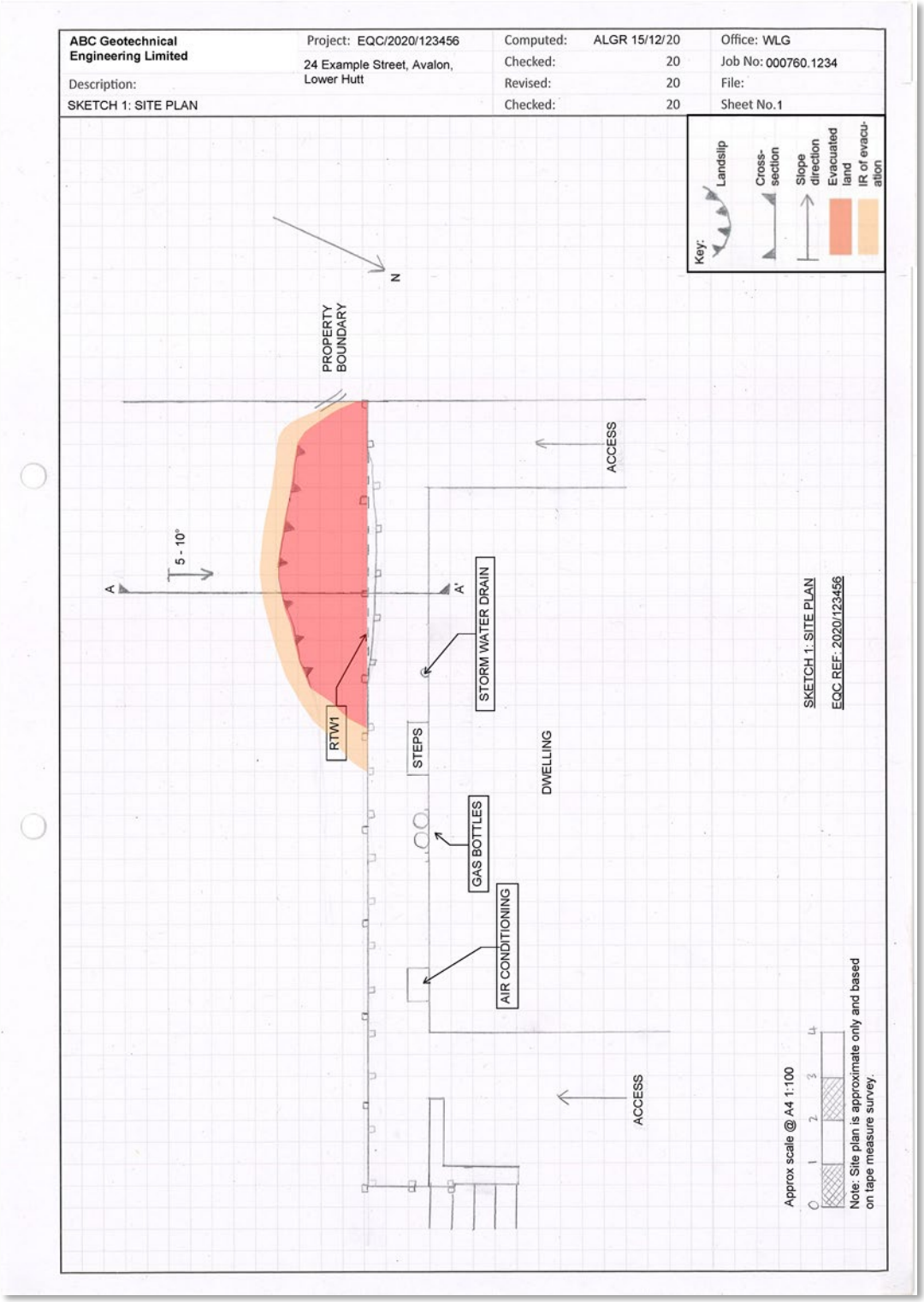

Figure 103 Geotechnical engineering report (Page 8)

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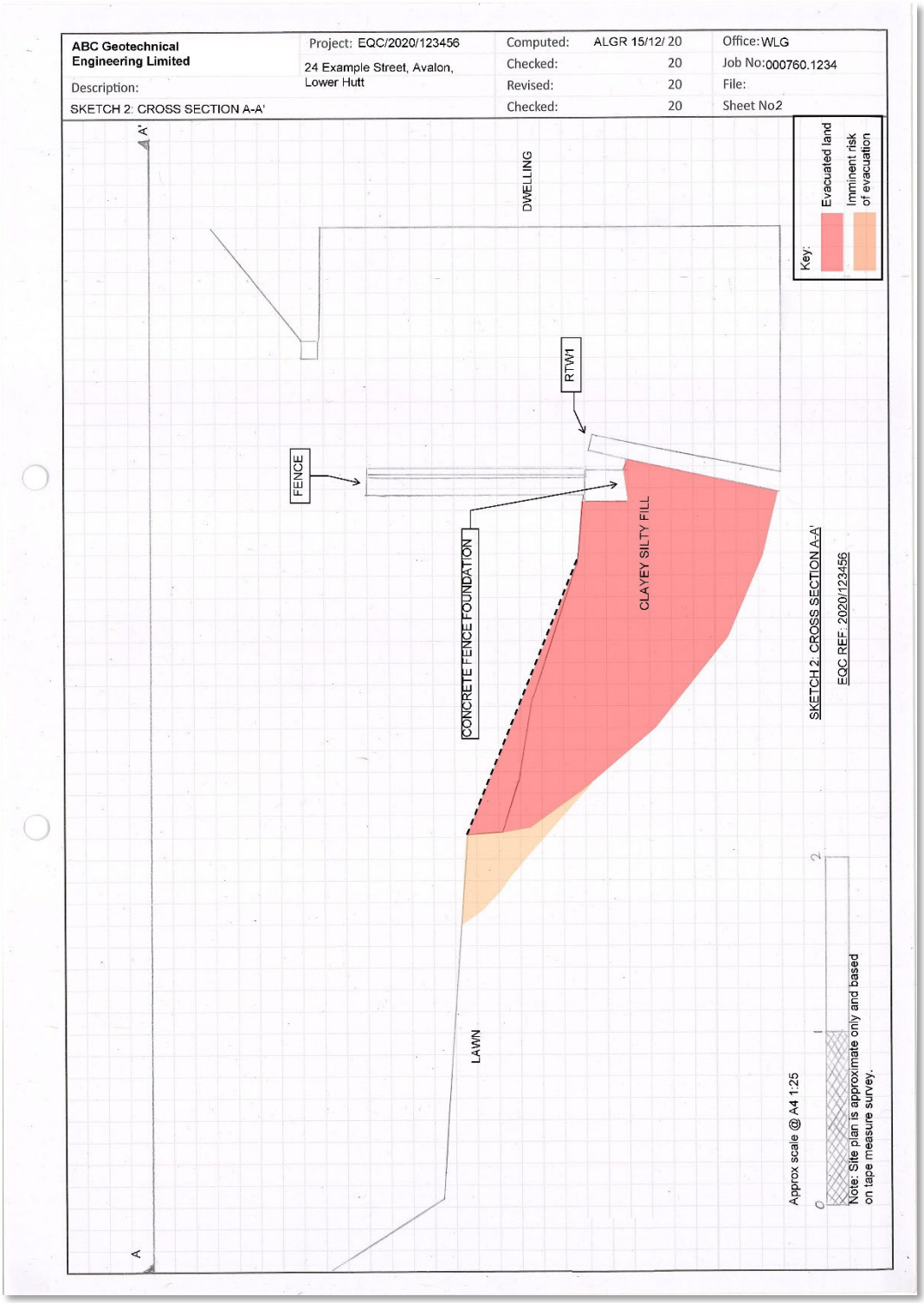

Figure 104 Geotechnical engineering report (Page 9)

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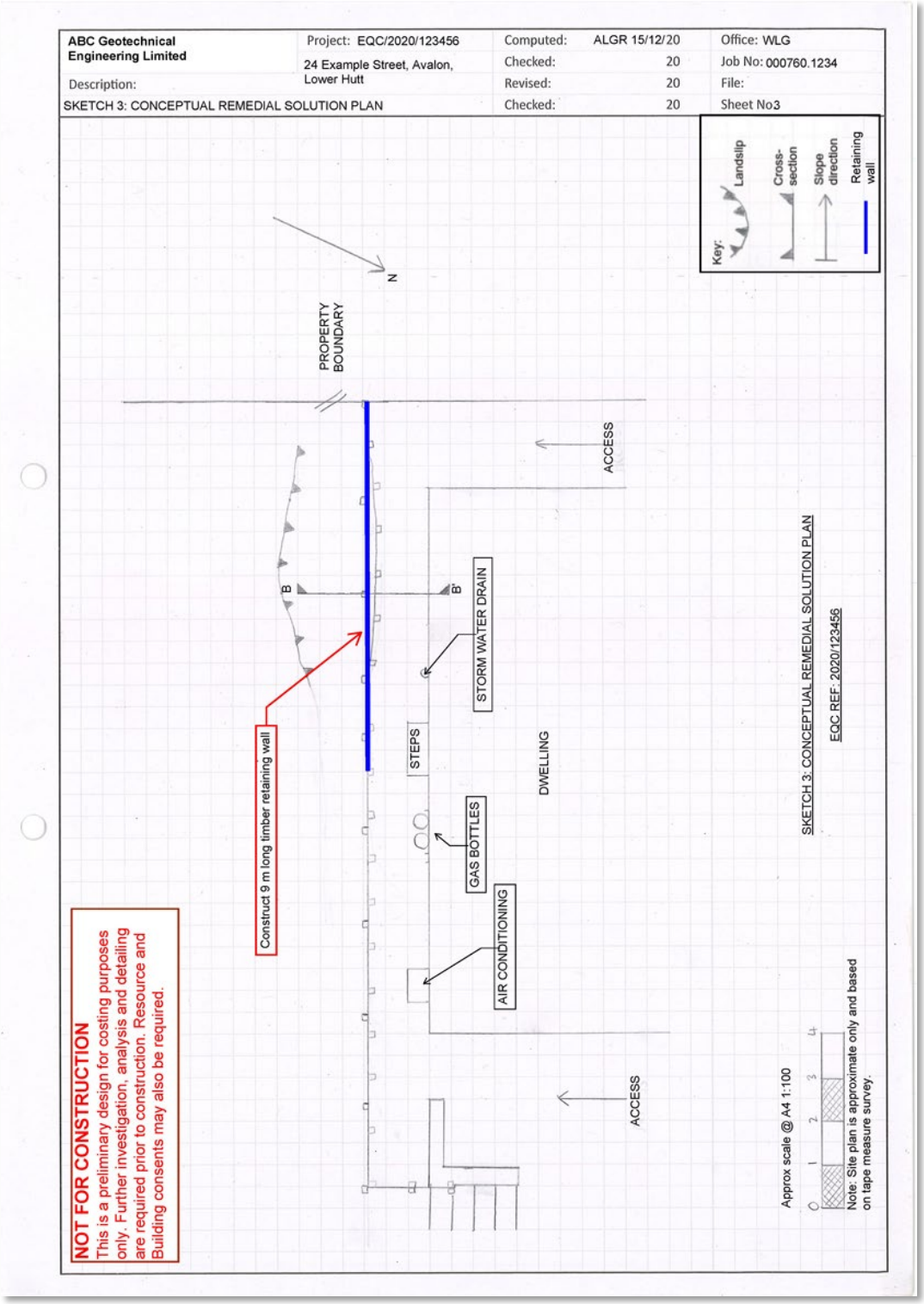

Figure 105 Geotechnical engineering report (Page 10)

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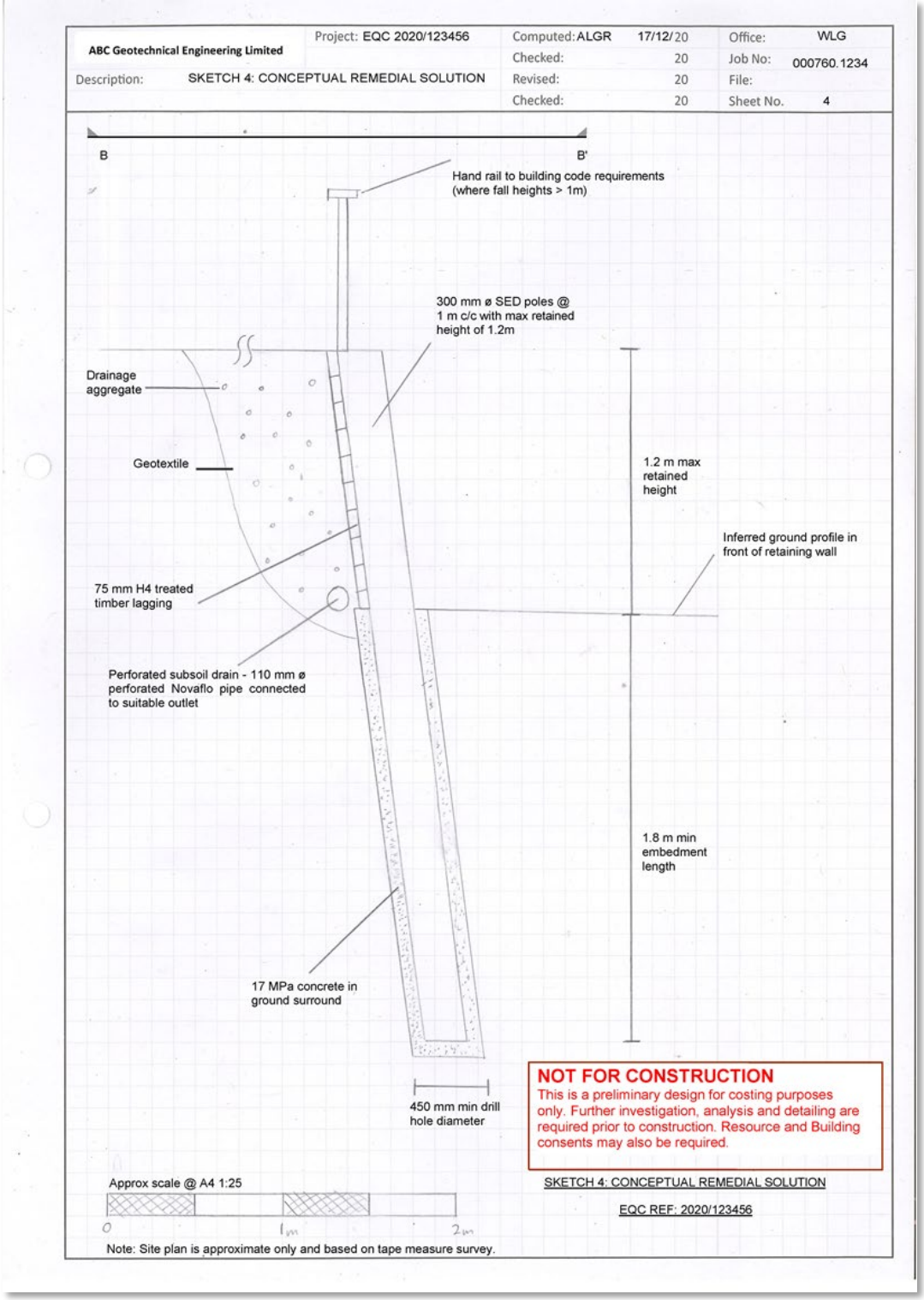

Figure 106 Geotechnical engineering report (Page 11)

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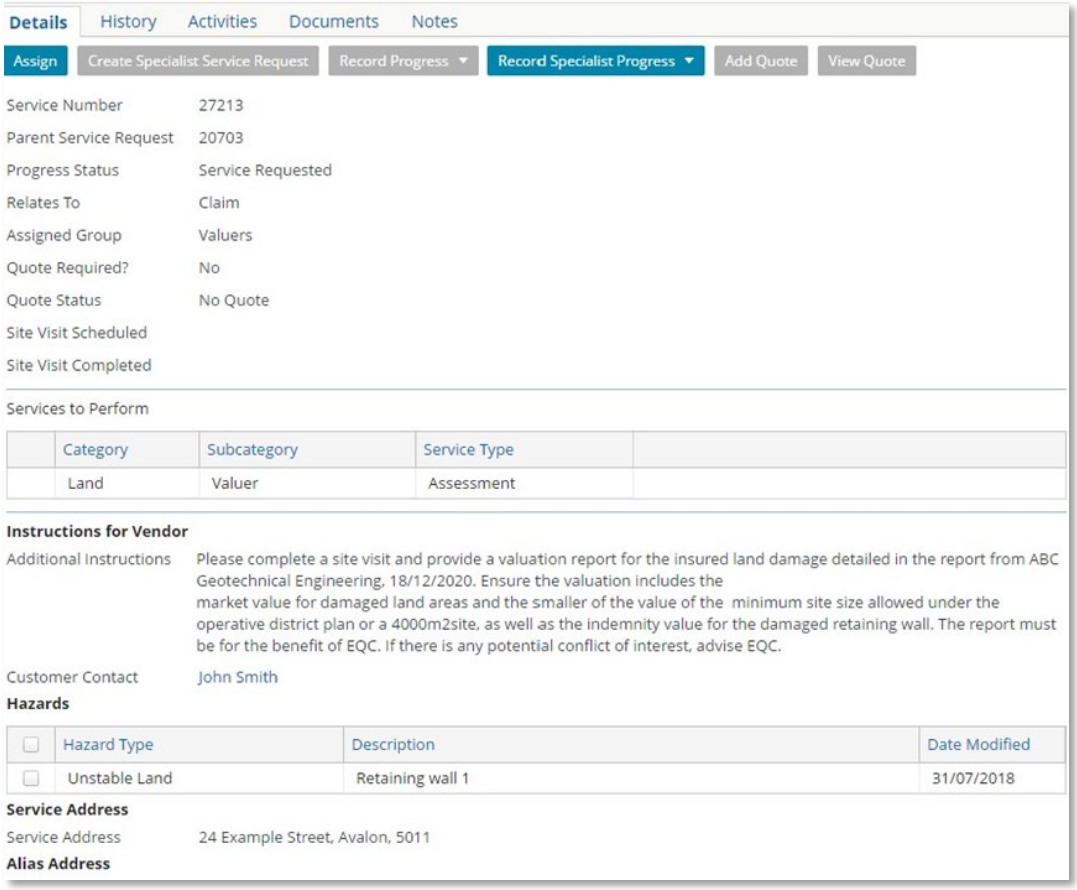
h. Valuer instruction

The following is an example instruction, typically prepared by the assessor, which sets out the request and provides the information the valuer will require to complete their valuation report.



Details | History | Activities | Documents | Notes

Assign | Create Specialist Service Request | Record Progress | Record Specialist Progress | Add Quote | View Quote

Service Number	27213
Parent Service Request	20703
Progress Status	Service Requested
Relates To	Claim
Assigned Group	Valuers
Quote Required?	No
Quote Status	No Quote
Site Visit Scheduled	
Site Visit Completed	

Services to Perform

Category	Subcategory	Service Type
Land	Valuer	Assessment

Instructions for Vendor

Additional Instructions: Please complete a site visit and provide a valuation report for the insured land damage detailed in the report from ABC Geotechnical Engineering, 18/12/2020. Ensure the valuation includes the market value for damaged land areas and the smaller of the value of the minimum site size allowed under the operative district plan or a 4000m2site, as well as the indemnity value for the damaged retaining wall. The report must be for the benefit of EQC. If there is any potential conflict of interest, advise EQC.

Customer Contact: John Smith

Hazards

Hazard Type	Description	Date Modified
Unstable Land	Retaining wall 1	31/07/2018

Service Address

Service Address: 24 Example Street, Avalon, 5011

Alias Address

Figure 107 Valuer instruction

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i. Valuation report

The following is an example valuation report, which meets the assessor's requirements as set out in their original instructions.

XYZ Valuations Limited

14 January 2021

Earthquake Commission

Sent via email

Your Reference: EQC/2020/123456
Date of Valuation: 10 October 2020
Date of Inspection: 13 January 2021

Attention: Michele Brown

Dear Michele

LAND CLAIM: 24 EXAMPLE STREET, *AVALON, LOWER HUTT* – EQC/2020/123456

Thank you for your request for valuation services. In accordance with our recent instructions we have inspected the property on 13 January 2021 in order to assess the pre-loss value of the damaged land and retaining walls, as identified and outlined by the ABC Geotechnical Engineering Limited engineering report supplied.

PROPERTY DESCRIPTION

Property Address:	24 Example Street, Avalon, Lower Hutt
Record of Title	WNA/123
Legal Description	Lot 1 Deposited Plan 12345
Zoning	The property is zoned General Residential under the Hutt City District Plan. The minimum net site area for subdivision is 400m²
Minimum Sized Site	400m²
Total Site Area	538m²

Site Map:

Source – Property Guru

Figure 108 Valuation report (Page 1)

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XYZ Valuations Limited

VALUATION SUMMARY

In accordance with Earthquake Commission requirements and pursuant to the Earthquake Commission Act 1993, values (GST inclusive, if any) are assessed as follows:

Description	Area	Value
1a. Minimum sized site	400m²	
1b. Value of Minimum sized site		$300,000
1c. Actual site area	538m²	
1d. Value of 4,000m² lot (if applicable)		N/A
2. Land actually damaged		
Within 8m of dwelling		
- Evacuated	11m²	$8,250
- Inundated	N/A	N/A
Main access within 60m of dwelling		
- Evacuated	N/A	N/A
- Inundated	N/A	N/A
3. Land at imminent risk		
Within 8m of dwelling		
- Evacuation	4m²	$3,000
- New Inundation	N/A	N/A
- Re-inundation	N/A	N/A
Main access within 60m of dwelling		
- Evacuation	N/A	N/A
- New Inundation	N/A	N/A
- Re-inundation	N/A	N/A
4. Indemnity Value of other damaged property – RTW	24m²	$15,180
5. Description of property valued in 4 – A timber pole retaining wall – 100 x 100 mm square poles at 1m centres. Retained height 1.2m. Non engineered		

VALUATION NOTES

1a – Value of Minimum Sized Site.

The Act stipulates that the loss in land is to be calculated on the smaller of the minimum sized land area permitted under the operative district plan, or the area of land that is actually lost or damaged. Where the area of damage is large enough, that value will instead be calculated using either the area of the minimum allowable lot size under the operative district plan or an area of 4,000m², whichever is smaller. The minimum net site area for subdivision under the Lower Hutt District Plan is 400m².

Our assessed value has been analysed using market based evidence as prevalent in October 2020. The 400m² site assumes all the same physical attributes, i.e. overland flood path, locality and contour. Based on our analysis we assess the value of the minimum sized site to be **$300,000.**

Date of valuation

The effective date of valuation is as at **10 October 2020.**

Figure 109 Valuation report (Page 2)

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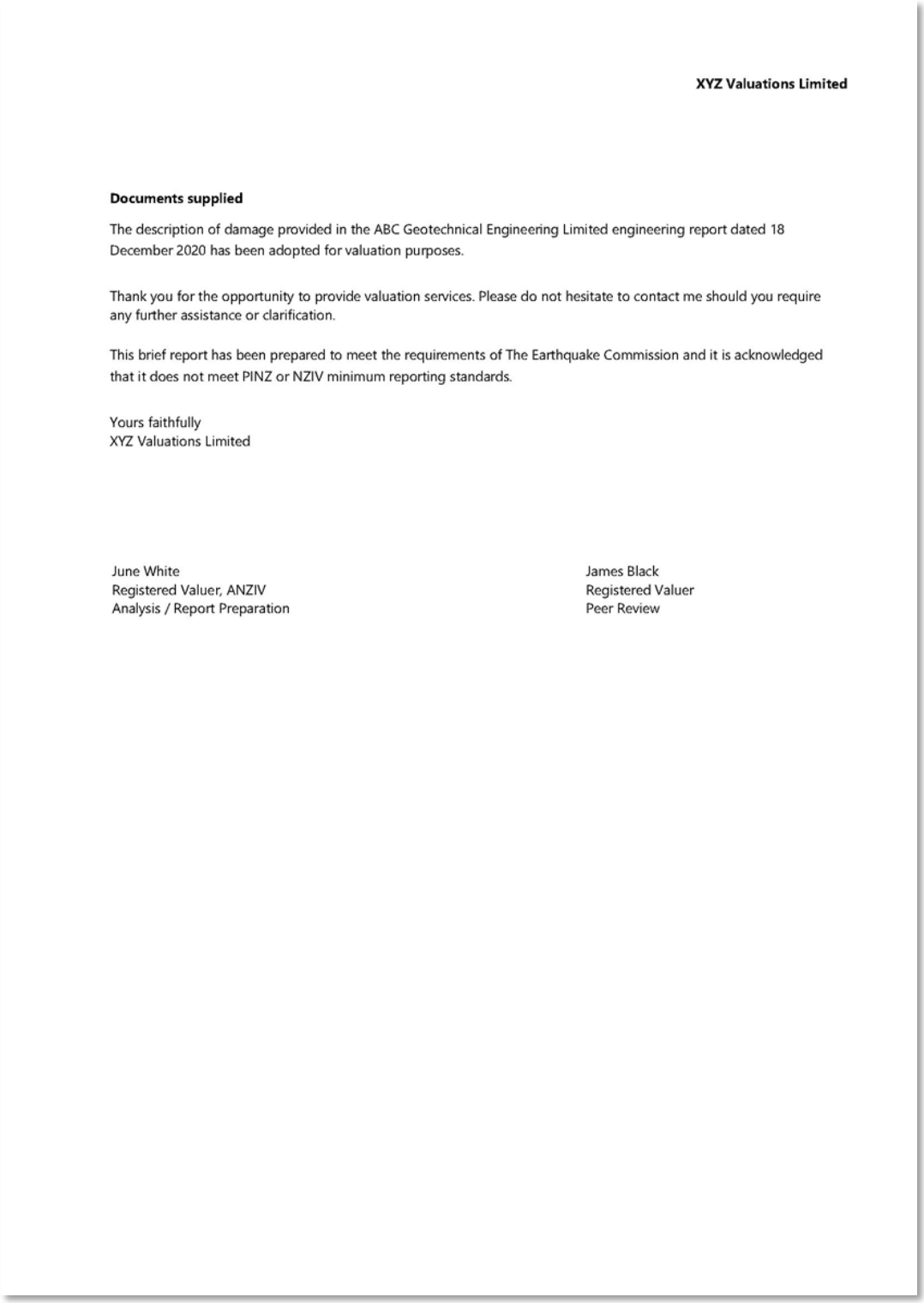

XYZ Valuations Limited

Documents supplied

The description of damage provided in the ABC Geotechnical Engineering Limited engineering report dated 18 December 2020 has been adopted for valuation purposes.

