

BUILDING PERFORMANCE

Progress toward identifying potentially earthquake-prone buildings 2019

NOVEMBER 2019



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 management of earthquake-prone buildings can be sent to **epb@mbie.govt.nz**

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Ministry of Business, Innovation and Employment (MBIE)

PO Box 1473, Wellington 6014, New Zealand

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Executive summary

The Building (Earthquake-prone Buildings) Amendment Act 2016 introduced major changes to the way earthquake-prone buildings are identified and managed under the Building Act 2004.

This monitoring report focuses on the transition from pre-2017 local management to the national system, progress with community consultation, and the level of confidence that the 1 January 2020 deadline will be met for identification of all potentially priority earthquake-prone buildings in the high seismic-risk areas of New Zealand. MBIE uses the monitoring report to identify where territorial authorities may need assistance to implement the system.

In 2019, 62 territorial authorities reported as required by legislation. Thirty-eight territorial authorities reported on their past 12 months' activity in their high seismic-risk areas. Thirty-seven territorial authorities reported on their past 24 months' activity for their medium seismic-risk areas. There were 13 reporting on high and medium seismic-risk areas.

Transition to a single national EPB management system is nearing completion

As at 30 June 2019, three quarters of the territorial authorities had made the required policy change to remove local earthquake-prone building policy, as there is a single national policy. All but two territorial authorities had revoked or reissued their locally determined s124 EPB notices following the EPB methodology. There are approximately 560 s124 notices remaining.

Progress with consultation on busy and strategic routes is wrapping up

As at 30 June 2019, in the high seismic-risk areas, half of the territorial authorities can issue priority EPB notices for buildings on busy routes and one quarter can issue them for strategic routes as their consultation is complete. Territorial authorities may decide, based on the building stock in busy areas, and road layout, that consultation is unnecessary.

In high seismic-risk areas, consultation on busy routes did not occur for one quarter of districts, and half of the districts did not see the need to consult on strategic routes. Approximately one quarter of territorial authorities in high seismic-risk areas had not completed consultation on their busy and strategic routes as at 30 June 2019.

In the medium seismic-risk areas, the general breakdown is that one third have completed consultation on busy and strategic routes, one third have decided not to consult and one third have not completed their consultation – some of these may later decide not to consult.

Confidence is high that the first deadline for identification will be met

As at 30 June 2019, half of the 38 territorial authorities with a 1 January 2020 deadline had met it. Seventeen of the remaining 19 were confident of meeting this deadline. An estimated 700 potentially priority buildings must be identified by 1 January 2020. The next deadline is 1 July 2022, by which time an estimated 2,100 non-priority buildings in high seismic-risk areas and 2,100 priority buildings in medium seismic-risk areas need to be identified.

Work is ongoing to assess, determine and remediate buildings

Territorial authorities have in the past reporting period identified 1,302 potentially earthquake-prone buildings, received 2,147 engineering assessments, determined 437 buildings to be earthquake prone, and revoked 384 EPB notices and approximately 112 pre-1 July 2017 s124 notices, as the buildings had been fixed and are no longer earthquake prone.

Assistance for territorial authorities' to comply with the EPB regime

The Ministry of Business, Innovation and Employment (MBIE) has used data provided by territorial authorities to identify and support those that may need assistance to meet the first identification deadline (1 January 2020) and other requirements of the EPB legislation.

Acronyms and definitions

Acronym or synonym	Term in full
district	Area managed by a territorial authority (meaning defined in section 7 of the Building Act 2004).
EPB methodology	Earthquake-prone building methodology is for the identification of earthquake-prone buildings, which are defined in section 133AB of the Building Act 2004.
EPB notice	Earthquake-prone building notice
EPB Register	Register of earthquake-prone buildings
MBIE	Ministry of Business, Innovation and Employment
s124 notice	An earthquake-prone building notice issued under section 124 of the Building Act prior to the commencement of the Building (Earthquake-prone Buildings) Amendment Act 2016.
URM	Unreinforced masonry
%NBS	The rating given to a building as a whole expressed as a percent of new building standard achieved, based on an assessment of the expected seismic performance of an existing building relative to the minimum that would apply under the Building Code (Schedule 1 to the Building Regulations 1992) to a new building on the same site with respect to life safety.

1. Introduction

New Zealand is extremely prone to seismic activity. Failure of buildings, or parts of buildings, can endanger lives. Protection of people and property is paramount. Identification and management is a response to lower the risks to public safety posed by existing buildings.

The regulatory framework

The Building (Earthquake-prone Buildings) Amendment Act 2016 introduced major changes to the way earthquake-prone buildings are identified and managed under the Building Act 2004.

