BUILDING PERFORMANCE

Progress toward identifying potentially earthquake-prone buildings 2023

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Te Kāwanatanga o Aotearoa
New Zealand Government

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Ministry of Business, Innovation and Employment (MBIE) Hīkina Whakatutuki – Lifting to make successful

MBIE develops and delivers policy, services, advice and regulation to support economic growth and the prosperity and wellbeing of New Zealanders.

USE OF THIS REPORT

Readers should always refer to subpart 6A of Part 2 of the *Building Act 2004* (special provisions for earthquake-prone buildings), the earthquake-prone building guidance, methodology and register, as well as education and training provided on the building.govt.nz website.

Questions about this report and the management of earthquake-prone buildings can be sent to EPB_TA_monitoring@mbie.govt.nz

DISCLAIMER

This document is a guide only. It should not be used as a substitute for legislation or legal advice. The Ministry of Business, Innovation and Employment is not responsible for the results of any actions taken on the basis of information in this document, or for any errors or omissions.

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Definitions

Term	Definition
Determination	If a territorial authority accepts an engineering assessment in accordance with the criteria in section 3.2 of the methodology or a previous assessment in accordance with section 3.3 of the methodology, the territorial authority must determine whether or not the building is earthquake prone in accordance with sections 133AB and 133AK of the *Building Act*.
District	A geographic area managed by a territorial authority (defined in section 7 of the *Building Act 2004*).
Earthquake-Prone Building (EPB)	A building, or part of a building, is earthquake-prone if it will have its ultimate capacity exceeded in a moderate earthquake, and if it were to collapse, would do so in a way that is likely to cause injury or death to persons in or near the building or on any other property, or damage to any other property.
Earthquake-Prone Building (EPB) methodology	The document that guides territorial authorities and engineers to identify, assess and make decisions on potentially earthquake-prone buildings. It is set by the Chief Executive of MBIE under the *Building Act 2004*.
High seismic risk	An area that has a Z factor that is ≥ 0.3. Z factor is the seismic risk factor of an area determined in accordance with Standard NZS 1170.5:2004.
Medium seismic risk	An area that has a Z factor that is ≥ 0.15 and < 0.3.
Low seismic risk	An area that has a Z factor that is < 0.15.
MBIE	Ministry of Business, Innovation and Employment.
Priority buildings	Buildings in high and medium seismic risk areas that pose a higher risk in the event of an earthquake due to their construction, building type, use or location.
Remediation	Carrying out building work to ensure that the building, or part of the building, is no longer earthquake-prone. Remediating an EPB can involve either strengthening to 34% NBS or above or demolishing the building (or parts of the building that are earthquake-prone).
Territorial authority (TA)	Defined under the Local Government Act 2002 as a city or a district council.

Disclaimer:
The findings in this report and MBIE's interpretation of the answers are based on the information provided by TAs at the time of submissions, as well as any follow-ups MBIE did with TAs (where applicable). As MBIE works with TAs regularly, site and training visits and discussions with TAs may update these answers. If this happens, these changes will be shown in the next progress report with revised figures and interpretations.

Background

On 1 July 2017, a national system came into effect that introduced new provisions for managing earthquake-prone buildings (EPBs) in New Zealand. Its aim is to improve the resilience of buildings and the safety of users and the public in the event of a moderate earthquake.

The Building (Earthquake-prone Buildings) Amendment Act 2016 introduced major changes to the way EPBs are identified and managed under the *Building Act 2004*. The system uses lessons learned from past earthquakes in New Zealand and overseas. It also provides a consistent approach across the country and focuses on the most vulnerable buildings. These provisions affect building owners, territorial authorities (TAs), engineers, building professionals and building users.

The EPB system works as follows:

- TAs identify potential EPBs. Additionally, building owners who suspect their building may be earthquake-prone can obtain an engineering assessment at any time.
- Owners of potential EPBs who are notified by their TA must obtain engineering assessments of the building carried out by suitably qualified engineers.
- TAs determine whether the buildings are earthquake-prone, assign ratings, issue notices and publish information about the buildings on a public register.
- Owners of EPBs must display notices on their building and remediate (strengthen or demolish) their building.