Thank you for the opportunity to provide valuation services. Please do not hesitate to contact me should you require any further assistance or clarification.

This brief report has been prepared to meet the requirements of The Earthquake Commission and it is acknowledged that it does not meet PINZ or NZIV minimum reporting standards.

Yours faithfully
XYZ Valuations Limited

June White
Registered Valuer, ANZIV
Analysis / Report Preparation

James Black
Registered Valuer
Peer Review

Figure 110 Valuation report (Page 3)

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
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j. Structural engineer letter of engagement

The following is an example instruction typically prepared by the assessor, which sets out their requirements to the engineer for assessing and reporting of natural disaster damage and/or providing a suitable conceptual remediation strategy. It has been adapted from an Engineering New Zealand template engagement letter.

27/07/2020

Joe Engineer

ABC Engineering Ltd

By email: jengineer@abcengineering.co.nz

LETTER OF ENGAGEMENT – ASSESSMENT AND REINSTATEMENT REPORT
1 Main Street, Example Town
EQC/2020/123456

The Earthquake Commission (**the insurer**) would like to engage you, under the terms and conditions set out in Schedule 3, to assess 1 Main Street, Example Town (the **house**), identify any structural earthquake **damage** 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 either party. You must act without bias. Your role is to give us technically accurate advice, regardless of whether that advice aligns with our interests or opinion.

You must also comply with the Engineering New Zealand Code of Ethical Conduct and Privacy Act 2020 in carrying out this work.

We are not asking you to interpret the EQC Act, comment on the cost of reinstatement, make decisions or advise on the extent of our obligations.

To undertake this work, you should be a Chartered Professional Engineer or senior engineer with experience in structural engineering, and in assessments of earthquake 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 homeowner their observations of structural earthquake damage.

Page 1 of 11

Figure 111 Structural engineer letter of engagement (Page 1)

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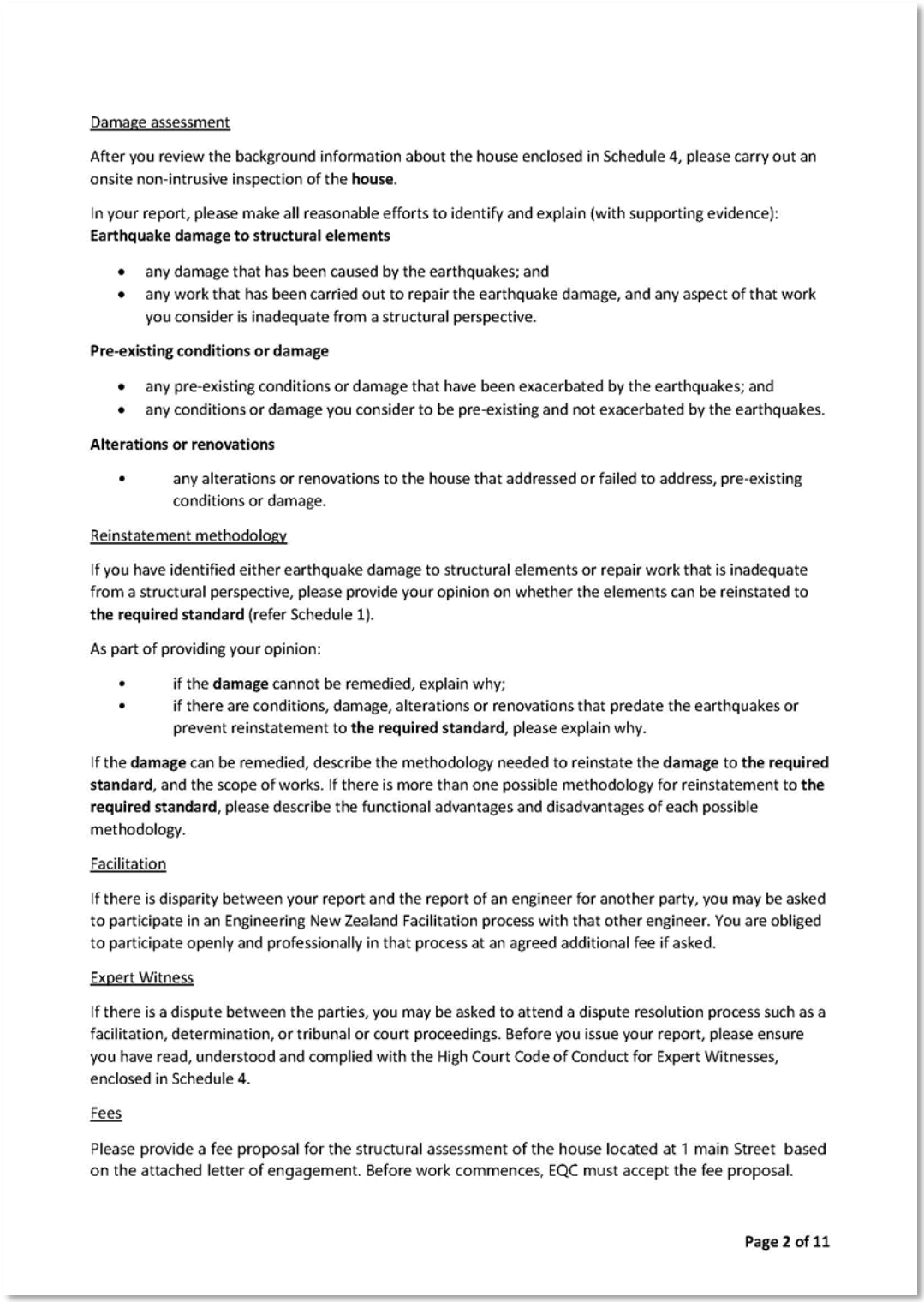

Damage assessment

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):
Earthquake damage to structural elements

- any damage that has been caused by the earthquakes; and
- any work that has been carried out to repair the earthquake damage, and any aspect of that work you consider is inadequate from a structural perspective.

Pre-existing conditions or damage

- any pre-existing conditions or damage that have been exacerbated by the earthquakes; and
- any conditions or damage you consider to be pre-existing and not exacerbated by the earthquakes.

Alterations or renovations

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

Reinstatement methodology

If you have identified either earthquake 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** (refer Schedule 1).

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 earthquakes 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.

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

Please provide a fee proposal for the structural assessment of the house located at 1 main Street based on the attached letter of engagement. Before work commences, EQC must accept the fee proposal.

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Figure 112 Structural engineer letter of engagement (Page 2)

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Once a the fee has been agreed, if any work is required beyond the scope of this letter of engagement, you must seek endorsement for that additional work from EQC.

Engagement

You may not assign or subcontract this engagement without our prior written consent. Your advice is for the benefit of, and may be relied on by, us and the Earthquake Commission.

Please contact us 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.

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. This however is not a mandatory outcome.

Yours sincerely

A Assessor

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

_____

Joe Engineer

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Figure 113 Structural engineer letter of engagement (Page 3)

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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, garages, glasshouse, swimming pools, retaining walls, driveways, and so forth.

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.

For EQC's purposes, the EQC Act provides cover for the items of property captured by the definition "residential building" in section 2(1) of that Act. Schedule 2 of the EQC Act sets out various property that is not insured under the EQC Act.

"Damage"

A structural element is earthquake **damaged** if,

- its physical state has been measurably or visibly altered by the earthquakes in a negative way; and
- that alteration is more than de minimis; and
- that alteration affects the original functionality of the structural element.

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.

"the required standard"

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

a. the reinstatement methodology of a structural element must restore the functionality and durability equivalent to when it was originally constructed.

a. the reinstatement methodology of a structural element does not have to make the damaged structural element an exact replica of the original; and

b. current materials and methods must be used; and

c. the reinstatement work must meet current building regulatory requirements, including the Building Code to the extent required by the Building Act.

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Figure 114 Structural engineer letter of engagement (Page 4)

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SCHEDULE 2: REPORTING FRAMEWORK

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 earthquake damage 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**	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. site performance, bearing capacity, SLS settlement, lateral stretch status, presence of uncontrolled fill/compressible soils etc.
6.	**Summary and discussion of earthquake damage and 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	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
6.3	Pre-existing condition of structural elements	

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Figure 115 Structural engineer letter of engagement (Page 5)

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6.4	Previous repairs undertaken	Identify the nature and effectiveness or otherwise of any previous repairs
7.	**Reinstatement methodology**	
7.1	Definition of required standard applied	
7.2	Recommended remediation	Outlining how the damage attributable to the earthquake 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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Figure 116 Structural engineer letter of engagement (Page 6)

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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. 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 $NZ500,000.
12. 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.
13. 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 clause11. 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. Intellectual property prepared or created by the Consultant in carrying out the Services ("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. Intellectual property owned by a Party prior to the commencement of this Agreement and intellectual property created by a Party independently of this Agreement remains the property of that Party. 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 Consultant does not warrant the suitability of New Intellectual Property for any purpose other than the Services or any other use stated in the Agreement.
16. The Consultant and the Client will be aware of, and comply with, any relevant obligations imposed on them under the Health and Safety at Work Act 2015 (the "Act"). The Consultant has not and will not assume any duty imposed on the Client from time to time pursuant to the Act arising out of this engagement.
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.

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Figure 117 Structural engineer letter of engagement (Page 7)

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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), 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

3. In any evidence given by an expert witness, the expert witness must—
   a. acknowledge that the expert witness has read this code of conduct and agrees to comply with it:
   b. state the expert witness' qualifications as an expert:
   c. state the issues the evidence of the expert witness addresses and that the evidence is within the expert's area of expertise:
   d. state the facts and assumptions on which the opinions of the expert witness are based:
   e. state the reasons for the opinions given by the expert witness:
   f. specify any literature or other material used or relied on in support of the opinions expressed by the expert witness:
   g. 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.
4. 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.
5. 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

6. An expert witness must comply with any direction of the court to—
   a. confer with another expert witness:
   b. try to reach agreement with the other expert witness on matters within the field of expertise of the expert witnesses:
   c. 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.

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Figure 118 Structural engineer letter of engagement (Page 8)

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7. 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

BACKGROUND

1. This instruction relates to the residential dwelling at 1 Main Street, Example Town
2. The property was constructed in 1947 and is clad in timber weatherboard, with a concrete tile roof and a perimeter foundation with internal timber piles. The dwelling footprint is approx. 110m2

   An EQC assessment was carried out on 25 July 2020. This assessment notes the following:

   - *cracking to interior wall and ceiling linings.*
   - *binding if some interior doors.*
   - *damage to the exterior cladding, including both misalignment of and some rotten weather boards.*
   - *The roof shows signs of fresh cracking along the ridge cap,*
   - *there is minor cracking damage to the concrete precast chimney.*
   - *Minor cracking damage to the perimeter foundation.*
   - *There is notable floor dislevelment throughout the entire house*
3. EQC and the owner will confirm a convenient time for you to inspect the dwelling. EQC may send one of its estimators or assessors to attend the site visit with you. The owner may also be present and may be accompanied by a support person or technical advisor(s).

TIMEFRAMES

1. We would like to have a copy of your draft report as soon as possible. This would mean that it would be preferable if your site visit could take place within 2 weeks of receiving this letter. Please contact us as soon as possible should this not be achievable.

SOME FURTHER INFORMATION

1. In **Schedule 6**, we list the documents we are providing to you that we would like you to review when preparing your draft report.
2. In **Schedule 6.1**, we set out in detail what your draft expert report should address.

SCHEDULE 6: LIST OF REPORTS AND DOCUMENTS

Your draft report will need to include a review of the following reports and documents:

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Figure 119 Structural engineer letter of engagement (Page 9)

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Document title	Party who provided the document	Date
Building Assessment Report (pre-purchase inspection)	Customer	12/08/2018
Council Property File (Requested)	Council	TBC
EQC Assessment report	EQC	25/07/2020
EQC Assessment report photos	EQC	25/07/2020

SCHEDULE 5.1: WHAT YOUR DRAFT REPORT SHOULD INCLUDE

A FORENSIC ASSESSMENT

1. At a minimum the following information must be captured by you and be included in your report to support your opinion:
2. Floor levels;
3. Ceiling Levels;
4. Window sill levels;
5. Benchtop Levels;
6. Door head levels;
7. Levels for any other fixed features deemed by you to be noteworthy such as tiling, external weatherboards or guttering;
8. Commentary/discussion around the levels, variance(s) and how this relates to earthquake damage or otherwise;
9. Shallow Geotech Report if required

ASSUMPTIONS

1. You should state the facts and assumptions on which your opinions are based and give reasons for your opinions.
2. You should also consider whether you need any further geotechnical or other specialist advice before you reach a conclusion about what earthquake damage the house has suffered and what the appropriate repair strategy is.
3. If you cannot say conclusively whether (say) a particular item of damage is earthquake-related or not, it is enough for you to say, with reasons, what you consider the position is likely to be.
4. You should consider and identify the extent to which identification of the earthquake damage is restricted by previous repairs carried out by EQC.

COMMENTS ON OTHER REPORTS

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

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Figure 120 Structural engineer letter of engagement (Page 10)

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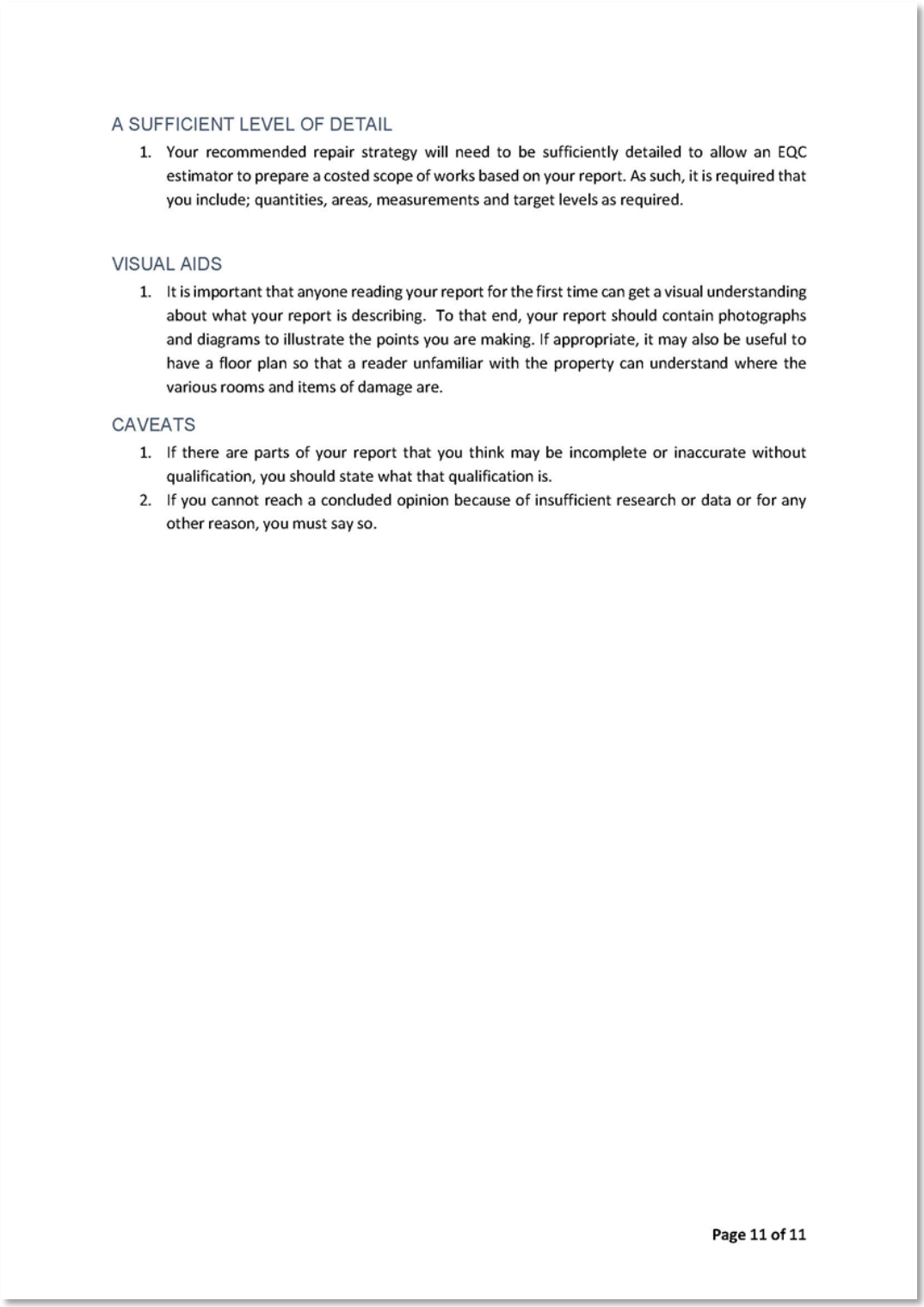

A SUFFICIENT LEVEL OF DETAIL

1. Your recommended repair strategy will need to be sufficiently detailed to allow an EQC estimator to prepare a costed scope of works based on your report. As such, it is required that you include; quantities, areas, measurements and target levels as required.

VISUAL AIDS

1. It is important that anyone reading your report for the first time can get a visual understanding about what your report is describing. To that end, your report should contain photographs and diagrams to illustrate the points you are making. If appropriate, it may also be useful to have a floor plan so that a reader unfamiliar with the property can understand where the various rooms and items of damage are.

CAVEATS

1. If there are parts of your report that you think may be incomplete or inaccurate without qualification, you should state what that qualification is.
2. If you cannot reach a concluded opinion because of insufficient research or data or for any other reason, you must say so.

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Figure 121 Structural engineer letter of engagement (Page 11)

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k. Structural engineering report

The following is an example structural engineering report, which meets the assessor's requirements as set out in their original instructions.

EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Structural Engineering Report – Revision A

For Information

1 Main Street, Example Town

EQC/2020/123456

15 September 2020

Authored	**John Smith**	B.Eng (Hons), MEngNZ	
Reviewed by	**Jane Doe**	B.Eng (Hons), CPEng	

Figure 122 Structural engineering report (Page 1)

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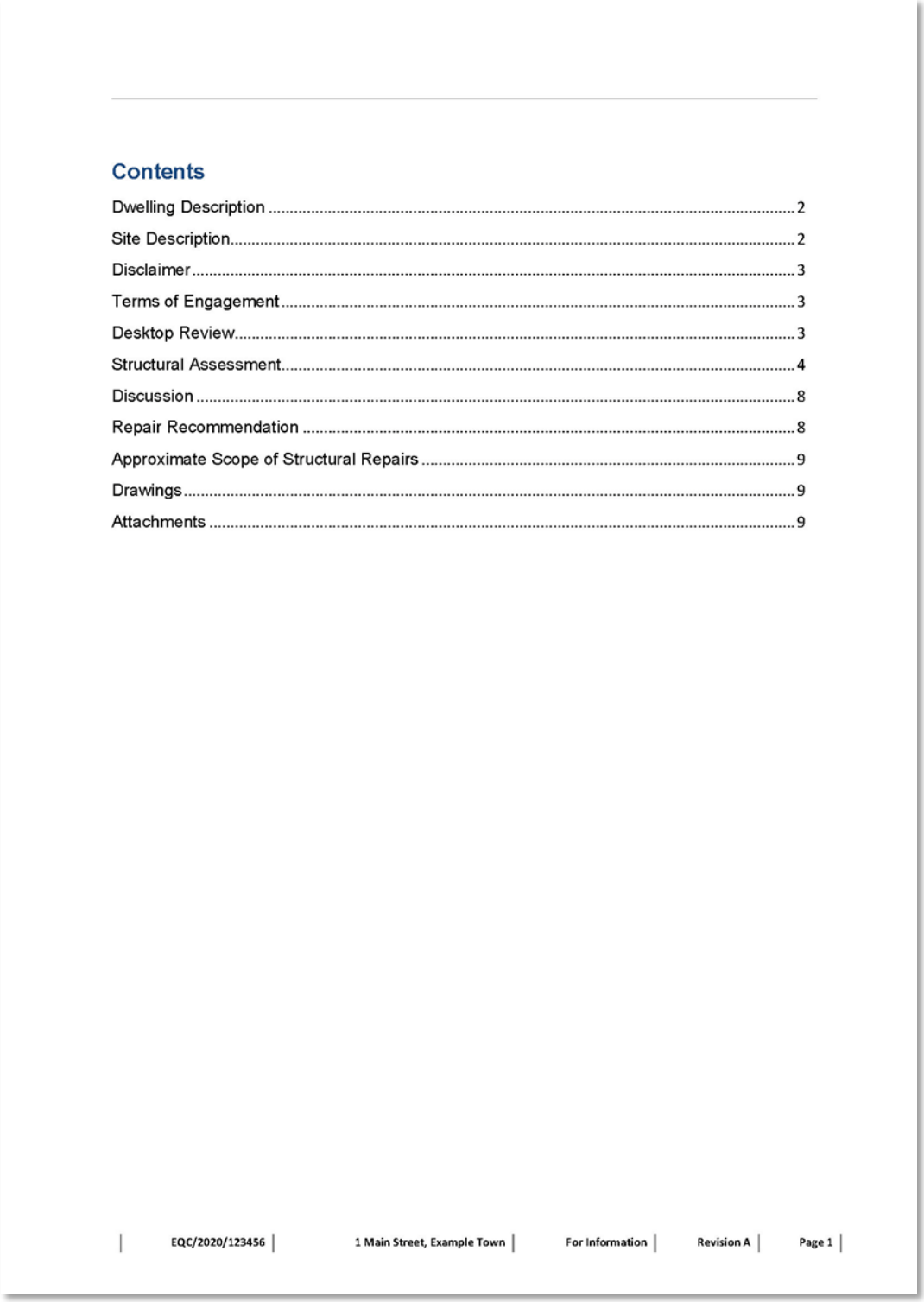

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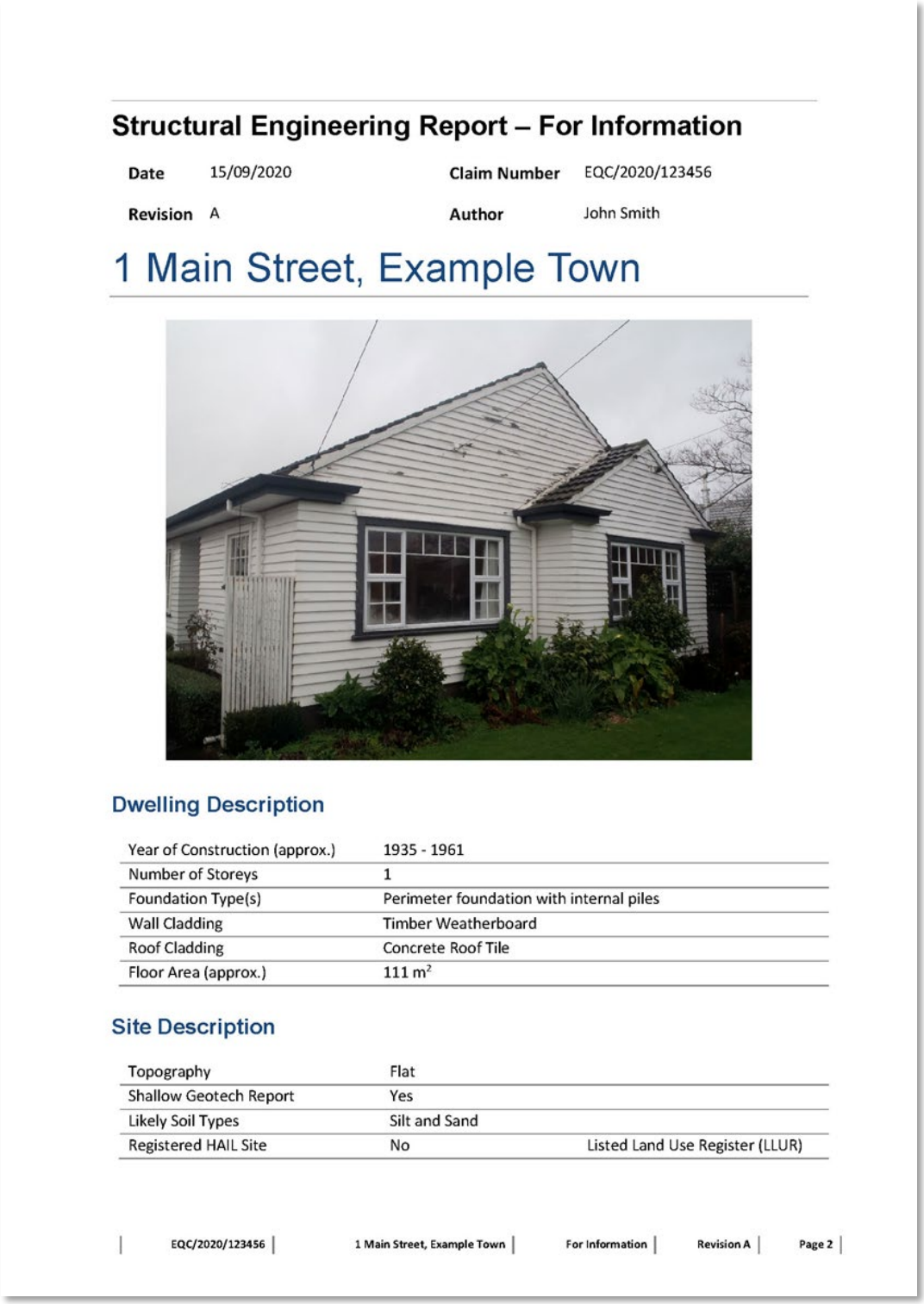

