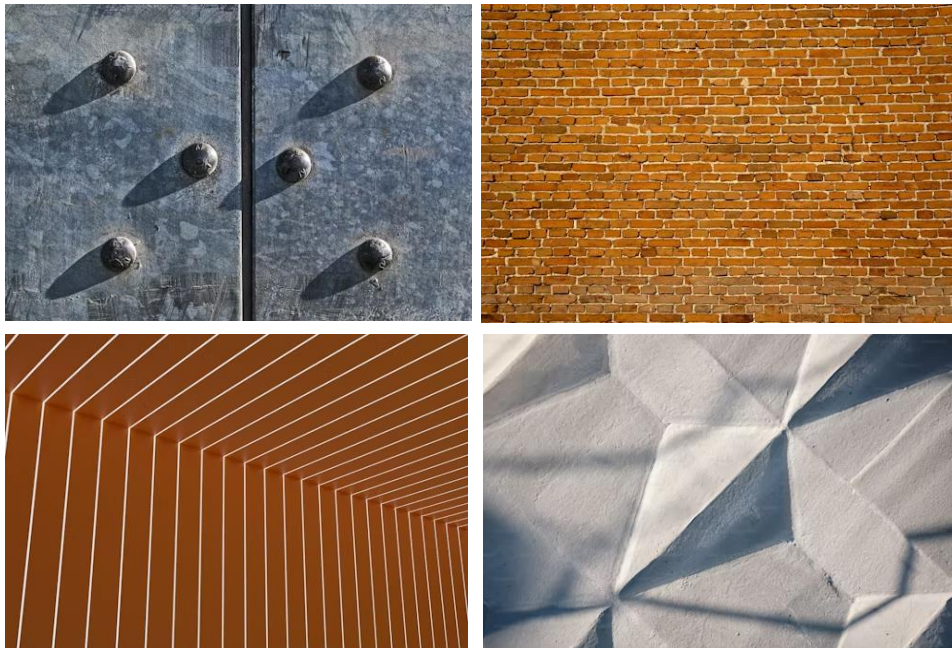


EARTHQUAKE PRONE BUILDINGS POLICY



Updated 12 September 2024

INTRODUCTION

Dealing with earthquake prone buildings is a challenge. We probably have more than our fair share of older buildings, some with heritage listings, that are earthquake prone.

Dealing with these buildings requires us to consider not only any legal responsibilities, but to also consider our responsibilities as Christians.

The Council of Assembly statement on this issue is:

Our Council of Assembly, after consulting with our Doctrine Core Group, has reached the conclusion that Church owned buildings that are unsafe should not be used for church or community activities. This conclusion is not just a matter of risk management, but one that the Council believes affirms the integrity and nature of our Church and its Christian witness and mission; none of us wishes to knowingly place anyone at risk by worshipping or working in an unsafe environment.

The Council of Assembly has requested the Church Property Trustees to oversee this policy on their behalf for property north of the Waitaki River.

Purpose

The purpose of the Earthquake prone buildings policy is to assist Church Councils and Presbyteries with their responsibilities and obligations in respect of earthquake prone buildings.

Under the Book of Order and the Presbyterian Church Property Act 1885, the leadership of each Congregation has the primary responsibility for ensuring that its buildings are safe and functional – and that those buildings comply with all applicable legislation.

Background

The Trustees Building Safety Policy was first shared with the Church in 2012. This became the Earthquake prone building policy and was updated in 2015, and then every year between 2018 and 2022. Some updates were in response to the views of the Church and some in response to changes in legislation or public standards.

Up to now, the Earthquake prone building policy set requirements for strengthening buildings to at least 67% New Building Standard by deadlines set by the Trustees (staggered to reflect risks associated with each building). These requirements were subject to multiple exemptions, but the focus was on keeping people safe and ensuring mission-critical buildings were sufficiently strengthened to ensure mission could continue over the long term.

The 2023 General Assembly invited the Trustees to consider aligning the Earthquake prone buildings policy with the requirements under the Building Act 2004. In doing so, the General Assembly noted that the Building Act only required strengthening to 34% NBS and typically provided longer timeframes for building owners to carry out any seismic strengthening required.

New Standards

The Trustees believe that working to lower standards might be convenient for now, but may not be in the best interests of the Church over the long term. Nonetheless, they resolved to align the Earthquake prone building policy with the requirements of the Building Act 2004.