The EPB system also divides New Zealand into three seismic risk areas: high, medium and low. Each area has different reporting schedules and timeframes for action. TAs with high seismic risk areas were required to report every year until 2022. Those with medium seismic areas are required to report every two years until 2027, and TAs with low seismic risk areas are required to report every three years until 2032.

Table 1 below shows the deadlines for identifying and remediating EPBs in each area. Priority buildings are those that are considered important due to their construction, building type, use or location. For example, they are critical to recovery in an emergency, may pose a higher risk due to being on a high pedestrian or vehicle traffic thoroughfare, or may impede emergency response routes if they were to collapse. They therefore have shorter timeframes than non-priority buildings.

Table 1: Timeframes for action to identify and remediate EPBs

Seismic risk area	TAs must identify potential EPBs by:		Owners of EPBs must carry out seismic work within (time from issue of EPB notice):	
	Priority	Non-priority	Priority	Non-priority
High	1 January 2020	1 July 2022	7.5 years	15 years
Medium	1 July 2022	1 July 2027	12.5 years	25 years
Low	N/A	1 July 2032	N/A	35 years

The purpose of this report

This report provides the Ministry of Business, Innovation and Employment (MBIE) with an annual update and evidence in terms of:

- how TAs have tracked in achieving their deadlines
- TAs' progress towards meeting future deadlines, and
- TAs that are not tracking as expected and may require support.

This report also assures New Zealanders that public safety risks from existing buildings in the event of an earthquake are being identified and managed, and that risks are being addressed.

This is the sixth year of reporting since the national system for managing EPBs came into effect on 1 July 2017.

This year's report looks at the progress made from **1 July 2022 to 30 June 2023** by 42 TAs with medium or low seismic risk areas, particularly in regard to:

- identifying non-priority potential EPBs
- the number of requests for engineering assessments they sent
- the number of EPBs they published on the national register
- how they monitored the progress of EPB work after identification.

This report does not include individual TA-level progress. While TAs can choose to publish their own progress reports there is no requirement to do so.

There are 24 TAs with medium seismic risk areas, 13 with both medium and low seismic risk areas and 5 with just low seismic risk areas. Table 2 below lists the TAs required to report in 2023 by seismic risk area.

Table 2: TAs required to report in 2023 by seismic risk area[1]

Medium		Medium/Low	Low
Ashburton District	Ruapehu District	Clutha District	Auckland City
Buller District	South Taranaki District	Dunedin City	Chatham Islands
Central Otago District	South Waikato District	Gore District	Far North District
Hamilton City	Stratford District	Hautaki District	Kaipara District
Kawerau District	Tasman District	Invercargill City	Whangārei District
Mackenzie District	Taupō District	Ōtorohanga District	
Marlborough District	Tauranga City	Southland District	
Matamata-Piako District	Waipā District	Thames-Coromandel District	
Nelson City	Western Bay of Plenty District	Timaru District	
	Whakatāne District		
New Plymouth	Whanganui District	Waikato District	
Queenstown Lakes District		Waimate District	
Rangitīkei District			
Rotorua Lakes		Waitaki District	
		Waitomo District	

1 Some of the TAs may also have an area of high seismic risk.

Key Findings

TAs in medium seismic risk areas have made good progress towards identifying priority and non-priority potential EPBs. This work is getting underway in low seismic risk areas, where there are longer timeframes.

Nearly all TAs in medium seismic risk areas have identified their priority potential EPBs

TAs with medium seismic risk areas were required to meet the 1 July 2022 deadline to identify priority potential EPBs, and most have completed this process.

One TA has completed their identification but is reviewing their list, and another has identified some omissions in their previous process but is working to rectify that. MBIE will follow up with these TAs to ensure this process is completed as soon as possible.

As at 30 June 2023, 2,593 buildings have been identified as priority potential EPBs in medium seismic risk areas.

TAs are on track with identifying non-priority potential EPBs

TAs are also working towards the 1 July 2027 deadline to identify non-priority potential EPBs in medium seismic risk areas. Again, as at 30 June 2023, almost all TAs had started the identification of non-priority potential EPB buildings. The only TA yet to formally start has begun drafting a list of buildings they want to assess so will be underway soon.

So far, 4,718 buildings have been identified as non-priority potential EPBs in medium seismic risk areas.