Structural Engineering Report – For Information

Date	15/09/2020	**Claim Number**	EQC/2020/123456
Revision	A	**Author**	John Smith

1 Main Street, Example Town

Dwelling Description

Year of Construction (approx.)	1935 - 1961
Number of Storeys	1
Foundation Type(s)	Perimeter foundation with internal piles
Wall Cladding	Timber Weatherboard
Roof Cladding	Concrete Roof Tile
Floor Area (approx.)	111 m^2

Site Description

Topography	Flat	
Shallow Geotech Report	Yes	
Likely Soil Types	Silt and Sand	
Registered HAIL Site	No	Listed Land Use Register (LLUR)

Figure 124 Structural engineering report (Page 3)

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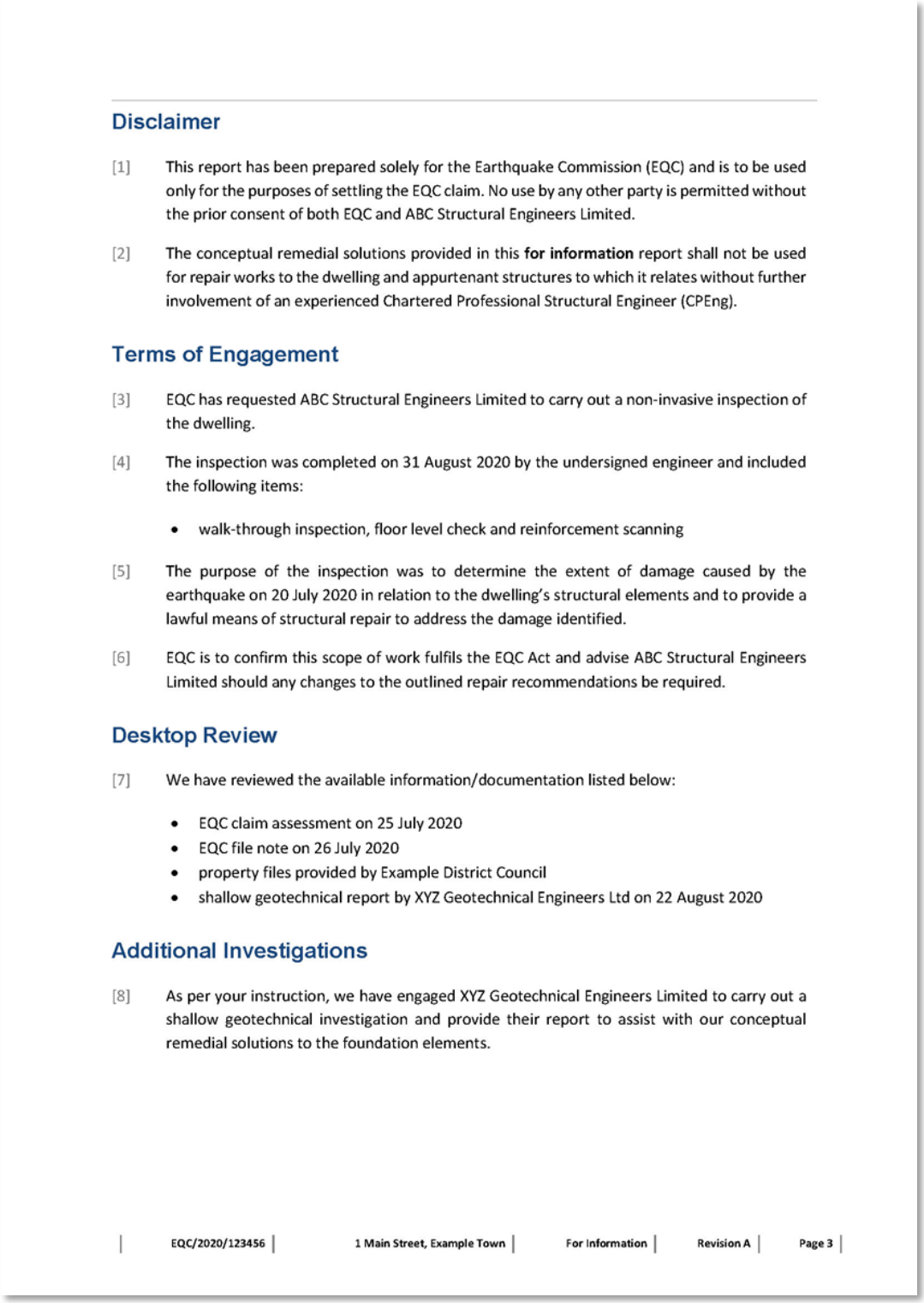

Disclaimer

[1] This report has been prepared solely for the Earthquake Commission (EQC) and is to be used only for the purposes of settling the EQC claim. No use by any other party is permitted without the prior consent of both EQC and ABC Structural Engineers Limited.

[2] The conceptual remedial solutions provided in this **for information** report shall not be used for repair works to the dwelling and appurtenant structures to which it relates without further involvement of an experienced Chartered Professional Structural Engineer (CPEng).

Terms of Engagement

[3] EQC has requested ABC Structural Engineers Limited to carry out a non-invasive inspection of the dwelling.

[4] The inspection was completed on 31 August 2020 by the undersigned engineer and included the following items:

- walk-through inspection, floor level check and reinforcement scanning

[5] The purpose of the inspection was to determine the extent of damage caused by the earthquake on 20 July 2020 in relation to the dwelling's structural elements and to provide a lawful means of structural repair to address the damage identified.

[6] EQC is to confirm this scope of work fulfils the EQC Act and advise ABC Structural Engineers Limited should any changes to the outlined repair recommendations be required.

Desktop Review

[7] We have reviewed the available information/documentation listed below:

- EQC claim assessment on 25 July 2020
- EQC file note on 26 July 2020
- property files provided by Example District Council
- shallow geotechnical report by XYZ Geotechnical Engineers Ltd on 22 August 2020

Additional Investigations

[8] As per your instruction, we have engaged XYZ Geotechnical Engineers Limited to carry out a shallow geotechnical investigation and provide their report to assist with our conceptual remedial solutions to the foundation elements.

Figure 125 Structural engineering report (Page 4)

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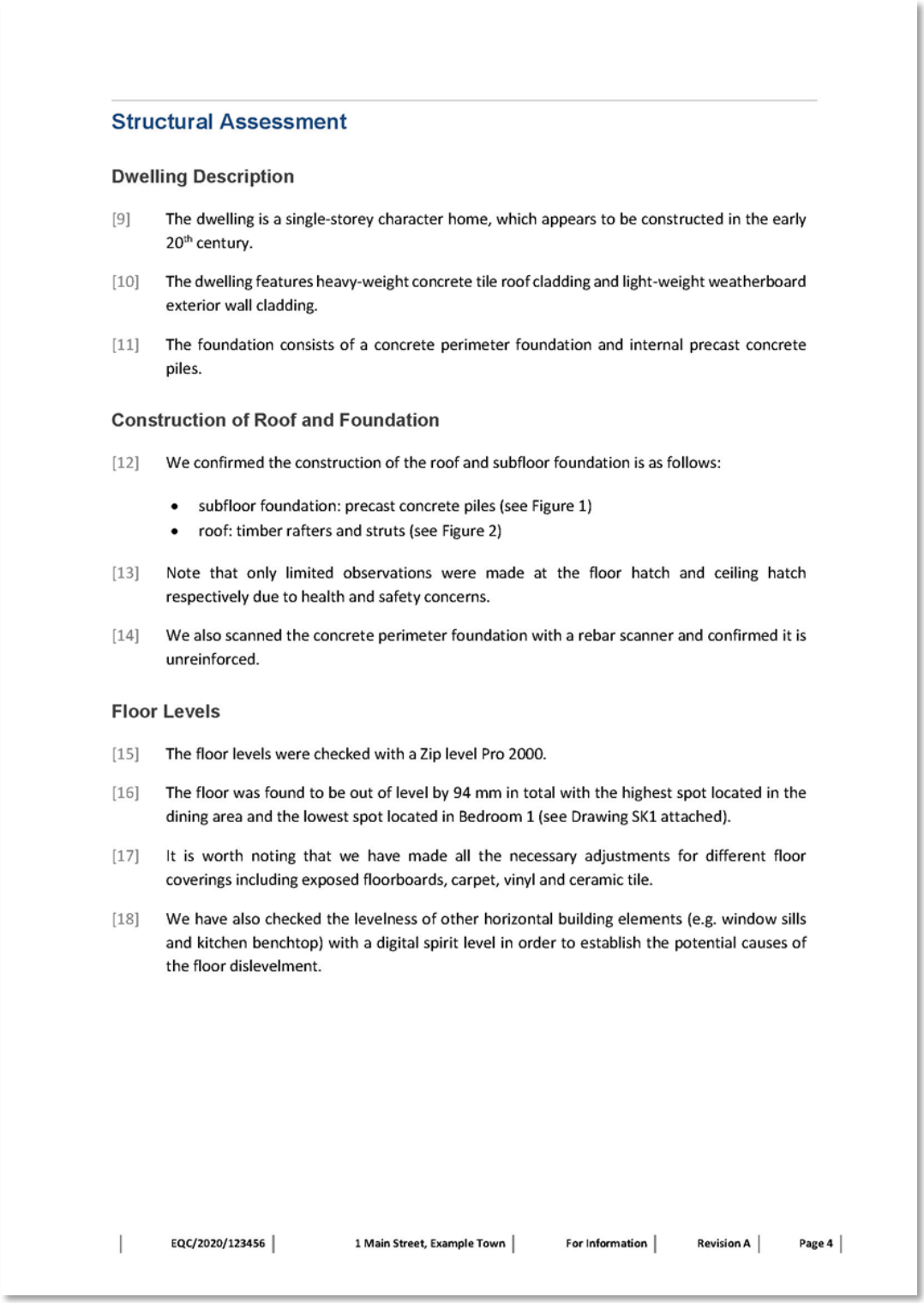

Structural Assessment

Dwelling Description

[9] The dwelling is a single-storey character home, which appears to be constructed in the early 20th century.

[10] The dwelling features heavy-weight concrete tile roof cladding and light-weight weatherboard exterior wall cladding.

[11] The foundation consists of a concrete perimeter foundation and internal precast concrete piles.

Construction of Roof and Foundation

[12] We confirmed the construction of the roof and subfloor foundation is as follows:

- subfloor foundation: precast concrete piles (see Figure 1)
- roof: timber rafters and struts (see Figure 2)

[13] Note that only limited observations were made at the floor hatch and ceiling hatch respectively due to health and safety concerns.

[14] We also scanned the concrete perimeter foundation with a rebar scanner and confirmed it is unreinforced.

Floor Levels

[15] The floor levels were checked with a Zip level Pro 2000.

[16] The floor was found to be out of level by 94 mm in total with the highest spot located in the dining area and the lowest spot located in Bedroom 1 (see Drawing SK1 attached).

[17] It is worth noting that we have made all the necessary adjustments for different floor coverings including exposed floorboards, carpet, vinyl and ceramic tile.

[18] We have also checked the levelness of other horizontal building elements (e.g. window sills and kitchen benchtop) with a digital spirit level in order to establish the potential causes of the floor dislevelment.

Figure 126 Structural engineering report (Page 5)

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Damage Observation – Exterior

[19] We observed a ground fissure through the concrete driveway and the lawn (see Figures 3 and 4).

[20] There was no evidence of liquefaction at the time of the walk-through inspection. The owners also confirmed that soil liquefaction ejecta was not observed on the property.

[21] The concrete perimeter foundation exhibited cracking at multiple locations. The distribution of the observed cracks is shown in Drawing SK1.

[22] Most of the cracks appeared to be fresh as evident in the sharpness of the crack edges (see an example in Figure 5). However, a few cracks appeared to be old with signs of rounded edges and some with paint embedment in the cracked surface (see an example in Figure 6).

[23] The timber weatherboards along the driveway were found to be visibly out of alignment (see Figure 7).

[24] There was damage to the ridge tiles.

Damage Observation – Interior

[25] We observed wall/ceiling lining damage at several locations in the form of diagonal or straight cracking (see examples in Figures 8 and 9).

[26] A number of doors and windows were found to be sticky and difficult to open and close.

[27] The kitchen appeared to have been renovated prior to the earthquake with newer kitchen cabinetry and benchtop. We noted this newer kitchen benchtop is out of level.

Figure 1: Precast concrete piles

Figure 2: Timber rafters and struts

Figure 127 Structural engineering report (Page 6)

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Figure 3: Location of ground fissure

Figure 4: Depression in ground where fissure extends

Figure 5: Fresh crack with sharp edges below North-facing window of Bedroom 3

Figure 6: Old crack with paint embedment below East-facing window of dining area

Figure 128 Structural engineering report (Page 7)

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Figure 7: Timber weatherboards are visibly out of alignment

Figure 8: Diagonal wall lining crack in Bedroom 3

Figure 9: Ceiling crack in living area

Figure 129 Structural engineering report (Page 8)

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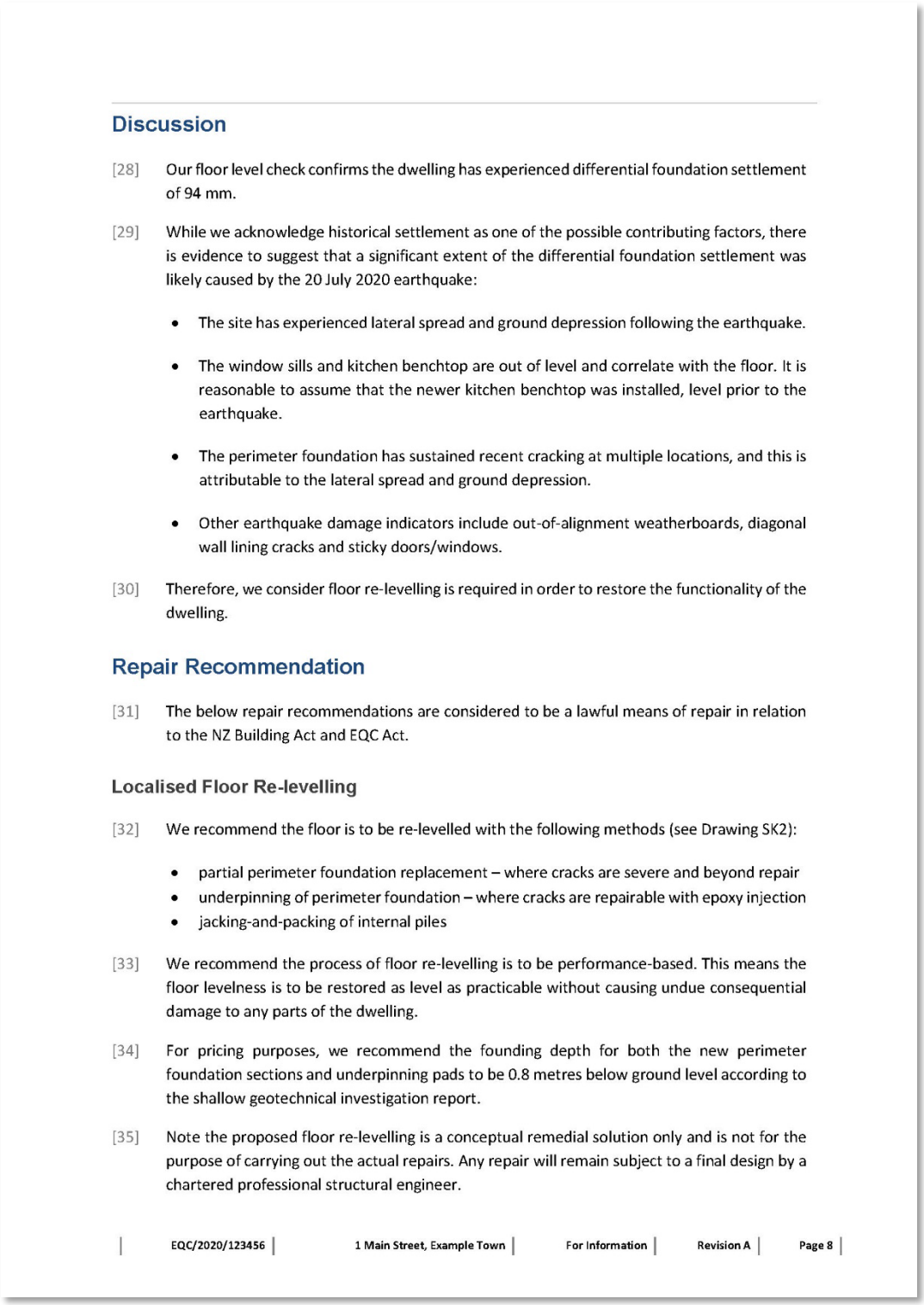

Discussion

[28] Our floor level check confirms the dwelling has experienced differential foundation settlement of 94 mm.

[29] While we acknowledge historical settlement as one of the possible contributing factors, there is evidence to suggest that a significant extent of the differential foundation settlement was likely caused by the 20 July 2020 earthquake:

- The site has experienced lateral spread and ground depression following the earthquake.
- The window sills and kitchen benchtop are out of level and correlate with the floor. It is reasonable to assume that the newer kitchen benchtop was installed, level prior to the earthquake.
- The perimeter foundation has sustained recent cracking at multiple locations, and this is attributable to the lateral spread and ground depression.
- Other earthquake damage indicators include out-of-alignment weatherboards, diagonal wall lining cracks and sticky doors/windows.

[30] Therefore, we consider floor re-levelling is required in order to restore the functionality of the dwelling.

Repair Recommendation

[31] The below repair recommendations are considered to be a lawful means of repair in relation to the NZ Building Act and EQC Act.

Localised Floor Re-levelling

[32] We recommend the floor is to be re-levelled with the following methods (see Drawing SK2):

- partial perimeter foundation replacement – where cracks are severe and beyond repair
- underpinning of perimeter foundation – where cracks are repairable with epoxy injection
- jacking-and-packing of internal piles

[33] We recommend the process of floor re-levelling is to be performance-based. This means the floor levelness is to be restored as level as practicable without causing undue consequential damage to any parts of the dwelling.

[34] For pricing purposes, we recommend the founding depth for both the new perimeter foundation sections and underpinning pads to be 0.8 metres below ground level according to the shallow geotechnical investigation report.

[35] Note the proposed floor re-levelling is a conceptual remedial solution only and is not for the purpose of carrying out the actual repairs. Any repair will remain subject to a final design by a chartered professional structural engineer.

| EQC/2020/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 8 |

Figure 130 Structural engineering report (Page 9)

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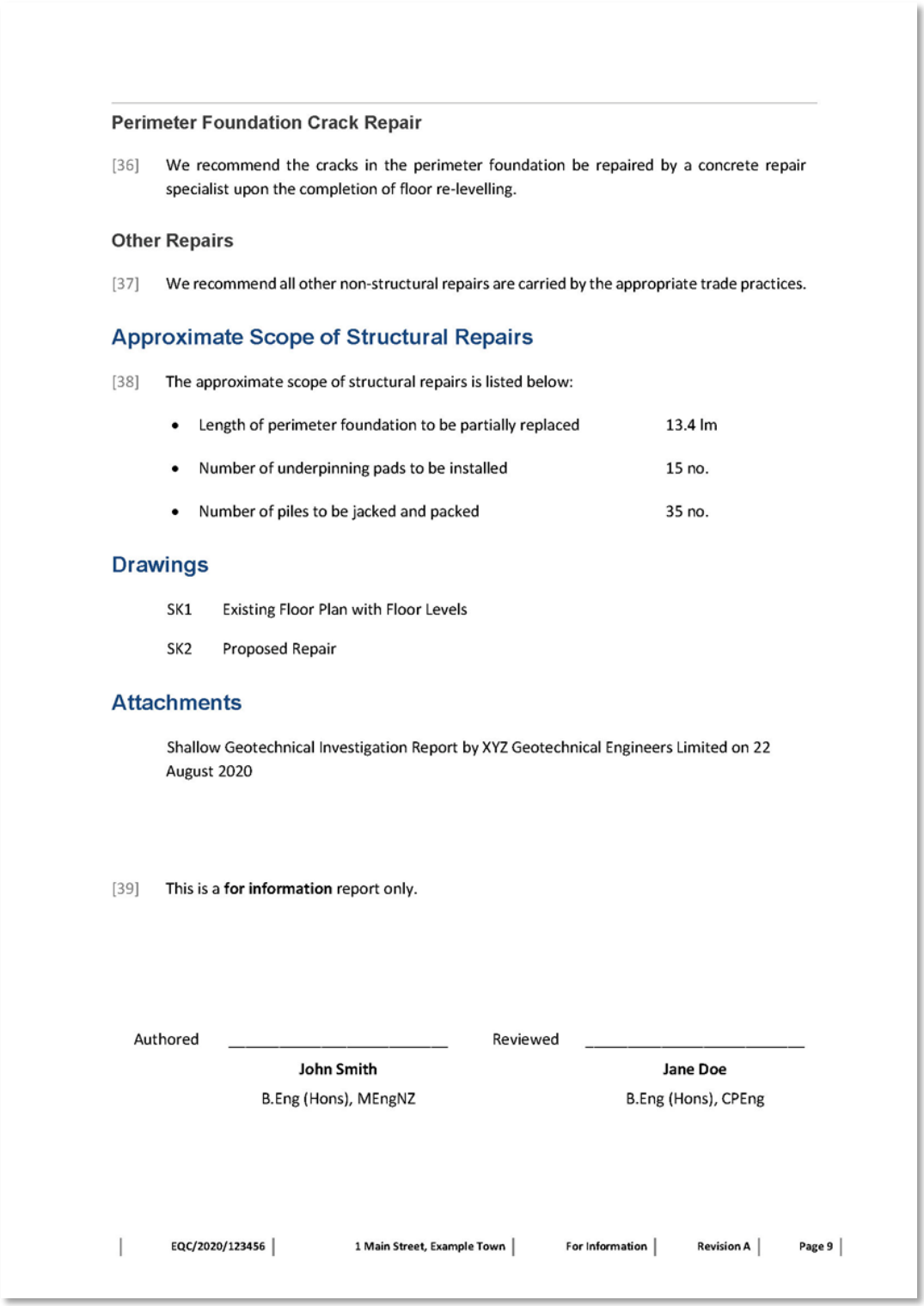

Perimeter Foundation Crack Repair

[36] We recommend the cracks in the perimeter foundation be repaired by a concrete repair specialist upon the completion of floor re-levelling.

Other Repairs

[37] We recommend all other non-structural repairs are carried by the appropriate trade practices.

Approximate Scope of Structural Repairs

[38] The approximate scope of structural repairs is listed below:

- Length of perimeter foundation to be partially replaced 13.4 lm
- Number of underpinning pads to be installed 15 no.
- Number of piles to be jacked and packed 35 no.

Drawings

SK1 Existing Floor Plan with Floor Levels

SK2 Proposed Repair

Attachments

Shallow Geotechnical Investigation Report by XYZ Geotechnical Engineers Limited on 22 August 2020

[39] This is a **for information** report only.

Authored _____ Reviewed _____

John Smith **Jane Doe**
B.Eng (Hons), MEngNZ B.Eng (Hons), CPEng

| EQC/2020/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 9 |

Figure 131 Structural engineering report (Page 10)

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l. Structural engineering report – floor plan and repair diagrams

The following is an example floor plan and repair diagram, prepared by the structural engineer, which meets the assessor's requirements as set out in their original instructions. This floor plan and diagram would be included with the structural engineering report.

