MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

Regulatory impact statement

Managing buildings after an emergency event

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Agency disclosure statement

This regulatory impact statement has been prepared by the Ministry of Business, Innovation and Employment. Policy options to improve the management of buildings after an emergency event have been considered.

A core objective is to ensure lives are not at risk during or following an emergency event. Other key objectives include a system that is clear, has proportionate impacts on personal and property rights, and appropriately recognises heritage.

Limitations on the analysis undertaken

A key limitation of the analysis in this RIS is that the full effect of each option considered is uncertain. The uncertainty arises due to:

- lack of relevant data
- the need to make assumptions about the likely behaviour of building owners, users and territorial authorities
- the impact of each individual emergency event being uncertain
- difficulties ascertaining the residual risk that remains after an initial emergency.

Balancing the value of life safety against impacts on property rights is difficult. Consequently, different conclusions are reached if different weightings are attributed to the opposing objectives.

The level of public concern about risks with low probability but major consequences informs whether any system for managing buildings after an emergency event is proportionate. The framework for considering public concern follows that of the United Kingdom's HM Treasury model for assessing proposals that affect the risk of fatalities, injury and other harms to the public. Consequently, this RIS' approach is consistent with best practice in risk management. The level of public concern about natural hazard risks was ascertained by reviewing the risk perception literature in New Zealand and overseas. It should be noted that there is no consensus in the risk literature about how to take the level of public concern into account: the risk literature only stresses that it should be.

Full consultation on the proposed powers was carried out in May 2015, and stakeholder feedback taken into account. The quantitative impacts summarised in this RIS focus on the costs and benefits of the preferred option. It is expected that the preferred proposal in this RIS will:

- save lives (this benefit has not been quantified)
- in quantitative terms, provide a small net benefit to society after an earthquake in an urban centre
- give greater certainty and legitimacy to building emergency management activities
- appropriately recognise property rights and protect heritage.

Overall, MBIE is satisfied that the conclusions in this RIS provide a reasonable indication of the potential direction and significance of the effects of the options analysed.

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Executive summary

1. The Canterbury earthquakes highlighted that gaps in the current legislation exist concerning the management of buildings following an emergency event. This gap creates a risk that buildings (or the surrounding land) damaged in an emergency event cannot be adequately managed to reduce or remove risk to life safety and other property, and disruption to neighbouring buildings or public thoroughfares. Given the gaps, special legislation was enacted after the Canterbury earthquakes: for example, the Canterbury Earthquake Recovery Act 2011.

2. In 2013, Cabinet agreed that regulations are required to address post-disaster building management [CAB Min (13) 10/6 refers]. New powers are proposed because the existing powers in the Building Act 2004 to manage dangerous and insanitary buildings are insufficient. Most buildings damaged in an emergency event will not meet the high threshold to be a 'dangerous building' under section 121 of the Building Act 2004. There is also a need for a smoother alignment with, and where necessary transition from, the powers available under the civil defence emergency management legislation to those in the Building Act 2004.

3. This RIS discusses changes to improve the system for managing buildings after an emergency event. The primary objective is to ensure that lives are not at risk during or following an emergency event. The proposed changes seek to lower risk to life whilst creating a system that is clear, has proportionate impacts on personal and property rights, and ensures that heritage is appropriately recognised.

4. Three broad options for managing buildings after an emergency event are discussed:

   - **Option 1** is the option to **take no action**, retaining the current status quo with its inherent problems.

   - **Option 2** contains the system consulted on in May 2015. This **introduces a new section into the Building Act 2004** to manage buildings and land damaged in an emergency event. This is separate from the powers to manage dangerous, insanitary and earthquake-prone buildings.

     The proposed new system will address the legislative gaps identified above. It does so by providing for the end-to-end management of buildings during and following a state of emergency from response to recovery, and into normal business-as-usual arrangements.

   - **Option 3 (the preferred option) refines option 2** based on stakeholder feedback on the May 2015 consultation document. Option 3 includes all changes proposed under Option 2. It includes **the key addition of a new trigger** to allow territorial authorities to apply the building emergency management powers when no state of emergency has been declared, **and a property rights framework**. Small refinements concerning the proposed duration and review of the building emergency management powers have also been included.

5. The recommended proposals:
    - create a full suite of powers in the Building Act 2004, and a clear and efficient system
    - cover a sufficiently wide range of situations and buildings, to manage any life safety risks
    - ensure the period during which building emergency management powers apply is long enough to take actions to reduce the risk to life and property
    - sufficiently recognises property rights and heritage.
6. To assess the net benefit of the preferred proposals, an initial assessment is made of the anticipated effectiveness at protecting life safety. This does not include a quantitative assessment of the value of a life saved, due to the high levels of uncertainty involved. A quantitative cost benefit analysis has been carried out by Sapere (an economic consultancy), to consider the broad costs and benefits that can be quantified.
7. The proposed changes have a marginal overall quantified benefit, and similar overall quantified benefit to other options considered. The recommended proposal performs highest in terms of the expected level of protection of life safety.
8. Finally, the Royal Commission of Inquiry into Building Failure caused by the Canterbury Earthquakes (the Canterbury Earthquakes Royal Commission) made 51 recommendations for operational, policy and legislative changes to improve the system for managing buildings after an emergency event. The proposed changes are consistent with the Government's final response to the Canterbury Earthquakes Royal Commission.

1 Status quo

Context

9. After an emergency event, there could be significant risks:
    - to life safety posed by buildings damaged after an emergency event
    - to a building and its users posed by the surrounding land, even though the building itself may be usable
    - of potential damage to other property and disruption to neighbouring buildings or public thoroughfares posed by buildings damaged in an emergency.

The Canterbury earthquakes revealed gaps in the system for managing buildings after an emergency event

10. Following the Canterbury earthquakes, damaged buildings and land posed risks to life safety when the states of emergency declared in September 2010 and February 2011 were terminated. The Canterbury earthquakes revealed gaps and barriers in the current system that meant these risks are not being adequately managed.

11. The Canterbury Earthquakes Royal Commission considered the management of buildings after the earthquake events between September 2010 and June 2011. It made 51 recommendations for operational, policy and legislative changes. These recommendations were to improve the efficiency and effectiveness of the system for managing buildings after an emergency event. Key recommendations include that:

    - the Building Act 2004 be amended to empower territorial authorities to take action where a building is not deemed dangerous or earthquake-prone, but requires immediate repair or demolition due to damage caused by an emergency event
    - the building safety evaluation process and wider building management after earthquakes (and other disasters) should be developed and provided for in legislation
    - MBIE should progress its proposals to incorporate new emergency risk management provisions into the Building Act 2004.

A new set of powers addressing this gap has been developed and consulted on

12. In April 2013, Cabinet agreed in whole or in principle with the recommendations of the Canterbury Earthquakes Royal Commission regarding the management of buildings after an emergency event. Cabinet agreed that regulation is required to address post-disaster building management. This includes that MBIE should progress proposals to incorporate emergency risk management provisions into the Building Act 2004, subject to further work on the required policy and legislative changes [EGI Min (13) 6/11 refers].

13. In May 2015, the Government consulted on proposals to improve the system for managing buildings after an emergency event. The consultation document contained 14 proposals for a broad set of new powers to be introduced into the Building Act 2004. These proposals set out an end-to-end process for managing buildings from response to recovery following an emergency event.

14. MBIE has adjusted the proposals in the consultation document after considering submitters' feedback. The key change is the introduction of:

    - a new trigger that allows territorial authorities to use the building emergency management powers when no state of emergency has been declared
    - an explicit property rights framework.

Status quo

How to carry out building emergency management activities, in practice

15. The rapid building assessment and placarding process is mainly associated with the Canterbury earthquakes. However, it was first used in New Zealand following the 2007 Gisborne earthquake.