The nationally consistent earthquake-prone building (EPB) management system was introduced on 1 July 2017. Under this system, territorial authorities must:

- › consult to identify well-used and strategic transport routes if necessary
- › identify potentially earthquake-prone buildings
- › notify the building owners and request engineering assessments (engineers must follow the national EPB methodology)
- › consider engineering assessments provided by building owners
- › determine if a building is earthquake prone, and if it is, assign an earthquake rating
- › issue EPB notices to owners of earthquake-prone buildings
- › publish information about earthquake-prone buildings in the EPB register
- › report to MBIE on their progress toward identifying potentially earthquake-prone buildings.

MBIE monitoring reports

The monitoring reports produced by MBIE monitor adherence by territorial authorities to the requirements of the Building (Earthquake-prone buildings) Amendment Act 2016.

Progress at individual authority level is not provided in this report, or in the first (2018) report. Territorial authorities may choose to publish their progress, but are not required to do so.

Objectives and intended use of the 2019 report

The end of June 2019 marked two years of the national regime.

The objective of this 2019 monitoring report is to provide a summary of the progress of territorial authorities whose districts include areas of high and medium seismic-risk.

This year's focus areas, and their references in the Building Act 2004, are:

- › transition by territorial authorities to the move from a local system to the national system ([Schedule 1AA](#))
- › progress on special consultative procedure that a territorial authority must follow ([section 133AF](#))
- › confidence that the 1 January 2020 deadline (identification of potentially priority earthquake-prone buildings in 38 high seismic-risk areas) will be met ([section 133AG](#)).

This public report provides New Zealanders with assurance that risks posed to public safety by existing buildings in the event of an earthquake are being identified and managed, and allows territorial authorities to compare their progress with overall territorial authority progress.

2. Approach, analysis and limitations

There is a statutory requirement that territorial authorities report their progress on a set schedule determined by the seismic risk areas within the district or city boundary. A map of New Zealand showing the high, medium and low seismic-risk areas overlaid by the boundaries of territorial authorities is presented in figure 1 on the following page.

All of the 62 territorial authorities reporting in 2019 (high and medium seismic-risk areas) provided data through an online reporting tool.

There were 14 questions about progress towards meeting regulatory requirements. These 14 questions and six context and capability questions were organised into eight panels. The number and nature of the questions asked represented a balance of the potential value of the answers, the effort required by respondents and the limits of the reporting tool.

The territorial authorities were requested to report their status as at 30 June 2019 and their activity over the past 12 months for their high seismic-risk areas, and/or their activity over the past 24 months for their medium seismic-risk areas. Activity included the number of s124 notices replaced or revoked, buildings identified and determinations of earthquake-prone status made.

This year, territorial authorities were asked to provide evidence to confirm progress made. They were asked to provide their dangerous and insanitary buildings policy. Territorial authorities that reported their consultation was 'complete' or 'underway' as at 30 June 2019 were asked to provide a public notice, statement of proposal or minute as evidence. Similarly, territorial authorities who reported that consultation was 'unnecessary' were asked to provide documented evidence of this decision.

Limitations

The analysis was limited to aggregate counts of the number of territorial authorities meeting certain conditions and the number of buildings in a certain timeframe. The chance of error, in the raw data provided by territorial authorities, means that all numbers in this report are indicative rather than exact. Because there was wide variation between the different territorial authorities, average values have not been provided.

In the reporting tool, territorial authorities could provide an explanation of their situation. On the basis of the explanation, all 'other' or 'unsure' responses were allocated without difficulty to a pre-set suitable option, or a slight modification of the pre-set option.

MBIE has used the data provided by territorial authorities to find those that may need assistance to meet the first identification deadline (1 January 2020) and other requirements of the Building (Earthquake-prone buildings) Amendment Act 2016.