This means that congregations (and presbyteries where appropriate) no longer need to strengthen buildings with a NBS between 34% and 66% (inclusive) or apply to the Trustees for an exemption.

And those buildings with a NBS below 34% will only need to be strengthened in accordance with an earthquake prone building notice issued by a territorial authority (and the deadline associated with that notice).

The obligations for compliance with the Building Act 2004 (and the Health and Safety at Work Act 2015) rest with the Church Council. Whereas the earlier policy provided some protection for Church Councils (by virtue of the earlier deadlines and higher standards), this is no longer the case.

As a result, **the primary objective of this policy is to help Church Councils (and Presbytery Councils where appropriate) meet their obligations under:**

- a) The Building Act 2004 (including the Building (Earthquake prone Buildings) Amendment Act 2016;
- b) The Health and Safety at Work Act 2015

Government Review

The Government has brought forward a review of the earthquake-prone building system to 2024. The review will focus on how well the current system is managing seismic risk in existing buildings, look to identify issues, and examine the approach taken by other overseas jurisdictions in regions of high seismic risk.

While the review is underway, the Government has agreed to amend the Building Act 2004 to extend all non-lapsed earthquake-prone building remediation deadlines, as at 2 April 2024, by four years, with an option to extend by a further two years if required. Extensions will apply automatically, and councils will re-issue earthquake-prone building notices to all eligible buildings, once the amendments to the Act are made (expected by end of 2024).

While eligible building owners will have more time to strengthen or demolish their earthquake-prone building following these changes, all other earthquake-prone building requirements under the Building Act will continue to apply. Once the review is completed, further legislative changes to the Act may be made.

Further information about the review and legislation to extend remediation deadlines will be made available throughout 2024.

Disclaimer

The purpose of this policy is to help Church Councils (and Presbytery Councils where appropriate) meet their obligations. It provides a summary of some of those obligations and some suggestions for how to comply. However, **it is a guide only**. Compliance with this policy may not be sufficient to comply with any relevant legislation.

Church Councils (and Presbytery Councils where appropriate) are encouraged to seek their own legal advice regarding compliance with their obligations.

Acknowledgement

The Trustees want to acknowledge the vast amount of good work that has already taken place to address the Church's earthquake prone buildings. We are very aware of the stress that earthquake strengthening is placing on many people and parishes.

If you wish to discuss this policy, or to have practical advice on its implementation, please contact the Church Property Trustees' Executive Officer, Russell Garrett.

CONTENTS

INTRODUCTION	2
Purpose	2
Background	2
New Standards	2
Government Review.....	3
Disclaimer.....	3
CONTENTS	4
BUILDING (EARTHQUAKE PRONE BUILDINGS) AMENDMENT ACT 2016	5
What is an earthquake prone building?.....	5
The role of the Territorial Authority	5
Church Councils have obligations under the Building Act	6
Presbytery’s obligations	7
When the Trustees might act.....	7
HEALTH AND SAFETY AT WORK ACT 2015	8
Church Councils as PCBUs	8
Church Councils must be active	9
HOW DOES IT ALL WORK?.....	10
USE OF EARTHQUAKE PRONE BUILDINGS.....	11
Life Safety Risk Assessment	11
WHAT DOES THIS MEAN FOR THE CHURCH’S APPROVAL PROCESSES?	13
67% is still the preferred target for mission-critical buildings.....	13
Impact on other building projects.....	14
REVISITING A SEISMIC ASSESSMENT.....	15
What does this mean for Church Councils?	15
GENERAL PROVISIONS.....	16
APPENDIX - UNDERSTANDING NEW BUILDING STANDARDS	17
The NBS number	17
The types of evaluation.....	17

BUILDING (EARTHQUAKE PRONE BUILDINGS) AMENDMENT ACT 2016

The Building (Earthquake-prone Buildings) Amendment Act 2016 ([Amendment Act](#)) was brought into force on 1 July 2017 and introduced major changes to the way earthquake prone buildings are identified and managed under the Building Act 2004 (Building Act).

The Amendment Act categorises Aotearoa/New Zealand into three seismic risk areas and sets time frames for identifying and taking action to strengthen or remove earthquake prone buildings. Further, the Amendment Act provides more information for people using buildings such as nationally consistent earthquake prone building notices with ratings for earthquake prone buildings and a public earthquake prone building register.