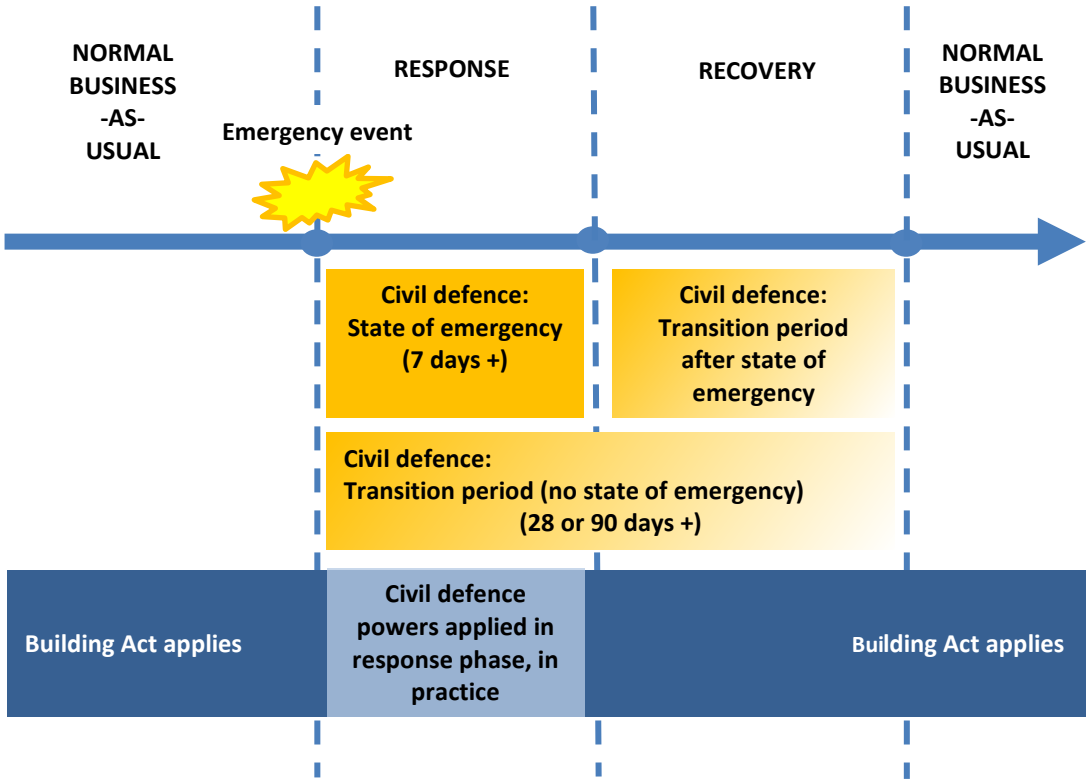
16. The current system for managing buildings after an emergency comprises of local reconnaissance teams undertaking rapid building assessments to buildings following an earthquake, flood or other emergency event. Rapid building assessors may also place red, yellow or white notices (placards) on buildings, based on observed damage. Detailed engineering assessments are then commissioned by building owners to follow up on the

rapid building assessment. New Zealand's system is an adaption of California's ATC-20 process, considered international best practice.[1]

Two pieces of legislation overlap, but a gap exists that results in risks to life safety

17. Buildings and land damaged in an emergency event are managed by two regulatory frameworks:
    - the Civil Defence Emergency Management Act 2002
    - the Building Act 2004.
18. The following figure illustrates the main regulatory frameworks that form the status quo for managing buildings after an emergency event.

Figure 1: Main regulatory frameworks for managing buildings after an emergency event, in the current system



Managing buildings under the civil defence emergency management framework

19. If an emergency event occurs, the Civil Defence Emergency Management Act 2002 can apply. Under civil defence emergency management legislation, damaged buildings and land can be managed using wide ranging powers.
20. These powers include to:
    - inspect and place notices on buildings
    - evacuate and restrict entry to buildings

[1] The Applied Technology Council developed the rapid building safety evaluation process used in California from 1989.

- require further information
- demolish buildings, and direct others to take action to prevent, reduce or limit the extent of any emergency event.

A state of emergency can be declared

21. Civil defence emergency management groups can declare a state of emergency or transition period to access these powers. Section 4 of the Civil Defence Emergency Management Act 2002 defines an 'emergency' as a situation that as a result of any happening, whether natural or otherwise:
    - causes, or may cause, loss of life, injury, illness or distress, or in any way endangers the safety of the public or property in New Zealand, and
    - cannot be dealt with by emergency services, or otherwise requires a significant and coordinated response under the Civil Defence Emergency Management Act 2002.
22. A state of emergency has a duration of seven days. It can be extended more than once.

Transition periods replace or follow a state of emergency

23. The Civil Defence Emergency Management Amendment Bill currently before Parliament will make many of the civil defence emergency management powers available outside of a state of emergency. These powers will be available:
    - to recovery managers appointed under this legislation following a state of emergency, to promote initial recovery efforts after an emergency event
    - to civil defence emergency management groups, with the approval of the Minister of Civil Defence, to manage the response to an emergency event when no state of emergency is declared.
24. Transition periods have a duration of 28 days for a local transition period, or 90 days for a national transitional period. Transition periods can be extended more than once.

Not all emergency events are managed using civil defence emergency management powers

25. Not all emergency events will need to be managed as an emergency, as defined above, under the Civil Defence Emergency Management Act 2002. There is no formal definition of an emergency event that is, when an event occurs but no state of emergency is declared. Local authorities can respond to emergency events using normal, business-as-usual powers, if necessary.

MBIE has new readiness responsibilities in the civil defence emergency management framework

26. MBIE has responsibilities for building emergency management activities under the *National Civil Defence Emergency Management Plan*, an Order in Council under the Civil Defence Emergency Management Act 2002. The *National Civil Defence Emergency Management Plan* was reviewed after the Canterbury earthquakes. The new plan came into force in December 2015.

Managing buildings under the Building Act 2004

27. One on the main purposes of the Building Act 2004 is to ensure that people can use buildings safely without endangering their health. This purpose is primarily achieved by requiring all new building work to comply with the Building Code (a regulation under the Building Act 2004).

28. The Building Act 2004 primarily manages existing buildings in three circumstances. It provides a legal framework to manage the risk to building users and the public posed by buildings deemed to be:

    - dangerous
    - insanitary
    - earthquake-prone.

29. Where a building has been classified as dangerous, insanitary or earthquake prone, the Building Act 2004 empowers territorial authorities to require the building owner to 'reduce or remove' the danger. To manage dangerous, insanitary and earthquake-prone buildings, territorial authorities have powers to:

    - inspect buildings
    - place notices on buildings
    - restrict entry to buildings
    - demolish buildings that are an immediate danger to life safety
    - require building owners to reduce or remove the danger within a specified timeframe.

30. Territorial authorities use these powers to manage the risk posed by buildings and land damaged in an emergency event when no state of emergency has been declared. These powers are also used to manage damaged buildings and land after a state of emergency.

31. The Building Act 2004 requires territorial authorities to develop policies in consultation with their communities on how they will exercise these powers. This includes how the policy will apply to heritage buildings.

The Building Act 2004 defines a dangerous building

32. Section 121 of the Building Act 2004 defines a dangerous building as one that, in the ordinary course of events (excluding the occurrence of an earthquake), is likely to cause injury or death to persons in a building or on other property, or damage to other property. The threshold to be a dangerous building is high and the definition in section 121 specifically excludes earthquakes as a situation that causes a building to be dangerous. The Building Act 2004 makes a distinction between earthquake-prone buildings that are a risk before an emergency event separately from buildings that pose a risk after an emergency event has occurred.

Earthquake-prone buildings will be managed using new, standalone powers

33. The Building (Earthquake-prone Buildings) Amendment Act 2016 reinforces this distinction. It amends the Building Act 2004 to introduce a standalone framework for managing earthquake-prone buildings. This is separate from the dangerous and insanitary building provisions and powers.

The dangerous building provisions are not usually applied during a civil defence emergency management response to an emergency event

34. Current practice is to use the civil defence emergency management powers and the Building Act 2004 powers sequentially to manage buildings and land damaged in an emergency event. In theory, the powers under the Civil Defence and Emergency Management Act 2002 and the Building Act 2004 are both available at the same time. This is illustrated in Figure 1.

35. However, in practice the civil defence emergency management powers are used when a state of emergency has been declared. This is because emergency services and territorial authorities cannot manage the response to an emergency event under normal, business-as-usual arrangements. Extraordinary powers are required under the Civil Defence Emergency Management Act 2002 to ensure a significant and coordinated response.

36. The dangerous building provisions in the Building Act 2004 are then used when the state of emergency is terminated. Territorial authorities use these powers after a state of emergency to manage any buildings that still pose a risk to life safety and property.

Other legislation and legal obligations related to buildings

37. The Building Act 2004 does not set out all of the legal obligations for the owners of buildings damaged in an emergency event. Building owners have other legal obligations at common law or under other legislation. Requirements under District Plans prepared under the Resource Management Act 1991 may also apply, particularly in regard to heritage buildings.

Managing buildings after an emergency engages a wide range of people

38. Prior to the Canterbury earthquakes, the New Zealand Society for Earthquake Engineering (an engineering technical society) had ownership of the system. Since the Canterbury earthquakes, MBIE has taken stewardship of the system for managing buildings after an emergency event. This is the current situation.

39. The design and administration of the system for managing buildings after an emergency event has a strong reliance on volunteers for leadership and delivery. MBIE draws heavily on engineering and local government expertise when developing processes and materials to support the system. New Zealand's rapid buildings assessors are part of a highly organised and strongly networked international community. New Zealand was supported by foreign specialists during the Canterbury earthquakes. Our experts have assisted other countries.

