

REVISED EARTHQUAKE PRONE BUILDINGS POLICY

SUMMARY OF INFORMATION IN THE

STATEMENT OF PROPOSAL

The Building Act 2004 requires Council to adopt an earthquake-prone buildings policy to ensure all earthquake prone buildings are strengthened to at least meet the minimum prescribed standard (or be demolished) to reduce the potential of injury, loss of life or damage to other property in the event of a moderate earthquake.

The policy is required to be reviewed within five years of being adopted. The Council also stated in the final report back on the 2006 policy consultation (11 May 2006), the policy would be reviewed when the Initial Evaluation Process (IEP) was completed and the extent of the strengthening challenge for Wellington City more accurately identified.

Wellington City is located in one of the most seismically active parts of New Zealand and accordingly the draft Policy proposes a largely active approach to ensure buildings are appropriately strengthened, or if appropriate, demolished.

This Policy applies to all the buildings in Wellington City, except those used wholly or mainly for residential purposes unless they are comprised of two or more storeys *and* contain three or more household units.

The existing Policy sets out:

- the priorities for assessing and strengthening earthquake-prone buildings, which is based on their building type and use (for example, whether they serve a post-disaster function) and the building's age and condition
- the maximum timeframes required to undertake the upgrading work
- that owners of earthquake-prone listed heritage buildings must provide a management plan outlining how upgrading work will preserve the building's heritage fabric
- the procedure Council will undertake to determine the earthquake-prone status of buildings.

Four key changes are now proposed to the 2006 policy:

- Extension of the current five, ten and fifteen year maximum strengthening timeframes to ten, fifteen and twenty years for high, moderate and low priority buildings respectively
- Removal of the 1/3rd of capital value strengthening trigger
- Highlighting of a policy provision allowing owners of two or more potentially earthquake prone buildings to negotiate a strengthening plan across their portfolio which may modify the order and timeframes for the buildings to be strengthened, but providing an overall public safety gain.

- Amend the policy to include provisions allowing a council officer with the appropriate delegations to issue an EQPB notice with a timeframe different to the timeframes stated in the policy. This specifically relates to situations where:
 - Due to the effects of an earthquake
 - A building that was considered earth quake prone and had been issued a notice under this policy has been affected and it requires immediate action to address public safety issues.
 - A building that was not considered earth quake prone prior to the earthquake has been affected and it requires immediate action to address public safety issues.

- A building owner(s) has failed to comply with a notice and/or the time frame has expired.

The Council now seeks ratepayer and stakeholders feedback on the proposed Policy. The full Statement of Proposal to make the Policy is attached to this Summary of Information along with a submission form. It is also available online at www.wellington.govt.nz or from Council Service Centres and libraries or at the Council reception desk at 101 Wakefield Street.

Submissions open 7 July 2008 and close at 4pm 8 August 2008.

STATEMENT OF PROPOSAL

TO MAKE THE

EARTHQUAKE-PRONE BUILDINGS POLICY 2008

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1. Introduction

The Building Act 2004 ('the Act') requires Council to adopt an earthquake-prone buildings policy to ensure all earthquake-prone buildings are strengthened to at least meet the minimum prescribed standard (or be demolished) to reduce the potential of injury, loss of life or damage to other property in the event of a moderate earthquake.

This policy is required to be reviewed within five years of being adopted. The final report back on the 2006 policy consultation (11 May 2006) also stated that the policy would need to be reviewed when the IEPs were completed and the extent of the strengthening challenge for Wellington City more accurately identified. This policy outlines the approach Wellington City Council ('the Council') will take to require the owners of earthquake-prone buildings to have them strengthened, or if appropriate, have them demolished.

2. Background

Earthquakes are unpredictable events that occur infrequently and they can have significant consequences. Wellington City is located in one of the most seismically active parts of New Zealand and accordingly the draft Policy proposes a largely active approach to ensure buildings are appropriately strengthened (or be demolished).

This review will provide amendments to the current Earthquake Prone Building Policy 2006.

A number of other statutes affect the assessment and management of earthquake-prone buildings. Relevant agencies can therefore take action under their own legislation but this does not effect the assessment of a building in terms of the Building Act.

