



New Zealand Historic Places Trust Pouhere Taonga
**Sustainable Management of Historic Heritage
Guidance Series (draft for consultation)**

**Heritage Provisions for
Earthquake-prone buildings
policies under the
Building Act 2004**



1 November 2010

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Heritage provisions for Earthquake-prone Building Policies Under the Building Act 2004

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Cover photo: Damage to St John's, Hororata, following the Canterbury earthquake of 4th September 2010, Photo, NZHPT

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1. Introduction

Earthquakes can destroy places of value to individuals and communities. Since 2004, there have been two major earthquakes which have damaged heritage buildings – Gisborne earthquake on 20 December 2007 and the Canterbury earthquake on 4 September 2010.

There has been unprecedented nation-wide media interest about the effect of earthquakes on heritage buildings following the Canterbury earthquake. This interest will result in greater public expectations about the risk of heritage buildings to public safety and how such buildings are being managed to survive future earthquakes. For territorial authorities, there will be a greater need for robust earthquake-prone policy, proactive identification and strengthening of earthquake-prone buildings, effective post-disaster strategies and recovery plans.

This revised guide has been informed by the experiences of both the Gisborne and Canterbury earthquakes. It is designed for territorial authorities with respect to heritage provisions in policies for earthquake-prone buildings.

All territorial authorities must review their dangerous, earthquake-prone, and insanitary buildings policies by March 2011. This revised guide is designed to assist territorial authorities prepare the 2nd generation earthquake-prone buildings policies.¹

This guide discusses some key heritage-related principles relating to earthquake-prone building and explains the concept of heritage buildings. It covers the topics of the general policy approach, identifying earthquake-prone buildings, taking action on earthquake-prone buildings, post-disaster response, heritage precincts and incentives. Examples of model policies are provided for territorial authorities to consider incorporating into their policy processes.

The NZHPT acknowledges that the extent to which guidance regarding policy development and implementation of voluntary practice by territorial authorities is applied will be subject to the resources allocated for such tasks by a community.

Policies prepared under the Building Act 2004 (the Building Act) should ensure that the special issues concerning heritage buildings are recognised and provided for, especially issues relating to the need to strengthen dangerous heritage buildings, the need to minimise any damage or loss of heritage fabric, provision of incentives, and the interests of owners and other stakeholders.

The term ‘building’ in this document has the same meaning as the definition of building under the Building Act which includes a range of temporary and fixed structures



Towards Improving National and Local Action on Earthquake-Prone Heritage Buildings, NZHPT, March 2009 (CTRL + click on image to link to report on NZHPT website)

¹ This revised guide has excluded policies relating to dangerous, insanitary buildings and dangerous dams. For information about management about these matters, see NZHPT’s original guide as part of the *Sustainable Management of Historic Heritage Guidance Series*, August 2007: <http://www.historic.org.nz/Publications/SustainMgtSeries.aspx>

1.1 Earthquake-prone buildings and heritage

Sustainable development of the built environment promotes the conservation of heritage buildings for future generations. Sustainable development encourages a long-term risk management approach to ensure such buildings are safeguarded from hazards such as earthquakes and fires.

Heritage buildings are of importance to the nation. While they are places of public interest, heritage buildings are often privately owned.

New Zealand's building regulations have ensured the survival of many heritage buildings over the years and appropriately designed earthquake strengthening work will ensure these buildings survive for future generations.² Such earthquake strengthening works should be designed to achieve minimal loss to heritage fabric.

While territorial authority policies and actions aim to minimise the potential impact of earthquakes, there can be conflict and tensions about the extent of territorial authority intervention to manage earthquake risk involving heritage buildings and the appropriate design of building work to improve structural performance.

As a first step, territorial authorities should discuss the preparation of the policies with the relevant regional or area office of the NZHPT. Ideally, there should be an opportunity for NZHPT input before formal public notification of the proposed policy in view of promoting a 'partnership approach'.

In addition to discussions with relevant organisations, a 'working party' approach to the preparation of the policies should be encouraged with the participation of NZHPT, community boards, heritage groups, and other stakeholders. Generally, the NZHPT will base its advice and advocacy to territorial authorities on this guide.

Dealing with earthquake-prone heritage buildings is not a new issue. As indicated above, the NZHPT published earthquake-prone policy guidance in 2007 as part of the *Sustainable Management of Historic Heritage Guidance Series* (the guidance series). The NZHPT also published guidance in 2000 about earthquake strengthening

Archaeological authority process under the Historic Places Act 1993

All pre-1900 archaeological sites are protected under the Historic Places Act 1993. An archaeological authority is required from the NZHPT to destroy, damage or modify an archaeological site.