40. A wide range of groups may engage with building emergency management activities:

- Local authorities are responsible for civil defence emergency management and managing buildings in their area.
- Building owners and insurers commission and pay for any detailed engineering or other technical reports, and pay to remediate buildings.
- Building users may need to find alternative accommodation, and commercial tenants may have their business interrupted.
- The public may be at risk from unremediated buildings.
- Communities may experience social impacts from the loss of heritage and the loss of a sense of place due to the demolition of buildings.

2 Objectives

41. The system for managing buildings after an emergency event seeks to adequately address risks to life safety from buildings when an extraordinary situation still exists, while ensuring a proportionate response that appropriately recognises property rights and impacts on heritage and moves towards normal, business-as-usual arrangements.

42. Managing buildings after an emergency involves carefully considering the objectives and criteria set out in Table 1. These objectives are used as criteria against which options to address the problems identified in this RIS are assessed.

Table 1: Objectives and descriptive criteria for the system for managing buildings after an emergency event

Aim	Criteria	Description
Life safety	**Life safety is adequately protected**	• The need to protect people for the risk posed by buildings and the surrounding land damaged in an emergency event • Life safety risks in a range of circumstances and buildings are managed in the short, medium and long term by sufficient powers
Proportionate	**Recognises level of public concern about risk**	• The risks that society is prepared to accept, the risks it finds intolerable, and the price it is prepared to pay for mitigating those risks
	Recognises impacts on personal and property rights	• The extent of the proposed powers and what circumstances they would cover • A framework explicitly provides appropriate protection for personal and property rights
	Recognises impacts on heritage	• Specifically recognises the value communities place on the contribution that heritage buildings make to social and cultural values and a community's sense of place
Growth supporting	**Promotes economic and social recovery**	• Promotes and facilitates economic and social recovery
Administrative efficiency	**Promotes good decision making with best available information**	• Allows good, consistent decision making in times of great stress when information is not readily available
	Clear requirements and obligations	• Roles, responsibilities and obligations are clearly understood • Powers and requirements are clear and transparent
	Interfaces well with other legislation	• Relationships with other legislation are clear and appropriate • Any potential conflict between legislative frameworks is managed
	An efficient and effective regulator	• Workability and ease of implementation • Smooth transition from response to recovery to normal, business-as-usual arrangements • Administration and compliance costs are minimal

Life safety is the primary objective, but other objectives are also important

43. The primary objective is the protection of life safety. Occupation of damaged buildings can pose a risk of life safety and injury in subsequent events such as aftershocks. This occurred in Christchurch in the February 2011 aftershock. Once identified, damaged buildings that pose risks to life safety should be repaired or demolished as quickly as possible, to remove any risk to life safety but also to aid recovery efforts.

44. However, it is impossible to manage all risks to life without prohibitively high costs. It is therefore appropriate to consider other objectives alongside life safety, such as:

    - creating a regulatory system with clear roles, responsibilities, obligations and requirements, so no confusion arises during or following an emergency event
    - recognising impacts on property rights and on heritage.

45. The protection of life safety is the first consideration when assessing options. However, when two options have an equal expected impact on life safety, the preferred option will be the one that:

    - has the least detrimental effect on property rights and on heritage
    - best facilitates social and economic recovery
    - is administratively efficient.

Understanding the risks society is prepared to accept, tolerate and mitigate

46. The analysis of the risks that society is prepared to accept, tolerate and mitigate was informed by advice from international risk experts and a review of the international risk literature. This analysis also used a framework from HM Treasury (the United Kingdom) for assessing proposals that affect the risk of fatalities, injury and other harms to the public.

47. For low probability/high impact risks, it is appropriate to consider the risk to society and communities as a whole, as well as the risks to individuals. It is also appropriate to consider the level of public concern about the consequences of these risks. There is no consensus in the risk literature about how to take the level of public concern into account when managing particular risks, only that it should be.

48. This RIS undertook a review of the risk perception literature in New Zealand and overseas using the framework from HM Treasury, to ascertain the level of public concern about the consequences of natural hazard risks. Advice from international risk experts and the risk literature is that there is a high level of public concern about the impacts of low probability/high impact risks like earthquakes.[2] When the level of public concern is high, a more precautionary approach that emphasises the impact of the event as well as its probability is justified. Options were assessed on how well they explicitly reflected the risk literature and managed the impacts of natural hazard risks.

[2] Slovic, Paul (1987), "Perception of Risk", *Science*, Vol 236, pp.280-285.

3 Problem definition

Problem statement

49. The risks posed by damaged buildings and land after an emergency event need to be managed.

50. However, the risks posed by damaged buildings and land after an emergency event cannot currently be adequately managed due to two key gaps in the legislation:

    - **insufficient powers to manage buildings** damaged in an emergency that do not meet the definition of a dangerous building under the Building Act 2004
    - **the lack of smooth transition** between civil defence emergency management powers and normal, business-as-usual powers under the Building Act 2004.

51. There is also **a lack of a clear legislative mandate** for the system for managing buildings after an emergency event, resulting in unclear roles and responsibilities.

52. For these reasons, risks to life safety posed by damaged buildings and land are not being adequately managed at present.

The powers in the civil defence emergency management legislation and the Building Act 2004 are insufficient to manage buildings after an emergency event

The powers in the civil defence emergency management legislation are insufficient to protect life safety

53. The current Civil Defence Emergency Management Act 2002 regime does not adequately meet life safety objectives in the long term. The powers are wide enough to adequately manage life safety risks posed by damaged buildings and land in the short to medium term. However, it is unlikely that a state of emergency or transition period will be in place long enough to adequately repair or demolish all buildings damaged in an emergency event.

54. This is because the civil defence emergency management legislation is general legislation that only facilitates the management of an emergency event when territorial authorities are unable to do so under normal, business-as-usual processes. Consequently, states of emergency and transition periods manage buildings in the short to medium term. The experience of Canterbury and Gisborne demonstrate it can take several years to remove the risk posed by damaged buildings. By contrast, the Building Act 2004 specifically manages buildings over much longer periods.

The powers in the Building Act 2004 are insufficient to protect life safety

55. However, the powers in the Building Act 2004 to manage dangerous and insanitary buildings do not adequately manage the risks to life safety posed by buildings and land damaged in an emergency event. This is because the powers are insufficient.

56. Only buildings that qualify as 'dangerous' or 'insanitary' buildings under the Building Act 2004 can be managed using these provisions. This is a high threshold. Most buildings damaged in an emergency event will not meet it, despite still posing risks to life safety. In Christchurch, these issues were addressed through a special Order in Council that amended the definition of a dangerous building to lower the threshold, by removing the need for the risk to be in the ordinary course of events.

57. The risk posed by a building in an aftershock cannot be managed using the dangerous building provisions. This is because the definition specifically excludes earthquakes as a situation that causes a building to be dangerous. Consequently, in Canterbury the special Order in Council also amended the definition of a dangerous building to account for aftershocks.

58. The definition of a dangerous building reflects the societal tolerance for natural hazard risks in 1968. However, the risk literature indicates that today the public is less tolerant of sudden losses in extraordinary, natural hazard events with large impacts. In 1968, the definition of a dangerous building was written to make a distinction between the immediate risks posed by a dangerous building and the longer term risk posed by an earthquake-prone building. It is unclear whether decision makers considered how these provisions would apply to buildings damaged in an emergency event, particularly an earthquake.

59. Existing powers in the Building Act 2004 to manage dangerous and insanitary buildings are not wide enough. There are no powers under the Building Act 2004 to evacuate buildings before restricting access to them. Powers in the Building Act 2004 to require information are weak. Territorial authorities do not have sufficient powers to require information and to require the remediation of damaged buildings.

60. Powers to require information and remediation are needed because commercial building owners in New Zealand do not have the same incentives to follow up on rapid building assessments that exist in other countries. Modern multi-storey/multi-unit buildings contain structural elements that are designed to deform in an event and be repaired before the building's long term reoccupation. Many of these buildings will be assessed with minor damage in a rapid building assessment. Overseas, the remediation of such buildings is the responsibility of the building owner.

61. The possibility of being sued is a strong incentive for action in other jurisdictions, such as California. However, building owners in New Zealand cannot be sued for personal injury or death resulting from a damaged building (except for exemplary damages) under the Accident Compensation Act 2001. Owners in other countries also have incentives to obtain a detailed engineering report to access what can be generous repair assistance packages (Italy), or repair work carried out directly by the government and/or non-government organisations (Taiwan).

There may be inconsistencies across territorial authorities in approaches to deciding when to declare a state of emergency, in order to manage buildings

62. Insufficient powers to manage damaged buildings and land using normal, business-as-usual powers in the Building Act 2004 could lead to declarations of a state of emergency that are inconsistent. Sometimes an emergency event of sufficient scale and impact will occur that warrants using the proposed powers. However, no state of emergency will be declared because the emergency event can otherwise be managed by the territorial authority. This occurred in Wellington after the 2013 Seddon earthquake.