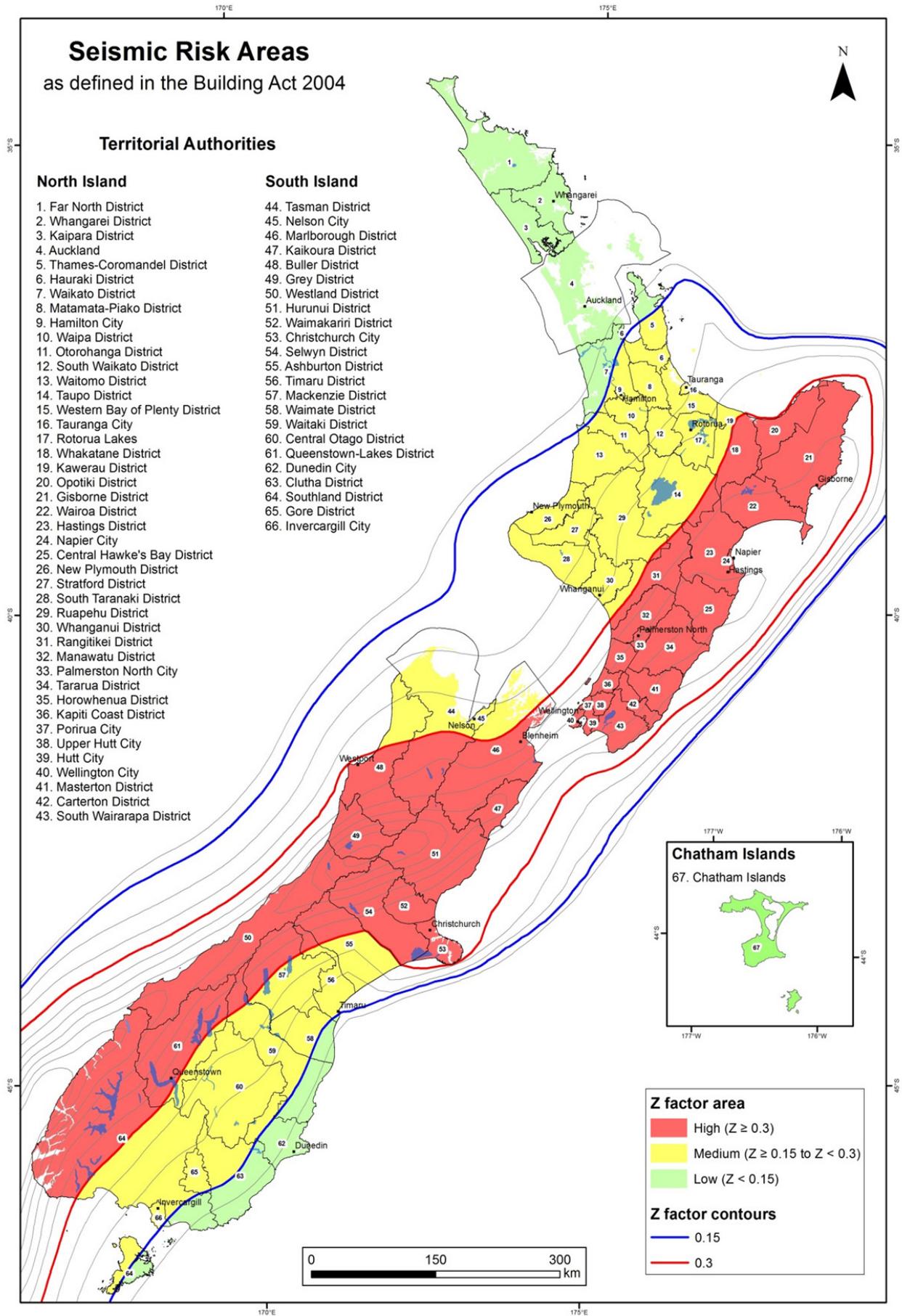


Figure 1. This figure is based on Figures 3.3 and 3.4 from NZS 1170.5:2004 and is used with permission from Standards New Zealand, on behalf of the New Zealand Standards Executive, under copyright licence LN001239.

3. Territorial authorities reporting in 2019

Territorial authorities with areas of high seismic-risk

Territorial authorities whose districts include high seismic-risk areas are required to report annually for five years (2018–2022). These territorial authorities are required to identify potentially priority earthquake-prone buildings by 1 January 2020 and potentially non-priority earthquake-prone buildings by 1 July 2022 where the building is in the high seismic-risk area.

Thirty-eight territorial authorities have a high seismic-risk area within their boundaries (authorities marked with an asterisk also have a medium seismic-risk area):

Ashburton District*	Mackenzie District*	Southland District*
Buller District*	Manawatu District	Tararua District
Carterton District	Marlborough District*	Tasman District*
Central Hawke's Bay District	Masterton District	Taupō District*
Christchurch City	Napier City	Timaru District*
Gisborne District	Ōpōtiki District	Upper Hutt City
Grey District	Palmerston North City	Waimakariri District
Hastings District	Porirua City	Wairoa District
Horowhenua District	Queenstown-Lakes District*	Waitaki District*
Hurunui District	Rangitīkei District*	Wellington City
Kaikōura District	Ruapehu District*	Westland District
Kāpiti Coast District	Selwyn District	Whakatāne District*
Hutt City (Lower Hutt)	South Wairarapa District	

Territorial authorities with areas of medium seismic-risk

Territorial authorities whose districts include medium seismic-risk areas are required to report every two years for 10 years (2019–2027). They must identify all potentially priority earthquake-prone buildings by 1 July 2022 and potentially non-priority earthquake-prone buildings by 1 July 2027 where the building is in their medium seismic-risk area.

