NHC Assessment Manual – NHI Act

Version as at 14 September 2026

NHI Act – For claims made in relation to initial damage from natural hazards occurring **on or after** 1 July 2024

Natural Hazards Commission
Toka Tū Ake

Contents

1. Introduction 12

a. Terminology 12
b. Purpose of Manual 12
c. Who is this Manual for? 12
d. How should you use this Manual? 13
e. Updates to this Manual 13
f. NHI Act interpretation 14
g. Relationship with NHC Claims Manual – Residential Buildings – NHI Act, NHC Claims Manual – Residential Land – NHI Act and the NHC Insurers Manual 14
h. Expectations of those involved in the claims assessment process 15

i. Overview 15
ii. Capabilities 15
iii. Soft skills and communication style 15
iv. Keeping customers informed 16
v. Health and safety 17

i. Overview 19
j. Terms used in this Manual 21

2. Claimed damage assessment purpose and legislative components 24

a. Overview 24
b. What is the purpose of the claims assessment process? 26

i. Has the property incurred natural hazard damage? 27
ii. What is the amount of the natural hazard damage covered? 27

c. Is there natural hazard damage? 27

i. What is a ‘natural hazard’? 27
ii. What is natural hazard damage? 31
iii. Is there physical loss or damage? 32
iv. Is the physical loss or damage ‘a direct result’ of a natural hazard? 33
v. What is 'mitigation damage'? 37
vi. What is 'imminent damage'? 39

d. What is the basis of cover? 40

i. Basis of cover for a ‘residential building’ 40
ii. Basis of cover for ‘residential land’ 45

e. Consequential loss 50
f. Pre-existing conditions 51
g. Grounds for declining an NHCover claim 51

3. Identifying natural hazard damage to a residential building 53

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a. Overview 53
b. Is there an insured 'residential building'? 53
c. Distinguishing natural hazard damage from pre-existing conditions 54
d. Indicators of the extent of damage 54
e. Factors that may determine the nature of natural hazard damage to a residential building 55
f. Features of natural hazard damage to a residential building 56

i. Common natural hazard damage to building elements 56
ii. Common natural hazard damage observations to specific exterior cladding types 60
iii. Common natural hazard damage observations to specific interior lining types 65
iv. Common natural hazard damage observations to foundations 68
v. Common natural hazard damage observations to specific chimney types 71
vi. Common natural hazard damage observations to specific service infrastructure 73

4. Identifying natural hazard damage to residential land 75

a. Overview 75
b. Is there insured 'residential land'? 75

i. Residential land may include common land, joint land and shared land 77

c. Distinguishing natural hazard damage from pre-existing conditions 78
d. What are the steps in the assessment? 78

i. Assessing the extent of the insured person's land 79
ii. Assessing the type and extent of the natural hazard damage to the land area and land structures on the insured person's land 80
iii. Assessing the extent of the insured residential land 84
iv. Assessing the area of land that is lost or damaged 85

e. Indicators of the extent of damage 86
f. Features of natural hazard damage to residential land 87

i. Natural hazard land damage 87
ii. Natural hazard damage to land structures (retaining walls, bridges and culverts) 94

5. Imminent damage 97

a. Overview 97
b. What the NHI Act covers 99
c. Limitations 99
d. Other considerations 100
e. How to identify loss 100

i. Economic loss 100
ii. Consequential loss 100

f. Calculating imminent damage settlement 101

i. Complex scenarios 102

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6. Pre-existing conditions 103

a. What are pre-existing conditions? 103
b. Distinguishing pre-existing conditions from natural hazard damage 104
c. Exacerbation of pre-existing damage 104
d. The amount of the natural hazard damage covered 105
e. When pre-existing conditions are included in the repair of natural hazard damage 105

i. Pre-existing legal requirements 105

f. Common types of pre-existing conditions in a residential building 106

i. Overview 106
ii. Damage from an earlier natural hazard 106
iii. Design and/or construction-related matters 107
iv. Damage caused by an event not covered by the NHI Act 109
v. Damage due to 'age, wear and tear' 109
vi. Existing land conditions 110
vii. Other considerations 110

g. Common types of pre-existing conditions in relation to residential land 111

i. Damage from an earlier natural hazard 111
ii. Design and/or construction-related matters 112
iii. Damage excluded under the NHI Act 113
iv. Damage due to deferred maintenance 113
v. Existing land conditions 113
vi. Other considerations 114

7. Engaging experts 115

a. Overview 115
b. When may an expert need to be engaged? 115

i. Building claims 115
ii. Land claims 117
iii. Other considerations 117

c. Who may be engaged as an expert? 118
d. How to engage an expert 118
e. Types of experts 119

i. Geotechnical engineer 119
ii. Registered valuer 121
iii. Estimator and quantity surveyor 123
iv. Survey specialist (for a building) 124
v. Survey specialist (for land) 125
vi. Structural engineer 125
vii. Other appropriate experts 127

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8. Assessing damage across multiple properties 128

a. Overview 128

b. Principles of assessing multiple property claims 128

c. Process for assessing damage across multiple properties 129

i. Identify each residential building 131

ii. Determine whether there is a multi-unit building (MUB) and if so, categorise it 133

iii. Identify the residential land associated with each residential building (land claim only) 141

iv. Identify any natural hazard damage 147

v. Document and allocate the natural hazard damage to the correct residential building 150

vi. Determine a remediation strategy 155

vii. Create a scope of works for the conceptual remediation strategy 156

viii. Determine the appropriate valuation (land claim only) 158

ix. Apply cover proportionately to shared property and shared land 158

x. Apply cover proportionately to joint property and joint land 159

xi. Apply cover proportionately to common property and common land 160

xii. Apply cover proportionately where shared property or land is also common property or land, or joint property or land 161

xiii. Create a settlement recommendation 161

d. Examples of applying the 50% test 162

i. Mixed residential and non-residential properties (MUB3) 162

ii. Long-term accommodation for the elderly (MUB4) 164

e. Reviewing expert reports 167

9. Unsafe properties 168

a. Overview 168

b. Unsafe building notices 168

i. Who can issue an unsafe building notice and when? 169

ii. When are unsafe building notices most commonly issued? 169

iii. What is the purpose of an unsafe building notice? 170

c. Properties that are not safe to assess 170

d. Properties that are unsafe to access or occupy 171

e. Dangerous, affected and/or insanitary buildings 171

i. Dangerous buildings (section 121) 171

ii. Affected buildings (section 121A) 171

iii. Insanitary buildings (section 123) 172

f. Earthquake-prone buildings 172

g. Buildings in a designated area 172

h. Unsafe properties in practice 173

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i. What if you identify that a property is unsafe to assess? 173
ii. What if you believe a property may be unsafe to access or occupy? 174
iii. What if you identify a building that may be dangerous, affected and/or insanitary? 174
iv. Disclosing information 175

i. When can you assess an unsafe property? 176

i. When can you assess a property with an unsafe building notice? 177

j. When can an unsafe building notice be removed? 177
k. Unsafe property responsibilities 178

10. Planning for a site assessment 179

a. Overview 179
b. Assessment preparation 180

i. Review claim file 180
ii. Research the property 180
iii. Check the priority of the assessment 181
iv. Review health and safety information 181
v. Establish whether the claim is an 'extra care claim' 183
vi. Review the loss details 183
vii. Check the background and whether previous claims have been made 183
viii. Confirm that the basic requirements of the NHCover claim are met 184
ix. Review event information 184

c. Customer/assessor first contact 186

i. Review key information (list of information you should have before calling) 186
ii. Make the call 187

d. Site visit preparation 188

i. Consider whether a second assessor or specialist is required 188
ii. Gather equipment 188
iii. Consider health and safety 189
iv. Consider urgent works 189

11. Carrying out a site assessment 191

a. Arrive at site 191
b. Discuss the claim with the customer and complete the relevant forms with them 191
c. Complete the site assessment 192
d. Record damage 195

i. Photographs and videos 196

e. Explain findings to customer 197

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i. Definitions of assessment outcomes 198
ii. Recommending that damage be accepted (in full or in part) 199
iii. Recommending that damage not be accepted 199
iv. Recommending that the claim be found invalid 200
v. Quantifying residential building damage 200
vi. Quantifying residential land damage 200

f. Conclude the assessment visit 201

12. Post-site assessment actions 203

a. Update the claim details 203
b. Prepare the assessment report 203
c. Determine the assessment outcome 204
d. Review expert reports 204

i. Geotechnical report 204
ii. Structural engineering report 205
iii. Valuation report 207
iv. Survey specialist's report (for building) 208
v. Survey specialist's report (for land) 208
vi. Other reports 208

e. Prepare scope of works 208
f. Calculate the undepreciated value of damaged land structures 209
g. Prepare a settlement recommendation 211
h. Upload documents for the customer's claims manager 211

13. Assessment documentation standards 212

a. Overview 212
b. Assessment documentation requirements 212
c. Assessment documentation purpose and outputs 213
d. Assessment information capture 214

i. General documentation standards 215
ii. Assessment planning documentation standards 216
iii. Site assessment documentation standards 216
iv. Post-site visit documentation requirements 219

Appendices 221
Appendix 1. Building components and repair considerations 221

a. Overview 221
b. Key considerations for remediation 221
c. Works that do not require consent (exempt building works) 222
d. Works that require consent (restricted building work or work that is not restricted) 223

i. Definition of restricted building work 223

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e. Examples of restricted building work **224**

i. Work to a dwelling's primary structure 224
ii. Work to a dwelling's weathertightness 225
iii. Fire safety design 226

f. Foundations **227**

i. Common foundation remediation considerations 227
ii. Foundation design considerations 230

g. Roof **231**

i. Common roof remediation considerations 231
ii. Roof design considerations 232

h. Chimneys **232**

i. Common chimney remediation strategies 232
ii. Chimney design considerations 235

i. Superstructure (walls) **235**

i. Common superstructure remediation strategies 235
ii. Superstructure design considerations 238

j. Exterior cladding **239**

i. Common exterior cladding remediation strategies 239
ii. Exterior cladding design considerations 241

k. Interior linings **242**

i. Common interior lining remediation strategies 242
ii. Interior lining design considerations 243

l. Joinery **244**

i. Common joinery remediation strategies 244
ii. Joinery design considerations 246

m. Floors **246**

i. Common floor remediation strategies 246
ii. Floor design considerations 248

n. Services **249**

i. Common remediation strategies to services 249
ii. Design considerations for services 249

Appendix 2. Land components and repair considerations **251**

a. Overview **251**
b. Key considerations for remediation **251**
c. Retaining walls **252**

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i. Definition of 'face area' 252
ii. Common retaining wall remediation strategies 253
iii. Retaining wall design considerations 267

d. Bridges and culverts 285

i. Common bridge and culvert remediation strategies 285
ii. Bridge and culvert design considerations 287

e. Inundated land (falling, sliding, flowing or ejection) 289

i. Common inundation remediation strategies 289
ii. Design considerations for removing inundation 291

f. Evacuated land (including scouring) 292

i. Common evacuated land remediation strategies 292
ii. Evacuated land design considerations 293

g. Cracking (lateral spreading and oscillation movement) 295

i. Common cracking remediation strategies and design considerations 295

h. Undulating land 296

i. Common undulating land remediation strategies and design considerations 296

i. Localised ponding 296

i. Common localised ponding remediation strategies and design considerations 296

j. Localised settlement 297

i. Common localised settlement remediation strategies and design considerations 297

k. Contaminated land 297

i. Key considerations for remediation 297

Appendix 3. Remediation strategy, standards and costing 299

a. Overview 299
b. Reinstatement standards under the NHI Act 300

i. Building repair considerations 300
ii. Land repair considerations 300

c. Regulations and compliance 302
d. Which costs are involved? 304

i. Substantive works 304
ii. Preliminary and general costs (P and G) 305
iii. Margin 306
iv. Goods and services tax (GST) 306
v. Enabling works 306

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vi. Professional and compliance fees 306
vii. Additional health and safety costs 307
viii. Asbestos testing 307
ix. Land contamination testing 307

e. Reviewing quotes and invoices 308

Appendix 4. Documentation examples 309

a. Overview 309
b. Building assessment report 310

i. Building assessment report, Unit 1 311
ii. Building sketch (floor plan), Unit 1 315
iii. Statement of claim checklist – damage report, Unit 1 316
iv. Scope of works, Unit 1 317
v. Building assessment report – Unit 2 319
vi. Building sketch (floor plan), Unit 2 325
vii. Statement of claim checklist – damage report, Unit 2 326
viii. Scope of works, Unit 2 327

f. Land assessment report 329
g. Critical risk assessment 332
h. Land sketch 335
i. Instructions for the geotechnical engineer 336
j. Geotechnical engineering report 337
k. Valuer instruction 345
l. Valuation report 346
m. Notification of a potentially dangerous building 349

i. Site assessment documentation standards 353

k. Structural engineer letter of engagement 356
l. Structural engineering report 368
m. Structural engineering report – floor plan and repair diagrams 378

Appendix 5. Case studies 380

a. Introduction 380
b. Building 381

i. No natural hazard damage to the building 381
ii. Minor building damage (cosmetic damage) 383
iii. Moderate building damage (structural damage) 385
iv. Severe building damage (structural damage) 388
v. Total loss of building 393

c. Land 396

i. No natural hazard damage to the land 396

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ii. Minor land damage 399
iii. Moderate land damage 403
iv. Severe land damage 410
v. Unrepairable land damage (cliff collapse) 419

d. Building and land combined 428

i. Land damage under (and affecting) the dwelling 428
ii. Land damage with imminent damage to the dwelling 437

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1. Introduction

a. Terminology

Throughout this document, when we refer to 'we/our/us', we mean the Natural Hazards Commission Toka Tū Ake (NHC). When we refer to 'you/your', we mean any of the people described in the 'Who is this Manual for?' section below unless we have specified otherwise.

b. Purpose of Manual

This Manual sets out how to apply the Natural Hazards Insurance Act 2023 (NHI Act) and Natural Hazards Insurance Regulations 2024 (NHI Regulations) 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 NHI Act; and
- deliver a great customer experience.

c. Who is this Manual for?

This Manual is for NHC and everyone authorised to perform claims management activities on our behalf:

- our staff and contractors
- private insurers (acting as our agent under the NHI Act Natural Disaster Response Agreement (NHI Act NDRA), as amended from time to time) and their staff and contractors
- third-party providers (authorised to act on our behalf, either appointed by us or an insurer as permitted under the NHI Act NDRA) and their staff and contractors.

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d. How should you use this Manual?

When dealing with Natural Hazards Cover (NHCover) claims, you must act in accordance with the NHI Act, all other applicable laws, our delegations, our instructions in relation to the application of the NHI Act, this Manual and all other applicable parts of the NHC Insurers Manual.

Where the NHI Act does not cover the damage, you should consider whether a private insurance policy covers it. Where both the NHI Act and a private insurance policy cover the damage, the NHI Act typically covers the first loss, so you should consider the coverage under the NHI Act first. In some cases, neither the NHI Act nor a private insurance policy covers the damage.

In all cases, you must comply with your organisation's own internal processes and delegations, including the Fair Insurance Code (FIC). Under the NHI Act, you are also required to manage NHCover claims in accordance with the Code of Insured Persons' Rights. This Code sets out the rights of the insured person as well as the obligations of NHC and anyone authorised to perform claims management activities on our behalf. The Code of Insured Persons' Rights relates to NHCover claims and does not replace the FIC.

When we (or persons we authorise) make a referable decision[1] about an NHCover claim, an affected person[1] who disputes the decision may refer the dispute to the dispute resolution scheme.

e. Updates to this Manual

We may update this Manual (or part of it) from time to time. Updates will be in writing.

This Manual sets out our interpretation of the NHI Act as at 1 July 2024. It therefore applies to claims made in relation to initial damage[2] from a natural hazard occurring on or after 1 July 2024.

An updated part of this Manual may set out our interpretation of the NHI Act as at a later date, whether because of legal developments or otherwise. We will record that date against the updated part of the Manual. The update will be effective from the date recorded against it, or otherwise from the date we notify the required party of the update.

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[1] 'Referable decision' and 'affected person' are defined in section 104(6) of the NHI Act. Also, for information on decisions that are not referable decisions, see regulation 17, NHI Regulations.

[2] Initial damage is defined in section 53 of the NHI Act.

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f. NHI Act interpretation

We must comply with the NHI Act and all applicable laws. This Manual sets out our interpretation of the NHI Act (as informed by relevant case law) as agreed by private insurers under the NHI Act NDRA in accordance with the NHC Insurers Manual development process under that agreement. However, this Manual does not act as a substitute for the NHI Act because:

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

You should escalate the matter to the appropriate NHC representative where this Manual, the NHC Claims Manual – Residential Buildings – NHI Act, or the NHC Claims Manual – Residential Land – NHI Act:

- do not clearly provide for the fact situation or circumstances at hand;
- are capable of more than one interpretation; or
- have been applied using more than one interpretation.

g. Relationship with NHC Claims Manual – Residential Buildings – NHI Act, NHC Claims Manual – Residential Land – NHI Act and the NHC Insurers Manual

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

This Manual focuses on the process of assessing residential building claims and land claims for natural hazard damage. You should therefore read this Manual alongside those separate Manuals, as well as all other instructions from NHC.

In the case of insurers engaged under the NHI Act NDRA, this Manual forms part of the NHC Insurers Manual, which also includes a range of other Manuals, guidelines and policies.

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h. 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 NHC 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 NHCover claims 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 NHC 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 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 language style and avoid jargon, technical terms and acronyms. We must pre-approve any template communication that refers to NHC or uses the NHC logo.[3]

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

iv. Keeping customers informed

You must regularly update customers on the status of their NHCover claim, in line with any of our standards about keeping customers informed, including the Code of Insured Persons' Rights. We will issue and notify you of these standards from time to time. You must 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.

a. Communicating settlement outcomes

You must communicate settlement outcomes to customers in accordance with NHC Claims Manual – Residential Buildings – NHI Act, Section 10.A.c Advising the customer of the outcome of the residential building claim/NHC Claims Manual – Residential Land – NHI Act, Section 11.A.c Advising the customer of the outcome of the residential land claim.

b. Extra care claims

When dealing with an NHCover claim, you must take reasonable steps to identify claims that need extra care based on the specific circumstances of the homeowner, occupant of the property, or third party who may be directly affected by the claims management process (extra care claim[4]).

You should comply with your organisation's guidelines (as agreed with NHC) for managing extra care claims.

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[3] See NHC Claims Manual – Residential Buildings – NHI Act, Section 11.e Use of NHC name and logo/NHC Claims Manual – Residential Land – NHI Act, Section 12.e Use of NHC name and logo.

[4] For more information about extra care claims, see our Extra Care Claims Policy. Your organisation may use other similar terms such as 'customers experiencing vulnerability'.

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v. Health and safety

You must comply with the Health and Safety at Work Act 2015 (HSWA) 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.

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.[5]

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.

[5] See Section 7 Engaging experts.

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See also:

- Section 9 Unsafe properties in this Manual; and
- NHC Claims Manual – Residential Buildings – NHI Act, Section 11.b Notices restricting access to buildings/NHC Claims Manual – Residential Land – NHI Act, Section 12.b Notices restricting access to buildings.

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 NHC. However, you may make available any information you have to relevant third parties (e.g. police, medical providers or territorial authority (TA)) 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.

Part 5, Subpart 3, the NHI 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 NHC Claims Manual – Residential Buildings – NHI Act, Section 11.f.i Sharing information/NHC Claims Manual – Residential Land – NHI Act, Section 12.f.i Sharing information.

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i. Overview

The following diagram illustrates the steps involved in assessing and settling an NHCover 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?	
What is an insured residential building?	3.b to 3.f
What is insured residential land?	4.b

Is there natural hazard damage?	
What is a natural hazard?	2.c.i
What is natural hazard damage?	2.c.ii

How is the natural hazard damage assessed?	
What is the purpose of the claims assessment process?	2.b
What are the expectations of those involved in the assessment process?	1.h
What are the requirements and obligations under the NHI Act?	2.c
How should a site assessment be planned?	10
How should a site assessment be carried out?	11
When and how should experts be engaged?	7
How should damage across multiple properties be assessed?	8
How should unsafe properties be dealt with?	9, 10, 11
Which actions should occur after a site visit?	12
What are the standards for assessment documents?	13, Appendix 4

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When are urgent works required?	9, 10, 11

How is the natural hazard damage identified?	
How is natural hazard damage to a residential building identified?	3, Appendix 4
How is natural hazard damage to residential land identified?	4, Appendix 5b
How is imminent damage identified?	5
What are pre-existing conditions?	6

What are the repair methodology and standards?	
What are the repair methodology and standards?	Appendix 3
What are the building components and repair considerations?	Appendix 1
What are the land components and repair considerations?	Appendix 2
How is natural hazard damage costed?	Appendix 3

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j. Terms used in this Manual

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

Table 1: Terms used in this Manual

Term	Manual section
appurtenant structure	NHC Claims Manual – Residential Buildings – NHI Act, Section 4.D What is an 'appurtenant structure'?/NHC Claims Manual – Residential Land – NHI Act, Section 5.e What is an 'appurtenant structure'?
building cover cap	NHC Claims Manual – Residential Buildings – NHI Act, Section 8.e What is the maximum amount (the building cover cap) that can be paid for a residential building claim?
building cover excess	NHC Claims Manual – Residential Buildings – NHI Act, Section 8.h What excess applies for a residential building claim?
diminution of value	NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.vi What is diminution of value?
direct result	Section 2.c.iv Is the physical loss or damage 'a direct result' of a natural hazard? in this Manual/NHC Claims Manual – Residential Buildings – NHI Act, Section 5.e Is the physical loss or damage as 'a direct result' of a natural hazard'?
dwelling	NHC Claims Manual – Residential Buildings – NHI Act, Section 4.C.c What is a 'dwelling'?
eligible building	NHC Claims Manual – Residential Buildings – NHI Act, Section 4.C What is an 'eligible building'?
fire insurance contract	NHC Claims Manual – Residential Buildings – NHI Act, Section 3.g, Was there a 'fire insurance contract' or direct NHCover over the property concerned in force at the relevant time?/NHC Claims Manual – Residential Land – NHI Act, Section 3.h, Was there a 'fire insurance contract' or direct NHCover over the property concerned in force at the relevant time?

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imminent damage	Section 5 Imminent damage in this Manual NHC Claims Manual – Residential Buildings – NHI Act, Section 5.c.iv Physical loss or damage that is imminent damage/NHC Claims Manual – Residential Land – NHI Act, Section 6.c.iv Physical loss or damage that is imminent damage
insured person's land	NHC Claims Manual – Residential Land – NHI Act, Section 4.d What is the insured person's land?
land cover cap	NHC Claims Manual – Residential Land – NHI Act, Section 9.e What is the maximum amount (the land cover cap) that can be paid for a residential land claim?
land cover excess	NHC Claims Manual – Residential Land – NHI Act, Section 9.h What excess applies for a residential land claim?
market value	NHC Claims Manual – Residential Land – NHI Act, Section 7.A.b.iv Assessing the insured residential land that is lost or damaged Land Valuation Guide – NHI Act
multi-unit building (MUB)	Section 8.c.ii Determine whether there is a multi-unit building (MUB) and if so, categorise it in this Manual
natural hazard	Section 2.c.i What is a 'natural hazard'? in this Manual NHC Claims Manual – Residential Buildings – NHI Act, Section 5.b What is a 'natural hazard'?/NHC Claims Manual – Residential Land – NHI Act, Section 6.b What is a 'natural hazard'?
natural hazard damage	Section 2.c Is there natural hazard damage? in this Manual NHC Claims Manual – Residential Buildings – NHI Act, Section 5.c 'What is 'natural hazard damage'?/ NHC Claims Manual – Residential Land – NHI Act, Section 6.c What is 'natural hazard damage'?
ownership interest (common, joint, or shared)	NHC Claims Manual – Residential Buildings– NHI Act, Section 4.C.i Determining the common, joint, or shared ownership interest for a mixed-use building

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physical loss or damage	Section 2.c.iii Is there physical loss or damage? in this Manual NHC Claims Manual – Residential Buildings – NHI Act, Section 5.d Is there 'physical loss or damage'?/ NHC Claims Manual – Residential Land – NHI Act, Section 6.d Is there 'physical loss or damage'?
reinstatement cost	NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.iii What is reinstatement cost?
replacement cost	Section 2.d.i.a What is the definition of 'replacement cost'? in this Manual NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.c What is 'replacement cost'?
residential building	Section 3.b Is there an insured 'residential building'? in this Manual
residential land	Section 4.b Is there insured 'residential land'? in this Manual
service infrastructure	NHC Claims Manual – Residential Buildings – NHI Act, Section 4.E What is 'service infrastructure'?
undepreciated value	NHC Claims Manual – Residential Land – NHI Act, Section 7.A.d.vi What is the undepreciated value of the insured land structures for the purposes of the land cover cap?

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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 hazard damage and the basis of cover for residential buildings and associated residential land;
- introduces the grounds for declining a claim under sections 68 to 77 of the NHI 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 hazard 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 hazard that has occurred. In this section of the Manual, a reference to 'damage' includes any such imminent damage.[6]

[6] See Section 5 Imminent damage in this Manual.

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Assessing residential buildings or land claims typically involves:

- visiting the residential building[7] or land;[8]
- determining any natural hazard damage to the residential building[9] or land;[10] and
- engaging appropriate experts.[5]

In addition, assessing residential buildings typically involves costing the repair and/or replacement of residential buildings on the basis of the replacement cost.[11]

Assessing residential land also typically involves:

- formulating a conceptual remediation strategy[12] for the damaged residential land;
- costing the repair of land damage;
- valuing the damaged areas of insured land; and
- calculating the undepreciated value of damaged insured land structures.[13]

The claims assessment process[14] involves considering only relevant considerations and weighing the available evidence.

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[7] See NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.f When must the assessor visit a residential building for an assessment? and 6.A.g What are the requirements for visiting a residential building for an assessment?.

[8] See NHC Claims Manual – Residential Land – NHI Act, Section 7.A.i When must the assessor visit the residential land for an assessment? and 7.A.j What are the requirements for visiting residential land for an assessment?.

[9] See NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.h Other requirements for an assessment of the natural hazard damage to the residential building.

[10] See NHC Claims Manual – Residential Land – NHI Act, Section 7.A.b.ii Assessing the type and extent of the natural hazard damage to the land area and land structures on the insured person's land and 7.A.b.iv Assessing the insured residential land that is lost or damaged.

[11] See NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.h Other requirements for an assessment of the natural hazard damage to the residential building.

[12] See the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.iv Assessing the conceptual remediation strategy.

[13] See the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.v Assessing the cost of repair.

[14] See the NHC Claims Manual – Residential Buildings – NHI Act, Section 6.B.a What is the process for the assessment?/NHC Claims Manual – Residential Land – NHI Act, Section 7.B.a What is the process for the assessment?.

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The output of the assessment[15] is full documentation recording the reasons underpinning, and the findings of, the assessment.

Where there are multiple events, follow the principles for assessing claims for natural hazard damage under NHC Claims Manual – Residential Buildings – NHI Act, Section 6.C Principles for assessment where there are multiple events/NHC Claims Manual – Residential Land – NHI Act, 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 hazard damage under Section 8 Assessing damage across multiple properties in this Manual.

This section does not address situations where a repair has been completed in relation to the current claim, and a residential building or land needs to be reassessed, e.g. because that remediation strategy has failed. Additional considerations[16] 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 hazard damage; and
- the extent of any natural hazard damage and the customer's building claim entitlement.

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

- whether the residential land has incurred natural hazard damage;
- the extent of any natural hazard damage and the customer's land claim entitlement.

[15] See the NHC Claims Manual – Residential Buildings – NHI Act, Section 6.B.b What is the output of the assessment?/NHC Claims Manual – Residential Land – NHI Act, Section 7.B.b What is the output of the assessment?.

[16] See the Declining a Claim Guide – NHI Act.

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i. Has the property incurred natural hazard damage?

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

- 'physical loss or damage'[17] to a residential building or residential land … ;
- … occurring as 'the direct result'[18] of … ;
- … a 'natural hazard'.[19]

Section 24(1), NHI Act

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

The NHI Act insures residential buildings on the basis of the replacement cost (subject to the building cover cap).

The NHI Act insures residential land on an indemnity basis (subject to the land cover cap). Before you can determine whether the land cover cap is reached, you must assess the amount of the natural hazard damage on the basis of the actual loss suffered. This is quantified using:

- the reinstatement cost; and/or
- the DOV.

c. Is there natural hazard damage?

i. What is a 'natural hazard'?

For there to be 'natural hazard damage', there must be a natural hazard.

[17] See Section 2.c.ii What is natural hazard damage? in this Manual. For further details, see NHC Claims Manual – Residential Buildings – NHI Act, Section 5.d Is there 'physical loss or damage'?.

[18] See Section 2.c.iv Is the physical loss or damage 'a direct result' of a natural hazard? in this Manual. For further details, see NHC Claims Manual – Residential Buildings – NHI Act, Section 5.e Is the physical loss or damage 'a direct result' of a natural hazard?.

[19] See Section 2.c.i What is a 'natural hazard'? in this Manual. For further details, see NHC Claims Manual – Residential Buildings – NHI Act, Section 5.b What is a 'natural hazard'?.

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a. What is the NHI Act definition of 'natural hazard'?

The NHI Act states:

(1) Each of the following is a **natural hazard**:

(a) an earthquake:
(b) hydrothermal activity:
(c) a landslide:
(d) a tsunami:
(e) volcanic activity:
(f) a flood:
(g) a storm:
(h) a natural hazard fire.

(2) However, the normal action of the wind or water causing gradual erosion (including, for example, coastal erosion, bank erosion, and sheet erosion) is not a natural hazard.
Section 23 NHI Act – 'natural hazard'

Residential buildings and residential land have NHCover for earthquakes, hydrothermal activity, landslides, tsunamis, volcanic activity, and natural hazard fire occasioned by those types of hazards. But only residential land has NHCover for storms, floods and natural hazard fire occasioned by a storm or flood. In either case, NHCover only applies if there is a fire insurance contract or direct NHCover for the residential building on that land, which is in force at the relevant time.

b. Who determines whether a natural hazard has occurred under the NHI Act?

You must determine whether there is a 'natural hazard' under the NHI Act.

c. What is an 'earthquake'?

The NHI Act defines 'earthquake' as follows:

earthquake means ground shaking caused by seismic waves generated from tectonic processes or volcanic processes
Section 5(1), NHI Act – Definition of 'earthquake'

Earthquake includes ground shaking caused by volcanic processes, and the definition of volcanic activity expressly excludes ground shaking that constitutes an earthquake. Therefore, damage that is a direct result of such ground shaking is earthquake damage, not volcanic activity damage.

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d. What is 'hydrothermal activity'?

The NHI Act defines 'hydrothermal activity' as follows:

> **hydrothermal activity** means the release of energy, gas, or other matter due to sub-surface or surface processes involving the convection and movement of hot waters driven by magmatic or tectonic processes resulting in surface phenomena (including, for example, hydrothermal steam explosions)
> Section 5(1) NHI Act – Definition of 'hydrothermal activity'

e. What is a 'landslide'?

The NHI Act defines 'landslide' as follows:

> **landslide** means movement (by way of 1 or more of falling, sliding, or flowing) of ground-forming materials (being 1 or more of natural rock, soil, or artificial fill) that, before they moved, formed an integral part of the ground, but not movement of the ground due to below-ground subsidence, soil expansion, soil shrinkage, or soil compaction (but see section 23(2))
> Section 5(1), NHI Act – Definition of 'landslide'

Section 23(2) of the NHI Act provides that the 'normal action of the wind or water causing gradual erosion (including, for example, coastal erosion, bank erosion, and sheet erosion)' is not a natural hazard.

The central features of a 'landslide' 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 natural rock, soil, artificial fill or a combination of those materials; and
  - have formed an integral part of the ground before the movement.

A landslide does not include:

- the movement of ground due to below-ground subsidence;
- the movement of ground due to soil expansion, soil shrinkage, or soil compaction; or
- gradual erosion caused by normal action of the wind or water.

Landslide-related claims may be declined or limited in certain circumstances

A landslide may occur where human action is the trigger. A common example of this is the failure of an excavated slope that has been left unsupported. If the customer is

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responsible for this event, their claim may be declined or limited due to, for example:

- negligence;
- failure to meet construction standards; or
- failure to comply with any law or legal requirement.

For more information, see:

- the NHC Claims Manual – Residential Land – NHI Act, Section 8.h What are the grounds to decline NHCover claims (in whole or in part)?; and
- the NHC Claims Manual – Residential Land – NHI Act, Section 8.g What are the grounds to limit NHCover?.

f. What is a 'tsunami'?

The NHI Act defines 'tsunami' as follows:

> **tsunami** means a wave, or series of waves, generated when a large volume of water in the sea or a lake is rapidly displaced by an earthquake, landslide, meteorite, or volcanic activity
> Section 5(1), NHI Act – Definition of 'tsunami'

Tsunami includes flooding that is a direct result of a tsunami, as the definition of flood expressly excludes inundation due to a tsunami. Therefore, damage that is a direct result of such flooding is tsunami damage, not flood damage.

g. What is 'volcanic activity'?

The NHI Act defines 'volcanic activity' as follows:

> **volcanic activity** means the release of energy, gas, water, rock, magma, or other matter due to sub-surface volcanic processes resulting in surface phenomena (including, for example, volcanic explosions, lava flows, or lahars), but not ground shaking that constitutes an earthquake
> Section 5(1), NHI Act – Definition of 'volcanic activity'

Volcanic activity excludes ground shaking that constitutes an earthquake. Therefore, damage that is a direct result of such ground shaking is earthquake damage, not volcanic activity damage.

h. What is a 'flood'?

The NHI Act defines 'flood' as follows:

> **flood** means inundation of normally dry land by water due to a storm, a storm surge, or the escape or release of water from its normal confines, but not inundation due to a tsunami
> Section 5(1) NHI Act – Definition of 'flood'

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Flood excludes inundation due to a tsunami. Therefore, flooding that is a direct result of a tsunami is tsunami damage, not flood damage.

i. What is a 'storm'?

The NHI Act defines 'storm' as follows:

> **storm** means a disturbance of the earth's atmosphere that includes 1 or more of strong winds, heavy precipitation, and lightning (including, for example, a gale, hailstorm, snowstorm, or tornado)
> Section 5(1), NHI Act – Definition of 'storm'

j. What is a 'natural hazard fire'?

The NHI Act defines 'natural hazard fire' as follows:

> **natural hazard fire** means fire occasioned by, through, or in consequence of any other natural hazard
> Section 5(1), NHI Act – Definition of 'natural hazard fire'

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

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

ii. What is natural hazard damage?

a. What is the NHI Act definition of 'natural hazard damage'?

The NHI Act defines 'natural hazard damage' as follows:

> (1) Physical loss or damage to a residential building or residential land is **natural hazard damage** if—
>
> (a) it occurs as a direct result of a natural hazard; or
>
> (b) it occurs as a direct result of measures taken under proper authority to mitigate the consequences of a natural hazard; or
>
> (c) it is imminent damage.

Section 24, NHI Act – 'natural hazard damage'

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b. Components of subsection (1) (a) of the definition of 'natural hazard damage'

Subsection (1)(a) of the definition of 'natural hazard damage' can be broken down into the following components. There must be 'physical loss or damage' to the property … ;… occurring as 'the direct result' of … ; … a 'natural hazard'.

Section 24, NHI Act – Subsection (1)(a) of 'natural hazard damage'

c. Physical loss or damage that occurs as a direct result of measures taken under proper authority to mitigate the consequences of a natural hazard

Subsection (1)(b) of the definition of natural hazard damage covers physical loss or damage that occurs as a direct result of measures taken to mitigate the consequences of a natural hazard (referred to as 'mitigation damage'). An example is damage caused by Urban Search and Rescue (USAR) teams entering residential buildings by force after an earthquake to check on the safety of any person inside the building. The type of loss or damage covered by subsection 1 (b) is discussed separately – see Section 2.c.v What is 'mitigation damage'? in this Manual.

Section 24(1), NHI Act – Subsection 1 (b) of the definition of 'natural hazard damage'

d. Physical loss or damage that is imminent damage

Subsection 1(c) of the definition of 'natural hazard damage' covers physical loss or damage that has not yet occurred. For cover to apply:

- a natural hazard must have occurred; and
- as a direct result of that natural hazard, the loss or damage must be more likely than not to occur within 12 months after the natural hazard occurred.

For more information, see Section 2.c.vi What is 'imminent damage'? in this Manual.

If physical loss or damage is covered as 'imminent damage', and the loss or damage subsequently actually occurs, it cannot be claimed for again and is not considered natural hazard damage.

Section 24(5)(b), NHI Act

iii. Is there physical loss or damage?

Under the NHI Act, 'physical loss or damage' occurring as a direct result of a natural hazard is covered.

Section 24, NHI Act – 'natural hazard damage'

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a. Loss or damage must be physical

Physical loss – not economic loss

Loss or damage in the context of the NHI Act means loss or damage to the physical materials or structure of the insured property. For example, depriving a person of the use of their home because of the threat of rockfall is not 'physical loss ... to the property' under the NHI Act. It is an economic 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 hazard 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 hazard damage. For example, cracking to the foundation (which is covered by carpet) of a residential building caused by an earthquake is not natural hazard damage if it does not affect:

- the structural integrity of the foundations as a whole; or
- the floor's aesthetic value (and therefore does not impair the utility or amenity of the residential building).

It is 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 value of the insured property.

iv. Is the physical loss or damage 'a direct result' of a natural hazard?

Under the NHI Act, insured property is covered against 'natural hazard damage', which is any physical loss or damage occurring as 'a direct result' of a natural hazard.

Section 24, NHI Act – Subsection 1(a) of 'natural hazard damage'

a. Physical loss or damage must be 'a direct result' of a natural hazard

Whether physical loss or damage is 'a direct result' of a natural hazard is a question of fact to be resolved in the circumstances of the particular case. As a general rule,

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physical loss or damage to property is 'a direct result' of a natural hazard where the natural hazard is the proximate cause of the physical loss or damage.

Imminent damage that is mitigated before it can become actual or extended damage[20] is still a direct result of a natural hazard if the natural hazard is the proximate cause of the damage. For more information, see Section 2.c.vi What is 'imminent damage'? in this Manual.

Determining causation

Determining causation is largely a decision based on the factual circumstances and expert advice. When considering whether the natural hazard was the proximate 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 hazard was more likely than not the cause of the damage. In general, the natural hazard is the proximate cause of the physical loss or damage to property where:

- the natural hazard leads, in the natural and ordinary course of events, to that kind of loss or damage; and
- there is no break in the physical chain of causation.

Examples

The following examples illustrate where a natural hazard 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 a 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 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 a direct result of the earthquake.

[20] For the definition of 'extended damage', see NHC Claims Manual – Residential Buildings – NHI Act, Section 3.f.iii Situation where there is more than one natural hazard in a 48-hour period or 7-day period.

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Example 2 – Residential building with cracks in the 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 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 a direct result of the earthquake.

b. What if the natural hazard damage has also been caused or made worse by somebody's action or inaction?

In some cases, a claim for natural hazard damage can be declined (or only met in part). One such case is where the physical loss or damage – although a direct result of the natural hazard – has also been caused or made worse by somebody's action or inaction. These grounds to decline claims are set out in sections 68 to 77 of the NHI Act. For further details of the grounds for declining a claim, see the NHC Claims Manual – Residential Buildings – NHI Act, Section 7 What are the grounds for declining an NHCover claim?.

You must consider whether any physical loss or damage is a direct result of a natural hazard before – and separately from – considering whether there are any grounds to decline the claim. If the physical loss or damage is not a direct result of the natural hazard:

- there is no natural hazard damage;
- there is no need to consider the grounds to decline the claim under sections 68 to 77 of the NHI Act.

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Examples

Set out below are examples of relevant grounds where a claim can be declined because the natural hazard damage has been caused or made worse by somebody's action or inaction:

- A person has failed to take steps to mitigate the risk of natural hazard damage (where there were steps that could have reasonably been taken). This includes both the situation:
  - where a person has failed to mitigate the risk of natural hazard damage before the natural hazard occurred; and
  - where a person has failed to mitigate the risk of natural hazard damage after the natural hazard occurred. This includes where a payment was made for earlier natural hazard damage and that payment was not used to repair the property. In this case, the earlier natural hazard damage has caused the current natural hazard damage or made it worse.

Section 73, NHI Act

- Certain property types (set out below) were not constructed in accordance with standards considered appropriate for that property at the time it was constructed, and the natural hazard damage occurred because of, or was made worse by, the failure to comply with those standards. The relevant property types are:
  - any part of the residential building that is not an integral component of the eligible building;
  - a retaining wall;
  - a bridge; or
  - a culvert.

Section 76, NHI Act

- The insured person's intentional act, omission or negligence caused the natural hazard damage or made it worse.

Section 74, NHI Act

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- A previous owner's or previous occupier's intentional act, omission or negligence caused the natural hazard damage or made it worse. The insured person was aware of that other person's intentional act, omission or negligence when the insured person acquired the property and was, or reasonably should have been, aware of the resulting risk.

Section 74, NHI Act

c. What if there are multiple causes of physical loss or damage?

The NHI Act provides that:

- residential buildings have NHCover for damage that occurs as a direct result of earthquakes, hydrothermal activity, landslides, tsunamis, volcanic activity and natural hazard fire occasioned by those types of hazards; but
- residential buildings do **not** have NHCover for damage that occurs as a direct result of storms, floods, and natural hazard fire occasioned by a storm or flood.

As a first step, it is necessary to determine what hazard has caused damage to the residential building.

If you determine that a residential building has suffered damage from multiple natural hazards, and the damage from one of those hazards is covered but the damage from another is not, you should escalate the matter to the appropriate NHC representative.

See also the NHC Claims Manual – Residential Buildings – NHI Act:

- Section 3.f.iii Situation where there is more than one natural hazard in a 48-hour period or 7-day period; and
- Section 6.C Principles for assessment when there are multiple events.

v. What is 'mitigation damage'?

Physical loss or damage to property that occurs as a direct result of measures taken under proper authority to mitigate the consequences of a natural hazard (referred to as 'mitigation damage') is natural hazard damage per section 24(1)(b) of the NHI Act.

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The NHI Act provides:

> Mitigation damage
>
> (2) Loss or damage referred to in subsection (1)(b)—
>
> (a) is natural hazard damage regardless of whether it is intentional or accidental; and
>
> (b) is taken to occur as a direct result of the natural hazard in relation to which the measures were taken.
>
> Section 24(2), NHI Act

a. Section 24(2), NHI Act components of the 'mitigation damage' definition

The above provisions can be broken down into three key components. For there to be 'mitigation damage':

- there must be physical loss or damage to the property;
- the physical loss or damage must occur (whether intentionally or accidentally) as a direct result of measures taken under proper authority; and
- those measures must be to mitigate the consequences of a natural hazard;

For mitigation damage to have occurred, all components must be met. Each component is discussed below.

1. There must be physical loss or damage to the property (see Section 2.c.iii Is there physical loss or damage? in this Manual).

2. The physical loss or damage must occur (whether intentionally or accidentally) as a direct result of measures taken under proper authority.

The physical loss or damage to the property is 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' (see Section 2.c.vi What is 'imminent damage'? in this Manual).

In this context 'proper authority' could be authority derived from any enactment. An enactment is an Act or regulations. An example is USAR teams (which come under the umbrella of Fire and Emergency New Zealand (FENZ)). 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 (FENZ).

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3. Those measures must be to mitigate the consequences of a natural hazard. The words 'to mitigate the consequences of a natural hazard' include both:
   - measures taken to avoid the spread of the natural hazard; and
   - measures taken to preserve life or otherwise assist people possibly hurt as a result of the natural hazard.

b. Who determines whether 'mitigation damage' applies?

You determine whether 'mitigation damage' applies.

Sometimes the authority (for measures for mitigating the consequences of a natural hazard) will be granted by emergency legislation. You will determine whether mitigation damage applies, taking into account, in each case, the specific facts and legal position at the relevant time.

vi. What is 'imminent damage'?

The NHI Act defines 'imminent damage' as:

> (3) Physical loss or damage to a residential building or residential land that has not yet occurred is imminent damage if—
>
> (a) a natural hazard has occurred (event 1); and
>
> (b) the Commission is of the opinion that, as a direct result of event 1, the loss or damage is more likely than not to occur within 12 months after event 1 first occurred.
>
> Section 24(3), NHI Act

For more information, see Section 5 Imminent damage in this Manual.

a. Components of imminent damage

The above provisions can be broken down into three key components. For there to be imminent damage:

- there must be the potential for physical loss or damage to property;
- the potential physical loss or damage must be 'a direct result' of the natural hazard that has occurred; and
- the potential physical loss or damage must be 'more likely than not to occur within 12 months' after the natural hazard occurred.

For imminent damage to have occurred, all components must be met.

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b. Who determines whether 'imminent damage' applies?

You (or the expert you have engaged) must determine whether 'imminent damage' applies.

d. What is the basis of cover?

i. Basis of cover for a 'residential building'

Under the NHI Act, a residential building is insured against natural hazard damage for its replacement cost.

The amount of the NHCover for a residential building is also subject to a maximum amount of insurance referred to as the 'building cover cap'.

But before it can be determined whether the building cover cap is reached, it is necessary to assess the amount of the natural hazard damage on the basis of the replacement cost.

Section 30, 31 NHI Act

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

Replacement cost, in relation to a residential building, is defined in the NHI Act as follows:

> The replacement cost of the damaged parts of the residential building is the total cost that would reasonably be incurred to replace or reinstate the damaged parts of the building to a condition substantially the same as, but not better or more extensive than, their condition when they were new, but—
>
> (a) modified as necessary to comply with all applicable laws (such as the Building Act 2004 and the building code under that Act); and
>
> (b) replaced or reinstated using materials and methods that are currently in common use.

Section 32(1), NHI Act

The replacement cost means the total of the costs that are reasonably incurred in doing all of the following:

- Replacing or reinstating the damaged parts of the residential building to a condition substantially the same as (but not better or more extensive than) their condition when they were new. This may include work that needs to be done to undamaged parts of the residential building to replace or reinstate the damaged parts, or relocating parts of the residential building. The condition

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'when they were new' is modified as necessary to comply with any new applicable laws.

- Demolishing and removing debris, but only to the extent that the demolition and removal is reasonably required to carry out the replacement or reinstatement work.
- Complying with any applicable laws relating to replacing and reinstating the residential building.
- Paying other fees or costs in the course of replacing or reinstating the residential building (for example, architects' fees and fees payable to local authorities).

For all of the four components above, GST is included.

What does 'when they were new' mean?

Under the NHI Act, the damaged parts of a residential building must be replaced or reinstated to a condition substantially the same as, but not better or more extensive than, their condition when they were new.

If a component only has a functional purpose, the requirements under the NHI Act are met by restoring that functional purpose to its condition when it was new. Where a component also has an aesthetic purpose, the remediation strategy must also (as far as possible) 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.

A common issue that might arise relating to the 'when-new' repair standard is where a residential building was built with materials that are no longer available. Under section 32(1)(b) of the NHI Act, the damaged parts of the building are to be repaired using materials and methods that are currently in common use. The damaged parts must be returned to a condition that is substantially the same as, but not better or more extensive than, when the building was built.

Another issue is how the 'when-new' standard applies where there have been changes to the building laws since the residential building was built. In this case, under section 32(1)(a) of the NHI Act, the NHCover will meet the costs of modifying the residential building as necessary to comply with all applicable laws (such as the Building Act 2004 and the Building Code under the Act).