63. Different territorial authorities will declare or not declare a state of emergency for events of similar size and impact. This is because declaring a state of emergency depends on the capability of territorial authorities to manage the event under normal circumstances. This results in the inconsistent management of buildings with similar levels of observed damage across the country.

64. If no state of emergency is declared, the life safety risks posed by some buildings in some areas will not be able to be adequately managed. This is because the powers under the Building Act 2004 are insufficient to manage buildings damaged in an emergency event. Powers available under the civil defence emergency management legislation will not be in place long enough to manage the life safety risks posed by all damaged buildings.

The transition from the civil defence emergency management legislation to the Building Act 2004 is not smooth

65. The current system is not administratively efficient. This is because the transition from the powers available under civil defence emergency management legislation to those in the Building Act 2004 is not smooth.

66. Protective measures undertaken during a state of emergency, such as placards that prohibit access, lose legal force when the state of emergency ends. This also applies to directives made during transition periods under the Civil Defence Emergency Management Amendment Bill.

67. However, some buildings may still pose a risk to life safety that needs to be managed after a state of emergency when directives have expired. To remain in force, the placards and other measures need to be transitioned to notices issued under section 124 of the Building Act 2004.

68. For large numbers of buildings, this process is unworkable because of the time needed to issue and process these notices. Following the September 2010 Canterbury earthquake, the Government managed this transition by a special Order in Council. Red and yellow placards were deemed to be section 124 notices under the Building Act 2004.

MBIE's legislative mandate is not clear

69. Finally, MBIE lacks a direct legislative mandate to oversee the system for managing buildings after an emergency event. No powers are assigned to MBIE's responsibility for building emergency management activities in the *National Civil Defence Emergency Management Plan*. Since taking stewardship of the system in 2011, MBIE has made operational changes to improve the efficiency and effectiveness of the system. However, these need to be supported by an appropriate legislative framework.

The current system performs poorly against the objectives for a system for managing buildings after an emergency event

70. Overall, the current system performs poorly against the criteria set for assessing options against the objectives for a system for managing buildings after an emergency event.

71. This is because problems exist across the civil defence emergency management and Building Act 2004. Taken together, this legislation **does not adequately protect life safety** in the short, medium and long term.

72. The current system is not proportionate, because the impacts on the following criteria are mixed:

- the criteria of recognises the level of public concern about risk:
  - because the civil defence emergency management legislation is consistent with the current risk literature
  - but the Building Act 2004 reflects the societal risk tolerance in 1968
- the criteria of recognising impacts on personal and property rights:
  - because the civil defence emergency management legislation overrides personal and property rights to manage life safety risks
  - but the Building Act 2004 has significantly less impact on property rights, as fewer owners are affected due to the high threshold and narrow definition.

73. In addition, the civil defence emergency management legislation and the Building Act 2004 **do not specifically provide for the protection of heritage** when managing dangerous buildings.

74. Overall, **the current system is not clearly growth supporting**. The civil defence emergency management legislation is strongly focussed on enabling recovery, and the new legislation currently progressing through Parliament specifically provides for recovery activities. However, the Building Act 2004 can only require the remediation of dangerous and insanitary buildings. This could delay recovery efforts if other building owners are slow to remediate their damaged buildings.

75. Finally, **the current system is administratively inefficient**. This is primarily because it does not encourage having an efficient and effective regulator. The dangerous and insanitary building powers can only be used on buildings that had civil defence emergency management directives transitioned to section 124 notices. There are significant costs to territorial authorities to transition any placards or other directives to section 124 notices.

4 Options and impact analysis

76. Three broad options for the system for managing buildings after an emergency event were identified.

77. **Option 1** is the option to **take no action**, retaining the current status quo with its inherent problems.

78. **Option 2** contains the system consulted on in May 2015. **This introduces a new section into the Building Act 2004** to manage buildings and land damaged in an emergency event. This framework is separate from the powers to manage dangerous, insanitary and earthquake-prone buildings.

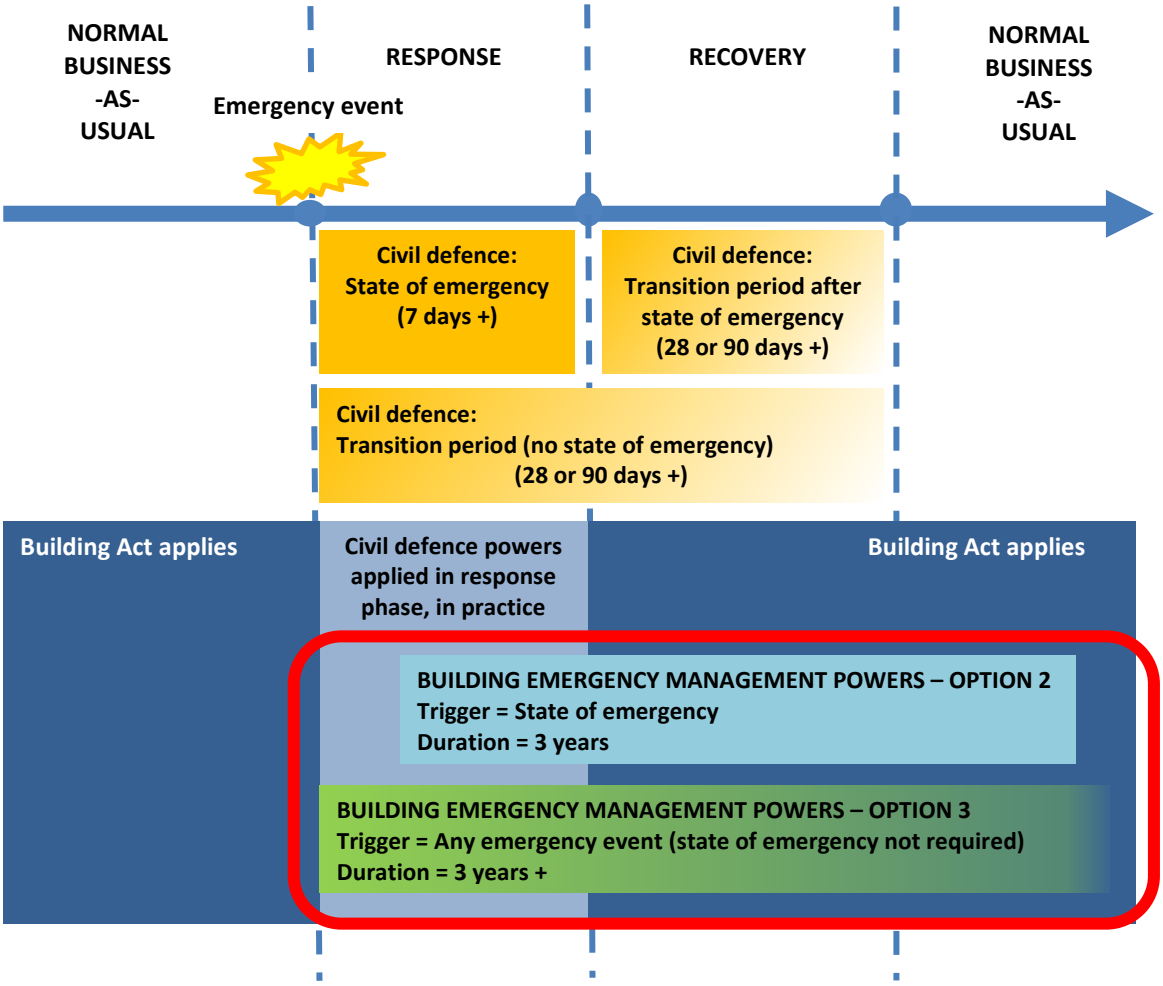
79. The proposed new system will address the legislative gap (identified above) by providing for end-to-end management of buildings during and following a state of emergency. The new standalone framework manages damaged buildings from response to recovery, into normal business-as-usual arrangements.

80. **Option 3 (the preferred option) refines option 2** based on stakeholder feedback on the May 2015 consultation document. Option 3 includes all changes proposed under Option 2.

A **key addition** is making the building emergency management **powers available when no state of emergency** has been declared. A second key change is the inclusion of **a property rights framework**. Small refinements concerning the proposed duration and review of the building emergency management powers have also been included.

81. Figure 2 compares the new, standalone powers in Options 2 and 3 with the current system for managing buildings after an emergency event.

Figure 2: New, standalone powers under Options 2 and 3 compared to the current system



82. The status quo is rejected as an option and does not receive further detailed analysis. This is because the problems outlined in paragraphs 49-75 are expected to remain.

83. This section of the RIS presents Options 2 and 3 and then analyses each option against the objectives set out Table 1.

