

25 July 2023

Cody C

fyi-request-22963-70be52ff@requests.fyi.org.nz

Our reference: OIA22-23 299

Tēnā koe

Official Information Act 1982 Request

Thank you for your email of 1 June 2023, asking for the following under the Official Information Act 1982 (the OIA):

“supply the risk modelling data that was supplied to reinsurance provider(s)”

Clarification

On 12 June 2023, I sought clarification of your request from you. As a result, you advised that reports as opposed to data files would be suitable.

Response

In response to your request, I attach the following documents:

- Document 1 - Toka Tu Ake EQC 2023 Renewal January 2023
- Document 2 - Toka Tu Ake EQC 2023 Reinsurance Renewal Information
- Document 3 - Toka Tu Ake EQC Catastrophe Modelling Summary 2023

Some information has been withheld from these documents under the following sections of the OIA:

- 9(2)(a) to protect the privacy of individuals,
- 9(2)(b) to avoid disclosure of a trade secret or to avoid prejudice to the commercial position of the person who supplied or is the subject of the information,

- 9(2)(e) to avoid prejudice to the measures that prevent or mitigate material loss to members of the public, and
- 9(2)(j) to enable Toka Tū Ake EQC to carry out commercial negotiations.

You have the right to ask the Ombudsman to investigate and review this response. The Office of the Ombudsman can be contacted through their website at www.ombudsman.parliament.nz.

Ngā mihi

Tina Corbett

Senior Advisor Government Relations | Kaitohutohu Hononga Kāwanatanga Matua

AON

Toka Tū Ake EQC 2023 Renewal

January 2023

Proprietary & Confidential

Under the Official Information Act 1982



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Executive Summary

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Executive Summary

Goals

Provide Toka Tū Ake EQC with property catastrophe modelling results for the reinsurance programme renewing 1 June 2023.

Including:

- An overview of the year-on-year exposure movements
- Information on key modelling assumptions
- A comparison of treaty average output year-over-year
- Generate an Earthquake (EQ) loss estimate for the portfolio
- A Wellington fault scenario analysis
- Technical pricing for the expiring structure and alternative retention options

Approach

New Zealand (NZ) wide residential property exposures are provided by Toka Tū Ake EQC, with the cap having changed from 150k to 300k on Oct 1 2022, and the dataset already having been adjusted by Toka Tū Ake EQC for internal modelling purposes:

- Asset data is based off an extract from CoreLogic in September 2022
- Values are then adjusted to account for inflation and expected building stock growth up to 1st June 2023.
- Aon has modelled these properties at risk level using the following models:
 - s9(2)(b)
 - PRUE (losses provided by Toka Tū Ake EQC)
 - s9(2)(b)

Outcome

- Uncapped exposures are up 20.4% from June 2022 to June 2023.
 - Rebuild Rate +17.8%
 - Housing Stock +2.6%
- Capped values on the 300k portfolio are up +7.6% compared to 2022.
- The land values are up +38.7% from last renewal - noting that the currently available models do not have the capability to model this exposure.
 - These are based on council valuations which have three-year cycles.
- The gross losses (AALs) excluding demand surge have increased in line with exposure growth, driven by Wellington, and are as follows:
 - s9(2)(b)
 - PRUE +18.2%
 - s9(2)(b)

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Data and Assumptions

- Exposure Summary
- Data Adjustments by Toka Tū Ake EQC
- Primary Modifiers Summary
- Primary Modifier Mapping
- NZ EQ Model Information

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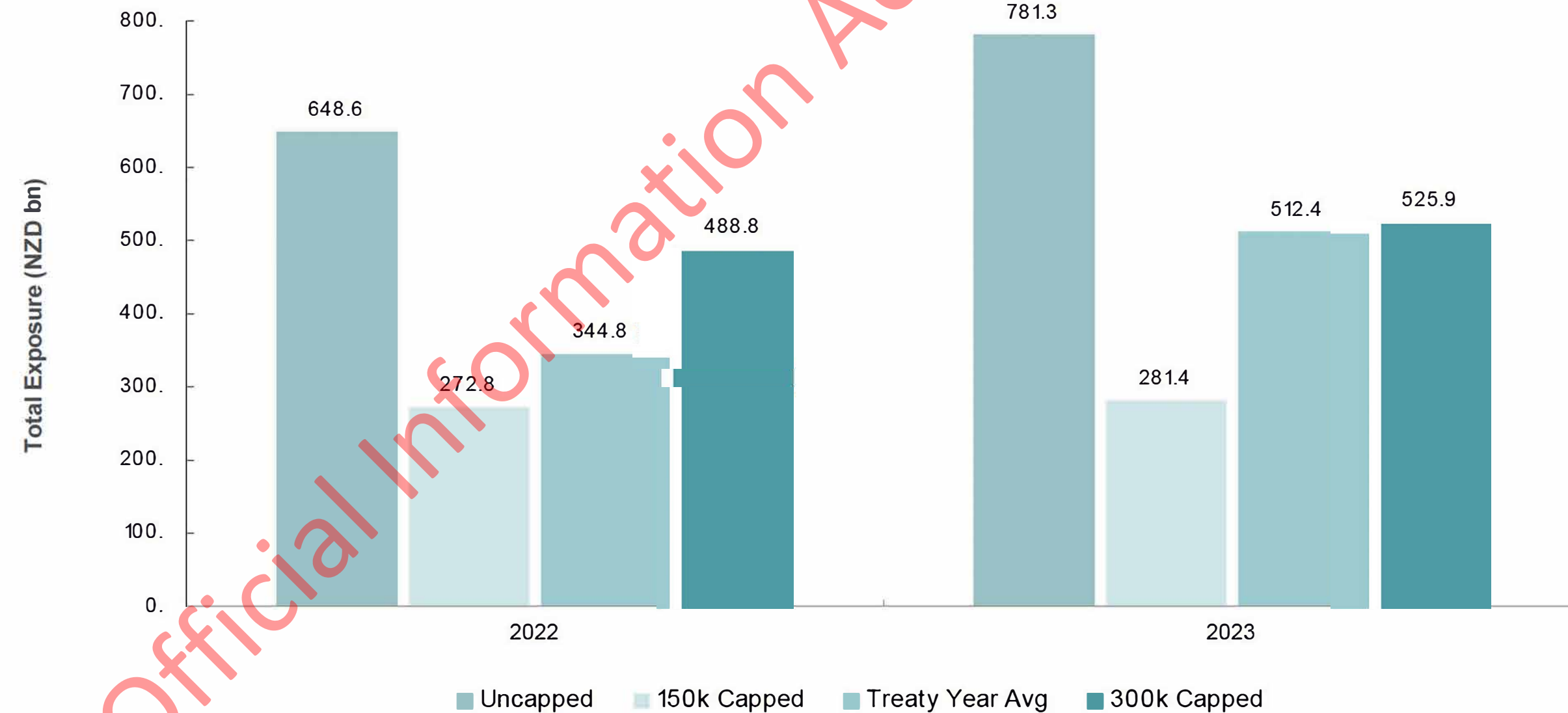


Exposure Summary

Portfolio Data at Country Level (NZDbn)

Description	Buildings Risks	Total Land Value
2022 Portfolio (300k)	1,841,136	601.6
2023 Portfolio (300k)	1,888,757	834.7
% Growth	2.6%	38.7%

Description	2022	2023	% Change
Uncapped	648.6	781.3	20.4%
150k Capped	272.8	281.4	3.2%
Treaty Year Avg	344.8	512.4	48.6%
300k Capped	488.8	525.9	7.6%



Key Portfolio Movements:

- Building risk count is up 2.6% to 1.88m
- The land values (based on council valuations which have three-year cycles) have increased by 38.7%
 - The main drivers for land value increases this year are Auckland Council (March 2022), Wellington City Council (September 2021, released several months later (too late to have been included in the 2022 portfolio)). Several other councils have also had new valuations.
- Uncapped building values have increased by 20.4%
- Treaty year average exposure has increased by 48.6%
 - The view of average exposure over the treaty year is made up of 5.5% aggregate from the 2023 150k cap portfolio and 94.5% from the 2023 300k cap portfolio. This is based off the average exposure calculations across the 12 month period, accounting for the change in cap at 1 October 2022
 - The view of average exposure over the 2022 treaty year is made up of eight months from the 2022 150k cap portfolio and four months from the 2022 300k cap portfolio.
 - Modelling assumes policies renew evenly through the year
- Capped building values on the 300k cap have increased by 7.6% to 525.9bn from 488.8bn

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Data Adjustments by EQC

Adjustments

HNZC	<ul style="list-style-type: none"> Nationwide portfolio included where total value of the housing complex is greater than \$2m. All other building risks excluded.
Housing stock growth	<ul style="list-style-type: none"> 4.88% from September 2022 to 1 June 2023, made up of: <ul style="list-style-type: none"> - 3.11% discrepancy between QV's extract and statsNZ figures data and; - 1.72% estimate of housing stock growth.
Insurance Uptake	<ul style="list-style-type: none"> Only 95% of the data is assumed to be insured. Which results in total percentage of base portfolio modelled to 99.64% ($100 * 1.0488 \text{ (growth)} * 0.95$).

- > The table above shows the adjustments made by Toka Tū Ake EQC to the data provided from CoreLogic (from September 2022), prior to providing the dataset to Aon for modelling.
- Red zone properties are no longer included in the modelling as no dwellings now exist in CoreLogic records within the red zone.

Primary Modifiers Summary

Detailed Risk by Risk Data

Geographic Resolution	Area Unit, Postcode, CRESTA and WGS1984 coordinates Portfolio was geocoded to 99.99% coordinate level
Occupancy	Provided: - 95% Single Family Housing - 5% Multi Family Housing
Construction	• Provided: - 61% Wood - 21% Unknown - 11% Masonry - 6% Reinforced Concrete - 0.7% Unreinforced Brick Cavity Wall - 0.3% Steel/Light Metal • Brick assumption – post-1940 assumed to be brick veneer, pre-1940 assumed to be double brick (Unreinforced Brick Cavity Wall)
Year built	• Provided: - 15% Pre-1950 - 38% 1950 - 1980 - 20% 1981 - 1995 - 28% 1996 to present
Number of stories	• Provided: - 99.74% 1 - 3 Stories - 0.26% > 3 Stories
Roof type	• Provided - has no effect on earthquake losses in the models
Units	• Number of units at each location was provided

- The table above shows the Toka Tū Ake EQC's portfolio with primary modifiers and respective sum insured percentage splits used for modelling.

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Primary Modifiers Mapping

Primary Modifiers Mapping

EQC Data	Character	RMS Mapping	Description	AIR Mapping	Description
First Character of BCO Field	Description	Codes		Codes	
#	Unknown	0	Unknown	100	Unknown
A	Aluminium	4B	Light Metal Frame	152	Light Metal
B	Brick	1A3	Light Wood Stud Walls with Brick Masonry Veneer	103	Masonry Veneer
C	Concrete	3	Reinforced Concrete	131	Reinforced Concrete
F	Fiber Cement	1A	Light Wood Frame	101	Wood Frame
G	Glass	4B	Light Metal Frame	152	Light Metal
I	Steel/G-Iron	1A	Light Wood Frame	101	Wood Frame
M	Malthoid/Fab	1A	Light Wood Frame	101	Wood Frame
P	Plastic	1A	Light Wood Frame	101	Wood Frame
R	Roughcast	2	Masonry	111	Masonry
S	Stone	2	Masonry	111	Masonry
T	Tile Profile	1A	Light Wood Frame	101	Wood Frame
W	Weatherboard	1A	Light Wood Frame	101	Wood Frame
X	Mix. Material	0	Unknown	100	Unknown
	Pre 1940 Brick Assumption	2B4	Unreinforced Brick Cavity Wall	114	Unreinforced Masonry - Bearing Wall

- The table above shows the mapping of Toka Tū Ake EQC's portfolio with the construction types available within each model.

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NZ EQ Model Information

Modelled Loss Mechanisms

s9(2)(b)	
PRUE	• EQ Shake
	• Fire Following (implicit)
	• Liquefaction (implicit)
	• Demolition Costs (not included)
s9(2)(b)	

- > • The above models are utilised for estimating the earthquake losses to Toka Tū Ake EQC's 2023 portfolio.
- Land loss is not modelled in any of these models.

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Modelling Results

- Normalised Exposure & Losses
- All Models OEPs & Return Period of Attachment and Exhaustion
- ^{s9(2)(b)} PRUE, ^{s9(2)(b)}

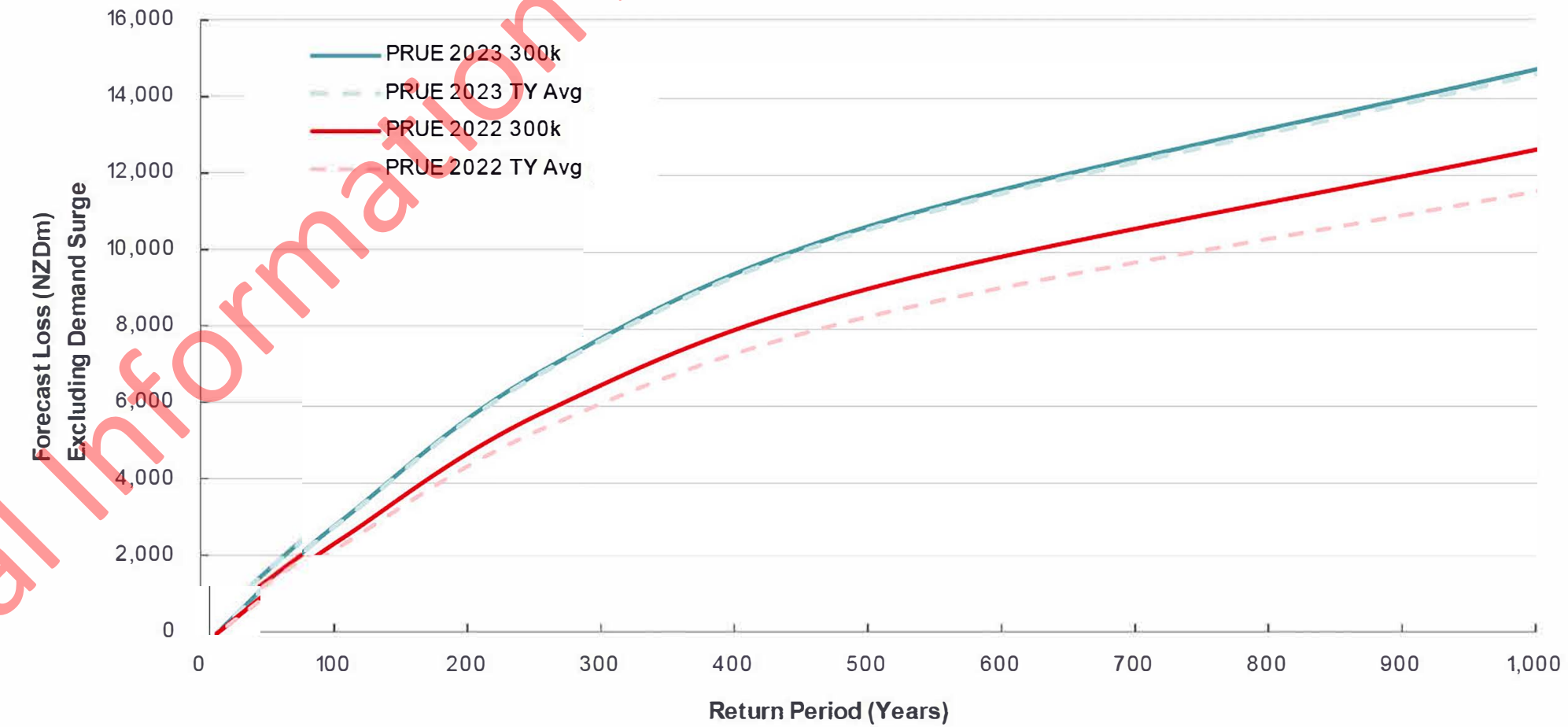
Pages 12 to 15 and 17 to 18 inclusive withheld under section 9(2)(b)

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PRUE Gross Losses Excluding Demand Surge

Return Period	2022		2023		NZDm without Demand Surge	
	PRUE 2022 TY Avg	PRUE 2022 300k	PRUE 2023 TY Avg	PRUE 2023 300k	% Change 2023 vs 2022 (TY Avg)	% Change 2023 vs 2022 (300k)
1000 yr	11,661	12,759	14,730	14,849	26.3%	16.4%
500 yr	8,410	9,148	10,691	10,772	27.1%	17.8%
250 yr	5,451	5,877	6,909	6,959	26.7%	18.4%
100 yr	2,439	2,603	3,051	3,071	25.1%	18.0%
50 yr	1,260	1,345	1,584	1,595	25.7%	18.6%
25 yr	607	645	760	765	25.3%	18.6%
10 yr	207	218	257	258	24.3%	18.5%
5 yr	75	78	92	93	23.7%	18.6%
Annual Avg	152	162	191	192	25.4%	18.2%
Std Dev	817	890	1,036	1,044	26.8%	17.3%



- The table and graph above show the year on year changes in Gross (Capped) OEP losses for the Toka Tū Ake EQC portfolio using PRUE.
- The OEP curves were provided to Aon by Toka Tū Ake EQC along with the ELTs (event loss tables) for technical pricing purposes.
- The treaty year view of exposure includes 5.5% exposure from the 150k cap and 94.5% from the 300k cap portfolio, based off average exposure calculations across the 12 month period. Whereas, for 2022 it includes eight months exposure from the respective 150k cap portfolio, and four months from the 300k cap portfolio.
- Please note the PRUE model has no demand surge component.
- The gross AAL has increased by 18.2% for the 300k cap year-over-year, and 25.4% for the 2023 treaty year average.
- There has been increase of 16.4 – 18.6% across the 300k OEP curve, and 23.7 – 27.1% for the 2023 treaty year average.