3. Key Policy Components

3.1 Assessing earthquake-prone buildings and standard of strengthening required

The Building Act 2004 and Building Regulations 2005 define the meaning of an 'earthquake-prone building'. As a general guidance, **an earthquake prone building will have strength that is 33% or less of the seismic loading standard NZS 1170.5: 2004.**

Once a building is classified as earthquake-prone, it will need to be strengthened, or if appropriate, demolished. Council will, however, encourage owners of earthquake-prone buildings to strengthen them to the greatest extent possible, particularly for buildings serving a specific post-disaster function.

3.2 Prioritisation to strengthen earthquake-prone buildings

Table 1 of the draft Policy prioritises the order in which the buildings will be assessed and, if necessary, strengthened. The prioritisation seeks to balance the public risk associated with earthquake-prone buildings, the private cost of strengthening a building and the availability of people to undertake the strengthening work.

The prioritisation in Table 1 is determined by:

Importance Level – whether a building has a post-disaster function, serves a specific community purpose and is likely to cause injury or damage to other property, based on NZS 1170.0:2002.

Building Age and Condition – the likely structural performance of a building based on the structural code to which the building was designed or strengthened.

Comparative studies of historical structural design standards to NZS 1170.5:2004 have shown that buildings originally designed or strengthened to the:

- *pre-1965 codes* are likely to be earthquake-prone unless there are mitigating circumstances
- *2/3 NZS 1900 Chapter 8:1965 standard* are likely to be earthquake-prone unless there is a mitigating circumstance. This is the level to which most of the non-heritage buildings in Wellington City have been seismically strengthened
- *NZS 1900 Chapter 8:1965 standard (1965 code)* may meet the required strength criteria and will probably not be earthquake-prone
- *1976 NZS 4203 and subsequent structural codes* are not expected to be earthquake-prone, unless they have an identified critical structural weakness.

In terms of the prioritisation of buildings, they differ in their importance to the community, numbers of occupants and potential risk of structural damage and collapse in an earthquake. Earthquake-prone buildings could therefore be prioritised for strengthening on a number of bases, including by:

- location, for example, giving priority to the Central Business District or buildings located near a faultline
- use, for example, giving priority to buildings attracting large crowds, then retail, commercial, industrial and finally residential
- size of building, and therefore likely size of occupant loading
- structural code a building was designed or strengthened to, or
- engineering or risk basis, combining as assessment of the building's strength and the consequences of an earthquake.

The engineering evaluation has been chosen as the basis for prioritisation because it takes into account the importance of buildings to the community because of their post-disaster function, special purpose/use and the numbers of occupants. It also assesses the likely performance of buildings in earthquake events.

3.3 Timeframe to strengthen a building

Staged timeframes to strengthen earthquake-prone buildings have been allowed for a number of reasons. They help ensure that there is sufficient resource accessible to do the investigation, design and construction work. For large buildings, long lead times may be required to re-negotiate leases to manage the vacating of areas necessary to undertake the work.

Strengthening a building can be expensive and building owners will have to determine if the strengthening is viable. This will include consideration of the benefits of

upgrading a building rather than demolition. On the other hand, a strengthened building may include an increase in market value of the building, increased demand in the rental market and more favourable insurance options.

The current policy sets maximum building strengthening timeframes of 5, 10 and 15 years for high, moderate and low category buildings respectively. The policy, in addition, requires strengthening if the cumulative value of works requiring building consent exceeds 1/3rd of the capital value of the building.

Council experience of implementing changes in earthquake strengthening standards since the 1970s has been that:

- Approximately thirty years has been required to achieve widespread compliance with the revised standards of that time.
- Shorter timeframes have often resulted in poor urban amenity outcomes such as demolitions and creation of ad hoc car parks, boarded up buildings or visually inappropriate forms of strengthening.
- Longer timeframes have generally resulted in strengthening to a higher structural and visual standard. The longer timeframes better allowed owners to make financial provision for strengthening costs. Technical analysis of the benefit cost ratios of strengthening requirements support this conclusion, indicating that longer retrofit time periods can have higher benefit cost ratios.

The current timeframes are considered to be inappropriate in light of Council's experience. It is proposed to extend the timeframes for strengthening compliance in the 2006 policy by a further five years for each priority category as follows:

- | | |
|---------------------|-----------------------------------|
| • High priority | Change from 5 to up to 10 years. |
| • Moderate priority | Change from 10 to up to 15 years. |
| • Low priority | Change from 15 to up to 20 years. |
| • Passive | No maximum – unchanged. |

Other councils have typically chosen a more discretionary approach where precise timeframes are not apparent or assessed on a case by case basis. This would suggest the likelihood of relatively long timeframes being set in practice.