More information on managing earthquake-prone buildings from the MBIE / Hīkina Whakatutuki Building Performance unit can be found online at: [Managing earthquake-prone buildings | Building Performance](#).

What is an earthquake prone building?

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.

Whether a building (or a part of a building) is earthquake prone is determined by the territorial authority in whose district the building is situated. Their determination must be in accordance with earthquake-prone building methodology (EPB Methodology). The EPB Methodology provides that:

Section 133AB(1)(a) of the Building Act is met if the assessment of the ultimate capacity of the building and its parts, and the relationship of this to moderate earthquake shaking, is less than 34%NBS, i.e., the %NBS in the engineering assessment report.

The role of the Territorial Authority

Each territorial authority has an applicable timeframe to identify earthquake prone buildings in their area based on the level of seismic risk of that area. This is calculated from the date the Amendment Act comes into force, being 1 July 2017.

Following amendment to the earthquake prone building provisions, the Building Act now provides for certain obligations of owners in relation to the identification of a building as earthquake-prone, and the strengthening of those buildings which a territorial authority has deemed earthquake-prone. Under these new provisions, if a territorial authority deems a building to be earthquake-prone, it must issue an EPB notice to the owner which, among other things, states:

- the owner of the building or part is required to carry out building work to ensure that the building or part is no longer earthquake prone (seismic work); and
- the deadline for completing seismic work; and
- that the owner of the building or part may apply for an exemption from the requirement to carry out seismic work; and
- if the building is a heritage building, that the owner of the building may apply under that section for an extension of time to complete seismic work.

The deadline for completing seismic work is measured from the date the first earthquake prone building notice is issued and differs based on the level of seismic risk of the relevant area. The following deadlines are applicable:

- a) in an area of low seismic risk, 35 years for any building; and
- b) in an area of medium seismic risk, 12 years and 6 months for a priority building and 25 years for any other building; and
- c) in an area of high seismic risk, 7 years and 6 months for a priority building and 15 years for any other building.

Church Councils have obligations under the Building Act

The Trustees sought advice as to who is the owner under the Building Act. That advice stated that because Church Councils attain the use, occupation and economic rights and interests, the Church Council or relevant congregation is the owner of the building for the purpose of the Building Act 2004.

This position is consistent with section 16.3 (1) of the Book of Order, under which the Church Council is responsible for the management and administration of all property of the congregation and must do everything necessary or appropriate for the use and management of all property associated with the life, worship, and mission of the congregation including ... the care and maintenance of all property. Under section 16.3 (6) the Church Council must ensure, and regularly monitor that it complies with, all requirements of legislation in force which affect the use and maintenance of real property.

Presbytery Councils assume this responsibility for buildings held on behalf of a presbytery.

The Building Act 2004 places the onus on the owner to:

- Provide information in relation to potential earthquake prone buildings, and
- Ensure seismic work is undertaken to strengthen those that are earthquake-prone.

It also puts responsibility on owners when seismic work is not completed in accordance with the deadline in an earthquake prone building notice.

If the Building Act obligations are not met by the owner, then there is also potential risk of liability by way of an offence under the Building Act. The Building Act provides for the following offences in relation to earthquake prone buildings:

- a) The owner of a building is liable on conviction to a fine not exceeding \$300,000 (individual) or \$1.5m (body corporate) for failure to complete seismic work on a building by the deadline that applies;
- b) A person who fails to attach an earthquake prone building notice to a building in accordance with section 133AP, or attaches the notice otherwise than in accordance with that section, is liable on conviction to a fine not exceeding \$50,000 (individual) or \$150,000 (body corporate); and
- c) A person who fails to comply with the safety requirements set out in section 133AR(4) of the Building Act, is liable on conviction to a fine not exceeding \$200,000, and in the case of a continuing offence, to a further fine not exceeding \$20,000 for every day or part of a day during which the offence continues.

Presbytery's obligations

The Book of Order (sections 16.4 and 16.5) not only requires that Presbyteries must approve building renovation plans (in excess of an amount set by General Assembly – currently \$50,000) but it must appoint a property committee with functions that include:

- Advising Church Councils with respect to property matters, and
- At intervals of not more than 6 years, inspect or arrange for the inspection of all properties for which the presbytery and Church Councils and other bodies within the area of the presbytery are responsible.