Options identification

84. The key features of Options 2 and 3 are summarised in Table 2.

85. The main differences between Options 2 and 3 are highlighted in red. These are:

- a new trigger allowing the use of the building emergency management powers when no state of emergency has been declared
- a framework that explicitly recognises impacts on personal and property rights.

Table 2: Feasible options for managing buildings after an emergency event

KEY FEATURES	CONSULTED ON IN 2015	PREFERRED SYSTEM
	OPTION 2 **New system in the building act 2004 for managing damaged buildings and land**	**OPTION 3** **Refined new system in building act 2004 for managing damaged buildings and land**
Deciding when and how to use the powers	Situation-specific criteria govern the extent and use of the powers The trigger is a state of emergency	High level criteria recognising property rights and situation-specific criteria govern the extent and use of the powers The trigger can be any emergency event, including when no state of emergency is declared
Summary of powers	Manage buildings that are a significant danger to life and economic disruption to other properties, up to 3 years: • Restrict entry, close roads and cordon • Require further information • Require risk to be reduced or removed Up to 1 year: • Inspect and placard • Evacuate • Immediate works / demolition without consents 28 day rollover until no entry restrictions	Manage buildings that are a significant danger to life and economic disruption to other properties, up to 3 years: • Restrict entry, close roads and cordon • Require further information • Require risk to be reduced or removed Up to 6 months: • Inspect and placard • Evacuate • Immediate works / demolition without consents Can extend long-stop, rollover every 90 days while powers in use
Pre-decision checks	No resource or building consent for demolition / works within 1 year Ministerial decision to demolish a Category 1 historic place and those on the National Landmarks List, for immediate danger Heritage NZ has 24 hours to provide advice for all listed heritage, including in District Plans Owners and tenants have 48 hours to appeal for works for economic disruption Heritage NZ has 10 working days to advise for demolition for risk of damage and disruption to other property	No resource or building consent for demolition / works within 6 months Ministerial decision to demolish a Category 1 historic place and those on the National Landmarks List, for immediate danger Heritage NZ has 24 hours to provide advice for all listed heritage, including in District Plans Minimum of 10 working days to consult with relevant parties before demolition due to risk of damage and disruption to other property
Appeals process	No appeal for demolition / works for immediate danger Current determinations process Judicial review	No appeal for demolition / works for immediate danger Shortened 3 week determinations process for non-complex cases Current determination process for other cases Judicial review
Compensation	No compensation for removal of immediate danger By owners application, where work disproportionately did more harm than good	No compensation for removal of immediate danger Government can decide on a compensation framework at the time, after an emergency event

Impact analysis

Option 2: new system in the Building Act 2004 for managing buildings and land damaged in an emergency event

86. Option 2 proposes to introduce into the Building Act 2004 a new system for managing buildings after an emergency event. This is a standalone framework for managing damaged buildings and land, from response to recovery, to normal business-as-usual arrangements. Fourteen proposals for this standalone framework were included in document released for public consultation in May 2015. These included powers to:

    - inspect and placard buildings in the rapid building assessment process
    - evacuate and restrict entry to buildings
    - close roads and cordon
    - require further information
    - demolish buildings that pose an immediate risk to life safety, or a risk of damage or disruption to neighbouring buildings and public thoroughfares
    - require building owners to reduce or remove the risk posed by their building.

87. Table 2 describes the key features of Option 2.

88. The compensation framework included under Option 2 replicates that used in the Civil Defence Emergency Management Act 2002. The appeal system proposed was the current determinations process in the Building Act 2004.

Assessment against primary objective: Life safety is adequately protected

89. Option 2 manages the risk to life safety posed by buildings after an emergency event better than the current system. It contains a set of powers that enables damaged buildings and land to be managed from response to recovery. The powers will be in place long enough to reduce or remove the risk posed by most buildings.

90. However, it is unclear how any remaining risk posed by unremediated buildings would be managed at the end of the three year long-stop date. For this reason, Option 2 does not manage risks to life safety as well as Option 3.

91. Overall, Option 2 is a good fit with the objective of adequately protecting life safety. This is because it includes a full set of powers that adequately manage life safety risks, when these powers are available. However, Option 3 is a better fit to this objective because it manages life safety risks over a longer period.

Assessment against objective: Proportionality

Recognises level of public concern about risk

92. Option 2 meets the criteria of recognising the level of public concern about risk. Option 2 implicitly recognises that the public is less tolerant of the risk posed by sudden losses in extraordinary events with large impacts. It does so by specifically managing damaged buildings and land separate from the existing dangerous building provisions.

93. This is a clearer, more consistent approach to recognising the level of public concern about risk than the current system. The civil defence emergency management legislation strongly recognises the level of public concern about risk. It takes a precautionary approach that is consistent with the risk literature. However, the Building Act 2004 reflects the societal tolerance for risk in 1968 and this tolerance has changed. Overall, Option 2 is a better fit with this criteria because of the inconsistencies in the current system.

Recognises impacts on personal and property rights

94. Option 2 has stronger impacts on personal and property rights compared to the current system in the Building Act 2004 and Option 3. This is because it specifically provides for the demolition of buildings that could damage or disrupt neighbouring properties, but do not pose an immediate risk to life safety.

95. To recognise impacts on property rights, Option 2 proposes a compensation scheme that replicates the compensation scheme set out in the Civil Defence Emergency Management Act 2002. However, some submitters on the consultation document expressed concerns about how this would apply to these buildings in practice.

Recognises impacts on heritage

96. The proposals in Option 2 would result in less impact on heritage than the current system. This is because Option 2 specifically provides for the protection of national, regional and local heritage. It does so by proposing that:

- the demolition of Category 1 listed heritage buildings and those on the National Historic Landmarks List are Ministerial decisions
- Heritage New Zealand is consulted 24 hours prior to the demolition of a heritage building that is an immediate risk to life safety
- Heritage New Zealand is consulted 10 working days before the demolition of heritage buildings, for all other reasons.

97. These proposals will ensure that the value communities place on heritage is recognised. This means that impacts on heritage are minimised under Option 2, despite overriding resource consent requirements.

Overall assessment against objective: Proportionality

98. Option 2 better meets the objective of proportionality than the current system across the criteria of:

- recognising the level of public concern about risk, because it does so more clearly and consistently
- recognising impacts on heritage, because it specifically provides for heritage.

99. Nevertheless, Option 2 has significant detrimental effects on property rights. It attempts to address these impacts by providing for appeals and compensation. However, submitters on the consultation document raised concerns about whether the timeframes for the current determinations process were workable after an emergency event. Some submitters also questioned how the proposed compensation framework would work in practice.

Assessment against objective: Growth supporting

Promotes economic and social recovery

100. Option 2 promotes economic recovery by specifically allowing territorial authorities to manage the impacts of buildings that are a disruption to neighbouring homes and businesses. Consequently, Option 2 is a better fit with the objectives than the status quo.

101. Under the current system, the civil defence emergency management legislation promotes economic recovery by specifically providing for recovery activities in the Civil Defence Emergency Management Amendment Bill currently before Parliament. However, territorial authorities can only require the remediation of dangerous or insanitary buildings when the civil defence emergency management powers are terminated. This makes it difficult to promote recovery under the current system. For these reasons, Option 2 better promotes economic and social recovery by facilitating the earlier remediation of a wider group of buildings.

102. Overall, Option 2 is a good fit to the objective of supporting growth by promoting economic and social recovery. It is a better fit with the objectives than the status quo, and is equally as effective as Option 3. This is because Options 2 and 3 contain the same powers for managing the impacts of buildings that are a disruption to neighbouring homes and businesses.

Assessment against objective: Administrative efficiency

103. Option 2 is more administratively efficient than the current system. This is primarily because it meets the objective of having an efficient and effective regulator. Administration costs will be significantly reduced compared to the current system. This is because civil defence emergency management directives do not need to be transitioned to Building Act 2004 notices. For this reason, Option 2 is significantly more workable than the current system.

104. Option 2 also partially meets the following administrative efficiency criteria:

- the criteria of promoting good decision making:
  - because Option 2 contains power to require information, although it is not clear whether owners can be required to obtain detailed engineering assessments
- the criteria of clear requirements and obligations:
  - because most roles, responsibilities and powers are clearly set out, but the obligations of building owners to meet information requirements are not clear.

105. However, it is not clear whether Option 2 meets the criteria of interfacing well with other legislation. This is because Option 2 does not specifically seek to manage any potential administrative confusion with the civil defence emergency management legislation. As illustrated in Figure 2, a new framework in the Building Act 2004 will run parallel to powers available under the civil defence emergency management legislation if there is a state of emergency or transition period. Consequently, any new system in the Building Act 2004 could potentially conflict with the civil defence emergency management legislation. Option 2 relies on existing provisions in the Civil Defence Emergency Management Act 2002 to manage any potential conflict. Section 6 of the Civil Defence Emergency Management Act 2002 provides that this legislation does not limit or substitute for more specific powers under another Act.