For example, if a chimney of an older type residential building were damaged by an earthquake, and the Building Code required that the replacement chimney have a

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different specification than the one used when the building was built, the NHCover would meet the cost of the improvement.

However, if there had been a legal obligation to modify the residential building (whether at the time or in the future) immediately before the natural hazard damage, the replacement cost would not include the modifications required to comply with that legal obligation. For more information, see NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.d What does the 'replacement cost' not include?.

b. What demolition and removal of debris is reasonably required for replacement or reinstatement work?

The cost of demolishing a building element and removing any associated debris should be included in the replacement cost to the extent that is reasonably required to carry out the replacement or reinstatement works.

If a relevant construction professional would consider repair or removal of debris a reasonable and necessary solution as part of the overall repair strategy, this indicates the work is reasonably required.

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

It is sometimes necessary to do work on an undamaged part of the residential building to meet the replacement cost standard. An example of this is removing undamaged floorboards to repair foundations.

In these situations, NHCover 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 depends on the particular circumstances of each damaged residential building.

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Example

The following is an example of how the replacement cost 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 compliant with the building code but was functional before the earthquake. The insured person had no legal obligation to replace the wiring immediately 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 corrugated 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 would 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 in this Manual.

d. Relocating parts of the residential building

The replacement cost can include the cost of relocating part of the residential building (see section 32(2)(a)(ii) of the NHI Act).

The NHI Act expressly allows a claim to be settled by relocating all or part of the residential building (even if this includes moving parts of the residential building that are undamaged). If relocated, the residential building (or any part of it) must be reinstated to a condition substantially the same as, but not better or more extensive than, its condition when it was new. This includes repairing any damage that was

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reasonably incurred as part of the relocation (see Section 8.c.iv Identify any natural hazard damage in this Manual).

e. How does 'replacement cost' apply with respect to floor levels?

If the natural hazard damage includes floor dislevelment, whether relevelling is required is determined under the NHI Act. Any relevelling is on the basis of the replacement cost standard. See the NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.c.i What is the definition of 'replacement cost'?.

The replacement cost standard does not mean that a residential building must necessarily be replaced or reinstated to 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 hazard and the residential building has previously been altered to accommodate the floors not being level.

If the floors were to be completely re-levelled, it 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 NHI Act. What is required will depend on the circumstances of each residential building. Any repair strategy must also comply with all applicable laws, e.g. the Building Act 2004.

f. How does the 'replacement cost' standard apply where there is a cash settlement?

If the claim is cash settled, the payment must be the replacement cost of the property as defined in section 32 of the NHI Act (and otherwise in accordance with the provisions of the NHI Act, including the building cover cap . This replacement cost standard of repair is the same whether the NHCover claim is cash settled or the residential building is repaired.

g. How does the 'replacement cost' apply to shared, common or joint property?

Assessing replacement cost involves an additional step where property is:

- shared;
- common; or
- joint.

Common and joint property only apply where there is a mixed-use building.

For an explanation of shared land, common land, joint land and mixed-use buildings, see Section 8 Assessing damage across multiple properties in this Manual.

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To assess the replacement cost for shared, common and joint property, you must determine the replacement cost as usual. You must then multiply the cost by the insured person's shared, common, or joint ownership interest (depending on the nature of the property) to quantify the proportionate amount that is covered under the person's NHCover claim (see Section 8 Assessing damage across multiple properties in this Manual).

For example, if the replacement cost for a shared wall was determined to be $10,000 (using the natural hazard damage assessment of replacement cost set out in the NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.c.i to 6.A.c.iii and Section 6.A.c.vii) and the insured person had a half share in the repair responsibility of the wall, the replacement cost would be:

$10,000 x 50% = $5,000.

There may be circumstances where property that is both shared property and common property (or shared property and joint property) is damaged. In this scenario, the replacement cost for the shared property is calculated first, and then the common property (or joint property) replacement cost (with any necessary modifications) is calculated.

h. How does 'replacement cost' apply to imminent damage?

The replacement cost for imminent damage must be determined using either (or a combination of) the cost to:

- prevent the imminent damage from occurring (the mitigation cost), or
- repair the imminent damage once it has occurred (the future replacement cost)

For further information on using either one, or a combination of the above options, see:

- Section 5.b What the NHI Act covers in this Manual;
- the NHC Claims Manual – Residential Building – NHI Act, Section 6.A.c.viii How does 'replacement cost' apply with respect to imminent damage;
- the Imminent Damage Guide – NHI Act.

ii. Basis of cover for 'residential land'

The NHI Act insures residential land on an indemnity basis (up to the land cover cap). Unlike residential buildings, residential land is not insured against natural hazard

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damage on a 'replacement cost' basis but on a 'reinstatement cost' basis.

The land claim entitlement for an NHCover residential land claim is subject to a maximum amount of cover (referred to in the NHI Act as the 'land cover cap'). In summary, the land cover cap is the sum of:

- the assessed market value of the damaged part of the insured land area (or other smaller specified area of land); and
- if there are damaged insured land structures, **the lesser of**:
  - the undepreciated value of the damaged insured land structures (see the NHC Claims Manual – Residential Land – NHI Act, Section 9.e.iii); and
  - the number of dwellings in the residential building multiplied by a fixed value (the 'applicable limit') (see the NHC Claims Manual – Residential Land – NHI Act, Section 9.e.i).

But before it can be determined whether the land cover cap is reached, it is necessary to assess the amount of the natural hazard damage on the basis of the actual loss suffered (see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A Assessment of residential land damage). This can be quantified using:

- the reinstatement cost; or
- the DOV.

For details on how to determine whether to use reinstatement cost or the DOV to quantify the actual loss suffered, see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.i What is the actual loss suffered?.

a. Reinstatement cost

Reinstatement cost, in relation to residential land, is defined in the NHI Act as follows:

> (1) The **reinstatement cost** of residential land (or part of it) is the total cost that would reasonably be incurred to reinstate the damaged residential land (or that part of it) in a way that would be reasonably sufficient in the circumstances.
> Section 41(1), NHI Act

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The reinstatement cost means the total of the costs that are reasonably incurred in doing all of the following:

- Reinstating the damaged parts of the residential land in a way that would be reasonably sufficient in the circumstances. This may include work that needs to be done to undamaged parts of the residential land to reinstate the damaged parts. Reinstatement call be full, partial, or a combination of both.
- Complying with any applicable laws relating to reinstating the residential land.
- Paying other fees or costs in the course of reinstating the residential land (for example, architect's fees and fees payable to local authorities).

For all of the three components above, GST is included.

For more information on reinstatement cost, see the NHC Claims Manual – Residential Land:

- Section 7.A.c.i What is the actual loss suffered?; and
- Section 7.A.c.iii What is reinstatement cost?.

Sometimes 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). For more information, see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.vi What is diminution of value?.

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 consider customer's particular circumstances (including what they have said they intend to do about repairing the land).

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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.

Settlements using both reinstatement cost and DOV

In some cases, it may be appropriate to settle a claim partly by paying the reinstatement cost and partly by paying DOV. For example, a landslide may have:

- damaged a retaining wall (which is repairable); and
- resulted in the permanent loss of an area of land that cannot be restored (for example, where a cliff has collapsed).

In such cases, the amount of the damage to the residential land may be settled by adding:

- the reinstatement cost for the damage that can be repaired (in the above example, the repairable retaining wall); and
- the DOV (if any) of the property caused by the unrepairable land damage (in the above example, the lost land that cannot be restored).

The settlement amount is always subject to the land cover cap – see Section 2.d.ii Basis of cover for 'residential land' in this Manual.

For more details on settling a residential land claim (or part of that claim) by paying DOV, see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.ii What method is used to quantify the actual loss suffered?. If it is identified that assessment on the basis of DOV may be appropriate, you must escalate the matter to the appropriate NHC representative.

b. How does the 'reinstatement cost' apply to shared, common or joint land?

Assessing reinstatement cost involves an additional step where residential land is:

- shared;
- common; or
- joint.

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Both common and joint land only apply where there is a mixed-use building. For an explanation of shared land, common land, joint land and mixed-use buildings, see Section 8 Assessing damage across multiple properties in this Manual.

If there is more than one residential building situated at a single property, you must determine the insured residential land in relation to each residential building (excluding service infrastructure).

To assess the reinstatement cost for shared, common and joint land, you must determine the reinstatement cost as usual. You must then multiply the cost by the insured person's shared, common, or joint ownership interest (depending on the nature of the property) to quantify the proportionate amount that is covered under the person's NHCover claim (see Section 8 Assessing damage across multiple properties in this Manual).

For example, if the reinstatement cost for a shared retaining wall was determined to be $20,000 using the natural hazard damage assessment of reinstatement cost (set out in the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.iii What is reinstatement cost? and Section 7.A.e How are the proportionate costs, values and amounts for shared, common or joint land determined?) and the insured person had a half share in the repair responsibility of the wall, the reinstatement cost would be:

$20,000 x 50% = $10,000.

There may be circumstances where land that is both shared land and common land (or shared land and joint land) is damaged. In this scenario, the reinstatement cost for the shared land is calculated first, and then the common land (or joint land) reinstatement cost (with any necessary modifications) is calculated.

c. How does 'reinstatement cost' apply with respect to imminent damage?

The reinstatement cost for imminent damage must be determined using either (or a combination of) the cost to:

- prevent the imminent damage from occurring (the mitigation cost); or
- repair the imminent damage once it has occurred (the future replacement cost)

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For further information on using either one, or a combination of the above options, see:

- Section 5.b What the NHI Act covers in this Manual
- NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.iii What is Reinstatement Cost?; and
- Imminent Damage Guide – NHI Act.

e. Consequential loss

'Consequential loss' is not covered under the NHI Act.

Section 28(3) NHI Act

The NHI Act states that 'consequential loss' includes temporary accommodation costs, loss of profits, loss or damage as a result of theft, vandalism, or business interruption, or loss of intangible property. This list is not exhaustive.

Sometimes the natural hazard 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. These types of physical loss or damage are not covered under the NHI Act.

Examples

- Temporary accommodation costs. An example of these are costs incurred by renting alternative accommodation. This applies either where alternative accommodation is necessary because the dwelling has suffered natural hazard damage to the point it cannot be occupied, or because the dwelling needs to be temporarily vacated for repairs to occur.
- Loss of profits and business interruption. An example of this is when a landlord's residential rental property suffers natural hazard damage, resulting in the tenants having to move out for repairs to the dwelling.
- Intangible property. An example of this is where a home automation and security system is damaged by a natural hazard, resulting in the loss of data stored on the system (such as recorded video).

If there is consequential loss, you should consider whether it is covered by a private insurance policy. Loss of profits and business interruption are also not covered under the NHI Act. An example of this is when a landlord's residential rental property suffers natural hazard damage, resulting in the tenants having to move out for

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repairs to the dwelling. This loss of rent is not covered because it is a consequential loss. In this case, you should consider the homeowner's private insurance policy response.

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 NHC representative.

f. Pre-existing conditions

Natural hazard 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 hazard. Relevant evidence may include both expert evidence, and observations of the customer and those who saw the damage before the natural hazard.

Under the NHI Act, there is only cover for costs directly linked with a natural hazard. However, the NHCover may still repair damage from other causes. Sometimes it is necessary to repair that other damage to repair the natural hazard damage lawfully and properly. Whether this is necessary will be a question of fact in each case.

If there was an existing legal requirement for the customer to make modifications to the property at the time the natural hazard occurred or in the future, you must exclude the cost of these from the scope of works.

For full details, see Section 6 Pre-existing conditions in this Manual.

g. Grounds for declining an NHCover claim

You may decide to decline (or meet only part of) a claim on a case-by-case basis under sections 68 to 77 of the NHI Act. This is a highly fact-dependent exercise, and you must ensure that your decision is lawful, procedurally fair, reasonable and made with an open mind. Any decision to decline or meet part only of an NHCover claim is discretionary. However, it is still subject to legal challenge, including by way of judicial review.

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For more information on considering a claim under sections 68 to 77 of the NHI Act, see the:

- NHC Claims Manual – Residential Buildings – NHI Act, Section 7 What are the grounds for declining an NHCover claim?/NHC Claims Manual – Residential Land – NHI Act, Section 8 What are the grounds for declining an NHCover claim?; and
- Declining a Claim Guide – NHI Act.

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3. Identifying natural hazard damage to a residential building

Before following the guidance in this section, ensure that you are familiar with the NHC Claims Manual – Residential Buildings – NHI Act, particularly Section 4 Is there an insured 'residential building'?. An overview of this section is provided below.

a. Overview

All residential buildings in New Zealand have cover for natural hazard damage if they have a current fire insurance contract or direct NHCover.

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

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

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

b. Is there an insured 'residential building'?

The definition of residential building makes it clear which buildings, parts of buildings, appurtenant structures and service infrastructure are insured under the NHI Act and which are not.

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

- a dwelling;
- an eligible building;[21]
- the residential building itself, which may include:
    - the whole of an eligible building; or
    - in the case of a mixed-use building, all of the dwellings in the eligible building';

[21] For the definition of 'eligible building', see section 7 of the NHI Act.

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- appurtenant structures;
- the service infrastructure.

A building, or part of a building, that is used to provide long-term accommodation for the elderly is a dwelling under the NHI Act, and is therefore covered on the same basis as any other residential building.

Schedule 2 of the NHI Act lists property that is not covered under the NHI Act or that is only covered in limited circumstances. This schedule has the effect of excluding some property that may otherwise be insured as components of the residential building.

c. Distinguishing natural hazard damage from pre-existing conditions

To be covered under the NHI Act, damage must be the direct result of the natural hazard as defined in the NHI Act.

When identifying natural hazard damage, you must also consider any pre-existing conditions,[31] including any damage not caused by the natural hazard.

If the cause of damage is not clear, engage appropriate experts[5] to provide advice.

d. Indicators of the extent of damage

It is important when you are assessing natural hazard damage that you can identify and understand types of building damage, and the 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 may require an expert for further quantification.

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- In some cases, it may require invasive investigations to quantify the damage.
- Generally, buildings with moderate damage remain safe to live in or can be made safe with urgent works.[132]

Severe damage:

- Severe damage involves significant structural or weathertightness issues.
- It most often requires an expert[5] for further quantification.
- In some cases, it may require invasive investigations to quantify the damage.
- Often, buildings with severe damage are unsafe[22] 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[6] 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 hazard damage to a residential building

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

- the natural hazard 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.

Damage types can also overlap. Common natural hazard damage to land elements is covered in Section 8 Assessing damage across multiple properties in this Manual.

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

f. Features of natural hazard damage to a residential building

Some common features of natural hazard 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 hazard damage to building elements

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

In all cases, consider dangerous or insanitary buildings.[22]

Under the NHI Act, natural hazard damage to residential buildings arising from a storm or flood is not covered. Only the residential land is covered for storm or flood damage.

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 service infrastructure, i.e. water supply, drainage, sewerage, gas, electricity, heating or telecommunications
- Foundation damage, e.g. settlement, cracking, movement of piles

[22] 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)

Landslide:

- 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 Landslide 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 or hydrothermal activity, e.g. cupping of flooring, failed electrical wiring and insulation
- Water or moisture damage, e.g. warping or 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 activity:

- 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 activity

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Figure 5 Lava flow from volcanic activity impacting dwelling

Natural hazard fire:

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

Figure 6 Natural hazard fire damage

ii. Common natural hazard 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-

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complex multi-unit building)[23] construction. Building materials not mentioned here may require further guidance or specialised assessment. See also Appendix 1 Building components and repair considerations.

a. 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 landslide debris

[23] 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

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Figure 10 Cracked EIFS panel (BRANZ)

b. Medium and heavyweight cladding (mass greater than 30 kg/m² 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

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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 hazard
- 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 hazard

Figure 14 Severely cracked brick wall

iii. Common natural hazard 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-

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complex multi-unit building)[24] construction. Building materials not mentioned here may require further guidance or specialised assessment.

See also Appendix 2 Land components and repair considerations in this Manual.

Plasterboard:

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

Figure 15 Structural cracking

Figure 16 Structural cracking

[24] 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 hazard 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.a Overview in this Manual.

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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)
- Cracking

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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

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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 hazard damage observations to specific chimney types

Un-reinforced masonry:

- Horizontal cracking or displacement

Figure 25 Chimney cracked at roofline with temporary supporting repairs

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

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Figure 26 Total collapse of chimney with temporary waterproofing measures

- Impact damage to other insured property

Reinforced masonry:

- Step-cracking 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

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- 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

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 hazard damage observations to specific exterior cladding types in this Manual.

vi. Common natural hazard damage observations to specific service infrastructure

Service infrastructure covered under the NHI Act is infrastructure (e.g. pipes, cables, wires, poles and drains) used to provide a service to the dwelling, an appurtenant structure for the dwelling, or to the insured person's land. Service means water supply, drainage, sewerage, gas, electricity, heating or telecommunications.

- Collapse
- Displacement (vertical or horizontal)

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- Cracking
- Rupture
- Cable disruption
- Inundation

Figure 29 Displacement of septic tank

See also Appendix 1 Building components and repair considerations in this Manual.

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4. Identifying natural hazard damage to residential land

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

a. Overview

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

It is necessary to first identify whether there is an insured residential building (as defined under the NHI Act) to determine whether there is any NHCover. Where there is an insured residential building, you must then determine the associated insured residential land, and whether there is natural hazard damage to the residential land.

This section discusses visible land damage only. If the claim you are dealing with has non-visible land damage, i.e. ILV or IFV, you must escalate this to the appropriate NHC representative.

b. Is there insured 'residential land'?

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

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

- the relevant residential building.
- the insured person's land.
- the insured land areas, which are:
    - the land that the residential building (excluding service infrastructure) is situated on;[25]

[25] See NHC Claims Manual – Residential Land – NHI Act, Section 4.e What is 'land on which the building is situated'?.

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  - the land within 8 metres, in a horizontal line, of the residential building (excluding service infrastructure);[26]
  - the land within 60 metres (in a horizontal line) of the residential building (excluding service infrastructure) that is either the main access way to the residential building or land that supports the main access way.[27]

- any insured land structures, which are:
  - all retaining walls and their support systems within 60 metres, in a horizontal line, of a residential building necessary for the support or protection of:
    - the residential building; or
    - one or more insured land areas (as described above).

    This can include retaining walls and their support systems that are situated outside the insured person's land where:
    - the other retaining wall criteria are met; and
    - the insured person has an insurable interest in the retaining wall.
  - all bridges[28] and culverts[29] that are on or in land that is:
    - an insured land area (as described above); or
    - outside the insured person's land but is otherwise land of the kind referred to as the 'insured land areas', and which the insured person has an insurable interest in.

When a damaged land structure is outside the insured person's land, the insured person must have an insurable interest in that land structure for it to be covered.

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[26] See NHC Claims Manual – Residential Land – NHI Act, Section 4.f What is 'land that is within 8 metres of the residential building'?.

[27] See NHC Claims Manual – Residential Land – NHI Act, Section 4.g What access way (or part of an access way) is 'residential land'?.

[28] See NHC Claims Manual – Residential Land – NHI Act, Section 4.i What bridges are 'residential land'?.

[29] See NHC Claims Manual – Residential Land – NHI Act, Section 4.j What culverts are 'residential land'?.

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Schedule 2 of the NHI Act lists property that is excluded property or is only covered in limited circumstances.[30] This schedule has the effect of excluding some property from cover that may otherwise have been insured as components of residential land.

i. Residential land may include common land, joint land and shared land

If there is more than one residential building lawfully situated on the insured person's land:

- the insured residential land is determined by reference to each residential building;
- the residential land may include shared land.

a. Shared land

Shared land is any part of the residential land that a person who is not the insured person has an insurable interest in (see NHC Claims Manual – Residential Land – NHI Act, Section 3.c.i Who is an 'insured person'?).

For more information on shared land, see NHC Claims Manual – Residential Land, Section 4.b.v Residential land may include 'common land', 'joint land' and 'shared land', and Section 8 Assessing damage across multiple properties in this Manual.

If there is a mixed-use building, the residential land may include common land or joint land.

b. Common land

Common land is any part of the residential land:

- that is for the use or benefit of the owners or other occupants of all premises in the mixed-use building, and
- that all of the owners have an insurable interest in.

[30] See NHC Claims Manual – Residential Land – NHI Act, Section 4.k What property is not insured by virtue of Schedule 2 of the NHI Act?.

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c. Joint land

Joint land is any part of the residential land:

- that is for the use or benefit of the owners or other occupants of some, but not all, premises in the mixed-use building, and
- that those owners have an insurable interest in.

For more information on common land and joint land, see NHC Claims Manual – Residential Land – NHI Act, Section 4.b.v, and Section 8 Assessing damage across multiple properties in this Manual.

c. Distinguishing natural hazard damage from pre-existing conditions

To be covered under the NHI Act, damage must be the direct result of a natural hazard as defined in the NHI Act.

When identifying natural hazard damage, you must also consider any pre-existing conditions,[31] including any damage not caused by a natural hazard.

If the cause of damage is not clear, engage appropriate experts[5] 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 insured person's land (see Section 4.d.i

  Assessing the extent of the insured person's land in this Manual);
- the type and extent of the land damage to the insured person's land (see Section 4.d.ii Assessing the type and extent of the natural hazard damage to the land area and land structures on the insured person's land in this Manual);
- the extent of the insured residential land (see Section 4.d.iii Assessing the extent of the insured residential land in this Manual);
- the area of insured residential land that is lost or damaged (see Section 4.d.iv Assessing the area of land that is lost or damaged in this Manual);

[31] See Section 6 Pre-existing conditions.

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- the conceptual remediation strategy for damage to the insured residential land (see Appendix 2 Land components and repair considerations in this Manual);
- the cost of repair for damage to the insured residential land (see NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.v Assessing the cost of repair); and
- the land values related to the land cover cap, which include the assessed market value of the damaged insured land areas (or other specified land areas) and costing the depreciated value of the damaged insured land structures (see NHC Claims Manual – Residential Land – NHI Act, Section 7.A.d Assessing the relevant land values).

More details on each of these seven steps are set out below. In most cases, you will require specialist advice to complete the steps in the assessment – see Section 7 Engaging experts in this Manual.

i. Assessing the extent of the insured person's land

As a first step, you must identify the extent of the insured person's land. NHC Claims Manual – Residential Land – NHI Act, Section 4.d What is the insured person's land? sets out in detail how to identify the insured person's land.

In general, the insured person's land consists of all the land within the boundaries shown on the record of title (RT) for that property. However, land outside those boundaries may also form part of the insured person's land in two situations[32] as follows:

- where the insured person has an estate or interest in land that is:
  - contiguous with the land within the RT;[33] and
  - used or intended to be used with the land within the RT as a single residential property;
- where an estate or interest in land is for the benefit of:
  - the land within the RT; or

[32] For more information, see the NHC Claims Manual – Residential Land – NHI Act, Section 4.d.i Is the insured person 's land always the same as the area of land shown within the RT?.

[33] For more information, see section 16 of the NHI Act.

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- land that is contiguous with the land within the RT and is used or intended to be used with the land within the RT as a single residential property.

In rare situations, land within a single RT should be treated as two (or more) insured persons' lands under the NHI Act.

ii. Assessing the type and extent of the natural hazard damage to the land area and land structures on the insured person's land

Next, you must identify the type and extent of natural hazard damage to the land areas and land structures (insured and uninsured) within the insured person's land.

a. What is the natural hazard damage?

The residential land has incurred natural hazard damage where there is:

- physical loss or damage to the residential land occurring:
  - as the direct result of a natural hazard; and/or
  - from measures taken under proper authority to mitigate the consequences of a natural hazard; and/or
- imminent damage.

Section 24(1),NHI Act

In each case, there is land damage where:

- the residential land has been materially physically changed as a direct result of a natural hazard; 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.

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b. Identifying damage to both insured and uninsured land

At this stage of the assessment, you should identify and record damage to all of the land area and land structures on the insured person's land (where appropriate). This means that the assessment includes damage to both:

- the insured land area and the insured land structures; and
- the uninsured land area and uninsured land structures on the insured person's land.

Only the insured land areas and the insured land structures of the residential land are insured under the NHI Act. But it is useful to also have information about any damage to the uninsured land areas and uninsured land structures within the insured person's land. That information may (where relevant) inform the assessment of the current or a future NHCover claim related to the property.

Sometimes it is not appropriate to identify and record damage to the entirety of the insured person's land. For example, on a large lifestyle property or farm it may be impractical. In these cases, you may limit your assessment to a smaller area of land. You must clearly define and record this area as part of your assessment, and include (as a minimum) any damage to the land area and land structures within 60 metres of the residential building.

c. Some typical types of land damage

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

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Table 2: Typical types of land damage

			NATURAL HAZARD TYPE							
			Earthquake	Landslide	Volcanic activity	Hydrothermal activity	Tsunami	Storm*	Flood*	Natural hazard 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	X				
		Cracking (oscillation movement)	X							
		Undulating land	X	X	X					
		Local ponding	X		X					
		Local settlement	X	X	X					
		Groundwater springs	X	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

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d. Imminent damage

In assessing any imminent damage, the engineer engaged (or other assessor) should provide their best estimate of the further natural hazard damage that is more likely than not to occur to the residential land (if any):

- as a direct result of the original natural hazard; and
- during the 12-month period following that natural hazard.[34]

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 hazard damage.

For further details, see Section 5 Imminent damage in this Manual.

e. As at what date must the damage be assessed?

The damage must generally be assessed as at the date that the natural hazard 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 hazard rather than at the date of the assessment.

f. Situation where there is both residential land and residential building damage

Sometimes (particularly for a landslide), the natural hazard damage to the residential land may also affect the residential building on the insured person's land. 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 claim will affect settlement of the residential building claim (see NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.iii What is reinstatement cost? and NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.c.viii How does 'replacement cost' apply with respect to imminent damage?).

[34] See Section 2.c.ii.d Physical loss or damage that is imminent damage in this Manual.

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g. Recording the type and extent of the natural hazard damage

The type and extent of the natural hazard damage to the land areas and land structures on the insured person's land should be recorded using a land sketch[35] and accompanying report.

iii. Assessing the extent of the insured residential land

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

a. How is the insured residential land identified?

Section 4.b Is there insured 'residential land'? in this Manual sets out in detail how to identify the insured residential land. In summary, the insured residential land is defined under the NHI Act as:

- the insured land areas; and
- any insured land structures.

Section 4.c Distinguishing natural hazard damage from pre-existing conditions in this Manual sets out details on assessing the extent of the residential land in different situations.

Section 17, NHI Act

b. What if there is doubt about whether any particular property is insured residential land?

Sometimes there may be doubt whether a particular land area or land structure comes within the definition of the insured residential land under the NHI Act. For example, there may be doubt about:

- whether a specific land area supports the main access way[36] of the property; or
- whether a particular wall within or outside the insured person's land is an insured retaining wall.[37]

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[35] For more details about the land sketch, see Section 13.d.iii Site assessment documentation standards in this Manual.

[36] See NHC Claims Manual – Residential Land – NHI Act, Section 4.g What access way (or part of an access way) is 'residential land'?.

[37] See NHC Claims Manual – Residential Land – NHI Act, Section 4.h What retaining walls are 'residential land'?.

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

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

In the first instance, you should refer that information to a relevant expert to see whether they can resolve the doubt. For example, you may engage a geotechnical engineer to provide advice about whether a specific land area supports the main access way. If, after obtaining the relevant expert's advice, you still have doubts about whether the land area or land structure is insured residential land, you should escalate the matter to the appropriate NHC representative.

c. Recording the type and extent of the insured residential land

You should record the extent of the insured residential land, and any particular land areas or land structures that are in doubt) using a land sketch[38] and accompanying report.

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

You must identify the insured land areas and land structures that are actually lost or damaged.

Two key components in calculating the land cover cap are:

- the assessed market value of the insured land areas that are lost or damaged
- the undepreciated value of any insured land structures that are damaged.

The insured residential land that is actually lost or damaged includes any land area and/or land structure where physical loss or damage is, in our opinion, imminent[39] as the direct result of the natural hazard that has occurred.

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

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[38] For more details about the land sketch, see Section 13.d.iii Site assessment documentation standards.

[39] See Section 2.c.vi What is 'imminent damage'?.

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For instructions on preparing a land sketch, see Section 13.d.iii Site assessment documentation standards in this Manual.

For an example of a land sketch, see Appendix 4 Documentation examples in this Manual.

For further information about how natural hazard damage to land is assessed, see NHC Claims Manual – Residential Land – NHI Act, Section 7 How is the natural hazard damage assessed?.

e. Indicators of the extent of damage

It is important when you are assessing natural hazard 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.
- The damage generally does not affect a land structure.
- It does not include landslides.

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.

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- Sometimes, land with severe damage makes the property unsafe to access and/or occupy[40] and it will remain so until substantive repairs are carried out.
- Severe damage may result in total loss of the insured land.

Imminent damage[6] may exist in any of the three categories of damage, but it is more likely in moderate or severe damage.

Identifying which category of damage the property you are assessing falls into helps 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 hazard damage to residential land

Some common features of natural hazard 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 hazard land damage

The most common types of natural hazard land damage are as follows. For further examples, see Appendix 4 Case studies.

a. Evacuation

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

[40] See Section 9 Unsafe properties.

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Figure 30 Evacuation due to landslide

b. 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 31 Silt inundation due to flooding

c. Cracking (lateral spreading)

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

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Figure 32 Cracking (lateral spreading) due to earthquake

d. 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.

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Figure 33 Cracking (oscillation movement of dwelling) due to earthquake

e. 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 landslide.

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Figure 34 Undulating land due to earthquake

f. 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 35 Localised ponding due to earthquake

g. 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 landslide can also result in localised settlement of the ground surface.

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Figure 36 Localised settlement due to rotated retaining wall (obscured)

h. Groundwater springs

New groundwater springs can emerge and start flowing over the ground surface where this was not happening before the natural hazard occurred. 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 hazard.

Figure 37 Inundation from groundwater spring due to earthquake

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i. Contaminated land that is the direct result of a natural hazard occurring

If residential land is contaminated as a direct result of a natural hazard (and this contamination is not temporary), this may be considered natural hazard damage.

An example of this type of contamination is residential land being inundated by debris containing asbestos.

You must treat this contamination as natural hazard damage.

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.

See also Section 1.h.v Health and safety in this Manual.

j. Temporarily contaminated land

Sometimes a natural hazard causes residential land to become temporarily contaminated (for example, sewage seeps to the surface of the land). This contamination often breaks down to safe levels over a short period (for example, because the bacteria in the sewage break down in the sunshine or normal rainfall).

In these situations, the land has 'self-repaired' (or will in the short term), and you do not need to cost a repair unless there are other types of land damage to the insured land.

k. Potentially contaminated land due to a pre-existing condition

'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. In other words, the contamination is not the result of a natural hazard.

An example is residential land on a Hazardous Activities and Industries List (HAIL) site that is listed on the Environment Canterbury (ECan) Listed Land Use Register (LLUR).

You must meet all health and safety requirements in connection with any visit to potentially contaminated land.

For detailed guidance about pre-existing conditions, see Section 6 Pre-existing conditions in this Manual.

For more details on common remediation strategies, see Appendix 2 Land components and repair considerations in this Manual.

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

The most common types of natural hazard damage to land structures are as follows. For further examples, see Appendix 4 Case studies in this Manual.

a. Impact damage

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

Figure 38 Impact damage to a bridge abutment from flood debris

b. 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 39 Retaining wall that has cracked due to earthquake

c. 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 (landslide) upslope putting pressure on the wall.

Figure 40 Timber retaining wall that has rotated due to land movement during a heavy rain event

d. 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 41 Timber crib retaining wall that has collapsed due to earthquake

e. 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 42 Stacked stone retaining wall washed away by flood waters

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5. Imminent damage

a. Overview

NHCover insures residential buildings and land against 'natural hazard damage',[41] which includes both actual and imminent damage.

The NHI Act defines 'imminent damage' as follows:

> (3) Physical loss or damage to a residential building or residential land that has not yet occurred is **imminent damage** if—
>
> (a) a natural hazard has occurred (**event 1**); and
>
> (b) the Commission is of the opinion that, as a direct result of event 1, the loss or damage is more likely than not to occur within 12 months after event 1 first occurred.
>
> Section 24(3) NHI Act, 'imminent damage'

Imminent damage is also commonly referred to as 'imminent risk' or 'IR'. We have used the term 'imminent damage' within this Manual.

For there to be imminent damage:

- there must be the potential for 'physical loss or damage'[42] to property;
- the potential physical loss or damage must be 'a direct result'[43] of a 'natural hazard'[44]; and
- the potential physical loss or damage must be 'more likely than not to occur within 12 months' after the natural hazard occurred. This means the 12 months:
  - starts from when the natural hazard, which the imminent damage is a direct result of, occurred;
  - ends 12 months after that date; and
  - does not restart if that imminent damage is realised (meaning it occurs).

---

[41] See NHC Claims Manual – Residential Buildings – NHI Act, Section 5 Is there 'natural hazard damage'?

[42] See NHC Claims Manual – Residential Buildings – NHI Act, Section 5.d Is there 'physical loss or damage'?

[43] See NHC Claims Manual – Residential Buildings – NHI Act, Section 5.e Is the physical loss or damage as a 'direct result' of a natural hazard.

[44] See NHC Claims Manual – Residential Buildings – NHI Act, Section 5.b What is a 'natural hazard'.

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To determine whether there is any imminent damage, and its extent, you should typically engage an expert for advice (e.g. geotechnical engineer). The person determining that there is imminent damage must be:

- sufficiently experienced, qualified and skilled for the purpose
- appropriately trained.

Engineers or other relevant experts must provide their best estimate of any further natural hazard damage (imminent damage) they consider more likely than not to occur at the insured property:

- as a direct result of the natural hazard that the imminent damage relates to;
- during the 12-month period after that natural hazard.

The person determining whether there is imminent damage should assume there will be normal weather conditions during the 12-month period (meaning no extraordinary conditions) and no remediation or mitigation of the original natural hazard damage.

Where further damage has occurred during extraordinary weather conditions (and within the imminent damage period), the person determining whether there is imminent damage must consider what property it affects. Where the further damage affects any:

- residential land and/or building that was assessed as having imminent damage under a previous claim, the damage must be included in that claim. This ensures that damage is attributed to the event it relates to, and that the same damage is not paid for twice.
- previously undamaged residential land and/or building, this is not considered to be imminent damage. The further damage may be covered under the NHI Act as a separate natural hazard event, where the relevant requirements are met. The customer should be advised to make a new claim for this further damage.[45]

[45] For further information on damage occurring as a result of more than one natural hazard, see NHC Claims Manual – Residential Buildings – NHI Act, section 3.f.iii Situation where there is more than one natural hazard in a 48-hour period or 7-day period.

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b. What the NHI Act covers

If it is determined that there is imminent damage, you must include it in the relevant claim entitlement, i.e. for residential building or residential land. You must factor in the cost to either:

- prevent the imminent damage from occurring (the mitigation cost); or
- repair the imminent damage once it has occurred (the future replacement cost for residential building claims or the future reinstatement cost for residential land claims).[46]

The above two methods can also be used in combination for one claim.[47]

Remediation work to prevent imminent damage may include:

- containing the threat, e.g. building a retaining wall to contain a landslide;
- 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 landslide.

NHCover only pays or contributes to prevention costs that are necessary and actual. Imminent damage may also be settled on a valuation basis.

c. Limitations

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

- After an earthquake, if an aftershock occurring outside the 'damage period'[48] causes new damage (not extended damage),[49] this is not imminent damage under the claim for the original earthquake. However, the NHI Act may cover it

[46] For examples, see the Complex Land Examples Guide – NHI Act.

[47] See the NHC Claims Manual – Residential Buildings – NHI Act, Section 8.d.ii Imminent damage.

[48] The 'damage period' is 0 to 48 hours for all natural hazard types except volcanic activity and natural hazard fire, and 0 to 7 days for volcanic activity and natural hazard fire.

[49] For the definitions of 'initial damage', 'second damage' and 'extended damage, see NHC Claims Manual – Residential Buildings – NHI Act, section 3.f.iii Situation where there is more than one natural hazard in a 48-hour period or 7-day period.

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as a separate natural hazard event, where the relevant requirements are met. The customer should be advised to lodge a new claim for this damage.

- Natural hazard damage occurring after the 'initial damage'[49] but within the damage period is not imminent damage. This further damage[49] is also covered under the original claim.

d. Other considerations

Imminent damage only relates to residential land and residential buildings that are covered by the NHI Act. It does not include imminent risk to life or risk to people's safety, which is the local TA's responsibility.

Anyone assessing an NHCover claim 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 (and our agents) cannot make any decisions about building safety for occupants. See Section 9 Unsafe properties in this Manual.

e. How to identify loss

The NHI Act does not cover any loss that is not physical loss or damage or imminent damage as the direct result of a natural hazard. For example:

i. Economic loss

Loss or damage in the context of the NHI 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 NHI Act does not cover economic loss.[50]

ii. Consequential loss

The NHI Act states that 'consequential loss' includes loss by theft, vandalism, loss of profits, business interruption, temporary accommodation costs and loss of intangible property. This list is not exhaustive.

[50] See Section 2.c.iii.a Loss or damage must be physical.

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The NHI Act does not cover any 'consequential loss'.

Section 28, NHI Act

For a more detailed discussion of consequential loss, see Section 2.e Consequential loss in this Manual.

f. Calculating imminent damage settlement

Repair costings for imminent damage to the residential land and/or residential building must include the cost to either:

- prevent the imminent damage from occurring, where possible (the mitigation cost); or
- repair the imminent damage once it has occurred (the future replacement cost for residential building claims or the future reinstatement cost for residential land claims).

When determining the cost of remediation for imminent damage to the residential building or residential land, either one or a combination of the above can be used as the claims manager considers appropriate.

For further information on using either one, or a combination of the above options, see:

- NHC Claims Manual – Residential Buildings – NHI Act, Section 6.A.c.viii How does 'replacement cost' apply with respect to imminent damage?;
- NHC Claims Manual – Residential Land – NHI Act, Section 7.A.c.ii What method is used to quantify the actual loss suffered?; and
- the Imminent Damage Guide – NHI Act.

NHCover only reimburses necessary and actual costs (up to the cap[51] for the overall claim less excess). Ensure that any proposed remedy is lawful and practical, and document it fully.

[51] See NHC Claims Manual – Residential Buildings – NHI Act, Section 8.e What is the maximum amount (the building cover cap) that can be paid for a residential building claim?/NHC Claims Manual – Residential Land – NHI Act, Section 9.e What is the maximum amount (the land cover cap) that can be paid for a residential land claim?.

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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 this Manual.

In certain circumstances, the entire NHCover claim (for land and building) is settled based on the cost to repair the land damage and/or remove the imminent damage risk to the land, even though the cost of this work exceeds the land cover cap. This is because the work required to repair the damaged residential land and/or to remove the imminent damage risk to the land will also remove the imminent damage risk to the residential building. Because the work is being carried out on the land, the cost of these works should be allocated first to the land claim as the reinstatement cost (up to the land cover cap). If the land claim reaches the land cover cap, the remaining portion (if any) of the cost of these works can be allocated to the building claim as the replacement cost, but only to the extent of the imminent damage risk to the building (up to the building cover cap)[52]. See Complex Land Examples Guide – NHI Act, example 5a and 5b.

This is more likely to occur when the:

- land remediation cost is low (e.g. there is no evacuation of insured land and/or no costly retaining wall remediation strategy);
- replacement cost for actual damage to the residential building is nil or low;
- future replacement cost for imminent damage to the residential building is high.

In difficult cases, you should escalate to the appropriate NHC representative.

For more information on settling NHCover land claims, see the:

- Calculating Settlement Guide – NHI Act; and
- Complex Land Examples Guide – NHI Act.

[52] See Section 34(7), NHI Act and regulation 10, NHI Regulations.

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6. Pre-existing conditions

a. What are pre-existing conditions?

Cover for natural hazards is available for any residential building in New Zealand that has a current fire insurance contract[53] or direct NHCover in place. There is also cover for associated residential land.[54]

After a natural hazard has occurred, you must identify first whether there is an insured residential building,[55] and if so, whether there is natural hazard damage[56] to the residential building and/or residential land.

To be covered by the NHI Act, damage must be the direct result[57] of a natural hazard.[58] Therefore, NHCover may not be available for pre-existing conditions.

Common types of pre-existing conditions include:

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

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

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[53] See NHC Claims Manual – Residential Building – NHI Act, Section 3.g Was there a 'fire insurance contract' or direct NHCover over the property concerned in force at the relevant time?.

[54] See NHC Claims Manual – Residential Land – NHI Act, Section 3.h Was there a 'fire insurance contract' or direct NHCover over the property concerned in force at the relevant time?.

[55] See Section 3.b Is there an insured 'residential building'? in this Manual.

[56] See Section 2.c Is there natural hazard damage? in this Manual.

[57] See Section 2.c.iv Is the physical loss or damage 'a direct result' of a natural hazard? in this Manual.

[58] See Section 2.c.i What is a 'natural hazard'? in this Manual.

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b. Distinguishing pre-existing conditions from natural hazard damage

When identifying natural hazard 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.[59]

If it is not clear whether the damage is the direct result of the natural hazard that relates to the current claim, engage appropriate experts[5] 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 hazard occurring.

In all cases where pre-existing conditions are identified, you must record a full and clear explanation of the findings.[60]

c. Exacerbation of pre-existing damage

The NHI Act only covers damage that has occurred as a direct result of a natural hazard, so NHCover is not available for any other causes, e.g. pre-existing conditions.

When determining whether natural hazard damage has occurred,[61] you should consider whether:

- there has been a material physical change to the insured property;
- the physical change is the direct result[62] of a natural hazard that has occurred; 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 hazard damage under the NHI Act.

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[59] See Section 2.g Grounds for declining an NHCover claim in this Manual.

[60] See Section 13 Assessment documentation standards in this Manual.

[61] See Section 2.c Is there natural hazard damage? in this Manual.

[62] See Section 2.c.iv Is the physical loss or damage 'a direct result' of a natural hazard? in this Manual.

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d. The amount of the natural hazard damage covered

The amount of the natural hazard damage to a residential building is measured on the basis of replacement cost.[63]

The NHI Act insures residential land against natural hazards on an indemnity basis. Unlike residential buildings, residential land is not insured against natural hazard damage for its replacement cost. The amount of the NHCover for residential land is subject to a maximum amount of insurance referred to as the land cover cap.[64]

e. When pre-existing conditions are included in the repair of natural hazard damage

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

- elements with pre-existing conditions, which have not been damaged by a natural hazard, will be damaged and need to be repaired as the result of a lawful and practicable repair of the natural hazard damage;
- a natural hazard has made a pre-existing condition materially worse and it is not possible, practicable, or lawful to repair the natural hazard damage only, i.e. separately to any damage from pre-existing conditions.

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, you should escalate the matter to the appropriate NHC representative.

i. Pre-existing legal requirements

If there was an existing legal requirement for the customer to make modifications to the property at the time the natural hazard occurred or in the future, you must exclude the cost of these from the scope of works. An example of this type of legal requirement is where an earthquake-prone building notice has been issued and

[63] See Section 2.d.i.a What is the definition of 'replacement cost'? in this Manual.

[64] See the NHC Claims Manual – Residential Land – NHI Act, Section 9.e What is the maximum amount (the land cover cap) that can be paid for a residential land claim?

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seismic repairs are required. If there was such a legal requirement, the homeowner did not carry out the works, and that failure caused the natural hazard damage or made it worse, that may provide grounds to decline the claim. For further details on grounds for declining a claim, see the Declining a Claim Guide – NHI Act.

You should determine the most appropriate approach to cost the repair based on the circumstances, which may be to:

- complete the costings as if all legally required modifications will occur, but the cost of those modifications will be funded separately; or
- complete the costings as if the residential building or land will be repaired without the legally required modifications being made.

f. 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.

If in doubt, engage an appropriately qualified expert,[5] such as a licensed building practitioner, a geotechnical engineer or (in some cases) a structural engineer, to determine what natural hazard damage occurred, or whether the state of the residential building results from a pre-existing condition.

ii. Damage from an earlier natural hazard

All damage occurring within a consecutive 48-hour period that is a direct result of any natural hazards and following extended damage is treated as an 'event' and covered under a single NHCover claim. A different period (7 days) applies for volcanic activity and natural hazard fires.

For more information about 'extended damage' and the term 'event', see NHC Claims Manual, Residential Buildings – NHI Act, Section 3.g.iii Situation where there is more than one natural hazard in a 48-hour period or 7-day period.

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Only new natural hazard damage is covered under the current (new) claim. Where a pre-existing condition is damage from an earlier natural hazard, 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 claim was made more than 2 years after the earlier damage.
- there is no prior claim relating to the earlier damage, and the current claim was made 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 section 73(3) of the NHI Act. In such cases, additional considerations apply.[59]

iii. Design and/or construction-related matters

Design and/or construction-related matters are not natural hazard 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.

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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 to the building;
- insufficient spouting and/or rainwater discharge;
- insufficient ground clearance.

Common examples of areas where weathertightness issues are seen include:

- internal guttering;
- enclosed fascia and guttering system;
- 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.

Repair costs associated with leaky building syndrome are not covered by the NHI Act. However, it is difficult to separate the costs to remedy the natural hazard 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 hazard.

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b. Potential grounds to decline a claim – considerations for buildings

In all cases where you have identified design or construction-related matters, you must also consider the potential grounds to decline a claim, for example, where the natural hazard damage has been caused or made worse by:

- any works associated with the residential building that do not comply with any law or legal requirement. Consider grounds to decline under section 75 of the NHI Act.[59]
- any of the following that have not been constructed to standards considered appropriate at the time of construction:
  - any part of the residential building that is not an integral component of the eligible building (service infrastructure and appurtenant structures)
  - land structures.[65]

Consider grounds to decline under section 76 of the NHI Act.

For all grounds to decline, see the Declining a Claim Guide – NHI Act.

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

The NHI Act only covers damage caused by natural hazards as defined in section 5 of the NHI Act. In cases where damage has occurred from something other than a natural hazard, the NHI Act does not cover this damage. For example:

- fire not caused by a natural hazard occurring;
- impact damage such as a car hitting the building;
- 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 NHI Act. For example:

- weathertightness issues, e.g. to exterior plaster finishes;
- rot and moisture damage, e.g. to weatherboards;

[65] As defined in Section 4.b Is there insured 'residential land'?.

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- 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 parts of the building caused by attachments or loading, e.g. aerials, heavy mirrors, or items stored in a roof space.

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g. 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 hazard

All damage occurring within a consecutive 48-hour period that is a direct result of any natural hazards and following extended damage is treated as an 'event' and covered under a single NHCover claim. A different period (7 days) applies for volcanic activity and natural hazard fires.

For more information about 'extended damage' and the term 'event', see NHC Claims Manual – Residential Land – NHI Act, Section 3.g.iii Situation where there is more than one natural hazard in a 48-hour period or 7-day period.