It is further proposed to remove the one third of capital value trigger which requires strengthening work to an earthquake prone building if building work is proposed in advance of the maximum timeframes otherwise required. This proposed change would allow building owners to improve the amenity of the buildings without the requirement to strengthen at that time. This is expected to allow building owners the full timeframes in which to make financial provision for strengthening works. Council has considered options of retaining the 1/3rd trigger and also amending the trigger to require negotiation of an agreed timeframe. While this last option has merit, complete removal of the trigger is recommended.

In any case it is recommended that Council's policy should continue to encourage strengthening to the highest practical standard when other significant work is undertaken.

The proposals represent a moderate relaxation of the maximum strengthening timeframes for buildings identified since 2006 as earthquake prone, while ensuring an appropriate balance with public safety concerns by maintaining Council pressure on those building owners who remain in breach of long standing strengthening notices issued under the previous policy.

Buildings with earthquake-prone building notices issued under Section 66 of the Building Act 1991 will be / or have been reissued a notice under Section 124 of the Building Act 2004 requiring strengthening. The timeframe for these notices is 2 years.

To meet the requirements of a notice, building work to strengthen or demolish the building needs to be completed within the time frame specified in the notice.

3.4 Demolition of earthquake-prone buildings

Once a building is classified as earthquake-prone, the building owner may choose to strengthen it, or if appropriate, demolish all or part of the building. A demolition proposal may require resource consent to be obtained from the Council.

3.5 Change of use

When a change of use for a building or part of a building occurs, then the structural upgrade of the building or the affected area is required to be strengthened “as nearly as is reasonably practicable” to the current requirements of the Building Code. Council has no discretion over this requirement which is a provision of the Building Act 2004.

3.6 Heritage buildings

A heritage building includes all buildings listed as a heritage building in the Wellington City District Plan and/or those registered by the New Zealand Historic Places Trust.

Section 4(2)(1) of the Building Act recognises the “need to facilitate the preservation of buildings of significant cultural, historical, or heritage value” and Council’s Built Heritage Policy 2005 contains objectives that recognise and protect the city’s built heritage. The Wellington City District Plan also requires a resource consent to alter or demolish a listed heritage building.

These factors need to be considered against the Building Act’s requirement that Council *must* ensure all earthquake-prone buildings are strengthened to at least meet the minimum prescribed standard (or be demolished) to reduce the potential of injury, loss of life or damage to other property in the event of a moderate earthquake.

It is likely that some heritage buildings will be classified as earthquake prone under the Act. The impact on heritage buildings in the city could be significant if it is not financially viable to strengthen the building and demolition is favoured by the building owners.

The continued approach in this Policy to heritage buildings is to reduce the impact of any strengthening work required on the heritage fabric of the building. Council will continue to proactively seek to protect heritage buildings as follows:

- strengthening is required so that it is no longer earthquake-prone
- the maximum timeframes will apply, just as it does to all buildings
- a management plan outlining how strengthening will preserve the heritage fabric of buildings is to be provided
- demolition is not encouraged.

A heritage incentive fund of \$250,000 is proposed in the 2008/09 draft annual plan. The fund will be available for a range of heritage-related projects, in accordance with the Built Heritage Policy, and *not* specifically for earthquake-strengthening related work. Building owners will be able to apply for funding for obtaining detailed assessments, completing management plans and a small amount may be available for any required strengthening work. However, the fund is not sufficient to make a significant impact on all earthquake-strengthening related work on heritage buildings expected throughout the city.

3.7 Council Infrastructure

Asset Management Plans set out how Council will meet its infrastructural obligations under the Civil Defence and Emergency Management Act 2002, which places a duty on a local authority to plan and provide for civil defence emergency management within its district. It must also ensure that it is able to function, even at a reduced level, after an emergency such as an earthquake.

3.8 Portfolio Approach

Owners of multiple EQPB can work with the Council to agree on a building portfolio strengthening plan that may modify the order and timeframes in which buildings are strengthened but providing an overall public safety gain.