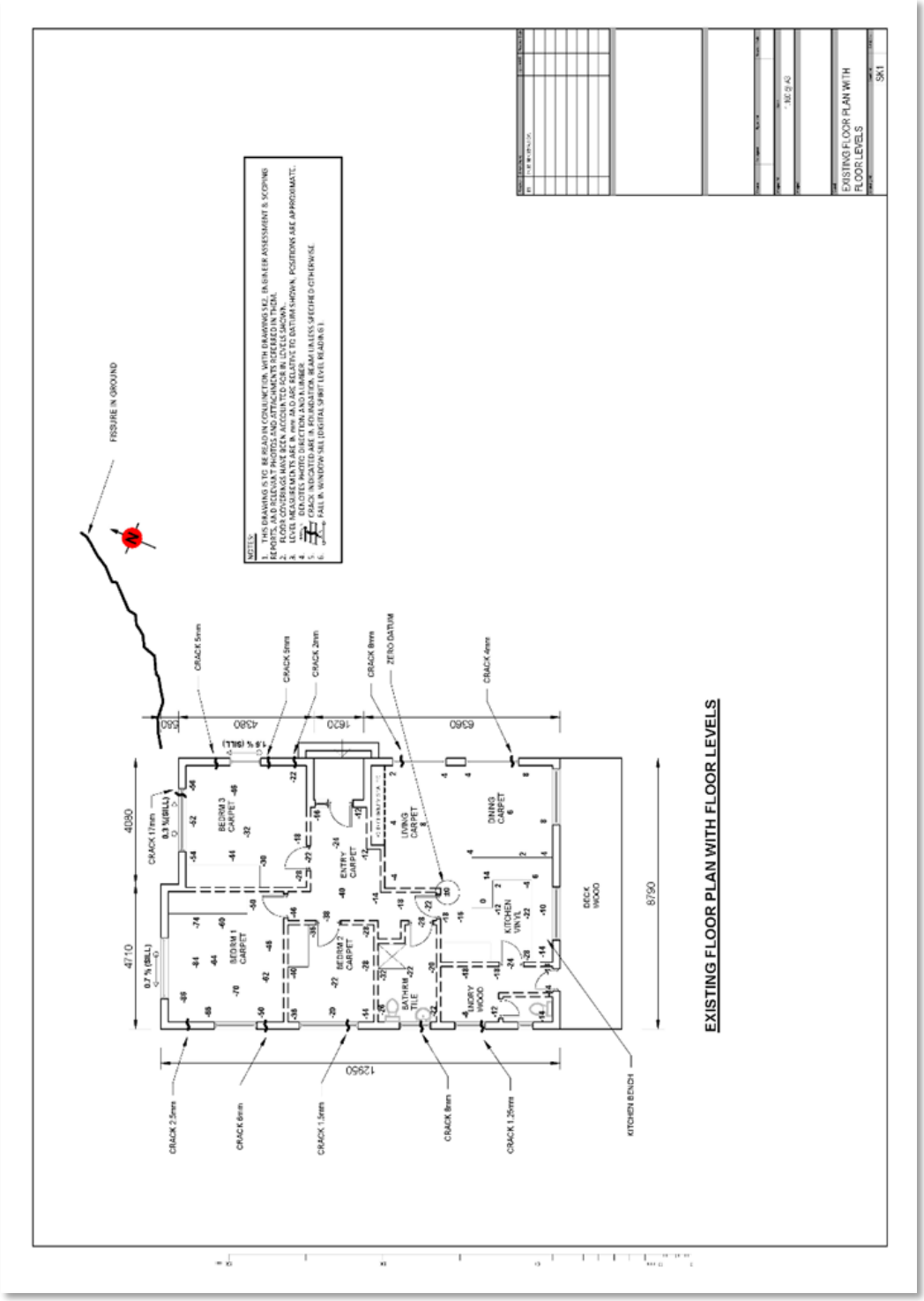

Figure 132 Structural engineering report - existing floor plan with floor levels

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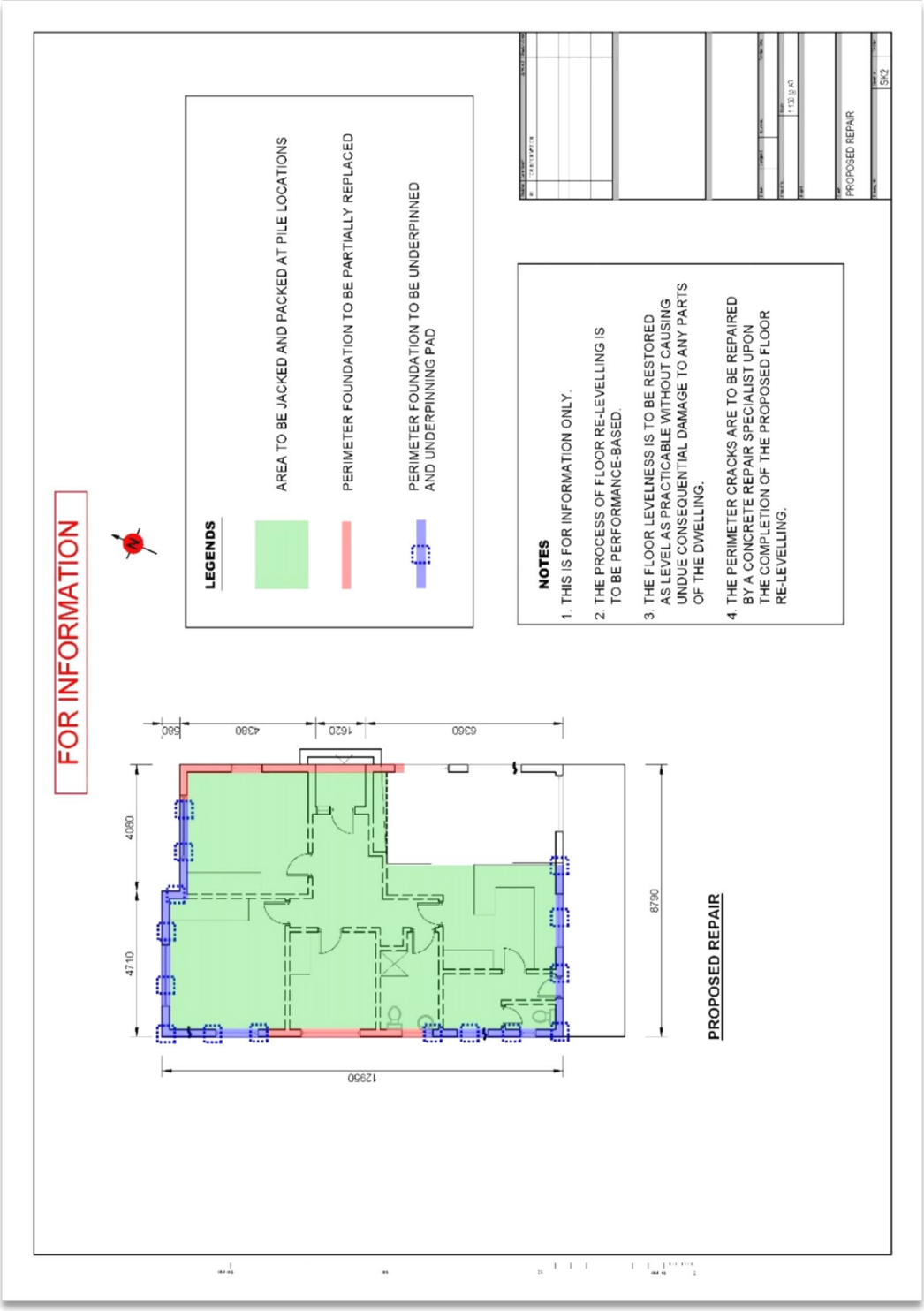

Figure 133 Structural engineering report - proposed repair diagram

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m. Notification of a potentially dangerous building

The following is an example form used by the assessor to notify the relevant TA of a potentially dangerous building.

EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

NOTIFICATION OF A POTENTIAL RISK OF INJURY TO PEOPLE FROM DAMAGED LAND AND/OR BUILDINGS

EQC staff and assessors visit residential properties to assess land and building damage resulting from a natural disaster. In the course of doing so, we have identified a property that in our opinion may pose a threat to personal safety by being dangerous or insanitary.

Party/ies being notified:

☑ the territorial authority ☑ property owner ☑ occupants ☐ neighbours

☐ other/s (please give details):

This notification relates to:

☑ land damage ☑ dangerous building ☐ insanitary building

The address of the property is: 1 City Street, Suburb, Town

The building appears to be: ☑ occupied ☐ unoccupied

The risk posed is as follows:

A landslip has occured within 2 metres of the western side of the dwelling. The landslip appears to be regressing further. I am concerned that if this occurs the building foundations will be destabilised and pose a risk of injury to the building occupant (the property owner).

Our mission: To reduce the impact on people and property when natural disasters occur.

1

Figure 134 Notification of a potentially dangerous building form (Page 1)

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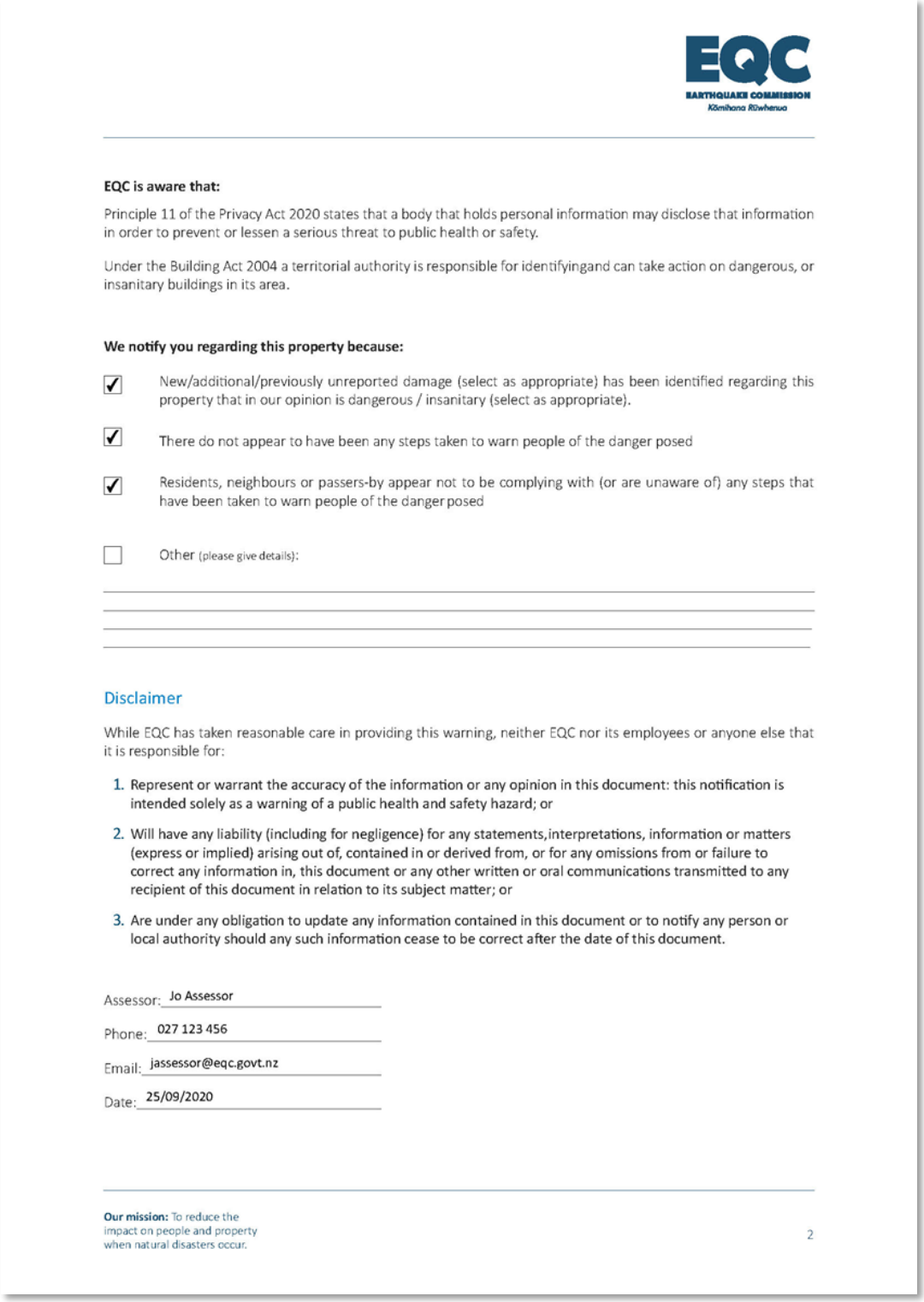

EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

EQC is aware that:

Principle 11 of the Privacy Act 2020 states that a body that holds personal information may disclose that information in order to prevent or lessen a serious threat to public health or safety.

Under the Building Act 2004 a territorial authority is responsible for identifyingand can take action on dangerous, or insanitary buildings in its area.

We notify you regarding this property because:

- ☑ New/additional/previously unreported damage (select as appropriate) has been identified regarding this property that in our opinion is dangerous / insanitary (select as appropriate).
- ☑ There do not appear to have been any steps taken to warn people of the danger posed
- ☑ Residents, neighbours or passers-by appear not to be complying with (or are unaware of) any steps that have been taken to warn people of the danger posed
- ☐ Other (please give details):

Disclaimer

While EQC has taken reasonable care in providing this warning, neither EQC nor its employees or anyone else that it is responsible for:

1. Represent or warrant the accuracy of the information or any opinion in this document: this notification is intended solely as a warning of a public health and safety hazard; or
2. Will have any liability (including for negligence) for any statements,interpretations, information or matters (express or implied) arising out of, contained in or derived from, or for any omissions from or failure to correct any information in, this document or any other written or oral communications transmitted to any recipient of this document in relation to its subject matter; or
3. Are under any obligation to update any information contained in this document or to notify any person or local authority should any such information cease to be correct after the date of this document.

Assessor: Jo Assessor
Phone: 027 123 456
Email: jassessor@eqc.govt.nz
Date: 25/09/2020

Our mission: To reduce the impact on people and property when natural disasters occur.

2

Figure 135 Notification of a potentially dangerous building form (Page 2)

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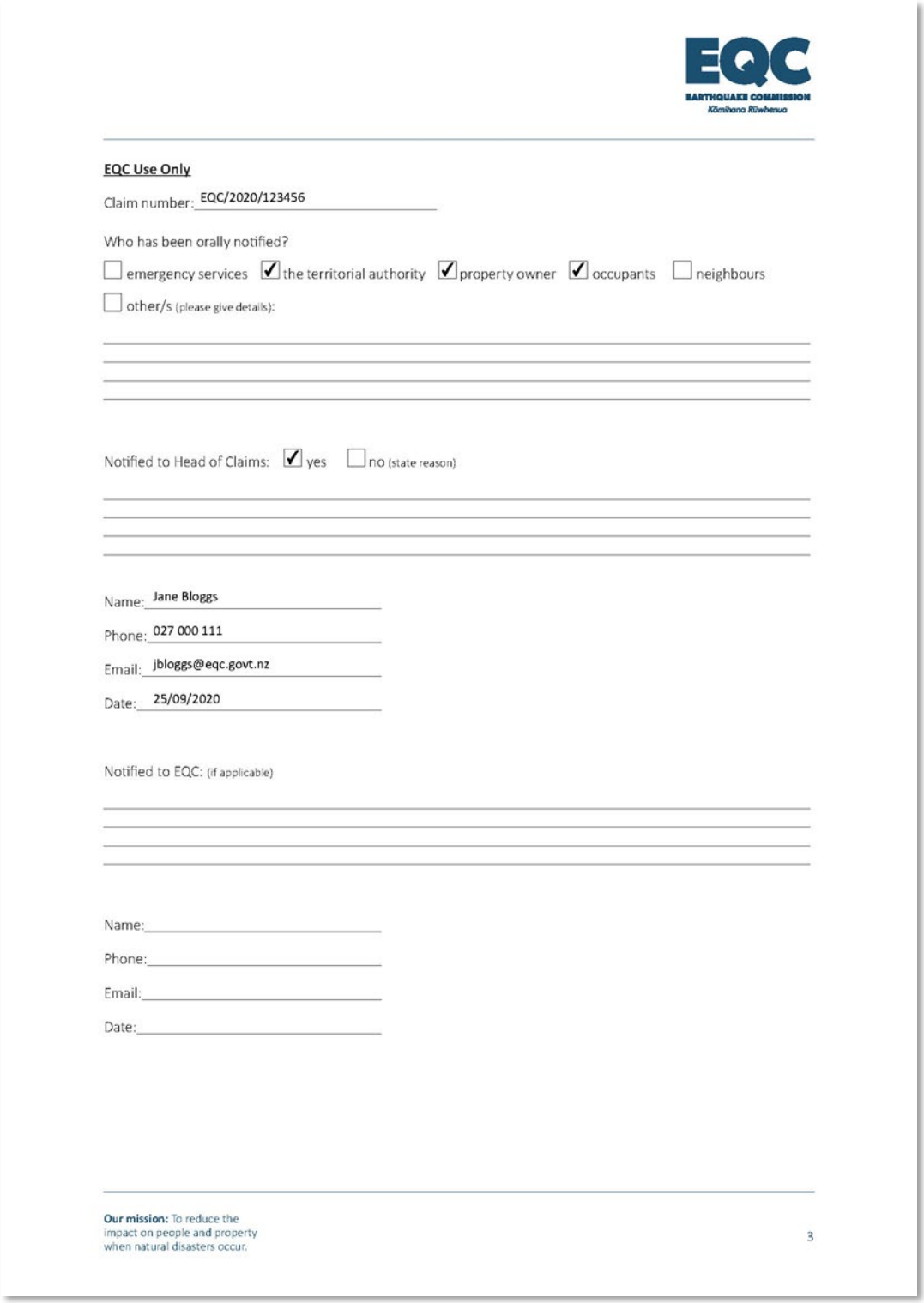

EQC
EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

EQC Use Only

Claim number: EQC/2020/123456

Who has been orally notified?

☐ emergency services ☑ the territorial authority ☑ property owner ☑ occupants ☐ neighbours

☐ other/s (please give details):

Notified to Head of Claims: ☑ yes ☐ no (state reason)

Name: Jane Bloggs

Phone: 027 000 111

Email: jbloggs@eqc.govt.nz

Date: 25/09/2020

Notified to EQC: (if applicable)

Name:

Phone:

Email:

Date:

Our mission: To reduce the impact on people and property when natural disasters occur.

3

Figure 136 Notification of a potentially dangerous building form (Page 3)

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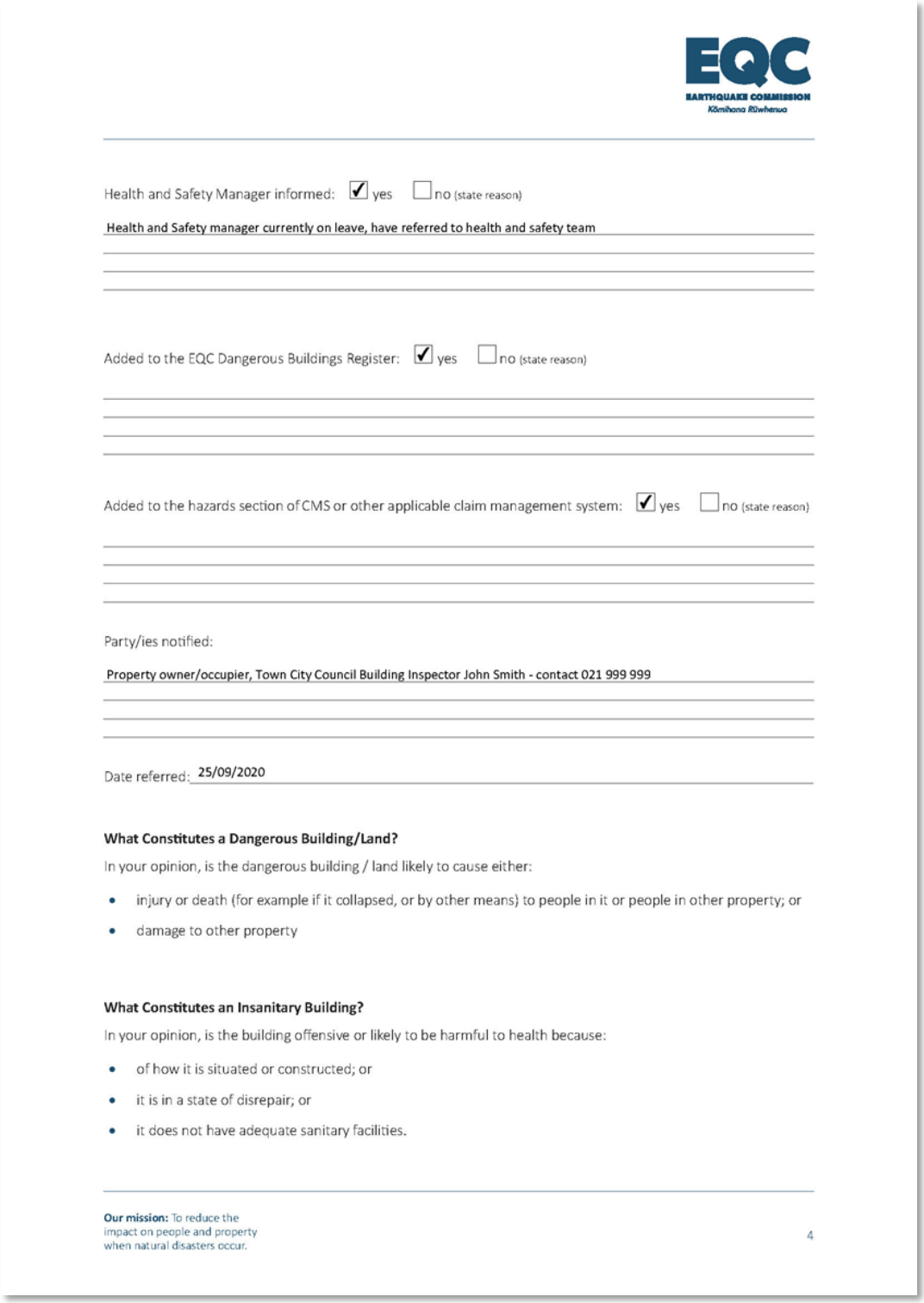

EARTHQUAKE COMMISSION
Kōmihana Rūwhenua

Health and Safety Manager informed: ☑ yes ☐ no (state reason)

Health and Safety manager currently on leave, have referred to health and safety team

Added to the EQC Dangerous Buildings Register: ☑ yes ☐ no (state reason)

Added to the hazards section of CMS or other applicable claim management system: ☑ yes ☐ no (state reason)

Party/ies notified:

Property owner/occupier, Town City Council Building Inspector John Smith - contact 021 999 999

Date referred: 25/09/2020

What Constitutes a Dangerous Building/Land?

In your opinion, is the dangerous building / land likely to cause either:

- injury or death (for example if it collapsed, or by other means) to people in it or people in other property; or
- damage to other property

What Constitutes an Insanitary Building?

In your opinion, is the building offensive or likely to be harmful to health because:

- of how it is situated or constructed; or
- it is in a state of disrepair; or
- it does not have adequate sanitary facilities.

Our mission: To reduce the impact on people and property when natural disasters occur.

4

Figure 137 Notification of a potentially dangerous building form (Page 4)

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Appendix 5. Case studies

a. Introduction

The scenarios below are designed to demonstrate the high-level generic steps taken when assessing a claim for EQCover. The examples are provided for guidance or reference only. EQCover claims will arise in a diverse range of fact situations, and these case studies are not intended to be exhaustive in their coverage.

When assessing a claim for EQCover, you must also:

- comply with all other sections of the *Toka Tū Ake EQC Assessment Manual*, including sections that address more general matters. General matters such as whether any health and safety concerns arise, whether the basic requirements for an EQCover claim are met, and whether customers are experiencing vulnerabilities, are not considered in detail in these case studies.
- act in accordance with the *EQC Act*, all other applicable laws, our delegations and the *Toka Tū Ake EQC Insurers Manual*.
- apply your organisation's own internal policies and processes.

Where damage is not covered by the *EQC Act*, you should consider whether it is covered by a private insurance policy. Where damage is covered by both the *EQC Act* and a private insurance policy, we typically cover the first loss, so you should consider the coverage under the *EQC Act* first. In some cases, damage may not be covered by either the *EQC Act* or a private insurance policy.

The subject property used in the following examples is a 100 m^2 3-bedroom timber-framed house, with separate double garage on an 800 m^2 section, set on a moderate slope towards a coastal cliff face. There are no prior EQCover claims. The basic details of the property are as follows.

Age: Circa 1965

Cladding: brick veneer

Foundation: Concrete perimeter foundation with internal piles

Roof: Concrete tile

Access way: Gravel/metal

Land structures: Two timber pole retaining walls – one supporting the access way and one supporting the land within 8 m of the dwelling.

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b. Building

i. No natural disaster damage to the building

Natural disaster type: Earthquake

Claim lodgement and triage
A customer lodges a claim for earthquake damage via her insurer's online claim lodgement portal. The customer's lodgement notes state:

I am not really sure when this occurred, but there was a small earthquake two weeks ago. A week later I was doing some gardening on the south side of my house and I saw some cracking to my bricks. I am concerned about rain getting in.

The claims manager who triages the claim observes that there was a magnitude 2.2 earthquake on the notified date of loss, which *GeoNet* recorded as having light shaking, however this occurred some distance from the property. There was no recent earthquake recorded nearer to the property. After calling the customer and discussing the damage, the claims manager decides it is appropriate for an assessor to attend the property and inspect the damage.

Assessment
The assessor reviews the claim and then contacts the customer to discuss the damage. The customer says she is feeling uncertain. She has not identified any other damage, but she would not know where to look. The assessor books a site assessment.

At the site assessment, the customer shows him the damage on the southern side of the property. The assessor can see a clear line of step-cracking from the bottom corner of the window, extending to the south-eastern corner of the dwelling. He identifies moss and debris in the crack. While walking around the exterior, the assessor notes that on this southern side of the property, the ground conditions are very wet.

The customer mentions to him that the ground conditions on the southern side are always boggy, and that it is much drier on the northern and western sides of the property.

The assessor notes that there is a loss of connection where the brick veneer meets the concrete perimeter ring foundation. It is his opinion that the resultant loss of support is the cause of the cracking observed.

The inspection continues in the related internal room, which is a bathroom. The customer says that the room was renovated about two years ago, which included stripping out and replacing all wall linings. The assessor notices that the skirting board in this room is tapered, with the widest part correlating with the external area of the building where the step-cracking to the veneer has occurred. There is also a new vanity in this area. The top of the vanity measures level, however the base has packers wedged under it, indicating pre-existing floor dislevelment at the time of vanity installation, again correlating with the external observations.

The assessor records the damage in a sketch and takes detailed notes of the damage and relevant supporting photographs.

The assessor concludes that the damage is not the result of the earthquake that occurred two weeks before because:

- the severity of the shaking was light in the property's location;
- there is moss and debris in the crack;
- there is evidence of works pre-dating the reported damage to address floor dislevelment and subsidence-based settlement;
- the constantly saturated soils have reduced loadbearing capacity, resulting in a loss of support for the building.

Post-assessment meeting with customer

The assessor explains the findings of his assessment to the customer, and explains that the claims manager will contact her to advise her of the claim outcome. The customer accepts and understands the explanations given. She asks the assessor what she might do to repair the damage and prevent further damage. The assessor advises her to engage an appropriate expert, e.g. Licensed Building Practitioner or geotechnical engineer, to determine the best solution, noting that we would not cover the costs of doing so.

Post-site assessment actions

The assessor returns to his office and:

- prepares an assessment report with detailed notes about his observations, supported by his photographs and sketches. A scope of works is not required.
- provides a settlement recommendation to the claims manager that the claim is invalid under the *EQC Act* because there is no natural disaster damage to the residential building.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's recommendation and on that basis, she contacts the customer to advise her of the claim outcome and explain the reasons for this and then closes the claim.

ii. Minor building damage (cosmetic damage)

Natural disaster type: Earthquake

Claim lodgement and triage

A customer lodges a claim via his insurer's contact centre for damage to a dwelling following a magnitude 4.5 earthquake.