Only new natural hazard damage is covered under the current (new) claim. Where a pre-existing condition is damage from an earlier natural hazard, 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 claim has been made more than 2 years after the earlier damage.
- there is no prior claim relating to the earlier damage, and the current claim was made 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 section 73(3) of the NHI Act. In such cases, additional considerations will apply.[59]

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ii. Design and/or construction-related matters

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

- issues with fill, including:
  - inappropriate material, e.g. organic 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. Potential grounds to decline – considerations for land

In all cases where you have identified design or construction-related issues, you must consider the potential grounds to decline a claim, including:

- any works associated with insured land and/or land structures that don't comply with any law or legal requirement. Consider grounds to decline under section 75 of the NHI Act.[59]
- any insured land structures that have not been constructed to the standards considered appropriate at the time of construction. Consider grounds to decline under section 76 of the NHI Act.[59]

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iii. Damage excluded under the NHI 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

The NHI Act only covers loss or damage that is the direct result of a natural hazard that has occurred, so NHCover is not available for damage caused by deferred maintenance.

Examples of deferred maintenance include:

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

If you identify deferred maintenance-related issues, you must consider the potential grounds to decline a claim. This includes where the damage occurred (or was made worse) because the insured person did not take reasonable steps to mitigate the risk of natural hazard damage. Consider grounds to decline under section 73 of the NHI Act.[59]

v. Existing land conditions

The NHI Act only covers loss or damage that is the direct result of a natural hazard, so NHCover 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 site hazards, e.g. site is in an area of known 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.

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7. Engaging experts

a. Overview

In situations where an expert is necessary, depending on the type of natural hazard 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 in this Manual.

b. When may an expert need to be engaged?

i. Building claims

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 a natural hazard that has occurred; or
- a lawful and practicable remediation strategy for the natural hazard 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, for example:
    - cracking to the concrete perimeter foundation, indicating lateral stretch, out-of-plane displacement (see Figure 43 below), or differential settlement.

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  - lateral movement of the building superstructure relative to the foundation, indicated by the 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 hazard event, adversely affecting the utility or amenity value.
- there are unstable and potentially dangerous parts of the building, 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 43 Out-of-plane displacement

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

ii. Land claims

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

- any landslide affecting residential land;
- imminent damage[6] considerations;
- significant structural foundation damage.

iii. Other considerations

Typically, you will engage experts as part of your post-site assessment actions.[66] 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.[67]

In some cases where you are unable to assess certain parts of the building or land, you may advise the customer that they should engage appropriate experts to assess for natural hazard 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[68] for professional services is not guaranteed.

Your organisation may also receive event information from us that provides an early

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[66] See Section 12 Post-site assessment actions.

[67] See Section 10 Planning for a site assessment.

[68] See NHC Claims Manuals – Residential Buildings – NHI Act, Section 11.q Reimbursing fees incurred by customers where a claim is reassessed/NHC Claims Manuals – Residential Land – NHI Act, Section 12.q Reimbursing fees incurred by customers where a claim is reassessed.

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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 this Manual.

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;
- be independent of the 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 the 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 NHI 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 NHI Act and what damage relates to the private insurance policy. This is 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 address;
- customer contact details;

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- loss details;
- any other relevant matters, e.g. whether the claim needs extra care,[69] health and safety, time frame.

For each individual expert, you need to provide more specific information. For examples, see Appendix 4 Documentation examples. The expert reviews and accepts 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 consider these factors when deciding which expert to engage.

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 to provide a conceptual remediation strategy 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 natural hazard damage;
- you (or another appropriate costing expert) to provide an appropriate scope of works and the undepreciated value of any land structures; and
- us (or any authorised person dealing with the claim) to use with the valuation, undepreciated value 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 practicable remediation strategy for the building damage.

[69] For a definition of 'extra care claim' and more information, see our Extra Care Claims Policy.

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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 must provide the structural engineer with further instructions to engage a geotechnical engineer for advice on our behalf.

b. 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, services and service infrastructure within property boundaries;
- the property's legal description;
- 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 sections 68 to 77 of the NHI Act;[70]
- 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.

c. 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[71] that we

[70] See the Declining a Claim Guide – NHI Act.

[71] See Section 13 Assessment documentation standards.

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will advise of from time to time.

ii. Registered valuer

a. Purpose of engaging a valuer

The purpose of engaging a valuer is to provide a land valuation. This is:

- usually a standard valuation based on an on-site assessment (or sometimes a desktop assessment), or
- an alternative land valuation such as a notional valuation.

When you engage a valuer to obtain a standard land valuation, the valuer provides:

- a value for each of the damaged land areas, consistent with the engineering report that is used to settle the land claim;
- the values of damaged land areas needed to help calculate the land cover cap,[72] which is the maximum amount that can be paid for an NHCover land claim; and
- information to help determine the correct basis for settling the NHCover land claim, which is the lesser of the actual loss suffered and the land cover cap. The actual loss suffered is usually the reinstatement cost, but may include DOV.

When you request a notional valuation from the appropriate NHC representative, we engage a valuer where appropriate and give them instructions based on the claim-specific facts for the relevant properties.

b. Instructions to give to a valuer

Your instructions will include requesting the:

- property's RT reference, legal description and zoning;
- actual site area;
- district plan minimum area;[73]

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[72] See NHC Claims Manual – Residential Land – NHI Act, Section 9.e What is the maximum amount (the land cover cap) that can be paid for a residential land claim?.

[73] 'District plan minimum area' means the minimum area (in square metres) allowable under the district plan for the land that is used for the purpose for which the residential land was being used at the time the natural hazard damage occurred.

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- market value for the site as per the requirements set out in section 44 of the NHI 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 areas;
- market value for any land that is considered to have imminent damage risk.

If you identify that it may be appropriate to assess and/or settle a land claim (in whole or in part) on the basis of DOV, your instructions should include requesting the DOV. For more information, see NHC Claims Manual - Residential Land - NHI Act, Section 7.A.c.i What is the actual loss suffered?. For the valuer to begin their assessment, you need to provide them with either:

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

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[71] that we will advise of from time to time.

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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;
- quantify the cost in relation to building and land claims; and
- calculate the undepreciated value[74] of any damaged land structures.

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 or calculate the undepreciated value of any damaged land structure. Where you are not costing the repair and/or the undepreciated value,[13] we expect that an estimator will be able to do this for you for most claims. However, there may be some cases where it is appropriate to consider engaging a quantity surveyor where these are required for more complex property types.

The estimator or quantity surveyor will:

- inspect the site if required;
- prepare costings to remediate natural hazard damage based on engineering advice;
- calculate the undepreciated value of any damaged land structures.[75]

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 NHI Act and other relevant legislation, including:

- any additional enabling or access works required;
- relevant professional and compliance fees;

[74] In accordance with section 45 of the NHI Act. For more information on 'undepreciated value', see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.d.vi, What is the undepreciated value of the insured land structures for the purposes of the land cover cap?.

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- 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[71] that we will advise of from time to time.

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

You should consider engaging a survey specialist where the results of the survey do not allow you to determine how a building has performed during a natural hazard and a more accurate survey may help in the assessment.

b. Instructions to give a survey specialist for a building

Request that the survey specialist provide their survey results, which will typically include verticality surveys, floor level surveys and other levels, e.g. kitchen benchtop, ceiling and windowsills.

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[71] that we will advise of from time to time.

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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[71] 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 7.b When may an expert need to be engaged? in this Manual for examples.

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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:

- you, 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 scope of works to determine the customer's building entitlement.

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, services and service infrastructure 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 sections 68 to 77 of the NHI Act;[75]
- 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.

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[71] that we will advise of from time to time.

[75] See the Declining a Claim Guide – NHI Act.

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vii. Other appropriate experts

Sometimes, you will need to obtain advice from other appropriate experts to determine the type and extent of natural hazard 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 or 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 or 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)

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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 effect 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, or a mixture of dwellings and other premises, within a single building, or across multiple buildings on the same property (multi-unit buildings);
- multi-unit buildings where the residential percentage[76] is less than 50% (mixed-use buildings);
- properties containing residential building or land components that a person other than the insured person also has an insurable interest in (shared property and shared land);
- neighbouring properties that are affected by the same natural hazard.

b. Principles of assessing multiple property claims

The following principles apply to assessing all multiple property claims:

- For residential building claims, NHCover is provided at a residential building level, so you must assess natural hazard damage for each residential building separately.
- If a residential building contains more than one dwelling, you must assess the natural hazard 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 hazard damage for each residential building separately but taking into account the natural hazard damage to the building as a whole.

[76] See Section 8.c.ii.e Mixed-use buildings and the '50% test' in this Manual for more information.

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- If there is more than one residential building, you must separately determine the insured residential land (and assess the natural hazard damage to that land) in relation to each residential building (for these purposes, the residential building includes any appurtenant structures, but not service infrastructure).[77]
- When assessing parts of the residential building, land areas or land structures that serve more than one dwelling or non-residential property, you must determine claim entitlements reflecting the insurable interests of the insured person and other affected parties.

These principles are explained in more detail below.

c. Process for assessing damage across multiple properties

When you have identified a potential multiple property situation with natural hazard 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;
- identify whether there is natural hazard damage to residential land associated with two or more residential buildings that are insured by different insurers and agree who will engage the land assessment lead. See the Multi-party Land Approach Guide – NHI Act 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 hazard damage, including which properties are affected;
- it may not be immediately clear which land areas or land structures are shared, common or joint land and which are exclusive;
- there may be imminent damage that is unknown to the owner or insured person.

[77] See NHC Claims Manual – Residential Land – NHI Act, Section 4.b.i 'Residential land' is in relation to a 'residential building'.

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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 in this Manual).
2. Determine whether there is a multi-unit building, and if so, categorise it (Section 8.c.ii in this Manual).
3. If there is a land claim, identify the residential land in relation to each residential building (including appurtenant structures, but excluding service infrastructure) (Section 8.c.iii in this Manual).
4. Identify any natural hazard damage (Section 8.c.iv in this Manual).
5. Document the natural hazard damage in relation to each residential building (Section 8.c.v in this Manual).
6. Determine a suitable remediation strategy, or engage an appropriate expert for further assessment of the property (Section 8.c.vi in this Manual).
7. Create a scope of works for the remediation strategy (Section 8.c.vii in this Manual).
8. If there is a land claim, engage appropriate experts to determine the amounts for the land cover cap (assessed market value, area caps, and undepreciated value) (Section 8.c.viii in this Manual).
9. Apply cover proportionately to any shared property and shared land (Section 8.c.ix in this Manual).
10. Apply cover proportionately to any joint property and joint land (mixed-use buildings only) (Section 8.c.x in this Manual).
11. Apply cover proportionately to any common property and common land (mixed-use buildings only) (Section 8.c.xi in this Manual).
12. Create a settlement recommendation (Section 8.c.xiii in this Manual).

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i. Identify each residential building

Identify each residential building by first identifying:

- each eligible building.[78] The eligible building is the building that contains the dwelling or dwellings. If the fire insurance contract only covers part of a building, the eligible building is just that part. If the fire insurance contract covers the whole building the eligible building is the whole building.
- any dwellings in the eligible building.[79] For a building to be an eligible building, it must contain at least one dwelling.
- the parts of each residential building.[80] The eligible building, appurtenant structures, and service infrastructure together make up the residential building that has NHCover. Identifying the residential building is also critical to identifying any related residential land.

If the eligible building is a mixed-use building, NHCover for the residential building applies to the dwellings, appurtenant structures and service infrastructure for the dwellings, and proportionately to any common or joint property. For detailed guidance on determining whether an eligible building is a mixed-use building, see Section 8.c.ii.e Mixed-use buildings and the '50% test' in this Manual.

Whether there is a residential building is determined when:

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

[78] See the NHC Claims Manual – Residential Buildings – NHI Act, Section 4.C What is an 'eligible building'?.

[79] See the NHC Claims Manual – Residential Buildings – NHI Act, Section 4.C.c What is a 'dwelling'?.

[80] See the NHC Claims Manual – Residential Buildings – NHI Act, Section 4 Is there an insured 'residential building'? and NHC Claims Manual – Residential Land – NHI Act, Section 5 Is there an insured 'residential building'?.

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If, partway through the period of the cover under the fire insurance contract or direct NHCover, the building no longer meets the definition of residential building in the NHI Act, NHCover nevertheless continues. The cover continues for that building until:

- the fire insurance contract for that building ceases to be in force (e.g. expires or is cancelled or suspended by the private insurer); or
- when the fire insurance contract comes to an end (whether for renewal or otherwise) the building no longer meets the definition of residential building; or
- we cancel the NHCover for that building.[81]

The reverse also applies – if a building meets the definition of residential building partway through the period of cover, it does not receive cover until the fire insurance contract is renewed (or a new fire insurance contract is taken out for the property).

In certain circumstances, a building may also retain NHCover, even if renovations or damage to the building mean that it will not meet the criteria to be a dwelling at the time the fire insurance contract is entered into or renewed. See the NHC Claims Manual – Residential Buildings – NHI Act, Section 4.C.c.ix What is the effect of a 'dwelling' becoming or ceasing to be a 'dwelling' (temporarily or otherwise)?.

a. Identify the eligible building

An eligible building under the NHI Act is either a whole building or part of a building that contains one or more dwellings.

Whether the eligible building is a whole building or part of the building is determined by the cover under the fire insurance contract:

- If a single fire insurance contract covers the whole building, the whole building is the eligible building.
- If the fire insurance contract covers only part of the building, that part is the eligible building.

[81] See NHC Claims Manual – Residential Buildings – NHI Act, Section 3.i Has the NHCover been cancelled or limited in any way?.

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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.

To ensure a consistent approach to managing MUB claims, we break these down into four categories. MUB categories are used for operational purposes, including preparing for and carrying out your assessment and managing the claim. Regardless of the MUB category, you must assess each building in accordance with the NHI Act.

The four categories are:

- MUB1: MUB1s are separately owned and insured dwellings that share building elements. These are generally attached and semi-detached houses.
- MUB2: MUB2s are two or more dwellings insured under a single policy. These are generally apartment buildings, blocks of flats, or similar, but also include separate dwellings on the same property under a single insurance policy.
- MUB3: MUB3s are buildings that have a mix of residential and commercial or other non-residential uses.
- MUB4: MUB4s are buildings that include long-term accommodation for the elderly. They are often part of a larger complex, such as a retirement village, which includes other buildings (e.g. standalone dwellings or non-residential buildings). The flowchart below illustrates the considerations when categorising MUBs. For more details on each MUB type, see the sections below.

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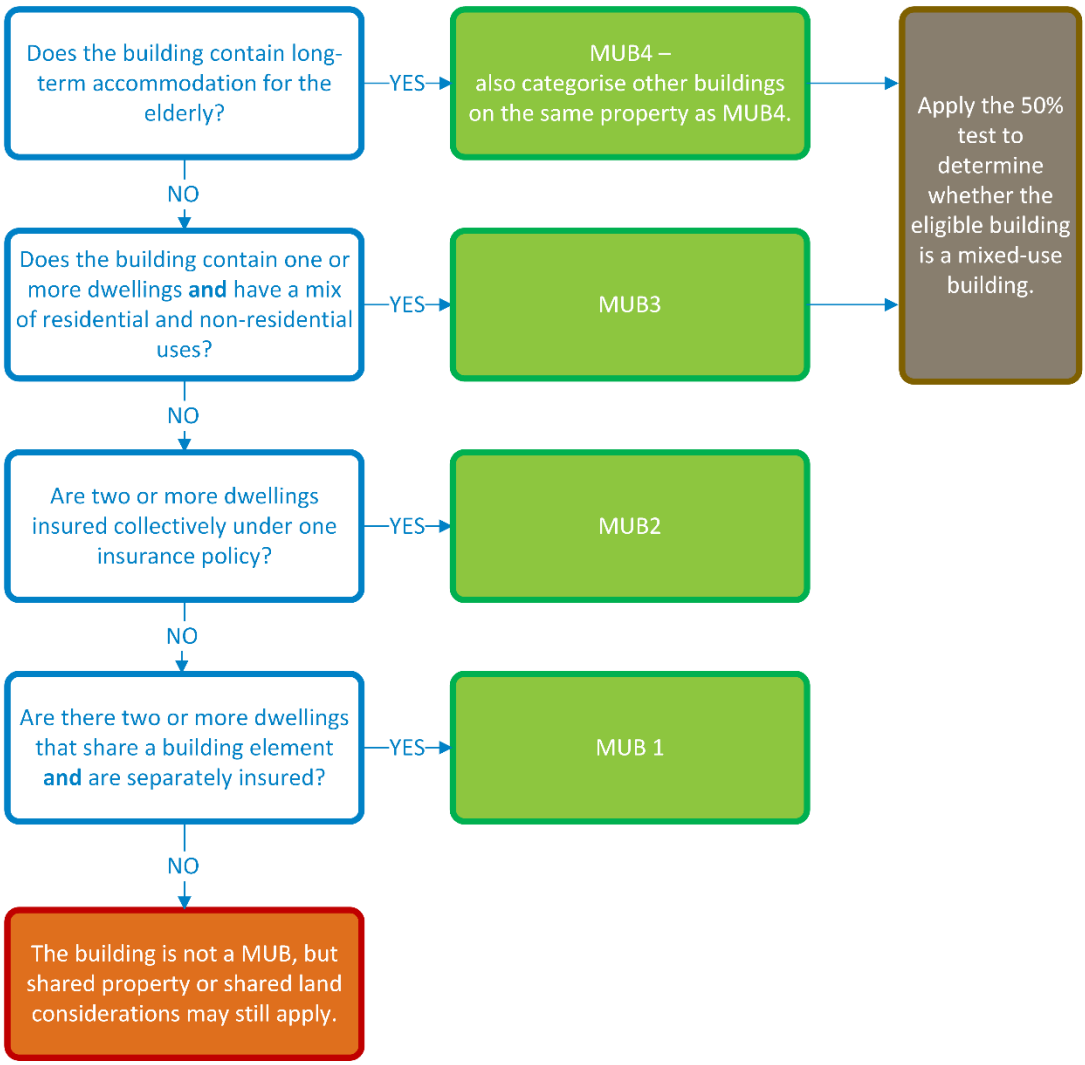

Figure 44 Categorising multi-unit buildings

a. MUB1 – Separately owned and insured

MUB1 refers to dwellings that are separately owned and insured, that share a building element (e.g. a shared roofline, foundation or firewall). These are usually a

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group or series of two or more dwellings that are attached or semi-detached. With a MUB1, each dwelling is a separate eligible building.

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

MUB2 refers to two or more dwellings that are insured collectively under one insurance policy. This category includes:

- buildings comprising two or more dwellings that share a building element (e.g. a shared roofline, foundation or firewall), such as apartment buildings. Buildings of this type are an eligible building containing two or more dwellings.
- where two or more detached dwellings are insured under one insurance policy, such as two houses on the same property. Each building of this type is a separate eligible building.

c. MUB3 – Buildings with a mix of residential and non-residential uses

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MUB3 refers to any eligible building covered under a single fire insurance contract:[82]

- that comprises or includes one or more dwellings; and
- where there is a mix of residential and commercial or other non-residential uses within that building, e.g. where there is a retail shop on the ground floor and dwellings on the floors above.

Buildings that are a MUB3 may also be mixed-use buildings, if the residential percentage is less than 50%. See Section 8.c.ii.e Mixed-use buildings and the '50% test' in this Manual for further information on mixed-use buildings and the '50% test'.

d. MUB4 – Long-term accommodation for the elderly

MUB4 refers to any eligible building that includes long-term accommodation for the elderly. Facilities that provide long-term accommodation for the elderly are specifically included in NHCover as a dwelling under the NHI Act.[83]

Buildings that are MUB4s are often part of a larger complex, such as a retirement village, aged care facility, or similar. In those cases, if there are other buildings in the complex that have NHCover, you must also categorise those buildings as MUB4 (even if they would fit within a different MUB category). This is an operational categorisation, and does not affect the cover that those buildings receive under the NHI Act. You must still assess each building in accordance with the NHI Act.

Buildings that are a MUB4 may also be mixed-use buildings, if the residential percentage is less than 50%. See Section 8.c.ii.e Mixed-use buildings and the '50% test' in this Manual.

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[82] For more details on mixed-use buildings, see NHC Claims Manual – Residential Buildings – NHI Act, Section 4.C.d What is meant by a 'mixed-use building'?.

[83] See NHC Claims Manual – Residential Buildings – NHI Act, Section 4.F How does the NHI Act cover 'long-term accommodation for the elderly'?.

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Identifying long-term accommodation for the elderly

Facilities that provide long-term accommodation for the elderly come in a range of forms. The key factor in identifying long-term accommodation for the elderly is assessing whether the building comprises the style of accommodation for elderly people found in many rest homes. Under the NHI Act, long-term accommodation for the elderly is treated as a single dwelling, 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 treated as separate dwellings.

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

If you identify a property that includes 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 each eligible building within the property is a mixed-use building.[84]

If an eligible building contains both long-term accommodation for the elderly and self-contained dwellings (under the same fire insurance contract), the building cover cap is calculated on the basis that:

- the long-term accommodation for the elderly is one dwelling in its own right; and
- the self-contained dwellings are additional to it.

For example, if an eligible building contains long-term accommodation for the elderly and four self-contained dwellings, both that accommodation and the dwellings must be separately disclosed for the building cover cap to be applied on the basis of five dwellings.

e. Mixed-use buildings and the '50% test'

When the eligible building is a MUB3 or MUB4, you must consider whether NHCover applies to the whole of the eligible building or only to the residential parts of it.

[84] See Section 8.c.ii.e Mixed-use buildings and the '50% test' in this Manual.

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To determine this, you must calculate the residential percentage of the building, and apply the '50% test':

- If the residential percentage is 50% or more, NHCover applies to the whole eligible building as usual (including non-residential parts of the building).
- If the residential percentage is less than 50%, the eligible building is a 'mixed-use building', and NHCover only applies to the residential parts (detailed below).

The residential percentage is the percentage of the internal floor area of the eligible building that is made up of dwellings and appurtenant structures. The internal floor area excludes the floor area of any common property, and areas that do not have a measurable floor area (such as ceiling voids). In many cases, these floor areas can be determined using the unit plan or flats plan for the property.

When calculating the floor area as part of the 50% test, you must only include the internal areas in your calculations (e.g. dwellings, hallways, stairwells, storage areas, basements, and internal parking spaces). The calculations do not include any external areas (such as decks, fire escapes, balconies, or verandas) or the roof, even if it is flat and can be walked on. The calculation also does not include buildings or structures outside of the eligible building, such as a separate garage building.

If the residential percentage of an eligible building is 50% or more, the whole eligible building is a residential building. NHCover applies to the entire building and any appurtenant structures and service infrastructure for the dwellings, assuming all other requirements under the NHI Act are met. This applies even if some of the eligible building is for non-residential use. However, even where non-residential parts of the eligible building are covered, there is no NHCover for property outside of the eligible building that does not meet the criteria for an appurtenant structure or service infrastructure under the NHI Act.

If the residential percentage is less than 50%, the building is a mixed-use building. In those cases, the NHCover for the residential building is limited to the residential parts.

The residential parts of a mixed-use building are:

- the dwellings in the eligible building;
- appurtenant structures for those dwellings;
- service infrastructure for those dwellings; and
- common and joint property for the building (on a proportionate basis).

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Common property and common land

Part of a mixed-use building is common property if that part is available for the use or benefit of the owners (or other occupants) of all premises in that eligible building, and that part is any of the following:

- an integral component of the eligible building, such as the roof, foundations, cladding or structural element;
- a common appurtenant structure for the premises, which could include a shared laundry area, shared stairwell, or shared lift, for example, where these are available for use by all occupants;
- common service infrastructure for the premises, such as the building's main water line, an HVAC system that serves the whole building, or the main electrical switchboard for the building;
- any other area in the eligible building that is not part of any premises, such as a common foyer, or storage area for building maintenance supplies.

To be available for the use of all owners, an area needs to be both physically and legally available for that use (although it does not actually need to be used by the occupants). These areas are often marked on the unit plan or flats plan for the building.

A part of the building is for the benefit of all owners if it is intended to provide an advantage to all owners in their occupation of the premises – for example, the roof or foundations.

Common land is any part of the residential land that is available for the use or benefit of all of the owners or occupants of the mixed-use building, and which all of the owners have an insurable interest in.

Joint property and joint land

Part of a mixed-use building is joint property if that part is available for the use or benefit of the owners (or other occupants) of some, but not all, premises in that

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eligible building (the 'joint-owner premises'), where at least one of those premises includes a dwelling, and that part of the eligible building is any of the following:

- an integral component of the eligible building, such as the roof, foundations, cladding or structural element;
- a joint 'appurtenant structure for the joint-owner premises', which could include a shared laundry area, shared stairwell, or shared lift, for example, where this was available for use for some owners;
- joint 'service infrastructure for the joint-owner premises', such as an HVAC system that serves part of the building, or a separate electrical switchboard for part of the building;
- any other area in the eligible building that is not part of any premises (such as a foyer, or storage area for building maintenance supplies for joint-owner premises).

Section 14(2), NHI Act

For example, a hallway on a floor of the building may be legally for the joint use of premises on that floor, but not premises on other floors.

To be available for the use of some of the owners or other occupants, an area needs to be both physically and legally available for that use (although it does not actually need to be used by the occupants).

A particular part of a building is for the benefit of some owners or occupants if it is intended to provide an advantage to them in their occupation or use of the premises – for example, the roof or foundations.

Joint land is any part of the residential land that is available for the use or benefit of some, but not all, of the owners or occupants of the mixed-use building, and which those owners have an insurable interest in.

If you are unsure about what areas are included in cover for a mixed-use building, you should escalate the matter to the appropriate NHC representative.

The flowchart below illustrates the 50% test.

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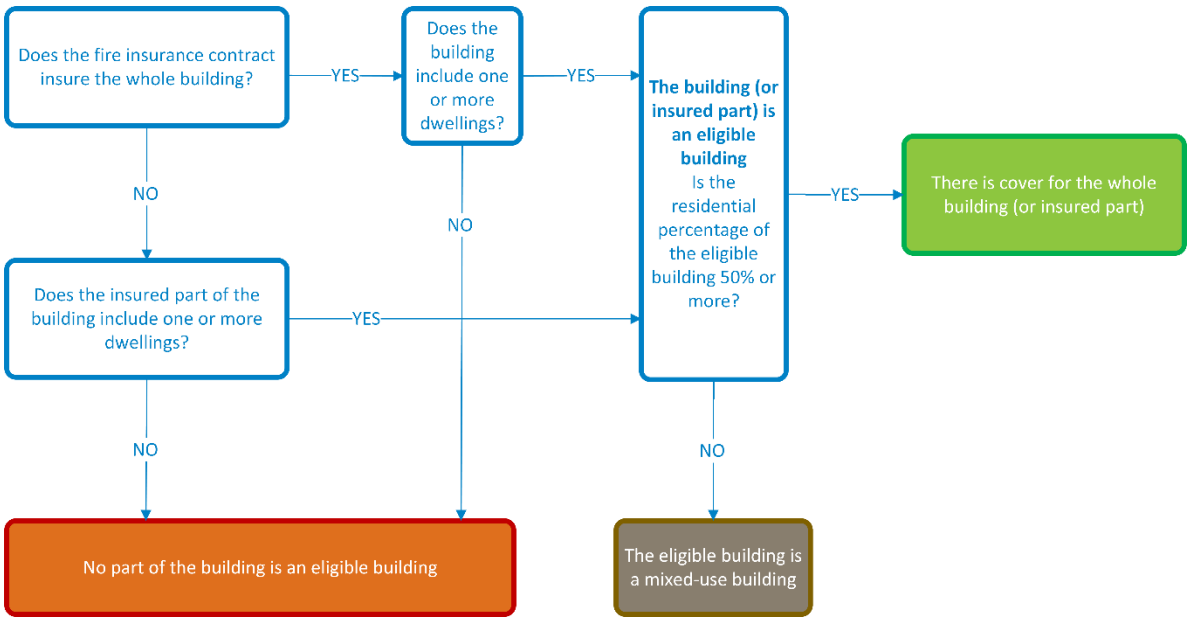

Figure 45 The 50% test

For examples of applying the 50% test, see Section 8.d Examples of applying the 50% test in this Manual.

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

Generally, you must identify the insured residential land area in relation to any residential buildings. Once you have identified each residential building,[85] you must determine:

- the insured person's land that each residential building is lawfully situated on;
- the insured residential land in relation to each residential building (excluding service infrastructure);
- any shared land;
- any joint land and common land (only in relation to a mixed-use building)

Residential land cover is measured from the part of the residential building that is the outermost point, at ground level, of the building. The outermost point is a point that provides a permanent firm base of the building on the ground. In the case of a mixed-use building, you usually measure the residential land from the foundations (following the usual approach for other residential buildings) because they are common property forming part of the residential building.

[85] See Section 8.c.i Identify each residential building in this Manual.

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For a MUB1 dwelling located above the ground floor, you usually measure the residential land from where a stairway or other access way for the property is in contact with the ground. This is because it is a separate residential building and the only part of that building which is in contact with the ground is the stairway or other access way.

a. Determine the insured person's land

In general, the insured person's land consists of all the land within the boundaries shown on the RT for that property. However, land outside those boundaries may also form part of the insured person's land in situations where:

- the insured person has an estate or interest in other land that is used with land the residential building is situated on as a single residential property, and the two areas of land are contiguous (located next to each other, or only narrowly separated);
- there is an easement or other estate or interest that benefits one or both of those areas of land (such as a right of way providing access over neighbouring land).

For the purpose of determining the extent of the insured person's land, an encroachment licence or licence to occupy is not equivalent to an easement or other interest in land. For example, if the customer has an encroachment licence or licence to occupy neighbouring land that a garage is situated on, the land the garage is on is not treated as part of the insured person's land.

In some situations the NHI Act may treat the land within a single RT as two (or more) separate insured persons' land, if there are two eligible buildings on the same title. In those cases, for the purposes of cover, the insured person is treated as if they were a separate person in relation to each eligible building.

For detailed instructions on how to identify the insured person's land, see NHC Claims Manual – Residential Land – NHI Act, Section 4.d What is the insured person's land?.

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

Once you have determined the insured person's land, you must determine the insured land areas for each residential building separately.

Measure residential land areas from the residential building (excluding service infrastructure such as pipes, cables, tanks, and machinery). This includes measuring

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from any appurtenant structures that house service infrastructure for the dwelling, such as a shed housing a water pump.

How is the residential land identified?

For details on how to identify residential land, see the NHC Claims Manual – Residential Land – NHI Act, Section 4.b What is 'residential land'?.

Identifying the extent of the residential land is generally straightforward where there is:

- a single residential building comprising one or more dwellings; and
- the residential percentage is 50% or more.

In these cases, you can assess the residential land claim for the entire residential building (including any appurtenant buildings and structures, but excluding any service infrastructure).[86]

Identifying the extent of the residential land is more complex where there are any or a combination of the following:

- individually insured (MUB1) units (particularly on cross-lease properties);
- more than one residential building on a single property;
- mixed-use buildings (MUB3 or MUB4).

Examples of these situations are described below.

c. Identify insured residential land on cross-lease and other multi-unit properties

Where cross-lease properties[87] are damaged following a natural hazard event, there is often overlapping damage in relation to the same residential land or shared 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 jointly owning an undivided share in the freehold title of a property, with all owners then leasing an individual unit or 'flat' to each owner, sometimes with an associated area of land for exclusive use. The leases in a cross-lease development often require each dwelling owner to have separate insurance, although they can also require a single policy covering the

[86] See NHC Claims Manual – Residential Land – NHI Act, Section 4.c.iv Situation where there is a residential building with one or more dwellings insured under a single fire insurance contract.

[87] See NHC Claims Manual – Residential Land – NHI Act, Sections 3.c.v What about making a claim for damage on a neighbouring cross-lease property? and 4.c.v Situation where there is more than one residential building on the insured person's land.

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whole property. Where a cross-leased property contains multiple dwellings in a single building, the dwellings involved are often separately insured by different private insurers.

Other property ownership types (such as unit titles and company share properties) can have very similar arrangements to a cross-lease. In these situations, identify the extent of the residential land depending on how many separately insured residential buildings there are.

A property where each dwelling is separately insured – MUB1

More typically with a cross-lease property, and also with other ownership types, there may be a single building comprising multiple dwellings, but each dwelling is separately insured as a residential building in its own right (a MUB1). In that case, identify the insured person's land and the area of the residential land separately for 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, because further considerations apply.[88]

Land structures on a property with multiple residential buildings – MUB1

If a person other than the insured person has an insurable interest in a single land structure (bridge, culvert or retaining wall) (for example, there is shared ownership of the land structure), it is shared land.[89] Take this scenario into account when assessing the residential land, because further considerations apply.

A single building with multiple dwellings insured as a single building – MUB2

Sometimes multiple dwellings in a property are located in one building that is insured as a single residential building under the NHI Act (a MUB2). In that case, identify the extent of the residential land for that single residential building.[90]

For more information on cross-lease properties and multiple residential buildings on a property, see NHC Claims Manual – Residential Land – NHI Act, Sections 3.c.v What about making a claim for damage on a neighbouring cross-lease property? and 4.c.v Situation where there is more than one residential building on the insured person's land.

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[88] See Section 8.c.iv.a
Assessing damage to overlapping insured residential land in this Manual.

[89] See the NHC Claims Manual – Residential Land – NHI Act, Section 3.c.i Who is an 'insured person'? and NHC Claims Manual – Residential Land – NHI Act, Section 4.c.x Situation where there is shared land.

[90] See the NHC Claims Manual – Residential Land – NHI Act, Section 4.c.iv Situation where there is a residential building with one or more dwellings insured under a single fire insurance contract.

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

If there is more than one residential building situated at a single property, you must determine the insured residential land for each residential building (excluding service infrastructure).

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

e. Identify insured residential land MUB3 and MUB4 buildings

The insured residential land for MUB3 and MUB4 buildings is generally the same as for MUB2 buildings. However, where the eligible building is a mixed-use building (i.e. the residential percentage is less than 50%), further considerations apply.

With a mixed-use building, land cover is measured from the parts of the eligible building that are insured as the residential building (see Section 8.c.iii Identify the residential land associated with each residential building (land claim only) in this Manual). Because the foundations and building superstructure are generally common property forming part of the residential building, residential land cover is usually measured with reference to the whole eligible building, as it is with a MUB2. Residential land cover is also measured from any appurtenant structures, including those that are common or joint property.

Some of the residential land with a mixed-use building may be joint land or common land, in which case cover applies proportionately. Because commercial and other non-residential premises are not part of the insured residential building (that is a mixed-use building), the insured residential land does not include areas that are legally for the exclusive use or benefit of those premises (e.g., an area that is a commercial loading zone for one of those premises).

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

For NHCover to apply to a land structure (a retaining wall, bridge, or culvert), the insured person must have an insurable interest in that structure. Generally, the insured person has that insurable interest because the land structure is within the insured person's land (meaning they hold an estate or interest in the structure).

However, land structures do not need to be within the insured person's land to be insured under the NHI Act. Where a land structure is situated partially within and partially outside the boundary of the insured person's land, the insured person's insurable interest in that land structure is met through their interest in the part of the

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land structure that is on or in the insured person's land. The insurable interest may also be created through contractual arrangements, such as a licence to occupy or an encroachment licence that applies to a structure on council land.

Because of this, cover for land structures is usually only for structures fully or partially within the insured person's land. However, it can also extend to structures outside the insured person's land where the insured person has an insurable interest in the structure through other means (if it meets the requirements for cover under section 18 of the NHI Act).

Example

To have NHCover for a bridge that is outside the insured person's land, the bridge must still be on or in land that would otherwise be the insured land areas. This means a bridge situated on the main access way to a residential building must be within 60 m of that building to be covered. The bridge is not covered if any part of it is more than 60 m from the residential building, even if the insured person has an insurable interest in the bridge. For more information on the insured person's land, see Section 8.c.iii.a Determine the insured person's land in this Manual.

Bridges or culverts

If a bridge or culvert is located wholly outside the insured person's land, and there is no other arrangement creating an insurable interest in that structure, none of it is covered under the NHI Act.

Retaining walls

If a section of a retaining wall that the insured person has an insurable interest in can be considered a retaining wall in its own right, that section is insured:

- provided it meets the requirements for cover in section 18 of the NHI Act; and
- even if it is attached to another section of the wall that is not insured and is also a retaining wall in its own right.

If the section of the retaining wall cannot be considered a retaining wall in its own right, or does not meet the requirements for cover in section 18 of the NHI Act, there is no cover for that section of wall.

If you are uncertain, consider obtaining advice from an appropriate expert,[5] e.g. a geotechnical engineer.

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For more information, see:

- NHC Claims Manual – Residential Land – NHI Act, Section 4.h.vi What if one end of the retaining wall and its support systems are beyond the 60 metres?
- NHC Claims Manual – Residential Land – NHI Act, Section 4.h.vii What if the retaining wall is situated outside the insured person's land?
- NHC Claims Manual – Residential Land – NHI Act, Section 4.h.viii What if the retaining wall is situated on the boundary of the insured person's land?. This section includes 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 hazard damage

See the following sections of this Manual:

- Section 3 Identifying natural hazard damage to a residential building; and
- Section 4 Identifying natural hazard damage to residential land.

a. Assessing damage to overlapping insured residential land

Where there is more than one residential building on a property, consider any overlapping land areas 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.[91]
- an overlap but no land damage within the overlapping areas, you can still assess the residential land claim for each residential building separately.
- an overlap and there is land damage within the overlapping area, further considerations apply as described below.

[91] See NHC Claims Manual – Residential Land – NHI Act, Section 4.c.iv Situation where there is a residential building with one or more dwellings insured under a single fire insurance contract.

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Examples of considerations for overlapping land damage:

- Consider who has an insurable interest in the applicable land areas and/or land structures, including any parties who are not insured. If the residential buildings have the same owners, you must assess overlapping areas as if those areas had different owners.
- Consider how each party with an insurable interest is affected and to what extent, including who is responsible for repairing the damage.[92]
- 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.[93]
- If there is a cross-lease[94] or any other legal contract (e.g. a lease or easement), consider whether its terms provide guidance, e.g. on the obligations of the parties.
- Settlement considerations[95] may also apply.

If you are unsure about assessing damage on overlapping residential land, you should escalate the matter to the appropriate NHC representative.

b. Complex land damage scenarios

Large-scale landslides

Large-scale landslides 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 landslide, but it is often more subtle damage, e.g. tension cracks or minor slumping damage, that shows the full extent of the landslide. This damage can be outside the insured person's land and, in many cases, several properties away from the property where the main visible damage has occurred.

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[92] See Section 8.c.v
Document and allocate the natural hazard damage to the correct residential building in this Manual.

[93] See the Multi-party Land Approach Guide – NHI Act.

[94] For information on cross-lease properties, see Section 8.c.iii.c Identify insured residential land on cross-lease and other multi-unit properties in this Manual.

[95] For settlement considerations, see Section 8.c.xiii Create a settlement recommendation in this Manual.

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You must identify any potential large-scale landslide 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 landslide (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, you should escalate to the appropriate NHC representative for advice.

Large-scale landslides are often associated with pre-existing land conditions such as slope instability. If you suspect this is the case, you must obtain advice from an appropriate expert[5] (e.g. geotechnical engineer) to help determine whether the landslide is natural hazard damage.

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

- multiple private insurers being involved;
- TAs applying dangerous building notices;
- global repair;
- cancellation or limitation of insurance;
- interest from the wider public and media.

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. For more information, see the Multi-party Land Approach Guide – NHI Act.

If you are unsure about assessing damage where you identify there is a potential large scale landslide, you should escalate the matter to the appropriate NHC representative.

Imminent damage-only claims

Although it is not common, a customer can have a valid NHCover claim where the only damage to their property is imminent damage.[6]

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

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imminent.

Often, either you or the expert[5] 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 hazard damage to the correct residential building

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 in this Manual to document the natural hazard damage.

If required, engage an appropriate expert,[5] e.g. a structural or geotechnical engineer to further assess the building and/or land.

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

a. Documenting and allocating damage to the building

To allocate all damage to insured areas within a residential building, identify exclusive and shared:

- building elements;
- appurtenant structures;
- service infrastructure.

Shared property is any part of the residential building that someone other than the insured person has an insurable interest in (e.g. a shared firewall with an easement over it). The NHI Regulations define who an 'insured person' is in relation to shared property – see the Insurable Interests Guide – NHI Act for further detail on this. For example, generally the interests of a mortgagee (e.g. a bank) do not result in residential land (or any part of it) becoming shared land.

Where shared property is damaged, the damage should be allocated according to each insured person's ownership interest in the damaged property. This ensures the same damage is not covered twice. See Section 8.c.ix Apply cover proportionately to shared property and shared land in this Manual for further information on determining the shared ownership interest.

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If the building is a mixed-use building, you will also need to identify any common or joint property. This is discussed further below under the heading 'MUB3 or MUB 4'. You should typically document damage according to the MUB category as follows.

All MUB categories

Document the damage to each part of a residential building separately:

- dwellings
- appurtenant structures
- service infrastructure
- shared property.

Follow the additional guidance for the specific MUB category below.

MUB1

Document the damage to the entire building but separately for the:

- exclusive parts of each residential building; and
- shared property belonging to two or more residential buildings (e.g. intertenancy walls and foundations).

MUB2

Document the damage to the entire building but separately for each part described below:

- the exclusive parts of each dwelling, and appurtenant structures and service infrastructure exclusive to the dwelling;
- shared property, e.g. intertenancy walls with other buildings; and
- all remaining parts of the eligible building, if any (e.g. lift shafts and/or lobbies).

If there is more than one residential building, record the damage for each building separately.

MUB3 or MUB4

There are key differences between MUB3 and MUB4 buildings, but the process for documenting and allocating damage is the same.

Document damage according to whether the building is a mixed-use building (based on the residential percentage).

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If the **entire** eligible building is covered (not a mixed-use building):

- document the damage to the entire building; **and**:
- for each dwelling, document the damage separately for:
  - the dwelling;
  - appurtenant structures to the dwelling within the eligible building (e.g. a storage area or internal parking space);
  - appurtenant structures to the dwelling outside the eligible building (e.g. a detached garage);
  - service infrastructure for the dwelling within the eligible building;
  - service infrastructure for the dwelling outside the eligible building; **and**
- for the building, document the damage separately for:
  - each part of the eligible building that is shared property;
  - any property that a dwelling shares use of with some (but not all) dwellings or non-residential premises in the eligible building (this would be joint property if it were a mixed-use building);
  - any property for the use or benefit of all premises in the eligible building (this would be 'common property' if it were a mixed-use building); and
  - each part of the eligible building that is commercial or non-residential property within the eligible building.

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

If only **part** of the eligible building is covered (a mixed-use building):

- for each dwelling, document the damage to any exclusive building elements, including:
  - the dwelling;[96]
  - appurtenant structures for the dwelling **within** the eligible building;
  - appurtenant structures for the dwelling **outside** the eligible building;

[96] 'Long-term accommodation for the elderly' is insured as a dwelling under the NHI Act.

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  - service infrastructure for the dwelling **within** the eligible building; and
  - service infrastructure for the dwelling **outside** the eligible building.

- for the building, document the damage separately for each part of the residential building that is:
  - joint property that is **within** the eligible building;
  - joint property that is **outside** the eligible building;
  - common property that is **within** the eligible building; and
  - common property that is **outside** the eligible building.

If any parts of the residential building are also shared property, document those parts separately.

Commercial or non-residential property within the eligible building (that is a mixed-use building) is not covered by the NHI Act. However, you should record any natural hazard damage to this property where it helps you to assess the insured residential parts of the building.

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

For more information on common and joint property, see Section 8.c.ii.e Mixed-use buildings and the '50% test' in this Manual.

b. Documenting and allocating damage to the land

<u>All MUB categories</u>

If there is a single residential building, allocate the damage to the residential land for that residential building, excluding service infrastructure. Clearly record the damage to:

- the insured land areas; and
- any insured land structures.

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If there is more than one residential building, allocating the damage depends on whether the residential land for one residential building overlaps with residential land for any other residential building. If:

- no residential land overlaps with any other residential building, allocate the damage to the insured residential land for each residential building separately, the same as for a single residential building.
- any residential land overlaps with more than one residential building, allocate all damage to the insured residential land for each residential building (excluding service infrastructure) separately. Then, for each residential building, record the damage to:
    - the exclusive land areas and land structures; and
    - the shared land areas and land structures.

Shared land is any part of the residential land (including land structures) that someone other than the insured person has an insurable interest in (e.g. a shared driveway or shared retaining wall). The NHI Regulations define who an 'insured person' is in relation to shared property and shared land – see the Insurable Interests Guide – NHI Act for further detail on this. For example, generally the interests of a mortgagee (i.e a bank) do not result in residential land (or any part of it) becoming shared land.

Where an insured person for an eligible building has an insurable interest in a separate building, or part of a building, that contains a dwelling or other premises within the same property, they are treated as separate insured persons under Section 22(3) of the NHI Act.

If it is not clear which land components are exclusive and which are shared, record as much information as possible for further review and engage any appropriate experts[5].

Follow the additional guidance for the specific MUB category below.

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MUB3 or MUB4

If there is one building and:

- the building is not a mixed-use building, document the damage to the insured land areas and land structures. Include insured areas within the insured person's land that are for common use and non-residential use.
- the building is a mixed-use building, document the damage to the insured land areas and land structures. Identify insured areas that are common land or joint land. Exclude any land areas on the title plan that are only for use with non residential premises in the building. This means premises that are not part of the residential building, e.g. an area that is a commercial loading zone for one of those premises.

If there is shared land that is also common land (or shared land that is also joint land), you must record this in your assessment of the residential land. For example, where a mixed-use building shares a retaining wall with a neighbouring property, the retaining wall is:

- common land to the mixed-use building; and
- shared land between the mixed-use building and the neighbouring property.

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 directly, e.g. geotechnical engineer and valuer.

If the damage is cosmetic, follow the processes in Appendix 1 Building components and repair considerations and Appendix 2 Land components and repair considerations in this Manual.

If the damage is structural, consider what effect the remediation strategy will have on adjoining residential buildings.

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For general guidance in this Manual 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 2 Land 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 the following sections of this Manual:

- Section 12 Post-site assessment actions; and
- Appendix 3 Remediation strategy, standards and costing.

a. Create a scope of works for the building

For each residential building, either:

- create a separate scope of works for each part of the residential building; or
- separate each part of the residential building clearly within one scope of works.

For example, if the residential building is a mixed-use building, the parts of the residential building may include each dwelling, a foyer, a stairwell, a hallway, and any common areas (such as the foundations, exterior walls and roof).

For further guidance about what each part of the residential building is for specific MUB categories, see Section 8.c.v.a Documenting and allocating damage to the building in this Manual.

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b. Create a scope of works for the land

If there is **one** building, and:

- the **entire** eligible building is covered (not a mixed-use building), prepare a scope of works for all land damage in relation to the entire building (excluding service infrastructure).
- only **part** of the eligible building is covered (a mixed-use building), prepare a scope of works for all land damage in relation to the part of the building (excluding service infrastructure) that is covered.

If there is **more than one** residential building, the scope of works you prepare for the land depends on whether a single or global remediation strategy applies, how many residential buildings the damage affects, and whether the damage is on shared land.

- If there is a single remediation strategy that will repair residential land damage that is:
  - exclusive to any one residential building (excluding service infrastructure), prepare a separate scope of works for that remediation strategy. For example, construct a retaining wall to remediate damage to land within 8 m of only one residential building.
  - on shared land, prepare a separate scope of works for the remediation strategy to each area that is shared land. For example, construct a retaining wall to remediate damage to a shared access way.
- If the residential land damage is not on shared land but affects multiple residential buildings, and a global remediation strategy is the only feasible way to repair it, prepare a separate scope of works for that remediation strategy. For example, construct a retaining wall to remediate damage affecting two neighbouring properties.

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.[97]

[97] For more information on allocating the damage, see Section 8.c.v
Document and allocate the natural hazard damage to the correct residential building in this Manual.