As a result, presbyteries play a vital role in helping Church Councils with their obligations under the Building Act, including:

- Ensuring that Church Councils understand their obligations,
- Incorporating seismic status into its inspection processes,
- Monitoring the issuing of earthquake prone building notices and deadlines pursuant to those notices, and
- Progress on seismic work required under an earthquake prone building notice.

When the Trustees might act

Under section 133AS of the Building Act, a territorial authority may carry out seismic work themselves if the seismic work on a building or a part of a building that is subject to an earthquake prone building notice has commenced but is not completed by the deadline that applies, or is not proceeding with reasonable speed in the light of that deadline. If a building owner does not carry out any work subject to an earthquake prone building notice by the given deadline, a territorial authority may move to have the building demolished.

In such circumstances, the territorial authority must give the owner 10 days' notice before applying to the District Court for an order authorising the works. If a territorial authority carries out seismic work under the authority of an order:

- The 'owner' of the building is liable for the costs of the work;
- The territorial authority may recover those costs from the owner; and
- The amount recoverable by the territorial authority becomes a charge on the land on which the work was carried out.

In light of potential offences or liability for costs associated with a territorial authority undertaking seismic work, the Trustees will likely step in before a territorial authority applies to a District Court for a works order. While the Trustees are normally only able to act in respect of property as a congregation requests (and a presbytery consents), the Presbyterian Church Property Act 1885 and the Trusts Act 2019 provide the Trustees with power to act. This includes the power to apply to the High Court for an order to sell or exchange land where that land is no longer suitable or is inconvenient for the purposes for which it was originally granted or conveyed. The Trustees are likely to argue that in the event that seismic strengthening cannot be carried out within the timeframe set out in an earthquake prone building notice, then the land is no longer suitable or is inconvenient for its original purpose.

HEALTH AND SAFETY AT WORK ACT 2015

The key objective of the Health and Safety at Work Act 2015 (HSWA) is to give “workers and other persons the highest level of protection against harm to their health, safety, and welfare from work risks as is reasonably practicable”.

The HSWA is the primary legislation that governs workplace health and safety in New Zealand. It establishes the role of a Person Conducting a Business or Undertaking (PCBU) who has a primary duty of care to provide a safe workplace. The HSWA requires all PCBUs to be cognisant of, and reduce or eliminate, health and safety risks not only within their workplaces, but also regarding the building they work within. This obligation includes an awareness of the risks relating to how their building and its fixtures and fittings will perform in a seismic event.

For the purpose of the HSWA, Church Councils are considered a PCBU and have the responsibilities and obligations under the Act.

Church Councils as PCBUs

As the HSWA does not give specific details about the liability of PCBUs in relation to the seismic safety of buildings, WorkSafe released a policy clarification entitled “Dealing with earthquake-related health and safety risks: information for PCBUs and building owners”. You can find this document [here](#). This document covers key actions PCBUs should be undertaking to meet their obligations under the HSWA.

The important points from the policy clarification were:

1. If a PCBU is meeting the requirements of the Building Act 2004, then WorkSafe will not enforce to a higher standard.
2. If a PCBU is not meeting the requirements of the Building Act 2004 then it is the Local Council who should intervene and take any necessary action. If the PCBU is not meeting the requirements of the Building Act 2004 and someone is harmed, then the PCBU may be liable under the HSWA and WorkSafe may take action against them.
3. All PCBUs are expected to:
 - a. proactively manage risks arising from objects in and around buildings in the workplace on a regular and ongoing basis.
 - b. keep abreast of new or emerging information that is relevant to the building’s performance in an earthquake.
 - c. prepare for an earthquake.
 - d. work with other PCBUs with overlapping duties (e.g. landlords and tenants).

The policy clarification outlines broad obligations on PCBUs to prepare their workplaces for an earthquake, as well as a small number of specific activities. These specific activities include undertaking earthquake drills, fixing and fastening of furniture and equipment, provision of survival kits, and gathering up-to-date staff contact information.

Church Councils must be active

Where a building has been identified by a Territorial Authority as “earthquake-prone”, policy guidance states that the PCBU is required to act in accordance with their obligations under the Building Act 2004.