Thirty-seven territorial authorities have a medium seismic-risk area within their boundaries (authorities marked with an asterisk also have a high seismic-risk area):

Ashburton District*	Nelson City	Tauranga City
Buller District*	New Plymouth District	Thames-Coromandel
Central Otago District	Ōtorohanga District	Timaru District*
Clutha District	Queenstown-Lakes District*	Waikato District
Dunedin City	Rangitīkei District*	Waimate District
Gore District	Rotorua Lakes	Waipa District
Hamilton City	Ruapehu District*	Waitaki District*
Hauraki District	South Taranaki District	Waitomo District
Invercargill City	South Waikato District	Western Bay of Plenty District
Kawerau District	Southland District*	Whakatane District*
Mackenzie District*	Stratford District	Whanganui District
Marlborough District*	Tasman District*	
Matamata-Piako District	Tāupo District*	

4. Transition from pre-2017 local policy

Update of local policy is complete or on the schedule for completion

Territorial authorities are required to follow the national earthquake-prone policy. As soon as is reasonably practicable after the 1 July 2017, each territorial authority must amend or replace their dangerous and insanitary building policy to remove reference to earthquake-prone buildings.

Forty-seven of the 62 territorial authorities (76%) reporting in 2019 stated that their dangerous and insanitary building policy never did include, or no longer includes, reference to managing earthquake-prone buildings. The remaining 15 were in the process of removing, or planned to remove, those references from their policy document.

Most pre-1 July 2017 notices have been replaced with new EPB notices

Territorial authorities that previously had an active (rather than passive) approach may have issued notices under section 124 of the Building Act 2004. From 1 July 2017, these territorial authorities have been required to replace any old notices with new notices, or revoke them.

■ HIGH SEISMIC-RISK AREAS

As at 30 June 2019, two territorial authorities reported that they had approximately 560 s124 notices to revoke, or reissue as EPB notices.

As at 1 July 2018, six territorial authorities reported that there were approximately 911 current s124 notices. In the following 12 months, approximately 115 s124 notices were revoked by six territorial authorities as the building in question was outside the new EPB methodology scope, 28 were reissued as priority, and 96 were reissued as non-priority. By implication, approximately 112 s124 notices were revoked as the building had been remediated or demolished.¹

Nine territorial authorities reported that at 1 July 2017, they had approximately 1,492 current s124 notices. In the following 12 months, approximately 39 were revoked and 772 reissued.

■ MEDIUM SEISMIC-RISK AREAS

As at 30 June 2019, four territorial authorities reported a total of approximately 50 s124 notices to revoke, or reissue as EPB notices. During the past 24 months, territorial authorities reported two notices have been reissued as priority and 169 as non-priority.

Updating pre-1 July 2017 s124 notices on the EPB register is largely complete

As soon as practicable, the territorial authority must record the details of the building or the part of the building in the register of earthquake-prone buildings (EPB Register)² and update other information in the register as necessary.

The bulk of the territorial authorities (48) had no s124 notices to update, reflecting their passive management prior to the new national management system. Eleven territorial authorities reported that they had updated the public EPB register to show the current state of s124 notices in their district as at 30 June 2019. Three reported that they had not updated s124 notices on the register and one noted an issue, now resolved by updating the register.

¹ See limitations on page 2.

² <https://epbr.building.govt.nz/>

5. Consultation with local communities

Community consultation to identify busy and strategic routes is mostly complete

Territorial authorities must use the special consultative procedure (section 83 of the Local Government Act 2002) to identify routes in an area of medium or high seismic-risk, onto which parts of an unreinforced masonry building could fall in an earthquake, and that are busy enough to warrant prioritising the identification and remediation of these parts of unreinforced masonry buildings.

A territorial authority is not required to consult to identify priority buildings if there is no reasonable prospect of any thoroughfare in its district having sufficient vehicle or pedestrian traffic on roads, footpaths or other thoroughfares onto which parts of an unreinforced masonry building can fall in an earthquake. A territorial authority has the discretion to initiate the special consultative procedure, as described in the Local Government Act 2002, to identify buildings that could impede a strategic transport route.³ A territorial authority may not use any other process to prioritise buildings on a strategic transport route.