The team member taking the call records the following notes about the property:

The customer has reported that he has noticed cracking around the walls after the earthquake last week. There is no other damage that the customer has noticed but he will have a look before the assessor comes.

A claims manager triages the claim and notes that there has recently been an earthquake in the area where the property is located. He requests an assessor to complete an assessment.

Assessment

The assessor reviews the claim and then contacts the customer to discuss the damage and book an appointment to assess the property. The customer states that he has had a good look around the house and has not found any damage other than the cracking they reported. The customer says he will not be able to attend in the next week but advises that he will be available in a fortnight. They arrange a suitable time to meet for the site assessment.

The customer meets the assessor onsite and shows her the damage he is concerned about.

The assessor notes the cracking to the plasterboard wall linings, which appears at window and door openings in four rooms along the southern and eastern sides of the house. She checks the corresponding exterior locations but does not note any additional damage to these areas. The assessor notes that the internal wall lining damage is jagged and sharp as would be expected in an earthquake event. She considers the damage to be the result of a natural disaster.

The assessor creates detailed notes, sketches and photographs the damage, noting that in three of the damaged rooms the damage is to one wall, while in the fourth it affects two walls. She is careful to note the construction type of the walls, which is plasterboard with a paint finish, to provide enough detail to create a scope of works.

Post-assessment meeting with customer

The assessor explains the findings of her assessment to the customer. She tells him that:

- she considers the damage to be the result of an earthquake;
- she will create a scope of works, which will include the necessary materials and labour to undertake the repair of the two damaged walls.

The customer expresses dissatisfaction with the remediation strategy. The assessor explains our obligation to repair the building element damaged by natural disaster which, in this case, is the damaged walls in the rooms. The customer says he understands and accepts this explanation.

The assessor then explains the next steps in the process, i.e. she will recommend to the claims manager that the claim be accepted and cash settled with the appropriate EQCover excess deducted.

Post-site assessment actions

The assessor returns to her office and:

- prepares an assessment report which explains the observed damage, the assessment outcome and the discussions she had onsite with the customer;
- uploads the assessment report and supporting information including photographs and sketches, to the claim file;
- creates a scope of works and sends it for peer review and approval.

The assessor receives approval for the scope of works, then creates a settlement recommendation for the claims manager to review.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's settlement recommendation and on that basis, contacts the customer to advise him of the claim outcome and explain the reasons for this. The claims manager advises the customer that if he finds further damage, additional repairs are required, or the cost of the repairs is greater than was estimated, he should get back in contact. The claims manager then arranges payment and closes the claim.

iii. Moderate building damage (structural damage)

Natural disaster type: Earthquake

Claim lodgement and triage

The customer lodges a claim via their insurer's contact centre for earthquake damage to a building. The customer reports the following, which is noted on the file:

- *The floors are sloping and feel 'springy'*
- *There are cracks in all the internal walls*

The claims manager assigns the claim to an assessor for review.

Assessment

The assessor reviews the claim and then books an appointment to attend the property with the customer. On arrival at site, the assessor and the customer complete a walkthrough together. The customer points out the sloping floors inside and the damage to the walls.

The assessor can immediately identify that the damage to the wall linings is structural, with long diagonal cracks spanning from the corner opening up towards the ceilings, as well as cracking to some ceiling linings. He observes that the slope to the floor is noticeable towards the southwest corner of the building. There is no access to the subfloor for internal foundation investigations.

The exterior of the building has cracking to the concrete perimeter foundation ranging from 5 to 25 mm wide, the location of which corresponds with the internal sloping floors. The brick cladding has step cracking spanning out from the window openings on the south and west elevations. On closer inspection, the assessor establishes that the cladding at the western end of the southern elevation is no longer mechanically connected to the building superstructure.

On this southwestern corner is a gully trap that household greywater discharges into. The gully trap has sunk and there is greywater discharging onto the section.

The assessor records the damage in a sketch and takes detailed notes of the damage and relevant supporting photographs.

It is apparent to the assessor that a structural engineer's assessment will be required to confirm the cause of the damage and determine an appropriate remediation strategy.

Post-assessment meeting with customer

The assessor explains the findings of his assessment to the customer. The assessor advises the customer that, due to the nature of the damage, a site-specific engineer's assessment will be required to confirm the extent of the damage.

The assessor also takes the opportunity to explain the remainder of the assessment process, excess and settlement process.

Assessor's post-site assessment actions

The assessor returns to his office and:

- prepares an assessment report with detailed notes about his observations and supported by his photographs and sketches;
- drafts a letter of engagement for a structural engineer and provides it to the engineer with the assessment report;
- notifies the claims manager of the claim's progress.

Structural engineer's assessment

The structural engineer receives the letter of engagement and agrees to the terms and conditions. He then contacts the customer and arranges a suitable time to assess the dwelling.

The structural engineer reviews the report provided by the assessor and then completes a site inspection. He takes detailed notes, measurements and photographs of the damage observed, including a floor level survey of the building.

The structural engineer completes a report which identifies the following damage to the building as the direct result of natural disaster:

- Significant floor dislevelment as a result of foundation damage at the southwestern corner of the building;
- Localised pile settlement in two other areas of the house (the lounge and dining room on the northern side of the house);
- 4 m^2 of brick veneer that is not mechanically connected back to the wall framing;
- 6 LM of step cracking to the brick veneer on the southern and western sides of the building;
- Structural damage to walls and linings in three rooms on the southern and western side of the building;
- Cosmetic damage to wall linings in four rooms on the northern and eastern side of the house;

- Settlement of the gully trap (services) resulting in the greywater disposal pipe becoming disconnected.

He completes his reporting by recommending the following conceptual repair strategies:

- Rebuild of the foundation at the southwestern corner, by lifting the flooring in the affected rooms and replacing it, repairing the piles as required, replacement of 5 LM of concrete perimeter foundation and tying back into the existing foundation;
- Localised pile replacement in the lounge and dining room;
- Replacement of the wall linings in the three rooms on the southern and western elevation (engineer confirms these are not bracing elements);
- Removal and reinstatement of the 4 m^2 damaged brick veneer on the southern elevation;
- Repointing the damaged brick veneer affected by step cracking;
- Reconnection of the greywater disposal pipe to the greywater gully trap.

The structural engineering report states that the final foundation remediation strategy remains subject to a shallow geotechnical investigation report being obtained, and the repair must comply with the requirements of the building code as outlined in the Building Act 2004.

The structural engineer sends his report to the assessor for review and approval.

Assessor's next actions

The assessor reviews the structural engineering report and confirms that no points require clarification. The assessor then:

- notifies the claims manager that the structural engineering report is completed and that they can provide the customer with a claim status update, including a copy of the structural engineer's report;
- completes a scope of works as specified by the structural engineer;
- submits the scope of works for peer review and approval by a Licensed Building Practitioner (because the remediation strategy includes restricted building work).

The assessor receives approval for the scope of works, then creates a settlement recommendation for the claims manager to review.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's settlement recommendation and on that basis, contacts the customer to advise them of the claim outcome and explain the reasons for this. The claims manager advises the customer that if they find further damage, additional repairs are required, or the cost of the repairs is greater than was estimated, they should get back in contact. The claims manager then arranges payment and closes the claim.

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iv. Severe building damage (structural damage)

Natural disaster type: Earthquake

Claim lodgement and triage

A customer lodges a claim via her insurer's contact centre for earthquake damage to a building. The customer reports the following, which is noted on the file:

- *The floors are sloping*
- *Some of the bricks have fallen off outside*
- *Doors are jamming*
- *There are cracks in all the internal walls and the damage seems quite severe*
- *The customer considers the house is safe to occupy*

The claims manager updates the hazard details on the claim and then assigns the claim to an assessor for review.

Assessment

The assessor reviews the claim and then books an appointment to attend the property with the customer. On arrival at site, the assessor notes the fallen exterior bricks and cracking to the concrete perimeter foundation. He takes a moment to consider the hazards he has observed, updates his site risk assessment and determines that he can continue his assessment safely. He meets the customer and they complete a walkthrough of the property together. The customer points out the sloping floors inside and the damage to the walls.

Externally, there is cracking damage to the concrete perimeter foundation on all elevations ranging from minor cracking less than 5 mm wide to severe cracking of more than 20 mm width. There are significant portions of the brick cladding that have either collapsed or show signs of instability.

Internally, the floor is on a noticeable slope across the entire dwelling in a southwestern direction. Many of the internal doors no longer close properly, with signs of new misalignment on the striker plates and no indicators of sustained misalignment. In the southwestern corner, where the floor slope is most noticeable, the windows cannot be opened. The customer reports that these were operating properly before the earthquake. There is diagonal cracking indicating structural damage to the wall linings in most rooms. There is no access to the subfloor for internal foundation investigations.

Several stormwater connections have failed, and stormwater now discharges directly onto the ground surrounding the dwelling, but the assessor considers it is not unsafe.

The assessor records the damage in a sketch and takes detailed notes of the damage and relevant supporting photographs.

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Post-assessment meeting with customer

The assessor explains the findings of his assessment to the customer. The assessor advises the customer that, due to the nature of the damage, a site-specific engineer's assessment will be required to confirm the extent of the damage. He discusses his findings with the customer and lets her know about urgent works she should consider undertaking, e.g. placing plywood on the exterior to secure the loose bricks and engaging a plumber to connect a temporary stormwater supply.

The assessor also takes the opportunity to explain the remainder of the assessment process, the EQCover cap, excess and settlement process, and also any relevant information regarding their private insurance claim.

Post-site visit actions

The assessor returns to his office and:

- prepares an assessment report with detailed notes about his observations and supported by his photographs and sketches;
- drafts a letter of engagement for a structural engineer (including authority to engage a geotechnical engineer to provide a shallow geotechnical investigation report if the structural engineer determines it is necessary) and provides it to the engineer with the assessment report;
- notifies the claims manager of the claim's progress.

Structural engineer's assessment

The structural engineer receives the letter of engagement and agrees to the terms and conditions. He then contacts the customer and arranges a suitable time to assess the dwelling.

The structural engineer reviews the report provided by the assessor and then completes a site inspection. He takes detailed notes, measurements and photographs of the damage observed, including a floor level survey of the building. He determines that a shallow geotechnical investigation report is required and engages a geotechnical engineer accordingly.

The structural engineer completes a report which identifies the following damage to the building as the direct result of natural disaster:

- Foundation damage spanning the entire building resulting in floor dislevelment of 110 mm across the entire building, including:
    - cracks ranging from 5 to 25 mm in the concrete perimeter foundation; and
    - apparent tilting of all piles (viewed through vents) and failure of all connections to bearers;
- Cladding detachment to the southern, western and northern elevations;
- Step cracking to the brick veneer on the eastern elevation;
- Structural damage to all wall linings indicated by severe diagonal cracking;
- Plumbing and stormwater connection failures.

He completes his reporting by recommending the following repair strategies, supported by the geotechnical engineering advice he obtained:

- Lifting the dwelling and replacing the concrete perimeter foundation and all piles;
- Replacing all wall linings and the affected ceiling linings;
- Reinstating the cladding on all elevations;
- Easing doors and windows;
- Reinstating all damaged services.

The structural engineering report states that any foundation damage must be repaired as per the requirements of the *building code* as outlined in the *Building Act 2004*.

The structural engineer sends his report to the assessor for review and approval.

Assessor next actions

The assessor reviews the structural engineering report and confirms that no points require clarification. The assessor then:

- notifies the claims manager the engineering report is completed and that he can provide the customer with a claim status update, including a copy of the engineering report;
- reviews the claim file and confirms with the customer that no urgent works have been carried out;
- completes a scope of works as specified by the structural engineer;

- submits the scope of works for peer review and approval by a licensed building practitioner because the remediation strategy includes restricted building work.

The assessor receives approval for the scope of works, then creates a settlement recommendation for the claims manager to review.

The final costed amount is $169,500.00 (incl. GST). The assessor makes the claims manager aware of the complex and variable nature of the works, so he can advise the customer.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's settlement recommendation and on that basis, contacts the customer to advise her of the claim outcome and explain the reasons for this. The claims manager advises the customer that if she finds further damage, additional repairs are required, or the cost of the repairs is greater than was estimated, she should get back in contact. The claims manager then arranges payment and closes the claim.

Works planning

The customer engages a project manager and provides them with the scope of works received with her claim payment to start the planning phase. During this process, the customer receives all quotes for the required works, and the total quoted amount is $177,000.00 (incl. GST).

The customer contacts the claims manager and advises that the repairs are going to cost more than the cost estimate, and sends the relevant information supporting this for the claims manager to consider.

Claim re-open and assessment

The assessor receives the claim file and reviews the supporting documents. He agrees the additional costs are reasonable. He submits the costs for peer review and recommends they be approved.

The assessor receives approval for the increase in costs, then creates a settlement recommendation for the claims manager to review. He recommends that the additional costs should be accepted because they would be reasonably incurred in repairing the natural disaster damage that has occurred. He notes that this claim will now exceed the EQCover cap.

The assessor recommends the EQCover claim be settled to cap and the remaining damage be settled under the customer's private insurance claim, and contacts the claims manager to advise of this outcome.

Second settlement

The claims manager reviews the assessor's revised settlement recommendation and supporting documents. He agrees with the assessor's recommendation and on that basis, contacts the customer to advise her of the claim outcome and explain the reasons for this. The claims manager then arranges the additional payments and closes the claims.

v. Total loss of building

Claim lodgement and triage

A strong earthquake occurs, resulting in severe and widespread damage to the lower North Island. The customer attends her insurer's office to report damage to her property. She sits down with a claims manager, who opens claims for damage covered by us and damage covered by their private insurance and records the following concerns:

- The local TA has issued a 'red sticker' on the property, meaning the building is too dangerous to enter.
- The building has moved from its foundation.
- The concrete tile roof has had almost all of the concrete tiles displaced.
- The brick chimney has collapsed into the dwelling itself resulting in severe damage to walls and floors linings.
- Most of the external bricks on all walls have fallen off.
- The asphalt driveway is severely cracked.

The customer has a copy of the red sticker, which is a section 124 notice under the *Building Act 2004* that restricts entry to the interior of the building. The property can still be accessed, meaning the building can be viewed externally.

The claims manager consults with an assessor and they agree that the property needs a priority assessment. They arrange a site assessment for the following day, and the claims manager advises the customer that this will cover the damage for both their EQCover and private insurance claims.

Assessment

The customer meets the assessor onsite and accompanies him on his site assessment because it is safe for her to do so. Because there is a restriction on entry into the building, the assessor conducts his assessment externally only, in accordance with his site risk assessment and considering the health and safety issues.

The assessor creates detailed notes, sketches and photographs, recording the following:

- There is structural damage to concrete perimeter foundation.
- Upon exterior inspection of the dwelling subfloor (where possible), all visible timber piles have either failed completely or are rotated to a position where they no longer provide support to the building's subfloor framing.
- Timber wall framing has partially detached from the roof structure and can no longer support the roof weight.

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- Interior wall linings in all rooms (able to be safely viewed through windows) have suffered structural damage.
- Power and water connections have been damaged.
- All glazing elements have been damaged and require replacement.

The assessor does not identify any visible land damage.

The severity of the damage means that a complete rebuild is likely to be required and the cost to repair will exceed the maximum amount payable under the *EQC Act* cap.

Post-assessment meeting with customer

The assessor explains the findings of his assessment to the customer. He also explains:

- that he will recommend that the EQCover claim be cash settled to cap and the remaining damage covered by their private insurance claim will also be cash settled, subject to the claims manager's approval;
- the expected timeframe for the claims manager to contact her and confirm the settlement outcome.

Post-site assessment actions

The assessor returns to his office and:

- prepares an assessment report which details all aspects of his site assessment and his recommendation that the dwelling is a total loss.
- uploads the assessment report and supporting information, including photographs and sketches, to the claim file;
- creates a scope of works which confirms the repair cost exceeds the EQCover cap, and sends it for peer review and approval.

The assessor receives approval for the scope of works, then creates a settlement recommendation for the claims manager to review, which is that the claim should be accepted because the damage observed is the result of a natural disaster covered by the *EQC Act*, and that this claim will exceed the EQCover cap.

Because this is a total loss scenario, the assessor does not need to carry out a full scope of works costing to determine that the EQCover claim will exceed cap. However, he has obtained the information needed for him to carry out a full costing for the customer's private insurance claim (which would allow for after-the-fact scoping of the works required to meet coverage under the *EQC Act*).

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's recommendation and on that basis, contacts the customer to advise her of the claim outcome and explain the reasons for this.

The claims manager advises the customer that because there is a mortgage on the record of title, and the settlement payment is over the relevant mortgagee cap, the claim payment will

need to be made to the mortgagee. The claims manager checks that the customer understands the next steps that she needs to take, then arranges payment to the mortgagee and closes the claim.

c. Land

i. No natural disaster damage to the land

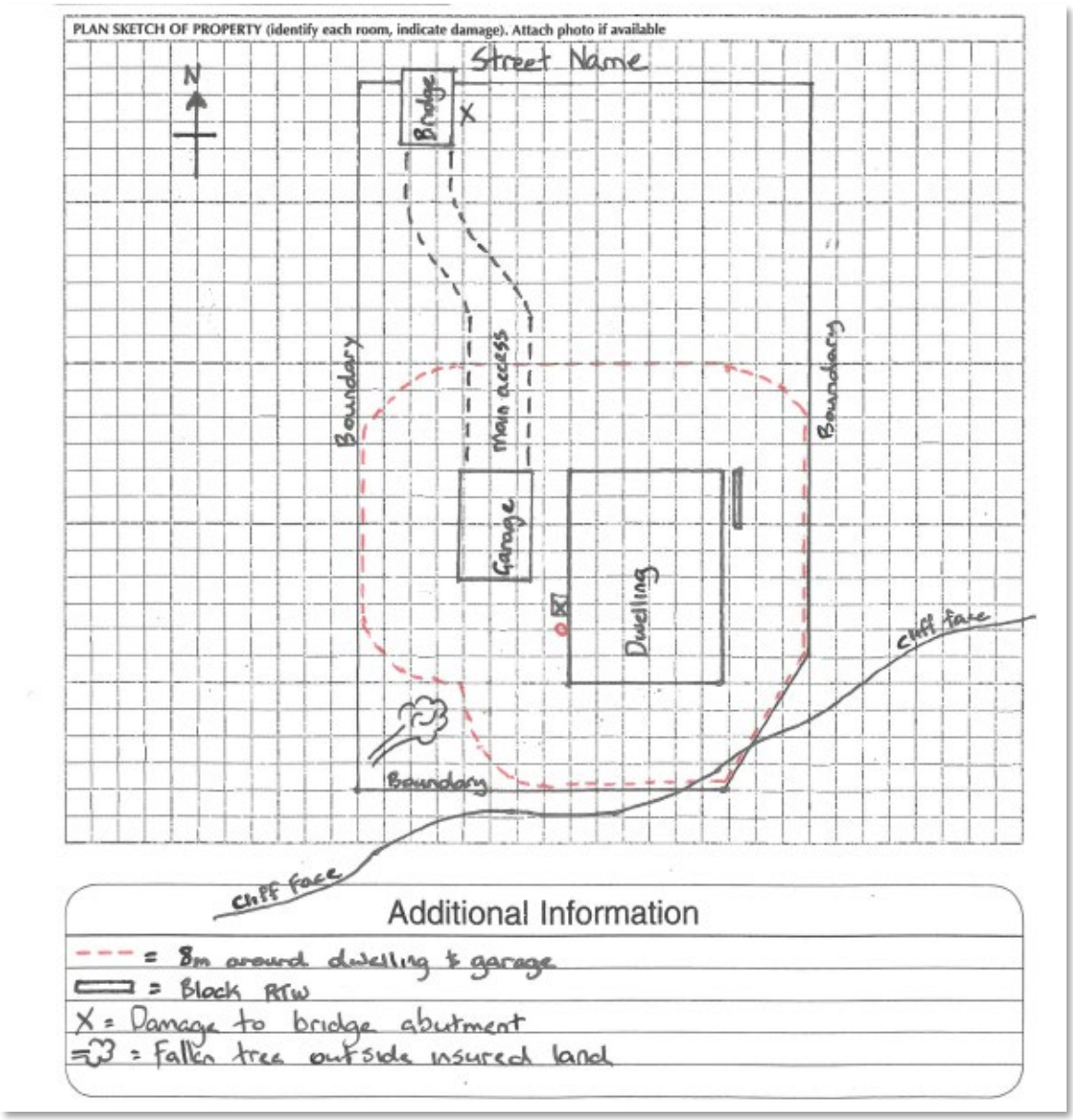

Figure 138 Site sketch with no natural disaster damage to the land

Natural disaster type: Storm

Claim lodgement and triage

After a severe storm event, a customer lodges a claim via their insurer's web lodgement portal. The lodgement note states:

The bridge at the front of my property was damaged in last week's cyclone.

A claims manager reviews the file and calls the customer. The customer says that the bridge abutment has been undermined causing one end to drop slightly. The bridge is approximately 40 m from the dwelling and forms part of the main access way which the customer advises is all part of their property. After speaking with the customer and discussing the damage, the claims manager determines it is appropriate for an assessor to attend the property and inspect the damage.

Assessment

The assessor reviews the claim file and then calls the customer and books an appointment time to assess her property.

When preparing for this assessment, the assessor has obtained an aerial plan from the local TA's geographic information system (GIS) file that supports the customer's comments about the location of the bridge and its distance from the dwelling. However, it also shows that approximately one third of the bridge is located outside of the property boundary, on TA-owned land.

The assessor asks the claims manager to check the record of title for any easements that would extend the land holding to include the neighbouring TA-owned land where the bridge is situated. The claims manager reviews the title and confirms there is no easement of any type on it. When the assessor arrives on site, the customer meets him at the bridge and shows him the damage. The assessor takes detailed notes of his observations, prepares a land sketch and takes relevant supporting photographs.

The assessor then asks the customer whether she is aware of any other damage on the property. The customer mentions that a tree fell over behind the house from the strong winds but says she did not think we covered trees. The assessor confirms that although the tree itself is not covered, if it has fallen onto land that is insured under the *EQC Act*, the tree may be considered debris that is inundating insured land. In this case, we may provide cover for the inundated land area. The assessor asks to inspect the tree to determine whether there is cover in this case.

The customer shows the assessor the tree and takes the assessor around the property to check for any other land damage. During his walkthrough, the assessor identifies no other land damage except for the inundation debris (the tree) and updates his land sketch with the extent of this damage and its location in relation to the dwelling and appurtenant structures. He takes photographs of the debris and makes detailed notes of his observations.
He measures and records the distance from the debris to the nearest insured residential building (the dwelling), and establishes that there is no debris within 8 m of the building.

Post-assessment meeting with customer

After the assessment, the assessor explains his findings to the customer. He advises the customer that all land damage has occurred outside of the land areas that are insured under the *EQC Act*. He explains that the bridge must be fully within the land holding for it to be covered and in this case, even though it is within 60 m of the dwelling and forms part of the main access way, part of it is situated outside of the land holding. He also explains that although the tree is debris inundation, it has not affected any insured land because it is more than 8 m from the dwelling or any appurtenant structure. Therefore, we do not cover the land damage (the bridge slumping and debris inundation). The assessor also explains that the customer's private insurance policy does not provide cover for the bridge.

The customer expresses disappointment but indicates that she understands the reasons.

Post-site assessment actions

The assessor completes a detailed assessment report, including the site sketch and photographs he took onsite. He prepares his settlement recommendation, which recommends that the EQCover claim is invalid because the damaged land falls outside the area of EQCover.

Post-site assessment actions

The assessor returns to his office and:

- prepares an assessment report with detailed notes about his observations supported by his photographs and sketches. A scope of works is not required.
- provides a settlement recommendation to the claims manager that the claim is invalid under the *EQC Act* because the damaged land falls outside the area of EQCover.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's recommendation and on that basis, he contacts the customer to advise them of the claim outcome and explain the reasons for this and then closes the claim.