However, this does not mean Church Councils can sit back and wait for a territorial authority to declare whether their building is earthquake prone. Nor does it mean that Church Councils have no obligations for a building that has been declared by a territorial authority as not earthquake prone.

Church Councils have to consider risks arising from a seismic event even for those buildings that are not classed as earthquake-prone under the legislation. There is an ongoing obligation to identify potential risks posed by the building, including those posed by non-structural elements and fixtures and fittings. PCBUs are obliged to keep up to date with new or emerging information about their building.

Items such as suspended ceilings, suspended heaters, air ducts, lights, projector screens, wall hangings, sound system speaker boxes and organ components have to be restrained for seismic activity in accordance with the building code. Congregations should seek the advice of a structural engineer or specialist service engineer to ensure these items are restrained to the appropriate standards.

We strongly recommend that Church Councils:

- Do not wait for a territorial authority to make a declaration about the seismic status of their buildings. The HSWA requires you to protect the people that work in and use the building. This is consistent with the Church’s Christian witness and mission. Church Councils need to know the seismic status of the buildings they are responsible for.
- Consider risks that might arise from an earthquake that might not be addressed by strengthening the building, including securing fixtures and fittings.

HOW DOES IT ALL WORK?

1. We suggest that Church Councils do not wait until contacted by a territorial authority, but take the initiative to secure an engineering assessment of their buildings. This means you will be able to determine whether you may have an earthquake prone building and can act accordingly (including consideration of obligations under the Health and Safety at Work Act). It also means you will be ready when and if you are notified by a territorial authority.
2. That said, whether a building is earthquake prone or not is a matter for the territorial authority. Territorial authorities must identify potentially earthquake-prone buildings and notify the building owners. They must do this within the timeframes set out in the Earthquake Prone Building (EPB) Methodology, with a focus on priority buildings.
3. If the territorial authority suspects a church building is earthquake prone, it will invite the congregation to provide an engineering assessment. The engineering assessment must meet the requirements of the EPB Methodology. Some earlier assessments may not. This will help the territorial authority assign an earthquake rating to the building.
4. If the territorial authority determines that a building is earthquake prone, it will issue an earthquake prone building notice. There are two types of notice depending on the rating: 0% to less than 20%; and 20% to less than 34%. If the territorial authority has issued a notice under the previous system, it will need to replace this with a new earthquake prone building notice. The original deadline will apply, unless the new notice requires a shorter deadline.
5. Territorial authorities are required to enter information about buildings that have been determined earthquake prone in the EPB register, which is maintained by the Ministry of Business, Innovation and Employment.
6. Church Councils that have received an earthquake prone building notice have until the deadline set out in the notice to strengthen (or demolish) the building. Once the work is complete and a code compliance certificate issued, the territorial authority will review the work and inform the Church Council that the building is no longer considered earthquake prone. The earthquake prone building notice will then be removed from the building.
7. Territorial authorities are able to make decisions for exemption from the remediation requirements for certain buildings. The characteristics of buildings that may be eligible for an exemption from the requirement to carry out seismic work are outlined in regulations.
8. Territorial authorities may receive applications from owners of earthquake-prone heritage buildings for an extension of up to 10 years to strengthen their buildings. The building will need to be a Category 1 historic place on the New Zealand Heritage List/Rārangi Kōrero.

USE OF EARTHQUAKE PRONE BUILDINGS

A building assessed as Grade E (below 20% NBS) or Grade D (20% - 33% NBS) is an earthquake prone building under the Building Act. While there is no legal requirement to close an earthquake prone building, the Council of Assembly has determined that 'unsafe buildings' should not be used.

Church Councils have a legal and Christian duty to safeguard the users of their buildings.

The Ministry of Business Innovation and Employment (MBIE) has developed seismic risk guidance to help building owners and users understand seismic assessments and provide them with the tools to make informed and risk-based decisions about continuing to occupy buildings with low seismic ratings.

Life Safety Risk Assessment

The primary focus of this assessment is on safety and is called a life safety risk assessment.

The starting point for carrying out a life safety risk assessment is an independently reviewed DSA listing the seismic vulnerabilities of the building and the potential consequences of their failure.