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viii. Determine the appropriate valuation (land claim only)

For land claims, in addition to the above, you need the:

- assessed market value of the insured land areas that have been damaged (or the 'area cap' if that area is equal to or smaller); and
- undepreciated value of any insured land structures that have been damaged.

If any insured land areas are damaged, you should generally engage an independent valuer to provide the assessed market value of those land areas in a standard land valuation. This valuation is site-specific and usually based on an on-site assessment but sometimes a desktop assessment. In some cases, an alternative land valuation (such as an adjusted rating valuation or notional valuation) may be appropriate.[98]

If there are any damaged land structures, you (or another appropriate costing expert) must calculate the undepreciated value of those structures.

For further guidance on determining the:

- assessed market value, see the Land Valuation Guide – NHI Act; and
- undepreciated value, see Section 11 Carrying out a site assessment in this Manual.

ix. Apply cover proportionately to shared property and shared land

If you have identified any natural hazard damage to shared property and/or shared land, the NHCover for that building element or land component is covered proportionately based on the insured person's shared ownership interest. This means you must determine the shared ownership interest that applies to each building element, land area or land structure.

The shared ownership interest is usually the percentage of the repair cost for the natural hazard damage that each insured person is legally required to meet (the 'repair responsibility'). This will be recorded in a legal document relating to the shared property or shared land, e.g. in an easement or cross-lease. Different percentages may apply for different building elements, land areas or land structures.

If you cannot ascertain that percentage, e.g. because the relevant documentation does not contain any information in relation to the repair responsibilities of each party, the usual approach is to allocate an equal share of the total insurable interest

[98] For details on obtaining an alternative land valuation, see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.d Obtaining an Alternative Land Valuation.

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in the property to each holder of a relevant insurable interest (i.e. to each person who has an insurable interest in the property or land that gives them the use or benefit of the property or land).

In some cases, there is information available that shows that an even split would not be equitable. Where that is the case, you must consider the nature of each party's interest, the loss they have suffered (or are likely to suffer), and any other information you consider relevant to determine equitable percentages.

Once you have determined the percentage, you must apply it to the part of the scope of works that relates to the shared property or shared land.

As part of the land cover cap calculation, you must also apply the shared ownership interest to the assessed market value or undepreciated value, to the extent they relate to shared land (which includes land areas and land structures). However, you should not apply the shared ownership interest to the applicable limit[99] for land structures within the land cover cap. Instead, the applicable limit continues to apply in full, even if the undepreciated value is reduced.

For example, if the insured person's shared ownership interest for a damaged retaining wall is 25%, you should record the full cost of repairs to that wall in the scope of works. You should then apply 25% of that amount to the insured person's land claim entitlement (reflecting the shared ownership). You should also reduce the undepreciated value for the wall to 25% in the same way, for use in the land cover cap calculation. However, note that the $50,000 (plus GST) per dwelling maximum for damaged retaining walls within the land cover cap is not reduced.

If the settlement includes a DOV calculation that relates to shared land, you should escalate the matter to the relevant NHC representative to confirm the correct approach.

For further information, see the Insurable Interest Guide – NHI Act.

x. Apply cover proportionately to joint property and joint land

This step only applies if the eligible building is a mixed-use building, and only if it includes joint property or joint land.

[99] The 'applicable limit' is the number of dwellings in the residential building multiplied by $50,000 plus GST for retaining walls, or $25,000 plus GST for bridges or culverts.

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You should approach joint property and joint land in the same way as shared property and shared land, except that:

- you only need to consider the repair responsibility and interests of owners of the joint-owner premises within the mixed-use building; and
- you should base the percentage on the repair responsibility or interest relating to the joint-owner premises that are dwellings.[100]

For example, if there are eight units on a floor in a multi-unit building whose occupants jointly have exclusive use of the hallways and lobby on that floor, all units' owners have an equal responsibility to meet the cost of repairs to the floor. If six of the eight units are dwellings, the joint ownership interest for the hallways and lobby on that floor is 75%.

You should then apply that percentage for the particular joint property or joint land to the relevant items in the scope of works (and land cover cap, where applicable). However, you should not apply the joint ownership interest to the applicable limit[100] for land structures within the land cover cap. Instead, the applicable limit continues to apply in full even if the undepreciated value is reduced.

xi. Apply cover proportionately to common property and common land

This step also only applies if the eligible building is a mixed-use building.

You must determine the common ownership interest by first using the percentage of interest in the common property or common land held by the owners of dwellings. You must only consider the interests of owners of premises in the building.

For example:

- if the owners of the dwellings in a unit title development hold a unit title ownership interest of 360 out of a total of 1000, the common ownership interest is 36%;
- if the owners of the dwellings in a cross-lease hold 2/5 of the interest in the underlying title, the common ownership interest is 40%.

If you cannot ascertain the common ownership interest based on each owner's share in the building (for example, if there is only a single title for the whole building), you must use the building's residential percentage.[77]

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[100] See NHC Claims Manual – Residential Buildings – NHI Act, Section 4.C.i Determining the common, joint or shared ownership interest for a mixed-use building.

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You should then apply that percentage (the common ownership interest or the residential percentage) to items in the scope of works relating to all common property and common land (and land cover cap, where applicable). However, you should not apply the common ownership interest to the applicable limit[100] for land structures within the land cover cap. Instead, the applicable limit continues to apply in full even if the undepreciated value is reduced.

xii. Apply cover proportionately where shared property or land is also common property or land, or joint property or land

There may be circumstances where shared property or shared land is also:

- common property or common land; or
- joint property or joint land.

In these situations, you must:

- first, apply the shared ownership interest to the items in the scope of works relating to the shared property or shared land; and
- second, apply the:
  - common ownership interest to the items in the scope of works relating to the common property or common land; or
  - joint ownership interest to the items in the scope of works relating to the joint property or joint land.

xiii. Create a settlement recommendation

When you have completed the steps above, you will have all the information you need 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.

For more information on claim settlement, see:

- NHC Claims Manual – Residential Buildings – NHI Act, Section 8 How is an NHCover claim settled?/NHC Claims Manual – Residential Land – NHI Act, Section 9 How is an NHCover claim settled?;
- the Calculating Settlement Guide – NHI Act; and
- the Reinstatement and Replacement Guide.

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d. Examples of applying the 50% test

The 50% test[101] is used to determine whether an eligible building is a mixed-use 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 and non-residential properties (MUB3)

The following scenarios are examples of applying the 50% test, where a part of the building is not residential.

a. Example 1 – the entire building is a residential building

The building pictured has one owner and is insured under a single policy. This building is an eligible building that contains five floors of apartments (dwellings) and one floor that is a retail shop.

Because the internal floor area of the apartments is 50% or more of the total internal floor area of the building, the building is not a mixed-use building. The entire building is a residential building, so NHCover applies to all of it. Because the entire building is a residential building, residential land cover can also apply to any part of the insured person's land.

[101] For more information on the 50% test, see Section 8.c.ii.e Mixed-use buildings and the '50% test' in this Manual.

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b. Example 2 – only part of the building is a residential building

The building pictured has one owner and is insured under a single policy. This building is an eligible building that comprises one floor that is a retail shop, four floors of offices, and one floor containing an apartment (dwelling). The apartment has a separate storage area within the building, which is an appurtenant structure.

The residential percentage of the building is 17%, which is the percentage of the internal floor area of the eligible building that is made up of the apartment and its appurtenant structure. The floor area of common property is excluded from this calculation.

NHCover does not apply to the whole building, because the residential percentage is less than 50%, making it a mixed-use building. However, NHCover does apply to:

- the apartment (dwelling);
- appurtenant structures for the apartment;
- service infrastructure for the apartment; and
- the common property and joint property in the building (on a proportionate basis) e.g. the roof, exterior walls and foundations.

Because the foundation of the building is part of the common property, the residential land is insured under the NHI Act, and measured around the whole building. However, the apartment has no exclusive area of land, and all of the land is common land, insured on a proportionate basis.

c. Example 3 – only part of the building is a residential building (bed and breakfast)

The ground floor of a two-level bed and breakfast is devoted to guests. The guest floor contains two bedrooms and is otherwise self-contained, with a total internal floor area of 100 m^2.

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The top floor is reserved for exclusive use by the owner as their home. It has a separate external access, two bedrooms, and is otherwise self-contained, with a total internal floor area of 90 m^2. This building is an eligible building containing one dwelling.

NHCover does not apply to the whole building, because the residential percentage of the top floor (the owner's home) is less than 50%, making the building a mixed-use building. However, NHCover does apply to:

- the dwelling on the top floor;
- service infrastructure for the dwelling (and any appurtenant structures for the dwelling); and
- common property (there is no joint property in this case).

Because the foundation of the building is part of the common property, the residential land is insured under the NHI Act. Because the residential land is a single title and can be used with both premises, all of the land is common land, insured on a proportionate basis.

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.

a. Example 1 – rest home

The building pictured contains a rest home and full accompanying facilities, as well as self-contained accommodation for the manager. The building has one owner and is insured under a single policy.

The rest home (providing long-term accommodation for the elderly) is treated as a single dwelling under the NHI Act. As a result, this building is an eligible building containing two dwellings (the rest home and the manager's accommodation). Because the internal floor area of the two dwellings is more than 50% of the total internal floor area of the building, it is not a mixed-use building. The entire building is a residential building, so NHCover applies to all of it. Because the entire building is a residential building, residential land cover can also apply to any part of the insured person's land.

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b. Example 2 – retirement village

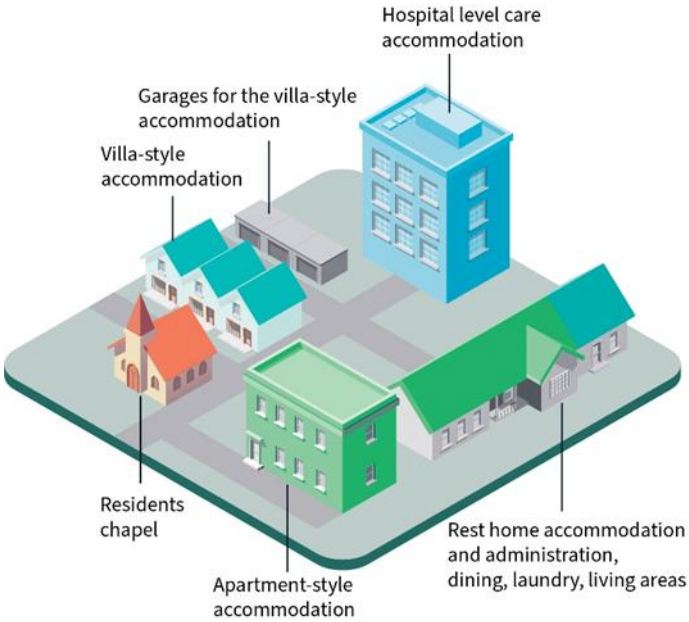

Figure 46 Retirement village

This example illustrates a retirement village complex that is made up of a variety of accommodation types and accompanying facilities. The whole complex has a single owner, and all buildings are insured under a single policy.

The complex contains:

- rest home accommodation (long-term accommodation for the elderly), which includes administration, dining, laundry and living areas;
- villa-style self-contained accommodation;
- apartment-style self-contained accommodation;
- a detached garage, exclusively for use of occupants of the villa-style accommodation;
- hospital-level care accommodation (providing a higher level of rest home care);
- a residents' chapel, for use by all residents in the complex.

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Table 3: 50% test for the buildings in this retirement village complex example (which includes long-term accommodation for the elderly)

Building type	Residential building test outcome	Residential percentage	NHCover
Villa-style accommodation	One residential building containing three dwellings	More than 50%	The whole building is a residential building and has NHCover.
Detached garages for villas	Appurtenant structure to the villas	n/a	These are included in cover for the villas.
Rest home accommodation* and administration, dining, laundry, living areas	One residential building comprising one dwelling	More than 50%	The whole building is a residential building and has NHCover.
Hospital level care accommodation* (providing a higher level of rest home care)	One residential building comprising one dwelling	More than 50%	The whole building a residential building and has NHCover.
Residents' chapel	Appurtenant structure to the entire retirement village complex	n/a	This is included in cover for the retirement village complex.
Apartment-style accommodation	One residential building containing four dwellings	More than 50%	The whole building is a residential building and has NHCover.

*In this example, these two buildings provide long-term accommodation for the elderly. A building (or part of a building) that provides long-term accommodation for the elderly is a dwelling under section 6(2) of the NHI Act.

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e. 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 NHI Act should be interpreted regarding the claim, return it to the expert for amendment.

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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 (or authorised people),[102] and any other relevant parties.

This section is about properties that are unsafe to assess, access and/or occupy. Some unsafe properties also include a building:

- that is 'dangerous', 'affected' and/or 'insanitary' (defined under section 121, 121A or 123 of the Building Act 2004);
- that is 'earthquake-prone' (defined under section 133AB of the Building Act 2004; and/or
- 'in a designated area', during a state of emergency or transition period (under section 133BC of the Building Act 2004).

Unsafe properties that include such a building may have an unsafe building notice (commonly referred to as a 'placard' or 'sticker').

b. Unsafe building notices

An unsafe building notice may be your first indication that a property is unsafe. These notices are also commonly referred to as 'placards' or 'stickers'. We have used the term 'unsafe building notice' within this section. Some of these notices (usually red or yellow) restrict or prohibit anyone from accessing the property without prior approval from the relevant TA. Other notices (often white) may allow the property to

[102] In this section, when we refer to a 'TA (or authorised person)', we mean anyone authorised to act with the relevant powers under the Building Act 2004 or the Civil Defence Emergency Act 2002 (CDEM Act). This includes 'responsible persons' as defined in section 133BJ of the Building Act 2004.

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be occupied even though the building may still be damaged. Whatever colour a notice is, you must check it carefully to determine:

- whether it restricts or prohibits your ability to enter the property; and
- how the notice may affect your ability to assess the residential building or land for natural hazard damage.

i. Who can issue an unsafe building notice and when?

An unsafe building notice may be issued either:

- by a TA under section 124 of the Building Act 2004 if a building is 'dangerous', 'affected' or 'insanitary';
- by a TA under section 133AR of the Building Act 2004 if a building is 'earthquake-prone'; or
- by a TA (or authorised person) under section 133BT of the Building Act 2004 if a building is 'in a designated area' during a state of emergency (or transition period).

Unsafe building notices may be issued because of:

- the pre-existing condition of the property (e.g., an earthquake-prone[103] building, hoarding of property or animals, or an infestation);
- natural hazard damage (including any imminent damage[6]), and/or
- the risk of damage (e.g. rock fall or cliff collapse) that is not imminent.

ii. When are unsafe building notices most commonly issued?

Few properties have a notice issued because of pre-existing conditions. It is more common after a natural hazard occurs for:

- properties to be unsafe, with buildings that are dangerous, affected and/or insanitary, and
- TAs (or authorised people) to apply unsafe building notices.

[103] As defined in section 133AB of the Building Act 2004.

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After a natural hazard occurs, unsafe building notices are often issued for damage affecting:

- multiple properties across a wide area or multiple areas. An example is buildings that are insanitary because of flood damage.
- one or a few neighbouring properties. An example is buildings that are dangerous or affected because of damage from a landslide.

iii. What is the purpose of an unsafe building notice?

Each notice gives TAs (or authorised people) certain powers to manage the building damage and risks. They may apply a notice to a building to do any one or a combination of the following:

- warn people not to approach the building;
- restrict or prohibit entry;
- require the customer to carry out certain work to make the building safe.

The unsafe building notice specifies the section of the Building Act that applies, who issued the notice and why. Notices issued under section 124 specify what repair work the customer needs to do to have the notice removed. Notices issued under section 133AR or 133BT only specify the risks or the site hazards that have been identified.

As a result of an unsafe building notice:

- the occupants may be required to evacuate the dwelling or part of it;
- the building may not be able to be entered for assessment; or
- urgent works and other risk mitigation measures may be required.

c. Properties that are not safe to assess

You may determine that it is unsafe to start or continue a site assessment because of:

- the pre-existing condition of the property; and/or
- any natural hazard damage (including any imminent damage) that has affected it.

You may be concerned about the condition of:

- the building or land at the property to be assessed; or
- a neighbouring property affecting it.

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You may identify safety concerns:

- during your initial contact with the customer;
- when arriving at site; or
- at any time during your site assessment.

A property may also be unsafe to assess for other reasons.

d. Properties that are unsafe to access or occupy

While completing your site assessment, you may identify natural hazard damage or a pre-existing condition that may make the property unsafe to access or occupy.

Any property could be unsafe to access or occupy. It does not need to be a residential building with a valid NHCover claim.

e. Dangerous, affected and/or insanitary buildings

The Building Act 2004 defines 'dangerous', 'affected' and 'insanitary' buildings.

i. Dangerous buildings (section 121)

Section 121 of the Building Act 2004 defines a dangerous building as follows:

(1) A building is **dangerous** for the purposes of this Act 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

ii. Affected buildings (section 121A)

Section 121A of the Building Act 2004 defines an affected building as follows:

A building is an affected building for the purposes of this Act if it is adjacent to, adjoining, or nearby—
- a) a dangerous building as defined in section 121; or
- b) a dangerous dam within the meaning of section 153.

Section 121A, Building Act 2004 – Meaning of affected building

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iii. Insanitary buildings (section 123)

Section 123 of the Building Act 2004 defines an insanitary building as follows:

> A building is insanitary for the purposes of this Act if the building—
> (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

f. Earthquake-prone buildings

Section 133AB of the Building Act 2004 defines an earthquake-prone building as:

> A building or part of a building is earthquake prone if, having regard to the condition of the building or part and to the ground on which the building is built, and because of the construction of the building or part—
> (a) the building or part will have its ultimate capacity exceeded in a moderate earthquake; and
> (b) if the building or part were to collapse, the collapse would be likely to cause—
> (i) injury or death to persons in or near the building or on any other property; or
> (ii) damage to any other property.
> Section 133AB, Building Act 2004 – Meaning of earthquake-prone building

g. Buildings in a designated area

If an area has been affected by an emergency, it can be 'designated' under section 133BC of the Building Act 2004. Designating an area gives certain persons (known as 'responsible persons'[104]) powers to manage buildings within that area to protect lives, buildings, public thoroughfares and critical infrastructure.

Responsible persons then assess buildings within the designated area and apply:

- red or yellow section 133BT notices to restrict or prohibit access to any buildings with damage or risks that need to be managed; or
- white section 133BT notices to buildings that can be occupied even though they may still be damaged.

[104] Who the 'responsible person' is depends on the circumstances an area was designated under. Section 133BJ of the Building Act 2004 sets out who a responsible person is.

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h. Unsafe properties in practice

A TA (or authorised person) may already have carried out their assessment before your site visit and:

- applied an unsafe building notice to the building, or
- determined that the building is safe.

A property that does not have an unsafe building notice may still be unsafe to assess.

i. What if you identify that a property is unsafe to assess?

If you identify that a property is unsafe to assess, you must:

- stop the assessment immediately;
- take all reasonable steps to ensure the safety of occupants and members of the public;
- tell the customer and any other affected party such as occupants and, if necessary, neighbours, about your concerns and the steps you are taking;
- contact emergency services if required;
- notify the relevant authority if you think the building may be dangerous, affected or insanitary (see Section 9.h.iii What if you identify a building that may be dangerous, affected and/or insanitary?);
- notify the claims manager;
- notify us;
- seek expert advice if required;
- record your concerns on the claim file;
- record any advice you give the customer about urgent works, in the assessment report and on the claim file;
- resolve safety concerns in accordance with our policies, your company's policies and any relevant legislation before continuing your assessment.

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ii. What if you believe a property may be unsafe to access or occupy?

If you believe a property may be unsafe to access or occupy, you should:

- tell the customer why; and
- consider whether a building at the property may also be dangerous, affected and/or insanitary. If so, follow the steps below.

iii. What if you identify a building that may be dangerous, affected and/or insanitary?

Although it is rare, you may identify a building that you consider meets these criteria. Examples include a building at risk from:

- impact from rockfall;
- ongoing land movement (slow-moving or sudden);
- landslide regression;
- collapse of a retaining wall;
- collapse of a building or other structure;
- hoarding of property or animals;
- an infestation.

If you believe the building may be dangerous, affected and/or insanitary (whether or not it is an earthquake-prone building or in a designated area), you must:

- immediately notify the relevant TA and record the details of the person you spoke to;
- follow 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.

If the property that you are assessing is affected by a neighbouring property, you must also inform the customer of your findings so they can take appropriate steps. This will likely involve:

- the customer engaging with their neighbour; or
- informing the neighbour yourself.

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Once a TA has been notified that a building may be dangerous, affected or insanitary, they must investigate the building to determine whether to apply an unsafe building notice to it. This investigation may include obtaining any relevant reports, such as an engineering report.

iv. Disclosing information

Under section 22 of the Privacy Act 2020 'Information privacy principle 10', you may make available any information you have to relevant third parties (e.g., police or medical providers) if you believe on reasonable grounds that it is necessary to prevent or lessen a serious threat to the life or health of any individual.

The Privacy Act defines 'serious threat' as:

> …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(1), Privacy Act 2020

Under Section 142 of the NHI Act, we may make available any information we have if we believe on reasonable grounds that it is necessary to prevent or lessen a serious threat to:

- public health or public safety; or
- any individual's life or health.

In this context, 'serious threat' has the same meaning as in section 7(1) of the Privacy Act 2020.

Section 142 of the NHI Act does not limit the Privacy Act or any other right we may have to disclose information. If you are a member of NHC staff or our contractor, this means that even if section 142 authorises a disclosure, you must take care to

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disclose any personal information only to the extent necessary to lessen the threat to public safety or the life of the individual and:

- in accordance with a purpose that information was obtained for;[105]
- with the consent of the individual concerned; or
- otherwise in accordance with the Privacy Act.

i. When can you assess an unsafe property?

Resolving safety concerns may include eliminating the risk, or appropriately minimising the risk if elimination is not reasonably practicable. This may involve urgent works if you consider they are appropriate and would allow you to safely return and continue your assessment.

You should explain to the customer any reasonable steps that the customer should consider taking to make their property safe. This may require expert assistance. What steps are reasonable will always depend on the claim-specific facts. Examples include turning off electricity when there are exposed wires, propping up a retaining wall at risk of collapse, or fencing off an unsafe area.

Customers may carry out urgent works if they are able. However, the customer's insurer may also choose to arrange urgent works on their behalf. If you are assessing an 'extra care claim',[106] you should consider what additional support the customer may need to complete the urgent works. For information on urgent works, see the Urgent Works Guide – NHI Act.

The claims manager will keep the customer informed on the status of their claim. You should arrange a suitable time to assess their property when you can do this safely.

Where you have identified safety concerns, but it is still safe to carry out your assessment, you can continue, with a plan and the relevant approval. For example, the plan must include obtaining the relevant TA's approval to assess a property that has a notice restricting or prohibiting entry to the building.

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[105] Under section 141 of the NHI Act, 'property-related' information is taken to have also been collected for the purpose of making the information available (including to the public).

[106] For a definition of 'extra care claim' and more information, see our Extra Care Claims Policy.

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i. When can you assess a property with an unsafe building notice?

If the damage is a result of a natural hazard and the claim is valid, the property must still be assessed once it is safe to do so, because an unsafe building notice does not affect the claim.

Where the unsafe building notice restricts or prohibits entry, you must contact the relevant TA and obtain their approval to access the property so that you can carry out your assessment. You must only carry out your assessment when you can do so safely. You must develop a plan of how you will do this. This may include some urgent works that will eliminate or minimise the risks.

For example, if there is still a risk at the building, you could assess it under the instruction and observation of a structural engineer or other relevant compliance officer, subject to the TA's approval. Alternatively, if the risk is from exposed wires, you may be able to assess the building after the customer has turned off the power.

If the building is dangerous, affected or insanitary, see our Dangerous and Insanitary Building and Land Policy.

j. When can an unsafe building notice be removed?

The customer is responsible for taking the necessary steps to make their property safe. These may include:

- engaging structural or geotechnical engineers for detailed evaluations (at their own cost);
- carrying out necessary repairs;
- providing evidence to the TA about their building's safety.

When the customer has taken the required action, the TA reassesses the building in accordance with its policies (for example, its dangerous building policy) and determines whether it can remove the notice.

Only a TA may change or remove the notice.

If the customer asks you what they need to do to have the notice removed, refer them to the authority that issued it.

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k. Unsafe property responsibilities

This table summarises who is responsible for key aspects of managing an unsafe property. See the individual sections above for details.

	TA (or authorised person)	Customer	NHC or our agent
Determine whether a building is safe to assess for natural hazard damage			✓
Develop a plan to assess natural hazard damage safely			✓
Determine whether a building is safe or unsafe	✓		
Issue unsafe building notices	✓		
Change unsafe building notices	✓		
Take the necessary steps to make the property safe		✓	
Provide evidence to the TA that the property has been made safe		✓	
Remove unsafe building notices	✓		

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10. Planning for a site assessment

Before following the guidance in this section, ensure that you are familiar with the NHC Claims Manuals – Residential Buildings – NHI Act and Residential Land – NHI Act, 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 hazard damage is captured efficiently. Effective planning also helps to achieve timely claim resolution for the customer.

You should consider whether the assessment is within your experience and capabilities[107] and whether you have the necessary knowledge of relevant legislation, e.g. the NHI 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 need to gather, the activities that you 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 time frames 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 claim needs extra care;[107]
- reviewing the loss details;

[107] See Section 1.h.ii Capabilities.

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- checking the background, including whether previous claims have been made;
- 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, date the claim was made, type of natural hazard;
- reading all file notes before contacting the customer;
- reviewing any information supplied by the customer.

Being familiar with the claim facts allows you to 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 hazard damage. In such cases, additional considerations will apply.[136]
- 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.

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Some examples of sources for the above information include:

- the RT – to understand the extent of the insured person's land (e.g. easements, shared access, size and shape) and identify any notices that may affect the claim (e.g. give grounds to decline,[59] limit or cancel NHCover, or identify other interests[108] in the claim).
- eMap (CoreLogic);
- 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 for that timeframe, e.g.:

- health and safety issues;[128]
- whether the claim needs extra care;[69]
- 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.

iv. Review health and safety information

At this stage of the assessment, steps to take when deciding whether it is safe to visit include:

- checking the claim file for any noted site hazards;
- considering the information the customer has provided;

[108] See NHC Claims Manual – Residential Buildings – NHI Act, Section 9 Who is the NHCover claim settled with?/NHC Claims Manual – Residential Land – NHI Act, Section 10 Who is the NHCover claim settled with?.

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- reviewing information supplied by other parties, e.g. a section 124 notice, a section 133AR notice or section 133BT notice under the Building Act 2004, red and yellow stickers (unsafe building notices);
- reviewing any other expert advice, e.g. initial structural assessment (ISA report).

We have classified site hazards in the following way:

- Contamination, for example:
  - liquefaction;
  - sewage;
  - asbestos;
  - broken or disrupted gas mains;
  - silica dust;
  - volcanic ash;
  - storing of toxic substances;
  - methamphetamine;
- Restricted access, for example:
  - section 124 notice;
  - section 133AR notice;
  - section 133BT notice;
  - dangerous building requiring TA assessment;
  - military cordon;
  - police or TA restrictions;
- Unstable building, for example:
  - damaged or fallen chimney;
  - debris;
  - unstable structures;
  - confined spaces with liquefaction, mould, live wires, or debris;
- Unstable land, for example:
  - damaged access way;
  - rock fall or mud slides;

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- uneven ground;
- undulating ground;
- overgrown land.

Use this information to make the customer aware of their responsibilities for their safety and that of others.[22]

v. Establish whether the claim is an 'extra care claim'

Any person dealing with an NHCover claim:

- must take reasonable steps to identify claims that need extra care based on the specific circumstances of the homeowner, occupant of the property or third party who may be directly affected by the claims management process (extra care claim).
- should comply with your organisation's guidelines (as agreed with NHC) for managing extra care claims.[69]

vi. Review the loss details

Look for:

- photos of damage;
- correspondence between the customer and insurer about the claim;
- quotes;
- invoices and the claims lodgement form filled out by the customer;
- the date of loss.

vii. Check the background and 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, statements of claim, photos, engineering reports, legends, sketches, scope of works and settlement documents.

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viii. Confirm that the basic requirements of the NHCover claim are met

Typically, it will have been confirmed before the assessment that the basic requirements[109] of the NHCover 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 hazard damage that is likely to occur or already has. We will share this information with your organisation (subject to sections 141 and 142 of the NHI 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.

[109] See NHC Claims Manual – Residential Buildings – NHI Act Section 3 Is the NHCover claim valid?/NHC Claims Manual – Residential Land – NHI Act, Section 3 Is the NHCover claim valid?.

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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 hazard that has occurred (earthquake, landslide, volcanic activity, 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, FENZ, 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 analyse the data we have gathered and provide the relevant organisations 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

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  - for other natural hazards, provides loss estimates using available information and cross-referencing with existing 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 you should have before calling)

- Current claim details
- Previous claim details including photos, sketches, and specialist reports
- Property details
- Notes on whether the claim needs extra care[4]
- Health and safety information, e.g. details of any site hazards
- Any other relevant notes and documents

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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 is guided by the specifics of the claim and the needs of the customer. For extra care claims,[4] consider what additional support the customer may need. During the call, determine the amount of information required to progress the claim and which information 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 or which may form part of a third party provider's processes. For further details, see the Privacy Act Guide – NHI Act.

- Gather information to prepare for the assessment. This will include the types of equipment you need to take to site and the time to allow for the assessment. The type of information that is commonly gathered at this stage of the claims process is set out below.
- 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 urgent 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.[110]

[110] See NHC Claims Manual – Residential Land – NHI Act, Section 5 Is there an insured 'residential building'?.

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- Gather general property information:
  - the size of the dwelling or residential building;
  - whether there is damage that affects multiple properties or damage to shared property or shared land – consider whether a multi-party approach[111] to the assessment is required;
- Confirm directly with the customer any health and safety concerns and update the claim file.
- Determine whether there has been any change to the need for extra care on the claim and update the claim file if required.
- Determine whether a site assessment is required. You may be able to determine this based on the information obtained, e.g. no natural hazard damage, or if minor damage and repairs have already been carried out by the customer.

d. Site visit preparation

i. Consider whether a second assessor or specialist is required

Consider whether the claim requires a second assessor or specialist at the first visit. Reasons for this can change and can include factors such as safety, technical expertise, access and efficiency for large 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 in this Manual.

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 hazard, and the damage that has occurred. Then consider the equipment that you

[111] See the Multi-party Land Approach Guide – NHI Act.

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will need. This will include your identification card (ID 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 NHCover claim must comply with the HSWA in all relevant respects. See:

- Section 1.h.v Health and safety for further details on health and safety expectations of those involved in the assessment process; and
- Section 7 Engaging experts.

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, or

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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 landslide 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 or carry out. If the customer does not have the means to pay for urgent works, see the Urgent Works Guide – NHI Act. Any reimbursement of the cost for urgent works is always subject to there being a valid claim that is accepted. The cost of any urgent works is taken into account when calculating the building or land claim entitlement (subject to the applicable building or land cover cap).

If you consider that a property is unsafe, see Section 9 Unsafe properties. For more information about urgent works, see the Urgent Works Guide – NHI Act.

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11. Carrying out a site assessment

Before following the guidance in this section, ensure that you are familiar with the NHC Claims Manuals – Residential Buildings – NHI Act and Residential Land – NHI Act, 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 site 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.[67]
5. As you approach the property:
   - look at the residential building 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 process, 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 hazard event and when they first noticed the damage. Listen and clarify.

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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 and specialist reports. You should ask the customer if they have any supporting documents, take a copy 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. whether the claim needs extra care.[4]

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 hazard damage, e.g. if the customer is unsure whether they have any other damage.

4. When assessing, look for building[112] or land[113] that appear to have suffered a material change as a result of the natural hazard. 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

[112] See Section 3 Identifying natural hazard damage to a residential building in this Manual.

[113] See 4 Identifying natural hazard damage to residential land in this Manual.

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the specific event, e.g. type and extent, including the appearance of age of the damage 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, 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 landslide 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 or carry out. If the customer does not have the means to pay for urgent works, see the Urgent Works Guide – NHI Act. Any reimbursement of the cost for urgent works is always subject to there being a valid claim that is accepted. However, the customer's insurer may also choose to arrange urgent works on the customer's behalf and deduct the cost from any cash settlements made on the claim.

   If you consider that a property is unsafe, see Section 9 Unsafe properties in this Manual. For more information about urgent works, see the Urgent Works Guide – NHI Act.

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 residential building or injury to people; or
   - the potential for damage to affect other properties.

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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.[114]

9. Consider whether any further damage would be more likely than not to occur in the next 12 months as a direct result of the natural hazard (imminent damage).[6]

10. If there is damage to multiple properties, e.g. shared access ways, additional considerations apply.[136] 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 insured person's land.

11. Gather more information if at any time during the site assessment, you identify potential grounds to:
    - decline the claim in part or in full under sections 68 to 77 of the NHI Act, or
    - pursue subrogated recovery action against potentially liable third parties.

    Consider whether:
    - you can obtain this information yourself, or
    - you will need to engage an appropriate expert to provide this information.

    Information that may help you determine whether a third party is liable includes:
    - relevant expert advice (e.g. a geotechnical engineering report for landslide damage)
    - building and resource consent information
    - a timeline of who did what, when and how

[114] See NHC Claims Manual – Residential Buildings – NHI Act, Section 4.D What is an 'appurtenant structure'?.

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- parties' accounts of events (e.g. the customer, contractors, and any third parties)
- photographs and videos.

Where you consider that there may be grounds for subrogated recovery, you may choose to engage further expert advice on the fact-specific circumstances. Record a summary of the facts and all supporting information and save a copy to the claim file.

12. Determine which experts[5] are required. Some typical experts engaged in assessing claims are:
    - structural engineers;
    - geotechnical engineers;
    - registered valuers.

d. Record damage

The damage that must be recorded is described in more detail in Section 3 Identifying natural hazard damage to a residential building and Section 4 Identifying natural hazard damage to residential land[60] in this Manual.

You must make a full and accurate record of your assessment, recording all relevant and necessary information to make your settlement recommendation.

Document the natural hazard damage to the property, and then make a record of any other relevant damage assessed, e.g. damage not caused by a natural hazard, or not caused by the natural hazard 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 hazard occurring.

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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. For further information on the standard for photographs (and video), see Section 13 Assessment documentation standards in this Manual.

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 hazard 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 scope of works for the remediation strategy;
- To prepare an undepreciated value costing for any damaged insured land structures;
- 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;
- estimator;
- NHC;

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- 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.

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 you make your final decision, the claims manager reviews the entire claim (including the assessment report and other property information such as the RT and claim details such as the date the claim was made) 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 your role to inform the customer about what is natural hazard 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
- Not accepted
- Invalid

These recommendations are defined in the next section.

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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 insured person's land;
- any information obtained during the assessment that may require further investigation in accordance with section 67 of the NHI Act.[16]

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:

a. Accepted

The claim 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 fire insurance contract provides 'ground-up' cover. The private insurer has paid for all the natural hazard damage within the terms of the contract and there is nothing else for us to pay; or
- accepted in part. The claim is accepted in part and the other part of the claim is declined under sections 68 to 77 of the NHI Act.

b. Invalid

The claim is invalid for one or more of the following reasons:

- there is no natural hazard damage to the residential building or land;
- an insured person with an insurable interest in the property concerned did not make the claim (or authorise another party to make it);
- the claim made does not say that natural hazard damage has occurred to insured property, i.e. property covered by the NHI Act;

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- the claim has not been made to us (or a person we authorised to receive the claim) or the customer's private insurer on or before the extended claim date (the two-year time limit);
- there was no fire insurance contract or direct NHCover over the property concerned in force at the relevant time;
- the NHCover had been cancelled at the relevant time.

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 disagrees with 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 hazard 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 disagrees with your recommendation that the damage not be accepted, advise them that you will follow the internal processes to help address their concerns.

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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 hazard damage.

1. You should inspect all areas of the property before advising the customer that there is no natural hazard damage. This will ensure you have taken all observations into account.
2. If there is no natural hazard damage to the property, explain this thoroughly at the time of the inspection.
3. If the customer disagrees with your recommendation that the claim be found invalid, advise them that you will follow the internal processes to help address their concerns.

v. Quantifying residential building damage

Advise the customer of the assessed natural hazard damage to the residential building based on your visual assessment. Make sure you include any specific requirements, e.g. asbestos testing.

For the majority of residential building 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.[5]

vi. Quantifying residential 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.

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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 residential land, you may not need to engage a valuer;[115]
- 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 you will use to cost the repair of the physical damage and the removal of any imminent damage risk;
- once the engineering report is received, if there is natural hazard damage, you must engage a valuer.

For all land claims, the maximum we can pay is determined by section 43 of the NHI Act. See the Calculating Settlement Guide – NHI Act. Provide the customer with an overview of the land cover cap 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 (the actual loss suffered or the building or land cover cap), excess, and the possible outcomes of a claim if accepted (e.g. cash settlement or repair).
2. Explain the next steps and the timeframe for each:
    - You will prepare an assessment report.
    - The engineer or valuer will prepare reports (if required).
    - You will prepare a scope of works.
    - You will complete a costing of the undepreciated value of any damaged land structures (for a land claim if required).

[115] In some cases, you may use an alternative land valuation such as an adjusted rating valuation or a notional value. For more information, see the Land Valuation Guide – NHI Act.

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- You will send your recommendation to their claims manager.
- Their claims manager will contact the customer to advise them of the decision on the claim outcome.[116]

3. Give any relevant information sheets to the customer.
4. Check all forms are complete, relevant information is recorded and equipment is accounted for.
5. Ask whether the customer has any further questions and address them before leaving site.
6. If follow-up is required, do so within the agreed time frame.

[116] This is a referable decision under the NHI Act.

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12. Post-site assessment actions

Before following the guidance in this section, ensure that you are familiar with the NHC Claims Manuals – Residential Buildings – NHI Act and Residential Land – NHI Act, 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 site hazards[22] 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 time frames;
- 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, and chimneys;
- the damage description is clear, concise, and unambiguous;
- if the damage is not accepted as natural hazard 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.[60]

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 residential building. The sketch should indicate the property boundary, identify any insured land structures and main access way (if applicable) and adhere to our documentation standards.[60] For land claims, a sketch may be an aerial photograph from the territorial or local authority's GIS records.

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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,[5] 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 NHI Act should be interpreted regarding the claim;
- the expert's report complies with our general documentation standards.[60]

If necessary, return the report to the expert for amendment.

Other details depend on the type of expert report.

i. Geotechnical report

Check the report for the following:

- Property details – confirm:
  - that any prior NHCover claims that have been identified are summarised;
  - that the property boundary and extent of the insured person's land and residential land 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 (where appropriate), e.g. soil type, elevations, cliffs, streams;
  - that any grounds to consider declining[16] a claim in full (or in part) under sections 68 to 77 of the NHI Act, or any grounds to consider pursuing subrogated recovery action against any potentially liable third parties, have been identified and are summarised.

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- Damage – confirm:
  - that you are satisfied that the correct loss cause has been identified;
  - that the report correctly identifies any natural hazard damage as defined by the NHI Act;
  - that the description of damage accurately records any damage to insured land areas, land structures, 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:
  - reinstates the residential land by restoring its utility to immediately before the natural hazard occurred;[117]
  - removes any imminent damage risk that has been identified (or would repair the imminent damage as if it had actually occurred);
  - 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.

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:

[117] See NHC Claims Manual – Residential Land – Section 7.A.c.iii What is reinstatement cost?.

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  - that any prior NHCover 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 hazard damage as defined by the NHI 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 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 hazard damage 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 hazard damage has occurred.

- Remediation strategy – check that the report provides:
  - a remediation strategy[132] that reinstates the damaged building to the standard required under the NHI Act and meets all applicable legislative requirements, e.g. Building Act 2004, building code;
  - details of whether parts of the building 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.

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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 hazard.

If necessary, have the report amended.

iii. Valuation report

Check that the report includes:

- property details – confirm that the following have been provided:
  - the RT reference, legal description, zoning and actual site area;
  - the area of the 'area cap' (i.e. the district plan minimum area, or a 4000 m^2 site, whichever is applicable);[64]
  - the value of the area cap, if the area of the area cap is smaller than the area of the damaged insured land.
- damage details – confirm that:
  - the site values have been provided as required in section 43 of the NHI Act;
  - the full extent of any damaged insured land areas 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 that is damaged.

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. the area of land valued is not consistent with the engineering report.

If necessary, have the report amended.

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iv. Survey specialist's report (for building)

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's report (for land)

Check that the report:

- shows the land structures 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.[60]

e. Prepare scope of works

For all claims, consider the following factors when preparing a remediation strategy[132] for the natural hazard 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;
- costs for transporting materials and contractors travelling to carry out the repairs in 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;

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- 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 NHI Act and other relevant legislation. In all cases, you must follow our requirements[132] 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.[5]

f. Calculate the undepreciated value of damaged land structures

To determine the land cover cap under section 43 of the NHI Act, you must calculate the undepreciated value of any insured land structures that have suffered natural hazard damage. Undepreciated value is the total cost that would be reasonably incurred at the time that the damage occurred[118] to construct a structure that is substantially the same as, but not better or more extensive than, the damaged one was when it was new. It does not need to comply with current building standards or applicable laws where such requirements would require modification of the

[118] In some circumstances, the undepreciated value may be settled based on rates at a later date than the date on which the damage occurred according to section 62(2)(b) of the NHI Act.

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structure from when it was new.[119] The undepreciated value costing is not intended to be used to:

- repair the damaged land structure; or
- construct a new land structure that would meet the current building standards.

To calculate the undepreciated value you must include:

- the cost of carrying out all construction work;
- the costs of complying with all applicable laws, other than those that would require the structure to be modified from when it was new; and
- other fees or costs payable in the course of constructing the structure (for example, consent fees) as if it complied with current building standards and applicable laws.

You must **not** include costs to:

- carry out any enabling works, e.g. costs to access the site, demolition and disposal (even if those works are necessary to enable the structure to be constructed);
- undertake any works required to bring the structure in line with any current building practices where those works would require modification of the structure when it was new; or
- cover any claim handling costs or any contingency allowances.

Example

A timber retaining wall, which would have required consent at the time of construction, has been damaged in an earthquake. The undepreciated value costing must include:

- the cost to construct the timber retaining wall at the time the damage occurred;[120] and
- any consent fees.

These must be at the rates applicable at the time the damage occurred.

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[119] For more information on this standard, see NHC Claims Manual – Residential Land – NHI Act, Section 7.A.d.vi 'What is the undepreciated value of the insured land structures for the purposes of the land cover cap?.

[120] Unless a later date has been determined under section 62(2)(b) of the NHI Act.

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The undepreciated value costing must not include the costs of:

- demolition and removal of the existing wall;
- any enabling works, including any site access restrictions;
- any works required to bring the retaining wall in line with any current building standards or applicable laws where those works would require modification of the structure from when it was new. An example is a handrail that would be required under the current building code but was not a requirement at the time the retaining wall was originally constructed.

g. 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 NHC Claims Manual – Residential Buildings – NHI Act, Section 8 How is an NHCover claim settled?/NHC Claims Manual – Residential Land – NHI Act, Section 9 How is an NHCover claim settled?.

h. 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 – NHI Act.

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13. Assessment documentation standards

Before following the guidance in this section, ensure that you are familiar with the NHC Claims Manuals – Residential Buildings – NHI Act and Residential Land – NHI Act, 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 NHCover claims. To comply with these requirements, you must retain any documentation used to assess an NHCover claim in accordance with the Public Records Act 2005 and associated NHC policy and standards. For further details, see the Recordkeeping Guide.

Any organisation dealing with an NHCover claim must:

- keep full, complete and accurate records for that claim (and any other NHC matters they are working on);
- compile and have available the full claim file and any other information we require;
- ensure that all damage recorded in an assessment and the resultant supporting information, whether natural hazard-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 NHC policies and associated standards, and any applicable legislation, including the Code of Insured Persons' Rights.

In all cases, you will need to comply with your organisation's own internal processes and delegations, including the Fair Insurance Code.

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In gathering or preparing the assessment documentation, consider our requirements[121] for communications by private insurers acting on our behalf. One such requirement is that the communication may be:

- in two communications (one about the residential building claim and one about the building component that is covered by the private insurer for the same property); or
- in one communication (about both), provided the two components can clearly be understood separately.

The private insurer must set out clearly the different reasons for, and the effect (if any) of, the respective decisions to decline where:

- the relevant NHCover claim is declined under one of the grounds set out in sections 68 to 77 of the NHI Act; and
- the private insurer also declines the relevant claim under the fire insurance contract for the same property.

c. Assessment documentation purpose and outputs

Section 141 of the NHI Act explains when we may collect information and how it may be used:

(1) The Commission may collect information (including from authorised persons) for the purposes of performing its functions under this Act.

(2) If property-related information is collected for that purpose, it is taken to have also been collected for the purpose of making the information available (including to the public).

(3) This section does not limit the Privacy Act 2020 or any other right the Commission may have to collect of disclose information.

(4) In this section, property-related information means information about property (whether generally or in relation to 1 or more identified properties), including information about—

(a) natural hazard damage to the property; and

(b) any claims made under this Act in relation to the property (including information about the assessed cost of replacing or reinstating damaged property, reinstatement methods, and settlement amounts).

[121] See NHC Claims Manual – Residential Buildings – NHI Act, Section 10.A.c Advising the customer of the outcome of the residential building claim/NHC Claims Manual – Residential Land – NHI Act, Section 11.A.c Advising the customer of the outcome of the residential land claim.

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Section 58(1) of the NHI Act also permits us to ask the customer to provide any information we reasonably believe we need to assess, decide or settle the claim (at the customer's expense).

> (1) The Commission may, by written notice, request the insured person to give to the Commission, or produce for it to inspect, any information, document, or other thing that the Commission believes on reasonable grounds that it needs to assess, decide, or settle the claim.

Some examples of situations where we may use information collected in the course of carrying out an assessment include:

- settling a claim;
- natural hazard event planning; and
- research and education.

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, sections 141(2) and 142 of the NHI 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.[122] 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.

[122] For details, see Section 10 Planning for a site assessment, Section 11 Carrying out a site assessment and Section 12 Post-site assessment actions in this Manual.

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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 – NHI Act.

In gathering this information, you should apply certain documentation standards as follows.

i. General documentation standards

All documents that are created in assessing an NHCover claim must:

- have correct claim identifying details, e.g. damage location address, customer contact details, loss details;
- be concise, complete, accurate and factual;
- be professional and use correct spelling and grammar;
- comply with any privacy requirements[123] and any other applicable standards, which we may advise you of from time to time 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, NHC 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 GIS records.

[123] See the Privacy Act Guide – NHI Act.

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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 parts of the building (where applicable), e.g. foundation, wall and roof cladding type and materials;
- details of the parts of the land (where applicable), e.g. land structures, property boundaries and appurtenant structures;
- 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 hazard 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.

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a. Standards for sketches

Residential building claims

For residential building claims, your building or 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 insured person's land;[124]
- the extent of the insured residential land. This includes:
    - insured land areas and land structures within the insured person's land (whether damaged or not), and;
    - insured land structures outside the insured person's land that are lost or damaged (if any);
- the type and extent of the land damage. This includes natural hazard damage (including imminent damage) to:
    - the insured land areas; and
    - any uninsured land areas and land structures within the insured person's land; and

[124] If it is not appropriate to identify and record damage to the entirety of the insured person's land (e.g. on a large lifestyle property or farm), you may identify a smaller area of land to limit your assessment of the land to. For more information, see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.b.ii Assessing the type and extent of the natural hazard damage to the land area and land structures on the insured person's land.