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ii. Minor land damage

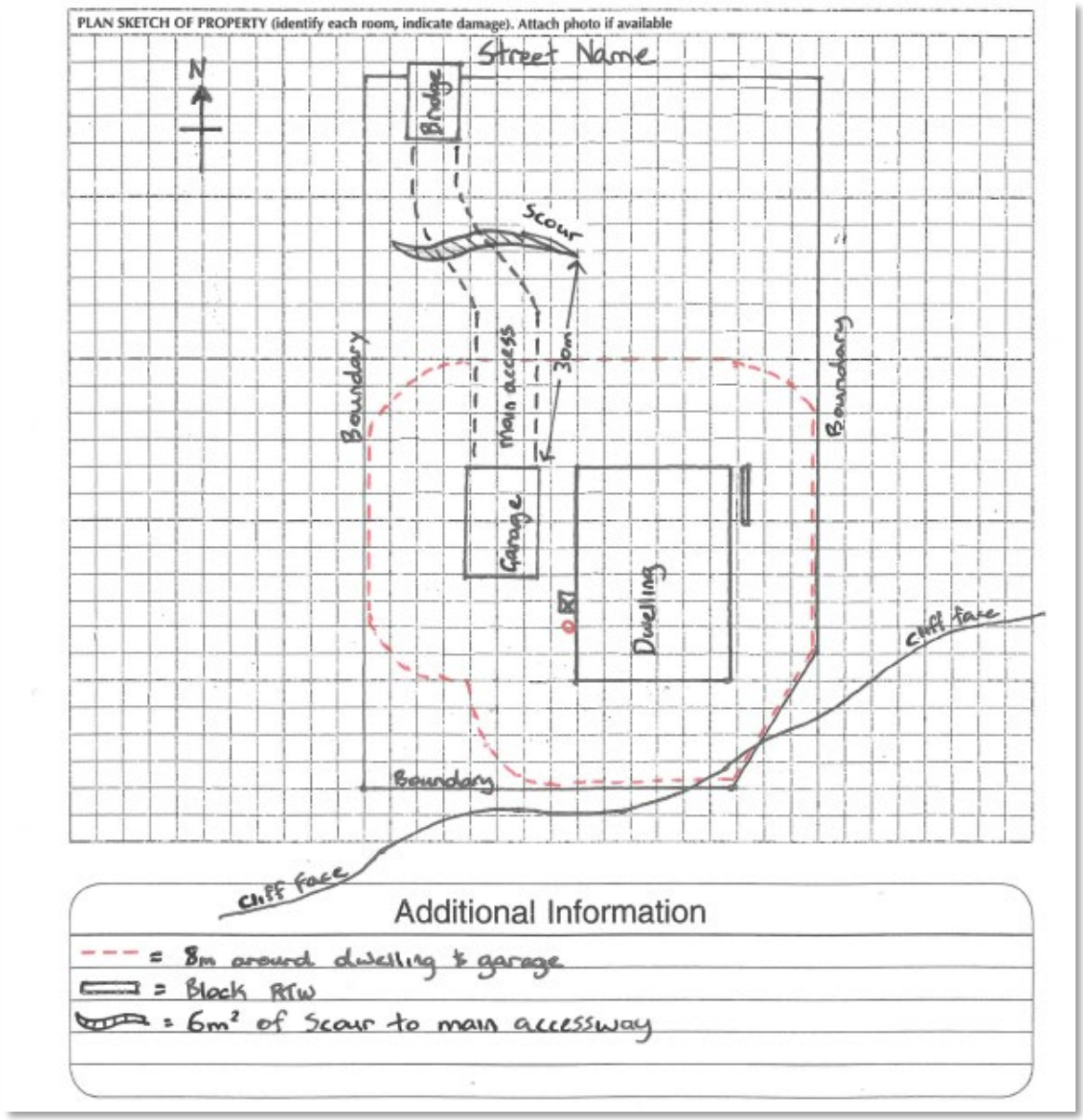

Figure 139 Site sketch with minor land damage

Natural disaster type: Storm

Claim lodgement and triage

Following an overnight storm, the customer lodges a claim via his insurer's web lodgement portal. The lodgement note states:

We had a lot of water flowing off the neighbour's hill during last night's storm and this morning we've realised that part of our driveway has been washed out. We have a 4WD truck so can still get in and out of our property.

The team member assigns the claim to a claims manager who calls the customer. The customer reiterates to her the damage described above. The claims manager asks the customer if he has any other property damage, e.g. a shed or garage that may have been flooded. The customer he says he doesn't think so, but he is not sure. The claims manager arranges an assessment.

Assessment

The assessor reviews the claim file and then calls the customer and books a suitable time to assess the property.

The assessor arrives at the property and parks on the street. She takes care as she walks up to the house, noting the recent scouring damage on the gravel/metal driveway. She meets the customer at the house and they go to inspect the damage together.

The assessor confirms that heavy rainfall during the storm has caused surface water to flow off the neighbouring hill, west of the customer's property, and onto their main access way. This has caused scouring damage to an approximate 2 m wide section of the gravel/metal driveway, approximately 30 m from the detached garage situated on the west side of the dwelling.

The assessor measures the total area of land that has been scoured and notes that it extends beyond the insured land area onto the front lawn. She takes detailed notes and photographs of the damage and creates a land sketch, carefully recording all relevant aspects of the property, all the land damage and the insured land areas. She also measures the land damage that is within insured land areas at 6 m^2.

The customer agrees to show the assessor around the rest of the property to check for any other possible storm damage. They do not find any further damage. Based on her observations and the damage that has occurred (i.e. scour damage from a storm) the assessor is confident that there is no imminent damage risk. Because there are also no damaged land structures, she decides not to engage a geotechnical engineer.

Post-assessment meeting with the customer

The assessor explains the findings of her assessment to the customer. She also explains:

- that she considers the scouring of the main access way is the result of natural disaster (storm) damage;
- the remediation strategy to fix the damage to the driveway (the insured land area);
- that she will be preparing a costed scope of works upon returning to the office;
- the basis of settlement, i.e. the claim will be settled either on the value of the damaged land (6 m^2) or the cost to repair that land, whichever is the lesser amount (however, she explains that she is unable to say which basis she will make her recommendation on until she has completed the scope of works);
- that if a property-specific valuation is required, a registered valuer will be in contact with him to arrange a suitable time to visit the property.

The assessor also takes the opportunity to explain the remainder of the assessment process, the EQCover cap, excess and settlement process.

Assessor's post-site assessment actions

The assessor returns to her office and:

- prepares an assessment report with detailed notes about her observations and supported by her photographs and sketches;
- completes her scope of works and submits it for peer review and approval;
- determines that a valuer is not required because the land can be valued using a 'notional' land value[199], and carries out the process to obtain this valuation;
- notifies the claims manager of the claim's progress.

Assessor final actions

The assessor's costed scope of works for the remediation strategy has been approved. The assessor then creates a settlement recommendation for the claims manager to review. The assessor recommends that the claim be settled on the basis of remediation because the scope of works repair estimate of $850.00 is less than the notional land value of $1,200.00.

[199] See *Toka Tū Ake EQC Claims Manual – Residential Land, Section 7.A.c.vii Assessing the Relevant Land Values*.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. She agrees with the assessor's recommendation and on that basis, contacts the customer to advise him of the claim outcome and explain the reasons for this.

The claims manager advises the customer that:

- she obtained a valuation for the damaged land from a valuer.
- if the customer finds further damage, additional repairs are required, or the cost of the repairs is greater than was estimated, he should get back in contact.

The claims manager then arranges payment and closes the claim.

Settlement calculation

Claim item	Repair estimate*	Valuation	Settlement amount
Land scour			
Evacuation – main access way (6 m^2)	$850.00	$1,200.00	$850.00
Sub-total	**$850.00**	**$1,200.00**	**$850.00**
Less excess ($500 minimum)			$500.00
Total land settlement to customer			**$350.00**

*Basis of settlement

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iii. Moderate land damage

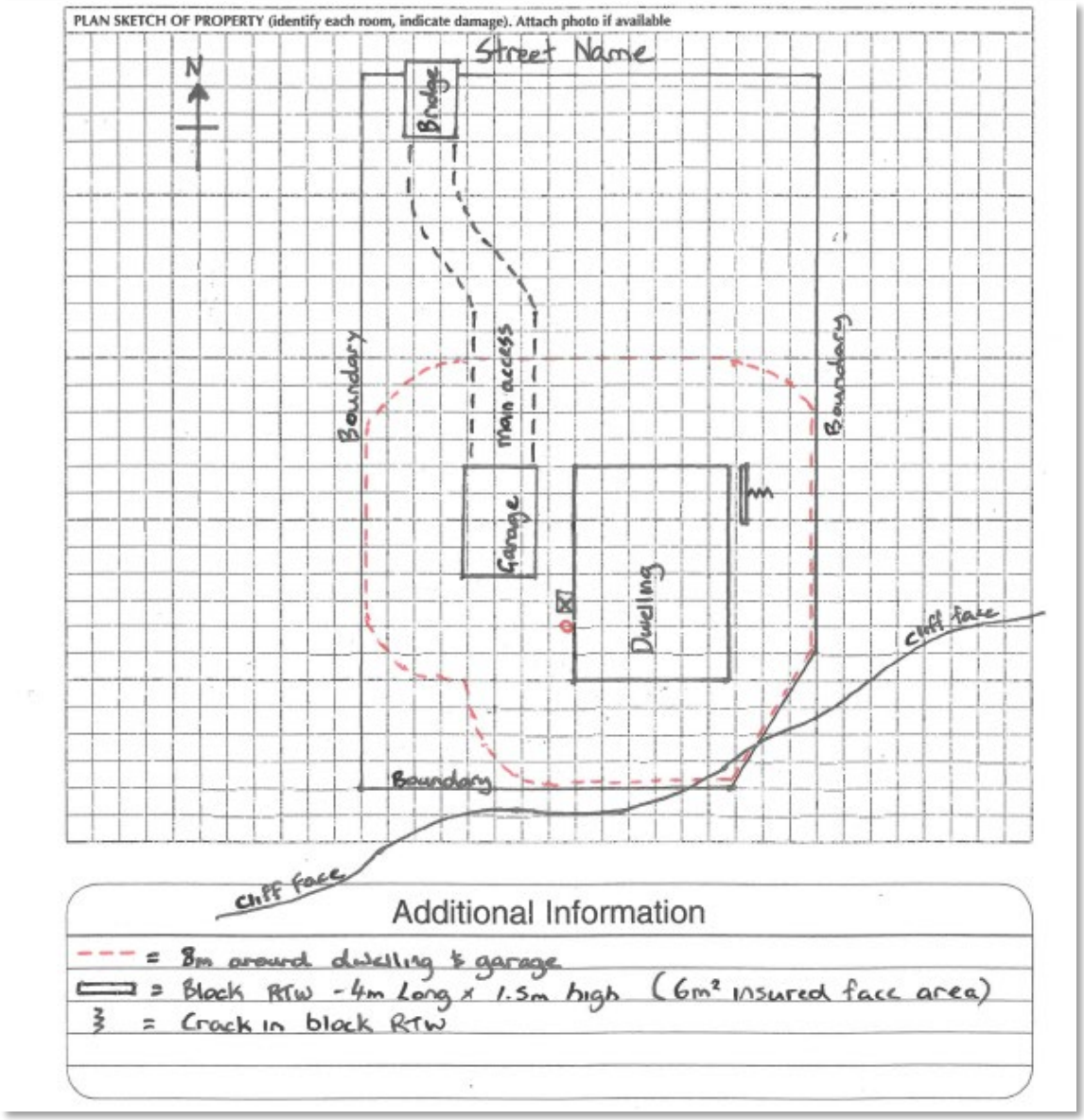

Figure 140 Site sketch of moderate land damage

Natural disaster type: Earthquake

Claim lodgement and triage

A customer lodges a claim for earthquake damage via her insurer's online claim lodgement portal. The customer's lodgement notes state:

I am not really sure when this occurred, but there was a small earthquake 2 weeks ago. A week later, I was doing some gardening on the east side of my house and I saw some cracks in my retaining wall. I am concerned as this wall holds up part of my home.

A claims manager triages the claim and notes that a magnitude 5.2 earthquake occurred approximately 30 km from the property location. *GeoNet* recorded the shaking as moderate. The claims manager contacts the customer, discusses the damage and confirms that the damaged retaining wall appears to be within EQCover-insured land areas. The claims manager decides it is appropriate for an assessor to attend the property and inspect the damage.

Assessment

The assessor reviews the claim file and then phones the customer to discuss the damage. The customer says she has looked around the property with a builder friend and she is reasonably certain that there is no damage beyond what she has already reported. The assessor books a site assessment.

The customer meets the assessor at the property and shows him the damaged retaining wall near to, and on the eastern side of, the dwelling. The assessor can see a fresh crack in the blockwork that forms the retaining wall which is within the insured land area. Although the retaining wall runs parallel with the dwelling and is situated approximately 200 mm off the foundation line, there are no visible mechanical connections between the retaining wall and the dwelling.

The assessor considers that the damage is new because of the lack of weathering to the faces of the crack, the sharpness of the edges of the crack, and the lack of debris within the crack.

The assessor checks the interior of the dwelling and is satisfied that there is no visible damage to the building associated with the retaining wall damage. He checks the subfloor to assess the ground immediately behind the retaining wall and does not detect any visible issues. He checks the concrete perimeter foundation of the dwelling and does not find any damage.

The assessor records the damage in a land sketch and takes detailed notes of the damage and relevant supporting photographs.

Based on his assessment, the assessor concludes that the damage is the result of the earthquake that occurred two weeks ago because:

- the severity of the shaking was moderate in the property location;
- there is no evidence of weathering in the crack;
- the edges of the crack are sharp;
- there is no debris in the crack.

The assessor determines a geotechnical engineer is required to:

- quantify the extent of the damage;
- confirm that the proximate cause is natural disaster;
- advise on any imminent damage to insured land and/or the residential building; and
- provide a conceptual remediation strategy for the land (structure) repair and estimate for relevant professional and compliance fees.

Because of the retaining wall's proximity to the dwelling, the assessor also asks the geotechnical engineer to confirm that the retaining wall is not mechanically connected to the dwelling.

Post-assessment meeting with customer

The assessor explains the findings of his assessment to the customer along with:

- the next steps;
- expected time frames;
- excess amounts; and
- imminent damage considerations.

The customer asks some questions about what she might do to repair the damage. The assessor recommends that she wait until the geotechnical engineer assesses the property to allow him to make an accurate assessment.

The assessor also takes the opportunity to explain the remainder of the assessment process, the EQCover cap, excess and settlement process.

Post-site assessment actions

The assessor returns to his office and:

- finishes the site inspection documents, including preparing an assessment report with detailed notes about his observations and supported by his photographs and sketches;
- requests that a geotechnical engineer attend the property and prepare a report on their findings;
- notifies the claims manager of the claim's progress.

Geotechnical engineer investigations and site assessment

The engineer receives the request and contacts the customer to arrange a time to assess the damage.

She attends the site and the owner directs her to the damaged retaining wall. The engineer determines that the crack in the retaining wall is the direct result of the earthquake as claimed, and quantifies the full extent of the damage and the total insured face area of the retaining wall.

Because the crack is less than 3 mm wide, the engineer proposes an epoxy injection as a conceptual remediation strategy that restores the functionality of the retaining wall. She determines that there is no imminent damage.

After attending site, the engineer requests the property file from the local TA to confirm whether the retaining wall is mechanically connected to the dwelling. She finds that the retaining wall was constructed approximately 12 years before and was consented. She also confirms that the retaining wall is not mechanically connected to the dwelling.

The engineer documents her findings in a draft report and sends it to the assessor for review. The assessor reviews her report and confirms that no points require clarification. The engineer finalises her report and uploads it to the claim file for use by the claims manager and assessor.

Geotechnical engineer's summary of information (engineering report)

Is this natural disaster damage?	Yes (Earthquake)
Land within 8 m of dwelling or appurtenant structure	**Nil**
Area of insured land damaged	
Evacuated land	Nil
Inundated land	Nil
Area of insured land at risk of imminent damage	
Evacuation	Nil
New inundation	Nil
Re-inundation	Nil
Main access way within 60 m of dwelling	**Nil**
Area of insured land damaged on or supporting main access way	
Evacuated	Nil
Inundated	Nil
Area of insured land at risk of imminent damage on or supporting main access way	
Evacuation	Nil
New inundation	Nil

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Re-inundation	Nil
Retaining walls supporting or protecting insured buildings and/or land located within 60 m of dwelling (or an appurtenant structure)	**Yes**
Timber pole retaining wall – 225 mm SED timber poles at 1 m centres (retaining wall 1): Whole wall length Retained height Damaged (insured face area) Imminent damage (insured face area) Insured wall (face area) Total wall (face area)	 10 m 1.5 m 2 m^2 Nil 15 m^2 15 m^2
Dwelling and appurtenant structure(s)	**n/a**
Has the dwelling or appurtenant structure been damaged as a result of the natural disaster?	No
Cost to repair damage	n/a*
Is the damage to the dwelling) or appurtenant structure) imminent as the direct result of a natural disaster?	No
Cost to remove imminent loss threat to dwelling (or appurtenant structure)	n/a
Value of imminent damage to dwelling (or appurtenant structures)	n/a*
Services within 60 m of dwelling	**n/a**
Bridges or culverts situated on insured land	**n/a**
Conceptual remediation works:	
Reinstate damage and remove risk of imminent damage to insured retaining wall by injecting epoxy into 2 m length hairline crack in retaining wall 1.	Nil + construction costs* (excluding GST)

*To be assessed by a Toka Tū Ake EQC cost estimator

Assessor next actions

The assessor:

- notifies the claims manager that the finalised engineering report has been uploaded to the claim file;
- asks the claims manager to provide the customer with a copy of the engineering report and a claim update;
- engages a valuer and asks them to provide a valuation for the indemnity value of the insured face area of the damaged retaining wall as quantified in the engineering report;
- completes his scope of works and submits it for peer review and approval, based on the engineer's recommended remediation strategy.

The claims manager contacts the customer to:

- update her on the progress of her claim;
- explain the engineer's findings;
- arrange to provide her with a copy of the report; and
- advise what will happen with her claim next.

Valuer investigation

The valuer receives the request from the assessor to value the damaged land structure and reviews the engineering report supplied.

The valuer carries out a site assessment and provides the assessor with a valuation report which lists the indemnity value of the retaining wall at $18,300.00.

Valuation summary

In accordance with Earthquake Commission requirements and pursuant to the Earthquake Commission Act 1993, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Description		Area	Value
1a	Area of land (minimum sized site under District Plan)	450 m^2	
1b	Value of minimum sized site		$300,000.00
1c	Actual site area	800 m^2	
2	Value of a 4000 m^2 site (if applicable)	n/a	
3a	Market value of damaged land evacuated	n/a	
3b	Market value of damaged land inundated	n/a	
3c	Market value of land at risk of imminent damage by evacuation	n/a	
3d	Market value of land at risk of imminent damage by new inundation	n/a	
3e	Market value of land at risk of imminent damage by re-inundation	n/a	
4a	Indemnity value of other damaged property	15 m^2	$18,300.00
4b	Indemnity value of other property at risk of imminent damage	n/a	
5	Description of property valued in 4a; timber pole retaining wall up to 1.5 m high – insured face 15 m^2		

Assessor final actions

The assessor's costed scope of works for the engineer's conceptual remediation strategy has been approved. The repair cost is estimated at $1,560.13. After receiving the valuer's report, the assessor checks that the figures valued match those detailed in the geotechnical engineering report. The assessor compares the estimated repair cost to the valuation. Because the repair cost is less than the indemnity value of the retaining wall, in accordance with *section 19 of the EQC Act*, the assessor recommends to the claims manager that the claim be settled on the remediation costs, minus the applicable excess of $500.00.

EQCover is changing due to amendments to the Earthquake Commission Regulations 1993.
These changes take place on and from 1 Oct 2022 to and including 30 Sep 2023.
Text in yellow in this Manual reflects cap, premium and excess provisions.
See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

Settlement calculation

Claim item	Repair estimate*	Valuation	Settlement amount
Land structure			
Retaining wall 1 (RTW 1)	$1,560.13	$18,300.00	$1,560.13
Sub-total	**$1,560.13**	**$18,300.00**	**$1,560.13**
Less excess ($500 minimum)			$500.00
Total land settlement to customer			**$1,060.13**

*Basis of settlement

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's recommendation and on that basis, contacts the customer to advise her of the claim outcome and explain the reasons for this. The claims manager advises the customer that if she finds further damage, additional repairs are required, or the cost of the repairs is greater than was estimated, she should get back in contact. The claims manager then arranges payment and closes the claim.

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Text in yellow in this Manual reflects cap, premium and excess provisions.
See the *Building Cap and EQCover Premium Change – 2022 Phase-in Guide* for details.

iv. Severe land damage

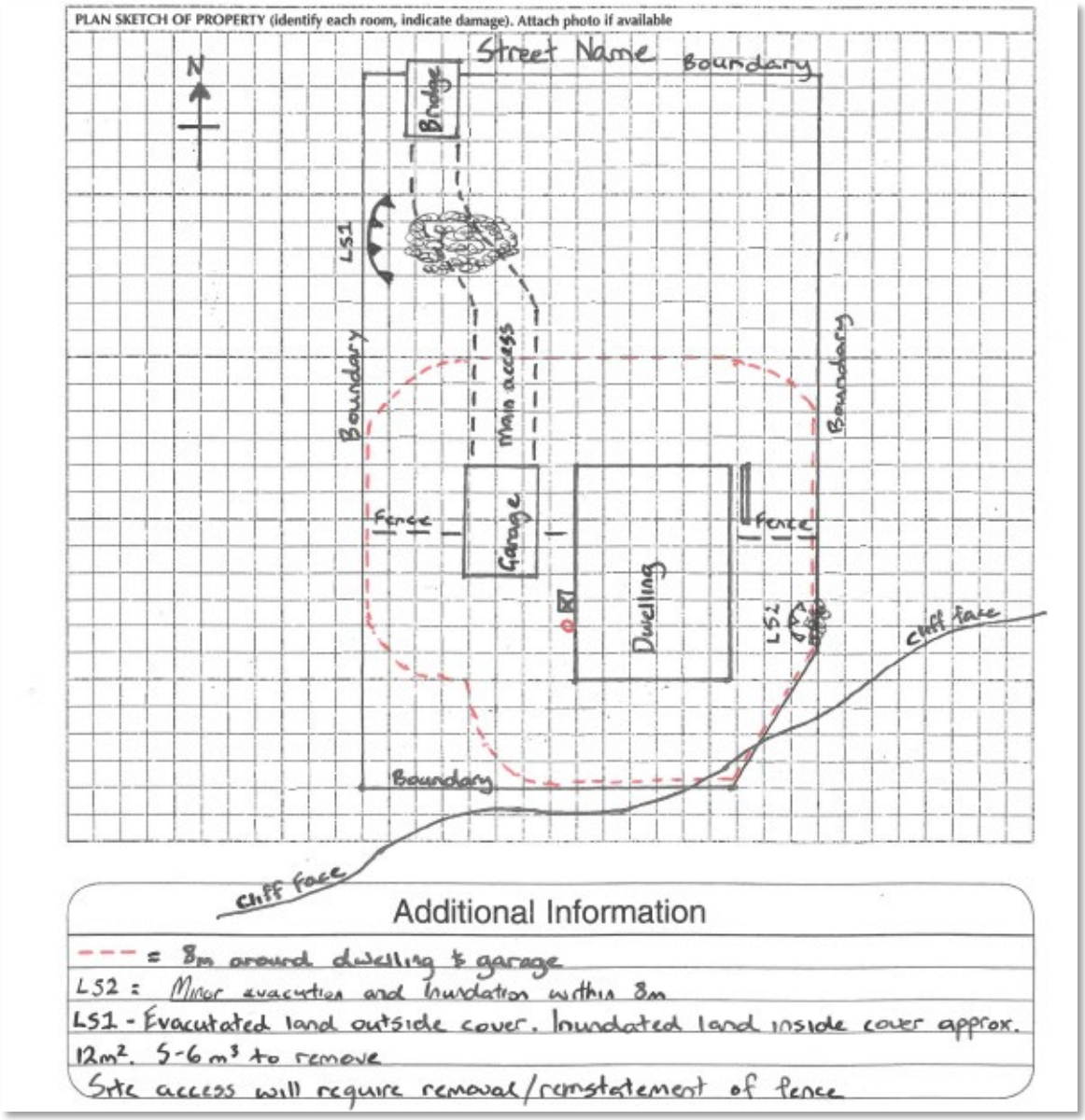

Figure 141 Site sketch of severe land damage

Natural disaster type: Natural landslip

Claim lodgement and triage

A customer calls her insurer's contact centre to lodge a claim. She reports that she can no longer access the property because her access way is blocked by debris.

The team member taking the call asks about the damage and the location and makes the following notes:

- *The customer cannot access her property as a large landslip has occurred and mud and rocks are all over the driveway. The mud is approximately 1 m high and covers the entire width, and a 4 m length of, the driveway.*
- *There is another landslip on the other side of the house – probably about 2 m away.*
- *The customer is very anxious as she has a disabled grandchild who stays one week per month for respite care. With the current access situation, she will be unable to provide this support to her family.*

Once the claim lodgement process is finished, our representative escalates the claim to a claims manager because of the vulnerabilities the customer is experiencing.

The claims manager reviews the file and contacts the customer to explain the claims process. The claims manager explains the urgent works process and suggests that the customer may wish to consider arranging the removal of debris from her driveway to restore access to her home. He then assigns the claim to an assessor and follows up with a phone call to confirm they can carry out a priority assessment.

Assessment

The assessor reviews the claim file and other relevant property information, such as an aerial plan of the property, noting relevant details, e.g. property boundary. He then calls the customer to confirm a suitable time to assess the property damage, acknowledging the vulnerabilities the customer is experiencing and urgency requirements.

The assessor arrives at the property and notes the access way remains blocked with inundation debris. He updates his site risk assessment and, having confirmed it is safe to enter the property, the assessor meets with the customer. The customer points out the areas of concern and the assessor confirms the following damage:

- Landslip 1:
  - Inundation of the main access way within 60 m of the dwelling
  - Evacuation of land outside the EQCover-insured area
- Landslip 2:
  - Evacuation of land within 8 m of the dwelling
  - Inundation within 8 m of the dwelling

The assessor records the damage in a land sketch and takes detailed notes of the damage and relevant supporting photographs.

The assessor also notes that any potential repair to this property will require heavy machinery and there will be site access issues. He records details of an undamaged side fence that would need to be removed to provide the necessary site access.

Post-assessment meeting with customer

Because of the complexity of the damage, the assessor takes time with the customer to explain the findings of his assessment. He advises her that:

- the damage falls within the land areas covered by EQCover as defined by the *EQC Act*. A geotechnical engineer is required to attend the site for further claim investigations and report on their findings, including:
    - confirming natural disaster damage has occurred;
    - quantifying the damage that has occurred (including any imminent damage);
    - providing a conceptual remediation strategy for the damage that has occurred, which would also remove any risk of imminent damage;
- he (the assessor) will then prepare a scope of works for the conceptual remediation strategy provided in the geotechnical engineering report and engage a valuer to value the areas of land damage quantified; and
- a valuer is required to provide a land valuation of the insured land and damage to determine the maximum amount payable under *section 19 of the EQC Act*.

The customer says this a lot of information to think about, so the assessor explains to her:

- that there is relevant information on our website;
- that the claims manager will be in regular contact to update her on her claim and provide her with any new information, e.g. geotechnical engineering report, as it becomes available;
- that the customer can call her claims manager at any time with questions;
- that if the customer wishes, she can add someone she trusts to her claim as an additional contact to support her with it;
- that she may also consider having this support person help her arrange to have the debris removed from her driveway to restore access to her home. The assessor explains this would be carried out as urgent work and provides the necessary details on how to claim the cost of urgent works.