4. Identification of Earthquake-Prone Buildings

This review of the Policy continues to endorse the procedure Council has used to establish the earthquake-prone status of buildings. Sections 124 to 128 of the Building Act give the Council recourse to a number of remedies if a building is classified as earthquake-prone. The existing process is detailed further below and is proposed to remain unchanged except for the addition of a further provision allowing owners of two or more buildings to negotiate a strengthening plan across their portfolio which may modify the buildings to be strengthened and timeframes, while providing an overall public safety gain.

The process for the identification of earthquake prone buildings (which is the same as the 2006 policy) is set out below:

Step 1. Desk top review

A desk top review of Council files is undertaken by Council to assess which buildings could be earthquake-prone. Buildings that do not require further assessment include those that are excluded by the definition of an earthquake-prone building in the Building Act 2004 and buildings built or strengthened to 1976 and subsequent structural code standards.

From the information gathered in this review, a database of these potentially earthquake prone buildings is established.

Step 2. Initial evaluation process

The Council uses the Initial Evaluation Process (IEP) set out in the New Zealand Society for Earthquake Engineering *Recommendations for the Assessment and Improvement of the Structural Performance of Buildings in an Earthquake* to determine the structural performance score of potentially earthquake prone buildings in relation to NZS 1170.5: 2004. Buildings with a score of less than 34 are considered to fall within the definition of earthquake-prone.

Buildings are evaluated on an area by area basis. Consideration will also be given to the number, classification and potential risk of buildings within an area when deciding the order of areas to be assessed.

Council is, at its own cost, using appropriately qualified engineers to undertake the evaluations. This ensures that all IEPs are carried out, they carry out the evaluations consistently and they set the timeframe within which they are to be completed.

Step 3. Advise of IEP Outcome

As the IEP evaluations are completed, the Council will write to owners of buildings with an IEP score of less than 34 advising that their building is potentially earthquake prone. Owners will then have six months to consider this advice and provide any additional information about factors that may affect the strength of the building or a detailed assessment of the structure. Council will use appropriately qualified engineers to review this information.

Where the Council is satisfied that the building is not earthquake prone, the recorded status of the building will be changed and the owner will be advised of the Council's decision.

Step 4. Issue of notice to strengthen building

Where, after consideration of any further information provided in Stage 3 above, the Council is satisfied that the building is earthquake prone it will advise the owner of the classification of their building and issue a written notice under Section 124 of the Building Act 2004 requiring a building consent to be obtained and the structural strengthening work to be undertaken.

Step 5. Dispute of earthquake-prone classification of building

The Council has decided not to establish an appeals process against the classification of a building as earthquake-prone as the Building Act sets out whether a building is or is not earthquake-prone. However, should an owner dispute the classification, an application for a 'Determination' may be made to the Chief Executive of the Department of Building and Housing. As set out in the Building Act 2004, the determination of the Chief Executive is binding on the Council and the building owner(s).

Step 6. Request by building owner for extension in timeframe to complete work and owner with a portfolio of buildings

The Council will continue with its established hearings process to consider individual submissions from owners requesting a longer timeframe than it has decided upon in the Policy (and section 3.3 above) to complete the strengthening work. This may be appropriate in special circumstances where the building owner is unable to comply with the requirement to strengthen the building within the timeframes set out.

The hearing process will take the purpose and the relevant principles of the Building Act into consideration. The hearings will be established by Council and administrative costs to the building owner may apply.

Should the building owner be permitted to have a longer timeframe to strengthen the building, the Council may take action to ensure the public is aware of the earthquake-prone status of the building and the risk associated with occupying the building. This may include placing a notice on the building or putting up a hoarding or fence around the building. Any notice will be reissued to reflect amended agreed timeframes.

Step 7. Updates

As building consents for structural strengthening are received and the strengthening work completed, the database will be updated to reflect the status of the building as *not* earthquake prone.

Step 8. Enforcement action

- If structural upgrading work has not been undertaken in accordance with the notice issued at Step 4, the Council will consider taking enforcement actions.

5. Availability of Earthquake-Prone Building Information

The database of potentially earthquake prone buildings is publicly available upon request and includes information that is already provided in Land Information Memoranda. The database will provide a summary of the data and also the current status of the building as potentially earthquake prone or earthquake prone. It will note whether this information is pending an outcome or an assessment to determine its correct status. The information will continue to be included in property reports and Land Information Memoranda.