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Wellington Scenario Results

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Wellington Fault Analysis



Toka Tū Ake EQC Retention

The percentile at which Toka Tū Ake EQC's retention of \$1.75bn sits in PRUE and RMS' 300k losses is as below:

Model	Percentile 2023 300k Cap	Percentile 2022 300k Cap
PRUE	0.67%	1.06%
s9(2)(b)		

Toka Tū Ake EQC Limit

The percentile at which Toka Tū Ake EQC's limit of \$9.25bn sits in PRUE and RMS' 300k losses is as below:

Model	Percentile 2023 300k Cap	Percentile 2022 300k Cap
PRUE	48.94%	61.94%
s9(2)(b)		

- > The Wellington fault source (Event IDs) from both s9(2)(b) and PRUE were run through Toka Tū Ake EQC's portfolio to see the potential loss and the range of outcomes if it were to rupture during the 2023/24 treaty year.
- This analysis excludes demand surge.

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Technical Pricing

- Summary – All Models
- ^{s9(2)(b)} [redacted], PRUE, ^{s9(2)(b)} [redacted]

Pages 22 to 27 inclusive withheld under section 9(2)(j)

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Appendix

- Additional Modelling Results
- With Demand Surge Losses
- Technical Pricing: Alternative Retention Options
- s9(2)(b)
- Contacts & Disclaimer

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Additional Modelling Results

Pages 30,31,33 to 38 and 40 to 46 withheld under section 9(2)(j)

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With Demand Surge Losses

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Technical Pricing: Alternative Retention Options

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Contacts & Disclaimer

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Interpretation of Results

- The modelled losses presented in this report should be interpreted as follows. The "1 in 250 year" loss means that there is approximately a 1 in 250 annual probability that a loss of this size will be exceeded in any given year.
- Whilst modelled loss estimates are taken from a derived distribution of insured losses to the portfolio, both their magnitude and probability are subject to considerable uncertainty. This relates to uncertainty with regard to both hazard (specifically the probability and severity of catastrophic events themselves) and property vulnerability (i.e. the response of the insured property portfolio to damage when exposed to a catastrophic event).
- Catastrophe models assume high correlation between characteristics of insured property portfolios and those of the model features (such as vulnerabilities) designed to represent them. In aggregate, the attributes of a large population of risks may converge towards that assumed by the models. Individual risks however may have very different attributes to those assumed by the cat models. This means that real-life losses from a single risk or small group of risks concentrated at one or more locations could potentially exceed portfolio-level modelled losses calculated using the cat models.
- Aon recommends that the results presented in this report should not be relied upon in isolation when making decisions that may affect the underwriting appetite, rate adequacy or solvency of the company.

Legal Disclaimer

s9(2)(b), 9(2)(ba) and 9(2)(e)

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Thank you!

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Toka Tū Ake EQC

Earthquake Commission

2023 Reinsurance Renewal Information



Toka Tū Ake EQC Key Personnel



Tina Mitchell, Chief Executive



Chris Chainey, Chief Financial Officer

s9(2)(a)



Aon Contacts

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s9(2)(a)

London

s9(2)(a)

Sydney

s9(2)(a)

s9(2)(a)



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All amounts shown are in New Zealand Dollars (NZD) unless specified.

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Appendix 1 is publicly available at:

www.eqc.govt.nz/our-publications/eqcover-insurers-guide-july-2021

Section 1 Introduction to Toka Tū Ake EQC

Our Origins

Since 1944, the Earthquake Commission (EQC) scheme has been one of the New Zealand government's key policy interventions to manage the financial impact of significant natural hazard events. The scheme has evolved over time to meet the changing needs of New Zealanders, government priorities, advances in technology and our understanding of natural hazard risks in New Zealand.

At the heart of the scheme is the desire of successive governments that New Zealanders have access to affordable, readily available natural disaster insurance for the rare, but potentially significant natural hazard events. The scheme is owned and fully underwritten by the New Zealand Government which provides a statutory guarantee to meet its liabilities.

The scheme is underpinned by legislation which has recently been reviewed to clarify some definitions and align the organisation with other government entities. The recent legislative changes come into effect in July 2024 and do not affect the fundamental design of the scheme.

Toka Tū Ake

From 1 July 2024, the Earthquake Commission's name will formally change to Toka Tū Ake Natural Hazards Commission. We are transitioning to our new name through the adoption of Toka Tū Ake EQC.

Our new name reflects the history of our nation.

Toka Tū Ake means "the foundation from which we stand strong, together". Our name reflects the role our scheme plays in supporting New Zealanders recover from natural hazard events.

Our Mission

Toka Tū Ake EQC's mission is to reduce the impact on people and property when natural hazards occur. It does this by undertaking a number of complementary functions, including

- Providing "first loss" cover on residential dwellings and land per event against specific natural hazard perils, including earthquakes, volcanoes and tsunami
- Investing in research and core infrastructure to support research and hazard monitoring e.g. the national geological hazards monitoring network
- Supporting the Government's fiscal position through its risk financing strategy
- Facilitating preparedness for future events

Evolving our role

In recent years Toka Tū Ake EQC has launched a new claims management model, the Natural Disaster Response Model (NDRM), in partnership with the private insurance market in New Zealand. Insurers now settle claims on behalf of Toka Tū Ake EQC so residential homeowners only need to make one call for all their public and private insurance needs. This world-leading partnership aims to ensure that customer welfare is always at the forefront of our activities.

Increasingly we are taking what we know about natural hazards from research and from the impacts we see in claims to inform, influence, and advocate for good natural hazard risk management in New Zealand. We put considerable effort into making sure knowledge is passed on to central government lawmakers and local government planners, including through statutory consultation processes and by participation in policy and planning.

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Section 2 Gross Earned Premium Income

Table 1: Residential Property to 30 June

Year	Amount (NZD)	Actual/Forecast
2007/2008	85,660,000	Actual
2008/2009	86,400,000	Actual
2009/2010	85,960,000	Actual
2010/2011	87,776,000	Actual
2011/2012	107,495,000	Actual
2012/2013	241,674,000	Actual
2013/2014	274,115,000	Actual
2014/2015	280,753,000	Actual
2015/2016	280,194,000	Actual
2016/2017	283,215,000	Actual
2017/2018	309,479,000	Actual
2018/2019	386,589,000	Actual
2019/2020	458,658,000	Actual
2020/2021	533,491,000	Actual
2021/2022	528,048,000	Actual
2022/2023	597,288,000	Forecast
2023/2024	796,000,000	Forecast
2024/2025	804,000,000	Forecast
2025/2026	812,000,000	Forecast

Notes:

Premium Income forecasts are based on the legislated coverage and premium rate.

From 1 February 2012 the premium rate increased from 5c per NZD 100 of insurance cover, up to a maximum of NZD 69 a year (including GST), to 15c per NZD 100 of insurance cover, with an annual cap of NZD 207 (including GST).

From 1 November 2017 the premium rate increased from 15c per NZD 100 of insurance cover, up to a maximum of NZD 207 a year (including GST), to 20c per NZD 100 of insurance cover, with an annual premium cap of NZD 276 (including GST).

From 1 July 2019 the annual premium cap increased to NZD 345 (including GST) as a result of the EQC building cover increasing to NZD 150,000 and contents cover moving to the private market.

From 1 October 2022 the annual premium cap increases to NZD 552 (including GST) as a result of the EQC building cover increasing to NZD 300,000 and the premium rate reducing from 20c to 16c per NZD 100 of insurance cover.

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Section 3 Retentions and Coverage

The Act specifies maximum replacement value as follows and depicted in Figure 1. The *EQCover - An Insurer's Guide* in Appendix 1 provides further detail on EQC cover.

Residential Building NZD 150,000 (+GST) per event. From 1 October 2022 the maximum amount of EQCover for a residential dwelling increases to NZD 300,000 (+GST) upon renewal of the original policy and for all new policies issued from this date.

Land around Building Market value of affected land within limits specified by the Act.

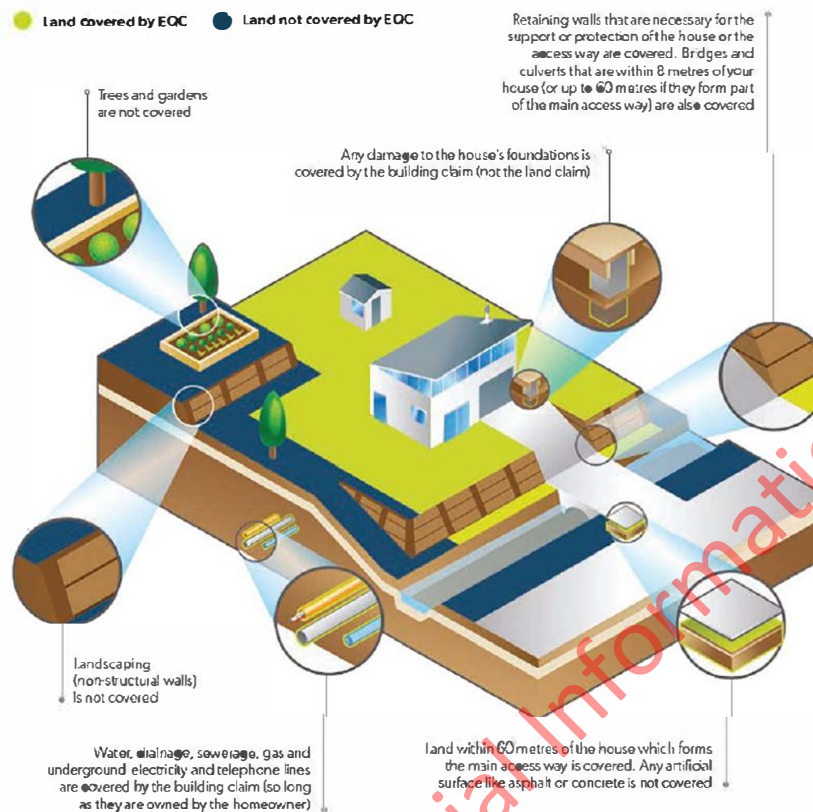
Subject to excesses of:

Residential Building 1% of the amount of the claim with a minimum of NZD 200 per Dwelling and a maximum of NZD 1,725.

Land 10% of the amount of the claim with a minimum of NZD 500 per Dwelling and a maximum of NZD 5,000.

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Figure 1: EQC Cover¹

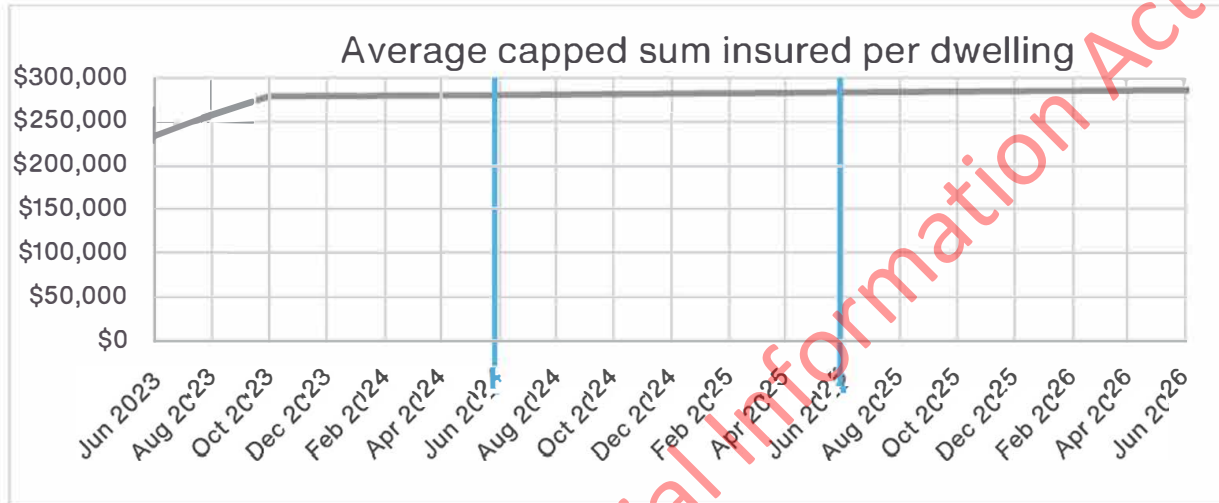


EQCover insures residential buildings and land against physical loss or damage from an earthquake, natural landslip, volcanic eruption, hydrothermal activity and tsunamis. EQCover insures residential land only for damage caused by a storm or flood. It also covers natural disaster fire which occurs as a consequence of any of the aforementioned.

¹ EQCover-Insurers-Guide-October-2022-2.0.pdf

Building Cap Change

The impact of the cap increase is shown in the following graph of forecasted average sum insured by dwelling over the next three years, noting that the sum insured figures allow for building inflation of 1.4% per quarter. Under the higher cap more properties are expected to be insured below the maximum cover.



The forecasted average per dwelling sum insured and the average total insured value for each of the next three years are shown below. Figures include price and portfolio inflation throughout the term, which is why the 2023/24 total figure differs from the NZD 513bn figure referenced elsewhere in the report.

Reinsurance year	Average capped dwelling sum insured (NZD)	Total capped insured building value (average total value during reinsurance year) (NZD m)
2023-24	272,000	521,000
2024-25	281,700	555,600
2025-26	284,500	579,500

Section 4 Aggregates at 'CRESTA' Level

Table 2: Aggregates at CRESTA Level – projected to 1 June each year (Figures in NZDm)

Cresta	2023						2022					
	Insured Building Risk Count	Gross Insured Building Value	Capped Insured Building Value (150k cap)	Capped Insured Building Value (Treaty Year Average*)	Capped Insured Building Value (300k cap**)	Insured Land Value	Insured Building Risk Count	Gross Insured Building Value	Capped Insured Building Value (150k cap)	Capped Insured Building Value (Treaty Year Average*)	Capped Insured Building Value (300k cap**)	Insured Land Value
1	78,568	33,152	11,719	21,401	21,965	13,307	76,690	27,438	11,373	14,389	20,420	10,170
2	556,559	241,971	82,915	151,125	155,094	476,603	540,925	198,570	80,073	101,478	144,288	331,193
3	162,406	63,595	24,191	43,706	44,842	54,403	157,594	54,847	23,337	29,298	41,220	41,078
4	157,774	62,548	23,519	42,756	43,876	54,898	154,067	51,082	22,878	28,842	40,771	39,504
5	50,623	20,761	7,553	13,835	14,201	8,270	50,098	16,968	7,429	9,404	13,355	7,207
6	21,474	7,841	3,191	5,675	5,820	3,091	21,420	7,751	3,159	3,919	5,440	3,025
7	96,966	37,726	14,456	26,117	26,796	19,700	95,290	30,418	14,112	17,702	24,883	13,274
8	69,464	26,962	10,348	18,783	19,274	13,353	66,766	19,497	9,887	12,422	17,493	12,413
9	22,511	9,085	3,357	6,132	6,294	3,203	22,346	7,995	3,317	4,177	5,898	3,127
10	177,125	70,132	26,293	47,267	48,488	87,586	172,717	61,092	25,457	31,912	44,822	56,833
11	51,223	21,273	7,636	14,018	14,389	14,471	49,460	17,646	7,343	9,339	13,331	10,291
12	25,292	10,596	3,770	6,912	7,095	4,322	25,300	9,102	3,762	4,778	6,809	4,188
13	257,652	110,434	38,470	70,891	72,778	49,773	250,414	92,199	37,241	47,558	68,192	44,250
14	10,651	4,392	1,587	2,909	2,986	720	10,495	3,716	1,554	1,977	2,822	516
15	106,633	42,881	15,892	28,881	29,636	26,989	104,326	35,452	15,449	19,465	27,498	21,057
16	43,836	17,926	6,542	12,014	12,333	3,990	43,228	14,872	6,417	8,132	11,563	3,472
Total	1,888,757	781,276	281,440	512,423	525,867	834,677	1,841,136	648,645	272,788	344,793	488,803	601,598
Change from 2022	2.59%	20.45%	3.17%	48.62%	7.58%	38.74%						

Treaty Year Average Exposure*:

References to “Treaty Year Average” provide a view of the average exposure during the 1 June – 31 May treaty year, and is based on:

- The view of average exposure over the treaty year is made up of 5.5% aggregate from the 2023 150k cap portfolio and 94.5% from the 2023 300k cap portfolio. This is based on the average exposure calculations across the 12-month period, accounting for the change in cap at 1 October 2022
- The view of average exposure over the 2022 treaty year was made up of eight months from the 2022 150k cap portfolio and four months from the 2022 300k cap portfolio.
- Modelling assumes policies renew evenly through the year.

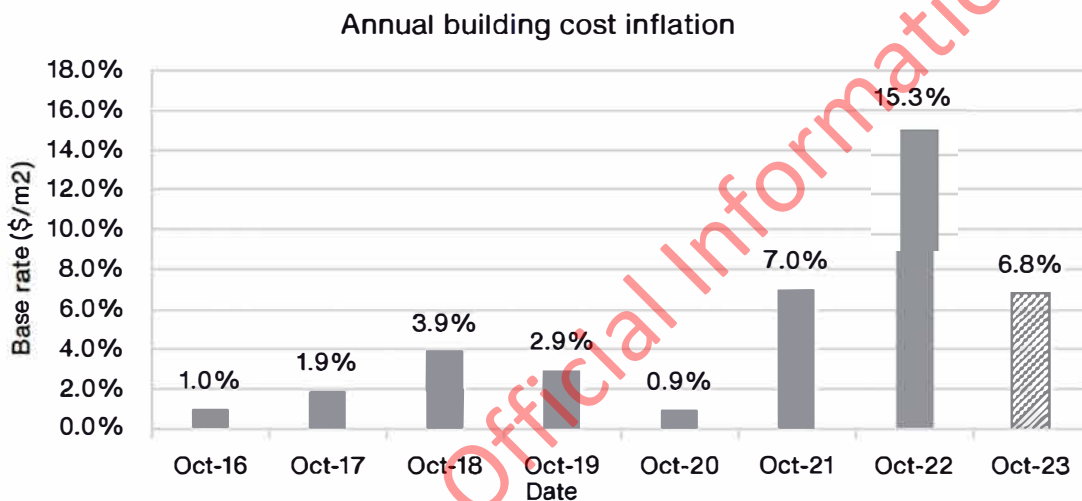
300k Cap Portfolio **::

A view of the exposures at 1 June 2022 to 31 May 2023 but assumes 100% of the portfolio is on the new NZD 300k cap basis.