If earthquake strengthening – related work requires excavations around the foundations of a pre-1900 building, an archaeological authority may be required from the NZHPT.

Further information about the archaeological authorities can be obtained by contacting the NZHPT:
www.historic.org.nz

² Initial research following the Canterbury earthquake indicates that buildings that had been seismically retrofitted have performed well in comparison to unreinforced buildings: Jason Ingham & Mike Griffith, 'Performance of unreinforced masonry buildings during the 2010 Darfield (Christchurch, NZ) earthquake': http://db.nzsee.org.nz:8080/en/web/lfe-darfield-2010/structural/-/blogs/initial-assessment-of-unreinforced-masonry-building-performance-in-the-2010-darfield-earthquake-1?_33_redirect=http%3A%2F%2Fdb.nzsee.org.nz%3A8080%2Fen%2Fweb%2Flfe-darfield-2010%2Fstructural%2F-%2Fblogs

heritage buildings. This guidance is being updated as part of the rolling review of the guidance series.³

The draft guide for earthquake strengthening and this revised policy has been informed by a separate and ongoing research project relating to the overall issue of earthquakes and heritage buildings. A copy of the research paper is also available on the NZHPT's website.⁴

Also as part of the guidance series, the NZHPT has developed an overview guide on the Building Act and heritage (see Guide No.6 of this series).⁵ For further information, please contact the nearest regional or area office of NZHPT.

The Department of Building and Housing has prepared a guide in respect to the preparation of a policy for earthquake-prone buildings. Copies of the *Earthquake-Prone Building Provisions of the Building Act 2004 Policy Guidance for Territorial Authorities*, June 2005 can be obtained from the Department of Building and Housing or downloaded the Department of Building and Housing website.⁶ The Department of Building and Housing is currently working on further additional guidance. For further information, contact David Hopkins at the Department of Building and Housing.



Earthquake Strengthening - Improving the Structural Performance of Heritage Buildings, NZHPT, August 2010 (CTRL + click on image to link to report on NZHPT website)

³ NZHPT. 'Earthquake Strengthening, Improving the Structural Performance of Heritage Buildings', Draft Guide, August 2010,

<http://www.historic.org.nz/en/ProtectingOurHeritage/ConsultingOn.aspx>

⁴ NZHPT, 'Towards Improving National and Local Action on Earthquake-Prone Heritage Buildings', 3 March 2009:

<http://www.historic.org.nz/ProtectingOurHeritage/AdvocatingForHeritage.aspx>

⁵ <http://www.historic.org.nz/Publications/SustainMgtSeries.aspx>

⁶ <http://www.building.govt.nz/publish/publications.php>

2. Building Act 2004

The Building Act⁷ regulates all building work in New Zealand and:

- sets performance standards (including the Building Code);
- establishes a licensing regime for building practitioners; and
- requires territorial authorities (and private organisations) to become registered and accredited building consent authorities to carry out building control functions,

The functions of territorial authorities as building consent authorities are outlined in the Building Act. These functions include:

- issuing building consents;
- issuing project information memoranda;
- issuing notices to fix (section 164);
- keeping building consent information and the provision of public access to building information;
- carrying out building work on default (section 220); and
- inspections and enforcement.

The purpose of the Building Act is to provide for the regulation of building work, the establishment of a licensing regime for building practitioners, and the setting of performance standards for buildings, to ensure that –

- (a) people who use buildings can do so safely and without endangering their health; and
- (b) buildings have attributes that contribute appropriately to the health, physical independence, and well-being of the people who use them; and
- (c) people who use a building can escape from the building if it is on fire; and
- (d) buildings are designed, constructed, and able to be used in ways that promote sustainable development.

In terms of the purpose of the Building Act, the NZHPT considers that it is an internationally accepted principle that the conservation of buildings of historical and cultural heritage importance is an essential element of sustainable



For further information about the Building Act 2004, visit the Department of Building and Housing website: <http://www.dbh.govt.nz/bic-building-act>

⁷ The Building Act 2004 is currently under review. Following any changes to the Building Act 2004, this guide will be further updated.

development. In other words, to achieve sustainable development, buildings of historical and cultural importance must be identified, preserved, and conserved.⁸

In applying the purpose of the Building Act, a number of principles are outlined in section 4(2). In terms of heritage, the relevant principles include:

- (d) the importance of recognising any special traditional and cultural aspects of the intended use of a building; and
- (l) the need to facilitate the preservation of buildings of significant cultural, historical or heritage value.

The Minister responsible for the administration of the Building Act, the Chief Executive of the Department of Building and Housing, and territorial authorities are required to 'take into account' these principles to the extent they are performing functions or duties, or exercising powers, in relation to the grant of waivers or modifications of the building code and the adoption or review of policy on dangerous, earthquake-prone, and insanitary buildings.