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  - any insured land structures within and outside the insured person's land.

- 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 insured person's land (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 insured and not insured;
- 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 h Land sketch in this Manual.

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 that 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;

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- any personal items in bedrooms or bathrooms;
- vehicle licence plates.

For video, also avoid including potentially sensitive audio, e.g. private conversations.

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 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.

- Long-range photographs of the insured property may be required, 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 required, 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 hazard 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.

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 NHI Act;
- the appropriate sign-off is included;

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- they have a draft watermark unless they are the final report;
- the report is either addressed to, or states it is for NHC, meaning it can be relied upon for settling NHCover 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 NHCover claims with a general understanding of common remediation strategies to natural hazard 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.[5]

The remediation strategies discussed in this section are substantive repairs, not urgent works.[125]

b. Key considerations for remediation

Remediation strategies identified and costed for natural hazard damage to residential buildings fall into one of two categories. Building work that:

- does not require consent (exempt building work); or
- requires consent (restricted building work or work that is not restricted).

Any remediation strategy must:

- meet the NHI Act requirements;[132]
- be lawful;[126]
- 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;
- consider any other properties[136] and how they may affect the remediation strategy for the property you are assessing;

[125] For details about urgent works, see the Urgent Works Guide – NHI Act.

[126] See Section c Works that do not require consent (exempt building works) and Section d Works that require consent (restricted building work or work that is not restricted) in this Appendix.

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- comply with the HSWA and regulations under that Act;[127]
- take into consideration the risk of contamination exposure, e.g. asbestos;
- consider any other relevant factors that you may identify;
- meet our repair standards.[128]

c. Works that do not require consent (exempt building works)

New Zealand legislation allows for exemptions to building consents in a variety of situations. The most applicable exemptions to natural hazard 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 a building product[129] 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. This is subject to meeting the requirements for exemption under Schedule 1, clause 1, subclause 3 of the Building Act 2004.

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.

For further information, see the design consideration tables for each building element below.

[127] See Section 1.h.v Health and safety.

[128] See Section 2.d.i.a What is the definition of 'replacement cost'?.

[129] The term 'building product' is defined in section 9A of the Building Act 2004.

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d. Works that require consent (restricted building work or work that is not restricted)

This section has been adapted from Restricted Building Work (RBW), which is licenced under CC BY by the Ministry of Business, Innovation and Employment.

Consent is required for all restricted building work, and for any work that is not restricted building work unless expressly exempted by section 41 of the Building Act 2004.

If you are unsure whether a consent is required or if the work is exempt from consent, you should refer the matter to an appropriate expert or ask the relevant TA.

i. Definition of restricted building work

Restricted building work is work that is critical to make a house or small-to-medium apartment building structurally sound and weathertight. You must use Licensed Building Practitioners (LBPs) to design and carry out or supervise 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; and
- includes physical work that:
  - involves construction or alteration of the primary structure or external moisture management system of (and so affects the weathertightness of) a house or small-to-medium apartment building;
  - is of a kind that is covered by one of the licence classes.

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- includes design work, which is the preparation of any documentation which proposes to construct or alter:
  - the primary structure or external moisture management system attached to, or forming part of (and so affect the weathertightness of), a house or a small-to-medium apartment building; or
  - any fire-safety system attached to, or forming part of, a small-to-medium apartment building.

Work is not restricted building work if it:

- is not to a house or small-to-medium sized apartment building. For example, if it is work to mixed-use apartments (such as buildings containing shops); commercial buildings of any height; and large apartment buildings (exceeding 10 m in height);
- does not require a building consent;
- does not affect or involve work to the primary structure of the building or its weathertightness;
- does not fit within one of the LBP licence classes.

e. Examples of restricted building work

i. 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.

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

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Examples of primary structure building elements	Types of primary structure building elements
Columns and beams	Timber, steel, concrete, masonry
Bracing	Cross bracing, sheet bracing, shear walls, diaphragms, portal frames

ii. 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 or 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)

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Examples of external moisture management systems	Areas where these may be found
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 will affect any exterior element other than for minor aesthetic reasons, you should ask the relevant TA whether a consent is required.

iii. Fire safety design

This generally applies to 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

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Examples of fire safety systems	Areas where these may be found
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

f. 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.

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

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Examples of observed damage	Considerations	Common remediation strategies
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	• Relevelling by 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 or design input is required • Whether ground conditions are suitable for the proposed remediation strategy • Whether it can be jacked and packed	• Localised replacement of any specified system (concrete perimeter foundation, timber pile) • Relevelling by ground injection • Mechanical jacking of concrete perimeter foundation • Jack and pack

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Examples of observed damage	Considerations	Common remediation strategies
		• Partial or full foundation rebuild
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 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 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	Full replacement of any specified system, e.g.: • Slab on grade • Concrete perimeter foundation • Piles or poles

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Examples of observed damage	Considerations	Common remediation strategies
	• Whether floor coverings will be affected • Whether the repair is economically viable • Whether the repair will restore superstructure geometry	

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 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 this Manual)	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.

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g. 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 roof 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 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 this Manual)	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 hazard.

h. 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.

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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

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 or 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)

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Description of observed damage	Considerations	Common remediation strategies
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 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 or 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 or repair of internal linings 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 or consents.
Pre-existing conditions (see Section 6 Pre-existing conditions in this Manual)	• Non-compliant fires e.g. open fires • Pre-existing cracks
Specialists	Designer or engineer may be required
Internal or 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

i. Superstructure (walls)

i. 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.

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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 is 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

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Description of observed damage	Considerations	Common remediation strategies
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)

ii. Superstructure design considerations

Table 17: Key superstructure design considerations

Key superstructure design considerations	Comments
Building Act 2004	Consider required consents or exemptions. For example, building work in connection with installing thermal insulation in an existing building is exempt from consent, except where it is in an external wall of the building or an internal wall of the building that is a fire separation wall.
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 in this Manual)	• Construction and design issues e.g.:
	  • undersized wall members
	  • insufficient bracing capacity
	  • inadequate reinforcement

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	• Rotten framing • Corrosion • Deterioration of waterproofing system

j. 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, EIFS, PVC or 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 and 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, plastering and painting • 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

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Description of observed damage	Considerations	Common remediation strategies
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

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. For example, building work in connection with installing thermal insulation in an existing building is exempt from consent, except where it is in an external wall of the building or an internal wall of the building that is a fire separation wall.
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 6 Pre-existing conditions in this Manual)	Construction and design issues e.g.: • leaky building syndrome • rotten framing
Materials	Availability

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Key exterior cladding design considerations	Comments
Category 1 and 2 historic buildings	Requirement to repair or replace in accordance with the Heritage New Zealand Pouhere Taonga Act 2014

k. 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

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

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Description of observed damage	Considerations	Common remediation strategies
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)

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. For example, building work in connection with installing thermal insulation in an existing building is exempt from consent, except where it is in an external wall of the building or an internal wall of the building that is a fire separation wall.

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Key interior lining design considerations	Comments
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 in this Manual)	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

l. Joinery

i. Common joinery remediation strategies

For any joinery type, the key things you must consider are:

- Weathertightness
- Glazing
- Access
- Availability
- Condition

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

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Description of observed damage	Considerations	Common remediation strategies
		• 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

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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 6 Pre-existing conditions in this Manual)	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

m. 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

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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	Removal, disposal and replacement of section of concrete slab

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	• Whether joinery needs to be moved • Whether services will be affected • Whether insulation will need to be replaced	
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 floor 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

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Key floor design considerations	Comments
Pre-existing conditions (see Section 6 Pre-existing conditions in this Manual)	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

n. Services

i. Common remediation strategies to services

You must determine a remediation strategy based on the natural hazard 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 hazard 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 in this Manual)	Construction and design issues e.g. access or availability

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Key design considerations for services	Comments
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 hazard damage to residential land.

The remediation strategies discussed in this section are substantive repairs, not urgent works.[130] 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 the claim you are dealing with has non-visible land damage, i.e. ILV or IFV, you must escalate this to the appropriate NHC 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 NHCover 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 hazard damage that has occurred (if any)
- a conceptual remediation strategy that will reinstate the damaged residential land and remove any risk of imminent damage,[6] including the relevant design considerations.

When recommending a remediation strategy,[131] the geotechnical engineer will consider:

- the property insured under the NHI Act;

[130] For details on urgent works, see the Urgent Works Guide – NHI Act.

[131] See Appendix 3 Remediation strategy, standards and costing.

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- the type and extent of natural hazard damage;
- reinstatement standards under the NHI 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 (RMA), 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 hazard 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 hazard 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 47 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. It is a common strategy to predrill holes for driven piles to facilitate driving poles into the ground and to reduce driving vibrations. If this is undertaken the pre-drilled diameter should be no larger than the pole diameter.

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

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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 or cemented in bored holes. 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 48 Concrete crib retaining wall

Figure 49 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

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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 hazard.

Table 31: Suitability of crib retaining walls

Cases where crib retaining walls are suitable	Cases where crib retaining walls are not suitable
• Where land needs to be built up and there is a stable base • 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 landslides 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 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

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Cases where crib retaining walls are suitable	Cases where crib retaining walls are not suitable
	runs between the boundary and dwelling • Where it is difficult to get large volumes of hardfill to site

c. Gabion basket retaining wall

Figure 50 Gabion basket scour protection

Figure 51 Gabion basket retaining wall

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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. They can be used together with rock mattresses, which provide erosion and scour control to waterways.

Gabion basket walls are typically suitable for retained heights of 0.5 to 3 m. Retained heights greater than 3 m are possible, but 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 near surface soils are very weak, because it may be difficult to form a stable founding platform • Deep-seated landslides 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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Cases where gabion basket retaining walls are suitable	Cases where gabion basket retaining walls are not suitable
• Where site access for machinery is limited, because materials may be transported and placed by hand	

d. Concrete block retaining wall

Figure 52 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 includes a concrete footing.

The concrete footing may extend in front of or behind the wall, beneath the backfill. When the concrete footing extends behind the wall, it provides more resistance against toppling over but requires more earthworks to backfill above the concrete pad.

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Since the concrete footings 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 footings are required. This can require a large amount of earthworks and space to construct the wall.

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 landslides 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

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Cases where concrete block retaining walls are suitable	Cases where concrete block retaining walls are not suitable
	• 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

e. Palisade wall

Figure 53 Reinforced concrete palisade wall holes

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Figure 54 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 landslides 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 landslide that poses a risk of imminent damage by evacuation.

Palisade walls also have a common application in NHCover 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 to 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 landslides, generally with slip surfaces of 3 m or less in depth. Palisade walls may also include a capping beam that ties together the piles at surface level. Capping beams may be required to increase wall capacity or facilitate ground anchors. For details on

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applying anchors, see Appendix 2, section iii Retaining wall design considerations in this Manual.

Table 34: Suitability of palisade retaining walls

Cases where palisade retaining walls are suitable	Cases where palisade retaining walls are not suitable
• Landslides with deep failure surfaces, which may undermine other retaining wall types • Landslides with small displacements – these may be identified as slips that 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 landslides, surficial rockfall or scour • For landslides 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. Soil nail, rock bolt and rock anchor retaining walls

Figure 55 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 and local specialist contractors. 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 short steel bars that may be utilised to stabilise localised areas on fractured rock slopes. They are used in mesh walls and often used in conjunction with sprayed concrete walls 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 failure mechanisms 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 steel elements (reinforcement bars or strands).

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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.

g. Pinned mesh retaining wall

Figure 56 Pinned mesh retaining wall

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.

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 pinned mesh is installed, rock scaling or surface cleaning may be required. Rock scaling is the process of removing existing loose rock from slopes, which is generally carried out by abseilers using pry-bars and picks.

Anchored mesh solutions are not suitable for large deep-seated landslides because they do not provide the slope with resisting forces to support large heavy unstable soil or rock masses.

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h. Sprayed concrete retaining wall

Figure 57 Sprayed concrete 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.

Sprayed concrete 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 is installed, rock scaling or surface cleaning may be required.

Sprayed concrete walls are not suitable for large deep-seated landslides because they do not provide the slope with resisting forces to support large heavy unstable soil or rock masses.

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iii. Retaining wall design considerations

a. Timber pole retaining wall design considerations

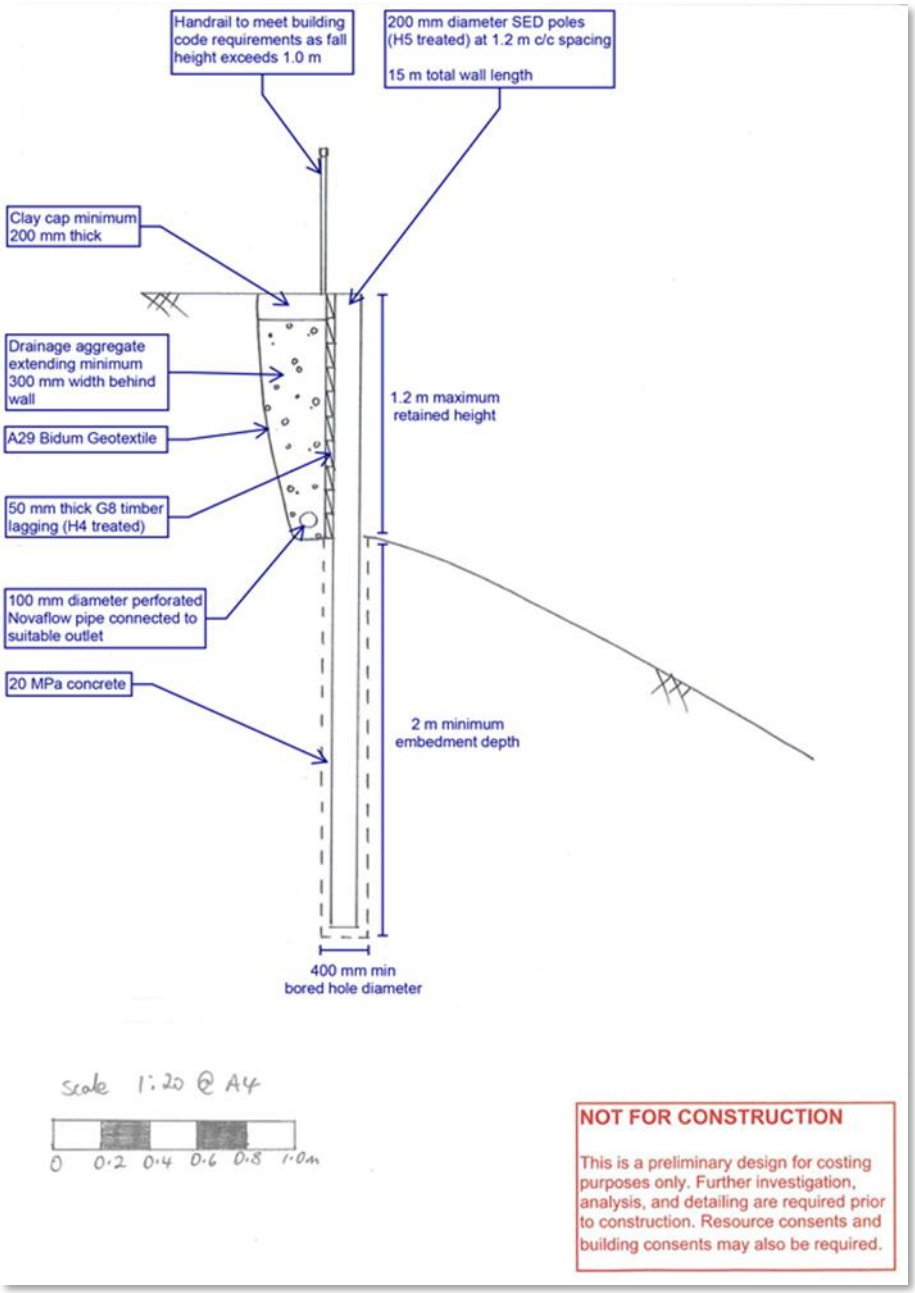

Figure 58 Key design elements of a timber pole retaining wall

Figure 58 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.

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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 exceed 1.5 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 125 mm square posts may be an alternative.
Hole diameter	Not applicable if driven timber poles are proposed. Bored hole diameters should ensure suitable concrete cover of the poles.
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.

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Key design components of timber pole retaining walls	Comments
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 filter fabric or an approved alternative. 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 or 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 rock mattress 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

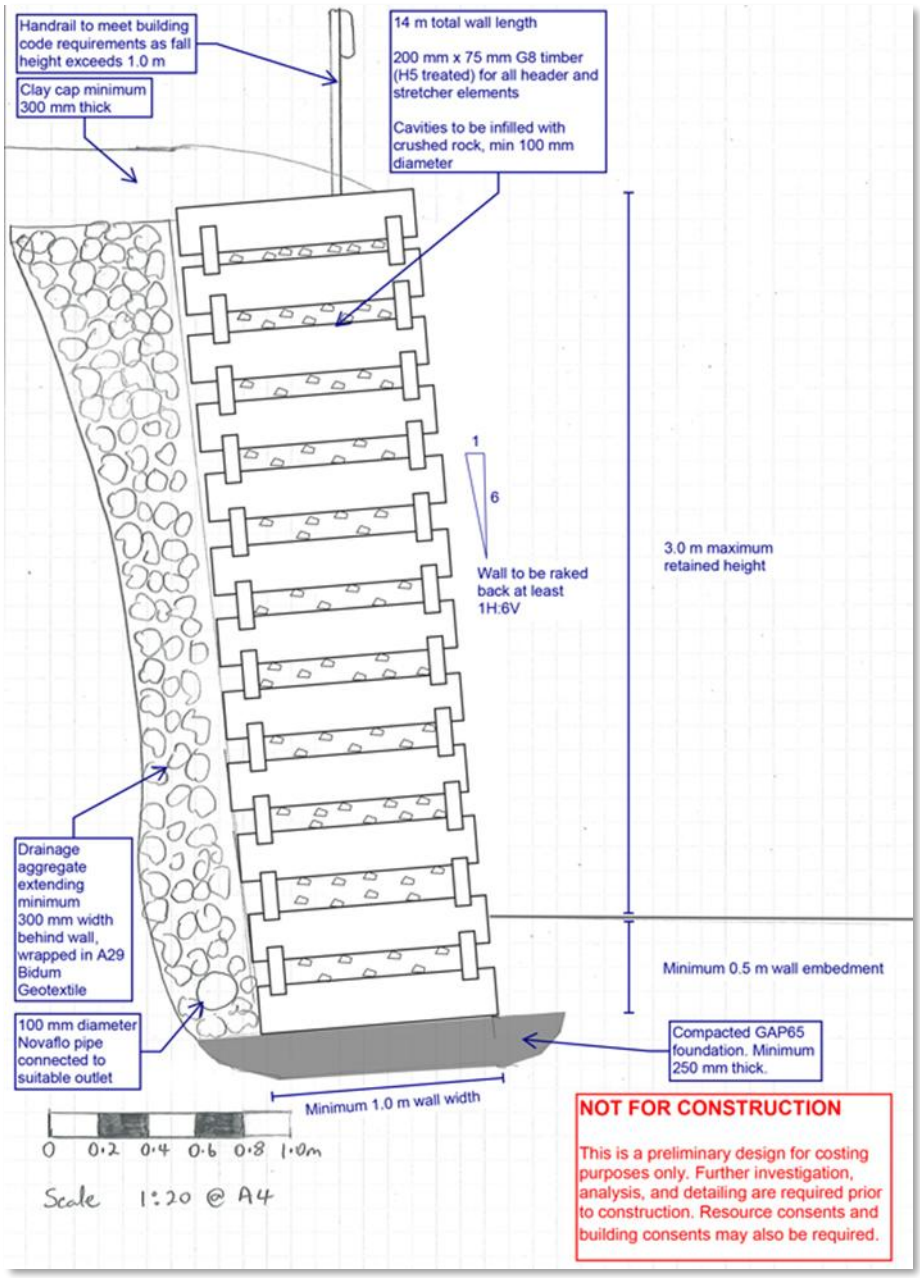

Figure 59 Key design elements of a timber crib retaining wall

Figure 59 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.

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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.
Wall length	The conceptual remediation strategy should be provided for the maximum retained height.
Retained height	Wall width is controlled by the length of the 'header' timber elements. The wall width determines the quantity of granular backfill required.
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.

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Key design components of timber pole retaining walls	Comments
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 onto slopes.
Handrail	The building code requires a handrail or fall barrier if there is a fall or 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

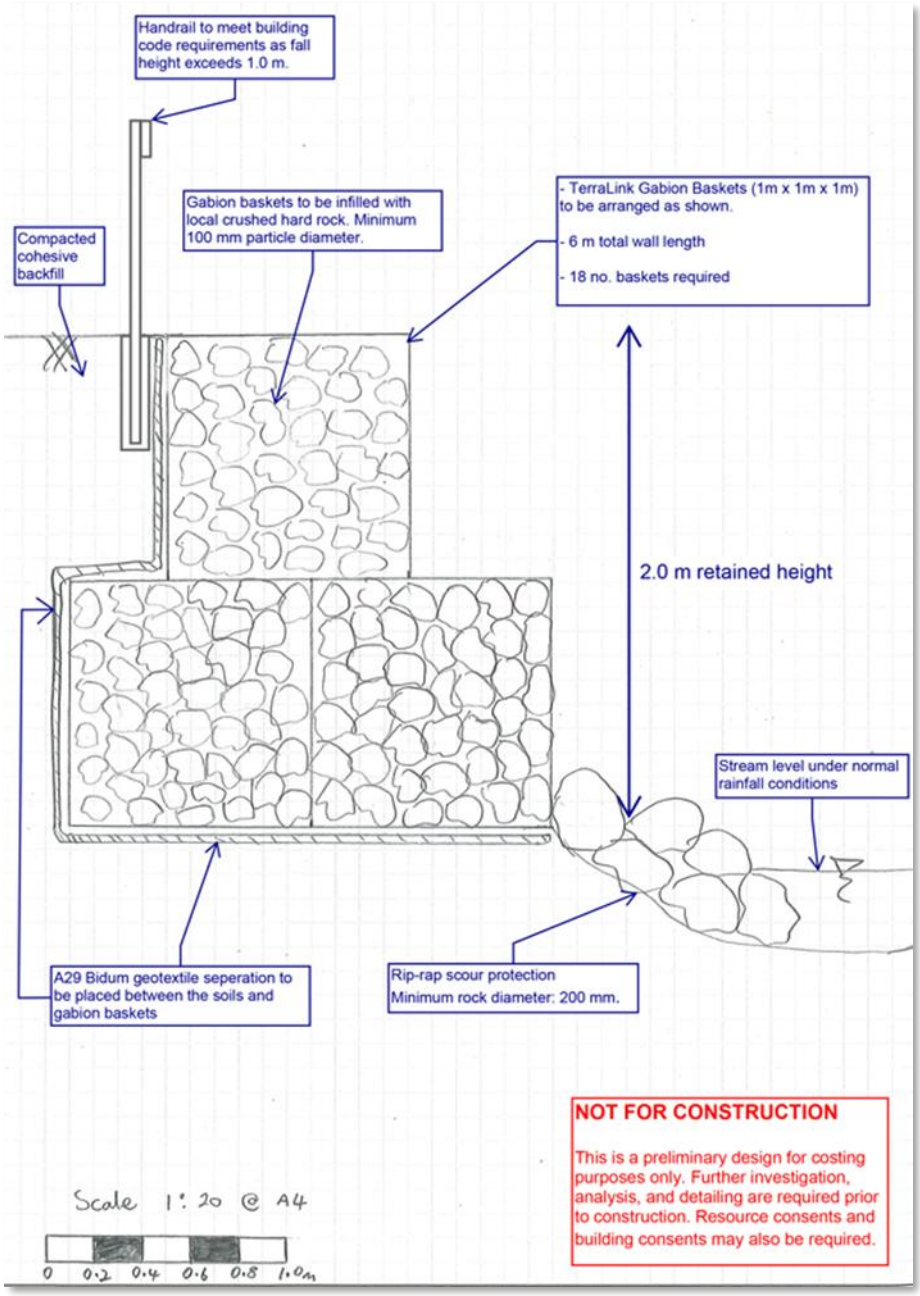

Figure 60 Key design elements of a gabion basket retaining wall

Figure 60 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.

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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.

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Key design components of gabion basket retaining walls	Comments
Handrail	The building code requires a handrail or fall barrier there is a fall or retained height of 1 m or more.

d. Concrete block retaining wall design considerations

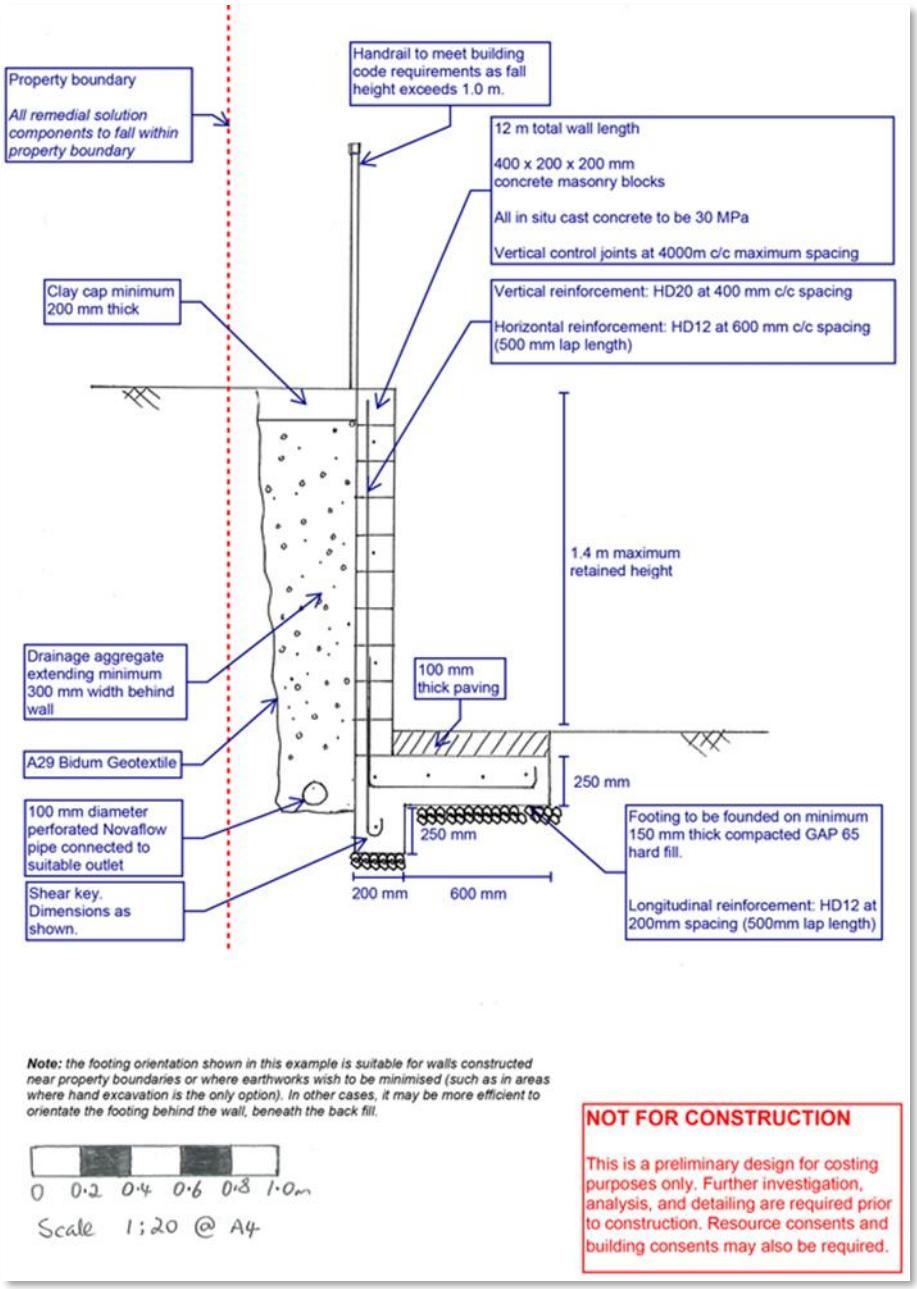

Figure 61 Key design elements of a concrete block retaining wall

Figure 61 provides an example of a remediation strategy sketch identifying the key

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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 landslide 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 filter fabric or an approved alternative. 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 onto slopes.

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Key design components of concrete block retaining walls	Comments
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

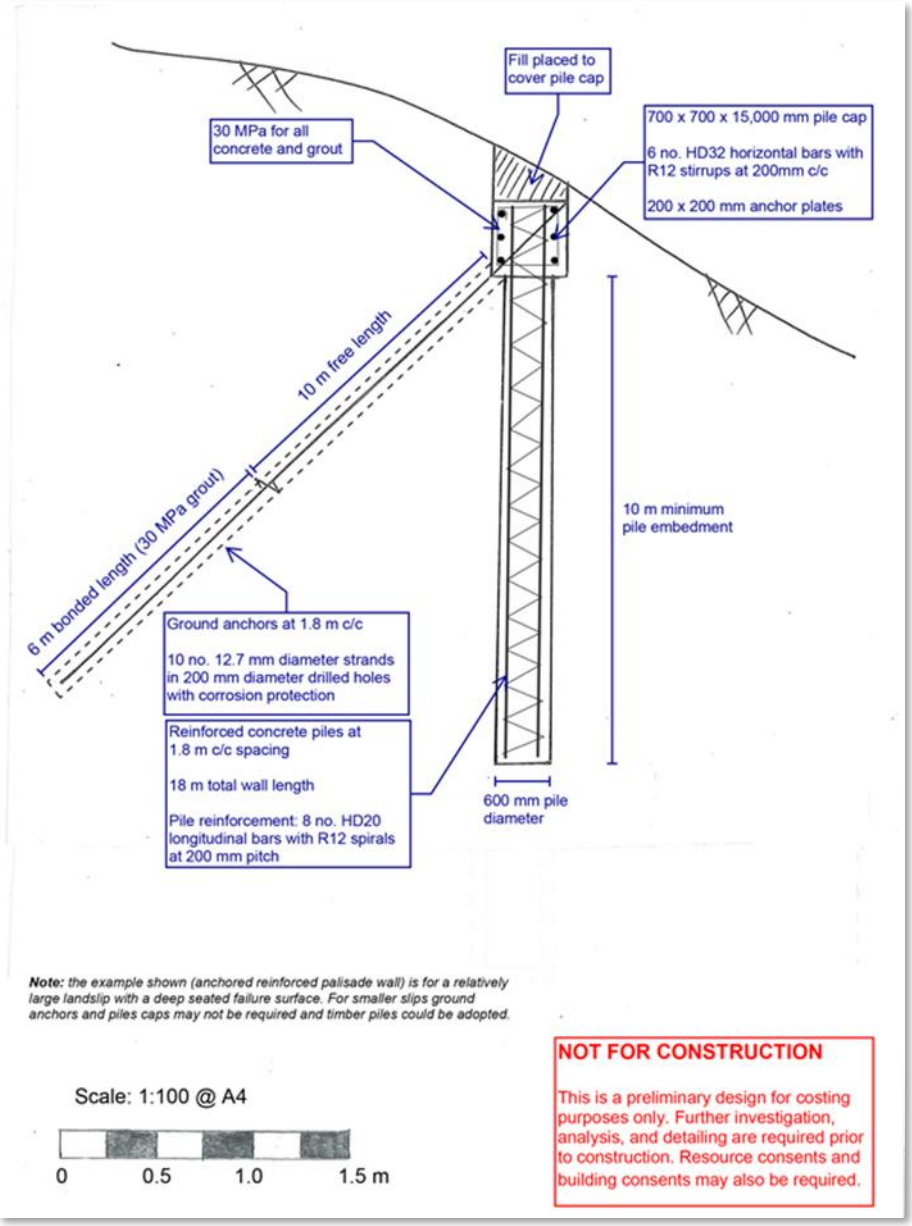

Figure 62 Key design elements of a palisade retaining wall

Figure 62 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.

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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 ensure suitable concrete cover of the poles.
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 or waler beam is required if ground anchors are adopted. See Appendix 2.c.ii.e Palisade wall in this Manual 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. Soil nail, rock bolt and rock anchor retaining wall design considerations

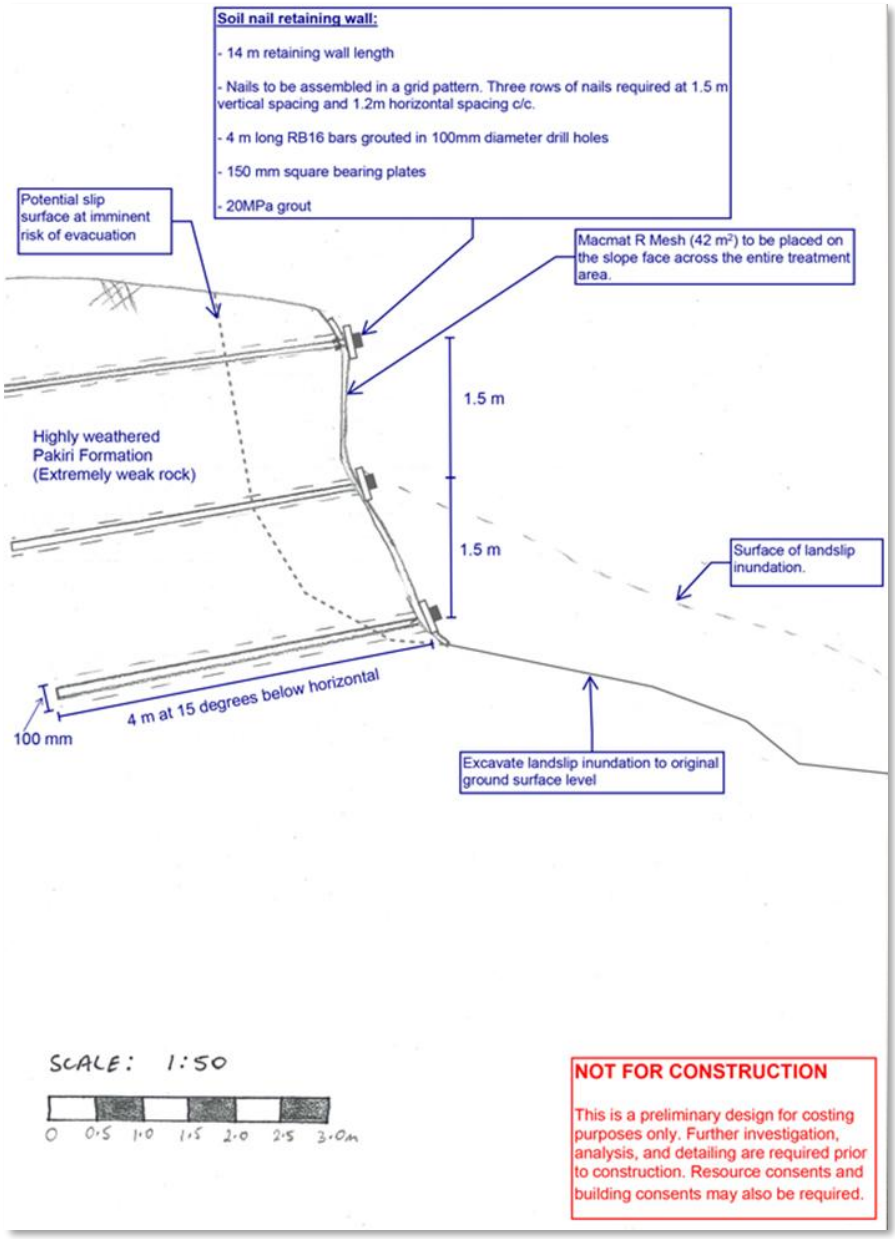

Figure 63 Key design elements of a nail/anchor retaining wall sketch

Figure 63 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 40 below.

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Table 40: 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. The rock anchors' 'fixed' length and 'free' length should 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.

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g. Pinned mesh retaining wall design considerations

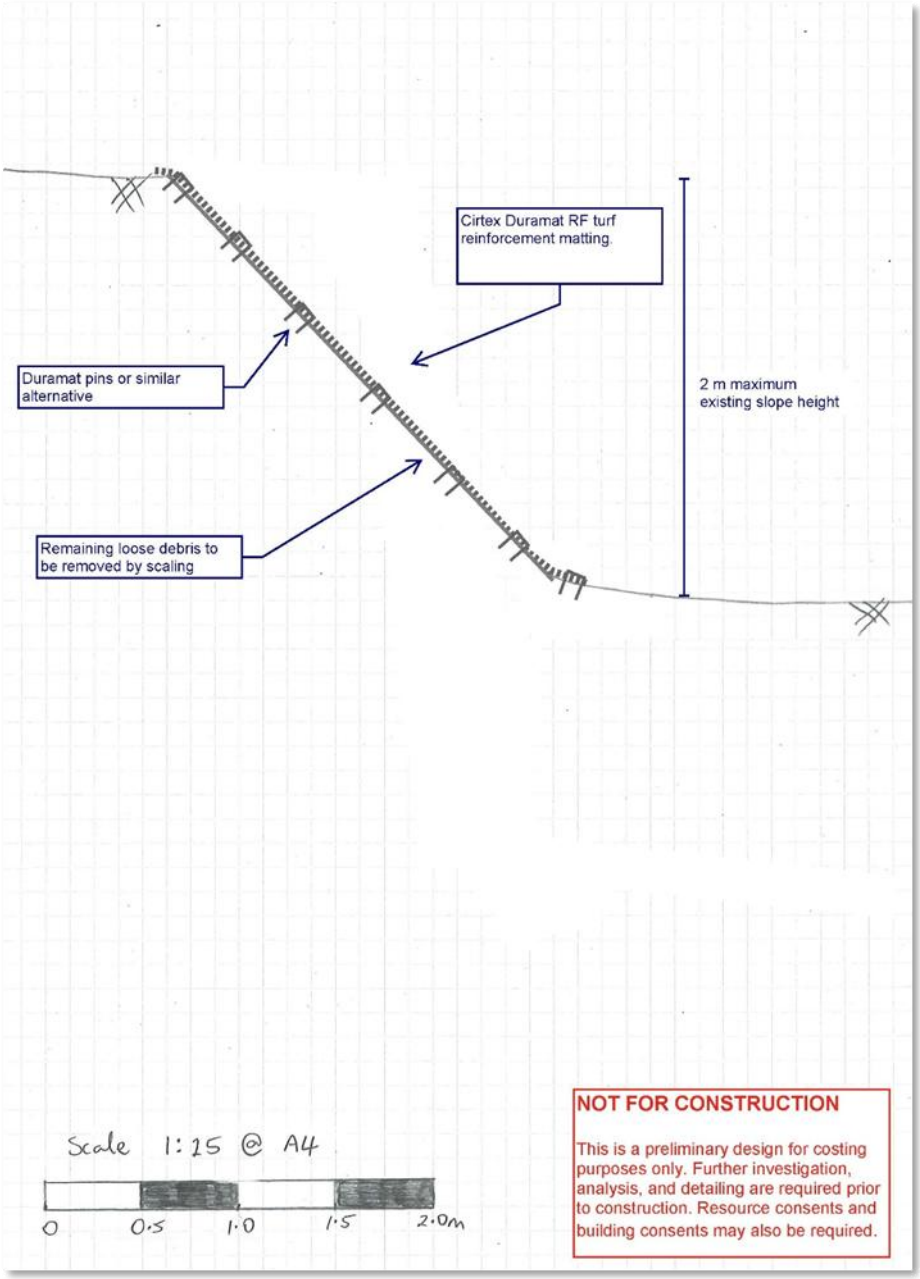

Figure 64 Key design elements of a pinned mesh retaining wall

Figure 64 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 hazard 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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h. Sprayed concrete retaining wall design considerations

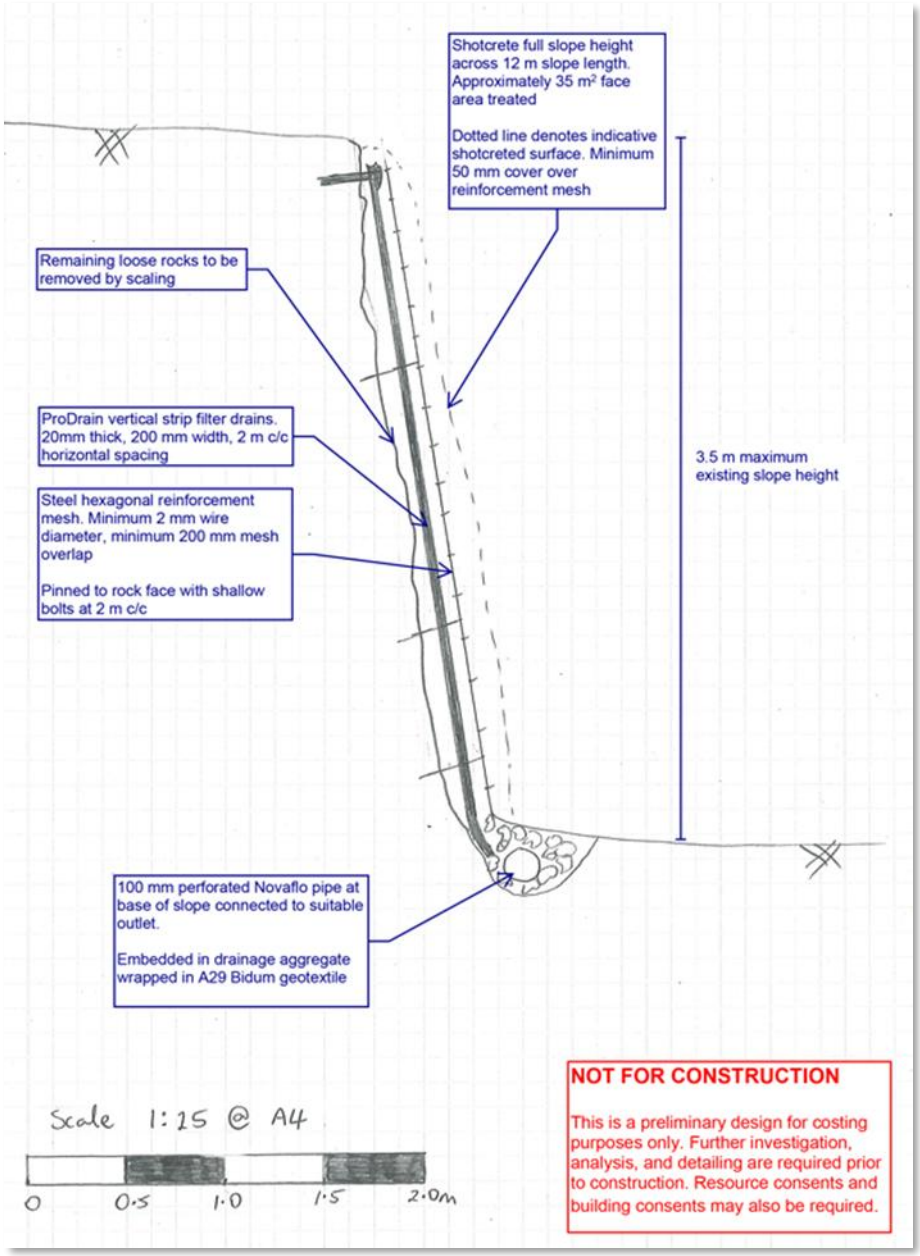

Figure 65 Key design elements of a sprayed concrete retaining wall

Figure 65 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 42 below.

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Table 42: 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 hazard 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.

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.

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Figure 66 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 67 Rural residential bridge

Bridge abutments also require design to transfer load from the bridge into the stream banks. If the existing bridge has been damaged due to a natural hazard and the stream banks are stable, shallow concrete footings may be suitable. More commonly, stream banks are unstable due to a landslide or scour and require a

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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 effect 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 landslides 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 in this Manual). 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.

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Key design components of bridges	Design considerations
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.

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Key design components of culverts	Design considerations
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[114] 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 landslide results in evacuation and inundation of insured land, the geotechnical engineer typically recommends 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 landslide has resulted in inundation only to insured land (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 damage 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.

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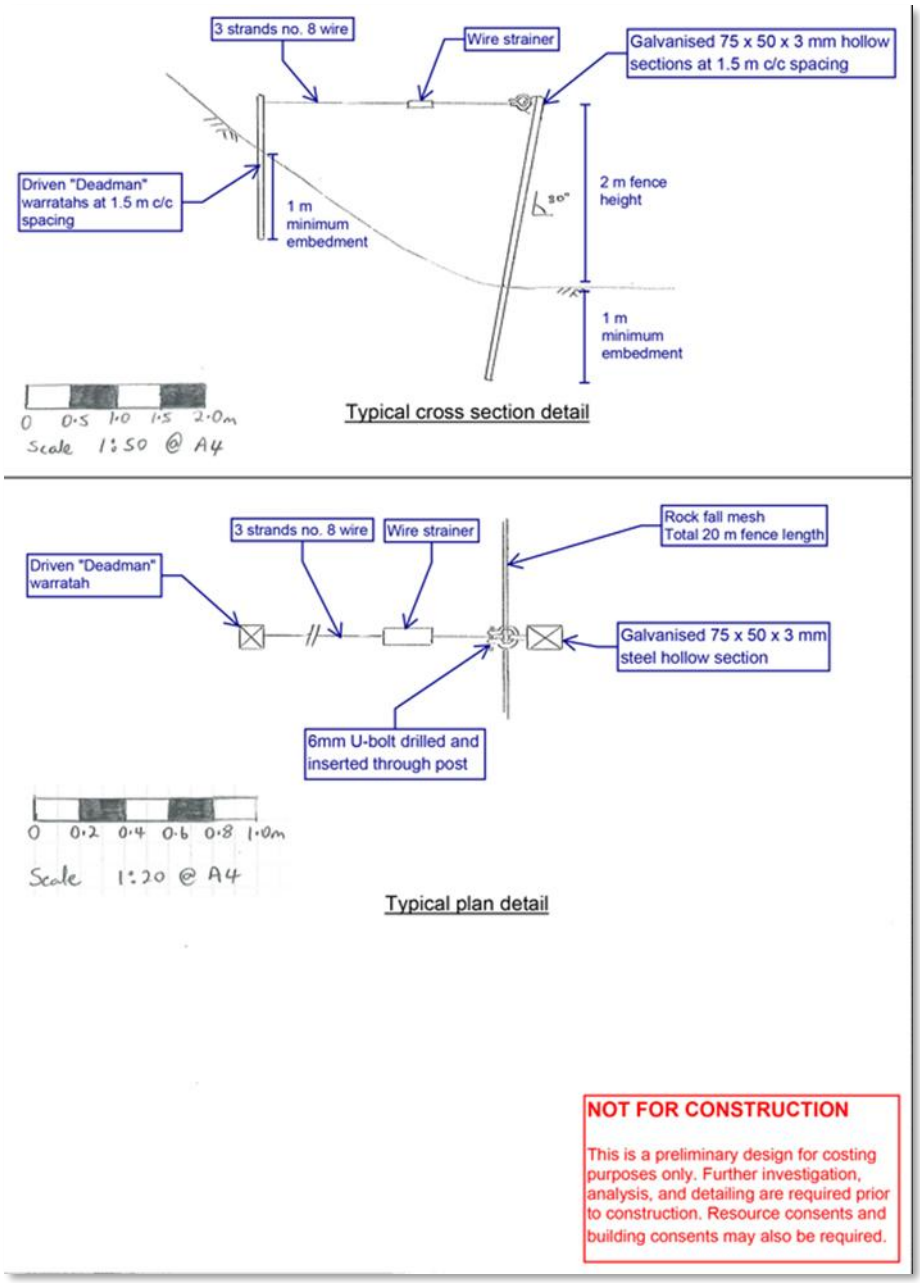

Figure 68 Key design elements of a rockfall catch fence

Figure 68 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.