Building Aggregates

EQCover automatically attaches to residential fire policies issued by private insurers, meaning that Toka Tū Ake EQC does not directly issue policies. As a result, property aggregates are based on an extract obtained from CoreLogic in September 2022, with construction rate information supplied by Quotable Value (QV) in October 2022.

Inflation has been a key consideration in the development of the portfolio. This included commissioning external advice from different sources including the New Zealand Institute of Economic Research on historical and expected inflationary drivers as well as ongoing discussion with key stakeholders such as Treasury.



The CoreLogic data includes residential building numbers, decade constructed, floor area, construction details and location information. Due to inherent delays in the CoreLogic data (and differences in definitions), the residential building values were adjusted upwards by 3.11% to bring these into line with the more up-to-date Statistics NZ numbers.

The residential building database is adjusted for non-insurance (assumed to be 5% of residential buildings that are not in the EQC scheme) and by deducting those Kāinga Ora – Homes and Communities (formerly Housing New Zealand Corporation (HNZC)) risks which are not covered by the reinsurance programme – see next section.

Three building ‘classes’ are modelled:

- Class 1 = typical 1 or 2 storey detached dwelling or duplex (the large majority of dwelling units)
- Class 2 = typical low-rise flats or similar; 2 or 3 storey with 10 or fewer dwelling units
- Class 3 = >3 storeys or >2 storeys with more than 10 dwelling units

As noted above, the data is adjusted to reflect increases in building stock and building inflation between the date of our dataset (October 2022) and the position at inception (1 June 2023).

- Building Stock: The predicted building stock growth rate of the portfolio is 1.72% over the nine month period from September 2022 to June 2023.
- Building Costs: We have allowed for a further 4.56% growth in building costs over this period (pro rata of 6.8% for the annual period).

Year on year portfolio movement reflects an increase in:

- +17.8% increase in rebuild rate
- +2.6% increase in housing stock growth
- Overall increase of +20.4% in uncapped exposures since 1 June 2022

Kāinga Ora – Homes and Communities (formerly Housing New Zealand Corporation)

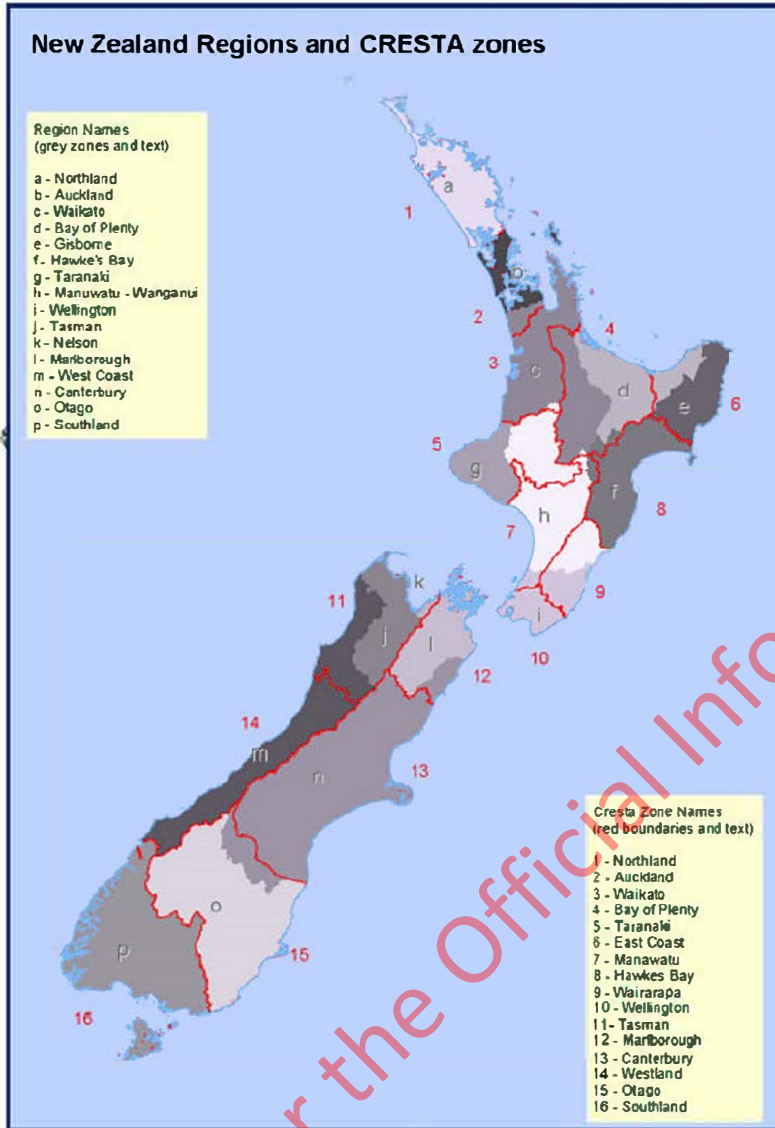
Kāinga Ora properties under NZD 2m are not covered by the EQC Scheme. This applies to all regions across New Zealand.

Land Aggregates

Insured land values were calculated by first estimating the 'EQC Land Area' – house plan area + eight metres margin (with an assumed standard house shape), plus additional area if there are known appurtenant buildings – all capped to actual land parcel size. No allowance was made for main access ways. Then 'EQC Land Value' = 'EQC Land Area' / Land parcel area * Land Market Value from the QV database. This should be reasonably accurate for urban properties but will underestimate value for rural since 'EQC Land Area' may be a minor fraction of the land parcel area but comprises a higher proportion of the value. However, rural is a small proportion of total exposure and is widely dispersed.

Note also that land values are based on council valuations which have three-year update cycles. The main drivers for land value increases this year are Auckland Council (March 2022), Wellington City Council (September 2021, released several months later (too late to have been included in the 2022 portfolio)). Several other councils have also had new valuations, however Auckland and Wellington represent a significant proportion of the national building stock.

Figure 2: New Zealand CRESTA Zones



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Section 5 PRUE - EQC's Earthquake Hazard Model

The PRUE EP-Curve and selected underlying data points are detailed below in Figure 3 and Table 3.

Figure 3: PRUE Results 2023

Figures in NZDm

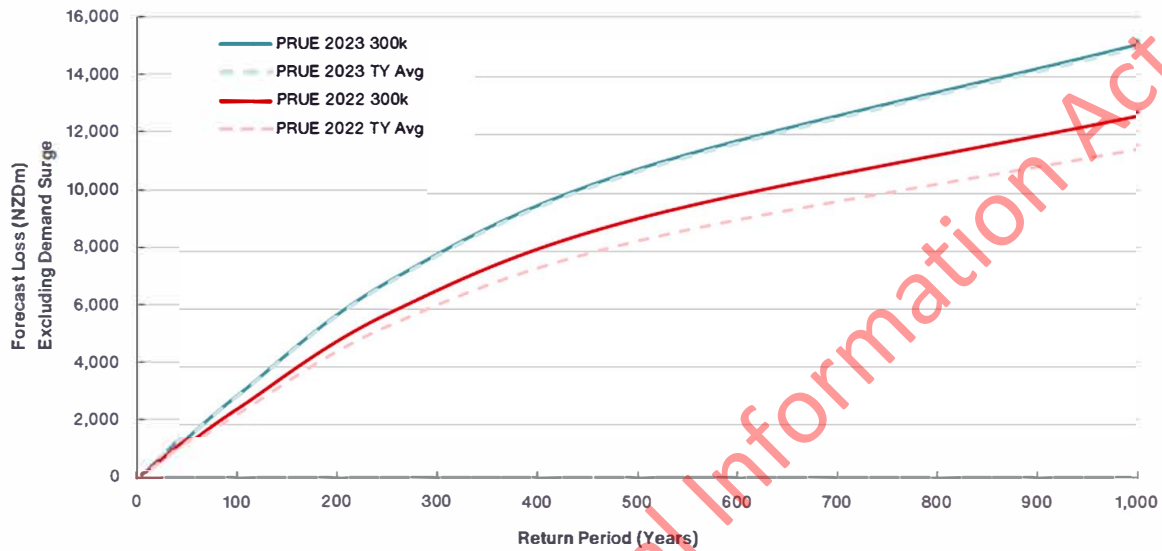


Table 3: PRUE Results 2023

Figures in NZDm

Return Period	2022		2023		% Change 2023 vs 2022 (TY Avg)	% Change 2023 vs 2022 (300k)
	PRUE 2022 TY Avg	PRUE 2022 300k	PRUE 2023 TY Avg	PRUE 2023 300k		
1000 yr	11,661	12,759	14,730	14,849	26.3%	16.4%
500 yr	8,410	9,148	10,691	10,772	27.1%	17.8%
250 yr	5,451	5,877	6,909	6,959	26.7%	18.4%
100 yr	2,439	2,603	3,051	3,071	25.1%	18.0%
50 yr	1,260	1,345	1,584	1,595	25.7%	18.6%
25 yr	607	645	760	765	25.3%	18.6%
10 yr	207	218	257	258	24.3%	18.5%
5 yr	75	78	92	93	23.7%	18.6%
Annual Avg	152	162	191	192	25.4%	18.2%
Std Dev	817	890	1,036	1,044	26.8%	17.3%

Excludes allowance for nominal land losses. As the land model is relatively underdeveloped (for example it does not explicitly account for liquefaction or landslips) Minerva / PRUE land losses have always been nominal.

Section 6 EQC’s Probable Maximum Loss Event

The estimated loss figures from PRUE for the Wellington earthquake event that EQC regard as its Probable Maximum Loss (PML) are shown in Figure 4 and Table 5 below:

Figure 4: PML Event
Figures in NZDm

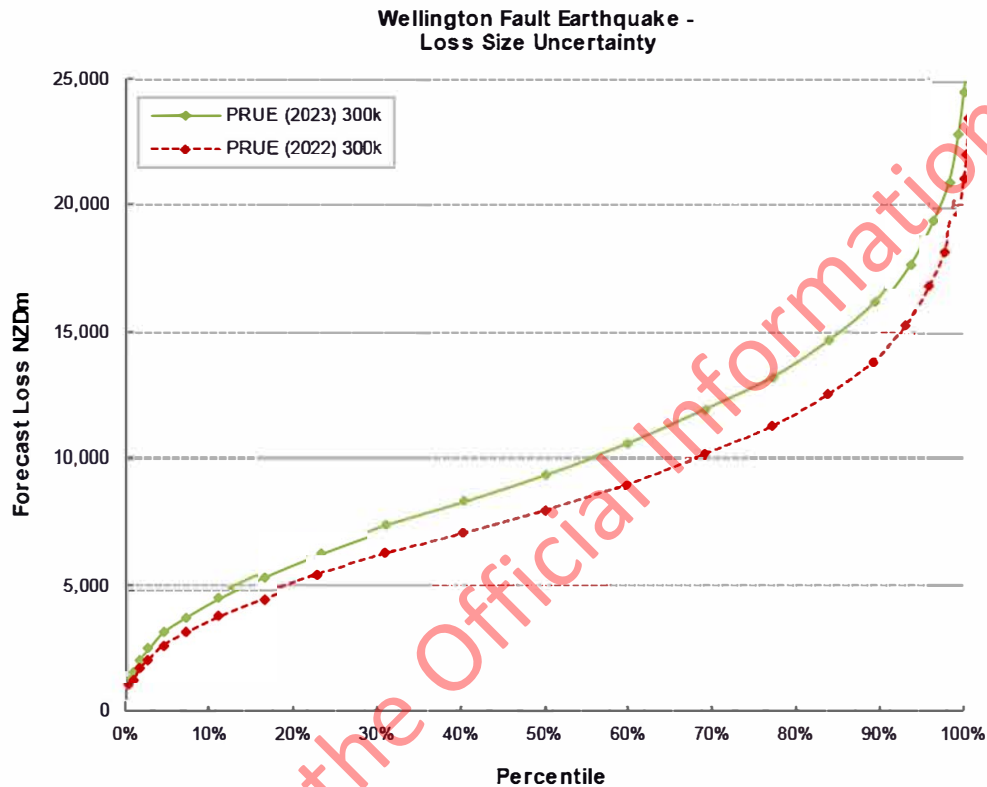


Table 4: PML Event
Figures in NZDm

	2022 150k	2022 300k	2023 300k
Mean	7,396m	8,563m	10,058m
Median	6,992m	7,953m	9,366m
66%	8,456m	9,742m	11,454m
80%	9,994m	11,672m	13,699m
90%	11,809m	14,034m	16,429m
95%	13,416m	16,214m	18,934m

A summary report of modelling results from a range of third party catastrophe models has been provided separately, along with details of modelling files available.

Section 7 Research and Modelling

Loss Modelling Update

EQC is now using its new loss modelling tool, PRUE, based on the RiskScape[®] software jointly developed by New Zealand Crown Research Institutes GNS and NIWA. PRUE currently uses the same earthquake models as Minerva, EQC's previous loss modelling tool.

One of the big research investments of the last two years has been New Zealand's new National Seismic Hazard Model, the first official update of such for many years. The model was released in October last year. We are working to incorporate the complex new model into PRUE.

Work is also underway updating our building vulnerability models and this is expected to be completed in 2023. We are also investing in hazards other than earthquakes, including working towards probabilistic volcano and tsunami models, and a new earthquake and rainfall-induced landslide model.

Resilience Strategy

In November 2019, we published [Resilience Strategy for Natural Hazard Risk Reduction 2019-2029](#). The Resilience Strategy describes EQC's intention to be a leader in natural hazard risk reduction, driven by its legislative mandate to invest in natural hazard research, data, and education.

The goal of the Strategy is to leverage this investment in research and data to provide information and advice that informs, enables, and influences the choices and decisions that reduces the vulnerability of New Zealand's built environment to natural hazard events. In pursuing this goal, EQC invests in creating, translating, and integrating information and knowledge to build 'evidence' and drive risk reduction and resilience actions.

In June 2021, the Toka Tū Ake EQC Board of Commissioners agreed to pursue three new initiatives for the Resilience function, including:

1. enhancing our role in influencing and enabling risk reduction and resilience;
2. developing a Natural Hazards Portal; and
3. to explore Toka Tū Ake EQC directly subsidising or funding risk reduction actions for homeowners.

In the last four years we have embarked on an ambitious work programme designed to implement the Strategy and Resilience Initiatives. The programme builds on New Zealand's existing efforts in understanding hazards, reducing risk and building resilience, and ensures our

investment in research and education is leveraged to maximum effect, and targeted to the results we want to see.

The foundation of this work is using the research and data we own or fund, in order to deliver reputable research-to-practice (resilience pathway). Using this approach ensures we get information into the hands of the people that can really make a difference and prioritise risk reduction actions. This includes policy-makers, planners, engineers, asset managers and homeowners.

This means it's important we ensure our research investments are targeted and effective. We use our Research Investment Priorities Statement (RIPS), to drive the disaster resilience research landscape in a way that aligns with the Resilience Strategy. The Priorities Statement outlines in some detail the areas that we see as gaps, or areas that can help EQC better achieve some of its organisational goals and objectives.

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Section 8 Loss Occurrences over NZD 10,000,000

Table 5: Loss occurrences with an approximate cost in excess of NZD 10,000,000 (in NZD of the day) since the commencement of the Fund

Month	Year	Location	Mag	Approx Cost (in NZD of the day)	No. Of Claims
March	1987	Edgecumbe	6.2	*20,150,000	4,352
August	2003	Te Anau	7.1	11,790,000	2,840
May	2005	Tauranga Landslip / Storm	N/A	23,091,000	667
March	2007	Far North/Northland Storm	N/A	12,313,000	638
December	2007	Gisborne	6.8	24,800,000	6,209
July	2008	National Storm (Northland – Canterbury)	N/A	21,000,000	917
September	2010	Canterbury (Darfield)	7.1	**4,005,000,000	156,631
February	2011	Canterbury (Lyttelton)	6.1	**7,165,000,000	157,318
June	2011	Canterbury (Sumner)	6	**608,000,000	54,211
Various	2010/11	Canterbury (all other events)***	N/A	**292,000,000	52,527
December	2011	Canterbury (“EQ4”)	5.8 & 6.0	**180,000,000	^48,796
January	2011	National Storm (Upper North Island)	N/A	19,248,000	830
April	2011	Hawkes Bay Storm	N/A	19,823,000	445
December	2011	Nelson Storms	N/A	19,073,000	989
July/August	2013	Cook Strait (Seddon)	6.5 & 6.6	30,848,000	11,482
January	2014	Eketahuna	6.2	10,139,000	5,247
February	2016	Canterbury (Sumner)	5.7	**52,644,000	13,380
November	2016	Kaikoura	7.8	**672,000,000	42,510
April	2017	National Storm	N/A	**22,851,000	1,036
July	2017	National Storm	N/A	14,025,000	605
July	2022	Nelson / Marlborough Storm	N/A	**43,000,000	2,480
January	2023	Auckland Floods	N/A		2,222****
February	2023	Cyclone Gabrielle	N/A		335****

Notes:

- All storm events include landslip related claims to buildings and contents and storm damage to land.
- *This figure represents the cost of residential claims which form part of the total claims cost of NZD 135,816,000.