The Building Act affords territorial authorities certain powers to take action with respect to dangerous, earthquake-prone and insanitary buildings (section 124). This includes giving written notice requiring works to be carried out within a given timeframe (section 124(1)(c)).

In exercising their functions under the Building Act, building consent authorities need to ensure that buildings are safe, promote physical independence and wellbeing, have adequate fire escape provisions and are designed, constructed, and able to be used in ways that promote sustainable development. Also building consent authorities are required to take into account the principles of section 4(2)(f) of the Building Act. This could include the need to facilitate the preservation of buildings of significant cultural, historical, or heritage value.

Under section 131 of the Building Act, a territorial authority must adopt policy on dangerous, earthquake-prone, and insanitary buildings. The policy must state:

- (a) the approach that the territorial authority will take in performing its functions under this section of the Act;
- (b) the territorial authority's priorities in performing those functions; and
- (c) how the policy will apply to heritage buildings.

Policies for dangerous, earthquake-prone, and insanitary buildings must be adopted in accordance with the special consultative procedure outlined in section 83 of the Local Government Act 2002. This means the policies must be subject to public consultation processes with the opportunity for public submissions and an open hearing.

⁸ Christine Phillips, *Sustainable Place – A Place for Sustainable Development*, Wiley-Academy, West Sussex, 2003

There can be tensions between the requirements of the Building Act, the purpose and principles of the Historic Places Act 1993 and the RMA. The tension stems from the focus of ensuring building safety, amenity, and access under the Building Act, the protection of historic heritage as a matter of national importance under the RMA, and the purpose of the Historic Places Act 1993, to promote minimum change of heritage places in order to conserve and preserve historical and cultural heritage values.

It is critical that in meeting the requirements of the Building Act and the building code, positive heritage outcomes are also achieved. For example, the implementation of the Building Act should not result in the premature demolition of heritage buildings. This needs to apply in both normal and disaster situations. In addition, buildings should not be abandoned due to considerable upgrade costs to meet the requirements of the building code. Any prolonged abandonment will eventually lead to demolition.

The policies need to meet the purpose of the Building Act, including the concept of sustainable development, and take into account any special traditional and cultural aspects of the intended use of a building and the need to facilitate the preservation of buildings of significant cultural, historical or heritage value. In addition, they must state how the policy will apply to heritage buildings.

3. Heritage Buildings

In the preparation of earthquake-prone, dangerous and insanitary buildings policies, the term 'heritage buildings' is adopted in section 131 of the Building Act. Territorial authorities must state how policy will apply to heritage buildings. This term is also used in section 125 with regard to provision for copies of requirement notices to be provided to the NZHPT.

There is an important distinction between earthquake-prone policies and dangerous and insanitary buildings policies under section 131 of the Building Act.

Earthquake-prone buildings can include any buildings with the exception of buildings that are wholly or mainly for residential purposes unless the building comprises 2 or more storeys and contains 3 or more household units.⁹

Earthquake-prone building policies under section 131 of the Building Act do not cover residential heritage buildings unless that residential building comprises 2 or more storeys and contains 3 or more household units. This provision should be made clear within territorial authority policies.

Dangerous and insanitary building policies under section 131 apply to all types of buildings as there is no exclusion for residential buildings within the meaning of dangerous and insanitary buildings. Consequently, all types of heritage buildings may be covered by dangerous and insanitary buildings policies.

While the Building Act defines the meaning of the term 'building', it does not provide guidance on the meaning of a 'heritage building'. To capture the wide-ranging nature of the term 'heritage building', it is suggested such buildings may include, but not be limited to:

- Any registered historic place, historic area, wahi tapu, or wahi tapu area under the Historic Places Act 1993.
- Any listed as a heritage item in any district or regional plan prepared under the RMA.
- Any heritage resource managed under the Reserves Act 1977 or the Conservation Act 1987.
- Any building established by the Maori Land Court under the Te Turi Whenua Maori Land Act 1993 for historic and cultural purposes and buildings of importance to tangata whenua.

⁹ Section 122, Building Act 2004

- Any historic cemetery or memorial.
- Any building managed for heritage purposes by agencies such as NZHPT, Ministry of Culture and Heritage, the Department of Conservation, and territorial authorities.
- Any building that is subject to a heritage order, heritage covenant or other protective covenant.
- Any other heritage building deemed to have heritage value using best practice criteria and research, including buildings identified within national or district heritage inventories or heritage policy.



The Register of historic places, historic areas, wahi tapu and wahi tapu areas is the national schedule of New Zealand's treasured heritage places. It is established under the Historic Places Act 1993, and compiled by the NZHPT.