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EARTHQUAKE- PRONE BUILDINGS POLICY

June 2008

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ATTACHMENT 2: Specific matters to be considered in a hearings process

1 Introduction

Wellington City is located in one of the most seismically active parts of New Zealand. Earthquakes are unpredictable events that occur infrequently and they can have significant consequences.

Earthquakes cannot be prevented, but their impacts can be mitigated. The Building Act 2004 (the 'Act') expresses the government's objective for earthquake-prone buildings to be strengthened to the appropriate seismic standards, or may ultimately be demolished. It has an underlying objective to reduce the risk of injury, death or damage to other property that may result from the effects of a moderate earthquake on buildings.

This Policy has been developed under the requirements set out in the Act. It outlines the Wellington City Council's approach to ensure earthquake-prone buildings are strengthened to the level required by the Act, or may be demolished.

This Policy updates the 2006 Earthquake Prone Buildings Policy which replaced the Council's Building Safety Policy 1998.

2 Policy Objectives and Principles

2.1 Policy objectives

The objective of this Policy is to discharge the Council's responsibilities and obligations under the Building Act with respect to earthquake-prone buildings.

In doing so, strengthening work undertaken to comply with the Policy will reduce the potential for injury, loss of life and damage to other property in a moderate earthquake. It will also reduce the potential social disruption and loss of productivity that may result from an earthquake.

It is the responsibility of building owners to ensure that buildings comply with the requirements of the Act. The Council can give no assurance or guarantee that any building is not earthquake-prone at any time, until approved strengthening work has been completed.

2.2 Policy principles

This Policy has been developed considering the purpose and principles of the Act which seek to ensure that:

- people who use buildings can do so safely and without endangering their health
- buildings have attributes that contribute appropriately to the health, physical independence, and well-being of the people who use them
- buildings are designed, constructed, and able to be used in ways that promote sustainable development.

3 Key Policy components

3.1 Assessing Earthquake-Prone Buildings

Under Section 122 of the Building Act, the meaning of earthquake-prone building is

- (1) A building is earthquake-prone for the purposes of this Act if, having regard to its condition and to the ground on which it is built, and because of its construction, the building -
 - (a) will have its ultimate capacity exceeded in a moderate earthquake (as defined in the regulations); and
 - (b) would be likely to collapse causing –
 - (i) injury or death to persons in the building or to persons on any other property; or
 - (ii) damage to any other property.
- (2) Subsection (1) does not apply to a building that is used wholly or mainly for residential purposes unless the building –
 - (a) comprises 2 or more storeys; and
 - (b) contains 3 or more household units.

Moderate earthquake has the same meaning as section 7 in the Building Regulations 2005 where –

‘...moderate earthquake means, in relation to a building, an earthquake that would generate shaking at the site of the building that is of the same duration as, but that is one-third as strong as the earthquake shaking (determined by normal measures of acceleration, velocity, and displacement) that would be used to design a new building at that site.’

Buildings will need to be assessed to determine whether they are earthquake-prone. As a general guidance, **an earthquake prone building will have strength that is 33% or less of the seismic loading standard NZS 1170.5: 2004.**

3.2 Standard of strengthening required

Once a building has been classified as earthquake prone, strengthening work to ensure the building is no longer earthquake prone will require a building consent. When a building consent is sought then the Council will assess whether the level of strengthening is to the greatest extent possible, particularly for buildings serving a specific post disaster function.

The benefits for the building owner of higher levels of strengthening include:

- improved levels of safety for occupants, tenants and the public
- allowance for a change of use to occur to potentially better meet owner or market demand and realise a better return
- greater ‘future proofing’ against changes in either the legislation or structural codes which may require higher levels of strengthening to be achieved
- leverage for improved insurance
- reduced risk level of damage to the building, other properties in its proximity and lessen the impacts on business continuity.

There is also an advantage to the city in reducing the impacts for our community following an earthquake event by:

- preserving the fabric of our city, particularly heritage buildings
- lessening the economic impacts
- lessening the disruption of service.

3.3 Prioritisation to strengthen earthquake-prone buildings

Table 1 prioritises the order in which the buildings will be assessed and, if necessary, strengthened. The prioritisation seeks to balance the public risk associated with earthquake-prone buildings, the private cost of strengthening a building and the availability of people to undertake the strengthening work.

