



New Zealand Historic Places Trust Pouhere Taonga

NZHPT Submission to the Canterbury Earthquakes Royal Commission

NZHPT File No. HP 26002-076

27 July 2012

Justine Gilliland
 Executive Director
 Canterbury Earthquakes Royal Commission
 Unit 15, Barry Hogan Place, Addington
 Christchurch
 Email: Canterbury@royalcommission.govt.nz

Submission of New Zealand Historic Places Trust Pouhere Taonga to Canterbury Earthquakes Royal Commission discussion papers

1. The Royal Commission has published discussion papers entitled *Building Management after Earthquakes* and the *Training and Education of Engineers and Organisation of the Engineering Profession*. These discussion papers examine issues relating to the building safety evaluation framework (the framework), building safety evaluation models, resourcing and planning and the role of engineers in an emergency situation and their role in building safety evaluation.
2. Thank you for the opportunity to provide a submission to the Canterbury Earthquakes Royal Commission (the Royal Commission) on the discussion papers.
3. The NZHPT has made a submission to the inquiry (the NZHPT's submission, dated 14 October 2011) and has provided a technical report supplying further information to the Royal Commission about seismic retrofitting that has taken place involving heritage buildings and the condition of these buildings following the Canterbury earthquakes.¹
4. The NZHPT's submission is informed by considerable experience 'on the ground' in Canterbury in terms of earthquake risk response and recovery for heritage places. Following the Darfield earthquake, the NZHPT joined Christchurch City Council heritage staff at the civil defence headquarters within hours of the earthquake and joined USAR personnel in carrying out the initial inspections. The NZHPT's response was enhanced by the engagement of additional heritage architectural personnel and Win Clark (Executive Officer of the NZ Society for Earthquake Engineering) a structural engineer who has extensive experience with heritage buildings. NZHPT staff were again deployed in response to the 22 February 2011 earthquake as part of the civil defence emergency response. This involvement has continued with the establishment of the Canterbury Earthquake Recovery Authority (CERA). The NZHPT has worked closely with decision makers during the response and recovery process and the NZHPT's role has involved the provision of advice and information to owners, the National Civil Defence Coordinator, CERA, Ministry for Culture and Heritage and the Christchurch City Council. This advice has fed into the decision-making process as governed by the Ministry of Civil Defence and Emergency Management (MCDEM) and CERA. Between September 2010 and June 2011, the NZHPT's work involved additional conservation advice involving 410 site visits,

¹ NZHPT, *Heritage Buildings, Earthquake Strengthening and Damage, The Canterbury Earthquakes September 2010-January 2012*, Report for the Canterbury Earthquakes Royal Commission, 8 March 2012

208 reports prepared for Christchurch City Council and another 115 instances of advice to owners of heritage buildings.

Civil Defence and Emergency Management Act 2002

5. The NZHPT considers that the issue of building management and the role of engineers after earthquakes requires a close examination of the post-disaster response framework under the Civil Defence Emergency Management Act 2002 and recovery under planning and building law. In 2005 and 2010, the NZHPT provided comment to the review of the National Civil Defence Emergency Management Plan and these comments are relevant to the Royal Commission's discussion papers.
6. Integrated management of hazards is one of the cornerstone paradigms of civil defence and emergency management in New Zealand. Integrated management aims to ensure all key issues, values and organisations are managed in the planning for, and response to, hazards. Within the wider paradigm of integrated and sustainable management, historical and cultural heritage is an important consideration and forms part of the purposes and/or principles of New Zealand primary building, civil defence and planning legislation including the Building Act 2004, the Civil Defence Emergency Management Act 2002 and the Resource Management Act 1991 (RMA).
7. Improved readiness processes are required to ensure there are operational systems and capabilities for heritage that are 'ready to go'. These processes should enable an effective response – being able to respond to a civil defence emergency affecting heritage in an integrated manner. While the NZHPT was able to respond promptly in Christchurch, despite not having a formal and agreed role, there were substantial delays in Gisborne following the earthquake in 2007 which exposed the risk of disasters in more isolated and rural cities and districts.
8. The purpose of the Civil Defence Emergency Management Act 2002 includes 'improving and promoting the sustainable management of hazards...in a way that contributes to the social, economic, cultural and environmental well-being and safety of the public and also to the protection of property.'²
9. The *National Civil Defence Emergency Management Strategy 2008* promotes an integrated approach to CDEM based on the four R's: reduction, readiness, response and recovery. In this context, the CDEM Strategy sets out five principles, being:
 - Individual and community responsibility and self-reliance.
 - A transparent and systematic approach to managing the risks from hazards.
 - Comprehensive and integrated hazard risk management.
 - Addressing the consequences of hazards.
 - Making best use of information, expertise and structures.
10. As part of principle one, the importance of Māori cultural heritage is highlighted:

In the New Zealand context, it is particularly important to note the role of Māori as an important community stakeholder. The Māori worldview incorporates a

² Section 3(a) Civil Defence Emergency Management Act 2002

special relationship with the environment, expressed inter-generationally through kaitiakitanga. The environment forms the base from which cultural, spiritual, emotional, and physical sustenance flows. Because of this perspective, Māori have a particular interest in the management of hazards and associated risks, including risks that may be posed to wahi tapu sites and other sites of significance. It is important that whanau, hapū, iwi and the wider Māori community are involved in CDEM planning. In addition Māori communities often have important resources for response and recovery, such as marae for use as emergency shelters and Māori welfare and support services.³

11. Principle four also notes the cultural implications of hazards by stating that the ‘consequences of hazards can be physical, social, technical, environmental, cultural, or economic, and may affect one or more communities.’⁴
12. Section 59(4)(g) of the National Civil Defence Emergency Management Plan Order 2005 outlines a number of emergency response objectives including – ‘asset protection, including buildings and historic heritage assets (including structures, areas, landscapes, archaeological sites, and wāhi tapu).’
13. Despite the inclusion of cultural well-being in the purpose of the Civil Defence Emergency Management Act 2002 and the provisions of the *National Civil Defence Emergency Management Strategy 2008* and National Civil Defence Emergency Management Plan 2005, there are gaps in understanding, identification and management of historic heritage, including cultural well-being, in emergency management.

Building Safety Evaluation Framework

14. In terms of emergency response processes, the NZHPT considers that the building safety evaluation framework during and following a state of emergency is of fundamental importance. Since the development of this framework internationally during the early 1980s following the Montenegro earthquake of 1979, there have been instances of unnecessary loss of historic heritage as a result of poor management decisions. In addition to the experience of demolition of some repairable heritage buildings in Christchurch, international examples include:
 - The demolition of the Oddfellows Fraternal Hall, Watsonville, California, after the 1989 Loma Prieta earthquake. Falling parapet masonry killed a pedestrian and the building was demolished despite being repairable.⁵
 - The demolition of the Century Theatre following the Newcastle Earthquake, Australia, of 1989. Despite damage being restricted to a collapsed awning, the entire building was demolished.⁶
15. The experience of the Gisborne earthquake of December 2007, the Canterbury earthquakes of 2010-2012 and international literature/guidance, raise a number of key issues for hazard management and historic heritage including:

³ MCDEM, *National CDEM Strategy*, 2008, p 7

⁴ ibid

⁵ Dirk H.R. Spennemann and David W. Look (eds), ‘From conflict to dialogue, from dialogue to cooperation, from cooperation to preservation’, in Dirk H.R. Spennemann and David W. Look (eds), *Disaster Management Programs for Historic Sites*, digital edition, 2004, p 178

⁶ ibid, p 179

- Need for communication between disaster management and historic heritage agencies at all levels (national, regional and local).
- General public misconceptions about building safety evaluation during a declared state of emergency. For example, ‘all ‘red-tagged’ buildings must be demolished’.
- Unnecessary demolition of historic heritage during the post-disaster phase as a result of poor advice, public calls for retribution or perceived opportunities to advance post-disaster reconstruction.
- The perception of historic heritage (and associated protective regulation) as a barrier to post-disaster reconstruction.
- Need for nation-wide standardisation in the application of rapid post disaster response relating to historic heritage.
- Need for more public and professional education.
- Need for the rapid deployment of mobile heritage damage assessment units.
- Need to consider cultural groups and protection of sacred sites.
- Need for financial incentives to promote appropriate earthquake strengthening of historic buildings.⁷

16. Consequently, the robustness and effectiveness of the building safety evaluation framework is dependent on adequate relationships and advice with regard to historic heritage. This is particularly important when a severe earthquake occurs in areas that have high historic heritage values. Critically, the building safety evaluation framework system is dependent on rapid and high quality information to answer questions such as:

- Is this building a heritage building?
- What is the effect of the damage on historic heritage values?
- Should a damaged section of the building be removed and would the removal of this section adversely affect historic heritage values?
- What are the best practice repair and shoring standards for damaged historic heritage?
- Should a heritage building (or parts of the building) that has survived a severe earthquake be considered a non-earthquake-prone building?
- Should a damaged heritage building be strengthened beyond 34% of the new building standard?
- Should a section 124 Building Act notice be issued for a heritage building on the basis of a rapid assessment?