Most TAs are yet to start identifying potential EPBs in low seismic risk areas

There are 18 TAs with low seismic risk areas. Ten have a mix of low and medium seismic risk areas, three have low, medium and high seismic risk areas and five have only low seismic risk areas. Of the 18 TAs, 12 have not yet started the process of identifying potential EPBs in their low seismic risk area. As TAs have until 2032 to identify all potential EPBs in their low seismic risk areas, there is less urgency for TAs to report on identification in these areas while they focus on those with impending deadlines. As such, it is unsurprising that the identification progress is slower in these areas.

TAs continue to work through the post-identification process

The follow-up questions TAs were asked about monitoring of EPBs were not specific to a seismic risk area but were more generally about their approach across their whole area.

After identifying potential EPBs, TAs have to notify the building owners that their buildings are potentially earthquake-prone and require them to obtain engineering assessments of their buildings.

Table 3 below shows the number of buildings for which TAs have issued notification letters. The numbers are broken down by priority level of the buildings. TAs have notified owners of 3,465 buildings to obtain an engineering assessment.

Table 3: Number of buildings for which TAs have issued letters as at 30 June 2023

Priority level	Number
Priority	1,633
Non-priority	1,832
Total	**3,465**

Source: MBIE

TAs have made determinations on almost 7,000 buildings

Owners who receive a notification letter from their TAs must obtain an engineering assessment of their building and submit it to the TA. After the engineering assessment is provided to the TA, the TA determines whether the building is earthquake-prone or not. TAs can also make a determination without requiring an engineering assessment. They may initially consider a building as a potential EPB as it meets the criteria but after further review determine that the building is not in fact an EPB, therefore no letter is sent.

TAs have reported that a total of 6,895 buildings have been issued determinations. Table 4 below shows the breakdown of outcomes of these determinations.

Table 4: Total number of priority and non-priority potential EPBs where the TA has made a determination as at 30 June 2023

Outcome of determination	Number
Priority buildings determined EPB	933
Priority buildings determined not EPB	1,741
Non-priority buildings determined EPB	768
Non-priority buildings determined not EPB	3,453
Total	**6,895**

Source: MBIE

The EPB register is not always kept up-to-date

When a building is determined to be earthquake-prone, the TA issues an EPB notice and records the building information on the EPB register. TAs were asked whether they had published this information on the EPB register. Almost a third of the TAs, 11 of the 37, had not recorded all their EPBs on the register. Most commonly, the delays were due to waiting for final verification or resourcing issues.

The monitoring of EPB notices varies

Under the current EPB legislation, TAs issue EPB notices to buildings determined earthquake-prone. The notices, amongst other things, identify the building or part of a building that is earthquake-prone, give the earthquake rating (if determined), and state the deadline for completing seismic work. These notices must be displayed in a prominent place on, or adjacent to, the building.

Of the 29 TAs that had issued an EPB notice, 19 actively monitored the notices, usually with an annual inspection or as part of the Building Warrant of Fitness check. A number of TAs had faced challenges with notices being removed or not displayed in the correct location.

Conclusion

Most of the 37 TAs with a medium seismic risk area met the deadline to identify priority potential EPBs. TAs have started to make progress with identifying potential EPBs in low seismic risk areas.

Previous reporting was affected by the ongoing impacts of Covid-19 and while those have eased, some TAs are still facing resourcing constraints due to staff turnover and shortages, which delayed their EPB work.

In addition, TAs have made good progress beyond identifying EPB buildings, by notifying owners that their buildings are potential EPBs and requesting engineering assessments. Of the buildings that have proceeded further through the EPB system, TAs have also made determinations on almost 7,000 buildings on whether or not the buildings are earthquake-prone.

NEXT STEPS

MBIE will contact the two TAs that are reviewing their list of previously identified EPBs and provide support to ensure they are able to fulfil their EPB roles and responsibilities.

The deadline for the identification of EPBs in high seismic risk areas was in 2022 and as such, TAs with high seismic risk areas have completed their reporting under the current legislative requirements.

There is no reporting due in 2024. The next reporting will be in 2025 which will cover the progress of 37 TAs with medium seismic risk areas. Future reporting will focus on whether TAs are meeting the remaining identification deadlines.

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