The prioritisation in Table 1 is determined by:





Importance Level – whether a building has a post-disaster function, serves a specific community purpose and is likely to causing injury or damage to other property. The complete list of Importance Levels, which is based on NZS 1170.0:2002, is included in Attachment 1.

Building Age and Condition – the likely structural performance of a building based on the structural code to which the building was designed or strengthened.

Table 1: Priority for assessing and strengthening earthquake-prone buildings

IMPORTANCE LEVEL	BUILDING AGE & CONDITION		
	A Pre NZS 1900 Chapter 8: 1965 Standard	B NZS 1900 Chapter 8: 1965 Standard	C Critical structural weakness
1: Low degree of hazard E.g. Farm buildings and isolated structures, fences, walls	Passive	Passive	Passive
2: Not in other levels E.g. Hotels, offices and apartments less than 15 storeys	Moderate	Low	Low
3: Contain crowds or high value to the community E.g. Schools, universities, structures over 15 storeys, medical centres	High	Moderate	Low
4: Highest with post-disaster functions E.g. Hospitals, civil defence centres, police, air traffic control, power, radio	High	High	High

Ranking:

 High priority	 Moderate priority	 Low priority	 Passive
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3.4 Maximum timeframe to strengthen a building

Using the prioritisation established in Table 1, the maximum timeframes for undertaking strengthening work for a building that has been determined as earthquake-prone, are:

- High priority 10 years
- Moderate priority 15 years
- Low priority 20 years
- Passive No maximum.

Buildings with earthquake-prone building notices issued under Section 66 of the Building Act 1991 will be reissued a notice under Section 124 of the Building Act 2004 requiring strengthening. The timeframe for these notices is 2 years.

To meet the requirements of a notice, building work to strengthen or demolish the building needs to be completed within the time frame specified in the notice.

3.5 Demolition of earthquake-prone buildings

Once a building is classified as earthquake-prone, the building owner may choose to strengthen it, or if appropriate, demolish all or part of the building. A demolition proposal may require a resource consent to be obtained from the Council.

3.6 Change of use

The Building Act 2004 provisions regarding change of use are separate from the Act's provisions relating to earthquake-prone buildings.

When a change of use for a building or part of a building occurs, then the structural upgrade of the building or the affected area is required to be strengthened" as nearly as is reasonably practicable" to the current requirements of the Building Code. Council has no discretion over this requirement which is a provision of the Building Act 2004.

The change of use provisions includes the establishment of a household unit where there was none before, and wherever there is a change in the classified use as defined in Schedule 2 of the Building (Specified systems, change of use, and earthquake-prone buildings) Regulations 2005.

3.7 Heritage buildings

A heritage building includes all buildings listed as a heritage building in the Wellington City District Plan and/or those registered by the New Zealand Historic Places Trust.

The Building Act requires that Council *must* ensure all earthquake-prone buildings are strengthened to at least meet the minimum prescribed standard (or be demolished) to reduce the potential of injury, loss of life or damage to other property in the event of a moderate earthquake. This Policy's approach to heritage buildings is to reduce the impact of any strengthening work required on the heritage fabric of the building so that for earthquake-prone heritage buildings:

- strengthening is required so that it is no longer earthquake-prone
- the maximum timeframes will apply, just as it does to all buildings
- a management plan outlining how strengthening will preserve the heritage fabric of buildings is to be provided
- demolition is not encouraged.

A heritage incentive fund has been operating since 2006/07. The 2008/09 draft annual plan provides \$250,000 a year for a range of heritage-related projects, including those that are required as a result of the adoption of the proposed Policy.

3.8 Council Infrastructure

The management of Council's infrastructure, including roads, tunnels and water reservoirs, is also relevant to this Policy. Currently, Asset Management Plans set out how Council will meet its obligations under the Civil Defence and Emergency Management Act 2002, which places a duty on a local authority to plan and provide for civil defence emergency management within its district. It must also ensure that it is able to function, even at a reduced level, after an emergency such as an earthquake.

In addition, all works carried on infrastructure comply with the risk analysis, best practice and relevant standards as set out in the Asset Management Plan.

3.9 Portfolio Approach

Owners of multiple EQPB can work with the Council to agree on a building portfolio strengthening plan that may modify the order and timeframes in which buildings are strengthened but providing an overall public safety gain.

