

**BUILDING
PERFORMANCE**

Progress toward identifying potentially earthquake-prone buildings 2022



MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Te Kāwanatanga o Aotearoa
New Zealand Government



**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
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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](https://www.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

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Definitions

Term	Definition
District	An area managed by a territorial authority (defined in section 7 of the <i>Building Act 2004</i>).
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 used by 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 <i>Building Act 2004</i> .
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 are considered to present a higher risk due to their construction, building type, use or location.
Territorial authority (TA)	Defined under the Local Government Act 2002 as a city or a district council.

Executive Summary

Territorial Authorities (TAs) are required to report on their progress in identifying potential earthquake-prone buildings (EPBs). This was the fifth year that TAs have reported on their progress to the Ministry of Business, Innovation and Employment (MBIE) since the national system for managing EPBs came into effect on 1 July 2017. Reporting began on 21 July 2022 and was completed by all TAs by 23 August 2022. The main findings of this report are:

Almost all TAs in high seismic risk areas have identified non-priority potential EPBs

All TAs with high seismic risk areas were required to identify non-priority potential EPBs by 1 July 2022. The majority of TAs (95%) have met this deadline to complete their identification of non-priority potential EPBs in their high seismic risk area. Of the two TAs that were in the process of completing their identification work as at the time of reporting, one of them has since completed the identification work. MBIE is following up with the other TA that has not met the deadline to ensure this process is completed as soon as possible. So far, 2,709 buildings have been identified as non-priority potential EPBs.

TAs made good progress in their role supporting the national system for managing EPBs after identifying potential earthquake-prone buildings

As at 1 July 2022, TAs have notified the owners of 713 priority buildings and 2,047 non-priority buildings that their building may be earthquake prone, and required them to undertake a seismic assessment. TAs make determinations as to whether buildings identified as potential EPB are earthquake prone based on the seismic assessment. So far, TAs have determined a total of:

- › 647 priority buildings as EPB
- › 1,908 priority buildings as not EPB
- › 1,087 non-priority buildings as EPB and
- › 3,566 non-priority buildings as not EPB.

The next progress report will be in 2023

The next report will cover progress from 37 TAs with medium seismic risk areas. It will also provide information on whether TAs met the 1 July 2022 deadline for identifying all priority potential EPBs. TAs with high seismic risk areas will no longer be required to report under the current national EPB system. Future reporting will look at whether remaining deadlines are being met and how TAs are handling any issues that arise from the remediation process.

Background, purpose and methodology

Background

On 1 July 2017, a national system came into effect that introduced new provisions for managing earthquake-prone buildings (EPBs) in Aotearoa New Zealand. These provisions affect building owners, territorial authorities (TAs), engineers, building professionals and building users.

The Building (Earthquake-prone Buildings) Amendment Act 2016 introduced major changes to the way EPBs are identified and managed under the *Building Act 2004*. It uses knowledge learned from past earthquakes in Aotearoa New Zealand and overseas. The new national system for managing earthquake-prone buildings is consistent across the country and focuses on the most vulnerable buildings.

How the EPB system works:

- › TAs identify potential EPBs
- › owners who are notified by their TA must obtain engineering assessments of the building carried out by suitably qualified engineers
- › TAs determine whether buildings are earthquake prone, assign ratings, issue notices and publish information about the buildings in a public register
- › owners are required to display notices on their building and to remediate their building.

The EPB system also divides Aotearoa New Zealand into three seismic risk areas – high, medium and low. Each has their own reporting schedule. TAs with high seismic risk areas are 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.

They also have their own timeframes for action as seen in Table 1 below. Additionally, priority buildings must be identified in a shorter timeframe than non-priority buildings and owners are given a shorter time in which to carry out work on priority buildings.

Table 1: Timeframes for action

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	Other	Priority	Other
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

Purpose

This summary report informs all stakeholders about the progress that has been made by 38 TAs with high seismic risk areas towards identifying potential EPBs in their districts during the period of **1 July 2021 to 30 June 2022**. It gives the Ministry of Business, Innovation and Employment (MBIE) an annual update and evidence in terms of:

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

This report also gives Aotearoa New Zealanders assurance that risks to public safety from existing buildings in the event of an earthquake are being identified and managed.

Progress at individual TA-level is not provided. TAs may choose to publish their progress but are not required to do so.