- **Loss estimates are based on the latest central estimate from the actuarial analysis for 31 December 2022, including estimated claims costs and claim handling expenses (CHE). The Canterbury Earthquake figures include costs that are not recoverable from reinsurers, but rather relate to work performed in Canterbury on behalf of the Crown.
- ***This incorporates all Canterbury events other than the Darfield, Lyttleton, Sumner and the 23 December earthquakes. There are a total of 15 'insurance' events to date and table 6 above shows the split of claims and claim payments to date. Separate loss estimates for all events are not available and some events will exceed NZD 10,000,000 in total.
- ****Claims numbers as at 20 February 2023 for Auckland Floods (January 2023) and Cyclone Gabrielle (February 2023). The expectation is that both events will exceed NZD 10,000,000 but reliable loss estimates are not yet available.

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Section 9 Financial Year Results

Table 6: Results for the Financial Year to December 2022 (NZDm):

	June22	December 2022**
Premiums Net of Commission	528.1	273.49
Net Investment Income	2	4
Expenditure (excluding Reinsurance)	(121.9)	(48.1)
Claims Paid and Outstanding (net of Reinsurance)	(279.7)	(78.6)
Cash and Investments	258.4	276.5
Natural Disaster Fund	(292.6)	(270.6)

**Unaudited financial results for the six months to 31 December 2022

Claims information is as at June 2022

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Section 10 Development of the Fund

Table 7: Development of the Natural Disaster Fund/Shareholder's Equity since 1993

Year	Gross Earned Premium NZDm	Investment Income NZDm	EQ Claims NZDm	Total Claims NZDm	Operating Surplus NZDm	*Net Surplus NZDm	Fund NZD bn
94/95	87.58	152.6	1.41	7.88	163.89	46.53	2.414
95/96	76.96	125.58	1.62	5.06	146.79	126.79	2,541
96/97	71.01	196.65	**4.30	6.6	203.76	188.76	2.73
97/98	74.11	452.8	0.24	4.9	459.14	449.14	3.179
98/99	73.3	203.58	0.9	13.11	198.71	188.71	3.368
99/00	74.62	220.13	1.3	7.56	223.73	213.73	3.581
00/01	75.65	265.09	1.48	6.23	270.7	260.7	3.893
01/02	77.43	153.28	2.08	9.36	155	145	4.037
02/03	78.73	277.83	1.21	11.57	289.79	279.79	4.316
03/04	80.4	204.77	15.95	32.37	196.74	186.74	4.503
04/05	83.9	275.02	15.5	62.45	235.13	225.13	4.728
05/06	85.14	691.01	1.48	16.99	700.45	690.45	5.418
06/07	83.75	46.68	3.96	46.43	25.79	15.79	5.434
07/08	85.66	188.35	37.06	59.6	150.51	140.51	5.535
08/09	86.4	76.79	2.54	50.54	45.63	35.63	5.571
09/10	85.96	385.52	N/A	32.2	365.1	355.1	5.926
10/11	87.77	416.7	N/A	11,448.60	-7,072.61	-7,082.61	-1.156
11/12	107.5	214.9	N/A	1,192.70	445.67	435.67	-1.592
12/13	241.7	45.96	N/A	-167.40	221.64	221.64	-1.370
13/14	274.1	71.13	N/A	-271.52	298.85	288.85	-1.082
14/15	280.8	112.5	N/A	-490.30	667.5	657.5	-0.424
15/16	280.2	71.72	N/A	167.46	-22.5	-32.53	-0.457
16/17	283.2	16.7	N/A	149.73	-304.01	-313.88	-0.77
17/18	309.5	11	N/A	398.75	-169.02	-179.03	-0.95
18/19	386.59	2	N/A	302.10	424.05	414.15	-0.535
19/20	458.658	1.365	N/A	470.43	-144.37	-154.37	-0.690
20/21	533.491	0.568	N/A	-21.813	474.898	464.898	-0.225
21/22	528.305	2	N/A	279.70	-67.71	-77.817	-0.293
22/23***	273.49	4	N/A	78.57	21.99	11.99	-0.271

Notes:

EQC effected a staged withdrawal from insuring non-residential property over the period 1 January 1993 – 31 December 1996.

Premium shown is gross prior to deduction of 2.5% commission payable to insurers who collect premium on behalf of EQC.

Table figures are from financial reports – reports from 2009 onwards do not split out the EQ specific claims.

- * Surplus is net of dividend, charge in lieu of tax and Crown underwriting fee.
- ** Included two commercial volcanic eruption claims
- *** Financial results for the six months to 31 December 2022 (claims information as at June 2022)

Section 11 EQC Activity Report

Implementation of the new legislation

On 21 February 2023 the *Natural Hazards Insurance Act* was passed by the New Zealand Parliament and will come into force on 1 July 2024. Many changes are minor and fundamentally the Scheme remains the same. Key changes include:

To help New Zealanders better understand what we do and make our role clearer:

- Name change to Toka Tū Ake – Natural Hazards Commission
- New primary objective to reduce the impact of natural hazards on people, property, and the community.

To clarify what claimants may be entitled to

- Improved cover for retaining walls, bridges, and culverts
- Flat rate excess of \$500 per claim on building and land claims
- Improved consistency and cover for mixed-used buildings and clear statement of repair standards
- Increased EQCover building cap from \$150,000 to \$300,000, which came into effect on 1 October 2022.

To support improved claims management processes and customers experience

- Extended period for volcanic activity from 48 hours to 7 days to count as a single claim and excess
- Requires the Commission to participate in a Dispute Resolution Scheme
- Requires a Code of Insured Person's Rights which will set out rights and a complaint and review process for any possible breaches of said rights

To improve transparency and governance

- Regular reviews required of levy, caps and other financial settings
- A funding and risk management statement
- Removal of ability to discount levies payable by insurers

To improve administration processes

- Clarifying and strengthening the Commission's information gathering and sharing powers
- Updating offences and penalties

We are not expecting any further changes to the Scheme over the coming few years. We are in the early stage of implementation planning for the new legislation and this will continue to be our focus in 2023, along with continuing to build our partnership with private insurers.

Event Readiness and Response

On 30 June 2021 the Natural Disaster Response Model (NDRM) became operational with Toka Tū Ake EQC partnering with the private insurance market to manage all natural hazard claims on our behalf. This is a world leading initiative covering more than 95 percent of the New Zealand residential market.

Our partnership with private insurers puts customers front and centre when they need it most. It is a step change from our Canterbury experience, which we have taken many lessons from. By managing EQCover claims on our behalf, customers have one point of contact throughout their entire claim, simplifying the process for them.

In the first 18 months or so of operating to December 2022, approximately 6,500 EQCover claims have been lodged through private insurers. The majority of these have been driven by storm and flood events with around 62 percent for landslips, 18 percent for earthquakes and the remainder mostly a mix of storm (9%) and flood (11%) damage (to land only). At the time of writing, EQCover claims for two more recent weather events (Auckland Floods and Cyclone Gabrielle) were still being lodged with private insurers.

The model is supported by a Data Hub and Exchange with all eight insurers onboarded prior to operational commencement of the NDRM. Through this new arrangement insurers are providing both capped exposure and claims data to Toka Tū Ake EQC. We undertake validation and assurance activities and are building a database to support our wider objectives. The electronic data exchange is a key step toward Toka Tū Ake EQC realising its Readiness strategic vision through the delivery of a world-leading operating model.

Comprehensive guidance and training is in place, supporting partners to deliver EQCover claims consistently and in line with the EQC Act. As well as providing the structure and operational baseline to deliver EQC Act obligations, this gives Toka Tū Ake EQC assurance each partner is aware of what's expected and how they'll deliver to those expectations. Events have provided partners the opportunity to demonstrate and enhance their EQCover claims management capabilities, in particular, EQCover for land, with behind-the-scenes coordination and support from Toka Tū Ake EQC as needed.

In addition to the work on the NDRM, the Readiness Team is continuing to:

- Develop and enhance event scenarios and EQCover response strategies for all natural disasters, including volcanic and tsunami events. The scenarios and strategies we have

developed to date include a M7.6 earthquake in Hawke's Bay, a rupture of the Alpine Fault in the South Island and a volcanic eruption of Mount Taranaki.

- Actively engage with local communities, partners, agencies and key stakeholders in the design of our event response plans
- Test and exercise event scenarios with our insurer partners at least every eight months in order to refine our response plans to ensure they deliver the expected customer and strategic outcomes

Post-Event Recovery – Dampening Surge Inflation

The New Zealand Government has shown a willingness to intervene in the recovery from large scale natural hazard events to dampen the impact of inflation and assist the recovery process. This was a feature of the managed repair process following the Canterbury Earthquakes. In its 2019 report *Demand Surge Perspective on the Canterbury Earthquake Sequence*, Verisk concluded that "one of the main goals of [Toka Tū Ake EQC] is to keep repair costs under control, and the data suggested that this goal was largely met for [residential losses]".²

Dame Sylvia Cartwright concluded in the *Report of the Public Inquiry into the Earthquake Commission* that "there is every prospect that following a future major event or series of events, it will again be necessary to coordinate repair of land and residential buildings and a similar managed repair process will be adopted. It is rational to undertake a managed repair programme; this fulfils many requirements to provide adequate housing for a traumatised population and ensures that the inevitable costs and rationing of resources can be managed fairly and efficiently."³ The Report concluded that the Government should proactively plan how a managed repair programme might be initiated and executed should it be required. This work is ongoing.

Incident Management Framework

Prior to the Canterbury Earthquake Sequence, Toka Tū Ake EQC's Response Plans were predominantly focussed on specific event response rather than wider business continuity planning. Today, Toka Tū Ake EQC has a range of plans and procedures in place to make sure our people are safe, and our organisation can continue to operate in an incident or event that impacts staff, our offices and/or functions. These plans work together and support each other as part of the Incident Management Framework.

Incident Management Plan

The main overarching plan in Toka Tū Ake EQC's Incident Management Framework. It outlines Toka

² Verisk, *Demand Surge Perspective on the Canterbury Earthquake Sequence*, December 2019

³ P. 14 <https://dpmc.govt.nz/sites/default/files/2021-01/report-of-the-public-inquiry-into-the-earthquake-commission.pdf>

Tū Ake EQC's arrangements for responding to an incident that disrupts operations or the environment Toka Tū Ake EQC operates in.

Event Response Plan

An Event Response Plan (ERP) is used if there is a natural disaster requiring event management. The ERP outlines how Toka Tū Ake EQC will respond to a natural disaster that exceeds BAU capability, such as a significant volume of customer claims. The ERP includes the event phases, Event Response Team structures and roles, and development of key event response documents.

Disaster Recovery Plan

Outlines how ICT services and systems can continue, or be restored within specific timeframes, following disruption to normal services.

Site Response Plans

Outlines the procedures and management structure to put in place to mitigate and respond effectively to a disruptive incident at an Toka Tū Ake EQC site. If the incident escalates, Business Continuity Plans or the Incident Management Plan may be activated.

Business Continuity Plans

When a disruptive incident occurs, outlines how Toka Tū Ake EQC can ensure that essential services of the business are maintained, and business functions recover as quickly as possible.

Pandemic Response Plan

The Pandemic Response Plan (PRP) document represents Toka Tū Ake EQC's plan for continued operations during a pandemic event, focusing in particular on ensuring the health, safety, and wellbeing of our people; and enabling business continuity for EQC's critical business functions.

During 2021, Toka Tū Ake EQC has enhanced its readiness capability across several key areas including the operationalisation of the insurer response model, internal capability build, assurance and stakeholder and community engagement. As part of the process, Toka Tū Ake EQC's Incident Management framework will continue to evolve and change as appropriate.

Appendix 1 – EQCover - An Insurer’s Guide

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EQCOVER INSURERS' GUIDE

October 2022

Version 2.0

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ABOUT THIS GUIDE

This guide provides a general summary of EQCover. However, Toka Tū Ake EQC is required to act in accordance with the provisions of the Earthquake Commission Act 1993 (EQC Act). In the case of any conflict between the information in this guide and the provisions of the EQC Act, the provisions of the EQC Act will prevail.

For the purposes of assessing EQCover, this guide's references to 'renewal' are intended to reflect the anniversary of the existing policy. It does not refer to other periodic renewal arrangements some customers and insurers may enter from time to time.

GST: All monetary figures in this guide are quoted exclusive of GST (excluding Appendix A: EQCover Claims and Excesses). In addition to the amounts quoted, there will be an additional payment for GST where Toka Tū Ake EQC is satisfied GST has been paid or will be paid by the insured in the course of replacing or reinstating the property [section 29 (3) of the EQC Act].

This guide was updated in October 2022 to reflect the cap and premium changes discussed below.

EQCOVER CAP AND PREMIUM CHANGES OCTOBER 2022

There have been amendments to the Earthquake Commission Regulations 1993. These take effect on or after 1 October 2022. The changes are as follows:

- The EQCover Building Cover Cap (EQCover cap) is increasing from \$150,000 to \$300,000.
- The EQCover premium (levy) is changing from 20 cents per \$100 of EQCover Building Cover to 16 cents per \$100 of EQCover Building Cover.

The increased EQCover cap results in the maximum payable EQCover premium increasing from \$300 to \$480. The changes apply to all new insurance policies (that include fire insurance) from 1 October 2022, and to all existing policies on their next anniversary after that date.

For policies that commenced or renewed from 1 July 2019 to 30 September 2022 also refer to the June 2021 version of this publication.

INTRODUCTION

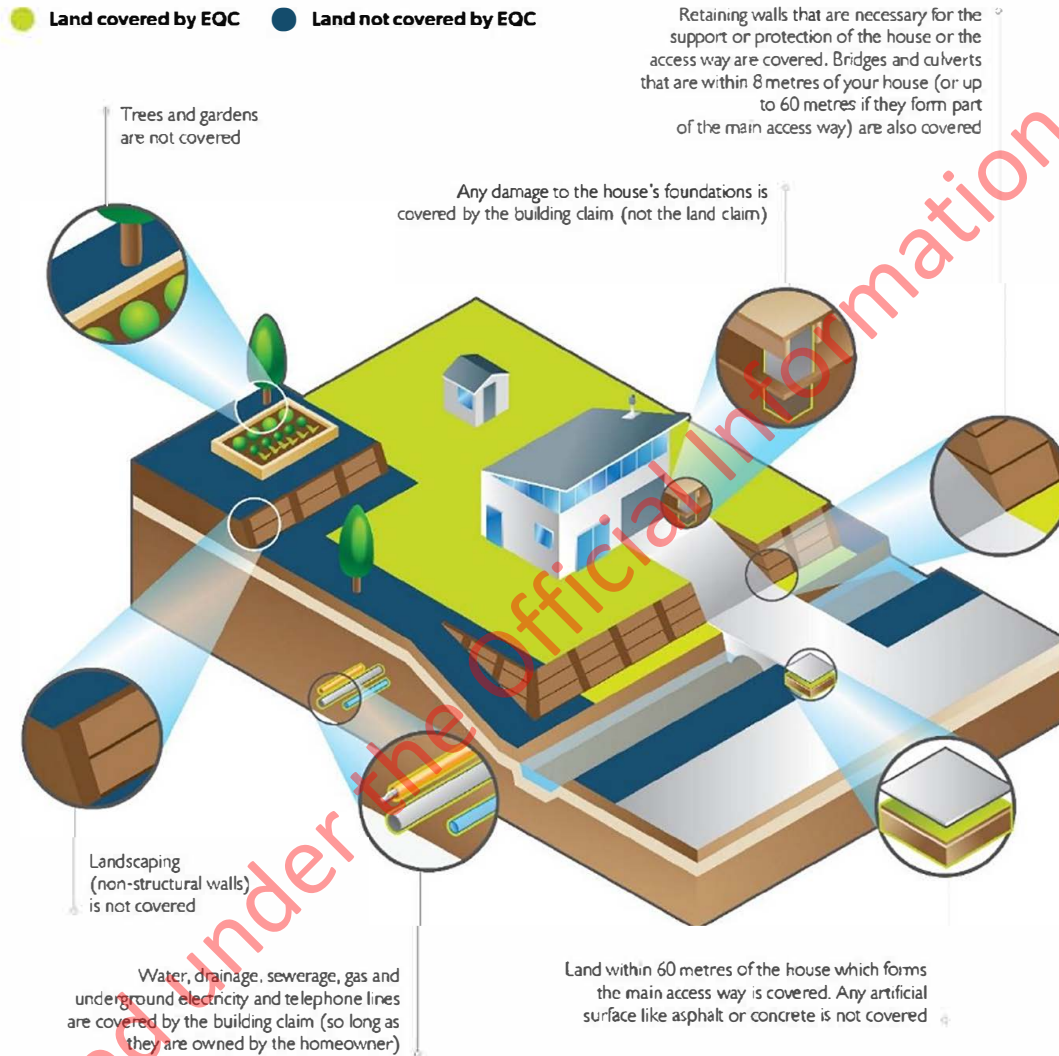
The EQC Act establishes the New Zealand government's natural disaster insurance product, commonly known as EQCover.

EQCover applies to a building (or part of a building) of which 50% or more of the floor area contains one or more dwellings. This is referred to as a 'residential building'.

Using the property below as an example, EQCover applies to the following:

Residential building	Dwelling(s), appurtenant structures and certain services (where those services are within 60 metres of the building, owned by the owner of the building or the land it sits on) for (usually) \$150,000 per event.
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<p>Residential land</p>	<ul style="list-style-type: none"> • Land under the building. • Land surrounding the building (8 metres around the building). • Land under the main access way to the building up to 60 metres in a straight line from the building or land supporting that access way. • Retaining walls supporting or protecting the insured area of land or the building up to 60 metres from the building. • Bridges and culverts in or on the insured area of land. • See paragraph 8.2 regarding the amount of cover.
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RESIDENTIAL BUILDINGS

SUMMARY

Step 1: Is the building within the scope of EQCover?