<http://www.historic.org.nz/TheRegister.aspx>

It is important to note, that any building that has been constructed before 1900 may be considered an archaeological site under the Historic Places Act 1993. Under section 2 of the Historic Places Act 1993, an archaeological site is defined as any place in New Zealand that either – was associated with human activity that occurred before 1900; or is the site of the wreck of any vessel where that wreck occurred before 1900; and – is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand. Under section 9(2) of the Historic Places Act 1993, the NZHPT may declare any post-1900 site to be covered by the archaeological site definition in section 2 by notice in the *Gazette*.

Section 10 of the Historic Places Act 1993 directs that an authority is required from the NZHPT if there is 'reasonable cause' to suspect an archaeological site (recorded or unrecorded), may be modified, damaged or destroyed in the course of any activity. An authority is required for such work whether or not the land on which an archaeological site may be present is designated, or a resource or building consent has been granted. For example, earthquake strengthening works to the foundations of a pre-1900 building or any earthworks may require an archaeological authority from the NZHPT.

Policies for earthquake-prone buildings should also recognise the special circumstances surrounding any building of special traditional or cultural usage and buildings of significant cultural historical, or heritage value in terms of section 4(2) (d) & (l) of the Building Act. These buildings may include churches, marae, and papakainga.

Marae

Marae are special buildings of cultural heritage value and are unique to New Zealand Aotearoa. Marae may be both historic and contemporary. Marae are part of a wide range of Māori built heritage that include not only wharehenui (meeting house), but also wharekai (dining hall), pātaka (storehouse) and pouhaki (flagpole). Wharehenui and wharekai are often located in a marae setting. Marae may also be associated with wharekarakia (church), urupā and papakāinga (residential village).

Territorial authorities should ensure marae communities are supported to undertake engineering assessments to identify buildings at risk and to carry out required strengthening work in a culturally appropriate manner.

The NZHPT Māori Heritage Advisers should be contacted for advice in relation to any proposed work involving Māori built heritage

4. Heritage-Related Policies for Earthquake-Prone Policy.

The Building Act provides special provisions for certain categories of buildings which are considered to be dangerous, earthquake-prone or insanitary.¹⁰ With regard to earthquake-prone buildings, these buildings are those which will have their 'ultimate capacity exceeded in a moderate earthquake.'¹¹ A 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.¹²

In simple terms, a building may be considered earthquake-prone if it is assessed to be less than one-third of the current standard for new buildings. As stated above, this provision relates to all types of buildings with the exception of residential unless the residential building comprises 2 or more storeys and contains 3 or more household units.¹³

¹⁰ See definitions of dangerous, earthquake-prone, and insanitary buildings: sections 121-123 Building Act 2004

¹¹ Section 122(1)(a) Building Act 2004

¹² Building (Specified Systems, Change the Use, and Earthquake-Prone Buildings) Regulations 2005

¹³ Section 122, Building Act 2004

If a territorial authority considers that a building is dangerous, earthquake-prone or insanitary, the territorial authority can take action to safeguard both life and property. These actions include putting up a hoarding or fence to prevent people approaching the building, attaching a public warning notice, or issuing a written notice to the owners requiring them to reduce or remove the danger or prevent the building from remaining insanitary.¹⁴ A copy of any such notice must be provided to the NZHPT if the building is a heritage building.¹⁵

In implementing the earthquake-prone building provisions of the Building Act, territorial authorities should work with owners and other agencies, including the NZHPT, to ensure positive heritage outcomes.

4.1 Overall Approach

The Building Act requires territorial authorities to evaluate the extent to which all buildings in their districts may be dangerous, earthquake-prone and insanitary, but affords them considerable scope to determine their policy approach towards doing so. The NZHPT's experience of policies for thus far is that they tend to vary between an 'active' (i.e. Council's themselves being proactive in identifying and assessing such buildings at risk) and 'passive' approach (i.e. awaiting applications made by owners under the building Act to 'trigger' any such assessment). The approach adopted typically depends upon the nature of the heritage building resource in the district, the level of earthquake risk, and the resources of the community.

In many districts, an active approach may be favourable to ensure heritage buildings at risk are identified. As noted in the introduction of this guide, sustainable development favours a long-term risk management approach to ensure buildings are safeguarded from earthquakes for future generations.



NZ Society for
Earthquake
Engineering:
<http://www.nzsee.org.nz/>

¹⁴ Section 124 Building Act 2004

¹⁵ Section 125(2)(f) Building Act 2004

Active approach for heritage buildings

The NZHPT favours an active approach towards the identification of heritage buildings at risk. A long-term risk management approach can then be adopted towards progressively strengthening such buildings against the threat of earthquakes, thereby ensuring such buildings are more likely to be preserved for future generations.