Methodology

On 21 July 2022, 38 TAs with high seismic risk areas in Aotearoa New Zealand were asked to complete their 2022 reporting requirements. This was the fifth year that TAs have reported on their progress in identifying potential EPBs to MBIE since the national system for managing EPBs came into effect on 1 July 2017. All TAs reported by 23 August 2022.

Some TAs are wholly one seismic risk area, but some are a mix of seismic risk areas. Twenty-five TAs were in the high seismic risk area only; 10 had a mix of high and medium seismic risk areas; and three had a mix of high, medium and low seismic risk areas. Those TAs with a mix of seismic risk areas were only required to report on their high seismic risk area this year. Among all TAs which reported, 22 were in the North Island and 16 in the South Island.

They were asked to provide information on their progress from 1 July 2021 to 30 June 2022 on various topics such as:

- › their progress in identifying the non-priority potential EPBs in high seismic risk areas
- › how many requests for engineering assessments were sent
- › how many EPBs were published on the national register
- › how TAs monitored progress of EPB work post-identification.

Disclaimer:

The findings in this report and MBIE's interpretation of the answers is based on the information provided by TAs at the time of submissions, as well as any follow-ups MBIE was able to do with Councils (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. However, under the current national EPB system, TAs with high seismic risk areas will no longer be required to report in future.

Table 2: Territorial authorities which have reported in 2022 by seismic risk area

High	Medium/High ¹	Low/Medium/High ²
Carterton District	Ashburton District	Southland District
Central Hawke's Bay District	Buller District	Timaru District
Christchurch City	Mackenzie District	Waitaki District
Gisborne District	Marlborough District	
Grey District	Queenstown Lakes District	
Hastings District	Rangitīkei District	
Horowhenua District	Ruapehu District	
Hurunui District	Tasman District	
Hutt City	Taupō District	
Kaikōura District	Whakatāne District	
Kāpiti Coast District		
Manawatū District		
Masterton District		
Napier City		
Ōpōtiki District		
Palmerston North City		
Porirua City		
Selwyn District		
South Wairarapa District		
Tararua District		
Upper Hutt City		
Waimakariri District		
Wairoa District		
Wellington City		
Westland District		

Count	High	Medium/High	Low/Medium/High	Total
North Island	18	4	0	22
South Island	7	6	3	16

¹ These TAs are only required to report on their high seismic risk area this year.

² These TAs are only required to report on their high seismic risk area this year.

Summary Findings

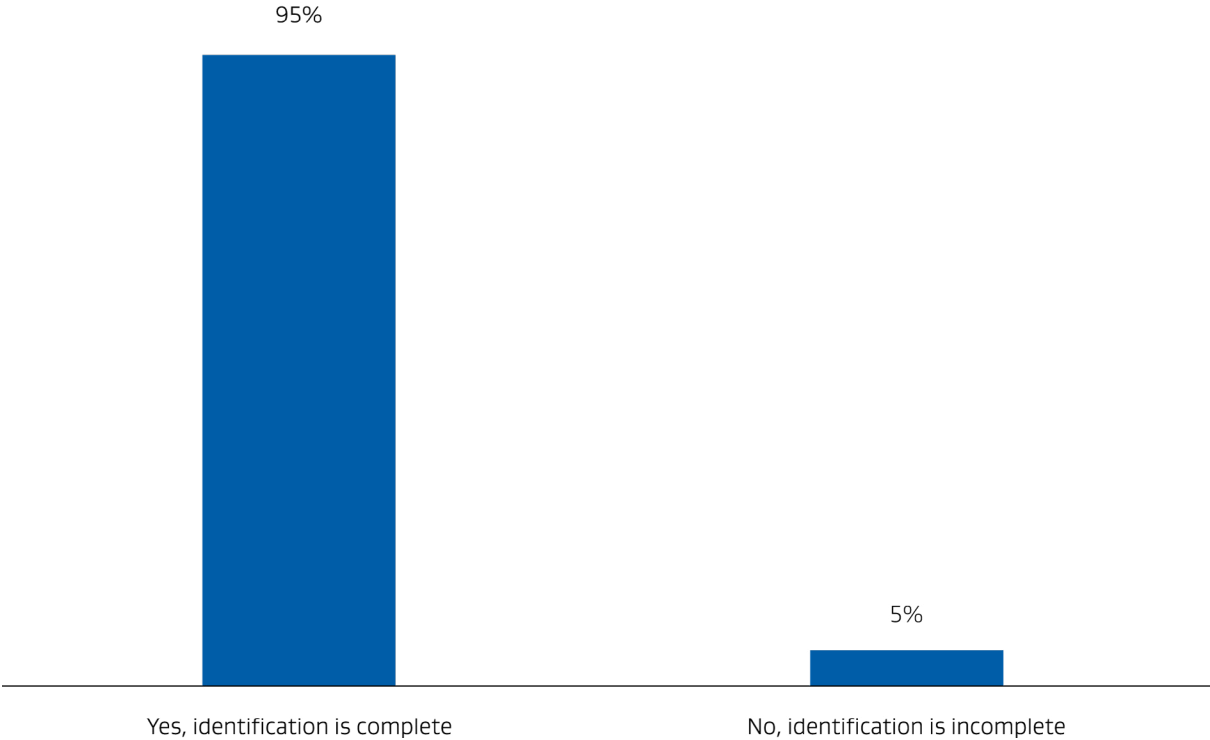
Almost all TAs in high seismic risk areas have identified non-priority potential EPBs