⁷ Dirk H.R. Spennemann and David W. Look (eds), ‘From conflict to dialogue, from dialogue to cooperation, from cooperation to preservation’, in Dirk H.R. Spennemann and David W. Look (eds), *Disaster Management Programs for Historic Sites*, digital edition, 2004

17. New Zealand's building safety evaluation framework was developed by the NZ Society for Earthquake Engineering in 2006. While the framework was supported by the former Department of Building and Housing and the MCDEM it lacks legislative status. Further, as highlighted in the discussion paper, issues require consideration such as when building safety evaluation should take place in the absence of a civil defence emergency, as was the case following the earthquake of 26 December 2010.
18. Response and recovery guidance and procedures for heritage places are necessary. This guidance should be informed by international best practice and cover the range of actions required including building safety evaluation, making safe, shoring, repairs and strengthening. This should also address any regulatory barriers such as the need for resource consents for repairs and earthquake strengthening in a post-disaster situation.
19. The NZHPT provided comment on the draft building safety evaluation framework prepared by the NZ Society for Earthquake Engineering in February 2009. The NZHPT supported the development of the guidance framework and requested a number of changes to improve the management of heritage buildings during an emergency. The NZHPT's suggestions included explicit documentation of heritage buildings by building control managers (recommended action steps), the inclusion of heritage professionals within rapid assessment inspecting teams, provision for heritage buildings within level 1 rapid assessment, and inclusion of a statement that it is likely that heritage buildings will require level 2 rapid assessments. The NZHPT also developed recommendations, based on international best practice and the experience of the Gisborne 2007 earthquake, for earthquake emergency response and historic heritage protection strategies in February 2009. These recommendations are attached as Appendix 1 to this submission.
20. The finalised building safety evaluation framework (August 2009) did not include all the suggestions that the NZHPT was seeking and still lacked clear and explicit guidance for dealing with heritage buildings. However, the NZHPT appreciated the work of the NZ Society for Earthquake Engineering at the time and it was understood that the Department of Building and Housing would take 'ownership' of the guidance and undertake future developmental work and training.
21. The NZHPT submits that the building safety evaluation framework should formally become part of the Civil Defence and Emergency framework under the Civil Defence and Emergency Plan 2002 and associated management strategy. We consider that the post-earthquake response in Canterbury would have benefited with improved guidance for dealing with heritage buildings in an emergency situation. The NZHPT considers that the framework contain specific guidance for dealing with heritage buildings in an emergency situation that would involve, at a minimum:
 - Provide explicit and formalised roles for Government heritage agencies, including the Ministry for Culture and Heritage and NZHPT.
 - The explicit identification of heritage buildings using visible signs where none exist.
 - The formation of teams consisting of heritage engineers and architects to carry out building safety evaluation on heritage buildings.
 - The development of best international practice guidance for shoring and propping.
 - Ensuring all decisions regarding demolition, partial demolition or repair methods resulting in significant loss to heritage values should be subject to a qualified second opinion.

- Ensuring historic fabric is salvaged and stored.
- That heritage buildings be subject to Level 2 Rapid Assessments.
- As part of Level 2 Rapid Assessments, that a separate heritage building report is prepared outlining the heritage status of the building, damage and recommendations to mitigate and remedy risks.
- The preparation of detailed engineering assessments to inform decisions regarding demolition and repair.
- Providing advice that where possible damaged buildings should be stabilised to allow further evaluations before any decision on the building's future was taken.

Identification of heritage places.