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

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typically more cost-effective, but more importantly, it fully repairs the natural hazard damage to insured land, whereas a catch fence does not.

Where the inundation debris has been caused by volcanic activity, the remediation strategy generally includes removing the debris. However, if the inundation debris is unrepairable[132] (e.g. debris from lava flow), you must consider DOV.

In all cases, when determining which remediation strategy to apply, consider any applicable risks[22] to the occupants and general public.

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 hazard damage must consider the contaminated land only in respect of repairing the damage to insured land. The cost of addressing pre-existing contamination to the site is not covered under the NHI Act. However, the cost of remediating any confirmed land contamination as required to repair natural hazard damage to the insured residential land is covered.
Re-use of material	The cost of the remediation strategy depends on whether the inundated material must be disposed offsite. Any contaminated material must

[132] For more information on unrepairable land, see Section 2.d.ii Basis of cover for 'residential land' in this Manual.

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Key design considerations for removal of inundation	Comments
	be disposed offsite in an approved facility. Uncontaminated landslide 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 hazard that has occurred. If the source of inundation is a landslide 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 will also remove the risk of imminent damage from inundation.

f. Evacuated land (including scouring)

i. Common evacuated land remediation strategies

Evacuation of land due to a landslide is usually remediated using a retaining wall. The type of retaining wall selected depends on the nature of the landslide, the ground conditions and the construction constraints. See Appendix 2.c.ii Common retaining wall remediation strategies in this Manual, which outlines common retaining wall remediation strategies for landslides.

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Occasionally, it will be sufficient and more economical to remediate evacuated land without constructing a retaining wall. Small shallow landslides 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 drains. 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[139] 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 landslide, slope angle, site access constraints, surcharge, ground conditions	The common recommended remediation strategy is a retaining wall. See Appendix 2.c.iii Retaining wall design considerations in this Manual, which outlines the design considerations for retaining wall remediation strategies. The table below outlines design considerations specifically for remediating evacuation caused by scour.

Table 46 outlines design considerations specifically for remediating evacuation caused by scour.

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Figure 69 Riprap scour protection

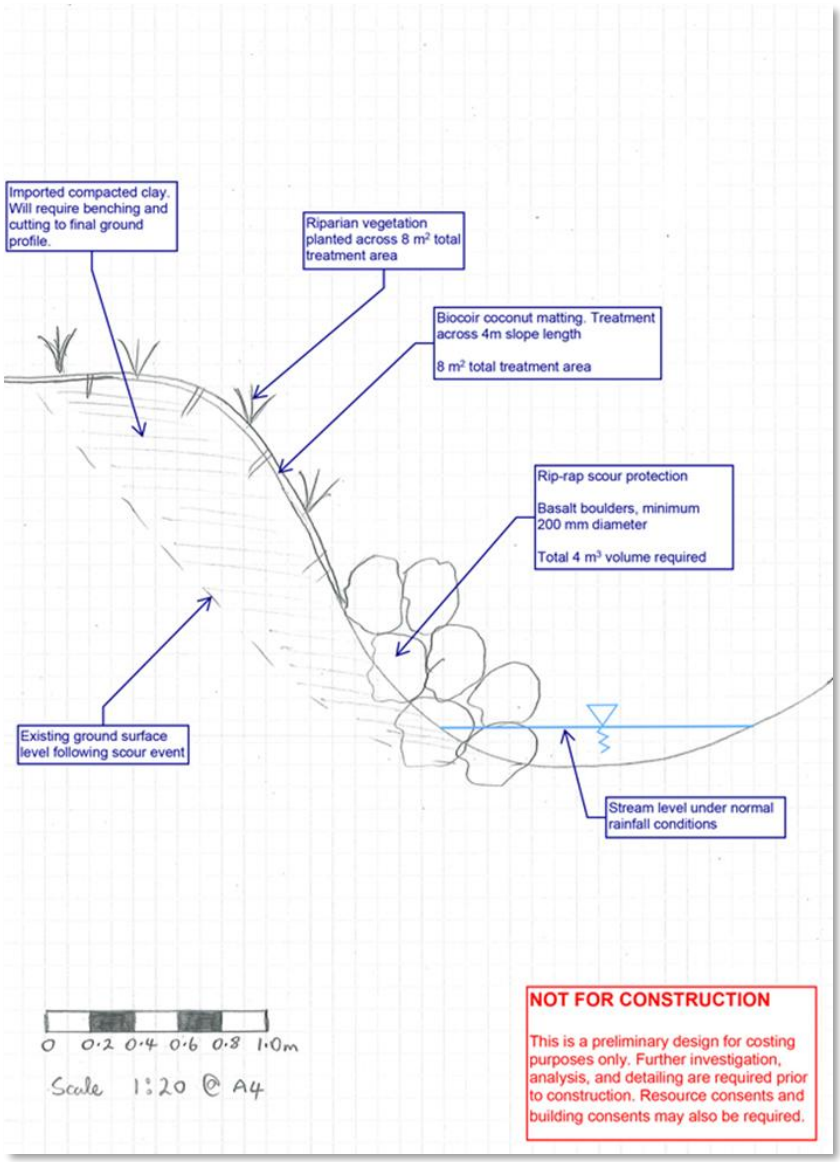

Figure 70 Key design elements of riprap scour protection

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Figure 70 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 or 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.

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Lateral spreading may result in differential settlement of building foundations. See Appendix 2 Section f Evacuated land (including scouring) in this Manual 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 landslide in the next 12 months. In this case, an in-ground palisade wall may also be required to protect and stabilise the land.

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 landslide. For remediation strategies for this type of claim, see Appendix 2 Section f Evacuated land (including scouring) and Section c Retaining walls in this Manual.

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 landslide) 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

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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.

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 RMA 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 NHCover claim assessments:

a. Temporarily contaminated land

A natural hazard that has occurred 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

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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 hazard.

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 NHCover land claim as required to repair natural hazard damage to the insured residential land. The cost of addressing pre-existing contamination to the site is not covered under the NHI Act. In situations where there is land contamination, 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 NHI Act requirements;[133]
- be lawful;[134]
- 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[135] 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 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.[5]

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;

[133] See Appendix 3 Section b Reinstatement standards under the NHI Act in this Manual.

[134] See Appendix 3 Section c Regulations and compliance in this Manual.

[135] See Section 8
Assessing damage across multiple properties in this Manual.

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- need for specialist expertise.

b. Reinstatement standards under the NHI Act

During the assessment process,[136] you will have established the extent of natural hazard damage (if any). This is essential to determine a remediation strategy that will replace or reinstate the property to the standard required by the NHI Act, and the cost of doing so.

This section outlines some of the key NHI Act considerations.

i. Building repair considerations

The NHI Act insures residential buildings against natural hazards for their replacement cost[137] up to the building cover cap.

ii. Land repair considerations

The NHI Act insures residential land on an indemnity basis (up to the land cover cap).[138] But before you can determine whether the land cover cap is reached, you must assess the amount of the natural hazard damage on the basis of the actual loss suffered. This is quantified using:

- the reinstatement cost;[139] and/or
- the DOV.[139]

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.

b. Land damage that is unrepairable or that is unlikely to be repaired

[136] See NHC Claims Manual – Residential Buildings – NHI Act, Section 6 How is the natural hazard damage assessed?.

[137] See Section 2.d.i Basis of cover for a 'residential building' in this Manual.

[138] See Section 2.d.ii Basis of cover for 'residential land' in this Manual.

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Residential land damage may be unrepairable, or unlikely 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 you 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, you must 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 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 ILV and IFV land damage. The claim may be settled 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 NHC Claims Manual – Residential Land – NHI Act – Section 7.A.c.ii What method is used to quantify the actual loss suffered? and the Land Valuation Guide – NHI Act.

c. Land that is contaminated or potentially contaminated

Contaminated land that is the direct result of a natural hazard occurring

If residential land is contaminated as a direct result of a natural hazard (and this contamination is not temporary), this may be considered natural hazard damage. An example of this type of contamination is residential land being inundated by debris containing asbestos.

You must treat this contamination as natural hazard damage.

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.

See also Section 1.h.v Health and safety in this Manual.

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Temporarily contaminated land

Sometimes a natural hazard causes residential land to become temporarily contaminated (for example, sewage seeps to the surface of the land). This contamination often breaks down to safe levels over a short period (for example, because the bacteria in the sewage break down in the sunshine or normal rainfall).

In these situations, the land has 'self-repaired' (or will in the short term), and you do not need to cost a repair unless there are other types of land damage to the insured land. If there are no other types of land damage to the insured land, the land claim entitlement is typically zero.

Contaminated land that is due to a pre-existing condition

'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. In other words, the contamination is not the result of a natural hazard. An example is residential land on a Hazardous Activities and Industries List (HAIL) site that is listed on the Environment Canterbury (ECan) Listed Land Use Register (LLUR). You should be aware of and consider other equivalent lists that apply to the location of the damaged property you are assessing.

You must meet all health and safety requirements in connection with any visit to potentially contaminated land.

You must consider any contamination-related costs incurred in carrying out the repair of natural hazard damage, unless the land is only temporarily contaminated. Those costs may include complying with the requirements of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011. The cost of addressing the effects on the site itself (e.g. the pre-existing contamination) is not covered under the NHI Act.

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.

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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, and 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, e.g. MBIE Guidance on Repairing and Rebuilding Dwellings Affected by the Canterbury Earthquakes. This advice, however, does not constitute NHI Act policy response.
- All repair work must also comply with the environmental obligations of the RMA. 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 on heritage listed buildings or structures, or to land that is, or is suspected to be, of archaeological significance.
- the HSWA, 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 – NHI Act.

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 the RMA.

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d. Which costs are involved?

When considering the total cost to replace and/or reinstate the damaged parts of the residential building or to reinstate the damaged parts of the residential land, 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, the total cost must also include:

- enabling works;
- professional and compliance fees;
- additional health and safety costs;
- travel costs.

Regardless of the severity of damage, the total cost 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 replace or reinstate the property damaged by a natural hazard. In some cases, carrying out substantive works will affect part of the residential building or land that was not damaged by a natural hazard. In these cases, NHCover 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;

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- relocating parts of the residential building (if applicable), even if this includes moving parts of the residential building that are undamaged; 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; and
- any legal requirement to undertake modifications (at the time or in the future).

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.

b. Legal obligation to undertake modifications

If, immediately before the natural hazard occurred, there was a legal obligation for the customer to undertake modifications to the property (at the time or in the future), you must exclude the cost of these from the scope of works. An example is where an earthquake-prone building notice has been issued and seismic repairs are required.

You should determine the most appropriate approach to cost the repair based on the circumstances. The approach may be to:

- complete the costings as if all legally required modifications will occur, but the cost of those modifications will be funded separately; or
- complete the costings as if the residential building or land will be repaired without the legally required modifications being made.

ii. Preliminary and general costs (P and G)

Preliminary and general costs cover any additional requirements to facilitate the repair of natural hazard 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.

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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

The margin is the cost that covers the contractor's profit and overhead costs. Margin is applied to the total of the repair cost up to this point (which includes P and G). Margin is applied before the GST component.

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 in accordance with sections 32 and 41 of the NHI Act. GST is applied to the total repair cost up to this point including P and G and margin.

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 RMA;
- 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 in this Manual.

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 hazard damage.

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Examples include:

- consent fees;
- engineering fees (investigation, design and construction monitoring);[139]
- architect's fees;
- surveyor's fees.

For land claims, the geotechnical engineering report provides an estimate of these costs. Where this type of cost is required to assess the extent of the damage, it does not form part of the scope of work.

vii. Additional health and safety costs

Health and safety costs are incurred by the main contractor for complying with the HSWA 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 or painting involving one contractor should not incur health and safety costs that are not already covered by the P and G allowance.

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

[139] Construction monitoring is typically completed by the design professional and provides the property owner or building consent authority with independent verification that the building work has been carried out in accordance with the specified requirements e.g. design drawings and building consent conditions.

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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 hazard, e.g. prior land use contamination, the NHI Act does not cover it. However, if there is a valid claim for land damage, the NHI Act covers any appropriate costs related to the contaminated land as required to repair the natural hazard damage to the insured residential land. The NHI Act does not cover the cost of addressing the effect of the pre-existing 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 hazard 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.

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 hazard damage that has occurred;
- if other repairs are included, which of the repairs were necessary to repair the natural hazard damage; and
- whether the costs for repairing the natural hazard 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.

NHC 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 in this Manual.

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
- Critical risk assessment
- Land sketch
- Instructions for the geotechnical engineer
- 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 hazard 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

Natural Hazards Commission Toka Tū Ake

Natural Hazard Event Assessment Report			
Loss Adjuster:	Michele Brown	Claim Number:	NHC/2025/234567
Organisation:	Natural Hazards Commission Toka Tū Ake	Customer Name:	Michael Holmes
Date of Assessment:	25/06/2025	Damage Address:	Unit 1/24 Example Street, Foxton
Date of Loss:	22/05/2025		
Cause of Loss:	Earthquake		

Loss Details: Magnitude 5.2 earthquake occurring at 3.04pm, Friday 22nd May 2025. 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 NHC 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 dwellings sharing an 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 2025, 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 shared property by both units and accordingly, both unit owners with valid claims are have an equal responsibility to repair the wall.

Natural Hazards Commission Toka Tū Ake
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.naturalhazards.govt.nz

Figure 71 Building assessment report, Unit 1 (Page 1)

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Natural Hazards Commission Toka Tū Ake

The total cost of accepted damage to Unit 1 is $4,773.50 including P&G, Margin & GST. The customer's share of the intertenancy wall is the replacement cost multiplied by the insured person's shared ownership interest, in this case 50%.

All of the relevant documents have been uploaded to the claim to allow for a peer review.

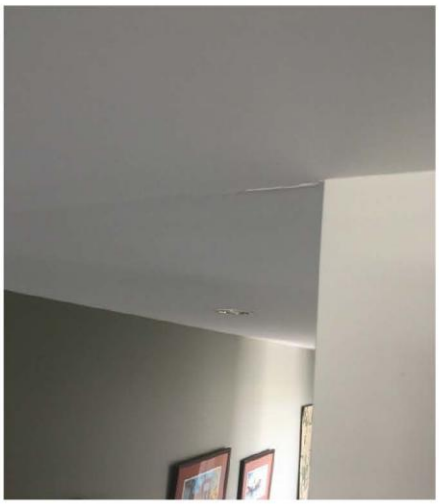
Post Assessment Meeting with Customer:

- All concerns expressed by the customer were addressed on site.
- The customer was advised of the claim process post assessment.
- The claim excess was discussed with the customer.
- The customer appeared satisfied with my inspection and explanations.

Assessment Recommendation:

Recommend the building claim is accepted and 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

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Figure 72 Building assessment report, Unit 1 (Page 2)

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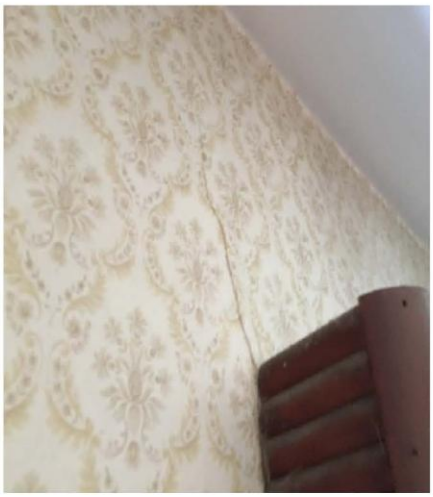
Bedroom 2 – 1.2 LM crack to painted plastered wall. Discoloured & aged. Not EQ-related.



Living room - 2.0 LM structural tear / crack to wallpapered plasterboard intertenancy wall. EQ-related.

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Figure 73 Building assessment report, Unit 1 (Page 3)

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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 74 Building assessment report, Unit 1 (Page 4)

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ii. Building sketch (floor plan), Unit 1

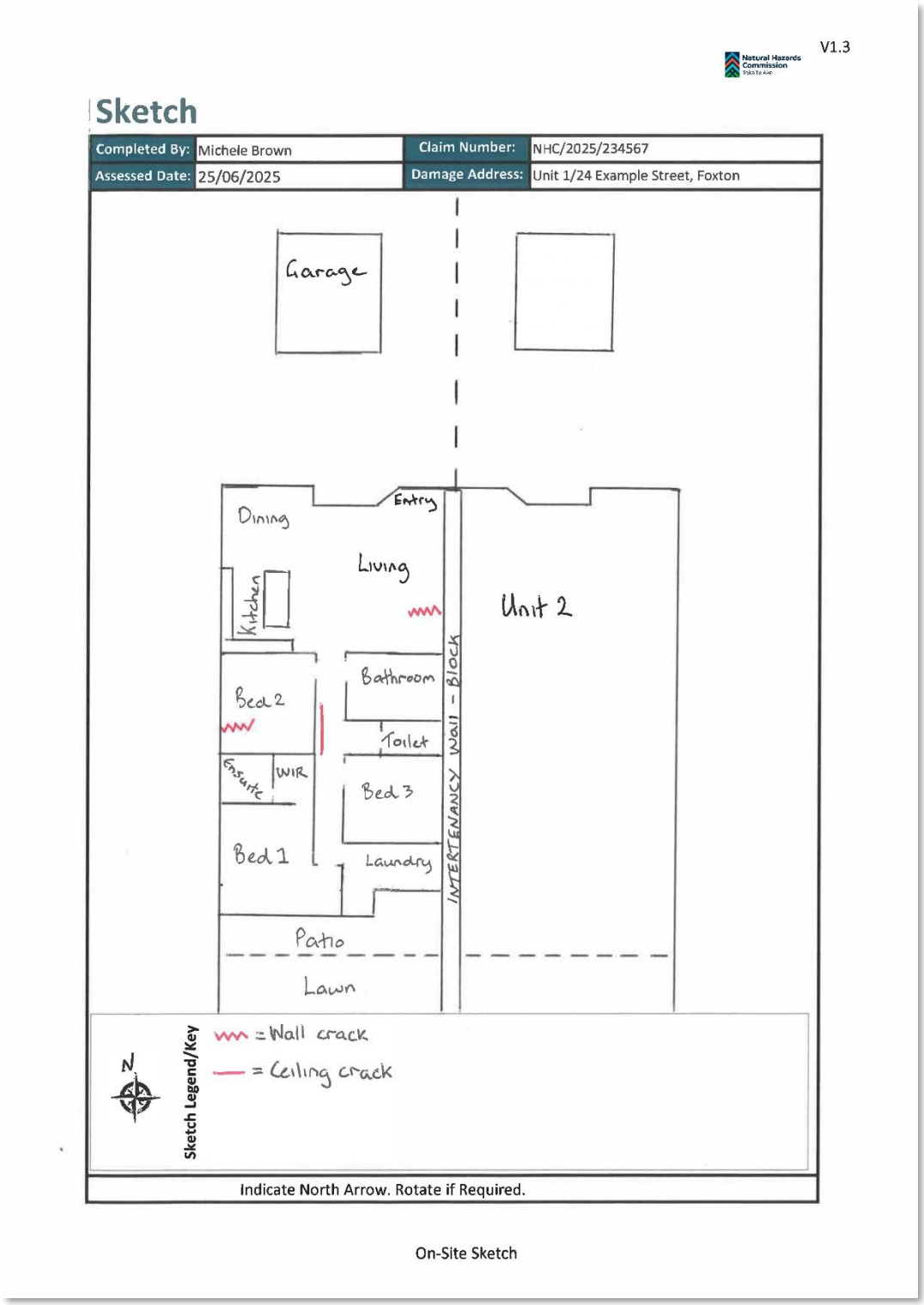

Figure 75 Building sketch (floor plan), Unit 1

iii. Statement of claim checklist – damage report, Unit 1

V1.3

Statement of Claim Checklist - Damage Report

Claim Number:	NHC/2025/234567	Completed By:	Michele Brown
Assessment Date:	25/06/2025	Customer Name:	Michael Holmes
Dwelling Name:	Main Dwelling	Situation of Loss:	Unit 1/24 Example Street, Foxton

NHC Covered Damage:	Length (m):	Width (m):	Stud height (m):	Name:	List Damage
X Yes / No	12	1.1	2.4	Hallway	2.4lm crack in painted plasterboard ceiling - EQ
Yes / X No	3.2	3.1	2.4	Bedroom 2	1.2lm crack in painted plasterboard wall lining. Visibly aged. NOT EQ
X Yes / No	6	5.4	2.4	Living Room	1.5lm crack in block intertenancy wall - EQ NOTE: IT wall only has plasterboard linings with painted anaglypta wall paper
Yes / No					

Statement of Claim of pages

Figure 76 Statement of claim checklist – damage report, Unit 1

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iv. Scope of works, Unit 1

Natural Hazards Commission Toka Tū Ake

Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	NHC/2025/234567
		Customer Name:	Michael Holmes
Role:	LOSS ADJUSTER		
		Address:	1/24 Example Street, Foxton
Date:	26/06/2025		

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 77 Scope of works, Unit 1 (Page 1)

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Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	NHC/2025/234567
		Customer Name:	Michael Holmes
Role:	LOSS ADJUSTER		
		Address:	1/24 Example Street, Foxton
Date:	26/06/2025		

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**

Figure 78 Scope of works, Unit 1 (Page 2)

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v. Building assessment report – Unit 2

Natural Hazards Commission Toka Tū Ake

Natural Hazard Event Assessment Report			
Loss Adjuster:	Michele Brown	Claim Number:	NHC/2025/123456
Organisation:	NHC	Customer Name:	Sam Davis
Date of Assessment:	25/06/2025	Damage Address:	Unit 2/24 Example Street, Foxton
Date of Loss:	22/05/2025		
Cause of Loss:	Earthquake		

Loss Details: Magnitude 5.2 earthquake occurring at 3.04pm, Friday 22nd May 2025. 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 NHC 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 buildings sharing an 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 2025, 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 79 Building assessment report, Unit 2 (Page 1)

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Natural Hazards Commission Toka Tū Ake

1.0LM step cracking to intertenancy wall concrete blockwork mortar. EQ related.

The intertenancy wall is shared property by both units and accordingly, both unit owners with valid claims have an equal responsibility to repair the wall.

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. The share of the intertenancy wall is the replacement cost multiplied by the insured person's shared insurable interest, in this case 50%.

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 excess was discussed with the customer.
- The Customer appeared satisfied with my inspection and explanations.

Assessment Recommendation:

Recommend building claim is accepted and cash settled based upon the costed scope of works, less any applicable excess.

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Figure 80 Building assessment report, Unit 2 (Page 2)

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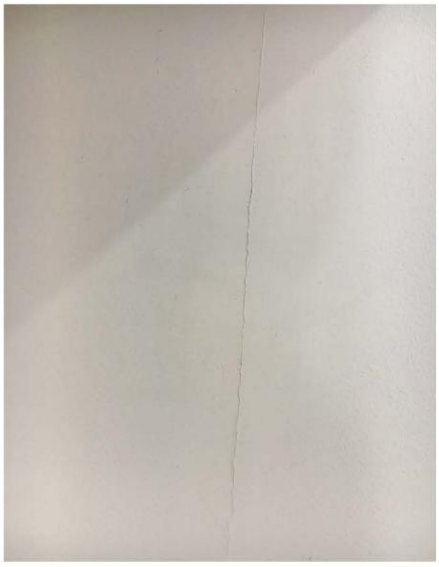
Natural Hazards Commission Toka Tū Ake

Damage Photo Schedule:



External garage – 2.4 LM crack to painted plastered wall. EQ-related.

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Figure 81 Building assessment report, Unit 2 (Page 3)

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Natural Hazards Commission Toka Tū Ake

Bedroom 1 – 1.0 LM crack to painted plastered wall. EQ-related.

NB: 3.0 M high stud.

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Figure 82 Building assessment report, Unit 2 (Page 4)

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Bedroom 2 – 0.5 LM crack to painted plasterboard wall. EQ-related.

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Figure 83 Building assessment report, Unit 2 (Page 5)

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Natural Hazards Commission Toka Tū Ake

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 84 Building assessment report, Unit 2 (Page 6)

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vi. Building sketch (floor plan), Unit 2

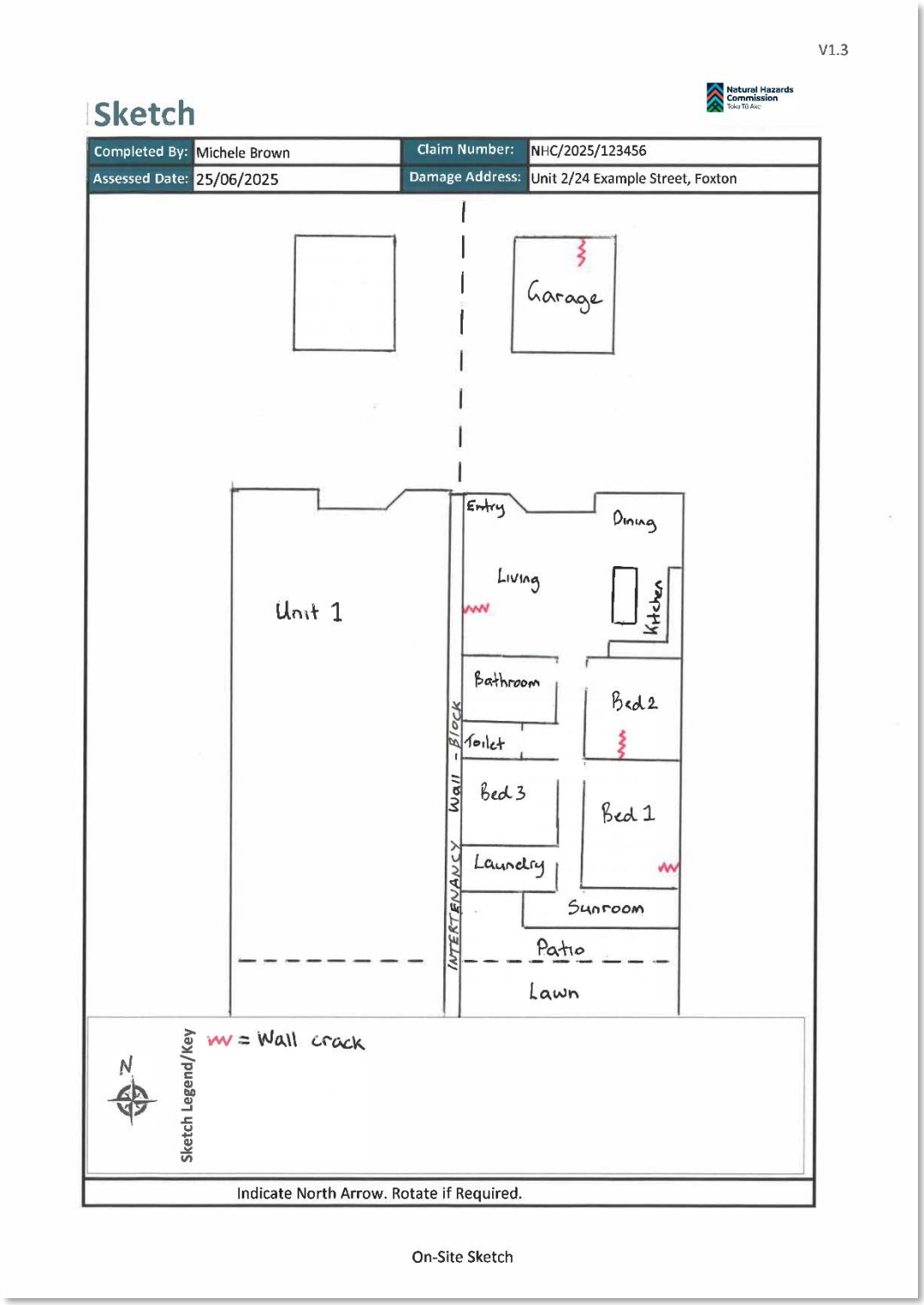

Figure 85 Building sketch (floor plan), Unit 2

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vii. Statement of claim checklist – damage report, Unit 2

V1.3

Natural Hazards Commission Toka Tū Ake

Statement of Claim Checklist - Damage Report

Claim Number:	NHC/2025/123456	Completed By:	Michele Brown
Assessment Date:	25/06/2025	Customer Name:	Sam Davis
Dwelling Name:	Main Dwelling	Situation of Loss:	Unit 2/24 Example Street, Foxton

NHC Covered Damage:	Length (m):	Width (m):	Stud height (m):	Name:	List Damage
X Yes / No	4.8	3.1	2.4	Bed One	1lm crack to one painted plasterboard wall - EQ
X Yes / No	3.2	3.1	2.4	Bed 2	.5lm crack to one painted plasterboard wall - EQ
X Yes / No	6	5.4	2.4	Living Room	1.5lm crack to block IT wall with painted plasterboard wall linings - EQ
X Yes / No	6	6	2.4	External Garage	2.4lm crack to painted plasterboard wall - EQ

Statement of Claim of pages

Figure 86 Statement of claim checklist – damage report, Unit 2

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viii. Scope of works, Unit 2

Natural Hazards Commission Toka Tū Ake

06/04/2025

Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	NHC/2025/123456
		Customer Name:	Sam Davis
Role:	LOSS ADJUSTER		
		Address:	2/24 Example Street
Date:	26/06/2025		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 87 Scope of works, Unit 2 (Page 1)

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Scope of Works - Building

Completed By:	Michele Brown	Claim Number:	NHC/2025/123456
Role:	LOSS ADJUSTER	Customer Name:	Sam Davis
Date:	26/06/2025	Address:	2/24 Example Street 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**

Figure 88 Scope of works, Unit 2 (Page 2)

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f. Land assessment report

The following is an example land assessment report, which the assessor uses to record information in their assessment of natural hazard damage.

Natural Hazards Commission Toka Tū Ake

Natural Hazard Event Assessment Report			
Assessor/Loss Adjuster:	Michele Brown	Claim Number:	NHC/2024/123456
Organisation:	NHC	Customer Name:	John Smith
Date of Assessment:	26/11/2024	Damage Address:	24 Example Street, Stokes Valley, Lower Hutt
Date of Loss:	10/10/2024		
Cause of Loss:	Landslide		

Loss Details:

A landslide has moved part of a retaining wall following heavy rain on the 10/10/2024.

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 NHC

Owner – John Smith

Assessment Observations:

Land: A landslide has occurred to insured land immediately behind a timber post/timber lagging retaining wall (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 headscarp 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 land area insured under the NHI Act, 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 89 Land assessment report (Page 1)

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Natural Hazards Commission Toka Tū Ake

Damage to Insured Appurtenant Structures: There is no visible nor 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 basis for settling land claims under section 39 of the NHI Act was explained to the customer, (land claim entitlement) who advised he understood the available compensation.

Assessment Recommendation:

The landslide has occurred, affecting the insured land area within 8 m of a residential building and an insured retaining wall under the NHI 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

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Figure 90 Land assessment report (Page 2)

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Natural Hazards Commission Toka Tū Ake

RTW rotating towards dwelling

Red line denotes assumed headscarp

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Figure 91 Land assessment report (Page 3)

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g. Critical risk assessment

The following is an example of a critical risk assessment form used before, during and after a site assessment. Its purpose is to record identified risks and steps to manage those risks.

Natural Hazards Commission Toka Tū Ake

Critical Risk Assessment (CRA)

For further assistance contact the Natural Hazards Commission Toka Tū Ake Health, Safety, Security, & Wellbeing Team.

Critical (Health & Safety) Risk Assessment Form				
Activity Type	Site Visit	Working Offsite	Customer Contact	Other
Description	Site visit with customer to complete a shallow geotechnical investigation			
Address	24 Example Street			
Suburb	Avalon, Lower Hutt			
Est Time On	1.00pm	Est Time Off	3.15pm	
Date	18 August 2024			

All Workers *(participating or in attendance)*			
1.	Michelle Brown (Assessor)	6.	
2.	Adam Brown (Geotechnical Engineer)	7.	
3.		8.	
4.		9.	
5.		10	

Which type of worker(s) are attending site?	Office Facing	Front Facing	Field Facing
Lead On-Site:	Michelle Brown		

Step 1: Identify the Critical Risk(s) and Critical Control(s) for the Work Activity

Driving / Vehicles				
☐ N/A	☐ Off Road Driving	☐ Motorway Driving	☐ Suburban *(City only)*	☐ Open Road
☐ Other (please list)				
Critical Controls summary	Current full license held by driver, work vehicle with GPS to be taken to site			

Violence or Aggression / Unacceptable Behaviours			
☐ N/A	☐ Red Flags present *(intel)*	☐ Staff Trained *(current status held)*	☐ Co-ordination with Insurer onsite
☐ Other (Please list)			
Critical Controls summary	Current Safe Practice Effective Communication Training		

Asbestos / ACMs			
☐ N/A	☐ Asbestos hazards identified	☐ ACM air test results	☐ Go to Asbestos Risk Assessment
☐ Other (Please list)			
Critical Controls summary			

1

Version 01 | Owner: HSSW Team | Next update: September 2025

Figure 92 Critical risk assessment (Page 1)

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Natural Hazards Commission Toka Tū Ake

Critical Risk Assessment (CRA)

For further assistance contact the Natural Hazards Commission Toka Tū Ake Health, Safety, Security, & Wellbeing Team.

Electrocution / Electrical Harm				
☐ N/A	☐ Underground Dig	☐ Overhead Power Line	☐ Unsafe House wiring	☐ Other
☐ Other (Please list)				
Critical Controls summary	C Scope metal detector to be used to detect underground services			
Restricted Spaces				
☐ N/A	☐ Sub-Floor	☐ Ceiling Space	☐ Other Crawl Space	
☐ Other (Please list)				
Critical Controls summary				
Working at Height *(any height)*				
☐ N/A	☐ Ladders	☐ MEWP/EWP	☐ Roof Checks	☐ Scaffolding
☐ Other (Please list)				
Critical Controls summary				
Lone Worker / Safety Functions				
☐ N/A	☐ Keeping in Touch Plan	☐ Get Home Safe App	☐ CRA Approved	☐ Others attending
☐ Other (Please list)				
Critical Controls summary				

Technology Available to Assist		
☐ Cavity Critter (Under floor)	☐ Drones (height)	☐ Garmin InReach
Other/details (please list):		
Other potential hazards present for this work activity		
☐ Dogs / Animals	☐ Unstable Land / Damaged Land	☐ Rockfall
☐ Abuse / Conflict / Multiple Parties	☐ Psychological / Stress	☐ Damaged Property
☐ Lone Working / Deploying Alone	☐ Remote Working	☐ No Cell Coverage
☐ Off-Road / Rural	☐ Boat Access only	☐ Helicopter
Other hazards (please list): Customer owns two dogs which will be on site during the assessment. This has been discussed with the customer and while not aggressive, the dogs will be contained to an area where assessment is not required, and assessors will not come into contact with them.		

2

Version 01 | Owner: HSSW Team | Next update: September 2025

Figure 93 Critical risk assessment (Page 2)

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Natural Hazards Commission Toka Tū Ake

Critical Risk Assessment (CRA)

For further assistance contact the Natural Hazards Commission Toka Tū Ake Health, Safety, Security, & Wellbeing Team.

Critical Controls summary	
Are the critical controls fit for purpose? Are critical risks suitably controlled? Yes / No	If the answer is No – start the critical control process again, adding more controls until the risks are deemed acceptable for the work activity to continue. Critical Controls must be applied for some risks.

Step 2: Monitor, review, and sign off for the Critical Risk Assessment

Complete during and/or after the activity	Yes	No
1. Are the planned control measures fit for the purpose intended (i.e. are the critical risks of this work activity deemed to be acceptable to NHC staff)?	☐	☐
2. Have there been any changes to the critical health and safety control measures?	☐	☐
3. Are further critical control measures required in future?	☐	☐

Detail what additional controls are required			
Review completed by	Michelle Brown	Designation	Assessor
Signature		Date	19 August 2024
The Manager or Team Leader *must* sign off each critical risk assessment 24-hours prior to any work activity commencing. This critical risk assessment has been signed off and deemed acceptable by an authorised person (see below).			
Authorising Person	Alan White	Date	19 August 2024
Signature		Time	

3

Version 01 | Owner: HSSW Team | Next update: September 2025

Figure 94 Critical risk assessment (Page 3)

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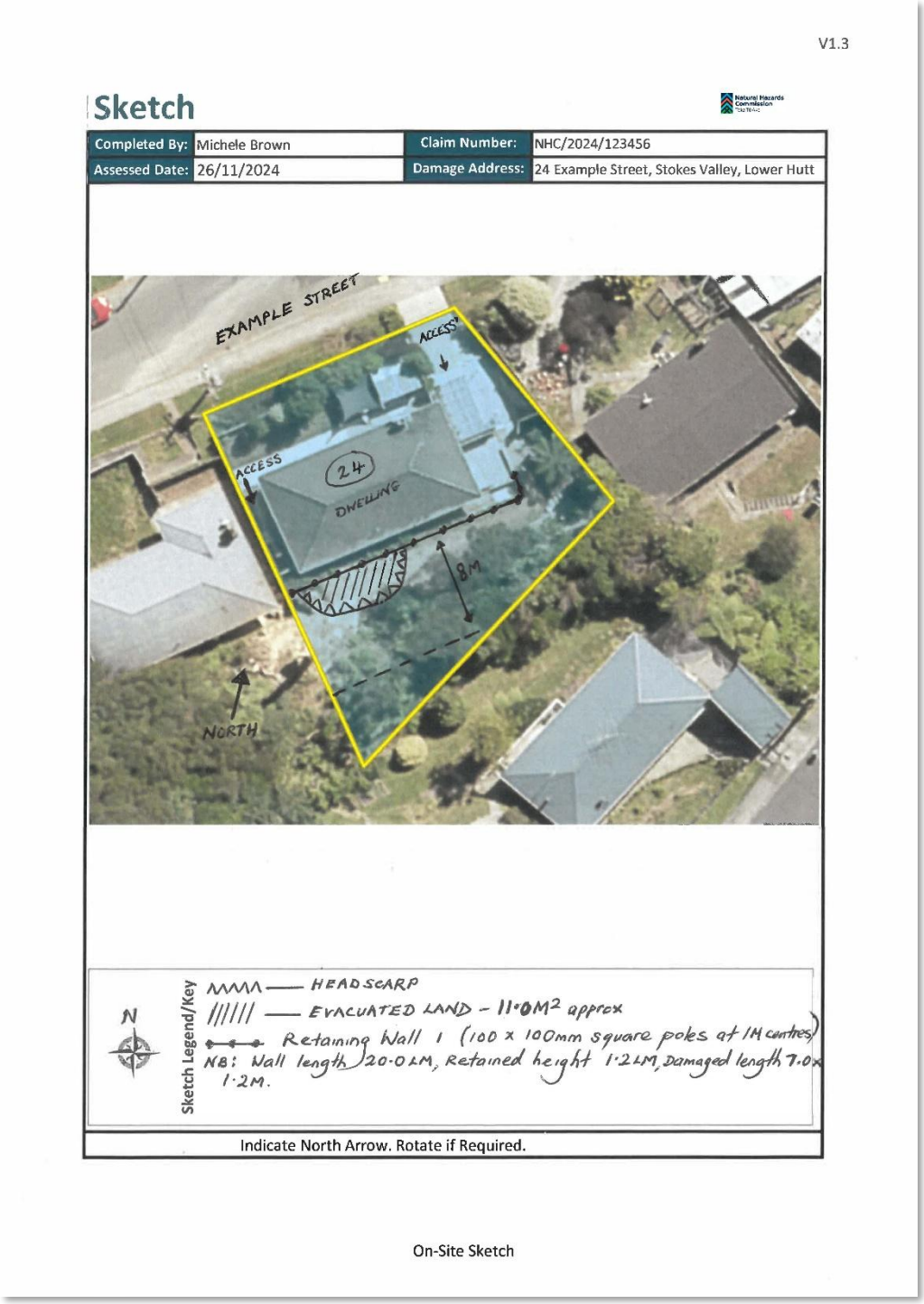
h. Land sketch

The following is an example of a land sketch completed during a site assessment, which provides visual guidance to the extent of NHCover and the location of damage.



V1.3

Sketch

Completed By:	Michele Brown	Claim Number:	NHC/2024/123456
Assessed Date:	26/11/2024	Damage Address:	24 Example Street, Stokes Valley, Lower Hutt

Indicate North Arrow. Rotate if Required.

On-Site Sketch

Figure 95 Land sketch

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i. 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 natural hazard damage and providing a suitable conceptual remediation strategy. The engineer uses this to provide a service fee quote for the assessor's approval.

Natural Hazards Commission Toka Tū Ake

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	30/11/2024	**Requester's name**	Michele Brown
Requester's phone	0274 555 555	**Requester's email**	mbrown@naturalhazards.govt.nz
NHC cost centre		**Claim number**	NHC/2024/123456
Customer name	John Smith	**Address of damage**	24 Example Street, Stokes Valley, Avalon, Lower Hutt
CMS specialist service request number	123456	**Part A version number**	V01

Brief

Event type	☐ EQ ☒ Landslide ☐ 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 whether the loss is the direct result of the natural hazard that has been claimed for • quantify land damage including imminent damage within Natural Hazards Cover • provide conceptual remedial solution.

Supporting documents

☒ Assessment report ☒ Land sketch ☒ Photos

SSR Form_Geotech_Standard Claims_Final V2_20241023

Figure 96 Instructions for the geotechnical engineer

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j. 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 2024

Natural Hazards Commission Toka Tū Ake (NHC)
Via email

Claim for Natural Hazard (Landslide) Damage

John Smith, 24 Example Street, Avalon, Lower Hutt

NHC/2024/123456

1 Introduction

As requested, ABC Geotechnical Engineering Limited inspected the subject property, legally described as Lot 2 DP 449899, on 11 December 2024 to assess the claim for natural hazard 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 hazard that has occurred.

This claim relates to a rain event that occurred in early October 2024.

2 Summary of damage information

Is this natural hazard damage?	Yes (Landslide)
Land within 8 m of dwelling or appurtenant structures	
Area of insured land **damaged**:	
Evacuated:	11 m²
Inundated:	Nil
Area of insured land **at risk of imminent damage:**	
Evacuation:	4 m²
New inundation:	Nil
Re-inundation:	Nil
Main access way within 60 m of dwelling	**N/A**
Retaining walls within 60 m of dwelling (or an appurtenant structure), supporting or protecting the dwelling, appurtenant structure or insured land areas	
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 m²
Imminent damage: (insured face area):	1.5 m²
Insured wall: (face area):	24.0 m²
Total wall: (face area):	24.0 m²
Dwelling and appurtenant structure(s)	

ABC Geotechnical Engineering Limited

Figure 97 Geotechnical engineering report (Page 1)

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Has the dwelling or appurtenant structure been damaged as a result of the natural hazard?	No
Is damage to the dwelling (or appurtenant structure) imminent as the direct result of the natural hazard that has occurred?	No
Insured service infrastructure	**N/A**
Insured Bridges or culverts	**N/A**
Conceptual remediation strategy:	
The conceptual remediation works, and drawings are for cost estimation only and are NOT FOR CONSTRUCTION. Remediate landslide damage to the insured land and remove imminent damage risk to insured land by constructing a cantilevered timber pole retaining wall tied into the existing wall. • Prepare the working area. • Remove landslide debris and damaged retaining wall, working from the top down and dispose off-site. • 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 SED H5 treated SG8 timber poles at 1 m centres ○ 75 mm thick H4 treated SG8 timber lagging ○ Backfill with well graded drainage material, wrapped in A29 Bidim geotextile. ○ 110 mm diameter Novaflow pipe at base, wrapped in filter fabric, connected to existing stormwater system. Handrail to Building Code requirements (required if someone could fall more than 1 m).	$6,500 + construction costs* (excluding GST)

*To be assessed by an NHC cost estimator

3 Additional information for cost estimation

Construction Issues	Easy	Moderate	Hard	N/A
Construction access	☒			
Earthworks required	☒			
Constructability/Reinstatement	☒			

All remediation strategies 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 conceptual remediation strategy 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 conceptual remediation strategy will be provided by an NHC cost estimator.

ABC Geotechnical Engineering Limited

Figure 98 Geotechnical engineering report (Page 2)

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3

4 NHCover considerations

We consider the damage described above to be natural hazard (landslide) damage as defined by the Natural Hazards Insurance Act 2023 (NHI Act).

5 Additional information / clarifications

5.1 General

The location and 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 unless specified otherwise.

5.2 Conceptual remediation strategy

The conceptual remediation strategy is provided solely to the above insurer for NHCover claim settlement purposes. The conceptual works are for NHC cost estimation only, to enable NHC 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 hazard that has occurred. The conceptual remediation strategy, and drawings, are NOT FOR CONSTRUCTION.

A Building and/or Resource consent is likely to be required and this should be confirmed with the Local Authority prior to any remedial works being undertaken.

Subsurface investigation, engineering design and subsequent sign off by a chartered professional engineer is also likely to be required as part of the building consent application. Regular inspections by a Chartered Engineer may also be necessary during the works to enable sign - off in accordance with the 2004 Building Act and the conditions of the building consent. Failure to obtain the required consents could mean that the building works have to be removed.

6 Applicability

This report was produced for Natural Hazards Commission Toka Tū Ake (NHC) for the sole purpose of assisting NHC to determine whether it has any liabilities under the Natural Hazards Insurance Act 2023 and it may not be relied upon in other contexts or for any other purpose, or by any person other than NHC, without our prior written agreement.

Yours sincerely
For ABC Geotechnical Engineering Limited

Alan Green

Geotechnical Engineer

Reviewed by and authorised for ABC Geotechnical Engineering Limited by Kate Gray (Project Director)

Attached: Photographs (1 – 3)
Annotated aerial photograph
Sketches (1 – 2)

ABC Geotechnical Engineering Limited **16 December 2024**

Figure 99 Geotechnical engineering report (Page 3)

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4

Photographs 1 to 3 – 24 Example Street, Avalon, Lower Hutt

Photograph 1: View of landslide on southern side of property (taken 11 December 2024 facing west).

Photograph 2: View of rotation of RTW1 (taken 11 December 2024 facing east).

ABC Geotechnical Engineering Limited 16 December 2024

Figure 100 Geotechnical engineering report (Page 4)

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5

Photograph 3: Street view of property from Example Street (taken 11 December 2024 facing south).