All TAs with high seismic risk areas were required to meet the 1 July 2022 deadline to identify non-priority potential EPBs.

Most TAs (95%) completed this process as shown by Figure 1. Of the two TAs that were in the process of completing their identification work as at the time of reporting, one of them has since completed the identification work and another TA is still in the process of identifying its non-priority buildings. MBIE is following up with that TA to ensure this process is completed as soon as possible.

There were 2,709 buildings identified as being a non-priority potential EPB in high seismic risk areas, of which 1,988 were in the North Island and 721 were in the South Island.

Figure 1: Identification of non-priority potential EPBs progress in high seismic risk areas as at 30 June 2022



n = 38
Source: MBIE

TAs made good progress in their role supporting the national system for managing EPBs after identifying potential earthquake-prone buildings

Notification

Following the identification of potential EPBs, TAs are required to notify the building owners that their buildings are potentially earthquake prone and require them to obtain an engineering assessment of their buildings.

TAs with high seismic risk areas were asked the number of buildings that were issued notifications requesting an engineering assessment. Table 3 below shows the number of buildings whose owners were sent letters of notification. The numbers are broken down by priority level of the buildings.

Table 3: Number of buildings for which TAs have issued letters as at 30 June 2022

Priority level	Number		
	North Island	South Island	Total
Priority	419	294	713
Non-Priority	1,665	382	2,047

Source: MBIE

Outcomes of determinations

Once owners are notified by their TA that their building may be earthquake prone, they must get an engineering seismic assessment of the building. After the seismic assessment is given to the TA, the TA makes a determination as to whether the building is earthquake prone or not.

The outcomes of these determinations are shown in Table 4 below. Note that the table is for determinations of buildings which have been issued notification letters as at 30 June, and not only those notified for the period 1 July 2021 to 30 June 2022 (in Table 3).

Table 4: Total number of priority and non-priority potential EPBs where the TA made a determination as at 30 June 2022

Outcome of determination	Number		
	North Island	South Island	Total
Priority buildings determined EPB	291	356	647
Priority buildings determined not EPB	335	1,573	1,908
Non-priority buildings determined EPB	402	685	1,087
Non-priority buildings determined not EPB	1,644	1,922	3,566