22. Heritage places are identified by the NZHPT and local authorities and in some areas, these places have signs or plaques that inform the public about the heritage status of a place.
23. There is, however, no nationally consistent signage system and the absence of signage can create uncertainty in emergency situations. For example, in both Gisborne and Christchurch in the post-quake environment there appeared to be public misunderstanding about 'old buildings' as opposed to 'heritage buildings'.
24. A simple plaque, panel or sign can be developed to identify heritage places not unlike the blue plaques that are common in the United Kingdom, Australia and some parts of New Zealand such as Dunedin. These signs would immediately inform Urban Search and Research (USAR) and assessors, etc, of the heritage status of a building. As a priority, national signage could be developed for non-residential historic places registered under the Historic Places Act 1993.
25. The provision of adequate signage may also contribute towards New Zealand's responsibilities as a signatory to the First and Second Protocols to the 1954 Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict (the Hague Convention). Article 5 of the Second Protocol of the Hague Convention highlights the need for the Government to take a range of preparatory measures for the safeguarding of cultural property which include the preparation of inventories, the planning of emergency measures for the protection against fire or structural collapse, the preparation for the removal of moveable cultural property or the provision of adequate in situ protection, and the designation of competent authorities responsible for the safeguarding of cultural property.

Role of engineers and heritage buildings in a post-disaster environment

26. Quality engineering expertise is critical to the survival of heritage buildings and New Zealand has benefited by the activities, advice and guidance by organisations such as Institute of Professional Engineering of New Zealand (IPENZ) and the NZ Society for Earthquake Engineering for many years.
27. Some structural engineers specialise in the assessment of existing buildings and have built up substantial experience in dealing with the challenges of buildings that are of historic and cultural significance. This specialisation is illustrated in the NZHPT's

research for the Royal Commission which shows that many of the engineering assessments for heritage buildings in Christchurch were carried out by a small number of engineering companies such as Holmes Consulting Group and Opus International Consultants.⁸ These companies are often involved in earthquake strengthening assessments and works over a long period of time (sometimes involving 1st, 2nd, or 3rd generation strengthening upgrades) with close alignment and involvement in conservation planning. Further, they also build up a body of technical knowledge such as original construction plans, alterations and information about geotechnical ground conditions.

28. As experienced in Christchurch, in an emergency or post-disaster environment, a large number of volunteer engineers may be involved in building safety evaluation. Many of these engineers may lack the local knowledge about specific ground conditions or lack expertise of assessment of existing buildings, especially heritage buildings. As commented in the discussion paper, many engineers have training and experience relating to the design of new buildings and structures. This training and experience may not be sufficient for rapid assessment of damaged existing buildings. Also, the large number of voluntary engineers may not have access to plans and specifications about the buildings under assessment.
29. In the ‘pressure-cooked’ environment of an emergency situation (and post-emergency response), it should still be possible for a small specialist team of heritage engineers and architects to carry out building safety evaluation for the generally small number of heritage buildings in any city or town. After all, it is estimated that heritage buildings only comprise of 0.7% of New Zealand’s total building stock (with non-residential heritage buildings making up about 4% of New Zealand’s total non-residential building stock).
30. In addition to building safety evaluation assessments, small specialist heritage engineering teams should supervise all temporary shoring works involving heritage buildings. The experience from the Canterbury earthquakes suggests some shoring on historic masonry buildings was poorly designed and constructed and may have resulted in accelerating damage.
31. The NZHPT submits that the building evaluation framework as incorporated into the Civil Defence and Emergency Management Act and associated management strategy provides for the explicit formation of heritage response teams during a civil defence emergency and to provide advice and assistance in the post-emergency situation.

Historic education for engineers

32. The NZHPT welcomes the Royal Commission’s discussion paper concerning the training and education of engineers. The NZHPT is concerned about the scope and quality of historic education for engineers. It would be expected that engineering education covers an in-depth understanding of New Zealand’s building stock, including its indigenous architecture, the planning and construction of early settler towns and the development of building codes and regulations. It appears from a brief web-based search of existing courses offered for civil/structural engineers at the Universities, this type of education is lacking.
33. The NZHPT is also aware that historical knowledge about earthquakes in New Zealand may not be taught as part of the education of engineers. By learning about the experience