Territorial authorities have used the option not to consult where there are unlikely to be any parts of URM buildings that may fall on people or property on busy routes, and/or where there are unlikely to be any buildings that may impede emergency vehicles if they were to collapse.

A territorial authority that has completed its consultation may identify priority buildings on busy and strategic routes. If these buildings are determined to be earthquake-prone, they must be remediated in half the time set for the non-priority buildings in that seismic risk area.

■ HIGH SEISMIC-RISK AREAS

As at 1 July 2019, 20 territorial authorities (53%) with high seismic-risk areas had completed and documented their consultation on busy routes, and 13 territorial authorities (34%) had done so for strategic routes. Nine (24%) decided not to consult about busy routes and 19 (50%) decided not to consult about strategic routes. Approximately one-quarter still had work to do.

Table 1 shows the number of territorial authorities at each stage of consulting on busy and strategic routes in high seismic-risk areas as at 30 June 2018 and 30 June 2019.⁴

Table 1: Consultation as reported by territorial authorities in 2018 and 2019 high seismic-risk areas

Status of consultation	Busy routes		Strategic routes	
	2018	2019	2018	2019
Complete and documented	6	20	2	13
Unnecessary ⁵	3	9	15	19
Planned or underway	25	3	17	2
On the to-do list	4	6	4	4
Total	38	38	38	38

³ <http://www.legislation.govt.nz/act/public/2002/0084/170.o/DLM172328.html>

⁴ Note that the threshold for 'planned' or 'underway' was higher in 2019 than in 2018. In 2019, a publically available plan was required for the territorial authority to meet this status. In 2018, self-reporting without explicit supporting documentation was all that was required.

⁵ Two territorial authorities provided documented evidence of approval of the decision that consultation on busy routes was unnecessary; four provided evidence for busy routes.

■ MEDIUM SEISMIC-RISK AREAS

As at 1 July 2019, approximately one-third of territorial authorities with medium seismic-risk areas had completed and documented their community consultation – 12 for busy routes and 15 for strategic routes.

Approximately one-third of the territorial authorities with medium seismic-risk areas had decided that consultation was unnecessary for busy routes (13)

and for strategic routes (15), and so will not be issuing priority notices on the basis of location.

One-third has not completed their consultation, although some territorial authorities may later decide not to consult as is permitted in certain circumstances.

Table 2 shows the number of territorial authorities at each stage of consulting to identify busy and strategic routes for their medium seismic-risk areas.

Table 2: Consultation as reported by 37 territorial authorities in 2019 medium seismic-risk areas				
Status of consultation	Busy routes		Strategic routes	
	2018	2019	2018	2019
Complete and documented	12		11	
Unnecessary ⁶	13		15	
Planned or underway	2		2	
On the to-do list	10		9	
Total	37		37	

Thirteen territorial authorities have reported twice (2018 and 2019) on their progress with consultation in their medium seismic-risk areas. This group has made substantial progress. By 30 June 2019, five of these territorial authorities had completed their consultation and six had reported that consultation

was unnecessary. There were two remaining of the 13 that had not begun consultation.

Table 3 shows the consultation status of the 13 territorial authorities that reported in 2018 and 2019, as they have areas of high and medium seismic-risk.

Table 3: Consultation as reported by 13 territorial authorities in 2018 and 2019 for medium seismic-risk areas				
Status of consultation	Busy routes		Strategic routes	
	2018	2019	2018	2019
Complete and documented	1	5	2	5
Unnecessary	0	6	1	6
Planned or underway	9	0	7	0
On the to-do list	3	2	3	2
Total	13	13	13	13

⁶ Eight authorities did not provide documented evidence of approval that special consultation was unnecessary for busy routes; 11 did not provide documented evidence for strategic routes.

6. Estimation of the number of buildings to be identified

10,000 potentially earthquake-prone buildings to be identified in the next eight years

A building, or part of a building, is earthquake prone if it will have its ultimate capacity exceeded (might collapse) 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.

Priority earthquake-prone buildings include buildings (or parts of buildings) that may fall on well-used roads or footpaths, or that may fall on transport routes needed by emergency services immediately after an earthquake, or are hospitals, emergency or education buildings.

Non-priority earthquake-prone buildings, like priority earthquake-prone buildings, are less than 34 percent

of the new building standard, but are less likely to cause a life-safety risk because they are located on less-used roads or footpaths; or impede emergency responses as they are located on non-strategic transport routes, and are not hospital, emergency or education buildings.

Territorial authorities estimated there are 10,362 buildings still to be identified that are potentially less than 34% of the new building standard in high and medium seismic-risk areas.