An active approach should not impact unduly upon owners of heritage buildings. Territorial authorities should actively consult such owners at an early stage. Their participation and cooperation should be encouraged, by facilitating the engagement of appropriate engineering advice and providing incentives and support. As part of this guidance series, the NZHPT has developed a draft guide for heritage incentives.¹⁶

It should also be recognised that many heritage buildings may enjoy protection under other legislation such as the RMA, Conservation Act 1987, or the Historic Places Act 1993. In addition, any survey of buildings can be integrated into State of the Environment reporting procedures under the RMA.

A more passive approach is typically one in which any action involving a heritage building (such as an initial assessment, subsequently more detailed assessment and any improvement of structural performance) needs to be triggered by an application under the Building Act. These applications may involve building alterations, change of use, and extension of life or subdivision. It is the NZHPT's preference that the action required to safeguard the public and protect heritage buildings not have to await, hence be dependent upon, development initiatives.

Whatever approach is chosen by Council, it should be discussed fully with building owners, community organisations and stakeholders, including the NZHPT.

A robust policy framework is required, irrespective of whether the approach is active or passive. Evidence-based research is required to identify the number, distribution and type of earthquake-prone heritage buildings in each district, and the associated costs of their strengthening and benefits of protection. This information should assist territorial authorities in assessing the implications of, hence deciding on, appropriate policy options. This includes the extent of regulatory intervention and non-regulatory incentives required, and which such incentives would be most appropriate.

Policies for dangerous, earthquake-prone and insanitary buildings should both facilitate and be supportive of the adaptive reuse of heritage buildings. The retrofit of commercial and public buildings for adaptive reuse is a heritage outcome

¹⁶ NZHPT, 'Incentives for Historic Heritage Toolkit' (draft), August 2010, <http://www.historic.org.nz/ProtectingOurHeritage/ConsultingOn.aspx>

strongly supported by the NZHPT. It enables such buildings to be used for residential living and a range of commercial activities. It is highly desirable that heritage buildings be preserved, survive and be used by present and future generations.

Such policies should be part of a 'package' of actions to promote and achieve adaptive reuse. They should complement initiatives such as:

- Robust district plan heritage rules.
- Effective incentives for owners of heritage buildings.
- Flexibility for heritage buildings under the building code.
- Appropriate standards and information for retrofit of heritage buildings.
- Efficient approaches, especially when dealing with precincts of heritage buildings.
- Appropriate structural performance targets to achieve building survival.

Policies for dangerous, earthquake-prone and insanitary buildings should also be connected to other territorial policies and strategies with heritage implications, e.g. renewal and revitalisation of inner city urban areas.

4.2 Identifying earthquake-prone buildings

The process of identifying earthquake-prone buildings includes preliminary investigations, initial evaluation processes (IEP), detailed assessment of earthquake performance, and developing priority listings.

In terms of developing the IEP and actual detailed assessment of earthquake performance, a grading system has been developed by the NZ Society of Earthquake Engineering (NZSEE) as outlined in Appendix 2 of the *Earthquake-Prone Building Provisions of the Building Act 2004 Policy Guidance for Territorial Authorities*, June 2005.

The NZSEE grading system establishes categories of high, moderate and low risk according to structural performance scores. Effectively many buildings built prior to 1976 may fall within the high risk category. Any grading system should be applied to all types of buildings and the process of identification should not be less rigorous for heritage buildings.

Many pre-1976 buildings are likely to have heritage values that require consideration when deciding on appropriate action to be undertaken to strengthen these buildings. Systems to identify earthquake-prone buildings should acknowledge previous earthquake strengthening works on the building.

4.3 Taking action on earthquake-prone buildings

Under sections 124-129 of the Building Act, territorial authorities have various options in dealing with earthquake-prone buildings. The options include preventing access to a dangerous site, erecting public warning notices or issuing a written notice to the owners requiring that the danger is reduced or removed or preventing the building from remaining insanitary. A territorial authority can also apply to the District Court for an order authorising the carrying out of building works (including demolition) and recovering the costs of these works from the owner.

In order to avoid the demolition or loss of heritage buildings, a territorial authority should, in the first instance, consult owners and the NZHPT about any proposed action to be considered under sections 124-129 of the Building Act. A territorial authority should also examine the option of preventing access to a dangerous site and putting up warning notices before considering issuing a notice to the owners to reduce or remove the danger. If a notice is issued under section 124 of the Act, the territorial authority should provide information about how the danger can be reduced without requiring demolition.

The issuing of section 124 notices under the Building Act should be informed by detailed analysis as part of the policy framework, and requires a well considered communication plan. Territorial authorities should assess the costs and benefits of this type of regulatory intervention, including its consequences for building owners, the present condition hence ability to maintain the building, and the ability of the building to withstand strengthening work.