106. Overall, Option 2 partially meets the objective of administrative efficiency. This is because some roles, responsibilities and requirements under Option 2 are still not clear: for example, how the power to require information applies to building owners obtaining detailed engineering assessments. Option 3 is a better fit to this objective because it is clearer about roles, responsibilities, requirements and the interface with the civil defence emergency management legislation.

Conclusion

107. Option 2 is a good fit with most of the objectives. Option 2 provides a standalone and fit-for-purpose framework for managing buildings after an emergency event. This ensures a smooth transition from response to recovery.

108. The proposals consulted on in 2015 would better ensure that the life safety risks posed by damaged buildings and land are managed in an end-to-end process, compared to the status quo. Specific provision is made for heritage. Option 2 also promotes recovery activity by specifically managing buildings that could damage and disrupt neighbouring properties and public thoroughfares.

109. However, Option 2 has strong impacts on personal and property rights that are not adequately balanced by pre-decision checks.

Option 3: refined new system in the Building Act 2004 for managing buildings and land damaged in an emergency event

110. Option 3 refines the proposals in Option 2. This is in response to feedback on the 2015 consultation document.

111. Option 3 includes all changes proposed under Option 2. It also includes the key addition of **a new trigger** that allows the use of the building emergency management powers when no state of emergency has been declared.

112. A second key addition is an explicit **property rights framework**. Under Option 3, the system for managing buildings after emergencies will now include:

- criteria that inform deciding when and how to use the suite of powers for managing buildings after an emergency event
- situation-specific criteria that are taken into account when managing individual buildings
- expanded pre-decision checks that require a wider group of interested parties to be consulted before works (including demolition) can be carried out on buildings that pose a risk of damage and disruption to other property or public thoroughfares
- more accessible appeal processes that shorten the current determinations process to three weeks.

113. Table 2 describes the key features of Option 3.

114. Small refinements concerning the proposed duration and review of the building emergency management powers have also been made under this option. These respond to submitters' feedback on the proposals in the May 2015 consultation document.

The new trigger allowing the use of the building emergency management powers when no state of emergency has been declared is a significant change

115. A key issue is whether the powers for managing buildings after an emergency event should be available when no state of emergency has been declared. The Canterbury Earthquakes Royal Commission recommended that powers for managing buildings should only be available after a state of emergency. This is because of their potential impact on property rights.

116. By contrast, some submitters on the 2015 consultation document support making the proposed powers available when no state of emergency has been declared. This is to ensure a state of emergency is only declared when appropriate, not solely for authorities to access any new powers in the Building Act 2004.

117. For these reasons, under Option 3 a territorial authority will be able to use the proposed powers when there has been an emergency event but no state of emergency has been declared.

118. This decision would be subject to the approval of the Minister for Building and Housing. This is consistent with the Civil Defence Emergency Management Amendment Bill currently before Parliament. Before granting approval, the Minister for Building and Housing should be satisfied that this is in the public interest and it is necessary and desirable, having regard to the circumstances in the affected area and the risks to life safety and property. The Minister for Building and Housing should also consult with the relevant civil defence emergency management group and the mayor of the territorial authority before making this decision.

119. This will ensure that the decision to use the building emergency management powers when no state of emergency is declared is proportionate. The property rights framework described in paragraph 112 will also ensure that the decision to use the powers is appropriate. Allowing the use of these powers when no state of emergency is declared could also have the effect of raising the bar for declaring a state of emergency. This is because buildings and land damaged in an emergency event will be able to be managed using powers in the Building Act 2004.

Assessment against primary objective: Life safety is adequately protected

120. The proposals under Option 3 will enable all damaged buildings to be remediated within the necessary timeframes. Unlike Option 2, the three year long-stop date can be extended.

121. In addition, the remediation of damaged but useable multi-storey/multi-unit buildings that deformed as expected in an emergency event can be required. This would be on a case-by-case basis, dependent the level of observed damage and likelihood of subsequent events. This means that any residual life safety risks in the medium and long term posed by these buildings can be managed.

122. Overall, Option 3 manages risks to life safety posed by buildings after an emergency event better than the other options. This is because the full set of powers in Option 3 manages any life safety risks posed by a wide range of buildings damaged in different situations. These risks can be managed in the short, medium and long term.

Assessment against objective: Proportionality

Recognises level of public concern about risk

123. Option 3 recognises the level of public concern about risk better than Option 2. This is because the risk literature explicitly informed the design of the system for managing buildings after an emergency event. The risk literature established a case that justifies the use of these strong legislative powers. This was taken into account when analysing the impact Option 3 had on personal and property rights.

Recognises impacts on personal and property rights

124. Like Option 2, this option has strong impacts on property rights. However, Option 3 is a better fit with this criteria because it also includes a framework that specifically recognises property rights. The changes described in paragraph 112 will ensure that property rights are adequately recognised throughout the system for managing buildings after an emergency event.

125. These changes address concerns raised by submitters about impacts on property rights. The changes also reflect submitters' feedback on the detail of the proposals consulted on in May 2015, including suggestions for:

- a wider group of interested parties to be consulted before works (including demolition) can be carried out on damaged buildings
- a shortened appeals process of three weeks, because some submitters considered the current timeframes for the determinations process to be unworkable.

126. Unlike Option 2, this option does not include a statutory framework for compensation as part of the new system for buildings that are not an immediate risk to life safety. Option 2 replicated the compensation framework in the Civil Defence Emergency Management Act 2002. However, submitters questioned the workability of these proposals.

127. In principle, providing for a full compensation framework would be the best way to recognise impacts on property rights. Other legislation does provide for compensation when local or central government decision making significantly impacts on personal and property rights, for example, the Biosecurity Act 1993.

128. However, the preferred option is for Cabinet to make any decision about compensation in the circumstances after an emergency event. This is because the impacts of any natural hazard event are highly uncertain and difficult to anticipate. When making this decision, territorial authorities and Cabinet would be guided by the policy and principles on financial support and compensation in relation to emergency events generally, and as set out in the Civil Defence and Emergency Management Act 2002. This includes that any payments are net of insurance and any private benefit gained from the actions undertaken.

Recognises impacts on heritage

129. Option 3 contains the same proposals to recognise the impacts on heritage that are set out in Option 2. The demolition of Category 1 listed heritage buildings and those on the National Historic Landmarks List would be a Ministerial decision. Heritage New Zealand would also be consulted. Again resource consent requirements would be overridden.

130. Option 3, like Option 2, meets this criteria. This is because Option 3 specifically provides for heritage. Again, the value communities place on heritage is recognised and impacts on heritage are minimised. This is despite overriding resource consent requirements.

Overall assessment against objective: Proportionality

131. Overall, the inclusion of the explicit property rights framework means that Option 3 is a better fit to the objective of proportionality than Option 2. This is despite Option 3 having the same strong powers as Option 2 and not providing for a compensation framework. However, the new criteria governing the use of the proposed powers provides for more appropriate and proportionate decision making about the repair or demolition of damaged buildings. This recognises property rights more effectively than Option 2 and mitigates against not providing for a specific compensation framework at this time.

Assessment against objective: Growth supporting

Promotes economic and social recovery

132. Option 3 promotes economic recovery by specifically managing the impacts of buildings that are a disruption to neighbouring homes and businesses.

133. Overall, Option 3 meets the objective of supporting growth by promoting economic and social recovery equally with Option 2. This is because Options 2 and 3 contain the same powers and have the same impacts.

Assessment against objective: Administrative efficiency

134. Option 3 is more administratively efficient than the other options. It is also a better fit to the following criteria than Option 2:

    - the criteria of promoting good decision making:
        - because it provides clear powers to require building owners to obtain detailed engineering assessments, when required
    - the criteria of roles, obligations and requirements:
        - because all roles, responsibilities, obligations and powers are clearly set out.

135. Option 3 is also a better fit to the criteria of interfacing well with other legislation than Option 2. This is because Option 3 will further clarify the relationship between the standalone framework in the Building Act 2004 and the civil defence emergency management legislation. Option 3 includes proposals to clarify:

    - that the powers in the Building Act 2004 should primarily be used to manage buildings after an emergency event
    - that building assessment managers will work to the relevant civil defence emergency management person during states of emergency and transition periods.

136. Overall, Option 3 is a better fit with the objective of administrative efficiency than the current system and Option 2. This is because the roles, responsibilities and requirements are clearer and it better manages the interface with the civil defence emergency management legislation.

Conclusion: Option 3 performs best against the objectives for a system for managing buildings after an emergency event

137. Option 3 is the preferred option. Overall, the proposals set out in Option 3 better ensure that the life safety risks posed by buildings and land damaged in an emergency event are adequately managed over the short, medium and long term. This is because Option 3 contains standalone powers to manage damaged buildings until they are remediated over the necessary timeframe beyond the three year long-stop date. Option 3 manages these buildings regardless of whether a state of emergency has been declared under the Civil Defence Emergency Management Act 2002.