Approximately 700 buildings need to be identified in the six months between 1 July 2019 and 1 January 2020. Another 4,300 buildings need to be identified in the three years to 1 July 2022. The remaining 5,300 must be identified by 1 July 2027. This count does not include buildings in the low seismic-risk area, which includes Auckland city.

A breakdown of the estimates is shown in Table 4 below.

Table 4: Estimate of number of potentially earthquake-prone buildings to be identified

Level of priority	Seismic risk level	
	High	Medium
Priority	694	2,115
Non-priority	2,076	5,273
Unspecified ⁷	79	126
Total	2,848	7,514

⁷ Depending on the outcome of consultation, these buildings may be priority or non-priority.

7. Confidence that buildings will be identified in time

Most territorial authorities are confident of meeting their first regulatory deadline

Territorial authorities are required to identify all potentially priority earthquake-prone-buildings in their high seismic-risk areas by 1 January 2020 and all potentially non-priority earthquake-prone buildings in their high seismic-risk areas by 1 July 2022.

Territorial authorities are required to identify all potentially priority earthquake-prone buildings in medium seismic-risk areas by 1 July 2022 and all potentially non-priority earthquake-prone buildings in their medium seismic-risk area by 1 July 2027.

During analysis, checks found that there had been some inconsistent responses. Some territorial authorities may have overestimated that they had met the deadline while others may have underestimated their progress. Overall, the results balance out fairly well.

■ HIGH SEISMIC-RISK AREAS

Nineteen territorial authorities (50%) reported they had met their 1 January 2020 deadline. This is an increase of seven territorial authorities during the past 12 months. All but two North Island provincial territorial authorities were confident that they had or would meet the 1 January 2020 deadline for identifying potentially priority buildings.

■ MEDIUM SEISMIC-RISK AREAS

Eleven territorial authorities reported that they had met the 2022 deadline for identification of potentially priority buildings.

Table 5 sets out confidence level responses by the territorial authorities.

Table 5: Territorial authority confidence (number) to meet priority building identification deadline

Description of level of confidence	Seismic risk level	
	High 1 January 2020	Medium 1 July 2022
There are no potentially priority earthquake-prone buildings.	10	7
All potentially priority earthquake-prone buildings have been identified following the EPB methodology.	9	4
The territorial authority is confident that all potentially priority earthquake-prone buildings can be identified by their deadline following the EPB methodology.	17	26
The territorial authority is NOT confident that all potentially priority earthquake-prone buildings can be identified by their deadline following the EPB methodology.	2	0
Total	38	37

8. Requests for and use of engineering assessments

Territorial authorities are actively identifying potentially earthquake-prone buildings

When a territorial authority identifies a building as potentially earthquake prone, the territorial authority must request an engineering assessment from the building owner.

■ HIGH SEISMIC-RISK AREAS

Nineteen territorial authorities (50%) reported that between 1 July 2018 and 30 June 2019, they had sent 609 requests for building assessments (152 priority, 457 non-priority).

Table 6 shows the number of 'priority' and 'non-priority' buildings of each profile category for 2018 and 2019 for which a letter requesting an engineering assessment was sent.

Table 6: Requests for engineering assessments in 12 months to 30 June 2019 (high seismic-risk)				
Building profile category	Priority		Non-priority	
	2018	2019	2018	2019
A. Unreinforced masonry buildings	110	135	40	137
B. Pre-1976 buildings with 3 or more storeys, or 12 or more metres in height above the lowest ground level (and not URM)	6	1	74	40
C. Pre-1935 buildings that are one or two storeys (and not URM)	68	1	60	76
Other basis for identifying as outlined in the EPB methodology ^a	6	15	119	204
Total	190	152	293	457

■ MEDIUM SEISMIC-RISK AREAS

Eleven territorial authorities (30%) reported that in the 24 months between 1 July 2017 and 30 June 2019, they sent requests to 693 owners of potentially earthquake-prone buildings.

Table 7 shows the number of priority and non-priority buildings of each profile category for 2019 for which a letter requesting an engineering assessment was sent.

Table 7: Requests for engineering assessments in 24 months to 30 June 2019 (medium seismic-risk)		
Building profile category	Priority	Non-priority
A. Unreinforced masonry buildings	211	135
B. Pre-1976 buildings with 3 or more storeys, or 12 or more metres in height above the lowest ground level (and not URM)	23	4
C. Pre-1935 buildings that are one or two storeys (and not URM)	82	55
Other basis for identifying as outlined in the EPB methodology	2	181
Total	318	375

⁸ Increased uncertainty about 'other basis' data (see limitations on page 2). The design date of non-priority buildings on the EPB register that were not category A, B or C is most commonly 1935–1965, with few dating from 1996 onward.