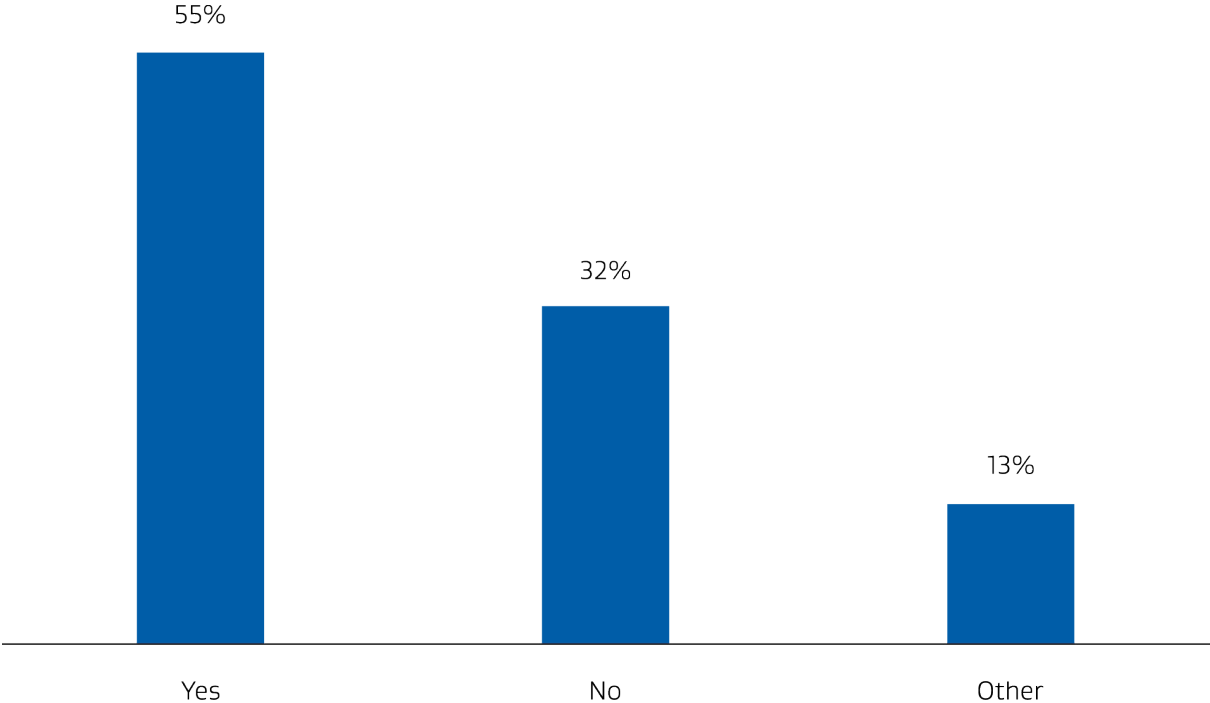
Source: MBIE

Monitoring of EPB information

Once a building is determined to be earthquake prone, the TA issues an EPB notice, and records information about the building in the EPB register.

TAs were asked whether they had published this information on the EPB register. More than half of the TAs responded that they had updated EPB records on the register. TAs that were not able to update their records on time were waiting for more information, delayed by staff shortages and/or had records of determined buildings that did not come up yet against EPB deadlines.

Figure 2: Percentage of TAs that have published all buildings determined EPB on the EPB register, as at 30 June 2022



n = 38
Source: MBIE

Active monitoring of EPB notices issued generally depended on the number of EPBs and the TAs' resourcing. TAs updated EPB records on the register and assigned compliance officers to conduct regular checks and ad hoc site visits and to update on-site notices. Some used IT systems to help them record changes, update work done and track against upcoming deadlines. Others followed-up with building owners regularly.