Section 124 notices should not act as a trigger to vacate the building, thereby exposing it to long-term 'demolition by neglect'. Other issues, such as the impact on economic viability and disruption to existing tenants need to be considered.

The issuing of section 124 notices can also create confusion for owners, in that a territorial authority may be requiring demolition under the Building Act, while at the same time restricting the demolition of scheduled heritage buildings in the district plan. The NZHPT does not support demolition as a method to reduce or remove the danger posed by a heritage building's presence. All possible options to strengthen the building, and thereby facilitate its retention, should be considered before demolition is contemplated.

In some circumstances, territorial authorities may consider carrying out strengthening work on buildings under section 126 of the Building Act and, if necessary and appropriate, waive costs of this work with regard to a heritage building.

Also in the implementation of sections 124-129, territorial authorities should consider the effect of other legislation. For example, if a building is listed within

the district plan, it is likely resource consent will be required to demolish, remove, or alter it under the RMA. In addition, if the building was built before 1900, an archaeological authority may be required from the NZHPT to carry out significant alterations to the building (including demolition and relocation) and/or earthworks on the property.

It is important that the actual level of upgrading required has regard to individual circumstances of the building including heritage considerations. For strengthening or stabilisation, the general objective should be 'to minimise the adverse effects on the building fabric and the spaces within the building.'¹⁷ In order to achieve this goal, assessments should consider alternative standards of earthquake strengthening work and the resulting effects on the heritage fabric and character of the building.

Level of Earthquake Strengthening Objective

The Building Act does not prescribe a strengthening objective for existing buildings except that in relation to section 124 requiring work to reduce or remove the danger and provisions for change of use or alterations, buildings which must comply as nearly as is reasonably practicable with the building code.

As outlined in the NZHPT's research report and draft strengthening guide,¹⁸ and as recommended by the NZSEE, the NZHPT promotes strengthening to 67% of the New Building Standard (NBS). This target will help to ensure public safety and some mitigation of building damage.

However, each building must be assessed on an individual and 'case by case' basis. As indicated by the NZHPT, 'consideration should be given to higher threshold and strengthening levels for buildings containing people in crowds, or of prime importance to the community in terms of heritage value of the building or contents.'¹⁹ Strengthening objectives also need to be accompanied by effective incentives for owners of heritage buildings.

It is important that territorial authorities and owners should engage an heritage professional for the assessment of appropriate strengthening works affecting any heritage building.

¹⁷ Lou Robinson and Ian Bowman, *Guidelines for Earthquake Strengthening*, NZHPT, 2000, p 4

¹⁸ NZHPT. 'Earthquake Strengthening, Improving the Structural Performance of Heritage Buildings', Draft Guide, August 2010, <http://www.historic.org.nz/en/ProtectingOurHeritage/ConsultingOn.aspx> NZHPT, 'Towards Improving National and Local Action on Earthquake-Prone Heritage Buildings', 3 March 2009

<http://www.historic.org.nz/ProtectingOurHeritage/AdvocatingForHeritage.aspx>

¹⁹ Lou Robinson and Ian Bowman, *Guidelines for Earthquake Strengthening*, NZHPT, 2000, p 5. The NZHPT recommended to Christchurch City Council in May 2010 that it promote strengthening of heritage buildings to 67% of the NBS.

4.4 Post-Disaster Response

Experiences of recent earthquakes in Christchurch (4 September 2010) and Gisborne (20 December 2007) highlighted the threats of earthquakes to heritage buildings, not just from the events themselves but also logistical responses in a bid to make the environment safe as soon as possible following the event. Because they are mostly constructed prior to 1976 (and are often pre-1900), heritage buildings are typically far more susceptible to earthquake damage than modern buildings. Their remaining presence in a damaged state can obviously be dangerous to property and human life, both of which may have already been impacted on significantly by the event itself.

While public safety must inevitably take precedence in such events, it is important that any decision to demolish a heritage building in whole or in part is not made prematurely. Potentially extensive loss of the district's heritage buildings can otherwise result quite unnecessarily.

Territorial authorities should ensure that heritage personnel are identified for co-opting into building inspection teams at the earliest possible stage. Such persons can then be present at such inspections of heritage buildings, to offer recommendations on every possible means by which such buildings can be preserved and any damaged fabric restored in accordance with best practice.

Territorial authorities should also build heritage building protection-type contingencies into any funding for disaster situation management. This will ensure pressure to redevelop a site does not result in the premature and potentially ill-informed demolition of a building. Such funding could also be used to provide residential accommodation or workspace at an alternative, safe location while a heritage building is repaired.

The NZHPT will be preparing additional guidance for managing heritage buildings following a major earthquake as informed by experiences in both the Gisborne and Canterbury earthquakes.