Territorial authorities are using engineering assessments to decide earthquake-prone status

The territorial authority must determine whether the building, or part, is earthquake prone; and if so, its earthquake rating must be made in accordance with the EPB methodology.

In the past 12 months⁹, 331 buildings situated in high seismic-risk areas were determined to be earthquake prone and 1,264 were determined to be not earthquake prone.

In the past 24 months, 106 buildings situated in medium seismic-risk areas were determined to be earthquake prone and 446 were determined to be not earthquake prone.

There was considerable variation between territorial authorities. For 14 territorial authorities, 90–100 percent of buildings were determined to be earthquake-prone on the basis of the engineering assessment; four determined that 40–70 percent were earthquake prone while 11 determined that less than 40 percent were earthquake prone on the basis of the engineering assessment. With one outlier removed¹⁰, the overall conversion rate was 42 percent.

Table 8 shows additional breakdown by seismic risk area. The numbers exclude buildings determined to be earthquake-prone on the basis of a building owner failing to provide an assessment within 12 months, or 24 months, if an extension had been approved.

Table 8: Result of determination of earthquake-prone status by territorial authorities					
	High seismic-risk 12 months		Medium seismic-risk 24 months		Total
	Prone	Not prone	Prone	Not prone	
Priority buildings	41	268	39	194	542
Non-priority building	290	996	67	252	1,605
Total	331	1,264	106	446	2,147

Engineering assessments should meet the requirements set out in the EPB methodology

Building owners need to make sure they commission an engineer who knows the requirements of the EPB methodology and has the qualification requirements set out in the EPB methodology. Engineers must do their assessments in accordance with the EPB methodology.

Where territorial authorities expressed concerns about the accuracy, quality and timeliness of engineering assessments, these concerns fell into two themes: experience and/or summary sheets missing, and insufficient judgement or justification provided.

An extension of time to get an engineering assessment is available but not often applied for

One extension is obtainable, of 12 months, to the 12 month timeframe for engineering assessment. The owner may, no later than two months before the due date, apply to the territorial authority for an extension of up to 12 months.

Six of the 62 territorial authorities commented that they had received a total of 13 requests from owners for an extension of time to provide an engineering assessment. Some territorial authorities noted a shortage of qualified engineers, while others noted that engineers reports were being provided within the time (12 months) expected.

⁹ The reporting period is 12 months for high seismic-risk and 24 months for medium seismic-risk areas.

¹⁰ The outlier may be a data entry error.

9. Seismic remediation of earthquake-prone buildings

Earthquake-prone buildings are being remediated or demolished

The EPB notice sets a deadline for completing seismic work. The owner of a building or a part of a building that is subject to an EPB notice must complete seismic remediation work on the building or part on or before the deadline specified.

In the past 12 months¹¹, 283 buildings situated in the high seismic-risk areas of 10 districts have been remediated (strengthened or demolished) and their EPB notices revoked.

In the past 24 months, 65 buildings situated in the medium seismic-risk areas of six districts have been remediated and their EPB notices revoked.

Some territorial authorities have also revoked the s124 notices of approximately 112 buildings that were no longer earthquake-prone because the buildings have been remediated.

Table 9 shows the breakdown of remediation by priority status and seismic risk area. Note that this table does not include s124 notices that have been revoked.

	High seismic-risk (12 months)		Medium seismic-risk (24 months)	
	Priority	Non-priority	Priority	Not Priority
Number of buildings	15	268	0	65
Sub-total by seismic risk		283		65
Total				384

The number of determined earthquake-prone buildings is currently stable

The net number of earthquake-prone buildings showed little change. For EPB notices, there was a net gain of 89 buildings, comprising 48 in high, and 41 in medium seismic-risk areas. However,

approximately 112 s124 notices were revoked where buildings had been remediated or demolished in these time periods.

Table 10 shows the number of revoked EPB notices and the number of new EPB notices over the past year for high seismic-risk areas, and two years for medium seismic-risk areas.

	High seismic-risk (12 months)		Medium seismic-risk (24 months)	
	Priority	Non-priority	Priority	Not Priority
Number of buildings added (EPB notice)	41	290	39	67
Number of buildings removed (revoked)	15	268	0	65
Difference	26	22	39	2
Total (gained does not include s124 notices)				89

¹¹ The reporting period is 12 months for high seismic-risk and 24 months for medium seismic-risk areas.