The assessor leaves the customer with the relevant land claim fact sheets and makes sure she has his contact details and those of the claims manager.

Post-site assessment actions

The assessor returns to the office and:

- prepares an assessment report which explains the observed damage, the assessment outcome and the discussions she had onsite with the customer;
- uploads the assessment report and supporting information, including photographs and sketches, to the claim file;
- requests that a geotechnical engineer attend the property and prepare a report on their findings. The assessor requests that the geotechnical engineer give the assessment priority due to the vulnerabilities the customer is experiencing.

Geotechnical engineer investigations and site assessment

The geotechnical engineer receives the request and contacts the customer to schedule a time to assess the damage.

The engineer visits the property and completes his assessment of the damage, as well as taking detailed measurements and noting his observations.

The engineer provides a draft report to the assessor for review. The assessor reviews his report and confirms that no points require clarification. The engineer finalises his report, which details the following:

Property damage

Two landslips have occurred following heavy rainfall two weeks ago, which has resulted in the following natural disaster (landslip) damage to insured land:

- Landslip 1 – a 5 m wide headscarp resulting in:
  - inundation on the main access way within 60 m of the dwelling (average depth 1 m);
  - imminent damage risk of re-inundation on the main access way within 60 m of the dwelling.

    The evacuated land from landslip 1 has occurred outside of EQCover-insured land areas.
- Landslip 2 – a 1m wide landslip headscarp resulting in:
  - evacuation within 8 m of the dwelling
  - inundation within 8 m of the dwelling
  - imminent damage risk of further evacuation of insured land within 8 m of the dwelling
  - imminent damage risk of re-inundation within 8 m of the dwelling.

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The dwelling has not been damaged and is not considered to be at risk of imminent damage from either landslip.

The geotechnical engineer provides a conceptual remediation strategy for the damage caused by landslip 1 and landslip 2.

Geotechnical engineer's summary of information (engineering report)

Is this natural disaster damage?	Yes (Landslip 1)	Yes (Landslip 2)
Land within 8 m of dwelling or appurtenant structure	**Nil**	**Yes**
Area of insured land damaged		
Evacuated land	Nil	2 m^2
Inundated land	Nil	4 m^2 (1 m^3)
Area of insured land at risk of imminent damage		
Evacuation	Nil	1 m^2
New inundation	Nil	Nil
Re-inundation	Nil	4 m^2 (0.5 m^3)
Main access way within 60 m of dwelling	**Yes**	**Nil**
Area of insured land damaged on or supporting main access way		
Evacuated	Nil	Nil
Inundated	12 m^2 (6 m^3)	Nil
Area of insured land at risk of imminent damage on or supporting main access way		
Evacuation	Nil	Nil
New inundation	Nil	Nil
Re-inundation	12 m^2 (3 m^3)	Nil
Retaining walls supporting or protecting insured buildings and/or land located withing 60 m of dwelling (or an appurtenant structure)	**Nil**	**Nil**
Not applicable:		
Whole wall length		
Retained height		

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Damaged (insured face area) Imminent damage (insured face area) Insured wall (face area) Total wall (face area)		
Dwelling and appurtenant structure(s)	**n/a**	**n/a**
Has the dwelling or appurtenant structure been damaged as a result of the natural disaster?	No	No
Cost to repair damage	n/a*	n/a*
Is the damage to the dwelling) or appurtenant structure) imminent as the direct result of a natural disaster?	No	No
Cost to remove imminent loss threat to dwelling (or appurtenant structure)	n/a	n/a
Value of risk of imminent damage to dwelling (or appurtenant structures)	n/a*	n/a*
Services within 60 m of dwelling	**n/a**	**n/a**
Bridges or culverts situated on insured land	**n/a**	**n/a**
Conceptual remediation works:		
Landslip 1: Reinstate damage to land and remove risk of imminent damage to insured land by removing debris and constructing a 6 m long catch fence. Landslip 2: Reinstate damage to land and remove risk of imminent damage to insured land by removing debris and constructing a 2 m long cantilever timber retaining wall (225 mm SED timber poles at 1 m centres and minimum pole embedment 2.5 m, 3.6 m total pole length)	$5,000.00 + construction costs* (excl. GST)	$12,500.00 + construction costs* (excl. GST)

*To be assessed by a Toka Tū Ake EQC cost estimator

Assessor next actions

The assessor:

- notifies the claims manager that the finalised geotechnical engineering report has been uploaded to the claim file;
- asks the claims manager to provide the customer with a copy of the engineering report and a claim update;
- engages a valuer and asks them to provide a valuation of the land damaged by natural disaster as detailed in the engineering report;
- completes his scope of works and submits it for peer review and approval.

Valuer investigations

The valuer receives the request from the assessor to value the damaged land and reviews the engineering report supplied.

The valuer provides a report to the assessor detailing the value of:

- the minimum sized site under the operative district plan;
- the land actually damaged;
- the land at risk of imminent damage.

Valuation summary

In accordance with Earthquake Commission requirements and pursuant to the Earthquake Commission Act 1993, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Description		Area	Value
1a	Area of land (minimum sized site under district plan)	450 m^2	
1b	Value of minimum sized site		$300,000.00
1c	Actual site area	800 m^2	
2	Value of a 4000 m^2 site (if applicable)	n/a	
3a	Market value of damaged land evacuated	LS2 / 2 m^2	$1,200.00
3b	Market value of damaged land inundated	LS1 / 12 m^2 LS2 / 4 m^2	$3,000.00 $1,200.00
3c	Market value of land at risk of imminent damage by evacuation	LS2 / 1 m^2	$600.00
3d	Market value of land at risk of imminent damage by new inundation	n/a	n/a
3e	Market value of land at risk of imminent damage by re-inundation	LS1 / 12 m^2 LS2 / 4 m^2	$3,000.00 $1,200.00
4a	Indemnity value of other damaged property	n/a	n/a
4b	Indemnity value of other property at risk of imminent damage	n/a	n/a
5	Description of property valued in 4a; not applicable		

Assessor final actions

The assessor's costed scope of works for the engineer's conceptual remediation strategy has been approved. After receiving the valuer's report, the assessor checks that the figures match those in the engineering report. The assessor then creates a settlement recommendation for the claims manager's review.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's recommendation and on that basis, contacts the customer to advise her of the claim outcome and explain the reasons for this, arranges payment and then closes the claim.

The two landslips, which have occurred within the insured land area of a single residential building, are both covered by a single land cap for that residential building. The cap is treated as a single cap, which means it is one amount made up of the values of the areas of land damaged by landslip 1 plus landslip 2.

The single cap of $6,000 applies to the entire residential land exposure for this residential building. The cap is the maximum amount that can be paid. Because the cap of $6,000 is less than the $22,950 total cost of repair in this example, the amount of the payment to settle the residential land exposure is the cap of $6,000 (less the excess that applies).

Settlement calculation

Claim item	Repair estimate	Valuation	Settlement amount
Landslip 1			
Inundation – main access way (12 m^2/6 m^3)	$1,100.00	$3,000.00	$3,000.00
Imminent damage re-inundation – main access way (12 m^2 / 3 m^3)	$850.00	$3,000.00	n/a*
Landslip 2			
Evacuation – within 8 m of dwelling (2 m^2)	$20,000.00	$1,200.00	$1,200.00
Imminent damage evacuation - within 8 m of dwelling (1 m^2)	Costed in the repair of evacuation above	$600.00	$600.00
Inundation – within 8 m of dwelling (4 m^2/1 m^3)	$500.00	$1,200.00	$1,200.00
Imminent damage re-inundation – within 8 m of dwelling (4 m^2/0.5 m^3)	$500.00	$1,200.00	n/a*

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Sub-total	**$22,950.00**	**$6,000.00**	**$6,000.00**
Less excess (10%)			$600.00
Total land settlement to customer			**$5,400.00**

(*Re-inundation is not included in the settlement because the value of land is already valued in the inundation amount. Therefore, valuation of the same area cannot occur twice unless re-inundation is greater than the inundated value).

v. Unrepairable land damage (cliff collapse)

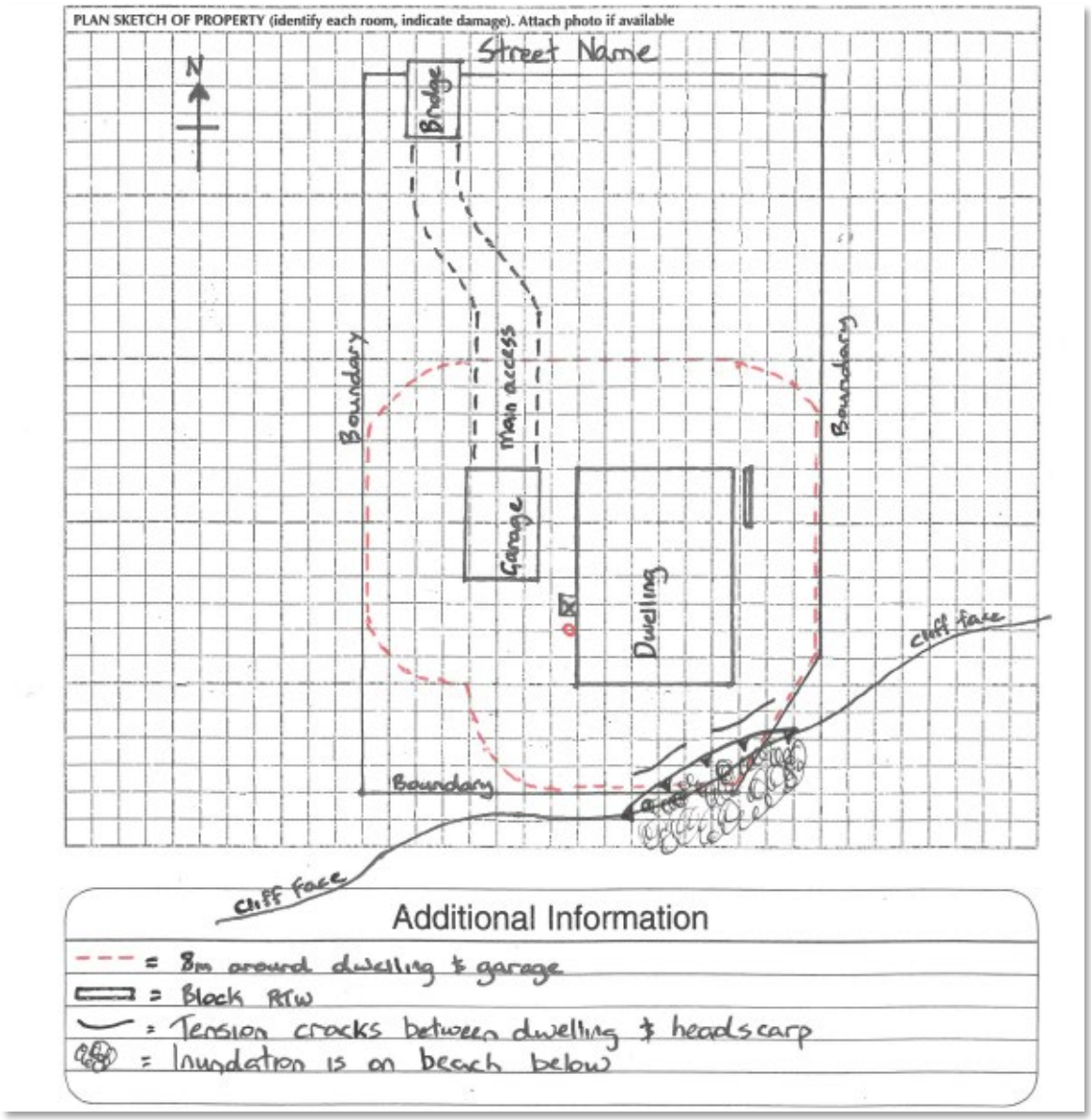

Figure 142 Site sketch of unrepairable land damage

Natural disaster type: Natural landslip

Claim lodgement and triage phase

A cyclone causes large areas of flooding and other storm damage including natural landslips in the local area. A customer lodges a claim for a natural landslip through her insurer's online lodgement portal. When lodging her claim, the customer states:

After all the bad weather we've been having, we got up on Tuesday morning and found that over 4 metres of the cliff at the rear of our house has fallen away.

The claims manager receives the claim file and contacts the customer to discuss the damage. The claims manager confirms with the customer that the damage that has occurred is within 8 m of the residential building. The customer states that the cliff face is now approximately 6 m away from the residential building. The claims manager recommends that the customer take reasonable steps to reduce safety concerns if it is safe to do so, e.g. put up a temporary barrier.

The claims manager asks for an assessor to attend the property and carry out a site assessment.

Assessment

The assessor reviews the claim file and calls the customer to discuss the damage in more detail. The customer says she has not noticed any further movement since lodging her claim. She says she has now taped of the cliff edge to stop people from approaching it. A site assessment is booked and confirmed.

The customer meets the assessor onsite and they look at the area of damage together. The assessor finds visible land (tension) cracks in the lawn close to the cliff edge (headscarp) which indicate that there is still a degree of slope instability and that any assessment needs to proceed with caution.

The assessor confirms the following damage:

- The cliff has collapsed with evacuation of part of the lawn area and the debris is visible on a section of inaccessible beach below.
- A small area of land that has been lost is within the area of residential land cover, i.e. within 8 m of the residential dwelling.
- The majority of the land that has been lost is outside the area of residential land cover, i.e. outside 8 m of the residential building.

The assessor records the damage in a land sketch and takes detailed notes of the damage and relevant supporting photographs.

Post-assessment meeting with customer

The assessor takes some time with the customer and explains the findings of her assessment. She advises her that:

- the majority of damage falls outside the land areas covered by EQCover as defined by the *EQC Act*.
- a small area of damage falls within the land areas we cover.
- a geotechnical engineer is required to attend the site for further claim investigations and report on their findings, including:
  - confirming natural disaster damage has occurred;
  - quantifying the extent of the damage that has occurred (including any imminent damage);
  - providing a conceptual remediation strategy for the natural disaster damage that has occurred, and which would also remove any risk of imminent damage; and
  - providing an estimate for relevant professional and compliance fees.
- the assessor will then prepare a scope of works for the conceptual remediation strategy provided in the geotechnical engineering report and engage a valuer to value the areas of land damage quantified.
- a valuer is required to provide a land valuation of the insured land and damage to determine the maximum amount payable under *section 19 of the EQC Act*.

The customer explains that she had two prior EQCover claims for natural landslip damage at her previous property, and she feels comfortable with the assessor's findings. The assessor offers her relevant land fact sheets and advises her that these are also on our website.

The assessor also takes the opportunity to explain the remainder of the assessment process, the EQCover cap, excess and settlement process.

Post-site assessment actions

The assessor returns to the office and:

- prepares an assessment report with detailed notes about his observations and supported by his photographs and sketches;
- asks a geotechnical engineer to attend the property and prepare a report on their findings.

Geotechnical engineer investigations and site assessment

Before visiting the site, the geotechnical engineer reviews the known geological conditions in the general area of the damaged property and makes any relevant notes ready for her site assessment. She visits the property and assesses the damage as well as taking detailed notes of her observations, prepares a sketch and takes supporting photographs.

The engineer provides a draft report to the assessor for review. The assessor reviews the report and confirms that no points require clarification. The engineer finalises her report, which details the following:

- A 20 m wide landslip has occurred as a result of heavy rainfall, affecting the steep cliff face along the southeast property boundary.
- The damage to the land is the result of natural landslip which occurred two days before the customer notified her insurer of the claim.
- The majority of the area of land damage falls outside the insured residential land.
- A small area of land damage falls within the insured residential land.
- The damage includes evacuation of insured land and imminent damage risk of further evacuation of insured land.
- The property boundary extends to an area at the base of the cliff face, however by the time of the engineer's visit, the debris the assessor observed had been washed away by the sea. Therefore, no remediation is required for the inundation debris.
- The engineer proposes geofabric matting as a conceptual remediation strategy to remove the imminent damage risk of further evacuation. However, she considers that there is no practical remediation strategy to reinstate the evacuated land damage that has already occurred, i.e. the land lost from the cliff collapse cannot be restored.

Geotechnical engineer's summary of information (engineering report)

Is this natural disaster damage?	Yes (landslip 1)
Land within 8 m of dwelling or appurtenant structure	**Yes**
Area of insured land damaged	7 m^2
• Evacuated land	Nil
• Inundated land	
Area of insured land at risk of imminent damage	16 m^2
• Evacuation	Nil
• New inundation	Nil
• Re-inundation	
Main access way within 60 m of dwelling	**Nil**

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Area of insured land damaged on or supporting main access way • Evacuated • Inundated	 Nil Nil
Area of insured land at risk of imminent damage on or supporting main access way • Evacuation • New inundation • Re-inundation	 Nil Nil Nil
Retaining walls supporting or protecting insured buildings and/or land located within 60 m of dwelling (or an appurtenant structure)	**Nil**
Not applicable: • Whole wall length • Retained height • Damaged (insured face area) • Imminent damage (insured face area) • Insured wall (face area) • Total wall (face area)	
Dwelling and appurtenant structure(s)	**n/a**
Has the dwelling or appurtenant structure been damaged as a result of the natural disaster?	No
Cost to repair damage	n/a*
Is the damage to the dwelling) or appurtenant structure) imminent as the direct result of a natural disaster?	No
Cost to remove risk of imminent damage to dwelling (or appurtenant structure)	n/a
Value of risk of imminent damage to dwelling (or appurtenant structures)	n/a*
Services within 60 m of dwelling	**n/a**
Bridges or culverts situated on insured land	**n/a**
Conceptual remediation works:	
Due to site topography, it is considered impractical to reinstate all the damaged land. To remove risk of imminent damage to insured land, trim headscarp, contour side scarps, remove debris and install MacMat geogrid (or similar geofabric) over 30m^2 area with Duckbill anchors placed at 3.0 m spacing, offset 1.5 m from each other and to a depth around 1.5 m to support the geogrid and the slope.	$5,000.00 + construction costs* (excluding GST)

*To be assessed by a Toka Tū Ake EQC cost estimator

Assessor next actions

The assessor:

- notifies the claims manager that the finalised geotechnical engineering report has been uploaded to the claim file;
- calls the claims manager about the engineer's advice that the evacuated land damage is unrepairable, and to discuss what the recommended basis for settlement should be;
- asks the claims manager to provide the customer with a copy of the engineering report and a claim update;
- engages a valuer and asks him to provide a valuation of the insured land damaged by natural disaster as detailed in the engineering report and a diminution of value (DOV) valuation for the area of insured land damage that the engineer considers to be unrepairable.
- completes his scope of works for the engineer's recommended installation of anchored geomat at $20,000.00 to remove the imminent damage risk, and submits it for peer review and approval.

The assessor and claims manager agree it is appropriate to ask the valuer to provide both a market value for the insured land damaged by natural disaster and a DOV calculation for the property. This is because:

- it is not practical to carry out a repair that would reinstate the evacuated land (cliff collapse)
- the cost of any repair work would be disproportionate to the reduction in value to the property caused by the evacuated land damage.

Valuer investigations

The valuer receives the request from the assessor to both value the damaged land and provide a DOV valuation for the property. He also reviews the engineering report.

The valuer carries out the site assessment and provides the assessor with a valuation report which values the land actually lost or damaged (including imminent damage) at $32,750.00.

The valuer also provides the assessor with a DOV valuation report which values the loss in value from the insured land area that is unrepairable at $10,000.00.

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Valuation summary

In accordance with Toka Tū Ake EQC requirements and pursuant to the Earthquake Commission Act 1993, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Description		Area	Value
1a	Area of land (minimum sized site under District Plan)	450 m^2	
1b	Value of minimum sized site		$300,000.00
1c	Actual site area	800 m^2	
2	Value of a 4000m^2 site (if applicable)	n/a	
3a	Market value of damaged land evacuated	7 m^2	$8,750.00
3b	Market value of damaged land inundated	N/A	
3c	Market value of land at risk of imminent damage by evacuation	16 m^2	$24,000.00
3d	Market value of land at risk of imminent damage by new inundation	n/a	
3e	Market value of land at risk of imminent damage by re-inundation	n/a	
4a	Indemnity value of other damaged property	n/a	
4b	Indemnity value of other property at risk of imminent damage	n/a	
5	Description of property valued in 4a; not applicable		
Other	The amount of diminution of value (DOV) assessed for the property as a result of unrepairable land damage (cliff collapse) as described in the engineering report is $10,000.00		

Assessor final actions

The assessor's costed scope of works for the engineer's conceptual remediation strategy to remove the imminent damage risk has been approved. After receiving the valuer's report, the assessor checks that the figures valued match those detailed in the geotechnical engineering report and that it includes a DOV amount for the unrepairable land area.

The assessor has determined that, as set out below, the repair cost plus DOV is less than the market value of the land actually lost or damaged (including imminent damage):

	Repair cost:	$20,000.00		
Plus	DOV:	$10,000.00		
	Total:	$30,000.00	<	Market value: $ 32,750.00

Therefore, in accordance with *section 19 of the EQC Act*, the assessor recommends to the claims manager that the claim be settled on the remediation costs plus DOV, less the applicable excess of $3,000.00.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's settlement recommendation and on that basis, contacts the customer to advise her of the claim outcome and explain the reasons for this. The claims manager also advises the customer that if she finds further damage, additional repairs are required or the cost of the repairs is greater than was estimated, she should get back in contact.

The claims manager identifies that there is a mortgage on the record of title, and that the settlement payment is over the relevant mortgagee cap, so advises the customer that the claim payment will need to be made to the mortgagee. The claims manager arranges payment and then closes the claim.

Settlement calculation

Claim item	Repair estimate*	Valuation	Settlement amount
Landslip 1			
Evacuation – within 8 m of dwelling (7 m^2)	(DOV) $10,000.00	$8,750.00	$10,000.00
Imminent damage evacuation – within 8m of dwelling (16 m^2)	$20,000.00	$24,000.00	$20,000.00
Sub-total	**$30,000.00**	**$32,750.00**	**$30,000.00**
Less excess (10%)			$3,000.00
Total land settlement to customer			**$27,000.00**

*Basis of settlement

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d. Building and land combined

i. Land damage under (and affecting) the dwelling

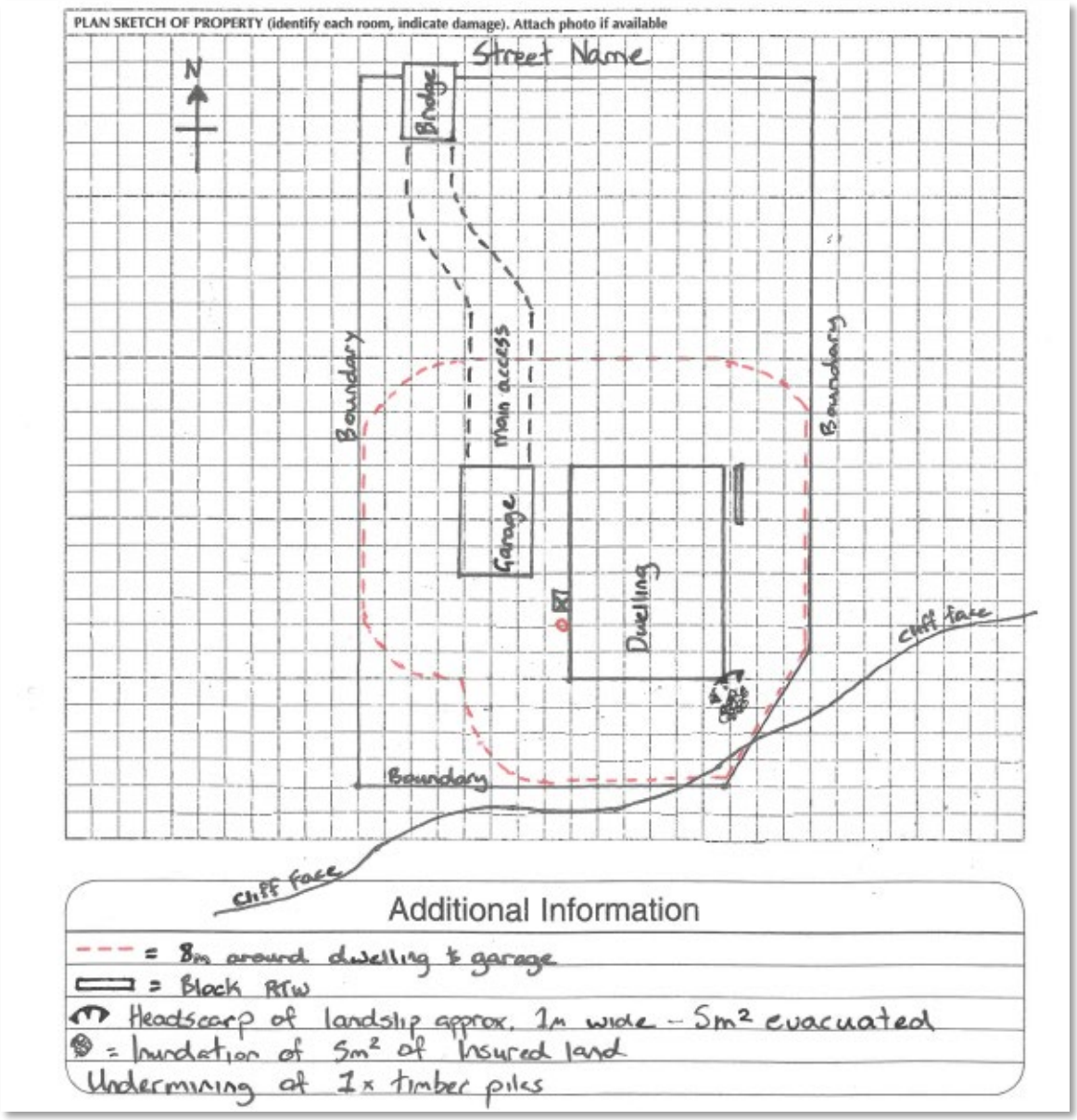

Figure 143 Site sketch of land damage under (and affecting) the dwelling

Natural disaster type**:** Natural landslip

Claim lodgement and triage

The customer lodges a claim for landslip damage via his insurer's online claim lodgement portal. His lodgement notes state:

There's been a landslip below our house. It happened during last night's storm and has exposed some of the piles. We're worried that it's going to get worse.