There must be a contract of fire insurance in place.

Step 2: Is it a 'residential building'?

A residential building is a building (or part of a building) where 50% or more of the floor area:

- provides long-term accommodation for the elderly
- comprises one or more dwellings.

Step 3: Does the building contain a 'dwelling'?

A. Self-contained:

- Provides the necessities of day-to-day living.
- There must be somewhere to live, cook, carry out ablutions, sleep, wash.

AND

B. Actually a home or holiday home or capable of being and intended by the owner to be a home or holiday home:

- Home:
 - Occupied, or intended for occupation, on more than a temporary or transient basis.
 - Prime purpose of the property is to serve as a domestic residence.
 - Person occupying is there by choice.
- Holiday home:
 - Owners intend to use the property as a holiday home.
 - Must be capable of use by the owner as a holiday home.
 - Unlikely to qualify if situated on the same land as the owner's residence.

Step 4: Consider guidance on the specific dwelling type.

Refer to the relevant section of this guide for each dwelling type as listed below:

Bed and breakfast accommodation (4.5)	Home or holiday home (3.1, 3.2, 3.3)
Boarding house (4.6)	Long term accommodation for the elderly (4.16)
Body corporate apartment building (4.10)	Multiple buildings, single policy (4.12)
Caravan and tiny house (4.7)	Multi-unit building (4.9)
Fractional ownership residential property (4.15)	Mixed use building (4.11)
Garage and garden shed(4.2)	Residential building under repair/renovation (4.3)
Granny flat and sleepout (4.13)	Serviced apartment and timeshare (4.8)
Holiday accommodation and motel (4.14)	Show home (4.4)

1. SCOPE OF COVER

1.1 Under Section 18 of the EQC Act

Residential buildings with a contract of fire insurance are insured under EQCover against physical loss or damage occurring as the direct result of a natural disaster. 'Natural disaster' means:

- a. an earthquake, natural landslip, volcanic eruption, hydrothermal activity, or tsunami; or
- b. a natural disaster fire (which is fire caused by a natural disaster in (a) above or (c) below); or
- c. in the case only of residential land, a storm or flood.

EQCover for a 'residential building' extends to any 'appurtenant structures' (see Section 1.3 below) and 'services' (see Section 1.4 below). Much of this guide provides information about what is and is not a residential building and therefore, what can be insured by EQCover.

1.2 Fire insurance

For EQCover to apply, there must be a valid policy of fire insurance over the property at the time of loss. It is the policy of fire insurance that brings the qualifying property 'on-risk' for the purpose of EQCover.

The EQC Act describes a policy of fire insurance as a contract whereby any property is insured against physical loss or damage by fire (other than natural disaster fire). This is whether the contract includes other risks or not, but does not include any contract of marine insurance or any contract of reinsurance.

1.3 Appurtenant structures included with residential building

EQCover will also apply to certain buildings or structures appurtenant to the residential building.

An appurtenant structure may be covered if it is a building or structure that is used for the purposes of the household of the occupier of the dwelling.

This definition comprises three key elements.

- a. building or structure, and
- b. it is appurtenant to a dwelling, and
- c. it is used for the purposes of the household.

1.4 Services included with a residential building

EQCover will apply for certain services if the service:

- a. serves the residential building or surrounding land, and
- b. is owned by the owner of the building (or by the owner of the land on which the building sits), and
- c. is situated within 60 metres of the building.

The services covered are water supply, drainage, sewerage, gas, electrical and telephone services, and structures appurtenant to those services.

1.5 No cover beyond direct physical loss or damage

EQCover does not extend beyond physical loss or damage to the insured property occurring as the direct result of a natural disaster. Physical loss or damage in relation to property includes any physical loss or damage to the property that (in the opinion of Toka Tū Ake EQC) is imminent (i.e. is expected to occur in the next 12 months) as the direct result of a natural disaster that has occurred.

For example, in the event of natural disaster damage to a bore, a change in the water quality or the disappearance of the water itself is not covered, but any damage to the bore infrastructure is.

1.6 Amount of cover

The maximum amount of insurance available under EQCover for a residential building is the lesser of the following three alternatives:

1. The replacement sum insured as noted in the fire insurance policy*.
2. If there is no replacement sum insured, then the sum specified in respect of EQCover**.
3. The amount arrived at pursuant to the following formula:***
 - Number of dwellings x \$300,000 = amount of cover.

* If the fire policy covers a residential building for a replacement sum insured, the size of the dwelling is not used to calculate EQCover.

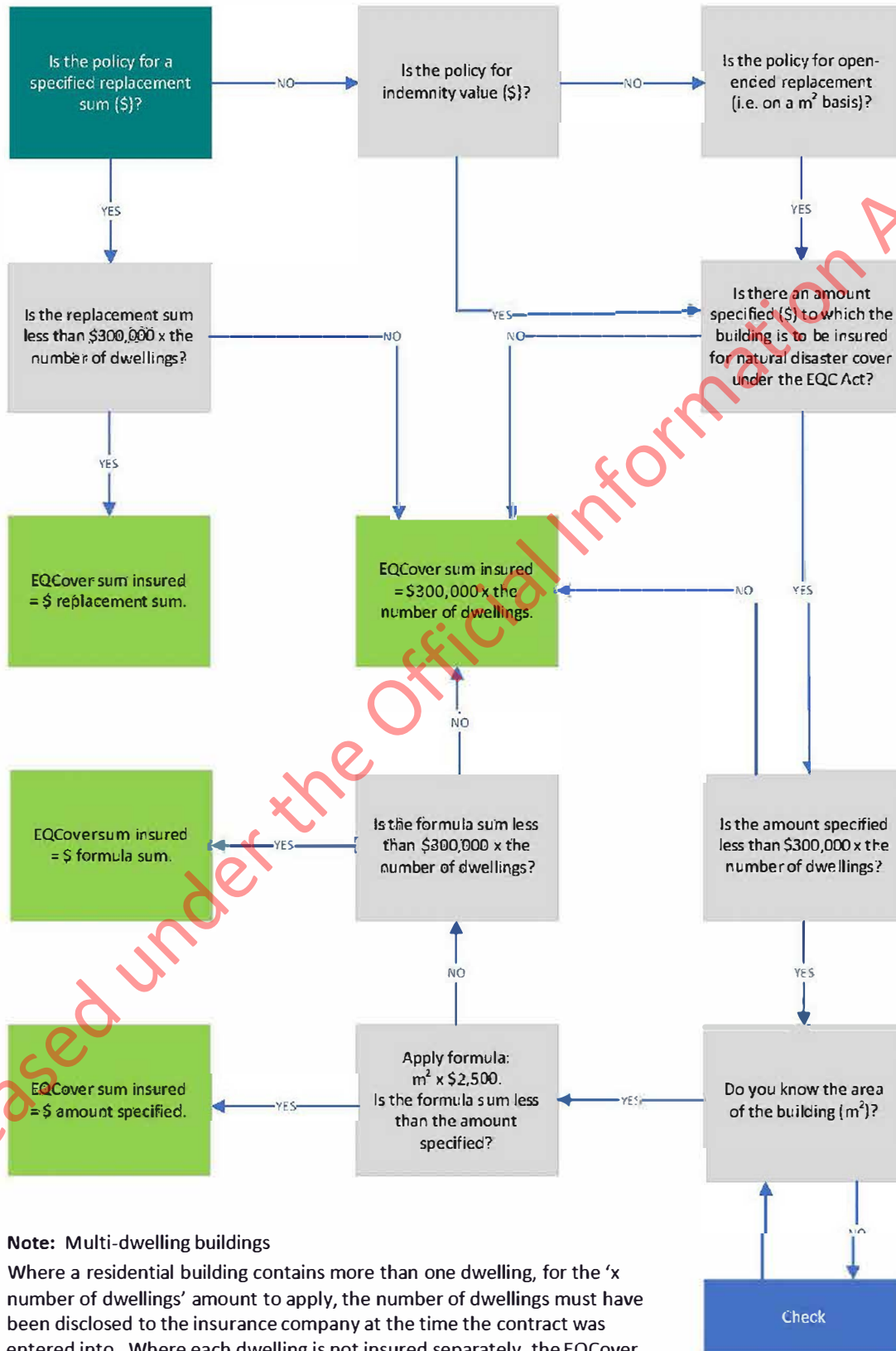
** Alternative 2 - Cannot be less than: size of dwelling (m²) x \$2500 = amount of cover (maximum = \$300,000 per dwelling per event)

*** Alternative 3 - A building is deemed to comprise one dwelling unless the existence of more than one dwelling was advised to the company providing fire insurance at the outset of that policy (or before its most recent renewal).

Example residential building with a single dwelling	For policies commenced or renewed from 1 October 2022. EQCover (the maximum amount of insurance available per event)
Replacement sum insured = \$800,000	\$300,000 (because it is less than the replacement sum insured)
Replacement sum insured = \$250,000 Area = 65m ²	\$250,000 (lesser of replacement sum insured or \$300,000)
Open-ended replacement cover Area = 220m ²	\$300,000 (because no replacement sum insured and no EQCover sum insured specified)
Open-ended replacement Area = 90m ²	\$300,000 (because no replacement sum insured and no EQCover sum insured specified) If EQCover sum insured specified, EQCover can be specified between: <ul style="list-style-type: none"> • \$225,000 (min: \$2,500 x 90m²) • \$300,000 (max: \$300,000 x one dwelling)
Indemnity value Area = 55m ²	If no EQCover sum insured specified, EQCover will be \$300,000. If EQCover sum insured specified, EQCover can be between: <ul style="list-style-type: none"> • \$137,500 (min: \$2,500 x 55m²) • \$300,000 (max: \$300,000 x one dwelling)

1.7 Extent of EQCover

Follow the diagram to work out the sum insured by EQCover under your policy.



Note: Multi-dwelling buildings

Where a residential building contains more than one dwelling, for the 'x number of dwellings' amount to apply, the number of dwellings must have been disclosed to the insurance company at the time the contract was entered into. Where each dwelling is not insured separately, the EQCover sum insured applies to the residential building as a whole. If the number is not disclosed, the number of dwellings is 'one'.

2. RESIDENTIAL BUILDING TEST

Every time a contract of fire insurance is made or renewed, it must be determined whether a building or part of a building meets the definition of a 'residential building'.

If, during the period of the fire insurance, a building or part of a building ceases to meet the definition of a 'residential building', EQCover will continue until the insurance is renewed, lapses or is cancelled.

When the contract of fire insurance:

- is due to be renewed, if the building or part of the building no longer meets the definition of a 'residential building', EQCover will cease
- lapses or is cancelled, EQCover will cease.

There may be scenarios where you have to consider whether EQCover applies to a building in whole or in part. For more information, see Section 4 below.

3. DWELLING TEST

To establish the existence of a dwelling, the premises must:

- be self-contained, and either
- be the home or holiday home of at least one person

or

- be capable of being the home or holiday home of at least one person and be intended by the owner of the premises to be the home or holiday home of at least one person.

Self-contained	+	is the home or holiday home of one or more persons	=	dwelling		
Self-contained	+	is capable of being the home or holiday home of one or more persons	+	is intended by the owner to be the home or holiday home of one or more persons	=	dwelling

3.1 Self-contained

To be self-contained, a dwelling must contain the facilities necessary to meet the occupants needs for day-to-day living on an indefinite basis. They do not have to be in one building but must be for the exclusive use of the dwelling. There must be somewhere to:

- cook
- sleep
- live
- wash
- carry out ablutions.

For example, a property may have:

- an external ablution building on the grounds that is not shared with any other dwellings, rather than an inside toilet.
- a sink and fridge with a microwave and a bench-top oven or hob for cooking, rather than a hard-wired oven.

3.2 'Home' or a 'holiday home'

a. Home

Where a person chooses to live (whether alone or with others) on a more than temporary or transient basis and the prime purpose of the premises is to serve as someone's home, then this will constitute a home for EQCover purposes.

Examples include:

- an owner-occupied home
- a home leased to a tenant
- flatting situations.

b. Holiday home

A holiday home is a secondary residence for someone whose home is elsewhere. It may be used on a transient basis by that person, usually for holidays.

A building is unlikely to be a holiday home if:

- it is set up purely as a commercial enterprise and the owners do not use it or intend to use it for their own purposes (or for someone else to use it as their holiday home)
- it is owned by an organisation that owns holiday homes purely for the benefit of its members and these members pay to stay there
- it is on the same property as the owners' residence. Even though others, such as family and friends, may use the building for holidays or visits, it is unlikely to be the holiday destination for the owners or the holiday home of any other person.

3.3 'Capable' of being the home or holiday home

Where a building contains all the requisite components needed for a home but is not occupied as a home, it can still be covered by Toka Tū Ake EQC if it is capable of being a home and is intended by the owner to be a home. For example, a tenanted property might have a period where it is untenanted. If this period occurs at the renewal date of an insurance policy, then the building is not being used as someone's home. However, if the landlord is intending to tenant the building during the insurance period, then it will be considered capable of being a person's home.

3.4 'Intended' by the owner to be a home or a holiday home

a. Intended to be a home

There are no defined criteria to evidence this intention. It is inferred from circumstances such as:

- the owner's description of what the owner is intending to do with the property
- lease/tenancy type and duration
- the type of insurance policy covering the property and
- steps the owner is taking to tenant the property (e.g. advertisements).

b. Intended to be a holiday home

From the circumstances there must be an intention on the part of the owner to keep returning, no matter how minimal the use. At a minimum, it is acceptable if the owner has the entitlement to occupy the property whenever they wish, and they store their possessions there.

It is contemplated that a holiday home may be used:

- solely by the owner
- by friends and family, as well as the owner
- by tenants on a periodic basis (including short-term holiday accommodation), as well as the owner when they want to use it.

3.5 Situations where there is not a dwelling

As guidance, a dwelling will generally be of the same scale as a house or other typical place of residence.

Examples of situations where there is not a dwelling include:

- premises that provide temporary or transient accommodation (e.g. hotels and motels)
- premises where the occupants living there are not in occupation by their own free will (e.g. prisons, police cells and lock ups, New Zealand Defence Force barracks and service penal establishments)
- premises that do not have as their prime purpose the provision of somewhere to live on an indefinite basis (e.g. hospitals, hotels and night shelters)
- university hostels, boarding school accommodation, club houses or workers' hostels.

4. PROPERTY-SPECIFIC GUIDANCE

To come within paragraph (a) of the definition of 'residential building' in the EQC Act, a building (or part of a building, or other structure) must comprise or include one or more 'dwellings' and the area of the dwelling or dwellings must constitute 50% or more of the total area of the building (or part of a building, or other structure). Section 3 of this guide explains what constitutes a dwelling. This section looks at how the dwelling requirements apply in particular situations and considers the rest of the definition of 'residential building'.

4.1 Dwellings

EQCover applies to dwellings that include:

- where the owner lives in them (whether with others or not)
- where the whole dwelling is rented by a tenant (whether with others or not)
- flatting situations (whether one occupant rents the entire dwelling and lets others live there or each occupant rents a bedroom exclusively from the landlord, sharing other facilities in common)
- where occupants rent individual rooms on a more than transient or temporary basis, from a landlord and where the occupants share common facilities.

4.2 Garages, garden sheds and similar

EQCover will apply if these structures are appurtenant to a residential dwelling (see Section 1.3)

4.3 Contract works policy—residential dwelling under extensive repair or renovation

As previously stated, the 'test date' to determine if the building is a residential building for the purposes of EQCover is the time the contract of fire insurance is made or renewed. The fire policy could be either a standard home policy or a contract works policy.

If the building is a residential building at the time the contract of fire insurance is made or renewed, EQCover for the building will continue.

If, during the period of the fire insurance, a building ceases to meet the definition of a 'residential building', EQCover will continue until the insurance is renewed, lapses or is cancelled.

When the contract of fire insurance:

- is due to be renewed, if the building no longer meets the definition of a 'residential building', EQCover will cease
- lapses or is cancelled, EQCover will cease.

This has significant implications regarding buildings under renovation.

4.4 Show homes

Toka Tū Ake EQC does not provide cover for buildings such as show homes that are purely used to showcase a product or design. These are not a home to anyone and there is no present intention they will be lived in as a home.

If at the time the contract of fire insurance was made or most recently renewed, the show home is on the market to be sold and the intention is that once it has sold it will:

- be someone's home, EQCover does apply
- continue to be used as a show home or a commercial building, EQCover will not apply.

4.5 Bed and breakfast accommodation

Where a person lives in a house but also provides bed and breakfast accommodation from the house, it will as a whole, generally be a 'dwelling' for the purposes of the EQC Act. That is because the house comprises self-contained premises, where the purpose remains that it is the home of one or more persons. There is nothing in the EQC Act that excludes cover for all or part of a house simply because the person whose home it is chooses to have paying guests stay in their home.

Similarly, where a person's home or holiday home is made available to others for short-term holiday accommodation (including for example, on Airbnb or Bookabach), the home or holiday home will generally be a dwelling for the purposes of the EQC Act if the home or holiday home remains available for the owners to use as their holiday home when they wish (see Section 3.4).

If a property contains two (or more) self-contained premises, it is necessary to consider whether each premises meets the dwelling test. It might be that one of the premises is covered as a dwelling under the EQC Act while the other is not.

Example 1

There are two self-contained buildings on the same property. The owners use one of the buildings as their home, and the other building is used solely for short-term accommodation.

The first building is covered as a dwelling because it comprises self-contained premises, and that premises is the home of the owners.

The second building is not covered as a dwelling. Although it is self-contained, it is not used as the home or holiday home of any person. However, it may be covered as an appurtenant structure to the first dwelling if it meets the requirements for being an appurtenant structure (and not solely for short-term rental accommodation).