⁸ NZHPT, *Heritage Buildings, Earthquake Strengthening and Damage, The Canterbury Earthquakes September 2010-January 2012*, Report for the Canterbury Earthquakes Royal Commission, 8 March 2012

of New Zealand's most significant historical earthquakes, guidance can be formulated to better inform post-quake responses. As an example, the Marlborough earthquake of 16 October 1848 (centred on the Awatere fault) of a magnitude 7.8 triggered a series of earthquakes up to October 1849 – an entire year!⁹ Also the Wairarapa earthquake of 24 June 1942 at 8.15 pm of magnitude 7.0 was followed by a larger quake at 11.17 pm of Mw 7.2. Consequently, a long period of aftershocks should be treated as the 'normal' situation following a major earthquake and there could be situations of larger earthquakes following the initial first shock. In addition, the commission and board of inquiry reports associated with historical earthquakes such as the Carter and Mills Commission Report following the 1855 Wairarapa earthquake should be standard reading text for engineers at University. For example, the Carter and Mills Commission reported:

In those parts of town the most damage occurred, namely dilapidated buildings and defective foundations; buildings erected on loose gravelly or swampy foundations; buildings with ground plates partially or entirely decayed or destitute of braces – have suffered severely while both houses and stores where the timbers were sound and the foundations good, have escaped without almost any injury.¹⁰

34. This education could also include examining surviving buildings and structures from New Zealand's historic earthquakes to discover the reasons why these buildings survived and why others were damaged or destroyed. Two unique examples are the Taylor-Stage Cottage and Paramata Barracks at Porirua which were constructed prior to the 1848 Marlborough earthquake and are registered under the Historic Places Act 1993. Paramata Barracks, in particular, illustrates problems of construction using stone and poor mortar quality that was a hallmark of building failure during both the 1848 and 1855 earthquakes which damaged buildings in the Wellington region.
35. Critically, engineering education needs to learn about the special and unique indigenous cultural heritage of New Zealand – marae and other traditional Māori buildings which have proved to be resilient places of critical importance in a post-disaster environment.
36. The importance of Māori and other historic buildings is not only provided for in the Historic Places Act 1993 but also forms part of the principles of the Building Act 2004, the RMA and the Civil Defence and Emergency Management Act 2002. It would be expected, therefore, that the study of these buildings is a primary part of the education syllabus for engineering.
37. We suggest that the historic heritage environment, including historic earthquakes, should be a core and compulsory component of engineering education and become part of professional development education for practicing engineers. We highlight that this education is also particularly important for engineers who have trained overseas and may not be familiar with New Zealand's unique historic and cultural heritage.

⁹ Rodney Grapes, *The Visitation, The Earthquakes of 1848 and the Destruction of Wellington*, Victoria University Press, 2011.

¹⁰ Rodney Grapes, *Magnitude Eight Plus New Zealand's Biggest Earthquake*, Victoria University Press, 2000, p 196.

Building and Resource Management

38. As outlined in the NZHPT's submission, shoring and earthquake strengthening is often treated as an 'alteration' under the Building Act 2004. This work may trigger other NZ Building Code requirements under section 112 of the Act which may be an obstacle for building owners. Further, work involving shoring and earthquake strengthening may trigger resource consent requirements under the RMA.
39. In a post-disaster situation following the lifting of the state of emergency, there must be minimal regulatory barriers to both shoring and earthquake strengthening. While we understand that Government is examining this issue as part of the review of the Building Act 2004, the NZHPT considers that there needs to be greater national policy guidance under building and planning legislation to set clear standards, definitions and processes for repairs, shoring and earthquake strengthening. This would enable a standard set of processes to be adopted at short notice in a post-disaster situation to apply country-wide and could include explicit provision for heritage buildings.
40. In addition, the NZHPT restates its position, as outlined in its submission to the Royal Commission, that the New Zealand's Building Code (or new building standard, NBS) system does not provide sufficient guidance for existing buildings. New Zealand has not followed overseas trends in the development of building codes for existing buildings as led by the International Code Council (ICC). The development of such a code can provide a method of dealing with earthquake strengthening performance objectives for existing buildings and associated matters such as improving fire safety and accessibility.

Signed



Nicola Jackson
National Heritage Policy Manager
New Zealand Historic Places Trust Pouhere Taonga

Contact:

Robert McClean
Senior Heritage Policy Adviser
New Zealand Historic Places Trust
Pouhere Taonga

PO Box 2629 Wellington
Phone 04 472 4341
Fax 04 499 0669

rmcclean@historic.org.nz

Appendix 1. Draft Recommendations for earthquake emergency response and historic heritage protection strategies

R. McClean
NZHPT
February 2009

The following draft recommendations have been developed for immovable historic heritage (buildings, structures, areas and sites). For information about disaster recovery of moveable historic heritage (cultural materials and collections), contact: National Library of New Zealand (conservation services), Te Papa or the Canterbury Disaster Salvage Team.