“Any decision to change the occupancy of the building should be based on a sound and complete understanding of the building and its potential vulnerabilities. Generally, an ISA does not provide enough detail to make a decision about occupancy of a building.” (MBIE, p. 10)

The key components of a life-safety risk assessment are set out in the MBIE Guidelines that can be found online [here](#), and the Church Council should refer to these.

In summary, they require the Church Council to:

1. Identify the critical vulnerable building elements,
2. Identify the consequences of the potential failure of each vulnerable element,
3. Consider the likelihood of an earthquake that could trigger failure of those building elements (this likelihood increases the longer the building is left unstrengthened),
4. Consider how many people might be exposed to the vulnerable building elements on a daily basis each week,
5. Consider how long before strengthening the building is likely to be completed (the remediation date),
6. Consider how long this exposure will continue in light of the proposed remediation date and the likelihood of a damaging earthquake during this time,
7. Determine the life safety risk based on the information gathered,

“Once you understand the exposure of people to the vulnerable building elements, the duration people will be exposed to the increased risk, and the likelihood of a damaging earthquake occurring during that time, you can determine the overall life safety risk.” (MBIE, p. 15)

“Life safety risk increases with higher exposure of people and longer periods before the risk is remediated. How you evaluate the life safety risk, and what is considered low or high

‘exposure of people’ will depend on your organisation’s own risk tolerance.” (MBIE, p. 15)

“It is useful to think of the time people will be exposed to the risk relative to the times set out in the Building (Earthquake-prone Buildings) Amendment Act 2016, as these times account for the Seismic Risk Area a building is in and hence the likelihood of an earthquake occurring in the region. If you are planning to remediate within or significantly faster than the times set out in the Act, you are significantly reducing the risk to building users.” (MBIE, p. 15)

8. Identify what can be done, if anything, to mitigate the life safety risk in the period to the proposed remediation date,

This might involve closing parts of the building where structural failure could occur in more frequent earthquakes, or removing, propping or tying back high-risk features of the building such as parapets or heavy cladding.

9. Identify the consequences of immediate closure of the building, including those for Christian witness and mission,

The Presbytery must confirm that the property is considered critical to the Presbytery’s mission. The less critical to this mission, the less are likely to be the consequences of closure.

“How you measure each of the impacts will depend on your organisation’s own risk tolerance and organisational priorities. For example, some organisations will place high importance on supporting their community, while others may have vulnerable customers that are a high priority. If you have a risk management framework or set of strategic objectives, this could be a useful frame for measuring building closure consequences against.” (MBIE, p. 17)

10. And, in light of all this information, determine whether the building is safe to occupy, not just as a matter of risk management but also as a decision that "affirms the integrity and nature of our Church and its Christian witness and mission."

“As schematically shown in Figure 5, vacating a building should generally only be considered where the consequences of closure are low and the life safety risk is very high. Such a building will typically have one or more severe structural weaknesses, and a range of vulnerabilities which suggest a propagating failure from one vulnerability to another (progressive collapse) is possible in strong ground shaking. Alternatively, a building with very low consequences of closure, for example a low use building where closure will not notably affect staff or service delivery, could be justified based on fewer, less severe vulnerabilities.” (MBIE, p. 17)

WHAT DOES THIS MEAN FOR THE CHURCH'S APPROVAL PROCESSES?

- Congregations no longer need apply for a strengthening exemption (if the current NBS rating is between 34 and 66% inclusive).
- Congregations will still need to apply for approval to strengthen their buildings from both the presbytery and the Trustees where the cost of that work exceeds the limit set by General Assembly under clause 2 of Schedule 2 of the Presbyterian Church Property Act 1885. That limit is currently \$50,000 and applies regardless of the current NBS rating.
- Congregations will also need to apply for approval (from both the presbytery and the Trustees) where they wish to use proceeds from the sale of property (property capital) to fund the strengthening work, regardless of the amount involved or the current NBS rating.
- Congregations no longer need to apply for an endorsement of decisions to use an earthquake prone building. Church Councils are responsible for any and all decisions to occupy a building and these should be based on a life safety risk assessment.