4.5 Heritage Precincts

Heritage precincts (areas in which groups of several or more heritage buildings and/or other historic features are present) are a feature of many urban (and in some cases non-urban locations). It is important that policies for earthquake-prone buildings recognise the co-existence of heritage buildings in such situations.

Shared walls are a common feature of 'blocks' of buildings. The failure of an adjacent wall or parapet may impact severely on a building that may not itself be earthquake-prone. Such walls need to be strengthened in a coordinated manner.

A 'project management' approach, whereby assessments of heritage values across the entire group of buildings involved is undertaken, is called for in such instances. Potential impacts on the wider streetscape, in addition to the individual buildings, require consideration in such circumstances. It should also be noted that while a specific building itself may not be of heritage value, its damage and/or demolition could impact severely on the surrounding heritage buildings, both in terms of their structural integrity and the area's overall character.

4.6 Incentives

Council can target non-regulatory financial incentives and advice to support the owners of heritage buildings in order to meet the requirements of the Building Act. A grant fund (typically termed a heritage incentive fund by many authorities) should be made available to ensure heritage buildings can be upgraded, strengthened and adapted for reuse in an appropriate manner, with minimal alteration to heritage fabric. Besides the works themselves, grant funds can also be applied to the preparation of conservation and management plans, professional conservation advice, and assessments for heritage buildings at risk.

Other means of financial assistance include nil or low interest loans, rates relief, and the waiving or discounting of consent fees. For further information, see the NZHPT's heritage incentive toolkit.²⁰

The NZHPT is currently exploring the development of more effective incentive programmes targeted towards heritage buildings at risk.

Because the limited extent of such funding offered nationally, by the NZHPT and other agencies, is presently small, territorial authorities have an important role to play in offering financial incentives for heritage protection.

²⁰ NZHPT, 'Incentives for Historic Heritage Toolkit (draft), August 2010, <http://www.historic.org.nz/ProtectingOurHeritage/ConsultingOn.aspx>

5. Summary Checklist: Development and Implementation of Policies for Earthquake-Prone Buildings under the Building Act 2004 – Heritage.

Policy Framework

- Has the Council's draft (or existing, to be revised) policy on earthquake-prone buildings provided for heritage buildings?
- Does the policy have a robust framework, foster an active approach for heritage buildings and does it integrate well with other Council policies for heritage management and related issues (e.g. urban renewal), particularly in fostering the retrofit and adaptive reuse of heritage buildings?
- Have heritage buildings been identified early in the process as part of the building stock appraisal?
- As part of the policy framework, is there an understanding of the primary issues involved, the risks to heritage buildings, including the number and type of potentially earthquake-prone heritage buildings and an assessment of the costs and benefits, policy options and implications of regulatory intervention?
- To what level of the New Building Standard (NBS) does the policy recommend that heritage buildings be strengthened to? (67%NBS is promoted for heritage buildings)

Evaluation process

- If a heritage building has been identified as 'potentially earthquake-prone prone' as a result of an initial evaluation procedure (IEP), territorial authorities should contact the owners and the NZHPT to discuss the implications and outline a pathway forward, including the preparation of a detailed engineering assessment.
- Sufficient time should be provided for consultation between the identification of 'potentially earthquake-prone' and the issuing of a section 124 notice.
- The IEP should be followed by a detailed engineering assessment. Ideally, heritage funding assistance should be available to assist with the preparation of a detailed engineering assessment.

- Is the building listed within a regional or district Plan under the RMA? If yes, it is likely resource consent will be required to alter, remove or demolish the building.
- Is the building an archaeological site under the Historic Places Act 1993? If the site has evidence relating to pre-1900 human activity, an archaeological authority may be required from NZHPT to remove or demolish the building.

Section 124 notices

- The use of section 124 notices under the Building Act should be informed by detailed analysis as part of the policy framework.
- Territorial authorities need to assess the costs and benefits of this type of regulatory intervention and the consequences in terms of impact on building owners, potential impact on the condition and maintenance of the building and the ability for strengthening work to be undertaken.
- Section 124 notices should be informed by a detailed engineering assessment. Such an assessment should provide a more detailed examination of alternative structural performance options, appropriate strengthening methods, and their costs and benefits.
- Section 124 notices should not be a trigger for building vacancy and long term 'demolition by neglect'. Other issues such as impact on economic viability and disruption to existing tenants need to be considered.
- Building owners may be confused that the territorial authority is requiring demolition under the Building Act while at same time restricting demolition under the district plan with respect to scheduled buildings. Generally demolition should not be a suggested option in section 124 notices as a method to reduce or remove the danger for heritage buildings. Instead, the focus should be on facilitating the strengthening of the heritage building.