Example 2

A two-level building is partly used as a bed and breakfast property. Each floor of the building is self-contained. The top floor is used by the owners as their home. It has two bedrooms and is self-contained with a total floor area 90m².

The ground floor is also self-contained and is devoted to bed and breakfast accommodation only. The ground floor contains 2 bedrooms with a total floor area of 100m².

EQCover does not apply to the whole building. The premises comprising the top floor is somebody's home, and the area of the top floor is not 50% or more of the total area of the building. However, EQCover applies to the top floor. That is because it is a part of a building and that part of the building is self-contained and 50% or more of the floor area of that part (i.e. the top floor) comprises a dwelling as defined by the EQC Act.

4.6 Boarding houses and similar

See Section 4.9 — Multi-unit buildings.

4.7 Caravans and tiny houses

There are two distinct types of caravan or tiny house accommodation. EQCover depends on the circumstances of the caravan or tiny house in question.

Type 1

The caravan or tiny house:

- is not connected to local services
- can be moved easily between locations (e.g. is on wheels or a trailer).

EQCover **does not** apply.

Type 2

The caravan or tiny house is:

- self-contained
- connected to local services and/or can be self-sufficient
- cannot be moved (e.g. wheels removed, fixed to piles, positioned on a platform or surrounded by a deck).

EQCover **does** apply.

The extent of cover depends on whether the caravan or tiny home is insured for indemnity value.

Indemnity value: EQCover is the lesser of:

- \$300,000 or
- size of dwelling (m²) x \$2,500 (if EQCover sum insured specified).

Replacement sum insured: EQCover is the replacement sum insured, up to a maximum of \$300,000. For example, if the replacement sum insured specified in the policy is \$50,000 that is the amount of EQCover.

4.8 Serviced apartments and timeshares

Serviced apartments and timeshares are not usually covered by EQCover. However, if:

- there is a self-contained manager's accommodation, that accommodation is covered (subject to meeting the other requirements of a dwelling)
- the building has both serviced and owner-occupied apartments, EQCover applies to the owner-occupied apartments (and may also extend to the whole building in circumstances where the owner-occupied apartments form 50% or more of the floor area of the building).

See Section 4.16, example 2 for apartment style accommodation in a retirement village.

4.9 Multi-unit buildings

There are several situations where a residential building contains more than one 'dwelling' within its structure (e.g. apartment buildings or large buildings divided into flats).

In these situations, and where the fire insurance policy is over the whole building, EQCover generally applies to the building as a whole, not on a dwelling-by-dwelling basis. The number of dwellings in the building is relevant to calculating the EQCover amount as this is used in the formula in Section 1.6, option 3 (\$300,000, x number of dwellings).

A residential building is deemed to comprise one dwelling unless the existence of a higher number of dwellings is disclosed to the insurer at the time the contract of fire insurance is made or renewed.

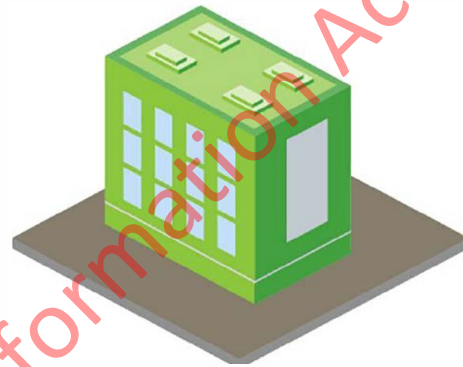
It is essential that the number of dwellings within the building is disclosed to the insurer in order to use this number in the calculation of EQCover. If it is not disclosed, the number of dwellings used in the formula is one and the EQCover would be the least of any replacement or EQCover sum insured or \$300,000.

4.10 Body corporate apartment buildings

The EQCover calculations below are scenarios for 12 apartments in a body corporate building where there is a single contract of fire insurance over the whole building. The existence of 12 dwellings has been disclosed to the insurer.

- Replacement sum insured of building = \$6,000,000, which means EQCover = \$3,600,000 (i.e. 12 x \$300,000).
- Replacement sum insured of building = \$1,000,000, which means EQCover is limited to \$1,000,000.
- Insured for indemnity only, which means EQCover is \$3,600,000 (i.e. 12 x \$300,000) for the building (unless lesser amount specified, see section 1.6).

Apartment	Apartment	Apartment	Apartment
Apartment	Apartment	Apartment	Apartment
Apartment	Apartment	Apartment	Apartment



4.11 Mixed use building

The examples below show the maximum cover available under the EQC Act. A residential building is deemed to comprise one dwelling unless the existence of more dwellings is disclosed to the insurer at the time the contract of fire insurance is made or renewed.

Example 1

Five self-contained apartments and one retail shop in a building with a single owner and a replacement sum insured of \$5,000,000.

EQCover is limited to 5 x \$300,000 = EQCover of \$1,500,000 for the building, provided the five dwellings are disclosed to the insurer at the time the contract of fire insurance is entered or renewed.

As more than 50% of the building comprises 'dwellings', Toka Tū Ake EQC would cover damage anywhere in the building.

Apartment
Apartment
Apartment
Apartment
Apartment
Retail Shop

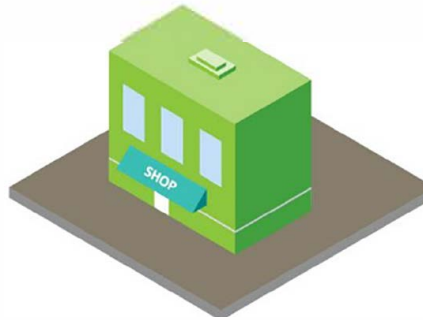
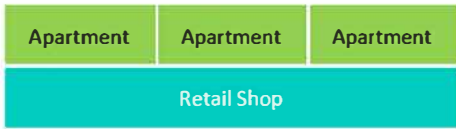


Example 2

Three flats and a retail shop in a building with a single owner and a replacement sum insured of \$800,000.

EQCover is \$800,000 (being less than 3 x \$300,000)

As 50% of the total area of the building comprises 'dwellings', Toka Tū Ake EQC would cover damage anywhere in the building.



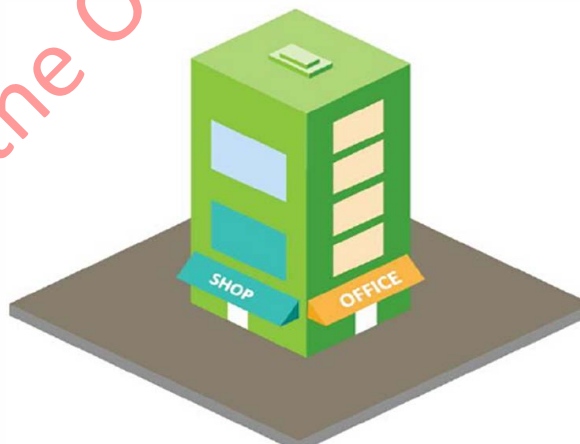
Example 3

One apartment, offices and retail shops in a building with one owner and a replacement sum insured of \$3,000,000.

The definition of 'residential building' includes a 'part of a building' that comprises one or more 'dwellings' if the area of the dwellings is 50% or more of the total area of that part of the building. The top floor is a part of a building that meets this definition. Accordingly, that part counts as a residential building.

EQCover is limited to 1 x \$300,000 = EQCover of \$300,000 for the residential part of the building.

Only damage to the top floor is covered by Toka Tū Ake EQC. The whole building is not an insured residential building, as less than 50% of the total area of the whole building comprises dwellings.



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4.12 Multiple buildings or dwellings covered by a single insurance policy

There are often situations where a contract of fire insurance will cover two or more separate residential buildings. It is also possible that some of these buildings contain multiple dwellings. It is also possible that some of these buildings contain multiple dwellings.

For example, a body corporate complex might consist of five distinct buildings, each containing two dwellings. EQCover is calculated for each residential building and based on the number of dwellings disclosed.

Where a policy covers multiple residential buildings with a single replacement sum insured (i.e. it 'floats' over all the buildings and does not identify an amount each building is insured for) then the replacement sum insured is not used for calculating the EQCover.

In these situations, it would be possible for the policy to specify an EQCover sum insured for each of the residential buildings. However, the EQCover is limited to a maximum of \$300,000 per dwelling for each building.

Situation	EQCover
<p>Body corporate complex. Four residential buildings, each with two units, disclosed to insurer. Unit area = 50m².</p> <p>Replacement sum insured 'floats' across all buildings in body corporate = \$4m.</p>	<p>If EQCover sum insured specified, EQCover can be between:</p> <ul style="list-style-type: none"> • \$1,000,000 (min: \$2,500 x 50m² x eight dwellings³) and • \$2,400,000 (max: \$300,000 x eight dwelling) <p>If no sum specified EQCover is maximum.</p>
<p>Policy covering two residential buildings. Each building contains a single dwelling.</p> <ul style="list-style-type: none"> • Building one replacement sum insured = \$1m • Building two indemnity value, area = 50m² 	<ul style="list-style-type: none"> • Building one = \$300,000 • Building two = If no EQCover sum insured specified, EQCover will be \$300,000. <p>If EQCover sum specified, EQCover can be specified between:</p> <ul style="list-style-type: none"> • \$125,000 (min: \$2,500 x 50m²) and • \$300,000 (max: \$300,000 x one dwelling)



4.13 Granny flats and sleepouts

A property may include a granny flat or a sleepout. Separate EQCover for the granny flat or sleepout will only apply if it meets the definition of 'dwelling' in the EQC Act.

Non self-contained:

A non-self-contained granny flat or sleepout will be covered if it is part of the residential building or if it is appurtenant to the main dwelling. The cover provided for it is within the EQCover for the main dwelling.

Self-contained:

A self-contained granny flat or sleepout must be used or intended to be used as someone's home to be considered a separate dwelling under the EQC Act.

Where the granny flat or sleepout is occupied or used by the same household occupying the main dwelling, then the it will not generally be a separate dwelling.

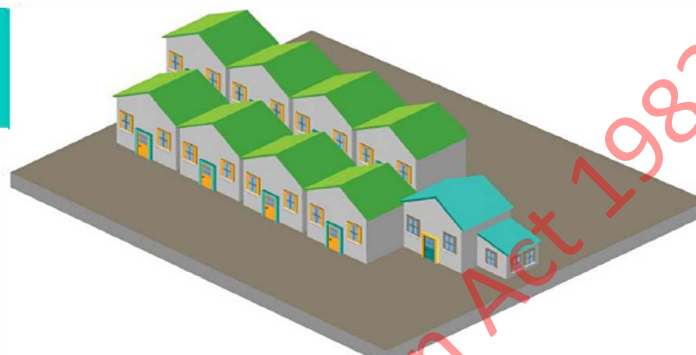
Where the granny flat or sleepout is tenanted or occupied by someone that lives independently of the main dwelling household, EQCover will apply.

Where a granny flat or sleepout is a separate dwelling, EQCover will be calculated on either the multiple residential building basis above (for detached dwellings) or on the multiple dwelling basis (for attached dwellings).

Situation	EQCover
Dwelling with self-contained tenanted granny flat in same building. Replacement sum insured for building = \$900,000.	\$600,000 (\$300,000 x two dwellings) if the existence of two dwellings in the building was disclosed. Otherwise \$300,000 only.
Dwelling with self-contained granny flat in same building where the granny flat is used as a place for family and friends to stay when they visit. Replacement sum insured for building = \$900,000.	\$300,000. The granny flat is covered but included within EQCover for the main dwelling.
Dwelling with a self-contained, detached sleepout. Replacement sum insured Dwelling = 200m ² Flat = 50m ² . Sleepout used as 'guest house' for visitors.	\$300,000. The sleepout is covered but included as an appurtenant structure within EQCover for the main dwelling.
Dwelling with a self-contained, detached granny flat. Dwelling = 200m ² , replacement sum insured \$800,000. Flat = 50m ² , replacement sum insured \$125,000. Granny flat tenanted.	Dwelling = \$300,000 Granny flat = \$125,000 (lesser of replacement sum insured or \$300,000).
Dwelling with non-self-contained granny flat (either in the same building or separate if used for the purposes of the household).	\$300,000. The non-self-contained granny flat is included within EQCover for dwelling (either as part of the dwelling itself, or as an appurtenant structure).

4.14. Holiday accommodation and motels

EQCover is limited to \$300,000 for the manager’s accommodation only.



4.15. Fractional ownership residential property

With fractional ownership the residential property is broken up into a set number of shares and each of these shares is sold.

Unlike timeshares, where each purchaser is given the right to use the property for a set number of weeks per year or at a set time, fractional ownership means the shareholders themselves decide how the property is to be used, including how or when each shareholder can use it.

If the property is still being used as a home or holiday home by the owners, Toka Tū Ake EQC will continue to cover it. If it is going to be used only for a holiday let or solely as a B&B, for example, then EQCover generally does not apply.

4.16 Long term accommodation for the elderly

Long term accommodation for the elderly includes rest homes and retirement villages. These are covered by Toka Tū Ake EQC because they are specifically included under the EQC Act. See paragraph (b) of the ‘residential building’ definition.

Although not specified in the EQC Act, to establish the ‘long-term accommodation’ component, it is likely evidence would be required to demonstrate that the building constitutes a self-contained residence and comprises a home to the residents.

Example 1: Rest home

The rest home shown is a single building, containing dormitory-type accommodation and full accompanying facilities. The building also includes self-contained accommodation for the owner/manager.

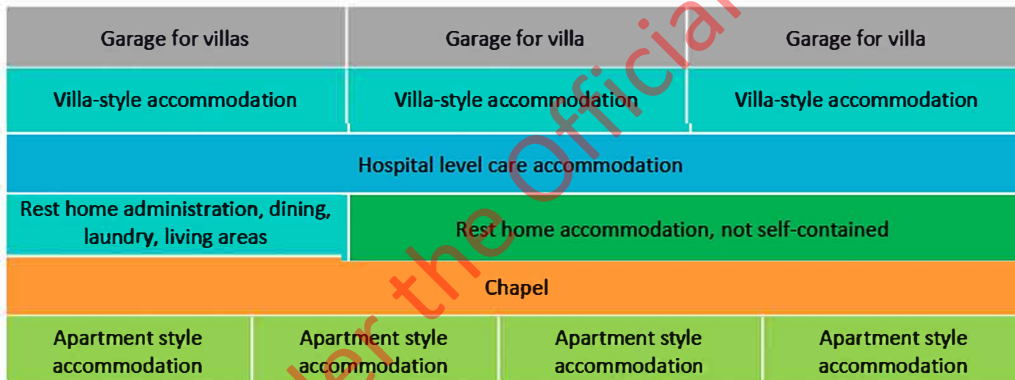
Description	EQCover	Total EQCover
Rest home accommodation, administration, dining etc.	Equates to one residential building.	\$300,000
Manager’s accommodation.	Equates to one residential building.	\$300,000



Example 2: Retirement village

The retirement village shown below is made up of a variety of accommodation types and full accompanying facilities.

Building type	Residential building test outcome	Total EQCover
Villa-style accommodation	One residential building containing three dwellings.	Up to \$300,000 per dwelling. \$900,000 for the whole building (if the existence of three dwellings in the building was disclosed).
Garages	Appurtenant building or structure.	Included in cover for villas.
Rest home accommodation and administration, dining, laundry, living areas	One residential building containing one dwelling.	\$300,000
Hospital level care accommodation (i.e. a higher level of rest home care)	One residential building.	\$300,000
Residents chapel	Appurtenant building or structure.	Included in cover for retirement village complex.
Apartment style accommodation	One residential building containing four dwellings.	Up to \$300,000 per dwelling. \$1,200,000 for the whole building (if the existence of four dwellings in the building was disclosed).



5. PAYING THE EQCOVER PREMIUM

5.1 Paying the premium

An EQCover premium is payable whenever a person enters into a contract of fire insurance with an insurance company for a residential building in New Zealand. Where the insurance company carries out business in New Zealand, the payment of the premium will be made by the insurance company.

Payments of EQCover premiums must be made within two months after the end of the month in which the obligation to pay the premium arises (e. g. a premium for a contract entered anytime in January will be due by 31 March of the same year).

5.2 Offshore placements

Sometimes an intermediary in New Zealand or offshore arranges offshore cover for residential property located in New Zealand.

EQCover still applies in this situation and remittance of the EQCover premium is made directly to Toka Tū Ake EQC.

5.3 Calculation of EQCover premium

EQCover costs 16 cents for every \$100 insured (0.016%) where the period of insurance is one year.

The EQCover premium can be calculated by using the following formula:

- EQCover Premium (\$) = EQCover amount (\$) x 0.0016

The most common EQCover premium amount will be \$480 for a residential building containing one dwelling with EQCover of \$300,000.

Where the period of insurance is anything other than one year, the premium will be calculated pro-rata for the number of days of the insurance cover.

For example:

- EQCover premium = \$480.00. Period of insurance = 102 days
- \$480.00 divided by 365/days = \$1.315
- \$1.315 x 102/days = \$134.13

GST is payable on the EQCover premium.

Cover for residential land is included at no additional cost.

6. DIRECT EQCOVER

If a person has not insured their residential building against fire with a private insurer, they may have obtained EQCover directly from Toka Tū Ake EQC for natural disaster damage.

Section 22 of the EQC Act, 'Voluntary insurance against natural disaster damage' provides that on application made by any person having an insurable interest in any residential building and land, Toka Tū Ake EQC may enter into a contract to insure that building and/or land under the EQC Act against natural disaster damage (not exceeding the maximum EQCover cap) and subject to the approval conditions.