1. Establish formal networks and relationships at the national, regional and local level.

The networks and relationships would involve:

- At the national level: Ministry of Civil Defence and Emergency Management; Earthquake Commission, Department of Conservation, Local Government NZ, NZSEE, NZ Urban Search and Rescue, GNS, Ministry of Culture and Heritage, NZHPT (National Office).
- At the regional level: Ministry of Civil Defence and Emergency Management Regional Sector, regional authorities, territorial authorities, Department of Conservation Conservancy, iwi and hapu, NZHPT (Regional Office).
- At the local level: Territorial authority (Civil Defence Emergency Management Group), Department of Conservation Area Office, iwi and hapu, Earthquake Commission, NZHPT (Regional and/or Area Office).

2. Civil Defence Emergency Policy and Plans

Historic heritage matters must be explicitly provided for in all civil defence strategies and policies under the Civil Defence Emergency Management Act 2002. In particular, all Civil Defence Emergency Management Group Plans should consider implications for historic heritage with regard to earthquakes. This may involve:

- Inclusion of NZHPT as a strategic partner or response agency.
- Inclusion of historic heritage within strategic principles for civil defence.
- Inclusion of historic heritage matters as part of operational requirements and priorities for response.

3. Preparation of earthquake management plans for historic central business districts

Historic central business districts require coordinated earthquake management planning. This planning should examine issues such as:

- Heritage significance and risk.

- Options for coordinated identification of earthquake-prone buildings, pre-disaster risk mitigation and earthquake strengthening.
- Incentives and funding.
- Post-disaster response strategies.

Provision for earthquake management plans should be provided for in earthquake-prone heritage buildings policies prepared under the Building Act 2004 and Long Term Council Community Plans (LTCCPs) prepared under the Local Government Act 2002.

4. Rapid response in a civil defence emergency.

All heritage professionals (heritage engineers, architects, archaeologists, planners and Māori heritage advisers) should be ready, at short notice, to provide assistance in an emergency situation following an earthquake. The ability and effectiveness of response, however, depends on coordination, training, resources and individual/personal circumstances.

It is suggested that the NZHPT should take the lead in the coordination of rapid response for historic heritage in a civil defence emergency at a national level. National coordination responsibilities would involve:

- Maintaining relationships with civil defence organisations and personnel.
- Maintaining up-to-date on literature relating to civil defence, emergency management and historic heritage.
- Maintaining contact details of heritage professionals for contact in an emergency.
- Undertaking and promoting building safety evaluation and emergency training and drills.
- Providing information on disaster planning and historic heritage.
- Identifying essential sources such as shoring materials and lists of professional and materials suppliers.
- Being able to establish a team at short notice to respond to an earthquake emergency.
- Assisting building safety evaluation in an event of an emergency.
- Providing advice to the Civil Defence Controller and other civil defence personnel on historic heritage matters in the event of an emergency.
- Providing on-going post-disaster advice and assistance.

Funding should be set aside for these coordination responsibilities.

5. Identification of historic heritage.

All historic heritage should be identified by the prominent display of a plaque. Unless considered to be culturally inappropriate, plaques should be installed at the front of all of the following:

- Historic places, areas, wahi tapu and wahi tapu areas registered under the Historic Places Act 1993.
- Historic items listed in any district or regional plan prepared under the Resource Management Act 1991 and places listed in heritage inventories prepared by local authorities.
- Historic places and/or Actively Managed Historic Sites listed in a Historic Resources Strategy or Conservation Management Strategy and Conservation Management Plan prepared under the Conservation Act 1987.
- Archaeological sites recorded by the New Zealand Archaeological Association (NZAA) depending on the nature of the site.¹¹
- Historic items within a historic reserve or listed in a reserve management plan prepared under the Reserves Act 1977.
- Places and areas of importance to Māori, including traditional Māori buildings, including those set aside for historic and cultural purposes under the Te Turi Whenua Māori Land Act 1993 or other legislation and places listed in iwi management plans or other inventories.
- Historic cemeteries and memorials.
- Places managed for heritage purposes by agencies such as NZHPT, Ministry of Culture and Heritage, the Department of Conservation, and local authorities.
- Places that are subject to a heritage order, heritage covenant or other protective covenant.
- Other historic heritage deemed to have heritage value identified using best practice criteria and research, including buildings identified within national or district heritage inventories or heritage policy, including:
 - Places listed by the Rail Heritage Trust of New Zealand.
 - Places listed by the Heritage Group, IPENZ.