10. Confidence of completing seismic remediation

Cautious approach by territorial authorities to indicating completion of seismic remediation

Building owners who receive an earthquake-prone building notice for a building, or a part of a building, are required to have all seismic remediation work completed on or before the date on their notice.

The deadline is measured from the date of the first EPB notice issued. In an area of high seismic-risk, it is seven years and six months for a priority building, and 15 years for any non-priority building. In an area of medium seismic-risk, it is 12 years and six months for a priority building, and 25 years for any non-priority building.

Extensions may be requested. If the building or part of the building is a heritage building to which section 133AO applies, the owner may apply for an extension of time.

Because there is a significant range of dates

on EPB (and s124) notices, the dates 1 July 2027 for priority buildings in high seismic-risk areas, and 1 July 2035 for priority buildings in medium seismic-risk areas have been selected as proxies for statistical purposes. The actual dates on some notices may be 10+ years later, but most will be earlier.

When asked, five territorial authorities with a high seismic-risk area, and one with a medium seismic-risk area, concluded that their remediation work on priority buildings was complete.

Overall, there is a bimodal distribution of confidence among the territorial authorities. One group is quite confident of completing, or has already completed, and the other group is somewhat or not confident that outstanding priority seismic work in their district will be completed by the proxy dates.

Table 11 shows the number of territorial authorities at each level of confidence for each seismic risk level.

Table 11: Territorial authority confidence of no outstanding priority seismic work (number)

Level of confidence	High seismic-risk by 1 July 2027	Medium seismic-risk by 1 July 2035
Already completed	5	1
Quite confident	8	13
Confident	6	6
Somewhat confident	15	11
Not confident	4	6
Total	38	37

11. Conclusion and next steps

Management of earthquake-prone buildings by territorial authorities in our seismically active nation plays a significant role in improving the life safety of New Zealanders and our visitors.

With respect to the focus areas for 2019, analysis of the reports supplied by 62 territorial authorities managing buildings in high and medium seismic-risk areas found that:

1. **Transition to a single national EPB management system is largely complete.** The regulatory requirement to update policy and transition s124 notices was largely, but not fully, met during the first two years of operation of the EPB management system.
2. **Progress with consultation in busy and strategic routes is wrapping up.** Territorial Authorities had expected to complete high risk area consultation by the end of June 2019. However, one-quarter had not completed consultation, leaving them with a fairly short interval to identify any potentially priority earthquake-prone buildings. Medium seismic-risk areas are tracking well for finishing consultations.
3. **Confidence is high that the first deadlines for identification will be met.** Thirty-six of 38 territorial authorities are confident that all potentially priority buildings can be identified by 1 January 2020. In total, 700 buildings need to be identified by 19 districts over six months. One-third of the 37 territorial authorities have completed identification of potentially priority earthquake-prone buildings in medium seismic-risk areas and all expect to complete identification by 1 July 2022.

Based on the regulatory requirements including the first regulatory deadlines, the priority next steps for territorial authorities, building owners and engineers are:

1. Fifteen territorial authorities complete the required changes (remove reference to earthquake-prone buildings) to their local dangerous and insanitary policy.
2. Two territorial authorities revoke or reissue s124 notices and update the EPB register.
3. Nine territorial authorities complete community consultation before year end.

4. Twelve territorial authorities complete community consultation within two years.
5. Twenty-eight territorial authorities complete a preliminary assessment.
6. Building owners that received a letter from territorial authorities in 2018–2019 purchase 1,200 engineering assessments; and may request a 12-month extension.
7. Nineteen territorial authorities identify 700 buildings by 1 January 2020.
8. Territorial authorities identify 4,200 more potentially earthquake-prone buildings in high and medium seismic-risk areas by July 2022 and 5,400 more in medium seismic-risk areas by July 2027.
9. Engineers prepare to complete engineering assessments of 10,300 buildings over eight years; this is likely to result in 4,100 more buildings added to the EPB register.

MBIE uses the monitoring reports and additional information to identify territorial authorities needing assistance to adhere to legislated requirements. Where territorial authorities have informed MBIE that they may be at risk, MBIE will respond in a tailored way to enable their compliance.

Further information

The following pages on the Building Performance website provide further information:

1. [Managing earthquake-prone buildings](#)
2. [Priority Buildings: a guide to the earthquake-prone building provisions of the Building Act](#)
3. [Progress toward identifying potentially earthquake-prone buildings: 2018](#)
4. [Register of earthquake-prone buildings \(EPB Register\)](#)

The EPB register may be accessed through its [standalone site](#).

The list of historic places is on the [Heritage New Zealand website](#).

Earthquake-prone building landing pages are set up on many of the local authorities' websites.



building.govt.nz