Heritage incentives

- The provision of adequate incentives for owners of heritage buildings is critical to facilitate earthquake strengthening. Incentives recognise the social benefits of improving the structural performance of heritage building and also the private costs. Grants, loans and rates relief are some of the incentives that should be offered by territorial authorities. These funds can assist with the preparation of detailed engineering assessments and the actual strengthening works.

5.1 Examples of Model Heritage-Related Policies on Earthquake-Prone Buildings.

Below are examples of the types of policies that territorial authorities may include in policy documents relating to earthquake-prone buildings:

General

The Council, in the implementation of procedures under the Building Act 2004 with regard to earthquake-prone buildings, will take into account any special traditional and cultural aspects of the intended use of a building and the need to facilitate the preservation of buildings of significant cultural, historical, or heritage value. This will be achieved by:

- *Recognising the range of heritage buildings that may exist in the district, including the NZHPT Register, listed heritage places, buildings of significance to iwi, and other buildings of significance to the community.*
- *Ensuring early identification of heritage buildings at risk.*
- *Ensuring early consultation with owners of heritage buildings.*
- *Informing and involving relevant statutory organisations, including NZHPT with regard to any heritage buildings identified as at risk.*
- *Considering heritage values when managing any building identified as at risk.*
- *Considering heritage values when developing upgrading proposals.*
- *Providing targeted assistance to the owners of heritage buildings.*

The classification of any heritage building as earthquake-prone shall be informed by an independent assessment of structural performance. Such an assessment will be funded through Council's [Heritage Incentive] Fund.

Consistent with Clause [X] above, Council will set aside \$X per annum for a [Heritage Incentive] Fund, the proceeds of which may be used to assist with any assessment of structural performance for a heritage building.

No information as to the extent to which any heritage building is earthquake-prone shall be entered onto any building consent or Land Information Memorandum (LIM) without an assessment of structural performance for that building being first completed.

Earthquake-Prone Buildings

In relation to any detailed assessment of buildings at risk and in relation to any heritage building, the following matters will be considered:

- *The heritage significance, integrity and condition of the heritage buildings including any significant components or fabric and features of heritage value.*
- *Any relevant economic matters.*
- *Any statutory protection, including any listing in the District Plan, reserve management provision, covenant or heritage order, or as an archaeological site under the Historic Places Act 1993.*
- *Any advice from NZHPT, professional conservation organization or heritage professional including Council's own heritage advisers (if relevant).*
- *The principles of the ICOMOS New Zealand Charter.²¹*
- *Any relevant conservation report, conservation plan, condition report, management plan, heritage assessment or other document.*

In implementing the provisions of section 124-129 of the Building Act, the Council will consider alternative methods to avoid unnecessary demolition of heritage buildings including:

- *Consulting owners and NZHPT in relating to any proposed written notice requiring work.*
- *Providing extended timeframes for heritage buildings in relating to any written notice requiring work.*
- *Ensuring that any written notice requiring work provides options to repair the building as appropriate.*
- *Examining options for the Council to repair buildings under section 126 including considering waiving costs to owners if appropriate.*
- *Restricting public access and erecting public warning notices (section 124(1) (a) (b)).*

In assessing the upgrading of heritage buildings to meet the Building Act requirements, the territorial authority will examine alternative levels of compliance with the Building Act and consider the varying effects on the heritage values of the building. In addition, any assessment for the upgrading of heritage buildings will consider the following matters:

- *The principles of the ICOMOS New Zealand Charter.*
- *Ensuring that all new work involves minimal possible intrusion to the site and the heritage fabric of the building.*
- *Any advice from the NZHPT, professional conservation organization or heritage professional, including a Council's own heritage advisers.*

²¹ See ICOMOS New Zealand: <http://www.icomos.org.nz/>

The Council will promote the use of non-regulatory financial incentives and advice to provide assistance to owners of heritage buildings at risk. This incentive will be operated in collaboration with other central government and private incentive and grant schemes. The total sum of monies available in the fund will be established in the Council's Long Term Council Plan (LTCP).

The Council will promote the strengthening of any heritage building deemed earthquake-prone to an extent equivalent to 67% of the New Building Standard (NBS). Funding will be available for such strengthening via the Council's [Heritage Incentive] Fund (see Clause XX above).

In the case of heritage buildings located within an Historic Area as listed in the NZHPT Register and/or a Heritage Precinct as defined in the District Plan, Council will facilitate the assessment and strengthening of heritage buildings to ensure that all walls shared by any heritage building within a block-group of buildings are covered by both the assessment of structural performance and strengthening works this recommends. Funding applications with respect to such shared walls will be treated as if the structure is within and part of a heritage building. .