A claims manager triages the claim and is aware that there has been heavy rain in the area. After contacting the customer and discussing the damage with him, the claims manager considers it appropriate for an assessor to attend the property and inspect the damage.

Assessment

The assessor reviews the claim file and then contacts the customer to discuss the damage and arrange a site assessment.

When the assessor arrives onsite, the customer shows her the damage at the rear of his dwelling where the land gently slopes towards the south to the cliff edge along the property boundary. The assessor can see that a small landslip with a headscarp of approximately 1 m wide has occurred in the southeast corner of the dwelling and confirms the following damage:

- evacuation of insured land beneath the dwelling and within 8 m of the dwelling;
- inundation of insured land within 8 m of the dwelling;
- exposure of two timber foundation piles.

The assessor and the customer check the dwelling for any further damage related to the landslip and find none. The assessor records the damage in a land sketch and takes detailed notes and relevant supporting photographs of the damage. Based on this information, she determines that there has been valid natural disaster (natural landslip) damage to insured land.

Post-assessment meeting with customer

Because of the complexity of the damage, the assessor takes time with the customer and explains her findings. She advises him that:

- the damage falls within the land areas covered by EQCover as defined by the *EQC Act*;
- a geotechnical engineer is required to attend the site for further claim investigations.

She explains that she will complete a report of her findings, including:

- confirming natural disaster damage has occurred;
- quantifying the damage that has occurred (including any imminent damage);

- providing a conceptual remediation strategy for the damage that has occurred and which would also remove any risk of imminent damage.

The assessor then explains that after receiving the engineering report, she will:

- prepare a scope of works for the conceptual land remediation strategy provided in the engineering report and a separate scope of works for any building repair if necessary; and
- engage a valuer to value the areas of land damage quantified (a land valuation is required to determine the maximum amount payable under *section 19 of the EQC Act*).

The assessor also takes the opportunity to explain the remainder of the assessment process, the EQCover cap, excess and settlement process.

The customer acknowledges he understands what is happening with his claim assessment and has his claims manager's contact details in case he has any questions.

Post-site assessment actions

The assessor returns to her office and:

- prepares an assessment report that explains the observed damage, the assessment outcome and the discussions she had onsite with the customer;
- uploads the assessment report and supporting information, including photographs and sketches, to the claim file;
- requests that a geotechnical engineer attend the property and prepare a report on their findings.

Geotechnical engineer investigations and site assessment

The engineer receives the request and contacts the customer to schedule a time to assess the damage.

He visits the property and completes his assessment of the damage, as well as taking detailed measurements and noting his observations.

The engineer provides a draft report to the assessor for review. The assessor reviews his report and confirms that no points require clarification.

The engineer finalises his report, which details the following:

Property damage

A 1.5 m wide landslip has occurred following the heavy rainfall that occurred two weeks ago and has resulted in the following damage to insured property:

- 5 m^2 of evacuation (2 m^2 beneath the dwelling, 3 m^2 within 8 m of the dwelling);
- 5 m^2 of inundation (within 8 m of the dwelling);

- One timber pile that has been undermined;
- 1 m^2 risk of imminent damage from further evacuation (beneath the dwelling);
- 5 m^2 imminent damage risk of re-inundation (within 8 m of the dwelling);
- Imminent damage risk of undermining of one additional timber pile.

The engineer proposes a 2 m long timber pole retaining wall as a conceptual remediation strategy that would reinstate the evacuated land and remove the imminent damage risk to the land and dwelling. He also recommends underpinning the timber pile which has been undermined. He notes that there is good site access, and provides an estimate of the engineering and TA fees necessary to carry out the conceptual land repair.

Geotechnical engineer's summary of information (engineering report)

Is this natural disaster damage?	Yes (landslip)
Land within 8 m of dwelling or appurtenant structure	**Yes**
Area of insured land damaged Evacuated land (2 m^2 beneath dwelling + 3 m^2 within 8 m of dwelling) Inundated land	5 m^2 5 m^2 (2 m^3)
Area of insured land at risk of imminent damage Evacuation (1 m^2 beneath dwelling) New inundation Re-inundation	1 m^2 Nil 5 m^2 (0.5 m^3)
Main access way within 60 m of dwelling	**Yes**
Area of insured land damaged on or supporting main access way Evacuated Inundated	Nil
Area of insured land at risk of imminent damage on or supporting main access way Evacuation New inundation Re-inundation	Nil Nil Nil
Retaining walls supporting or protecting insured buildings and/or land located within 60 m of dwelling (or an appurtenant structure)	**Nil**
Not applicable: Whole wall length Retained height Damaged (insured face area) Imminent damage (insured face area)	

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Insured wall (face area) Total wall (face area)	
Dwelling and appurtenant structure(s)	**n/a**
Has the dwelling or appurtenant structure been damaged as a result of the natural disaster? Undermining of one (1) timber foundation pile.	Yes
Cost to repair damage	n/a*
Is the damage to the dwelling or appurtenant structure imminent as the direct result of a natural disaster? Undermining of one (1) additional timber foundation pile	Yes
Cost to remove imminent loss threat to dwelling (or appurtenant structure)	n/a *
Value of risk of imminent damage to dwelling (or appurtenant structures)	n/a *
Services within 60 m of dwelling	**n/a**
Bridges or culverts situated on insured land	**n/a**
Conceptual remediation works:	
Reinstate damage to land and remove risk of imminent damage to insured land and dwelling by removing debris and constructing a 2 m long cantilever timber retaining wall (225 mm SED timber poles at 1 m centres and minimum pole embedment 2.5 m, 3.6 m total pole length)	$12,500.00 + construction costs* (excluding GST)

*To be reviewed by a Toka Tū Ake EQC cost estimator

Assessor next actions

The assessor:

- notifies the claims manager that the finalised engineering report has been uploaded to the claim file;
- asks the claims manager to provide the customer with a copy of the engineer's report and a claim update;
- engages a valuer and asks her to provide a valuation of the land damaged by natural disaster as detailed in the engineering report (including the imminent damage);
- prepares a scope of works for the land repair based on the engineer's remediation strategy and a separate scope of works for the building repair, as follows.

Scope of works

Land repair:

- Reinstate the damaged land and remove risk of imminent damage $20,000.00.
- Remove inundation debris (2 m^3) $800.00.
- Remove the imminent damage re-inundation debris on the basis that it would occur (0.5 m^3) $500.00.

Building repair:

- Repair actual damage, underpinning one timber pile $2,600.00.
- Repair imminent damage on the basis that it would occur, underpinning one timber pile $2,600.00.

Valuer investigations

The valuer receives the request from the assessor to value the damaged land structure and reviews the engineering report supplied.

She carries out a site assessment and provides the assessor with a valuation report.

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Valuation summary

In accordance with Earthquake Commission requirements and pursuant to the Earthquake Commission Act 1993, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Description		Area	Value
1a	Area of land (minimum sized site under District Plan)	450 m^2	
1b	Value of minimum sized site		$300,000.00
1c	Actual site area	800 m^2	
2	Value of a 4000 m^2 site (if applicable)	n/a	
3a	Market value of damaged land evacuated (beneath dwelling)	2 m^2	$1,400.00
3b	Market value of damaged land evacuated (within 8 m of dwelling)	3 m^2	$1,200.00
3c	Market value of damaged land inundated (within 8 m of dwelling)	5 m^2	$1,500.00
3d	Market value of land at imminent risk of evacuation (beneath dwelling)	1 m^2	$700.00
3e	Land at imminent risk of new inundation	Nil	
3f	Land at imminent risk of re-inundation (within 8 m of dwelling)	5 m^2	$1,500.00
4a	Indemnity value of other damaged property	n/a	
4b	Indemnity value of other property at imminent risk	n/a	
5	Description of property valued in 4a; not applicable		

Assessor final actions

The assessor's costed scope of works for the land repair based on the engineer's conceptual remediation strategy and the separate scope of works for the building repair have been approved. After receiving the valuer's report, the assessor checks the figures match those detailed in the engineering report. She then creates a settlement recommendation for the land exposure and the building exposure for the claims manager's review, as follows.

Settlement recommendation

Land exposure:

The assessor compares the repair cost for debris removal and retaining wall construction of $20,800.00, against the valuation amount of $4,800.00, excluding re-inundation (re-inundation is not included in the settlement because the value of land is already valued in the inundation amount. Therefore, valuation of the same area cannot occur twice unless re-inundation is greater than the inundated value).

In this case, the land valuation is less than the estimated repair cost. Therefore, in accordance with *section 19 of the EQC Act*, the assessor recommends to the claims manager that the land claim be settled based on the valuation of $4,800.00, less applicable excess of $500.00.

Building exposure:

Because the land exposure is being settled on valuation, the imminent damage risk to the building has not been removed. Therefore, the assessor recommends to the claims manager that the building exposure be settled based on the estimated repair cost of $5,200.00 (for both the actual and imminent damage), less applicable excess of $200.00.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's settlement recommendation and on that basis, contacts the customer to advise him of the claim outcome and explains the reasons for this. The claims manager advises the customer that if he finds further damage, additional repairs are required, or the cost of the repairs is greater than was estimated, he should get back in contact. The claims manager then arranges payment and closes the claim.

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Settlement calculation – landslip 1

Claim item	Repair estimate	Valuation*	Settlement amount
Evacuation – beneath dwelling (2 m^2)	$20,000.00	$1,400.00	$1,400.00
Evacuation – within 8m of dwelling (3 m^2)		$1,200.00	$1,200.00
Inundation – within 8m of dwelling (5 m^2 / 2 m^3)	$800.00	$1,500.00	$1,500.00
Imminent damage evacuation – beneath dwelling (1 m^2)	Costed in the repair of evacuation above	$700.00	$700.00
Imminent damage re-inundation – within 8 m of dwelling (5 m^2/ 0.5 m^3)	$500.00	$1,500.00	n/a**
Sub-total	**$21,300.00**	**$4,800.00**	**$4,800.00**
Less excess ($500 minimum)			$500.00
Total land settlement to customer			**$4,300.00**

*Basis of settlement

**Re-inundation is not included in the settlement because the value of land is already valued in the inundation amount. Therefore, valuation of the same area cannot occur twice unless re-inundation is greater than the inundated value.

Settlement calculation – building damage

Claim item	Repair estimate*	Valuation	Settlement amount
Actual damage to building (per scope of works)	$2,600.00	n/a	$2,600.00
Imminent damage to building (per scope of works)	$2,600.00	n/a	$2,600.00
Sub-total	**$5,200.00**	**n/a**	**$5,200.00**
Less excess ($200 minimum)			$200.00
Total building settlement to customer			**$5,000.00**

*Basis of settlement

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ii. Land damage with imminent damage to the dwelling

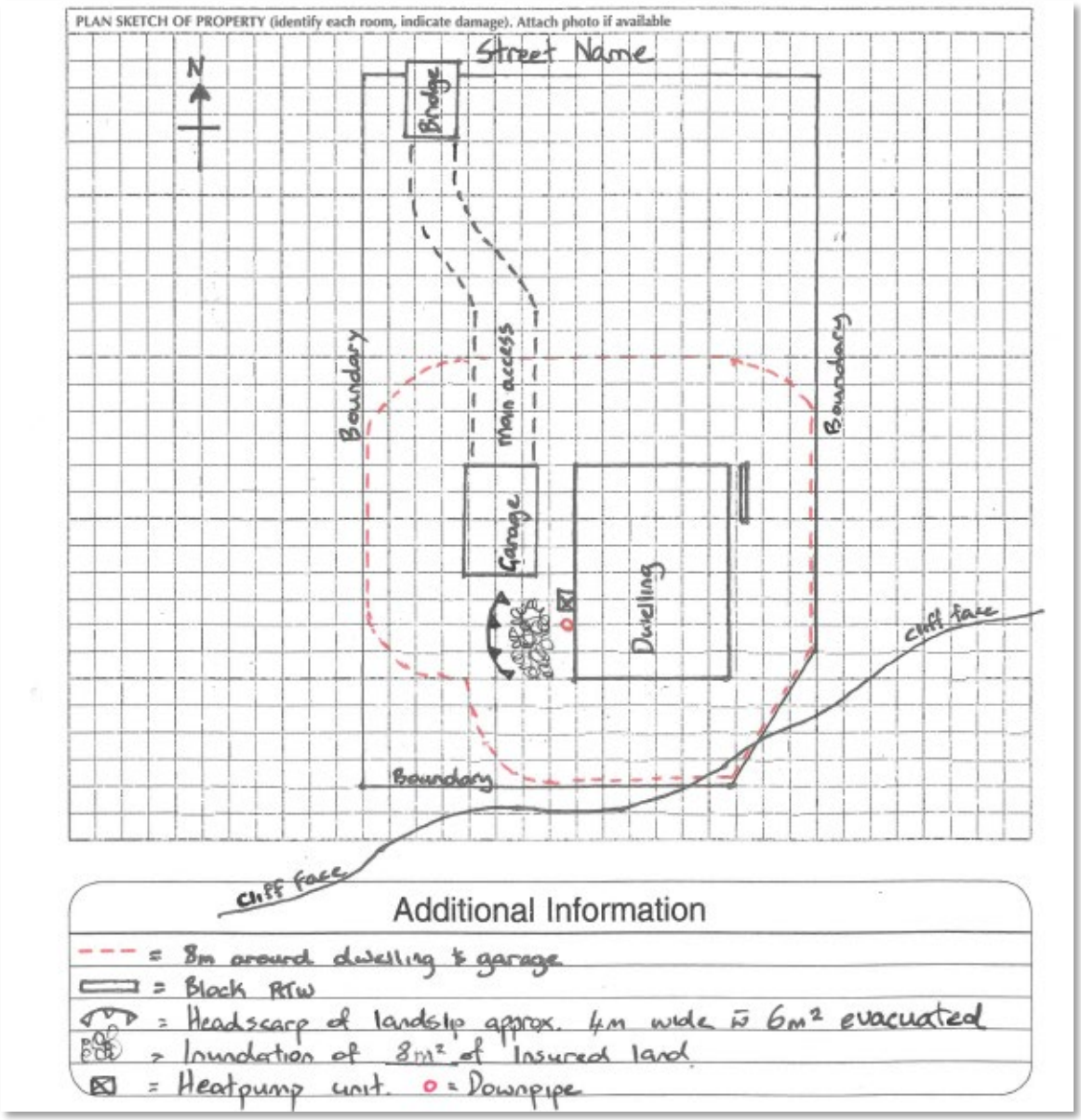

Figure 144 Site sketch of land damage with imminent damage to the dwelling

Natural disaster type**:** Natural landslip

Claim lodgement and triage

The customer lodges a claim for landslip damage via his insurer's online claim lodgement portal. The customer's lodgement notes state:

We have had non-stop heavy rain for the last 3 days. Last night we heard a terrible sound and woke to find part of the steep hill at the rear of the property has collapsed on to the lawn behind the house.

The customer also sends in photos showing the landslip. A claims manager reviews these photos and triages the claim, noting that there was heavy rain in the area as reported. After contacting the customer and discussing the damage, the claims manager considers it appropriate for an assessor to attend the property and inspect the damage.

Assessment

The assessor reviews the claim file and then contacts the customer to discuss the damage. The customer advises on the phone that he is not using the back bedrooms where the slip is located as he has concerns about whether the area is safe. The assessor books a site assessment.

When the assessor arrives onsite, the customer shows her the damage location on the southern side of the property. The assessor can see that the bank at the rear of the property has suffered a failure resulting in a landslip which has left a small section of the slope undermined.

The assessor records the damage in a land sketch and takes detailed notes of the damage and relevant supporting photographs. She measures the size of the landslip and its proximity to the dwelling.

She determines that all of the damaged land, both evacuated and inundated, is within the land holding and within 8 m of the dwelling. She records that the headscarp of the slip is approximately 4 m across. The assessor estimates that approximately 6 m^2 of insured land has evacuated and approximately 8 m^2 has been inundated. She notes there is no actual damage to the dwelling. Based on this information, the assessor determines that there has been valid natural disaster (natural landslip) damage to insured land.

She determines that a geotechnical engineer is required to attend the site for further claim investigations and report on their findings, including:

- confirming natural disaster damage has occurred;
- quantifying the damage that has occurred (including any imminent damage);
- providing a conceptual remediation strategy for the land damage that has occurred, and which would also remove any risk of imminent damage; and
- providing an estimate for any relevant professional and compliance fees.

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Post-assessment meeting with customer

The assessor takes time with the customer and explains her findings. She advises him that:

- the damage falls within the land areas covered by EQCover as defined by the *EQC Act*;
- a geotechnical engineer is required to attend the site for further claim investigations and report on their findings, including:
  - confirming natural disaster damage has occurred;
  - quantifying the damage that has occurred (including any imminent damage);
  - providing a conceptual remediation strategy for the damage that has occurred, and which would also remove any risk of imminent damage;
- the assessor will then prepare a scope of works for the conceptual remediation strategy provided in the engineering report and engage a valuer to value the areas of land damage quantified; and
- a valuer is required to provide a land valuation of the insured land and damage to determine the maximum amount payable under *section 19 of the EQC Act*.

The assessor acknowledges the customer's safety concerns and suggests steps he could consider taking to address safety concerns. The assessor considers that the claim-specific facts do not require any further action under our *Dangerous and Insanitary Buildings and Land Policy*.

The assessor also takes the opportunity to explain the remainder of the assessment process, the EQCover cap, excess and settlement process.

The customer says he is happy with the summary and understands the next steps for assessing their claim. The assessor leaves the customer with relevant land claim fact sheets and makes sure the customer has her contact details and those of the claims manager.

Post-site assessment actions

The assessor returns to the office and:

- prepares an assessment report which explains the observed damage, the assessment outcome and the discussions she had onsite with the customer;
- uploads the assessment report and supporting information, including photographs and sketches, to the claim file;
- requests that a geotechnical engineer attend the property and prepare a report on their findings.

Geotechnical engineer investigations and site assessment

The geotechnical engineer receives the request and contacts the customer to schedule a time to assess the damage. The engineer attends site and the customer directs him to the damaged area.

The engineer determines that a 4 m wide landslip has occurred following heavy rainfall which has resulted in the following natural disaster (landslip) damage:

- evacuated land within 8 m of the dwelling (7.5 m^2), and
- inundated land within 8 m of the dwelling (8.5 m^2 / 3m^3);
- imminent damage risk to the residential land, which includes:
  - further evacuation of land within 8 m of the dwelling (8 m^2);
  - new inundation of land within 8 m of the dwelling (4 m^2 / 2.5 m^3);
  - re-inundation of land within 8 m of the dwelling (8.5 m^2 / 1.5 m^3);
- imminent damage risk to the residential building, which includes:
  - impact damage and staining to the dwelling's rear exterior weatherboard cladding;
  - impact damage to a heat pump unit; and
  - impact damage to an 80 mm PVC downpipe.

The engineer proposes a 5 m long timber pole retaining wall as a conceptual remediation strategy that would reinstate the evacuated land and remove all risk of imminent damage. He provides the requirements of the retaining wall in sufficient detail to allow for a scope of works and cost estimate. The engineer also provides an estimate of the professional and compliance fees necessary to carry out the remediation strategy.

The engineer provides a draft report to the assessor for review. The assessor reviews his report and confirms that no points require clarification. The engineer then finalises his report.

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Geotechnical engineer's summary of information (engineering report)

Is this natural disaster damage?	Yes (landslip 1)
Land within 8 m of dwelling or appurtenant structure	**Yes**
Area of insured land damaged • Evacuated land • Inundated land	 7.5 m^2 8.5 m^2
Area of insured land at imminent risk • Evacuation • New inundation • Re-inundation	 8 m^2 4 m^2 8.5 m^2
Main access way within 60 m of dwelling	**Nil**
Area of insured land damaged on or supporting main access way • Evacuated • Inundated	 Nil Nil
Area of insured land at imminent risk on or supporting main access way • Evacuation • New inundation • Re-inundation	 Nil Nil Nil
Retaining walls supporting or protecting insured buildings and/or land located withing 60 m of dwelling (or an appurtenant structure)	**Nil**
Not applicable: • Whole wall length • Retained height • Damaged (insured face area) • Imminent damage (insured face area) • Insured wall (face area) • Total wall (face area)	
Dwelling and appurtenant structure(s)	**n/a**
Has the dwelling or appurtenant structure been damaged as a result of the natural disaster?	No
Cost to repair damage	n/a*
Is the damage to the dwelling or appurtenant structure imminent as the direct result of a natural disaster?	Yes

Impact damage and staining to the dwelling's rear exterior weatherboard cladding, impact damage to a heat pump unit and 80 mm PVC downpipe	
Cost to remove imminent loss threat to dwelling (or appurtenant structure)	n/a *
Value of imminent risk damage to dwelling (or appurtenant structures)	n/a *
Services within 60 m of dwelling	**n/a**
Bridges or culverts situated on insured land	**n/a**
Conceptual remediation works:	
Reinstate damage to land and the retaining wall and remove imminent risk to the insured land retaining wall. Remove debris and construct a 5 m long cantilever timber retaining wall (225 mm SED timber poles at 1 m centres and minimum pole embedment 2.5 m, 3.6 m total pole length)	$15,500.00 + construction costs* (excluding GST)

*To be reviewed by a Toka Tū Ake EQC estimator

Assessor next actions

The assessor:

- notifies the claims manager that the finalised engineering report has been uploaded to the claim file;
- asks the claims manager to provide the customer with a copy of the engineering report and a claim update;
- engages a valuer and asks them to provide a valuation of the land damaged by natural disaster as detailed in the engineering report (including the imminent damage).
- prepares her scope of works which she submits for peer review and approval, based on the engineer's remediation strategy as follows:

Reinstate the damaged land and remove risk of imminent damage	$56,000.00
Remove inundation debris (3 m^3)	$850.00
Repair the imminent land damage on the basis that it would occur:	
• Remove re-inundation debris (1.5 m^3)	$550.00
• Remove the new inundation (2.5 m^3)	$850.00
Repair the imminent building damage on the basis that it would occur	$8,060.00

Valuer investigations

The valuer receives the request from the assessor to value the damaged land and reviews the engineering report supplied.

The valuer attends site and provides the assessor with a valuation report which values the insured land damage as detailed in the valuation report below.

Valuation summary

In accordance with Earthquake Commission requirements and pursuant to the Earthquake Commission Act 1993, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Description		Area	Value
1a	Area of land (minimum sized site under District Plan)	450 m^2	
1b	Value of minimum sized site		$300,000.00
1c	Actual site area	800 m^2	
2	Value of a 4000 m^2 site (if applicable)	n/a	
3a	Market value of damaged land evacuated	7.5 m^2	$3,000.00
3b	Market value of damaged land inundated	8.5 m^2	$5,950.00
3c	Market value of land at imminent risk of evacuation	8.0 m^2	$3,200.00
3d	Market value of land at imminent risk of new inundation	4.0 m^2	$2,800.00
3e	Market value of land at imminent risk of re-inundation	8.5 m^2	$5,950.00
4a	Indemnity value of other damaged property	n/a	
4b	Indemnity value of other property at imminent risk	n/a	
5	Description of property valued in 4a; not applicable		

Assessor final actions

The assessor's costed scope of works for the engineer's conceptual remediation strategy has been approved.

After receiving the valuer's report, the assessor checks that the figures match those in the geotechnical engineering report. She then compares the land repair and reinstatement cost of $56,850.00 against the total valuation amount of $14,950.00,
excluding re-inundation. Re-inundation is not included in the settlement because the value of land is already valued in the inundation amount. Therefore, valuation of the same area cannot occur twice unless re-inundation is greater than the inundated value.

In this case, the land valuation of $14,950.00 is less than the estimated repair cost (which would reinstate the damaged land and remove the imminent damage risk) of $56,850.00. Therefore, in accordance with *section 19 of the EQC Act*, the assessor recommends to the claims manager that the land claim be settled based on the valuation, less applicable excess.

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Because the land exposure is being settled on valuation, the imminent damage risk to the building has not been removed. Therefore, the assessor recommends to the claims manager that the building exposure be settled based on the estimated repair cost of $8,060.00, less applicable excess.

Settlement

The claims manager reviews the assessor's settlement recommendation and supporting documents. The claims manager agrees with the assessor's settlement recommendation and on that basis, contacts the customer to advise him of the claim outcome, explains the reasons for this, arranges payment and closes the claim.

Settlement calculation – landslip 1

Claim item	Repair estimate	Valuation*	Settlement amount
Evacuation – within 8 m of dwelling (7.5 m^2)	$56,000.00	$3,000.00	$3,000.00
Inundation – within 8 m of dwelling (8.5 m^2 / 3 m^3)	$850.00	$5,950.00	$5,950.00
Imminent damage evacuation - within 8 m of dwelling (8.0 m^2)	Costed in the repair of evacuation above	$3,200.00	$3,200.00
Imminent damage new-inundation – within 8 m of dwelling (4.0 m^2 / 2.5 m^3)	$850.00	$2,800.00	$2,800.00
Imminent damage re-inundation – within 8 m of dwelling (8.5 m^2 / 1.5 m^3)	$550.00	$5,950.00	n/a
Sub-total	**$58,250.00**	**$20,900.00**	**$14,950.00**
Less excess (10%)			$1,495.00
Total land settlement to customer			**$13,455.00**

*Basis of settlement

Settlement calculation – building damage

Claim item	Repair estimate*	Valuation	Settlement amount
Imminent damage to building (per scope of works)	$8,060.00	n/a	$8,060.00
Sub-total	**$8,060.00**	**n/a**	**$8,060.00**
Less excess ($200 minimum)			$200.00
Total building settlement to customer			**$7,860.00**

*Basis of settlement