Any building associated with the above list of historic heritage should be considered a heritage building under the Building Act 2004.

6. Emergency Building Safety Evaluation

All building safety evaluation procedures should be informed by best practice historic heritage information, including:

- Provision of hard copy maps showing location of historic heritage from territorial authority GIS.

¹¹ For the majority of archaeological sites, the installation of a plaque will be inappropriate

- Lists of all identified historic heritage, indicating name and location.
- Early identification of damaged historic heritage.
- Inclusion of NZHPT and heritage professionals in building safety evaluation training and emergency procedures.
- Inclusion of NZHPT and heritage professionals in all building safety-related meetings and conferences.
- Ensuring all decisions regarding demolition, partial demolition or repair methods resulting in significant loss to historic heritage should be subject to a qualified second opinion.
- Ensuring all alterations and additions meet best practice standards, including NZHPT guidance.
- All historic fabric should be salvaged and stored, including loose or fallen debris.
- All identified heritage buildings should be subject to Level 2 Rapid Assessments.
- As part of Level 2 Rapid Assessments, a separate advisory report (heritage impact assessment or HIA) should be prepared to accompany the rapid assessment forms. The report should briefly state:
 - The status and significance of the place.
 - Risk to the place, including loss or damage to significance.
 - Statutory requirements (i.e. RMA and Historic Places Act 1993).
 - Recommendations to mitigate and remedy risks.

Following the Level 2 Rapid Assessments, it is likely most heritage buildings will require detailed engineering evaluation and remedial work.

7. Issuing of Section 124 notices under the Building Act 2004

Robust building safety evaluation should inform the preparation and issuing of section 124 notices under the Building Act. For a heritage building, the building safety evaluation should be accompanied by a heritage impact assessment and be informed by best practice historic heritage advice and information.

Copies of all section 124 notices must be sent to the NZHPT if the building is a heritage building (see section 125(2)(f) of the Building Act 2004).

It is accepted that in an emergency situation, the copying of these notices to the NZHPT may be delayed. For this reason, it is important to obtain historic heritage advice and information during the building safety evaluation process.

8. Post-emergency reconstruction

Regular updating meetings should be held involving the territorial authority, Department of Conservation Area Office (if relevant), NZHPT (Regional and/or Area Office), Earthquake Commission and Insurance Assessors.

The NZHPT should be involved at an early stage to provide advice on the repair and restoration of damaged places.

All major reconstruction works involving historic heritage should be informed by a professional heritage impact assessment.

Damage to historic heritage fabric should be avoided during clean-up operations.

Appropriate shoring and stabilisation techniques are promoted and adopted.

Incentives and funding assistance should be available for owners of historic heritage.

Key Information Sources:

- Dave Brunson, 'Rapid Evaluation of Building Safety: Learnings from the December 2007 Gisborne Earthquake' *Paper to the 2008 Australian Earthquake Engineering Society Conference*, Ballarat, Victoria
- Dirk H.R. Spennemann and David W. Look (eds), *Disaster Management Programs for Historic Sites*, digital edition, 2004
- FEMA 386-6, *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning*, May 2005
- Jeff Eichenfield, *20 Tools that protect historic resources after an earthquake: Lessons Learned from the Northridge Earthquake*, California Preservation Foundation
- Herb Stovel, *Risk Preparedness: A Management Manual for World Cultural Heritage*, ICCROM, Rome 1998
- Milford W. Donaldson, 'Tools that Protect Historic Resources after a Disaster' California State Parks, October 2007
- Paige Swartley, *Model Ordinance: Post-Disaster Alteration, Repair, Restoration, Reconstruction and Demolition of Historic and Cultural Resources*, California Preservation Foundation
- Roy W. Harthorn, *Temporary Shoring and Stabilisation of Earthquake Damaged Historic Buildings*, California Preservation Foundation
- US National Parks Service, *Emergency Preparedness for Historic Sites*, bibliography, 2002