67% is still the preferred target for mission-critical buildings

The Trustees still hope that congregations will get on and strengthen their mission critical buildings to at least 67% of New Building Standard. There are several reasons to do so:

- The longer we wait, the more it will cost. What is expensive now, will be even more expensive in the future.
- Mission-critical buildings at or above 67% NBS are more likely to remain standing after an earthquake. This standard remains the recommended standard by engineers. If the Church is spending money on strengthening a building, we want to get the best value from that spend (not see it go to waste if the building is damaged in a quake).
- The better the seismic standard, the less it costs to insure the building.
- The standards are periodically reviewed, and the recent trend has seen the demands increase each time. Buildings that just scrape through now might not meet future standards.

This means that all applications to strengthen a mission-critical building to less than 67% NBS should, with the plans submitted for approval, provide:

1. An estimate of the additional cost to strengthen to at least 67%, and
2. Evidence as to why it is not worth spending this money.

There will always be exceptions to the 67% target, but we know that the Church has scarce financial resources and needs to allocate them wisely. The Trustees want to ensure that when those scarce resources are focused on mission-critical buildings, that any spending on those buildings is at a level that will provide the best return over the long term.

Impact on other building projects

The same position will apply for applications to spend (more than \$50,000) on renovating a building that has a NBS above 34% but below 67% (without also strengthening the building to at least 67%). That is, all renovation applications seeking to spend this sum on renovating a building will be taken as a sign that the building is a mission-critical building and so all such applications will require:

1. Confirmation of the current NBS,
2. If the current NBS is below 67%, an estimate of the additional cost to strengthen to at least 67%, and
3. Evidence as to why it is not worth spending this money.

The Trustees will question spending material amounts on critical buildings that are not strengthened to this level and might go to waste in the event of a moderate earthquake.

34% or 67% - What is the difference?

It is recommended that Congregations upgrade mission critical buildings to at least 67%, which is higher than the 34% required by many Local Authorities and the legislation.

The reasons for this are simple:

- **At 34% a building has a high probability of staying sufficiently intact that people will not be injured or killed. But there is a much higher likelihood that the building will no longer be useable.** Government and Local Authorities are primarily concerned about life and limb and have therefore focused on 34%.
- **At 67% it is likely that the building will remain useable, or can be fixed, and so the work of the Congregation can continue.** In the long-term interests of the Church, we want mission-critical facilities to remain functional.

The 33% level is actually quite low. The New Zealand Society of Earthquake Engineers states:

“33% NBS is the minimum legal limit for a building's earthquake capacity. This is a relatively low level of capacity, with a 10-fold greater risk of significant damage occurring than for a new building. The NZSEE recommend that the minimum should be 67% NBS (5 times the risk compared to a new building) to give an acceptable level of protection in a moderate to severe earthquake.”

REVISITING A SEISMIC ASSESSMENT

No one will be surprised to hear that building standards continue to evolve. This is also true when it comes to earthquake-related standards. Each earthquake teaches us something about how different buildings respond to different types of quakes.

The Building (Earthquake Prone Buildings) Amendment Act 2016 sets out a new earthquake prone building methodology (EPB Methodology). In response, Assessment Guidelines (including various updates since the last major Guidelines were issued in 2006) were revised and issued by MBIE in 2017. All seismic assessments must use the 2017 Guidelines. Earlier assessments based on the 2006 Guidelines should not be used.

Key areas of change

Major changes in the assessment guidelines have been in the areas of unreinforced masonry or brick buildings and flexible buildings with precast floors. Buildings of these construction types experienced extensive damage in the Canterbury and Kaikoura earthquakes. In contrast, timber and steel buildings performed much better in the Canterbury earthquakes, and this is reflected in the new guideline requirements. In some cases, the 2017 Guidelines provide a higher %NBS rating than the 2006 Guidelines for timber buildings.

What does this mean for Church Councils?

- If you have not completed an assessment – when you do, please ensure your engineer uses the 2017 Guidelines.
- If you have completed an assessment based on the 2006 Guidelines, but not provided your assessment to your territorial authority, you will need to have your assessment reviewed and updated to comply with the 2017 Guidelines.
- If you have a one-storey timber or steel building with a pre-2017 assessment already lodged with the territorial authority, you do not need to do anything else, except check and secure heavy vulnerable items in public spaces, e.g., heavy lights and heating units.
- If you have an unreinforced masonry or brick building with a pre-2017 assessment (lodged with the territorial authority), you will need to review the existing assessment to comply to the 2017 Guidelines.
- If you have a multi-storey concrete and steel building with precast cast floors with a pre-2016 assessment (lodged with the territorial authority), you will need to review the existing assessment with respect to the performance of the precast floors for compliance to the 2017 Guidelines.
- If you have an unreinforced masonry or brick building or a multi-storey concrete and steel building with precast cast floors and have completed strengthening work based on pre-2017 Guidelines, you need to have that work reviewed to ensure it meets the new Guidelines.