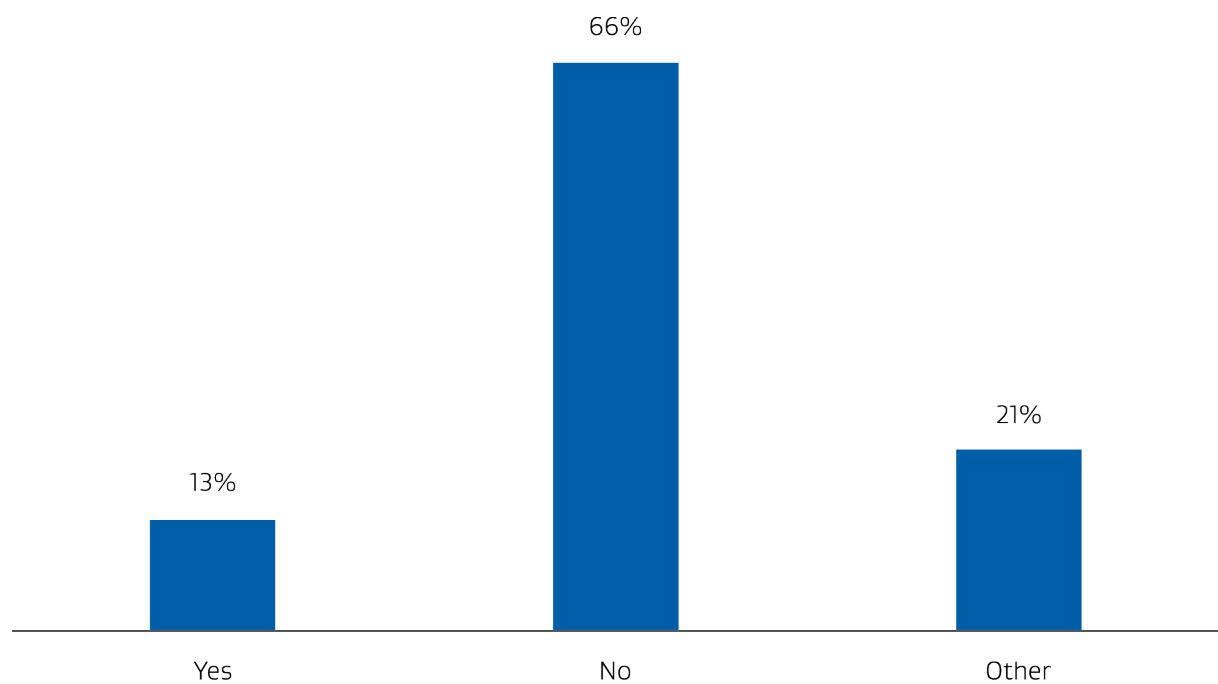
Some of the key challenges that TAs faced included managing upset and concerned owners with initial apprehension towards notices that might put off users in utilising their premises. Another problem was notices becoming obscured. It was difficult for some to place notices prominently due to wear and tear and weathering throughout the long duration of remediation.

TAs followed-up on buildings that had passed EPB deadlines

TAs were also asked whether any of the buildings they published on the EPB register had passed EPB deadlines for strengthening or demolishing, based on the notices issued.

Only 13% of TAs responded that they have buildings recorded in the register which passed their deadline to strengthen or demolish. As at 1 July 2022, there were 21 buildings reported to have passed the due date.

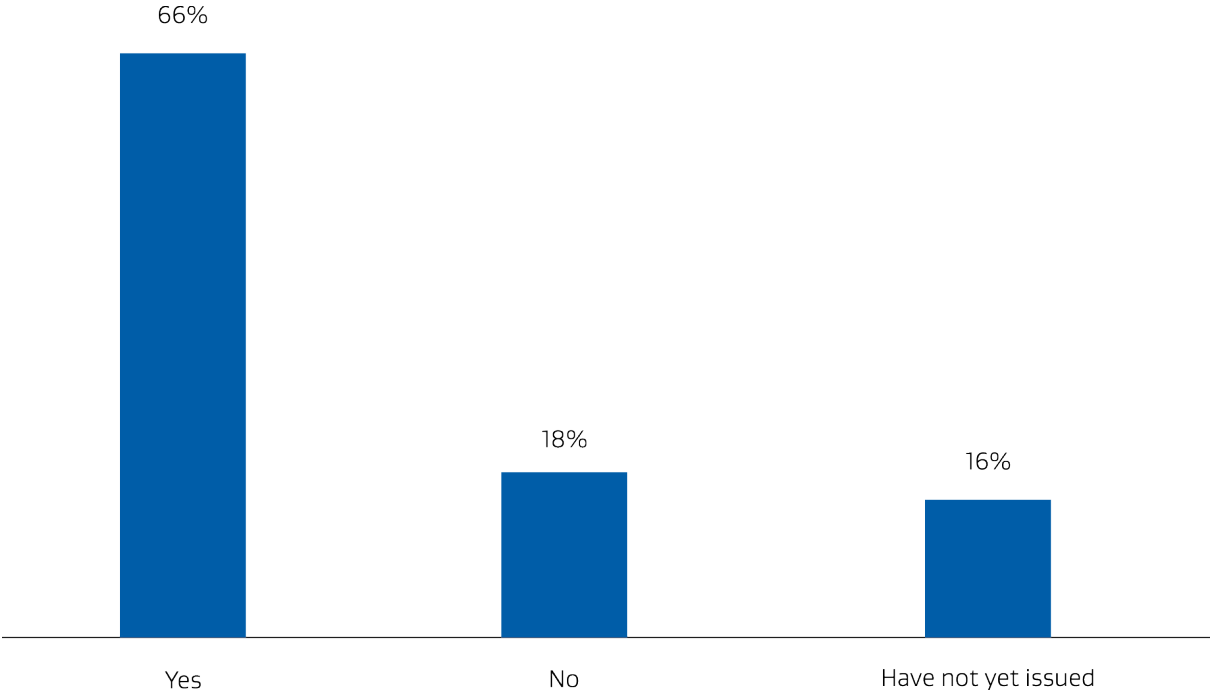
Figure 3: Number of TAs that have buildings recorded in the EPB register which also passed the deadline to strengthen or demolish, as at 30 June 2022