ABC Geotechnical Engineering Limited 16 December 2024

Figure 101 Geotechnical engineering report (Page 5)

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Figure 102 Geotechnical engineering report (Page 6)

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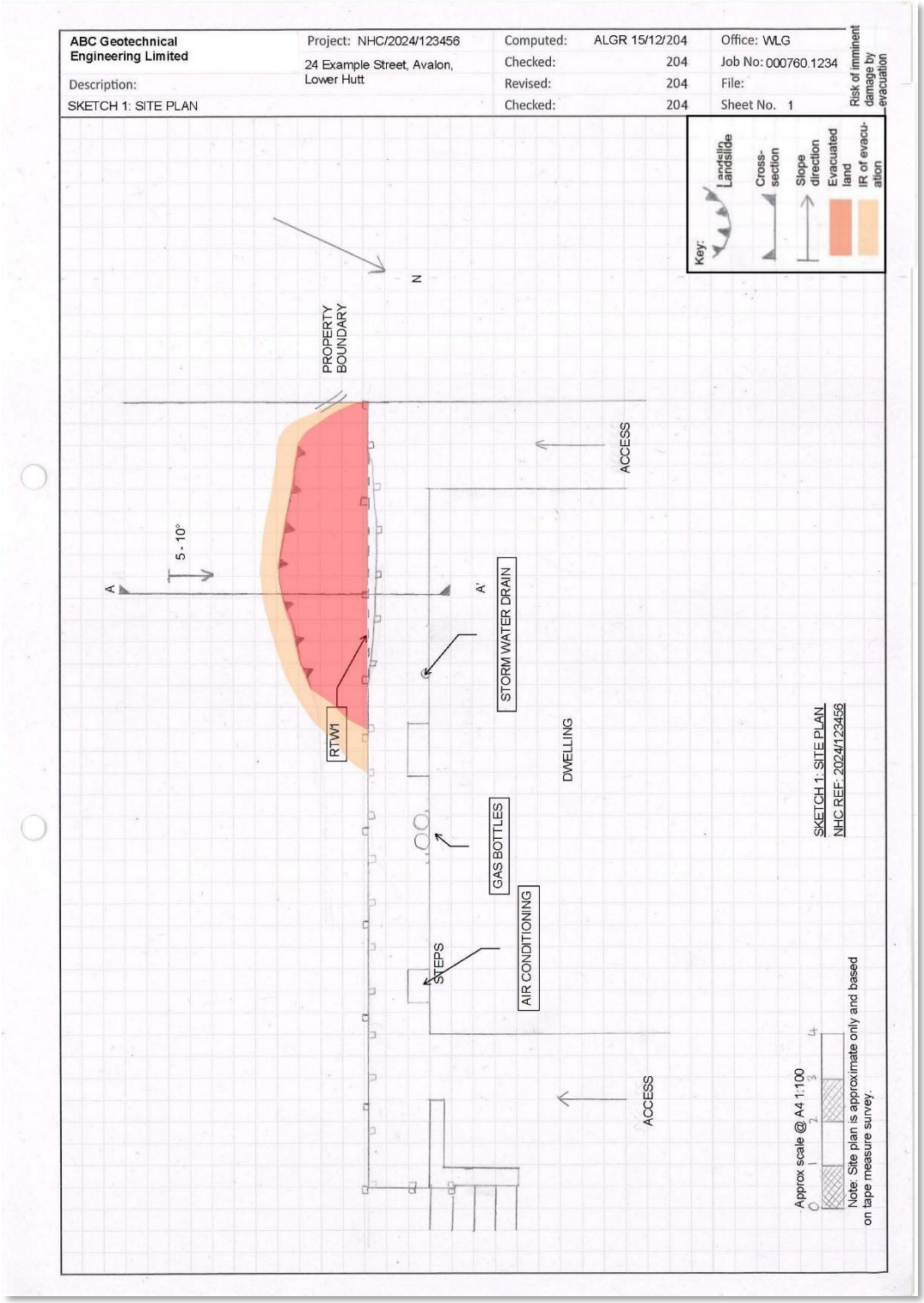

Figure 103 Geotechnical engineering report (Page 7)

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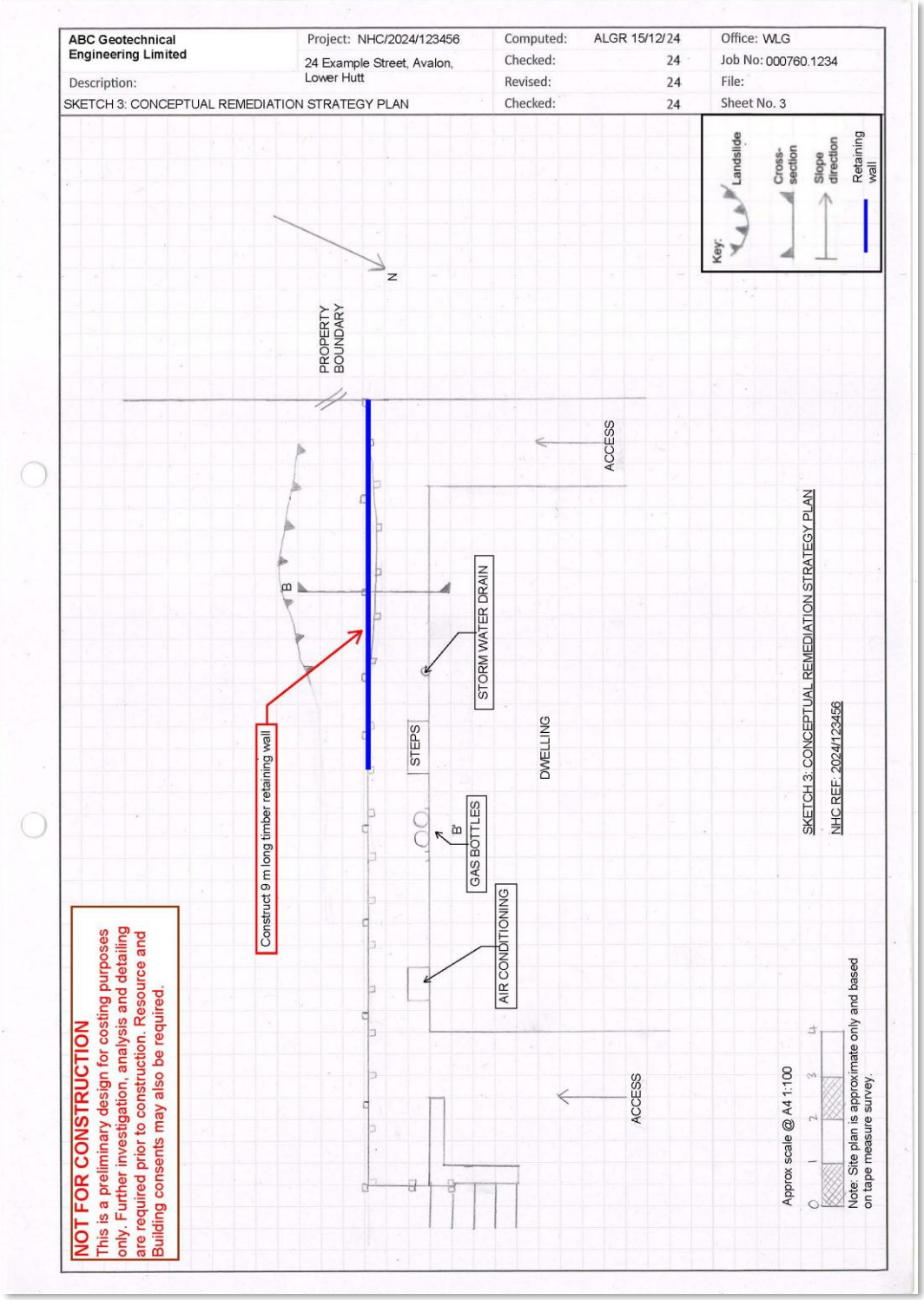

Figure 104 Geotechnical engineering report (Page 8)

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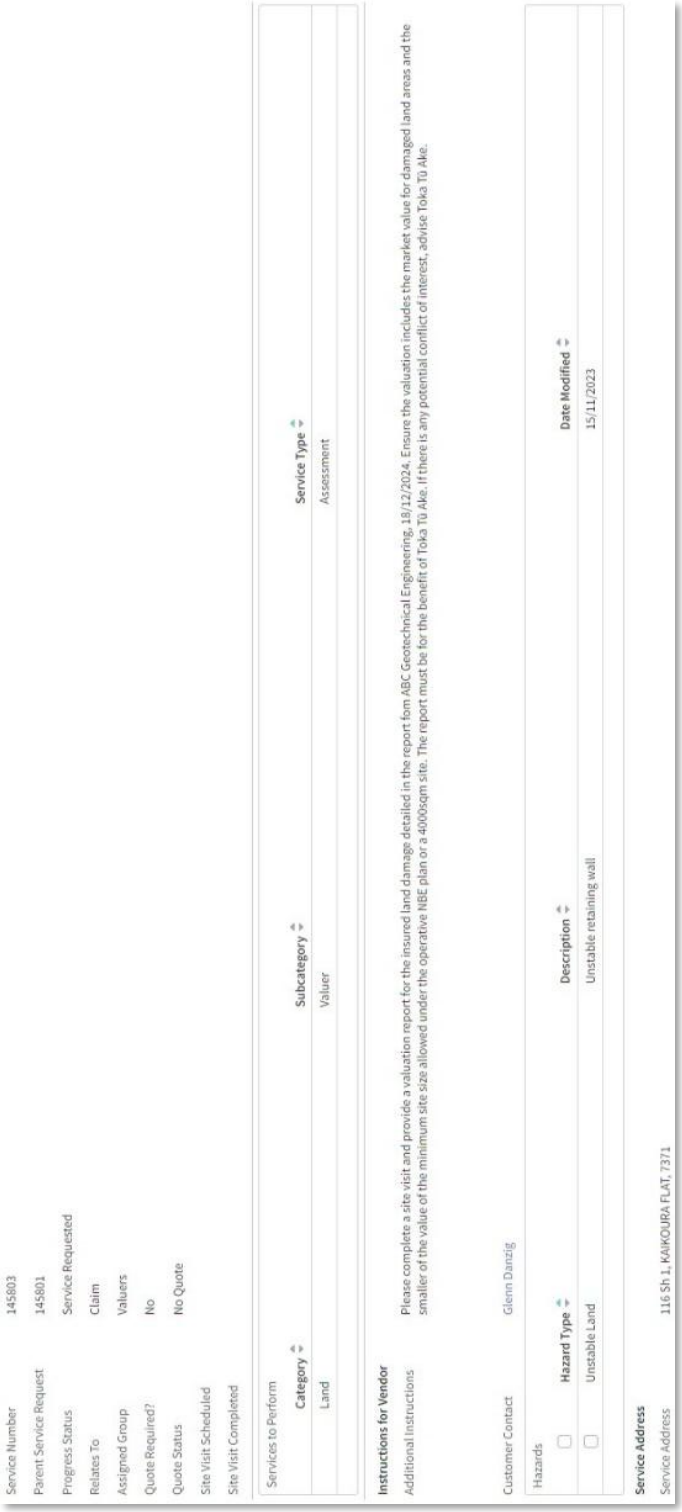
k. Valuer instruction

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.



Service Number	145803
Parent Service Request	145801
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 fom ABC Geotechnical Engineering, 18/12/2024. 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 NBE plan or a 4000sqm site. The report must be for the benefit of Toka Tū Ake. If there is any potential conflict of interest, advise Toka Tū Ake.

Customer Contact: Glenn Danzig

Hazards

Hazard Type	Description	Date Modified
Unstable Land	Unstable retaining wall	15/11/2023

Service Address

Service Address: 116 Sh 1, KAIKOURA FLAT, 7371

Figure 105 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 2025

Natural Hazards Commission Toka Tū Ake

Sent via email

Your Reference:	NHC/2024/123456
Date of Valuation:	10 October 2024
Date of Inspection:	13 January 2025

Attention: Michele Brown

Dear Michele

LAND CLAIM: 24 EXAMPLE STREET, *AVALON, LOWER HUTT* – NHC/2024/123456

Thank you for your request for valuation services. In accordance with our recent instructions we have inspected the property on 13 January 2025 in order to assess the pre-loss value of the damaged land, 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 106 Valuation report (Page 1)

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XYZ Valuations Limited

VALUATION SUMMARY

In accordance with Natural Hazards Commission Toka Tū Ake requirements and pursuant to the Natural Hazards Insurance Act 2023, 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	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

VALUATION NOTES

1a – Value of Minimum Sized Site.

The Act stipulates that the assessed market value is to be calculated by first determining the 'area cap', which is the smaller of the minimum sized land area allowable under the operative district plan, or 4,000 m². Once the area cap has been determined, the assessed market value depends on whether the area of damaged land is less than, equal to, or greater than the area cap. If the area of the damaged land is:

- less than or equal to the area cap, the assessed market value is the prior market value of that part of the residential land.
- greater than the area cap, the assessed market value is the prior market value of a hypothetical area of residential land that has an area equal to the area cap, is situated in the same place as the residential land and has all the same features as the residential land.

Our assessed value has been analysed using market-based evidence as prevalent in October 2024. The 400m² site assumes all the same physical features, e.g. 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 2024.**

Figure 107 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 2024 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 Natural Hazards Commission Toka Tū Ake 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 108 Valuation report (Page 3)

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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.

1

Natural Hazards Commission Toka Tū Ake

Notification of a potential risk of injury to people from damaged land and/or buildings

Natural Hazards Commission Toka Tū Ake (NHC Toka Tū Ake) staff and assessors visit residential properties to assess land and building damage resulting from a natural hazard. 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: _____

The building appears to be: □ occupied □ unoccupied

The risk posed is as follows: _____

_____

_____

_____

_____

NHC Toka Tū Ake 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. Similar provisions apply under section 142(1) of

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Figure 109 Notification of a potentially dangerous building form (Page 1)

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2

the Natural Hazards Insurance Act 2023.

1. Under the Building Act 2004 a territorial authority is responsible for identifying and 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 (selectas appropriate).
- ☐ there do not appear to have been any steps taken to warn people of the dangerposed
- ☐ 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 NHC Toka Tū Ake has taken reasonable care in providing this warning, neither we, our employees, nor anyone else that we are 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:_____

Phone:_____

Email:_____

Date: _____

Version: 02 | Owner: HSSW Team | Next update: November 2026

Figure 110 Notification of a potentially dangerous building form (Page 2)

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3

NHC Toka Tū Ake use only

Claim number: _____

Who has been **verbally** notified?

□ emergency services □ the territorial authority □ property owner □ occupants
□ neighbours □ other/s (please give details): _____

_____

Referred to Team Leader, Claim Specialists: □ yes □ no (state reason)

_____

_____

Name: _____

Phone: _____

Email: _____

Date: _____

Health and Safety Manager informed: □ yes □ no (state reason)

_____

_____

Added to the *NHC Toka Tū Ake Dangerous Property Register*: □ yes □ no (state reason)

_____

_____

Added to the 'hazards section' of the Claim Management System (CMS): □ yes □ no (state reason)

_____

_____

Party/ies notified: _____

_____

Date referred: _____

Version: 02 | Owner: HSSW Team | Next update: November 2026

Figure 111 Notification of a potentially dangerous building form (Page 3)

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4

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.

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Figure 112 Notification of a potentially dangerous building form (Page 4)

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i. Site assessment documentation standards

When completing the site assessment, record:

- details of the parts of the building (where applicable), e.g. foundation, wall and roof cladding type and materials;
- details of the parts of the land (where applicable), e.g. land structures, property boundaries and appurtenant structures;
- 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 hazard 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 or 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.

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Residential land claims

For residential land claims, your sketch must include:

- the extent of the insured person's land;[140]
- the extent of the insured residential land. This includes:
  - insured land areas and land structures within the insured person's land (whether damaged or not), and;
  - insured land structures outside the insured person's land that are lost or damaged (if any);
- the type and extent of the land damage. This includes natural hazard damage (including imminent damage) to:
  - the insured land areas; and
  - any uninsured land areas and land structures within the insured person's land; and
  - any insured land structures within and outside the insured person's land.
- 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 insured person's land (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);

[140] If it is not appropriate to identify and record damage to the entirety of the insured person's land (e.g. on a large lifestyle property or farm), you may identify a smaller area of land to limit your assessment of the land to. For more information, see the NHC Claims Manual – Residential Land – NHI Act, Section 7.A.b.ii Assessing the type and extent of the natural hazard damage to the land area and land structures on the insured person's land.

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- identify the areas of damaged land that are insured and not insured;
- 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 Section g Land sketch in this Manual.

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 that 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.

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 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.

- Long-range photographs of the insured property may be required, 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 or land structures.

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- Mid-range photographs may be required, 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 hazard 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.

k. 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 natural hazard damage or providing a suitable conceptual remediation strategy. It has been adapted from an Engineering New Zealand template engagement letter.

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27/07/2024

Joe Engineer

ABC Engineering Ltd

By email: jengineer@abcengineering.co.nz

LETTER OF ENGAGEMENT – ASSESSMENT AND REINSTATEMENT REPORT
1 Main Street, Example Town
NHC/2024/123456

Toka Tū Ake Natural Hazards 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 NHI 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 113 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; and
- any legal obligation to modify the property at the time the natural hazard damage occurred or in the future.

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 Code of Conduct for Expert Witnesses, Schedule 4 of the High Court Rules 2016, enclosed in Schedule 4 of this letter.

Page 2 of 11

UNCLASSIFIED

Figure 114 Structural engineer letter of engagement (Page 2)

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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, NHC must accept the fee proposal.

Once a 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 NHC.

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, the NHC.

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

Page 3 of 11

UNCLASSIFIED

Figure 115 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 the purposes of NHC, the NHI Act provides cover for the items of property captured by the definition "residential building" in section 9 of that Act. Schedule 2 of the NHI Act sets out property that is not insured under that Act and some property that may be insured in limited circumstances.

"Damage"

A structural element is earthquake **damaged** if,

- its physical state has been measurably or visibly altered as a direct result of the earthquake 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.
b. the reinstatement methodology of a structural element does not have to make the damaged structural element an exact replica of the original; and
c. current materials and methods must be used; and
d. the reinstatement work must meet current building regulatory requirements, including the Building Code to the extent required by the Building Act.

Page 4 of 11

UNCLASSIFIED

Figure 116 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	

Page 5 of 11

UNCLASSIFIED

Figure 117 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)

Page 6 of 11

UNCLASSIFIED

Figure 118 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.

Page 7 of 11

UNCLASSIFIED

Figure 119 Structural engineer letter of engagement (Page 7)

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SCHEDULE 4: CODE OF CONDUCT FOR EXPERT WITNESSES, HIGH COURT RULES 2016, SCHEDULE 4

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.

Page 8 of 11

UNCLASSIFIED

Figure 120 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 NHC assessment was carried out on 25 July 2024. 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. NHC and the owner will confirm a convenient time for you to inspect the dwelling. NHC 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

4. 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

5. In **Schedule 6**, we list the documents we are providing to you that we would like you to review when preparing your draft report.
6. In **Schedule 6.1**, we set out in detail what your draft expert report should address.

Page 9 of 11

UNCLASSIFIED

Figure 121 Structural engineer letter of engagement (Page 9)

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SCHEDULE 6: LIST OF REPORTS AND DOCUMENTS

Your draft report will need to include a review of the following reports and documents:]

Document title	Party who provided the document	Date
Building Assessment Report (pre-purchase inspection)	Customer	12/08/2018
Council Property File (Requested)	Council	TBC
NHC Assessment report	NHC	25/07/2024
NHC Assessment report photos	NHC	25/07/2024

SCHEDULE 6.1: 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:
   a. Floor levels;
   b. Ceiling Levels;
   c. Window sill levels;
   d. Benchtop Levels;
   e. Door head levels;
   f. Levels for any other fixed features deemed by you to be noteworthy such as tiling, external weatherboards or guttering;
   g. Commentary/discussion around the levels, variance(s) and how this relates to earthquake damage or otherwise;
   h. Shallow Geotechnical Report if required
   i. Foundation depth check if required

ASSUMPTIONS

2. You should state the facts and assumptions on which your opinions are based and give reasons for your opinions.
3. 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.
4. 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.
5. You should consider and identify the extent to which identification of the earthquake damage is restricted by previous repairs carried out by NHC.

COMMENTS ON OTHER REPORTS

6. You should identify where you agree or disagree with any report/s provided by NHC, the customer and/or private insurer's expert(s) and provide reasons for why you agree or disagree.

Page 10 of 11

UNCLASSIFIED

Figure 122 Structural engineer letter of engagement (Page 10)

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7. You should advise NHC in a timely manner if further geotechnical input is required to allow you to complete your reporting.

A SUFFICIENT LEVEL OF DETAIL

8. Your recommended repair strategy will need to be sufficiently detailed to allow an NHC 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

9. 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

10. If there are parts of your report that you think may be incomplete or inaccurate without qualification, you should state what that qualification is.
11. If you cannot reach a concluded opinion because of insufficient research or data or for any other reason, you must say so.

Page 11 of 11

UNCLASSIFIED

Figure 123 Structural engineer letter of engagement (Page 11)

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I. Structural engineering report

The following is an example structural engineering report, which meets the assessor's requirements as set out in their original instructions.

Natural Hazards Commission Toka Tū Ake

Structural Engineering Report – Revision A

For Information

1 Main Street, Example Town

NHC/2024/123456

15 September 2024

Authored	**John Smith**	B.Eng (Hons), MEngNZ	
Reviewed by	**Jane Doe**	B.Eng (Hons), CPEng	

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Figure 124 Structural engineering report (Page 1)

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Contents

Dwelling Description 2
Site Description 2
Disclaimer 3
Terms of Engagement 3
Desktop Review 3
Additional Investigations 3
Site Assessment 4
Discussion 8
Repair Recommendation 8
Approximate Scope of Structural Repairs 9
Drawings 9
Attachments 9

Figure 125 Structural engineering report (Page 2)

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Structural Engineering Report – For Information

Date	15/09/2024	**Claim Number**	NHC/2024/123456
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 m²

Site Description

Topography	Flat	
Shallow Geotech Report	Yes	
Likely Soil Types	Silt and Sand	
Registered HAIL Site	No	Listed Land Use Register (LLUR)

NHC/2024/123456	1 Main Street, Example Town	For Information	Revision A	Page 2

UNCLASSIFIED

Figure 126 Structural engineering report (Page 3)

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Disclaimer

[1] This report has been prepared solely for the Natural Hazards Commission Toka Tū Ake (NHC) and persons authorised to manage claims on its behalf. This report is to be used only for the purposes of settling the Natural Hazards Cover (NHCover) claim. No use by any other party is permitted without the prior consent of both NHC 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] NHC has requested ABC Structural Engineers Limited to carry out a non-invasive inspection of the dwelling.

[4] The inspection was completed on 31 August 2024 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 2024 in relation to the dwelling's structural elements and to provide a lawful means of structural repair to address the damage identified.

[6] NHC is to confirm this scope of work fulfils the NHI 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:

- NHCover claim assessment on 25 July 2024
- NHC file note on 26 July 2024
- property files provided by Example District Council
- shallow geotechnical report by XYZ Geotechnical Engineers Ltd on 22 August 2024.

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.

| NHC/2024/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 3 |

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Figure 127 Structural engineering report (Page 4)

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Site Assessment

Homeowner Comments

[9] We discussed with the customer on site the damage they have noticed, notably that the floor has begun to feel springy and noticeably out of level. They have also noticed that the exterior weatherboards appear to be out of alignment, and believe there may be some new cracking to the concrete perimeter.

Dwelling Description

[10] The dwelling is a single-storey character home, which appears to be constructed in the early 20th century.

[11] The dwelling features heavy-weight concrete tile roof cladding and light-weight weatherboard exterior wall cladding.

[12] The foundation consists of a concrete perimeter foundation and internal precast concrete piles.

Construction of Roof and Foundation

[13] 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)

[14] Note that only limited observations were made at the floor hatch and ceiling hatch respectively due to health and safety concerns.

[15] We also scanned the concrete perimeter foundation with a rebar scanner and confirmed it is unreinforced.

Floor Levels

[16] The floor levels were checked with a Zip level Pro 2000.

[17] 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).

[18] It is worth noting that we have made all the necessary adjustments for different floor coverings including exposed floorboards, carpet, vinyl and ceramic tile.

[19] 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.

| NHC/2024/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 4 |

UNCLASSIFIED

Figure 128 Structural engineering report (Page 5)

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Damage Observation – Exterior

[20] We observed a ground fissure through the concrete driveway and the lawn (see Figures 3 and 4).

[21] 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.

[22] The concrete perimeter foundation exhibited cracking at multiple locations. The distribution of the observed cracks is shown in Drawing SK1.

[23] 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).

[24] The timber weatherboards along the driveway were found to be visibly out of alignment (see Figure 7).

[25] There was damage to the ridge tiles.

Damage Observation – Interior

[26] We observed wall/ceiling lining damage at several locations in the form of diagonal or straight cracking (see examples in Figures 8 and 9).

[27] A number of doors and windows were found to be sticky and difficult to open and close.

[28] 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

| NHC/2024/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 5 |

UNCLASSIFIED

Figure 129 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 130 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

| NHC/2024/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 7 |

UNCLASSIFIED

Figure 131 Structural engineering report (Page 8)

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Discussion

[29] Our floor level check confirms the dwelling has experienced differential foundation settlement of 94 mm.

[30] 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 2024 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.

[31] Therefore, we consider floor re-levelling is required in order to restore the functionality of the dwelling.

Repair Recommendation

[32] The below repair recommendations are considered to be a lawful means of repair in relation to the Building Act 2004 and Natural Hazards Insurance Act 2023 (NHI Act).

Localised Floor Re-levelling

[33] 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.

[34] 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.

[35] 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.

[36] 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.

| NHC/2024/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 8 |

UNCLASSIFIED

Figure 132 Structural engineering report (Page 9)

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Perimeter Foundation Crack Repair

[37] We recommend the cracks in the perimeter foundation be repaired by a concrete repair specialist upon the completion of floor re-levelling.

Other Repairs

[38] We recommend all other non-structural repairs are carried by the appropriate trade practices.

Approximate Scope of Structural Repairs

[39] 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 2024

[40] This is a **for information** report only.

Authored _____ Reviewed _____

John Smith **Jane Doe**

B.Eng (Hons), MEngNZ B.Eng (Hons), CPEng

| NHC/2024/123456 | 1 Main Street, Example Town | For Information | Revision A | Page 9 |

UNCLASSIFIED

Figure 133 Structural engineering report (Page 10)

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m. 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.

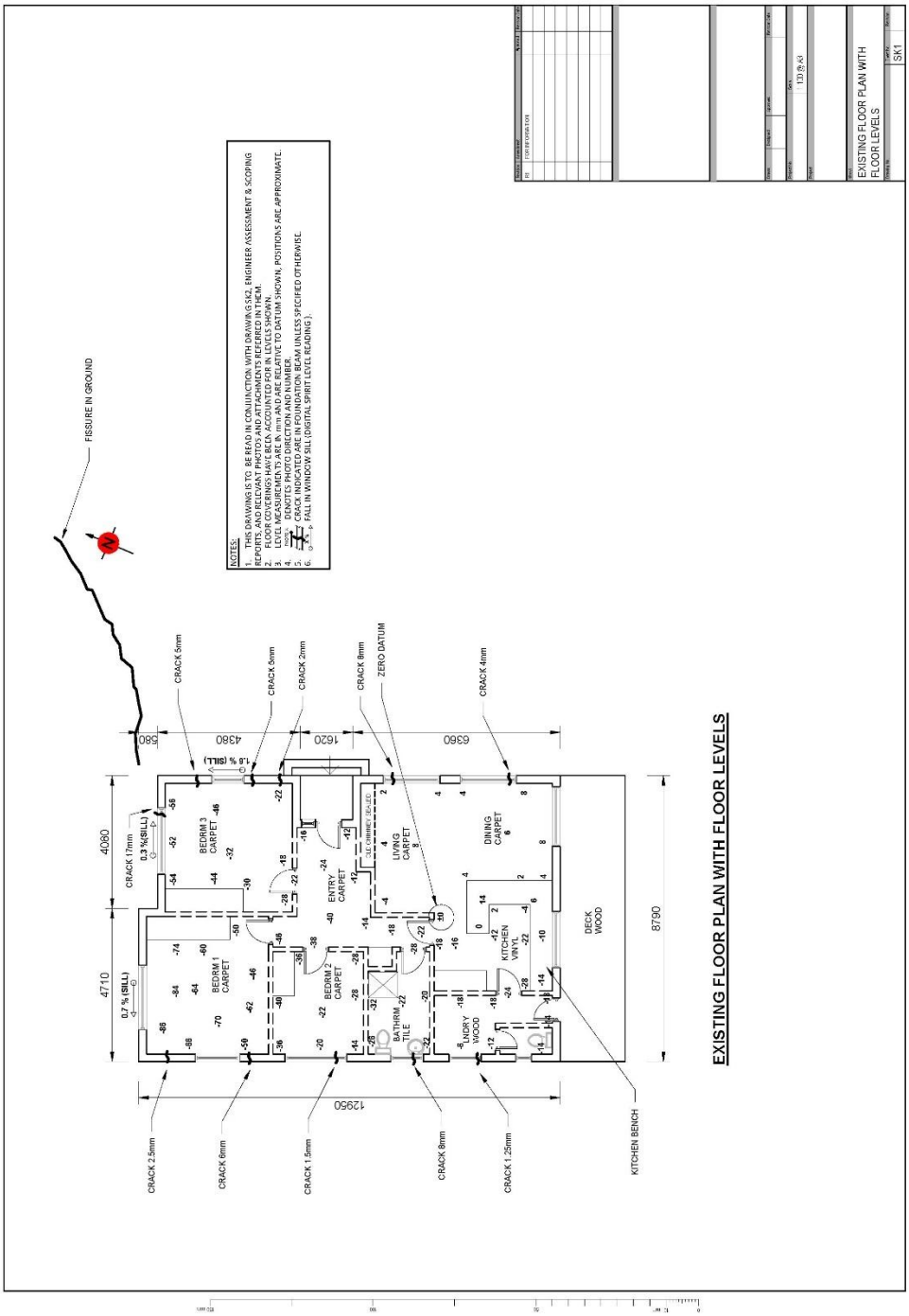

Figure 134 Structural engineering report – existing floor plan with floor levels

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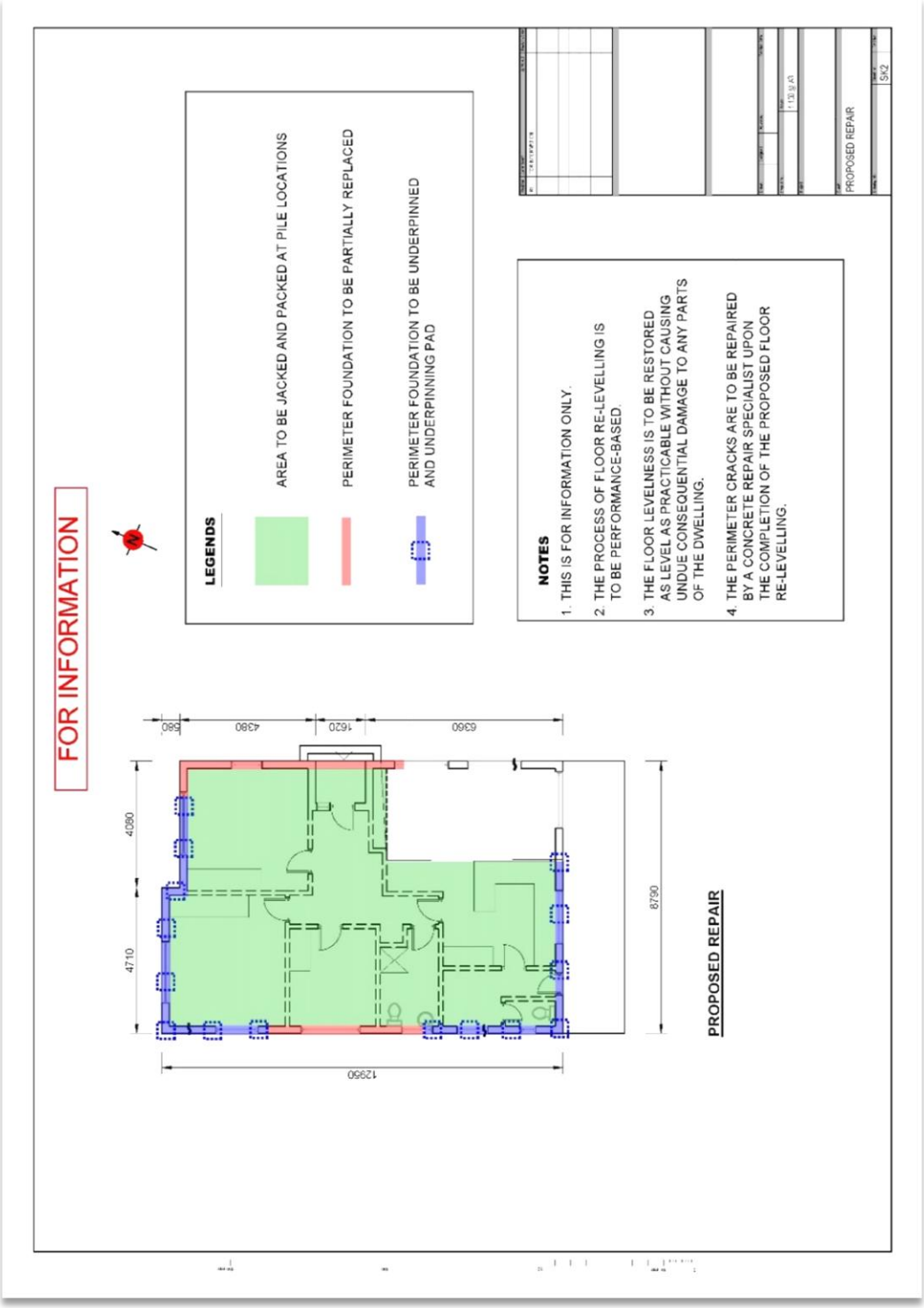

Figure 135 Structural engineering report - proposed repair diagram

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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 NHCover. The examples are provided for guidance or reference only. In all examples in this appendix, when the claims manager communicates the claim outcome to the customer, they advise the customer (verbally and in writing) of:

- their decision about the validity of the claim
- their settlement decision (where the claim is valid), and
- the customer's rights to refer disputes about referable decisions[141] to the dispute resolution scheme.

NHCover 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 NHCover, you must also:

- comply with all other sections of the NHC Assessment Manual, including sections that address more general matters. These case studies do not go into detail about general matters such as whether any health and safety concerns arise, whether the NHCover claim is valid, and whether the claim needs extra care.[142]
- act in accordance with the NHI Act, all other applicable laws, our delegations and the NHC Insurers Manual.
- apply your organisation's own internal policies and processes.

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

[141] 'Referable decision' is defined in section 104(6) of the NHI Act. Also, for information on decisions that are not referable decisions, see regulation 17, NHI Regulations.

[142] For a definition of 'extra care claim' and more information, see our Extra Care Claims Policy.

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Example property used for case study examples

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 NHCover 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 main access way and one supporting the land within 8 m of the dwelling.

b. Building

i. No natural hazard damage to the building

a. Natural hazard type: Earthquake

Claim lodgement and triage

A customer makes 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.

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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.

<u>Post-assessment meeting with customer</u>

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 once all relevant information has been obtained. 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

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expert, e.g. a 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.
- recommends to the claims manager that the claim is invalid under the NHI Act because there is no natural hazard damage to the residential building.

Settlement

The claims manager reviews the assessor's recommendation that the claim be found invalid, and his 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)

a. Natural hazard type: Earthquake

Claim lodgement and triage

A customer makes a claim via his insurer's contact centre for damage to a residential building 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 he 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.

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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 natural hazard damage.

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:

- the initial assessment indicates that the damage is 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 that there is NHCover for the cost to repair the part of the building damaged by the natural hazard 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 building cover excess[143] deducted.

[143] The 'building cover excess' and 'land cover excess' are defined in the NHI Act. For more information, see Section 1.j of this Manual.

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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)

a. Natural hazard type: Earthquake

Claim lodgement and triage

The customer makes a claim via their insurer's contact centre for damage to a residential building following a magnitude 5.2 earthquake. 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

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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, building cover 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;
- requests that a structural engineer attend the property and prepare a report on their findings. They provide the engineer with a letter of engagement and a copy of their 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.

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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 hazard:

- 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 m2 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

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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.

iv. Severe building damage (structural damage)

a. Natural hazard type: Earthquake

Claim lodgement and triage

A customer makes a claim via her insurer's contact centre for damage to a residential building following a magnitude 6.3 earthquake. 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

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- 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 site 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 site 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.

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.

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The assessor also takes the opportunity to explain the remainder of the assessment process, the building cover cap[144], building cover 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;
- requests that a structural engineer attend the property and prepare a report on their findings. They provide the engineer with a letter of engagement, a copy of their assessment report and authority to engage a geotechnical engineer to provide a shallow geotechnical investigation report if the structural engineer determines it is necessary;
- 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 hazard:

- 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;

[144] The 'building cover cap' and 'land cover cap' are defined in the NHI Act. For more information, see Section 1.j in this Manual.

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- 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 $337,500 (incl. GST). The assessor makes the claims manager aware of the complex and variable nature of the works, so he can advise the customer.

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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 $349,000 (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 hazard damage that has occurred. He notes that this claim will now exceed the building cover cap.

The assessor recommends the NHCover building claim entitlement be paid to the building cover 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.

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v. Total loss of building

Claim lodgement and triage

A magnitude 7.1 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 the NHI Act and damage covered by their private insurance and records the following concerns:

- The local TA has issued an unsafe building notice[145] under section 124 of the Building Act 2004 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 unsafe building notice 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 they will assess the damage for both their NHCover 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.

[145] These notices are also commonly referred to as 'placards' or 'stickers'. We have used the term 'unsafe building notice' within this section.

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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.
- 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 building cover 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 NHCover claim be cash settled to the building cover cap, subject to the claims manager's approval;
- that he will recommend that the remaining damage covered by their private insurance claim 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 building cover cap, and sends it for peer review and approval.

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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 hazard covered by the NHI Act, and that this claim will exceed the building cover 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 building claim will exceed the building cover 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 NHI 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 building claim entitlement 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.

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c. Land

i. No natural hazard damage to the land

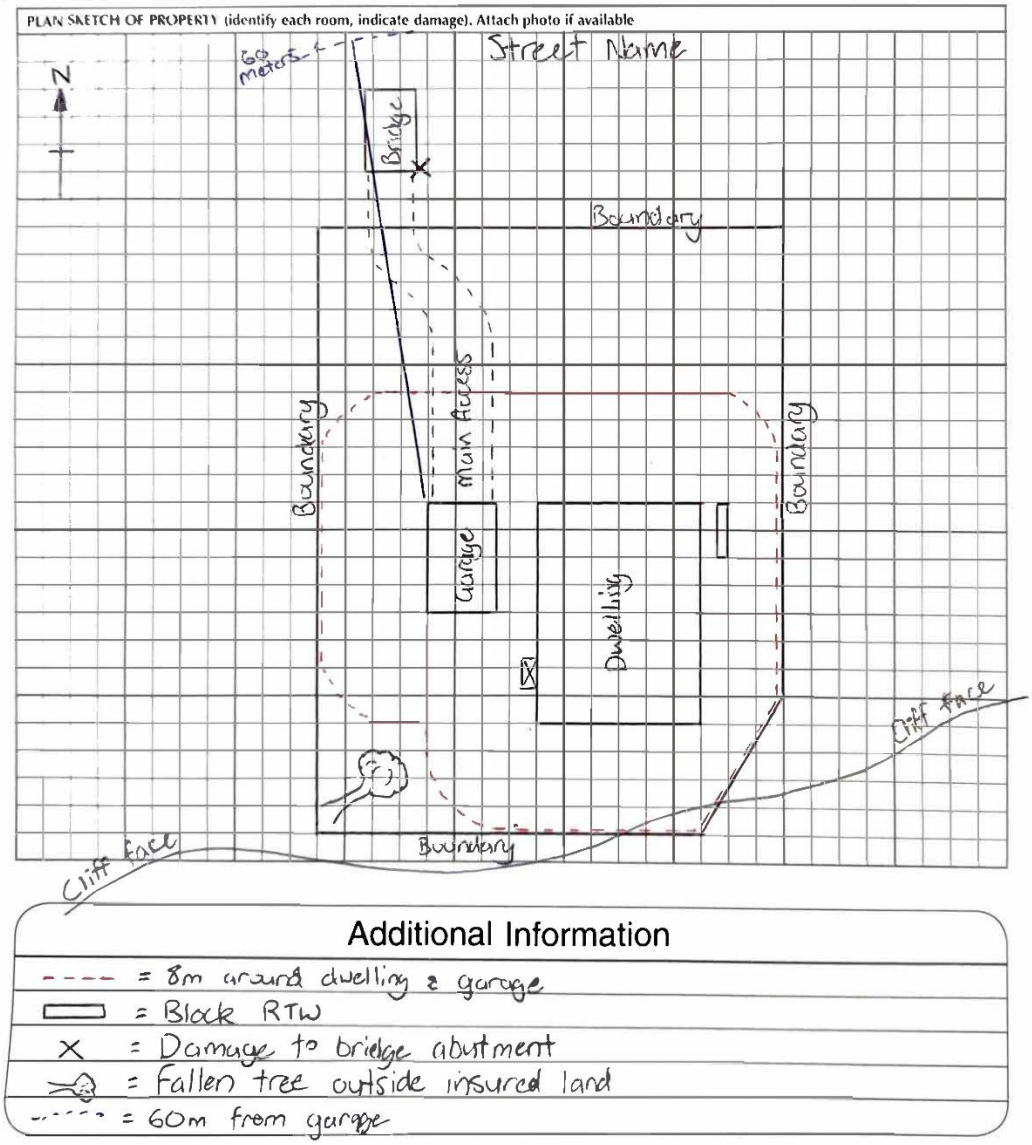

Figure 136 Site sketch with no natural hazard damage to the land

a. Natural hazard type: Storm

<u>Claim lodgement and triage</u>

After a severe storm event, a customer makes 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

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is approximately 40 m from the dwelling and forms part of the main access way. However, the bridge is situated outside the property boundary on council land. 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. As the bridge is situated outside of the property boundary, the assessor asks the claims manager to check:

- the record of title for any easements that would extend the insured person's land to include the neighbouring TA-owned land where the bridge is situated; and
- if the local council has a vehicle crossings bylaw which imposes repair obligations on the customer for the bridge.

The claims manager:

- reviews the title and confirms there is no easement of any type on it, and
- confirms there is no local council vehicle crossings bylaw.

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 trees were covered under the NHI Act. The assessor confirms that although the tree itself is not covered, if it has fallen onto land that is insured under the NHI 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

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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

The assessor explains the findings of his assessment to the customer. He says the claims manager will contact her to advise her of the claim outcome once they have considered all relevant information.

He explains that although the bridge is part of the main access way and within 60 m of the dwelling:

- the whole bridge is outside the customer's property boundary; and
- there is no easement that extends her insured land area to include the bridge.

He advises that the bridge may be covered if the customer can provide information that shows she has an insurable interest in it. An example would be a contract with the council that sets out her repair and maintenance responsibilities for the bridge.

The customer confirms that she does not have a contract with the council or any other evidence of an insurable interest in the bridge.

He explains that although the tree is debris inundation, it is more than 8 m from the dwelling or any appurtenant structure. This means it has not damaged any insured land areas.

The assessor advises the customer that he will recommend that the claim be closed as invalid. He explains that this is based on his findings that all land damage has occurred outside of the land areas that are insured under the NHI Act. 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 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.
- recommends to the claims manager that the claim is invalid under the NHI Act because there is no natural hazard damage to the insured residential land. The damage has occurred outside the insured land areas.

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Settlement

The claims manager reviews the assessor's recommendation that the claim be found invalid, and his 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.

ii. Minor land damage

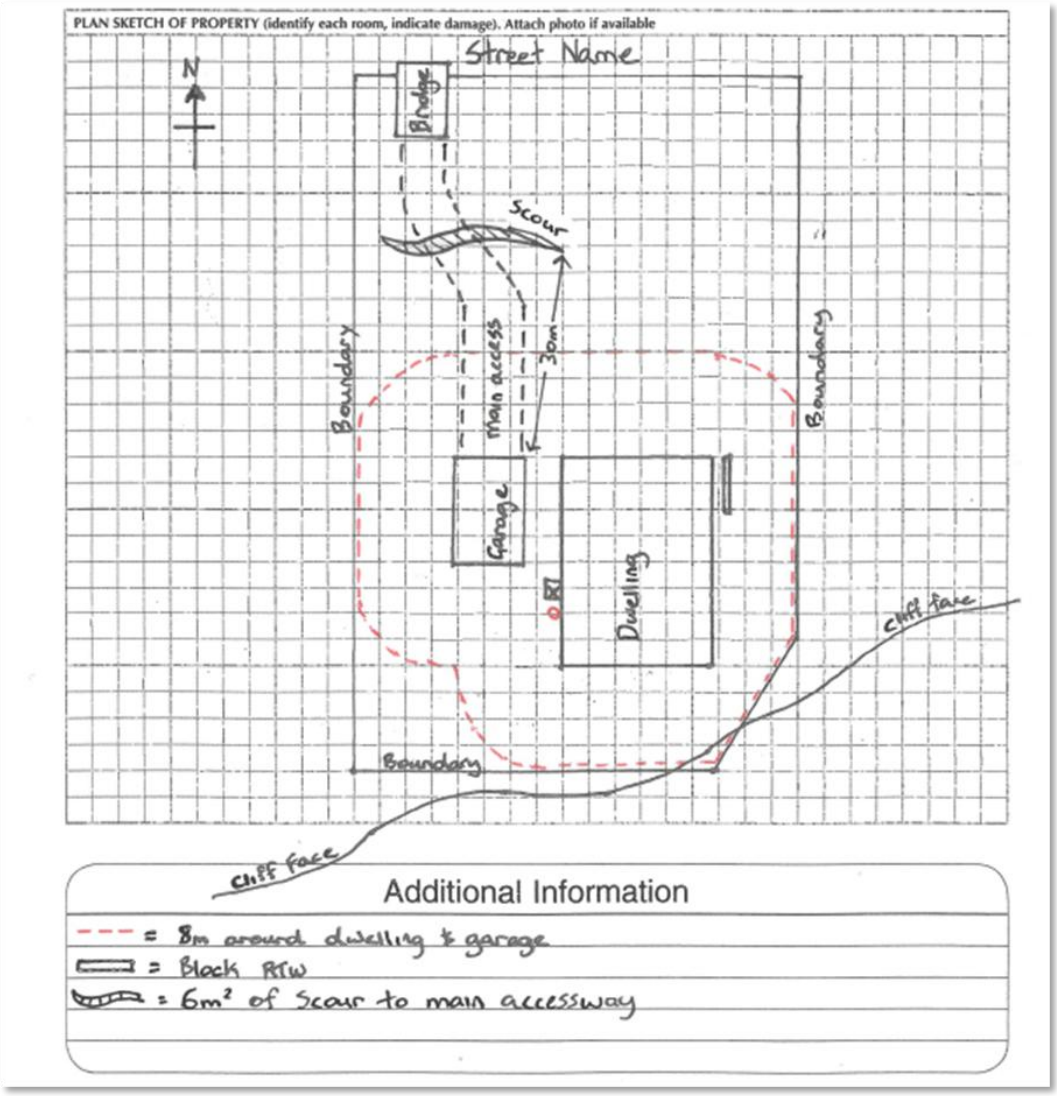

Figure 137 Site sketch with minor land damage

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a. Natural hazard type: Storm

Claim lodgement and triage

Following an overnight storm, the customer makes 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 areas 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, the insured land areas and land structures. She also measures the land damage that is within the insured residential land 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.

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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 hazard (storm) damage;
- the remediation strategy to fix the damage to the driveway (an 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 land claim entitlement will be either the value of the damaged land (6 m2) 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 standard valuation based on an on-site assessment 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 land cover cap[144], land cover excess[143] 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 the indicative square metre land value[146] from the adjusted rating valuation for the property;
- 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 reinstatement cost because the scope of works reinstatement cost estimate of $850 is less than 80% of the indicative land cover cap of $1,200 (calculated based on the indicative square metre land value from the adjusted rating valuation).