138. Submitters on the proposals set out in Option 2 raised concerns about property rights. Option 3 addresses these concerns by:

    - setting out criteria governing when and how these powers should be used
    - ensuring that relevant parties are adequately consulted before a decision is made and they have good access to appeal processes.

139. The net costs associated with the proposals in Option 3 are slightly higher than those of the current system. However, these small costs are outweighed if the value of one life saved is added into the analysis. It is therefore reasonable to conclude that Option 3 is likely to provide a small net benefit to society, given that this option provides a more effective framework for the protection of life safety.

140. Overall, the proposals set out in Option 3 address the legislative gaps in the current system to adequately manage risks to life safety from buildings after an emergency event when an extraordinary situation still exists. Option 3 also ensures a proportionate response that appropriately recognises property rights and moves towards normal, business-as-usual arrangements.

In summary, Option 3 is the preferred option because it:

- creates a full suite of powers in the Building Act 2004, and a clear and efficient system
- covers a sufficiently wide range of situations and buildings, to manage any life safety risks
- ensures the period during which the building emergency management powers apply is long enough to take actions to reduce the risks to life safety and property
- sufficiently recognises property rights and heritage.

Costs of the preferred Option 3

141. To frame up a plausible range of impacts, an independent cost benefit analysis of the preferred option was commissioned. A definitive quantification of the costs and benefits is not possible because of high uncertainty about the timing and scale of a natural disaster and its impact on the built environment. There is also uncertainty about how local authorities and building owners might respond in practice.

142. To carry out a cost benefit analysis with such information gaps, the following approach has been taken.

143. **An initial assessment is made regarding the proposals' anticipated effectiveness at ensuring life safety** is adequately protected. This does not include a quantitative assessment of the value of a life saved. Again, this is because of the high level of uncertainty involved.

144. However, there is clear potential avoided fatality in higher impact events given the loss of life after the Christchurch earthquake and the potential for the proposed powers to improve the management of damaged buildings – with the aim of reducing risks to life safety.

145. **Then a quantitative cost benefit analysis is attempted** to consider the broad costs and benefits that can be quantified.

146. Costs are:

- the compliance cost borne by building owners who would not otherwise purchase a detailed damage assessment
- a loss of economic activity that would otherwise occur due to additional access restrictions
- the administrative costs faced by a territorial authority applying the powers.

147. The additional benefits included:

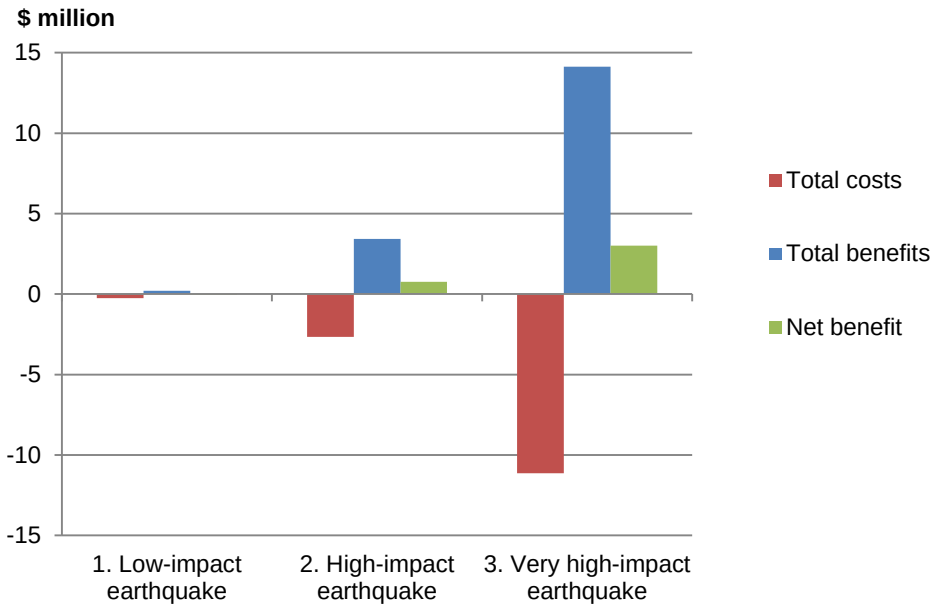
- the avoided cost of having to replace placards with section 124 notices
- an avoided loss of economic activity from a faster resolution of damaged buildings than would otherwise occur.

148. The quantitative cost benefit analysis models the impacts under three scenarios:

- **'low-impact',** based on the Gisborne earthquake (2007)
- **'high-impact',** based on the Darfield, Canterbury earthquake (2010)
- **'very high-impact'**, based on the Christchurch earthquake (2011).

149. These stylised scenarios are based on earthquakes because of the potential for widespread damage to buildings and for multiple aftershocks. Damage to buildings from the emergency event and subsequent aftershocks raise the risks to life safety if damaged buildings and their surroundings are not well managed. Figure 3 represents the high level results of this analysis. It shows the costs, benefits and net benefits by scenario and base case.

Figure 3: Costs, benefits and net benefit, by scenario and base case



150. The base case results show a net benefit for the two higher impact scenarios. This net benefit is $0.768 million for the high-impact scenario and $3.002 million for the very high-impact scenario. The benefit-cost ratios are similar at 1.29 and 1.27 respectively, indicating that society would be better off as a whole.

151. By contrast, the low-impact scenario has a small net cost of -$0.043 million, albeit fairly close to the breakeven point of zero. This result reflects the experience of the Gisborne earthquake. In Gisborne, the rapid building assessment process and placing of placards on buildings was confined to the central business district. The absence of placards assigned to residential buildings reduces some of the modelled benefit. The avoided cost of replacing all placards with section 124 notices issued under the Building Act 2004 is therefore lower than in the other scenarios.

152. Avoided fatality is plausible even in the low-impact scenario: for example, if sudden and strong aftershocks had occurred. If the use of the proposed powers following an earthquake can lead to a fatality being avoided in an aftershock –that would otherwise occur due to damaged buildings – then the net benefit and benefit-cost ratio are much more favourable. This is particularly so for a low-impact scenario, where the value of an avoided fatality, of $4.088 million, is large relative to the costs.[3]

153. Table 3 shows the net benefit ranges from $4.045 million (low-impact scenario) to $7.090 million (very high-impact scenario).

[3] Ministry of Transport (2015) – estimate of the average social cost per road transport fatality, excluding vehicle damage costs.

Table 3: Summary of key results by scenario, for base case and alternate case

($million) Not discounted	Scenario 1 low-impact earthquake event	Scenario 2 high-impact earthquake event	Scenario 3 very high-impact earthquake event
Net benefit			
Base case	-$0.043 m	$0.768 m	$3.002 m
Base case with an avoided fatality	$4.045 m	$4.856 m	$7.090 m
Alternative case	-$0.362 m	-$0.709 m	-$5.419 m
Benefit-cost ratio			
Base case	0.83	1.29	1.27
Base case with an avoided fatality	17.03	2.82	1.64
Alternate case	0.09	0.67	0.33

Note: the values represented here are not discounted for two reasons. Firstly, the timing of the disaster events is uncertain and is not explicitly modelled. Secondly, the impacts in each scenario are assumed to occur in the first year after the disaster event and so have a common temporal basis.

154. Table 3 also shows an 'alternate case.' This alternate case modelled the direct costs and benefit elements of each stylised scenario that are, arguably, relatively more certain in magnitude. These include the compliance costs faced by owners and the avoided placard replacement costs that a territorial authority otherwise faces. This case shows that, for the proposal to provide a net benefit, some benefit from the intended faster remediation of damaged buildings would likely be required.

155. Taking these results together, it is reasonable to conclude that the use of the proposed powers would likely provide a net benefit to society following an earthquake that causes damage to an urban centre. It should also be noted that the likelihood of a low-impact earthquake is much higher than that of a higher impact earthquake. This implies a greater weight should be placed on the results for the low-impact scenario.

156. Option 3 is therefore modelled to have a small net benefit because the greater certainty associated with the proposed powers is likely to result in the faster remediation of buildings. This would offset any increased administration and compliance costs. This benefit is enhanced if one life is saved as a result of these proposed changes.

5 Conclusions and recommendations

157. Option 3 is the preferred option. This option **introduces a new system for managing buildings after an emergency event into the Building Act 2004**. A territorial authority will be able to apply the building emergency management powers for a longer period than under the Civil Defence Emergency Management Act 2002. A **new trigger** will also allow territorial authorities to manage damaged buildings when no state of emergency has been declared. This occurred in Wellington following the 2013 Seddon earthquake. The new system will clearly allocate roles, responsibilities and obligations. Powers and requirements will be clear and transparent.