4 Identification of Earthquake-Prone Buildings

The following sets out the procedure Council will use to establish the earthquake-prone status of all buildings.

Step 1. Desk top review

A desk top review of Council files will be undertaken by Council to assess which buildings could be earthquake-prone. Buildings that will *not* require further assessment include those:

- designed or strengthened to the 1976 NZS 4203 and subsequent codes, unless they have a critical structural weakness
- isolated structures unlikely to collapse causing injury, death or damage to other property (refer Section 122 (1)(b) of the Building Act 2004)
- used wholly or mainly for residential purposes, unless the building comprises 2 or more storeys and contains 3 or more household units (refer Section 122(2) of the Building Act 2004)
- Council and Transit New Zealand infrastructure covered by an Asset Management Plan.

From the information gathered in this review, a database of potentially earthquake prone buildings will be established.

Step 2. Initial evaluation process

The Council will use the Initial Evaluation Process (IEP) set out in the New Zealand Society for Earthquake Engineering *Recommendations for the Assessment and Improvement of the Structural Performance of Buildings in an Earthquake* to determine the structural performance score of potentially earthquake prone buildings in relation to NZS 1170.5: 2004. Buildings with a score of less than 34 are considered to fall within the definition of an earthquake-prone building.

Buildings are evaluated on an area by area basis. Consideration will also be given to the number, classification and potential risk of buildings within an area when deciding the order of areas to be assessed.

Council will, at its own cost, use appropriately qualified engineers, to undertake the evaluations.

Step 3. Advisement of IEP Outcome

As the IEP evaluations are completed, the Council will write to owners of buildings with an IEP score of less than 34 advising that their building is potentially earthquake prone. Owners will then have six months to consider this advice and provide any additional information about factors that may affect the strength of the building or a detailed assessment of the structure. Relevant information could include:

- construction materials and detailing
- regularity of the building in both plan and elevation
- the type of soil the building is founded on.

Council will use appropriately qualified engineers to review this information. Where the Council is satisfied that the building is not earthquake prone, the recorded status of the building will be changed and the owner will be advised of the Council's decision.

Step 4. Issue notice to strengthen building

Where, after consideration of any further information provided in Stage 3 above, the Council is satisfied that the building is earthquake prone it will advise the owner of the classification and issue a written notice under Section 124 of the Building Act 2004 requiring a building consent to be obtained and the structural strengthening work to be undertaken.

Step 5. Dispute of earthquake-prone classification of building

Should an owner dispute the classification of their building as earthquake prone, application for a 'Determination' may be made to the Chief Executive of the Department of Building and Housing. As set out in the Building Act 2004, the determination of the Chief Executive is binding on the Council.

Step 6. Requests by a building owner(s) for extension in timeframe to complete work and/or with a portfolio of potentially earthquake prone buildings

The Council may consider individual submissions from owners through a hearing process requesting a longer timeframe (than set out in section 3.4) to complete the strengthening work. This may be appropriate in special circumstances where the building owner is unable to comply with the requirement to strengthen the building within the maximum Policy timeframes.

The hearing process will take the purpose and the relevant principles of the Building Act into consideration. It will consider the appeal of the building owner against the Council's requirement to reduce the risk to the public in the event of an earthquake. In general, the hearing process and specific matters that may be considered are set out in Attachment 2. The hearings will be established by Council and administrative costs to the building owner may apply.

Should the building owner be permitted to have a longer timeframe to strengthen the building, the Council may take action to ensure the public is aware of the earthquake-prone status of the building and the risk associated with occupying the building. This may include placing a notice on the building or putting up a hoarding or fence around the building. Any notice will be reissued to reflect amended agreed timeframes.

Step 7. Updates

As building consents for structural strengthening are received and the strengthening work completed, the database will be updated to reflect the status of the building as *not* earthquake prone.

Step 8. Enforcement action

If structural upgrading work has not been undertaken in accordance with the notice issued at Step 4, the Council will consider enforcement actions.

Availability of Earthquake-Prone Building Information

The database of potentially earthquake prone buildings is publicly available upon request and includes information that is already provided in Land Information Memoranda. The database will provide a summary of the data and also the current status of the building as potentially earthquake prone or earthquake prone. It will note whether this information is pending an outcome of an assessment to determine its correct status.