GENERAL PROVISIONS

Cooperative Ventures

In Cooperative Ventures this policy only applies to buildings held in Presbyterian title. Buildings held in the name of other churches should be dealt with in line with their policies.

Synod of Otago and Southland

For information regarding policies and funding for church buildings in the Synod of Otago and Southland area please contact the Executive Officer, Fergus Sime: phone 0800 76 22 22.

Funding of Seismic Assessments

Where the Congregation does not have the funds available to commission the seismic assessment, the Church Council may apply to use any capital funds held by the Trustees on behalf of the Congregation to meet the cost of the ISA or DSA. Where a Congregation has no funds available to undertake the evaluation, the Church Council should raise the issue with Presbytery.

Keeping everyone informed

Please forward a copy of the seismic assessment and other relevant information to both your Presbytery and the Church Property Trustees' office for their records.

Guidelines

More information on managing earthquake-prone buildings from the MBIE / Hīkina Whakatutuki Building Performance unit can be found online at:

<https://www.building.govt.nz/managing-buildings/managing-earthquake-prone-buildings>

The MBIE / Hīkina Whakatutuki document *Seismic Risk Guidance for Buildings: using seismic assessments in occupancy decision-making* referred to in this policy is available online at:

<https://www.building.govt.nz/assets/Uploads/getting-started/seismic-risk-guidance-for-buildings.pdf>

The Worksafe / Mahi Haumarū Aotearoa policy clarification for dealing with earthquake-related health and safety risks referred to in this policy is available online at:

<https://www.worksafe.govt.nz/laws-and-regulations/operational-policy-framework/operational-policies/dealing-with-earthquake-related/>

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APPENDIX - UNDERSTANDING NEW BUILDING STANDARDS

The NBS number

In New Zealand all buildings are rated as a percentage of the New Building Standard (% NBS). The loading code requirements aspect of the NBS vary across the country depending on the risk of earthquake, local seismicity factors and ground conditions. The assessment against the standard is based on The Seismic Assessment of Existing Buildings: Technical Guidelines for Engineering Assessments 2017 document (jointly managed by MBIE and others). Table A below sets out the implications of different percentages of the NBS. The risk of failure (life safety risk) increases significantly as the rated percentage drops.

Table A: Understanding New Building Standard Ratings

% NBS	Grade	Relative Risk of failure compared to a 100% rated building	Notes
>100	A+	<1 times	Over designed for emergency use
100	A	-	Standard for new buildings
80 - 99	A-	1 - 2 times	Current preferred standard for existing buildings
68 - 79	B	2 - 5 times	Future focus, preferred minimum
34 - 67	C	5 - 10 times	Medium term focus
20 - 33	D	10 - 25 times	Short term focus, legally earthquake prone if a public building or multi story residential
<20	E	>25 times	Immediate focus, legally earthquake prone if a public building or multi story residential

A building that is <34% NBS is considered to be “earthquake prone”. A building that is <67% NBS is considered to be an “earthquake risk”.

The types of evaluation

Since the Christchurch earthquakes the two different types of assessment have been called various names. It has now been decided that they should be called:

- **Initial Seismic Assessment (ISA).** This is a high-level screen to indicate the likely seismic rating of a building, taking into account its age and type of construction, local seismicity and the ground conditions. As it is a quick assessment, it can sometimes be considerably more conservative than the next assessment. This was previously called an Initial Evaluation Procedure or IEP.
- **Detailed Seismic Assessment (DSA).** This is a more detailed quantitative appraisal by an earthquake engineer that assesses the likely seismic performance of the building based on its individual characteristics. If a building is likely to be under or near the 34% NBS threshold, it may be more cost effective to obtain a DSA initially, as a DSA will provide more certainty and avoid the potential of having to pay for both an ISA and a DSA. This was previously called a Detailed Engineering Evaluation or DEE.