158. An explicit **property rights framework is established** to recognise impacts on personal and property rights. This specifically addresses concerns raised by submitters during consultation on the potential impacts of Option 2 on property rights. The preferred option contains checks and balances to ensure that the proposed powers are used appropriately, by:

    - setting out criteria governing when and how the powers would be used
    - ensuring that relevant parties are adequately consulted before a decision to undertake works (including demolition) is made and they have good access to appeal processes.

159. Submitters also raised concerns about impacts on heritage. The new system addresses these concerns by specifically providing for heritage.

160. Economic modelling shows there are small economic benefits associated with this option. The (unquantified) expected additional protections for life safety are higher for the preferred option than for other options.

161. Finally, Option 3 is consistent with the Government's final response to the Canterbury Earthquakes Royal Commission.

162. Table 4 on the following page summarises the impact analysis and these conclusions. The key improvements to the building emergency management system under Option 3 are outlined in red.

Table 4: Analysis of high level options for a system for managing buildings after an emergency event

OBJECTIVES	CONSULTED ON IN 2015 OPTION 2 New system in the Building Act 2004 for managing damaged buildings and land	PREFERRED OPTION OPTION 3 Refined new system in the Building Act 2004 for managing damaged buildings and land
Primary objective: **Life safety is adequately protected**	✓ • Strong protection of life safety from a full set powers to manage life safety risks, but it is unclear how any remaining risk posed by unremediated buildings would be managed at the end of the three year long-stop date	✓✓ • Strongest protection of life safety because any risks can be managed in the long term, including those posed by useable but damaged multi-storey buildings that deformed as expected in an emergency event, when subsequent events are likely • All buildings damaged in an emergency event can be managed, including when a state of emergency is not declared
Proportionate: **Recognises level of public concern about risk**	✓ • Managing buildings damaged after an emergency event separate from the dangerous building provisions implicitly reflects that the public is less tolerant of the risk posed by sudden losses in extraordinary events with large impacts	✓✓ • The risk literature explicitly informed the design of the system for managing buildings after an emergency event
Proportionate: **Recognises impacts on personal and property rights**	X • Strong impacts on property rights • Provides a better compensation framework than other options in principle, but unclear how this would work in practice	✓ • Includes a framework to recognise the strong impacts on property rights
Proportionate: **Recognises impacts on heritage**	✓✓ • Specifically provides for heritage despite overriding resource consent requirements	✓✓ Specifically provides for heritage despite overriding resource consent requirements
Growth supporting: **Promotes economic and social recovery**	✓ • Promotes recovery more than other options due to more certainty and specifically managing buildings that disrupt neighbouring properties and public thoroughfares	✓ • Promotes recovery more than other options due to more certainty and specifically managing buildings that disrupt neighbouring properties and public thoroughfares
Administrative efficiency: **Promotes good decision making with best available information**	✓ • Powers to require information to better determine the risk posed by damaged buildings, but unclear how this applies to building owners obtaining detailed engineering assessments	✓✓ • Clear powers to require information to better determine the risk posed by damaged buildings in the short, medium and long term
Administrative efficiency: **Clear requirements and obligations**	✓ • Most roles, responsibilities, obligations and powers are clear, but some are not	✓✓ • Roles, responsibilities, obligations and powers are clear
Administrative efficiency: **Interfaces well with other legislation**	≈ • Clearly overrides resourcing consenting requirements under the Resource Management Act 1991 • May conflict with the civil defence emergency management legislation, but the Civil Defence Emergency Management Act 2002 does not limit or substitute for more specific powers under another Act • Unclear how these powers would interface with the timeframes for remediating an earthquake-prone buildings	✓ • Clearly replaces resource consenting requirements with an alternative process in the Building Act 2004 • May conflict with civil defence emergency management legislation, but would further clarify this interface in the Building Act 2004 to reinforce that the Civil Defence Emergency Management Act 2002 does not limit or substitute for more specific powers under another Act • The powers could require the remediation of a multi-storey building that became earthquake-prone due to damage in an emergency event, before the required earthquake-prone building timeframe
Administrative efficiency: **Efficient and effective regulator**	≈ • The increased administration and compliance costs of managing more buildings is likely to be offset by greater certainty and faster recovery, and no costs to transition placards to section 124 notices	≈ • The increased administration and compliance costs of managing more buildings is likely to be offset by greater certainty and faster recovery, and no costs to transition placards to section 124 notices

6 Consultation

163. The following agencies have been consulted on this paper: the Treasury, Ministry of Civil Defence and Emergency Management, Ministry for the Environment, Ministry of Justice, and the Ministry for Culture and Heritage. The Office of Treaty Settlements was consulted. The Department of Prime Minister and Cabinet have been informed.

164. In May 2015, Cabinet agreed to release a consultation document on proposed changes to the system for managing buildings after an emergency and invited the Minster for Building and Housing to report back to the Cabinet Economic Growth and Infrastructure Committee on a new legislative framework for managing buildings after a state of emergency, taking into account the outcome of proposed consultation [CAB Min (15) 14/3 refers]. This included specifically asking submitters if there were situations where the proposed powers should be made available when no state of emergency has been declared.

165. The following agencies were consulted on the consultation document released in May 2015: the Treasury, Ministry of Civil Defence and Emergency Management, Canterbury Earthquake Recovery Authority, Ministry for the Environment, Ministry of Transport, Ministry of Justice, Ministry of Education, the Department of Internal Affairs, Land Information New Zealand, the Department of Conservation, and the Ministry for Culture and Heritage. Heritage New Zealand was also consulted.

166. MBIE received 35 submissions on the consultation document released in May 2015 outlining proposals to manage buildings after an emergency event. Submitters were mainly territorial authorities, engineers and participants in the building and construction sector.

167. Most of the 14 proposals in the consultation document were generally supported by submitters. However, some submitters felt that the proposed powers should be available when no state of emergency is declared. Concerns were also expressed about possible impacts on property rights and the protection of heritage.

168. In addition to the submissions on the consultation document, the options in this paper were informed by:

- the evidence submitters provided to the Canterbury Earthquakes Royal Commission, and Volume 7 of the Royal Commission's Final Report
- analysis of building emergency management approaches adopted in other jurisdictions, including parts of the United States of America, Japan, Taiwan, Italy, Canada, the United Kingdom and Australia
- a building emergency management sector reference group and officials reference group
- advice from international risk experts and a review of the international risk literature.

7 Implementation plan

169. The proposals would be given effect by:
    - legislation amending the Building Act 2004
    - provision of information and guidance from MBIE.
170. Legislation in the Building Act 2004 will formalise a number of changes MBIE has made to improve the operational framework for managing buildings following an emergency event. This will give greater certainty and legitimacy to these changes. The changes were made to respond to the recommendations of the Canterbury Earthquakes Royal Commission, to implement Cabinet's decisions in 2013.
171. In practice, these changes implement the operational features of proposed new system. Key initiatives include comprehensive field guides for rapid building assessments following flooding and earthquake events, and a list of approximately 400 trained assessors held by MBIE.
172. Further work underway on the operational framework includes the development of an electronic information management system, a field guide for assessing the damage to land, and guidance to territorial authorities on undertaking building emergency management activities. Work is also underway to develop guidance for engineers undertaking detailed damaged assessments. This will minimise compliance costs and implementation risks.
173. It is expected that the vast majority of buildings owners and the public will comply with building emergency management directives. However, there is a risk that some people will intentionally interfere with directives or use a building without permission. The proposed $200,000 fine is the same amount as for similar offences in the Building Act 2004. The $5,000 fine for individuals and $50,000 fine for body corporates are the same amounts as for similar offences in the Civil Defence Emergency Management Act 2002.

8 Monitoring, evaluation and review

174. Monitoring, evaluation and review of the new system for managing buildings after an emergency event will occur on a case-by-case basis after the powers are used. As the steward for the system, MBIE will play an integral part in this process and implement any recommended changes. The international building emergency management community is characterised by a culture of iterative learning. The community debriefs after each major international event. Countries quickly adjust their building emergency management systems to incorporate new learnings. For example, in 2012 the American building emergency managers incorporated innovations in managing aftershocks developed in

Christchurch within three months of learning about this process from a New Zealand delegation.

175. Iterative learning has also been the practice in New Zealand. Prior to the Canterbury earthquakes, the New Zealand Society for Earthquake Engineering was finalising redrafted guidelines for undertaking a rapid building assessment process based on learnings from the 2009 Padang, Indonesia earthquake.

176. The new system will allow for quick, operational changes to how buildings are assessed following new learnings after significant emergency events here and overseas. It has been designed to be flexible to facilitate iterative learning. For this reason, the rapid building assessment process is not specified in regulations.