n = 38
Source: MBIE

Most TAs (66%) responded that they have been monitoring the progress of buildings with EPB notices posted on them. The remaining 34% of the TAs either did not monitor or had not issued any EPB notices.

Figure 4: Number of TAs that monitor posted EPB notices attached to buildings, as at 30 June 2022



n = 38
Source: MBIE

TAs generally communicated with owners between 1–2 years before remediation deadlines, followed by regular communications to reduce deadline risks. TAs engaged and discussed with building owners any remediation intentions the building owners have on their buildings. TAs provided relevant information; worked with owners to progress their strengthening, demolition or rebuild; and helped address or resolve any issues. Some TAs assigned a Technical Advisor to perform a monthly check-in and seek updates from building owners.

Some TAs with buildings that went over the deadlines have taken enforcement actions, while others worked with owners to ensure timely building remediation work. TAs carried this out by serving building owners with formal warnings in consultation with their legal teams. TAs began by requiring building owners to secure the riskiest elements and cordon-off public areas, like footpaths, to ensure public safety. They then worked through other requirements to remediate on a case-by-case basis. MBIE will be contacting all TAs to find out what they intend to do about buildings that have passed remediation deadlines in relation to meeting their obligations to enforce the requirements of the *Building Act*.

Conclusion and next steps

Conclusion

Most of the 38 TAs met the deadline to identify non-priority buildings for their high seismic risk areas. However, with post-Covid 19 constraints, TAs continued to face staffing and resource issues, which delayed some of their EPB work. Those affected TAs expressed confidence in catching up with EPB deadlines.

MBIE has contacted the TA that has not met their deadlines to work with them and provide the support they need to fulfil their EPB roles and responsibilities.

In general, TAs have also made good progress beyond identifying EPB buildings, by notifying owners that their buildings are potentially EPB and have requested engineering assessments. Of the buildings which have proceeded further through the EPB system, TAs have also made determinations on whether or not the buildings are earthquake prone.

Next Steps

The deadline to identify all potential earthquake-prone priority buildings in medium seismic risk areas and non-priority buildings for high seismic risk areas was 1 July 2022. Attention for these TAs will now switch to making determinations on whether a building is actually an EPB, based on a seismic assessment, and remediation.

Future reporting will look at whether remaining deadlines are being met and focus on identifying any issues that arise from the remediation process.

In 2023, 37 TAs in medium seismic risk areas will be required to report. These TAs must have identified all priority potential EPBs by 1 July 2022, and non-priority EPBs by 1 July 2027. Table 5 below lists these TAs and their reporting requirement by seismic risk area.

Table 5 : Territorial authorities required to report in 2023 by seismic risk area

Medium/High	Low/Medium/High³	Medium	Low/Medium⁴
Ashburton District	Southland District	Central Otago District	Clutha District
Buller District	Timaru District	Hamilton City	Dunedin City
Mackenzie District	Waitaki District	Kawerau District	Gore District
Marlborough District		Matamata-Piako District	Hauraki District
Queenstown Lakes District		Nelson City	Invercargill City
Rangitīkei District		New Plymouth District	Thames-Coromandel District
Ruapehu District		Rotorua Lakes	Waikato District
Tasman District		South Taranaki District	Waimate District
Whakatāne District		South Waikato District	Waitomo District
		Stratford District	
		Tauranga City	
		Waipā District	
		Western Bay of Plenty District	
		Whanganui District	

³ These TAs are only required to report on their medium seismic risk areas in 2023.

⁴ These TAs are only required to report on their medium seismic risk area in 2023.



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