The information will continue to be included in property reports and Land Information Memoranda.

Importance Levels for Building types – New Zealand Structures

IMPORTANCE LEVEL	COMMENT AND EXAMPLES
1 (lowest)	<p><i>Structures presenting a low degree of hazard to life and other property</i></p> <ul style="list-style-type: none"> • structures with a total floor area of 30m² • Farm buildings, isolated structures, towers in rural situations • Fences, masts, walls, in-ground swimming pools
2	<p><i>Normal structures and structures not in other importance levels</i></p> <ul style="list-style-type: none"> • Buildings not included in importance levels 1,3 or 4 • Single family dwellings • Car parking buildings
3	<p><i>Structures that as a whole may contain people in crowds or contents of high value to the community or pose risks to people in crowds</i></p> <p>Buildings and facilities as follows:</p> <ul style="list-style-type: none"> (a) Where more than 300 people can congregate in one area (b) Day care facilities with a capacity greater than 150 (c) Primary school or secondary school facilities with a capacity greater than 250 (d) Colleges or adult education facilities with a capacity greater than 500 (e) Health care facilities with a capacity of 50 or more resident patients but not having surgery or emergency treatment facilities (f) Airport terminals, principal railway stations with a capacity greater than 250 (g) Correctional institutions (h) Multi-occupancy residential, commercial (including shops), industrial, office and retailing buildings designed to accommodate more than 5000 people and with a gross area greater than 10 000 m² (i) Public assembly buildings, theatres and cinemas of greater than 1000m² <p>Emergency medical and other emergency facilities not designated as post-disaster.</p> <p>Power-generating facilities, water treatment facilities and other public utilities not designated as post-disaster.</p> <p>Buildings and facilities not designated as postdisaster containing hazardous materials capable of causing hazardous conditions that do not extend</p>

4 beyond the property boundaries
Structures with special post-disaster functions
Buildings and facilities designated as essential
Facilities.

Buildings and facilities with special post-disaster
Function.

Medical emergency or surgical facilities.

Emergency service facilities such as fire, police
stations and emergency vehicles garages.

Utilities or emergency supplies or installations
required as backup for buildings and facilities of
Importance Level 4.

Designated emergency shelters, designated
emergency centres and ancillary facilities.

Buildings and facilities containing hazardous
materials capable of causing hazardous conditions that extend beyond the
property boundaries

5
(highest)

Special structures (outside the scope of the Standard)

- Structures that have special functions or whose failure poses catastrophic risk to a large area (e.g. 100km² or a large number of people (e.g.100,000))
- Dams, extreme hazard facilities

Source: Standards NZ, Structural design actions Part 0: General principles, AS/NZS 1170.0:2002, Table 3.1

Note: There are no importance Level 5 buildings in the Wellington City area.

Hearings Process

The hearing process is initiated by the property owner or their agent applying to the Council in writing and requesting a time extension to those set out in the section 124 notice that has been issued for the building(s). This may include information in support of a different timeframe and order that strengthening work is to be completed.

The matter will be heard by the Council's Regulatory Committee. Council Officers will provide a report with recommendations and the building owner or their agent will have the opportunity to make a presentation to the Committee.

Once the Committee has made a decision the building owners will be advised and the notices reissued if necessary.

Specific matters that may be considered for an extension in timeframe to complete strengthening work

- whether people who use the building(s) can do so safely
- importance of ensuring that each building is durable for its intended use
- importance of recognising any special traditional and cultural aspects of the intended use of the building(s)
- costs of the building(s) (including maintenance) over its whole life
- importance of standards of building design and construction in compliance with the building code
- need to provide for the protection of other property from the risk of physical damage
- need to facilitate the preservation of buildings of significant cultural, historical , or heritage value
- importance level of the building(s)
- building structure and strength i.e. the code that was used to design and construct the building(s)
- special characteristics of the building(s) e.g. heritage or historic
- whether the building(s) has already been strengthened along with the level it was strengthened to and when the work was done
- financial implications
- ramifications if the building(s) were to be demolished rather than strengthened e.g. loss of heritage for future generations
- availability of the appropriate people to do the work.
- the net gains in public safety that might be available where an owner of more than one building agrees to a building portfolio strengthening plan that may modify the order in which buildings are strengthened and timeframes.