7. SECTION 30 OF THE EQC ACT

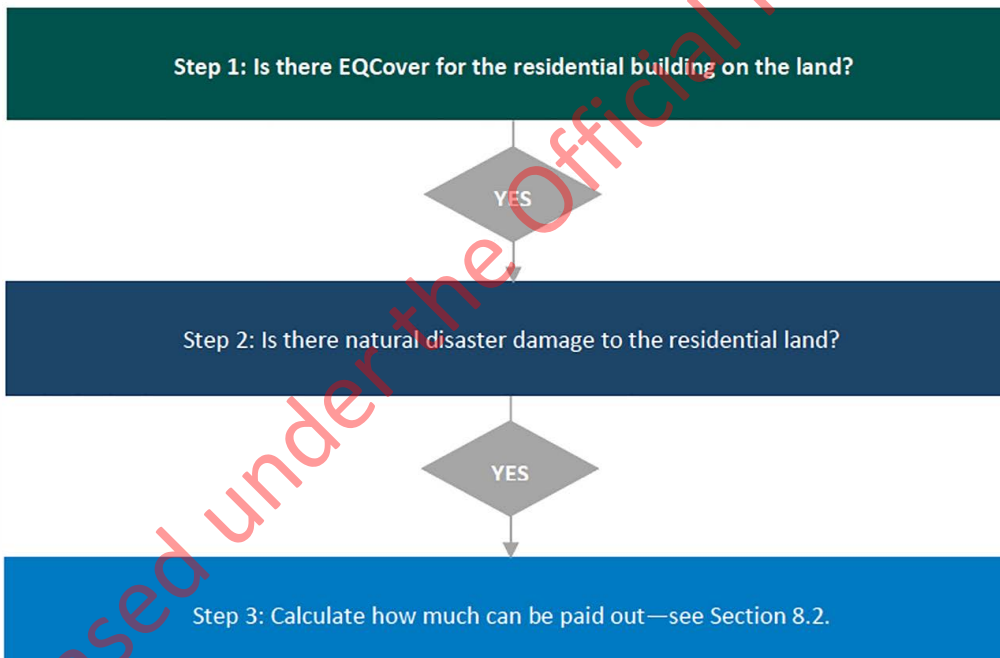
Section 30 of the EQC Act ‘Insurance other than under this Act’ provides certain rules for situations where, upon the occurrence of natural disaster damage to a property covered by EQCover, the property is also insured against that damage under a contract of natural disaster damage provided by an insurance company. The insurance company’s cover might be either ‘ground-up’ cover or ‘top- up’ cover.

‘Ground-up’ cover	Insurance company pays for all natural disaster damage within the terms of the policy and Toka Tū Ake EQC covers the balance (within the scope of the EQCover up to the limits specified in the EQC Act).
‘Top-up’ cover	Toka Tū Ake EQC pays for all natural disaster damage covered by the EQC Act up to the limits specified in the EQC Act, and then the insurance company pays for the balance.

The EQCover premium is payable wherever a contract of fire insurance is entered in respect of ‘residential building’. Accordingly, the EQCover premium is payable even where a ground-up natural disaster policy has been entered for that building if the contract of insurance also insures against fire.

RESIDENTIAL LAND

SUMMARY



8. EQCOVER: RESIDENTIAL LAND

8.1 Cover

If the residential building is covered by EQCover, then certain land on which the dwelling is located also has EQCover.

EQCover for land is limited to land that is within the 'land holding'. Generally, the land holding consists of all the land within the boundaries shown on the Record of Title (RT) for the property. This includes the land:

- under the dwelling and appurtenant structures
- within 8 metres of the dwelling and appurtenant structures
- under or supporting the main access way from the boundary of the land holding up to 60 metres from the building (but not the driveway surfacing).

EQCover also provides cover for:

- bridges and culverts located entirely within the areas referred to above
- some retaining walls that are necessary to support the residential building and appurtenant structures or insured land.

8.2 How much can be paid out?

EQCover pays the lesser of either:

1. the cost to repair the damaged land (or occasionally, the diminution in value of the land), or
2. the land cap, which is determined by the value of the smallest of the following three areas:
 - the area of land that is actually lost or damaged, or
 - the minimum-sized site for a residential building allowed under the District Plan in the area you live (if applicable), or
 - an area of land of 4,000 square metres

plus the indemnity value of any insured bridges, culverts or retaining walls that have been lost or damaged.

8.3 Bare land

Bare land is a land holding without a residential building on it. Bare land is not covered by EQCover.

8.4 Multiple access ways

If the residential building has several access ways (driveways and/or pathways and/or separate driveways), only the main access way is covered, up to 60 metres in a horizontal line from the residential building.

8.5 Multi-title properties and easements

It is necessary to determine what is within a property's boundary to identify what residential land is insured in connection with a given residential building. For example, the insured area of residential land can comprise land on two or more RTs if the multiple sections are used as a single land holding. This can occur where a residential building is built on adjoining sections or where the residential building is built on one section and the adjoining section is used as the backyard or garden. Where two or more titles form a single land holding, 'residential land' will not end at the boundary of the title the residential building is located on. It can extend across to the adjoining title.

The land holding can also include any legal rights held by the property owner over the land of their neighbour. For example, a property might have an easement over a neighbour's property for a driveway. If this forms the main access way to the insured residential building, the land underneath the main access way will have EQCover even though the land is not owned by the insured.



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APPENDICES

A: EQCOVER CLAIMS AND EXCESSES

The timeframe for lodging an EQCover claim is two years. However, Toka Tū Ake EQC recommends customers lodge a claim within three months of the damage occurring.

a. Making an EQCover claim

In most instances, the private insurer will manage any new EQCover claim on our behalf.

If the customer's private insurer does not manage a new EQCover claim or the customer is a Direct EQCover customer, please contact Toka Tū Ake EQC directly.

The customer can do this through:

1. Completing the online form at www.eqc.govt.nz or
2. Calling Toka Tū Ake EQC
 - Within New Zealand on **0800 DAMAGE (0800 326 243)**
 - From overseas on **+64 4 978 6400**

The timeframe for lodging an EQCover claim is two years. However, it is recommended customers lodge a claim within three months of the damage occurring as a delay may affect the ability of Toka Tū Ake EQC to assess damage.

Customers can carry out urgent works if they are able to and have the means. This means making their home habitable and protected from further damage by ensuring it is safe, sanitary, secure and weathertight.

Customers should keep a complete record of all urgent works carried out and copies of any documentation (e.g. before and after photographs, invoices).

b. Excesses

EQCover excesses per event are based on whichever is the greater of the calculations below up to the maximum payable.

Properties containing one dwelling

	Excess—% of claim	Min. payable	Max. payable
Dwelling	1%	\$200	\$3,450
Land	10%	\$500	\$5,000

Properties containing more than one dwelling

	Excess—% of claim	Min. payable	Max. payable
Dwelling	1%	\$200 x number of dwellings	N/A
Land	10%	\$500 x number of dwellings	\$5,000

The figures on this page are GST inclusive.

c. Circumstances where Toka Tū Ake EQC may decline a claim

Toka Tū Ake EQC may decline (or meet part only of) a claim made under any insurance of any property under the EQC Act where:

- a. the natural disaster damage to which the claim relates was caused or exacerbated by earlier natural disaster damage for which the Commission made payment and that payment was not used to repair the property; or
- b. the insured person has failed to comply with any law or bylaw, or any requirement pursuant to any law or bylaw, and that failure has caused or exacerbated the natural disaster damage; or
- c. in the case of any property of a kind referred to in –
 - i. paragraph (c) or paragraph (d) of the definition of the term residential building in section 2(1); or
 - ii. paragraph (d) or paragraph (e) of the definition of the term residential land in section 2(1) –the property was not constructed in accordance with standards considered appropriate for that property at the time of construction, and the failure to meet those standards has caused or exacerbated the natural disaster damage; or
- d. the RT for the land comprising the property, or on which the property is situated, contains an entry under section 36(2) of the Building Act 1991 or an entry under section 74 of the Building Act 2004 (see **Appendix C**); or
- e. there is or has been on the part of the insured person (whether to the Commission or its agents or to the insurance company concerned) –
 - i. any wilful and material misdescription of any of the property, or of any building or land in or on which the property is situated; or
 - ii. any misrepresentation as to any matter material for the purpose of estimating the value of the property; or
- f. the claim is in any respect fraudulent; or
- g. the natural disaster damage is caused or contributed to by the wilful act or negligence of the insured person, or of any previous owner or occupier of the property where the insured person was aware of that wilful act or negligence at the time the insured person acquired the property.



B: ITEMS EXCLUDED FROM EQCOVER

A specific list of EQCover exclusions is contained in Schedule 2 of the EQC Act and is reproduced here

1. Any property that is not tangible property.
2. Any motor vehicle (being a vehicle drawn or propelled by mechanical power), or any parts of, or accessories to, a motor vehicle.
3. Any trailer (being a vehicle without motive power that is capable of being drawn or propelled by a motor vehicle and that is not being used as a dwelling), or any parts of, or accessories to, a trailer.
4. Any vessel (being anything made to float, whether it is fixed or free, and whether or not it has any means of propulsion), or any parts of, or accessories to, a vessel.
5. Any aircraft, or anything in or on an aircraft.
6. Any bush, forest, tree, plant, or lawn.
7. Any growing crops (including fruit trees and vines) or cut crops in the open fields.
8. Any explosives.
9. Any animals, including livestock and pets.
10. Any road, street, drive, path, bridge, or culvert other than a gangway, ladder, access platform, or other form of access, constructed in a residential building or being an integral part of a residential building.
11. Any drain, channel, tunnel, or cutting, unless used to connect parts of one or more residential buildings.
12. Any dam, breakwater, mole, groyne, fence, pole, or wall that does not constitute an integral part of a residential building.
13. Any reservoir, swimming pool, bath, spa pool, tank, or water tower other than –
 - a. A reservoir, swimming pool, bath, spa pool, tank or water tower that constitutes an integral part of, and that is within, a residential building; or
 - b. A reservoir or tank used in a residential building as a storage vessel for any liquid product; or
 - c. A water tank forming part of the water supply to a residential building; or
 - d. A septic tank.
14. Any tennis court, whether inside or outside and whether lawn or not.
15. Any jetty, wharf, or landing.
16. Any paving or other artificial surface.

C: NOTIFICATIONS AFFECTING EQCOVER

a. Record of Title notifications

In certain circumstances a notification on a property's RT under Section 72 of the Building Act 2004 or Section 28 of the EQC Act may affect EQCover.

b. Section 72 of the Building Act notifications

Conditional building consents

When a building consent is requested to build a dwelling or structure on a property, the local authority is required to consider if the land is likely to be subject to a natural hazard and if the work will create or make worse a natural hazard on a property.

The Building Act states a building consent authority (i.e. the local authority) must refuse a building consent if the land on which the building work is to be carried out is subject to one or more natural hazards, or the building work is likely to accelerate, worsen or result in a natural hazard on that land or any other property.

However, the consent can be issued if adequate provision has or will be made to protect land from natural hazard damage.

The building consent is therefore issued pursuant to Section 72 of the Building Act 2004.

Section 72 states that the building consent authority must issue a building consent if it considers the building work will not cause or make worse a natural hazard on the property. However, this is a conditional consent as a natural hazard has been identified. This notification is what is shown on the RT.

Why the notification is added

The Building Act allows a local authority to grant a conditional building consent, in some circumstances, where the land on which the building work is to be carried out is subject (or likely to be subject) to one or more identified natural hazards.

A Section 72 notification (or 'entry') is added to the RT by the Registrar-General of Land whenever the local authority has granted a conditional building consent.

The notification alerts prospective purchasers and others with an interest in the property, such as lenders and insurers, that the land is subject to a natural hazard. It also specifies what the natural hazard (or hazards) are.

In the past, similar provisions were in effect under Section 36(2) of the Building Act 1991 and Section 641A of the Local Government Act 1974 (both now superseded). These notifications still appear on some RTs and have the same effect as a Section 72 notification, although notifications under these superseded provisions will not always identify the natural hazard concerned.

Other notifications referred to in Section 73 and 74

Section 73 of the Building Act makes it a requirement that the local authority must notify the Registrar-General of Land that the property is subject to a natural hazard and a conditional consent has been issued.

Section 74 describes the steps the Surveyor-General (Land Information New Zealand) must take when receiving notification from the consenting authority.

A Section 72 notification is added to the RT by the Registrar-General of Land whenever a conditional building consent has been granted.

What a Section 72 notification means for EQCover

If a property has a Section 72 notification on its RT (or a similar entry under Section 36(2) of the Building Act 1991 or Section 641A of the Local Government Act 1974) and a claim is made for damage that is caused by the type of natural hazard (or hazards) that caused the entry to be made, Toka Tū Ake EQC has the discretion to:

- meet the claim in full
- partly meet the claim
- decline the claim.

This provision is set out in Clause 3(d) of Schedule 3 of the EQC Act.

In deciding, Toka Tū Ake EQC will look at the particular circumstances of the property, the details of the notification and the claim.

If the claim is related to damage from a natural disaster of a different type from the natural hazard that caused the entry to be made, Toka Tū Ake EQC will apply normal processes.

c. Section 28 of the EQC Act notice

After cash settling a building or land claim (to the full extent of cover available under the EQC Act), Toka Tū Ake EQC may cancel EQCover for the property in certain circumstances pursuant to Clause 4 of Schedule 3 of the EQC Act. Toka Tū Ake EQC does this by sending the owner a written notice advising of the cancellation and arranging for a notice to be placed on the RT.

What is a section 28 notice?

If Toka Tū Ake EQC cancels EQCover under Clause 4 of Schedule 3 of the EQC Act, or limits its liability under subclauses (1) or (2) of Clause 5 of Schedule 3 of the EQC Act, Toka Tū Ake EQC shall notify the Registrar-General of Land by forwarding a certificate to that effect.

When is Toka Tū Ake EQC likely to issue a section 28 notice?

A section 28 notice is most commonly placed on a RT following claims for damage caused by flooding or landslips.

How Toka Tū Ake EQC goes about issuing a section 28 notice

After cash settling the claim, Toka Tū Ake EQC may contact the customer to ask about progress with the repairs or reinstatement.

Examples of progress might include a building consent application being submitted or a builder, engineer or other contractor being engaged.

If Toka Tū Ake EQC is not satisfied that the repair work (or reinstatement) is progressing, Toka Tū Ake EQC may notify the District Registrar of Land that a section 28 notice must be applied to the RT.

Getting a section 28 notice removed from a Record of Title

A section 28 notice remains in place until Toka Tū Ake EQC receives an application for removal or otherwise considers that the section 28 notice should no longer apply—even if the property is sold. To get a section 28 notice removed from a RT, the insured person will need to provide Toka Tū Ake EQC with evidence that the repair or reinstatement works have been undertaken to the requisite standard.

Toka Tū Ake EQC will then notify the District Registrar of Land that the section 28 notice must be removed. The insured person will be informed when this has been done.

Other situations

There are other provisions in Schedule 3 of the EQC Act that allow Toka Tū Ake EQC to decline or partially meet a claim.

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CONTACT INFORMATION:

Email: EQCover@eqc.govt.nz

Phone: 0800 DAMAGE (0800 326 243)

More information on our website www.eqc.govt.nz

Toka Tū Ake EQC Earthquake Commission

Catastrophe Modelling Summary – 2023



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Purpose and Scope

This report summarises the results from the 2023 catastrophe analysis of the Toka Tū Ake EQC portfolio conducted by Aon.

The basis for this analysis is the Toka Tū Ake EQC portfolio estimated as at 1st June 2023.

The purpose of this report is to outline the assumptions that have been applied to Toka Tū Ake EQC's exposure data and to provide analysis regarding Toka Tū Ake EQC's potential earthquake exposure. The report is not intended for any other purposes; nor is the report intended to be distributed to third parties, other than reinsurers.

Reliance's and Limitations

Our work relies on the completeness and accuracy of information provided by Toka Tū Ake EQC. We have conducted checks for reasonableness and consistency with information previously provided. However, we have not independently verified this information. We accept no responsibility for errors as a result of inaccurate or incomplete information provided. It should be noted that the financial impact of natural catastrophes is subject to a considerable amount of uncertainty, and as such the outcome of any actual events may deviate, perhaps materially, from any estimations made in this report.

Exposure Data

The Toka Tū Ake EQC portfolio data is based on a New Zealand wide property database sourced from CoreLogic as at September 2022, and replacement cost data from Quotable Value (QV) as at October 2022.

To account for increases in building stock and building inflation that may occur between 1 October (QV data date) and reinsurance programme inception of 1 June 2023, Toka Tū Ake EQC project aggregates forward allowing for additional building cost changes and risk count increases in that period.

Inflation has been a key consideration in the development of the portfolio. This included commissioning external advice from different sources including the New Zealand Institute of Economic Research on historical and expected inflationary drivers as well as ongoing discussion with key stakeholders such as Treasury.

As the building cap change continues to run-on, a blended portfolio is required to ensure this exposure change is accounted for. Toka Tū Ake EQC have provided New Zealand (NZ) wide residential property exposures on both the 150k and 300k cap (refer to 2023 Toka Tū Ake EQC Renewal Information documents for details of cap changes), with the dataset already having been adjusted by Toka Tū Ake EQC for internal modelling purposes to allow for inflation, expected building stock growth and non-insurance. The final database contains information for approximately 1.889m individual building risks. Each risk is listed with its primary characteristics and sum insured for modelling purposes.

Land is not modelled, as none of the models currently available are capable of simulating losses caused to land. Please note that land values are based on council valuations which have three-year update cycles.