[146] See NHC Claims Manual – Residential Land, Section 7.A.d Assessing the Relevant Land Values.

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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	$1200	$850
Sub-total	**$850**	**$1200**	**$850**
Less land cover excess			$500
Total land claim entitlement			**$350**

*Basis of settlement

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iii. Moderate land damage

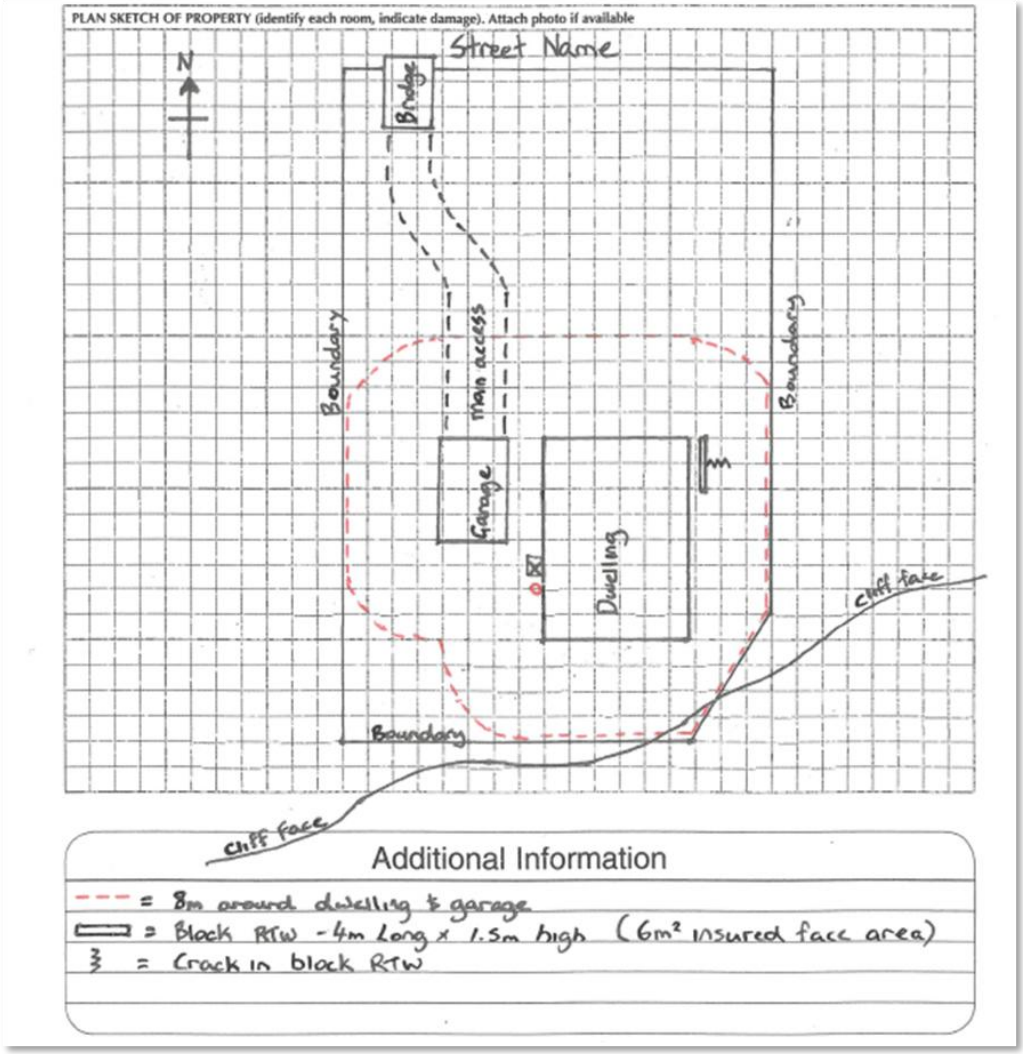

Figure 138 Site sketch of moderate land damage

a. Natural hazard type: Earthquake

<u>Claim lodgement and triage</u>

A customer makes 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

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damage and confirms that the damaged retaining wall appears to be within NHCover 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 areas. 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 damage is a direct result of the natural hazard that has been claimed for (earthquake);

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- advise on any imminent damage to insured residential land and/or the residential building; and
- provide a conceptual remediation strategy for the damaged insured land structure 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;
- land cover excess amount; 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 land cover cap, land cover 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.

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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 hazard damage?	Yes (Earthquake)
Land within 8 m of dwelling or appurtenant structures	**Nil**
Area of insured land damaged: Evacuated land Inundated land	 Nil Nil
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 Nil Nil Nil
Land that is part of (or supports land that is part of) the main access way to the dwelling and is within 60 m of the dwelling	**Nil**
Area of insured land damaged: Evacuated land Inundated land	 Nil Nil
Area of insured land at risk of imminent damage : Evacuation New inundation Re-inundation	 Nil Nil Nil
Retaining walls within 60 m of the dwelling (or an appurtenant structure), supporting or protecting the dwelling, appurtenant structure or insured land areas.	**Yes**

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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 direct result of the natural hazard?	No
Cost to repair natural hazard damage	n/a*
Is there imminent damage to the dwelling (or appurtenant structure) as a direct result of the natural hazard?	No
Cost to remove the risk of imminent damage to dwelling (or appurtenant structure)	n/a
Cost to repair imminent damage to dwelling (or appurtenant structure) if it were to occur	n/a*
Insured service infrastructure	**n/a**
Insured bridges or culverts	**n/a**
Conceptual remediation strategy **The conceptual remediation works and drawings are for cost estimation only and are NOT FOR CONSTRUCTION.** 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)

*The construction cost estimate for the conceptual remediation strategy will be provided by the assessor (or other appropriate costing expert).

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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;
- calculates the undepreciated value of the damaged retaining wall as quantified in the engineering report and submits it for peer review;
- 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.

The assessor calculates the undepreciated value for the damaged retaining wall using market rates from the date the damage occurred, based on information provided in the geotechnical engineering report. The assessor costs the undepreciated value of the retaining wall at $24,000.

Because the only damage is to an insured land structure, the assessor does not engage a valuer.

Assessor final actions

The assessor's costed scope of works for the engineer's conceptual remediation strategy has been approved. The reinstatement cost is estimated at $1560.13. The assessor compares the estimated reinstatement cost to the undepreciated value of the damaged retaining wall. Because the reinstatement cost is less than the undepreciated value (and the applicable limit of $50,000 + GST[147]), in accordance with section 39 of the NHI Act, the assessor recommends to the claims manager that the claim be settled on the reinstatement cost, minus the applicable land cover excess of $500.

[147] The applicable limit is calculated by the number of dwellings (one) in the residential building multiplied by $50,000 + GST. See Section 43 of the NHI Act.

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Settlement calculation

Claim item	Repair estimate*	Undepreciated Value	Settlement amount
Land structure			
Retaining wall 1 (RTW 1)	$1560.13	$24,000	$1560.13
Sub-total	**$1560.13**	**$24,000**	**$1560.13**
Less land cover excess ($500 minimum)			$500
Total land claim entitlement			**$1060.13**

*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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iv. Severe land damage

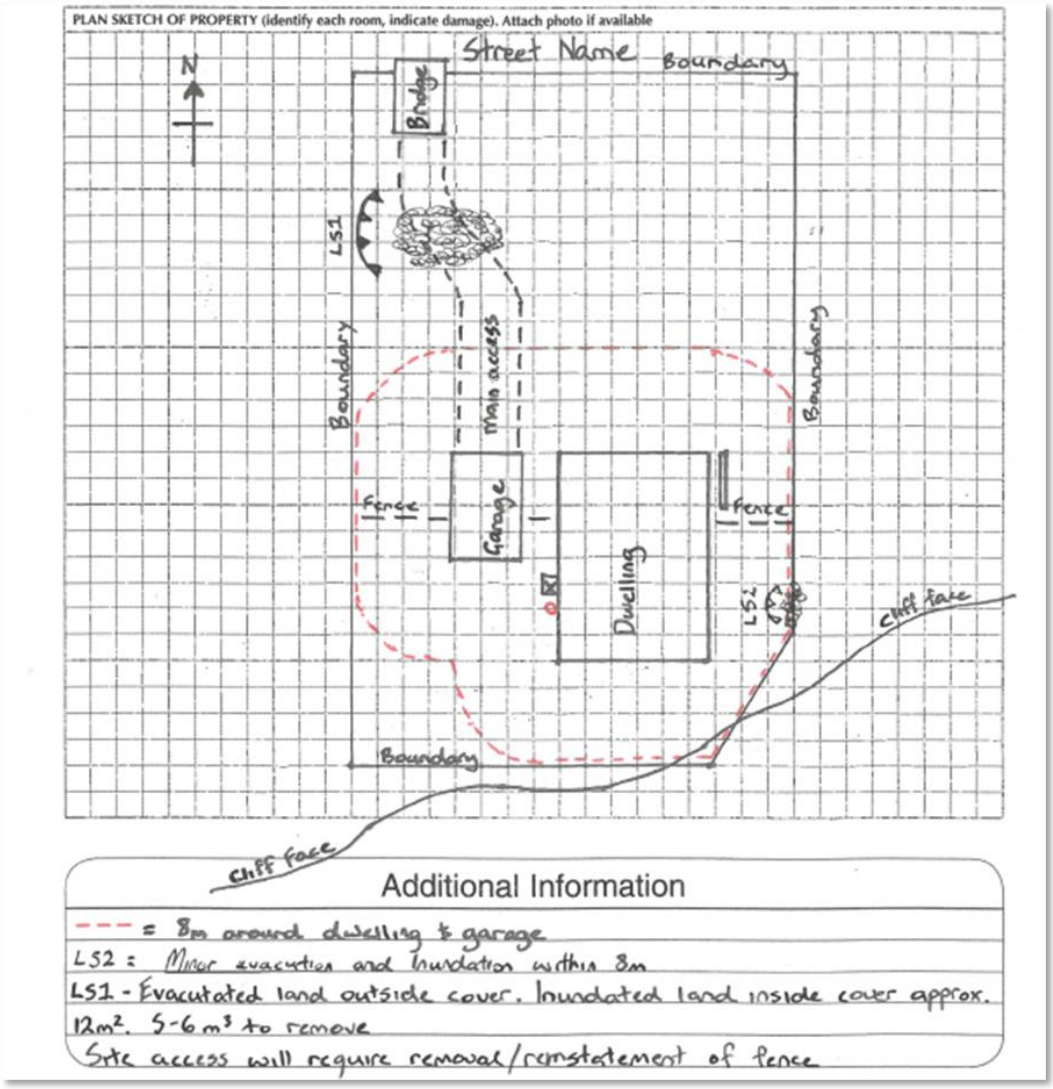

Figure 139 Site sketch of severe land damage

a. Natural hazard type: Landslide

<u>Claim lodgement and triage</u>

A customer calls her insurer's contact centre to make 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 landslide has occurred and mud and rocks are all over the driveway. The mud is approximately 0.5 m high and covers the entire width, and a 4 m length of, the driveway.
- There is another landslide on the other side of the house – probably about 2 m away.

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- 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, the contact centre representative escalates the claim to a claims manager because the customer's circumstances indicate that it may need extra care.

The claims manager reviews the file and contacts the customer to explain the claims process and discuss what extra care responses she would find helpful. 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 customer's circumstances and the extra care responses she has agreed with her claims manager.

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:

- Landslide 1:
  - Inundation of the main access way within 60 m of the dwelling
  - Evacuation of land outside the insured land areas
- Landslide 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.

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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:

- some of the damage falls within the insured land areas covered by the NHI Act;
- a geotechnical engineer is required to attend the site for further claim investigations and report on their findings, including:
  - confirming natural hazard damage has occurred;
  - quantifying the damage that has occurred (including any imminent damage);
  - quantifying what damage has occurred within the insured land areas;
  - providing a conceptual remediation strategy for the damage that has occurred within the insured land areas, 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 areas that have been damaged to determine the land cover cap

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.

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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 because it is one of the extra care responses the customer has agreed with her claims manager.

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 landslides have occurred following heavy rainfall two weeks ago, which has resulted in the following natural hazard (landslide) damage to insured residential land:

- Landslide 1 – a 5 m wide headscarp resulting in:
  - inundation on the main access way within 60 m of the dwelling (average depth 0.5 m);
  - imminent damage risk of re-inundation on the main access way within 60 m of the dwelling.

  The evacuated land from landslide 1 has occurred outside of insured land areas.
- Landslide 2 – a 1 m wide landslide headscarp resulting in:
  - evacuation within 8 m of the dwelling
  - inundation within 8 m of the dwelling

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- 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.

The dwelling has not been damaged and is not considered to be at risk of imminent damage from either landslide.

The geotechnical engineer provides a conceptual remediation strategy for the damage caused by landslide 1 and landslide 2.

Geotechnical engineer's summary of information (engineering report)

Is this natural hazard damage?	Yes (Landslide 1)	Yes (Landslide 2)
Land within 8 m of dwelling or appurtenant structures	Nil	Yes
Area of insured land damaged: Evacuated land Inundated land	 Nil Nil	 2 m^2 4 m^2 (1 m^3)
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 Nil Nil Nil	 1 m^2 Nil 4 m^2 (0.5 m^3)
Land that is part of (or supports land that is part of) the main access way to the dwelling and is within 60 m of dwelling	**Yes**	**Nil**
Area of insured land damaged: Evacuated land Inundated land	 Nil 12 m^2 (6 m^3)	 Nil Nil
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 Nil Nil 12 m^2 (3 m^3)	 Nil Nil Nil
Retaining walls within 60 m of the dwelling (or an appurtenant structure), supporting or protecting the dwelling, appurtenant structure or insured land areas	**Nil**	**Nil**

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Not applicable: Whole wall length Retained height Damaged (insured face area) Imminent damage (insured face area) Insured wall (face area) Total wall (face area)	 Nil Nil Nil Nil Nil Nil	 Nil Nil Nil Nil Nil Nil
Dwelling and appurtenant structure(s)	**n/a**	**n/a**
Has the dwelling or appurtenant structure been damaged as a direct result of the natural hazard?	No	No
Cost to repair natural hazard damage	n/a*	n/a*
Is there imminent damage to the dwelling (or appurtenant structure) as a direct result of the natural hazard?	No	No
Cost to remove the risk of imminent damage to dwelling (or appurtenant structure)	n/a	n/a
Cost to repair imminent damage to dwelling (or appurtenant structure) if it were to occur	n/a*	n/a*
Insured service infrastructure	**n/a**	**n/a**
Insured bridges or culverts	**n/a**	**n/a**
Conceptual remediation strategy **The conceptual remediation works and drawings are for cost estimation only and are NOT FOR CONSTRUCTION.** Landslide 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. Landslide 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	$5000 + construction costs* (excluding GST)	$12,500 + construction costs* (excluding GST)

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timber poles at 1 m centres and minimum pole embedment 2.5 m, 3.6 m total pole length)		

*The construction cost estimate for the conceptual remediation strategy will be provided by the assessor (or other appropriate costing expert).

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 insured land areas damaged by natural hazard 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 insured land areas 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 insured land areas actually damaged;
- the insured land areas at risk of imminent damage.

Valuation summary

In accordance with NHC requirements and pursuant to the Natural Hazards Insurance Act 2023, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Item No	Description	Area	Value
1a	Area of land (minimum sized site under district plan)	450 m^2	
1b	Value of minimum sized site		$300,000
1c	Value of a 4000 m^2 site (if applicable)	n/a	n/a
1d	Actual site area	800 m^2	
2	**Market value of damaged land**	**n/a**	

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Item No	Description	Area	Value
2a	Evacuated land – within 8 m of building	LS2 / 2 m^2	$1200
2b	Inundated land – within 8 m of building	LS2 / 4 m^2	$1200
2c	Evacuated land – main access way within 60 m of building	n/a	n/a
2d	Inundated land – main access way within 60 m of building	LS1 / 12 m^2	$3000
3	**Market value of land at imminent risk of damage**	**n/a**	
3a	Evacuation of land – within 8 m of building	LS2 / 1 m^2	$600
3b	New inundation of land – within 8 m of building	n/a	n/a
3c	Re-inundation of land – within 8 m of building	LS2 / 4 m^2	$1200
3d	Evacuation of land – main access way within 60 m of building	n/a	n/a
3e	Inundated land – main access way within 60 m of building	n/a	n/a
3f	Re-inundation of land – within 60 m of building	LS1 / 12 m^2	$3000
4	**Diminution of value**	**n/a**	**n/a**
4a	Diminution of value	n/a	n/a
4b	Description n/a		

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.

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The two landslides, which have occurred within the insured land areas of a single residential building, are both covered by a single land cover cap for that residential building. The land cover 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 landslide 1 plus landslide 2.

The single land cover cap of $6000 applies to the entire residential land claim for this property. The land cover cap is the maximum amount that can be paid. Because the land cover cap of $6000 is less than the $22,950 reinstatement cost in this example, the land claim entitlement is the land cover cap of $6000 (less the applicable $500 land cover excess).

Settlement calculation

Claim item	Repair estimate	Valuation*	Settlement amount
Landslide 1			
Inundation – main access way (12 m^2 / 6 m^3)	$1100	$3000	$3000
Imminent damage re-inundation – main access way (12 m^2 / 3 m^3)	$850	$3000	n/a**
Landslide 2			
Evacuation – within 8 m of dwelling (2 m^2)	$20,000	$1200	$1200
Imminent damage evacuation - within 8 m of dwelling (1 m^2)	Costed in the repair of evacuation above	$600	$600
Inundation – within 8 m of dwelling (4 m^2 / 1 m^3)	$500	$1200	$1200
Imminent damage re-inundation – within 8 m of dwelling (4 m^2 / 0.5 m^3)	$500	$1200	n/a**
Sub-total	**$22,950**	**$6000**	**$6,000**
Less land cover excess			$500
Total land claim entitlement			**$5,500**

*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.

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v. Unrepairable land damage (cliff collapse)

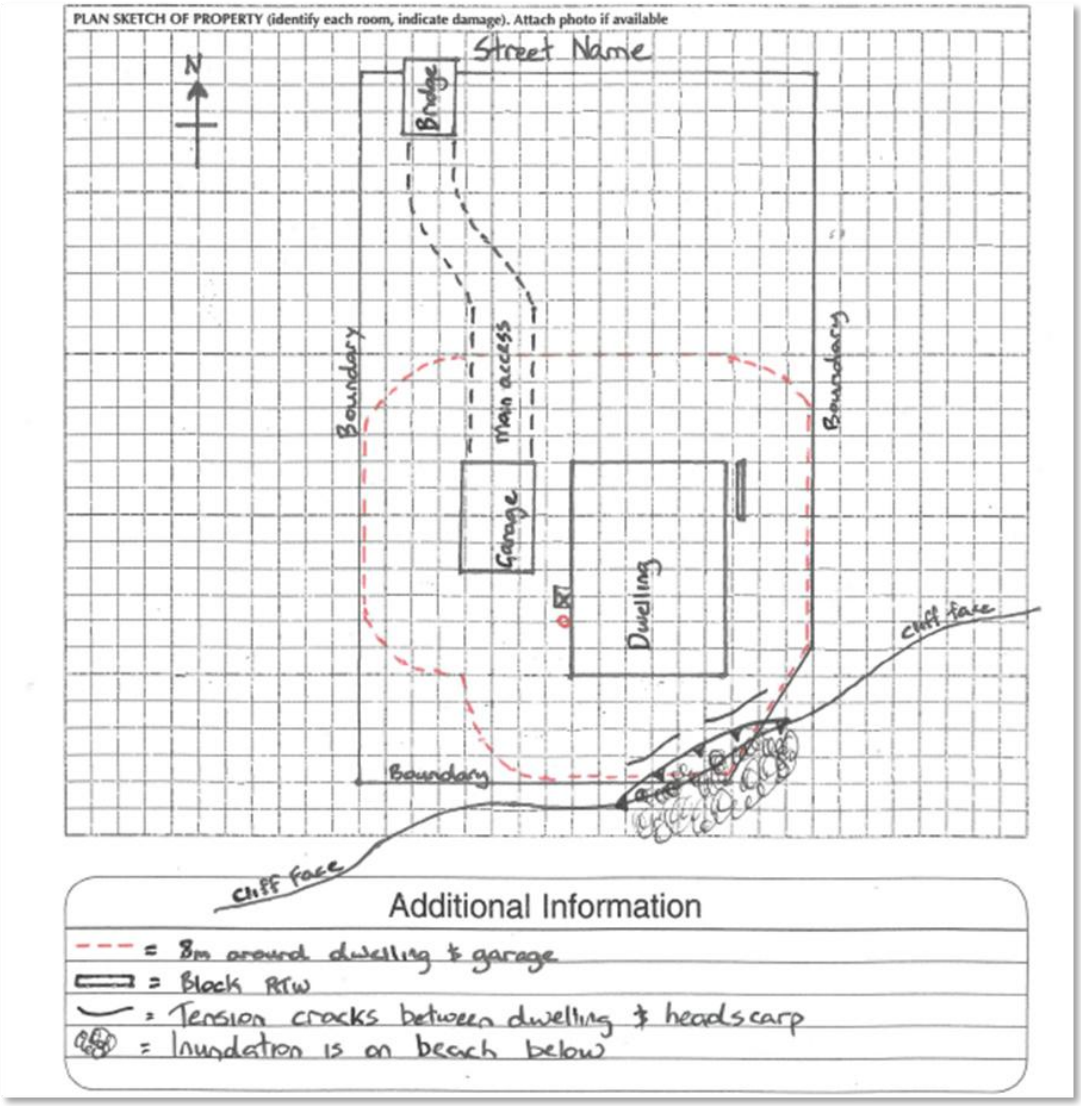

Figure 140 Site sketch of unrepairable land damage

a. Natural hazard type: Natural landslide

<u>Claim lodgement and triage phase</u>

A cyclone causes large areas of flooding and other storm damage including landslides in the local area. A customer makes a claim for a landslide 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

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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 making her claim. She says she has now taped off 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 insured land areas, i.e. within 8 m of the residential dwelling.
- The majority of the land that has been lost is outside the insured land areas, i.e. outside 8 m of the residential building and the insured person's land.

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 insured land areas covered by the NHI Act.
- a small area of damage falls within the insured 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 hazard damage has occurred;
  - quantifying the extent of the damage that has occurred (including any imminent damage);
  - quantifying what damage has occurred to the insured land areas;

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  - providing a conceptual remediation strategy for the damage that has occurred within the insured land areas, 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 areas that have been damaged to determine the land cover cap.

The customer explains that she had two prior NHCover claims for landslide 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 land cover cap, land cover excess and settlement process.

<u>Post-site assessment actions</u>

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.

<u>Geotechnical engineer investigations and site assessment</u>

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 landslide 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 a landslide which occurred two days before the customer made her claim with her insurer.

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- 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 hazard damage?	Yes (landslide 1)
Land within 8 m of dwelling or appurtenant structures	**Yes**
Area of insured land damaged: Evacuated land Inundated land	 7 m^2 Nil
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 16 m^2 Nil Nil
Land that is part of (or supports land that is part of) the main access way to the dwelling and is within 60 m of dwelling	**Nil**
Area of insured land damaged: Evacuated land Inundated land	 Nil Nil
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 Nil Nil Nil

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Retaining walls within 60 m of the dwelling (or an appurtenant structure), supporting or protecting the dwelling, appurtenant structure or insured land areas	**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)	 Nil Nil Nil Nil Nil Nil
Dwelling and appurtenant structure(s)	**n/a**
Has the dwelling or appurtenant structure been damaged as a direct result of the natural hazard?	No
Cost to repair natural hazard damage	n/a*
Is there imminent damage to the dwelling (or appurtenant structure) as a direct result of the natural hazard?	No
Cost to remove the risk of imminent damage to dwelling (or appurtenant structure)	n/a
Cost to repair imminent damage to dwelling (or appurtenant structure) if it were to occur	n/a*
Insured service infrastructure	**n/a**
Insured bridges or culverts	**n/a**
Conceptual remediation strategy **The conceptual remediation works and drawings are for cost estimation only and are NOT FOR CONSTRUCTION.** Due to site topography, it is not technically feasible to reinstate the 7 m^2 of evacuated 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 30 m^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.	$5000 + construction costs* (excluding GST)

*The construction cost estimate for the conceptual remediation strategy will be provided by the assessor (or other appropriate costing expert).

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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 calculating the land claim entitlement should be. They agree that it is appropriate to consider diminution of value (DOV) for the area of insured land that is damaged and unrepairable.
- 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:
  - an assessed market value of the insured land areas that are damaged by natural hazard as detailed in the engineering report; and
  - a 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 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 a DOV valuation for this claim because:

- it is not technically feasible to carry out a repair that would reinstate the evacuated land (cliff collapse); and
- 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 area 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.

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.

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Valuation summary

In accordance with NHC requirements and pursuant to the Natural Hazards Insurance Act 2023, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Item No	Description	Area	Value
1a	Area of land (minimum sized site under District Plan)	450 m^2	
1b	Value of minimum sized site		$300,000
1c	Value of a 4000 m^2 site (if applicable)	n/a	n/a
1d	Actual site area	800 m^2	n/a
2	Market value of damaged land		
2a	Evacuated land – within 8 m of the building	7 m^2	$8750
2b	Inundated land – within 8 m of the building	n/a	n/a
2c	Evacuated land – main access way within 60 m of the building	n/a	n/a
2d	Inundated land – main access way within 60 m of the building	n/a	n/a
3	**Market value of land at imminent risk of damage**		
3a	Evacuation of land – within 8 m of the building	16 m^2	$24,000
3b	New inundation of land – within 8 m of the building	n/a	n/a
3c	Re-inundation of land – within 8 m of the building	n/a	n/a
3d	Evacuation of land – main access way within 60 m of the building	n/a	n/a
3e	New inundation of the land – main access way within 60 m of the building	n/a	n/a
3f	Re-inundation of the land – main access way within 60 m of the building	n/a	n/a
4	**Diminution of value**	**n/a**	**n/a**
4a	Diminution of value	n/a	$10,000

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Item No	Description	Area	Value
4b	Description of the insured land areas that are damaged and applies to the value in 4a; 7 m^2 of evacuated land		

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 reinstatement cost plus DOV is less than the assessed market value of the land actually lost or damaged (including imminent damage):

Reinstatement cost:		$20,000		
Plus	DOV:	$10,000		
Total:		$30,000	<	Assessed market value: $ 32,750

Therefore, in accordance with section 39 of the NHI Act, the assessor recommends to the claims manager that the land claim entitlement be calculated on the reinstatement cost plus DOV, less the applicable land cover excess of $500.

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.

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Settlement calculation

Claim item	Repair estimate*	Valuation	Settlement amount
Landslide 1			
Evacuation – within 8 m of dwelling (7 m^2)	(DOV) $10,000	$8,750	$10,000
Imminent damage evacuation – within 8 m of dwelling (16 m^2)	$20,000	$24,000	$20,000
Sub-total	**$30,000**	**$32,750**	**$30,000**
Less land cover excess			$500
Total land claim entitlement			**$29,500**

*Basis of settlement

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d. Building and land combined

i. Land damage under (and affecting) the dwelling

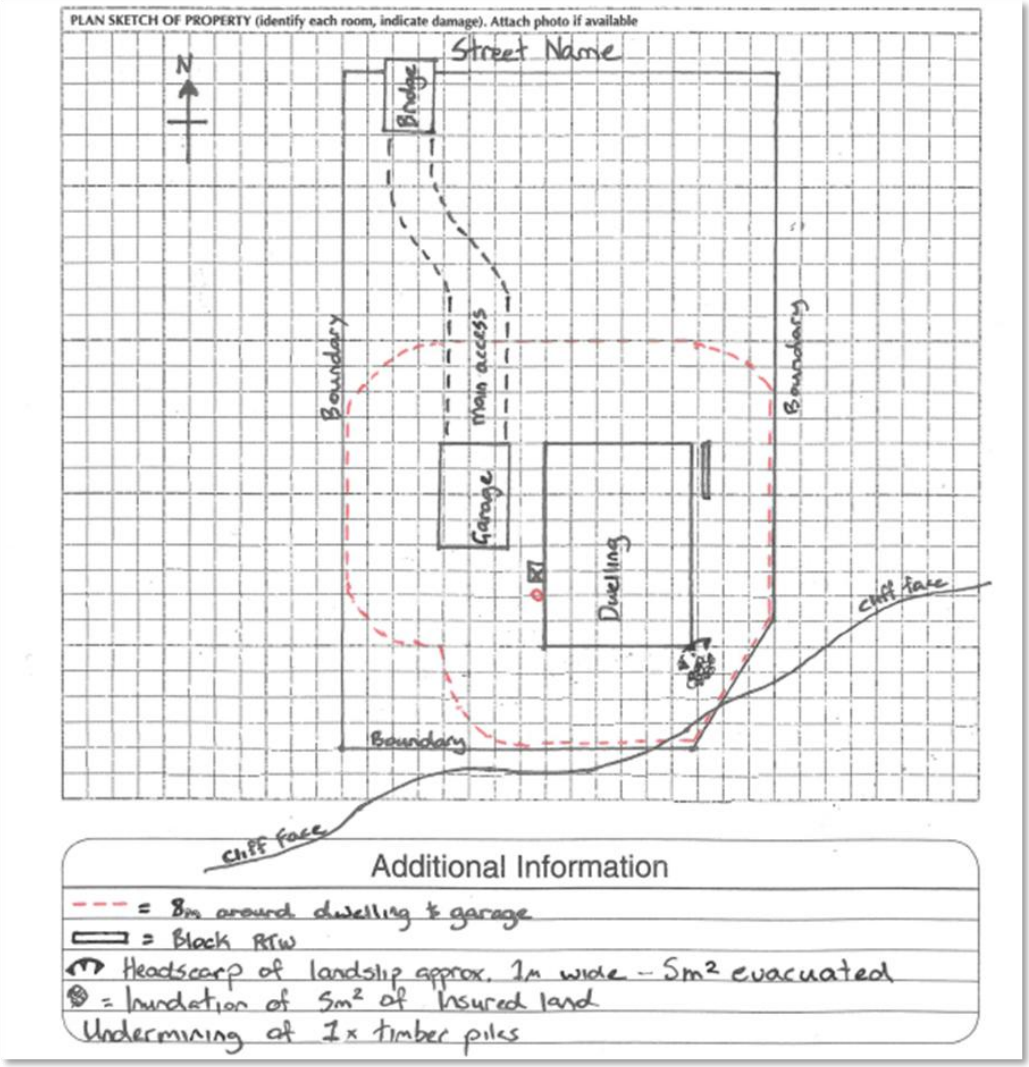

Figure 141 Site sketch of land damage under (and affecting) the dwelling

a. Natural hazard type: Landslide

<u>Claim lodgement and triage</u>

The customer makes a claim for landslide damage via his insurer's online claim lodgement portal. His lodgement notes state:

> There's been a landslide 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

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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 landslide 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 landslide 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 natural hazard (landslide) damage to the insured residential 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 insured land areas insured under the NHI 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 hazard damage has occurred;
- quantifying the damage that has occurred (including any imminent damage);
- quantifying what damage has occurred within the insured land areas;
- providing a conceptual remediation strategy for the damage that has occurred within the insured land areas and which would also remove any risk of imminent damage.

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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 land cover cap).

The assessor also takes the opportunity to explain the remainder of the assessment process, the building cover cap, land cover cap, building cover excess, land cover 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 landslide 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);

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- 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 hazard damage?	Yes (landslide)
Land within 8 m of dwelling or appurtenant structures	**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)
Land that is part of (or supports land that is part of) the main access way to the dwelling and is within 60 m of the dwelling	**Yes**
Area of insured land damaged: Evacuated land Inundated land	 Nil Nil
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 Nil Nil Nil
Retaining walls within 60 m of the dwelling (or appurtenant structure), supporting or protecting the dwelling, appurtenant structure or insured land areas	**n/a**

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Not applicable: Whole wall length Retained height Damaged (insured face area) Imminent damage (insured face area) Insured wall (face area) Total wall (face area)	 Nil Nil Nil Nil Nil Nil
Dwelling and appurtenant structure(s)	**Yes**
Has the dwelling or appurtenant structure been damaged as a direct result of the natural hazard? Undermining of one (1) timber foundation pile.	Yes
Cost to repair natural hazard damage	n/a*
Is there imminent damage to the dwelling or appurtenant structure as a direct result of the natural hazard? Undermining of one (1) additional timber foundation pile	Yes
Cost to remove the risk of imminent damage to dwelling (or appurtenant structure)	n/a *
Cost to repair imminent damage to dwelling (or appurtenant structure) if it were to occur	n/a *
Insured service infrastructure	**n/a**
Insured bridges or culverts	**n/a**
Conceptual remediation strategy **The conceptual remediation works and drawings are for cost estimation only and are NOT FOR CONSTRUCTION.** 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 + construction costs* (excluding GST)

*The construction cost estimate for the conceptual remediation strategy will be provided by the assessor (or other appropriate costing expert).

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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 insured land areas damaged by natural hazard 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.
- Remove inundation debris (2 m^3) $800.
- Remove the imminent damage re-inundation debris on the basis that it would occur (0.5 m^3) $500.

Building repair:

- Repair actual damage, underpinning one timber pile $2,600.
- Repair imminent damage on the basis that it would occur, underpinning one timber pile $2,600.

Valuer investigations

The valuer receives the request from the assessor to value the damaged insured land areas and reviews the engineering report supplied.

She carries out a site assessment and provides the assessor with a valuation report.

Valuation summary

In accordance with NHC requirements and pursuant to the Natural Hazards Insurance Act 2023, values (GST inclusive, if any) have been assessed following site inspection and analysis of comparable market evidence as follows:

Item No	Description	Area	Value
1a	Area of land (minimum sized site under District Plan)	450 m^2	

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1b	Value of minimum sized site		$300,000
1c	Value of a 4000 m² site (if applicable)	n/a	
1d	Actual site area	800 m²	
2	**Market value of damaged land**		
2a	Evacuated land – within 8 m of building beneath building within 8 m of building	 2 m² 3 m²	 $1400 $1200
2b	Inundated land – within 8 m of building	5 m²	$1500
2c	Evacuated land – main access way within 60 m of building	n/a	n/a
2d	Inundated land – main access way within 60 m of building	n/a	n/a
3	**Market value of land at imminent risk of damage**		
3a	Evacuation of land – within 8 m of building beneath building within 8 m of building	 1 m² n/a	 $700 n/a
3b	New inundation of land – within 8 m of building	n/a	n/a
3c	Re-inundation of land – within 8 m of building	5 m²	$1500
3d	Evacuation of land – main access way within 60 m of building	n/a	n/a
3e	New inundation of land – main access way within 60 m of building	n/a	n/a
3f	Re-inundation of land – main access way within 60 m of building	n/a	n/a
4	**Diminution of value**	**n/a**	**n/a**
4a	Diminution of value	n/a	n/a
4b	Description n/a		

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

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the figures match those detailed in the engineering report. She then creates a settlement recommendation for the land claim and the building claim for the claims manager's review, as follows.

Settlement recommendation

Land claim:

The assessor compares the reinstatement cost for debris removal and retaining wall construction of $20,800, against the valuation amount of $4800, 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 reinstatement cost. Therefore, in accordance with section 39 of the NHI Act, the assessor recommends to the claims manager that the land claim entitlement be $4800, less the applicable land cover excess of $500.

Building claim:

Because the land claim is being settled at the land cover cap, the imminent damage risk to the building has not been removed. Therefore, the assessor recommends to the claims manager that the building claim entitlement be based on the estimated repair cost of $5,200 (for both the actual and imminent damage), less the applicable building cover excess of $500.

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.

Settlement calculation – landslide 1

Claim item	Repair estimate	Valuation*	Settlement amount
Evacuation – beneath dwelling (2 m^2)	$20,000	$1400	$1400
Evacuation – within 8 m of dwelling (3 m^2)		$1200	$1200
Inundation – within 8 m of dwelling (5 m^2 / 2 m^3)	$800	$1500	$1500

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Claim item	Repair estimate	Valuation*	Settlement amount
Imminent damage evacuation – beneath dwelling (1 m^2)	Costed in the repair of evacuation above	$700	$700
Imminent damage re-inundation – within 8 m of dwelling (5 m^2 / 0.5 m^3)	$500	$1500	n/a**
Sub-total	**$21,300**	**$4800**	**$4800**
Less land cover excess			$500
Total land claim entitlement			**$4300**

*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)	$2600	n/a	$2600
Imminent damage to building (per scope of works)	$2600	n/a	$2600
Sub-total	**$5200**	**n/a**	**$5200**
Less building cover excess			$500
Total building claim entitlement			**$4700**

*Basis of settlement

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ii. Land damage with imminent damage to the dwelling

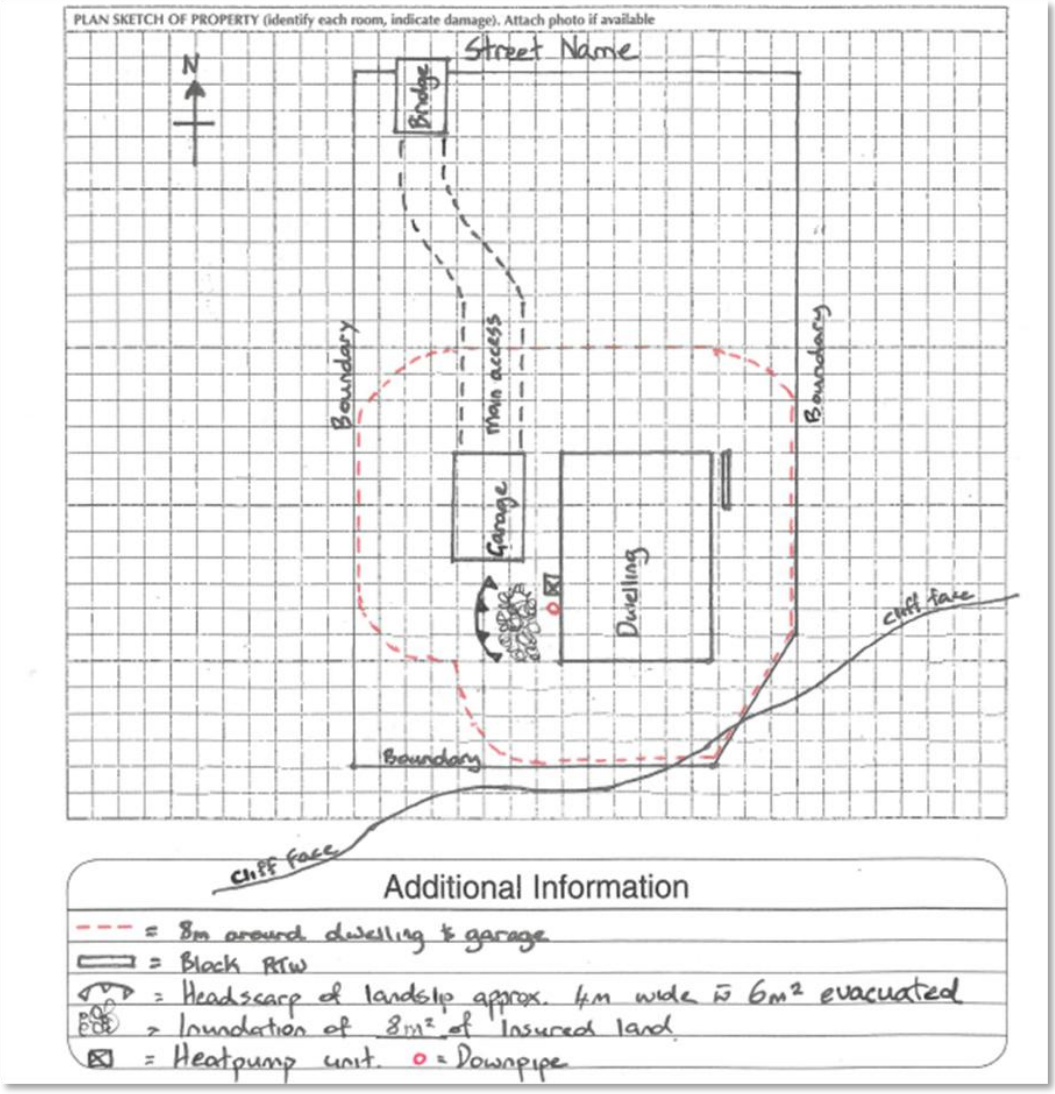

Figure 142 Site sketch of land damage with imminent damage to the dwelling

a. Natural hazard type: Landslide

<u>Claim lodgement and triage</u>

The customer makes a claim for landslide 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 landslide. 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

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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 landslide 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 landslide 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 landslide and its proximity to the dwelling.

She determines that all of the damaged land, both evacuated and inundated, is within the insured person's land and within 8 m of the dwelling. She records that the headscarp of the landslide 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 hazard (landslide) 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 hazard damage has occurred;
- quantifying the damage that has occurred (including any imminent damage);
- quantifying what damage has occurred within the insured land areas;
- providing a conceptual remediation strategy for the damage that has occurred to the insured land areas, 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 insured land areas covered by the NHI Act;
- a geotechnical engineer is required to attend the site for further claim investigations and report on their findings, including:
  - confirming natural hazard damage has occurred;
  - quantifying the damage that has occurred (including any imminent damage);
  - quantifying what damage has occurred within the insured land areas;
  - providing a conceptual remediation strategy for the damage that has occurred to the insured land areas, 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 insured land areas that are damaged, as quantified in the engineering report; and
- a valuer is required to provide a land valuation of the insured land areas and damage to determine the land cover cap.

The assessor acknowledges the customer's safety concerns and she suggests steps he could consider taking to address his 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 building cover cap, land cover cap, building cover excess, land cover 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.

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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 landslide has occurred following heavy rainfall which has resulted in the following natural hazard (landslide) 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 / 3 m^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 hazard damage?	Yes (landslide 1)
Land within 8 m of dwelling or appurtenant structures	**Yes**
Area of insured land damaged: Evacuated land Inundated land	 7.5 m^2 8.5 m^2
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 8 m^2 4 m^2 8.5 m^2
Land that is part of (or supports land that is part of) the main access way to the dwelling and is within 60 m of dwelling	**Nil**
Area of insured land damaged: Evacuated land Inundated land	 Nil Nil
Area of insured land at risk of imminent damage: Evacuation New inundation Re-inundation	 Nil Nil Nil
Retaining walls within 60 m of the dwelling (or appurtenant structure), supporting or protecting the dwelling, appurtenant structure or insured land areas	**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)	 Nil Nil Nil Nil Nil Nil
Dwelling and appurtenant structure(s)	**Yes**
Has the dwelling or appurtenant structure been damaged as a direct result of the natural hazard?	No

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Cost to repair natural hazard damage	n/a*
Is there imminent damage to the dwelling (or appurtenant structure) as a direct result of the natural hazard? Impact damage and staining to the dwelling's rear exterior weatherboard cladding, impact damage to a heat pump unit and 8 mm PVC downpipe	Yes
Cost to remove the risk of imminent damage to dwelling (or appurtenant structure)	n/a *
Cost to repair imminent damage to dwelling (or appurtenant structure) if it were to occur	n/a *
Insured service infrastructure	**n/a**
Insured bridges or culverts	**n/a**
Conceptual remediation strategy **The conceptual remediation works and drawings are for cost estimation only and are NOT FOR CONSTRUCTION.** Reinstate the land by removing debris. Remove risk of imminent damage to the insured land by constructing 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 + construction costs* (excluding GST)
Is this natural hazard damage?	Yes (landslide 1)
Land within 8 m of dwelling or appurtenant structure	**Yes**

*The construction cost estimate for the conceptual remediation strategy will be provided by the assessor (or other appropriate costing expert).

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 hazard as detailed in the engineering report (including the imminent damage).

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- 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

Remove inundation debris (3 m^3) $850

Repair the imminent land damage on the basis that it would occur:

Remove re-inundation debris (1.5 m^3) $550

Remove the new inundation (2.5 m^3) $850

Repair the imminent building damage on the basis that it would occur: $8060

Valuer investigations

The valuer receives the request from the assessor to value the damaged land areas and reviews the engineering report supplied.

The valuer attends site and provides the assessor with a valuation report which values the damage to insured land areas as detailed in the valuation report below.

Valuation summary

In accordance with NHC requirements and pursuant to the Natural Hazards Insurance Act 20234, values (GST inclusive, if any) have been assessed

following site inspection and analysis of comparable market evidence as follows:

Item No	Description	Area	Value
1a	Area of land (minimum sized site under District Plan)	450 m^2	
1b	Value of minimum sized site		$300,000
1c	Value of a 4000 m^2 site (if applicable)	n/a	
1d	Actual site area	800 m^2	
2	**Market value of damaged land**		
2a	Evacuated land – within 8 m of building	7.5 m^2	$3000
2b	Inundated land – within 8 m of building	8.5 m^2	$5950
2c	Evacuated land – main access way within 60 m of building	n/a	n/a
2d	Inundated land – main access way within 60 m of building	n/a	n/a

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3	**Market value of land at imminent risk of damage**		
3a	Evacuation of land – within 8 m of building	8.0 m^2	$3200
3b	New inundation of land – within 8 m of building	4.0 m^2	$2800
3c	Re-inundation of land – within 8 m of building	8.5 m^2	$5950
3d	Evacuation of land – main access way within 60 m of building	n/a	n/a
3e	New inundation of land – main access way within 60 m of building	n/a	n/a
3f	Re-inundation of land – main access way within 60 m of building	n/a	n/a
4	**Diminution of value**	**n/a**	**n/a**
4a	Diminution of value	n/a	n/a
4b	Description n/a		

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 reinstatement cost of $56,850 against the assessed market value of $14,950, excluding reinundation. Reinundation 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 assessed market value of $14,950 is less than the estimated reinstatement cost (which would reinstate the damaged land and remove the imminent damage risk) of $56,850. Therefore, in accordance with section 43 of the NHI Act, the assessor recommends to the claims manager that the land claim entitlement be settled at the land cover cap, less the applicable land cover excess.

Because the land claim is being settled at the land cover cap, the imminent damage risk to the building has not been removed. Therefore, the assessor recommends to the claims manager that the building claim be settled based on the estimated repair cost of $8,060, less the applicable building cover excess.

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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 – landslide 1

Claim item	Repair estimate	Valuation*	Settlement amount
Evacuation – within 8 m of dwelling (7.5 m^2)	$56,000	$3000	$3000
Inundation – within 8 m of dwelling (8.5 m^2 / 3 m^3)	$850	$5950	$5950
Imminent damage evacuation - within 8 m of dwelling (8.0 m^2)	Costed in the repair of evacuation above	$3200	$3200
Imminent damage new-inundation – within 8 m of dwelling (4.0 m^2 / 2.5 m^3)	$850	$2800	$2800
Imminent damage re-inundation – within 8 m of dwelling (8.5 m^2 / 1.5 m^3)	$550	$5,950	n/a
Sub-total	**$58,250**	**$20,900**	**$14,950**
Less land cover excess			$500
Total land claim entitlement			**$14,450**

*Basis of settlement

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Settlement calculation – building damage

Claim item	Repair estimate*	Valuation	Settlement amount
Imminent damage to building (per scope of works)	**$8060**	n/a	$8060
Sub-total	**$8060**	**n/a**	**$8060**
Less building cover excess			$500
Total building claim entitlement			**$7560**

*Basis of settlement

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