The overall 2023 portfolio movements compared with 2022 are summarised in the next section, with the underlying exposure adjustments shown below and in Appendix 1:

- +17.8% increase in rebuild rate
- +2.6% increase in housing stock growth
- Overall increase of +20.4% in uncapped aggregates since 1 June 2022

Portfolio Summary

Portfolio Data at Country Level (NZDbn)

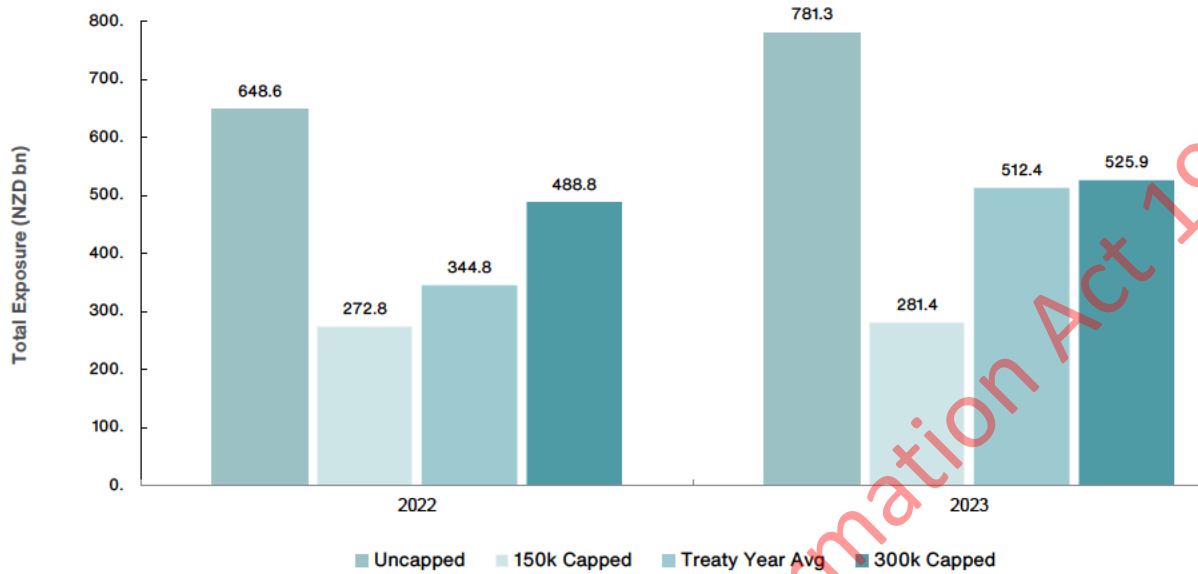
Description	Buildings Risks	Total Land Value
2022 Portfolio (300k)	1,841,136	601.6
2023 Portfolio (300k)	1,888,757	834.7
% Growth	2.6%	38.7%

Description	2022	2023	% Change
Uncapped	648.6	781.3	20.4%
150k Capped	272.8	281.4	3.2%
Treaty Year Avg	344.8	512.4	48.6%
300k Capped	488.8	525.9	7.6%

Key Portfolio Movements:

- Building risk count is up 2.6% to 1.889m
- The land values (based on council valuations which have three-year cycles) have increased by 38.7%
 - The main drivers for land value increases this year are Auckland Council (March 2022), Wellington City Council (September 2021, released several months later (too late to have been included in the 2022 portfolio)). Several other councils have also had new valuations.
- Uncapped building values have increased by 20.4% to 781.3bn
- Capped building values on the 150k cap have increased by 3.2% to 281.4bn, and by 7.6% to 525.9bn based on the 300k cap
- Due the cap change, the treaty year average exposure has increased by 48.6%.
 - The view of average exposure over the 2023 treaty year is made up of 5.5% aggregate from the 2023 150k cap portfolio and 94.5% from the 2023 300k cap portfolio. This is based off the average exposure calculations across the 12-month period, accounting for the change in cap on 1 October 2022
 - The view of average exposure over the 2022 treaty year is made up of eight months from the 2022 150k cap portfolio and four months from the 2022 300k cap portfolio.
 - Toka Tū Ake EQC 300k cap came into effect 1 October 2022 upon renewal of the original policy.
 - Treaty year average exposure assumes policies renew evenly through the year.
- For the Kāinga Ora – Homes and Communities (formerly Housing New Zealand Corporation) Housing New Zealand Corporation (HNZC) properties, these risks will have Toka Tū Ake EQC cover available, if the total value of the building complex is greater than NZD 2m.

Comparison of Capped and Uncapped Exposure Values by Year (NZDbn)



CRESTA Zone Level Summary (capped values are based on respective residential building limits)

CRESTA	Insured Building Risks	Uncapped Insured Value	Capped Insured Value (150k)	Capped Insured Value Treaty Year Avg	Capped Insured Value (300k)	Insured Land Value
1	78,568	33.2	11.7	21.4	22.0	13.3
2	556,559	242.0	82.9	151.1	155.1	476.6
3	162,406	63.6	24.2	43.7	44.8	54.4
4	157,774	62.5	23.5	42.8	43.9	54.9
5	50,623	20.8	7.6	13.8	14.2	8.3
6	21,474	7.8	3.2	5.7	5.8	3.1
7	96,966	37.7	14.5	26.1	26.8	19.7
8	69,464	27.0	10.3	18.8	19.3	13.4
9	22,511	9.1	3.4	6.1	6.3	3.2
10	177,125	70.1	26.3	47.3	48.5	87.6
11	51,223	21.3	7.6	14.0	14.4	14.5
12	25,292	10.6	3.8	6.9	7.1	4.3
13	257,652	110.4	38.5	70.9	72.8	49.8
14	10,651	4.4	1.6	2.9	3.0	0.7
15	106,633	42.9	15.9	28.9	29.6	27.0
16	43,836	17.9	6.5	12.0	12.3	4.0
All NZ	1,888,757	781.3	281.4	512.4	525.9	834.7

Earthquake Modelling Results

Demand Surge:

The vendor modelling results provided in the next section are exclusive of modelled demand surge, and whilst this is a change from prior years, it aligns with the exposure view of Toka Tū Ake EQC and is supported by the approach taken by the New Zealand Government in previous significant events.

Specifically drawing on the experience from the Canterbury Earthquake Sequence (CES), the Public Inquiry into the Earthquake Commission [document](#), makes it clear that the direction provided by the New Zealand Government given the “*scale of damage to housing, land and supporting infrastructure led to a decision that the best way to restore homes, contain building cost inflation, ensure equitable access to builders and help affected homeowners manage their recovery was to centralise and manage the process.*”¹ The report concluded that “*this is a predictable response to a large scale and complex event and is a decision that is likely to be repeated following future similar major natural disasters.*”¹

The impact of the approach taken during the CES was also evidenced in the work completed by Verisk, in which it outlines that the New Zealand Government has shown a willingness to intervene in the recovery from large scale natural hazard events to dampen the impact of inflation and assist the recovery process. This was a feature of the managed repair process following the Canterbury Earthquakes in its [Demand Surge Perspective on the Canterbury Earthquake Sequence \(air-worldwide.com\)](#) produced in 2019. Verisk concluded that “*one of the main goals of [Toka Tū Ake EQC] is to keep repair costs under control, and the data suggested that this goal was largely met for [residential losses]*”.²

The modelling analysis for the EQC portfolio does not suggest that no demand surge will occur in a large-scale event. However, s9(2)(j)

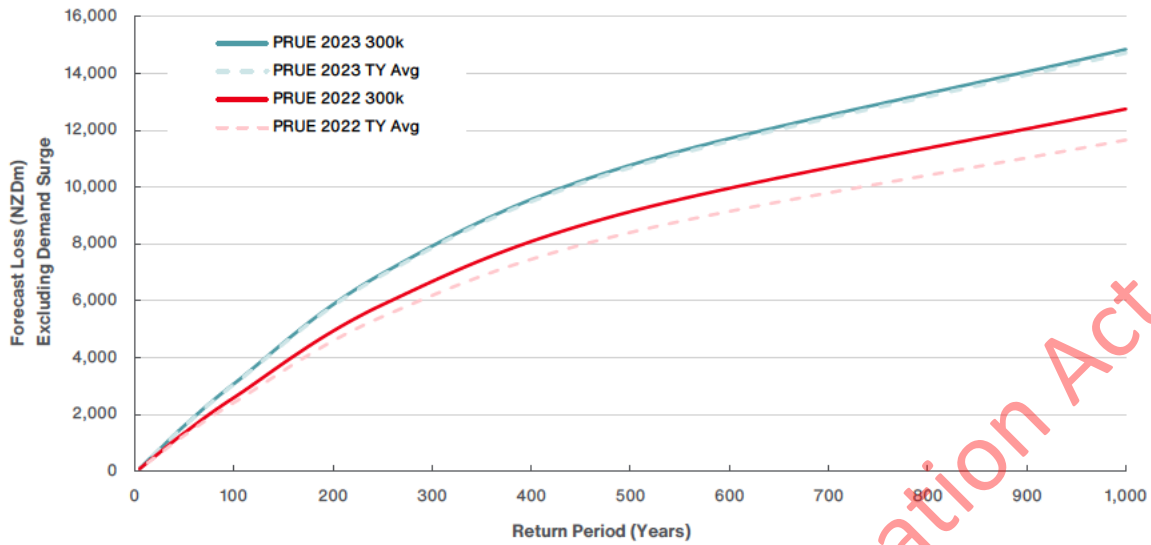
[1] P. 14 <https://dpmc.govt.nz/sites/default/files/2021-01/report-of-the-public-inquiry-into-the-earthquake-commission.pdf>

² Verisk, *Demand Surge Perspective on the Canterbury Earthquake Sequence*, December 2019

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PRUE Gross OEP Curves – 2023 vs 2022 – 300k Cap and Treaty Year Average



PRUE Forecast Losses – 2023 vs 2022 – 300k Cap and Treaty Year Average

Return Period	2022		2023		NZDm without Demand Surge	
	PRUE 2022 TY Avg	PRUE 2022 300k	PRUE 2023 TY Avg	PRUE 2023 300k	% Change 2023 vs 2022 (TY Avg)	% Change 2023 vs 2022 (300k)
1000 yr	11,661	12,759	14,730	14,849	26.3%	16.4%
500 yr	8,410	9,148	10,691	10,772	27.1%	17.8%
250 yr	5,451	5,877	6,909	6,959	26.7%	18.4%
100 yr	2,439	2,603	3,051	3,071	25.1%	18.0%
50 yr	1,260	1,345	1,584	1,595	25.7%	18.6%
25 yr	607	645	760	765	25.3%	18.6%
10 yr	207	218	257	258	24.3%	18.5%
5 yr	75	78	92	93	23.7%	18.6%
Annual Avg	152	162	191	192	25.4%	18.2%
Std Dev	817	890	1,036	1,044	26.8%	17.3%

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Modelling Files

The following modelling files and additional information will be sent via Aon's ebox.

- s9(2)(b) [REDACTED]
- s9(2)(b) [REDACTED]
- s9(2)(b) [REDACTED]
- PRUE ELTs
- OED files

Instructions on how to download the files from ebox will be sent via email.

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Appendix 1: Data and Modelling Assumptions

The following tables list the models and the corresponding level of geographic resolution that have been used:

Geographic Resolution by Model

PRUE	Lat/Long	• As per QV data
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Adjustments

HNZC	<ul style="list-style-type: none"> • Nationwide portfolio included where total value of the housing complex is greater than \$2m. • All other building risks excluded.
Housing stock growth	<ul style="list-style-type: none"> • 4.88% from September 2022 to 1 June 2023, made up of: <ul style="list-style-type: none"> - 3.11% discrepancy between QV's extract and statsNZ figures data and; - 1.72% estimate of housing stock growth.
Insurance Uptake	<ul style="list-style-type: none"> • Only 95% of the data is assumed to be insured. • Which results in total percentage of base portfolio modelled to 99.64% ($100 * 1.0488 \text{ (growth)} * 0.95$).

Detailed Risk by Risk Data

Geographic Resolution	Area Unit, Postcode, CRESTA and WGS1984 coordinates
	Portfolio was geocoded to 99.99% coordinate level
Occupancy	Provided: <ul style="list-style-type: none"> - 95% Single Family Housing - 5% Multi Family Housing
Construction	<ul style="list-style-type: none"> • Provided: <ul style="list-style-type: none"> - 61% Wood - 21% Unknown - 11% Masonry - 6% Reinforced Concrete - 0.7% Unreinforced Brick Cavity Wall - 0.3% Steel/Light Metal • Brick assumption – post-1940 assumed to be brick veneer, pre-1940 assumed to be double brick (Unreinforced Brick Cavity Wall)
Year built	<ul style="list-style-type: none"> • Provided: <ul style="list-style-type: none"> - 15% Pre-1950 - 38% 1950 - 1980 - 20% 1981 - 1995 - 28% 1996 to present
Number of stories	<ul style="list-style-type: none"> • Provided: <ul style="list-style-type: none"> - 99.74% 1 - 3 Stories - 0.26% > 3 Stories
Roof type	• Provided - has no effect on earthquake losses in the models
Units	• Number of units at each location was provided

Modelled Loss Mechanisms

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PRUE	• EQ Shake
	• Fire Following (implicit)
	• Liquefaction (implicit)
	• Demolition Costs (not included)
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Non-Modelled Loss Mechanisms

Loss Adjustment Expenses	•No allowance made
Land Damage	•No allowance made

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Appendix 2: Legal Disclaimer

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Interpretation of Results

The modelled losses presented in this report should be interpreted as follows. The "1 in 250 year" loss means that there is approximately a 1 in 250 annual probability that a loss of this size will be exceeded in any given year.

Whilst modelled loss estimates are taken from a derived distribution of insured losses to the portfolio, both their magnitude and probability are subject to considerable uncertainty. This relates to uncertainty with regard to both hazard (specifically the probability and severity of catastrophic events themselves) and property vulnerability (i.e. the response of the insured property portfolio to damage when exposed to a catastrophic event).

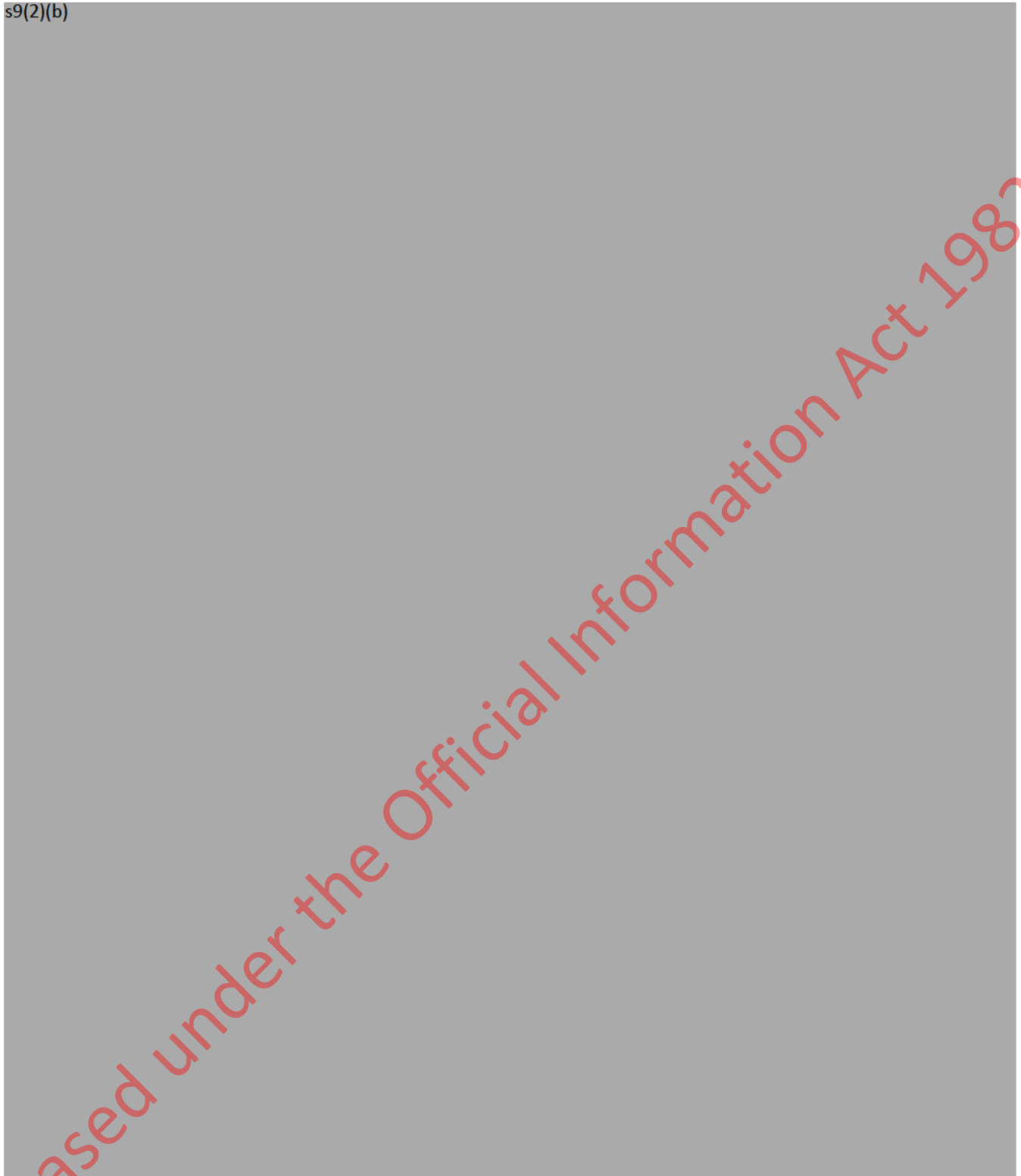
Catastrophe models assume high correlation between characteristics of insured property portfolios and those of the model features (such as vulnerabilities) designed to represent them. In aggregate, the attributes of a large population of risks may converge towards that assumed by the models. Individual risks however may have very different attributes to those assumed by the cat models. This means that real-life losses from a single risk or small group of risks concentrated at one or more locations could potentially exceed portfolio-level modelled losses calculated using the cat models.

Aon recommends that the results presented in this report should not be relied upon in isolation when making decisions that may affect the underwriting appetite, rate adequacy or solvency of the company.

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