

REVIEW OF SEISMIC RISK MANAGEMENT IN EXISTING BUILDINGS UNDER THE EARTHQUAKE-PRONE BUILDING SYSTEM

TERMS OF REFERENCE – MAY 2024

PURPOSE

The purpose of the Review is to ensure seismic risk in existing buildings is managed effectively.

To achieve this purpose, the Review will consider how well the current system for managing seismic risk in existing buildings is working, identify problems, assess a range of options, and provide recommended actions. This will include:

- considering society's expectations and willingness to pay for mitigating the risk of injury and death in the event of an earthquake, and for improving the resilience of buildings over time
- recommending regulatory responses for managing seismic risk in existing buildings that are workable, equitable, and balanced to the risk posed – balancing life safety risks against the costs of regulation and impact on private property owners
- identifying barriers to meeting regulatory requirements and the types of support or incentives that would help building owners to better manage seismic risk
- considering how outcomes from seismic risk requirements align with broader Government objectives, such as going for housing growth, rebuilding the economy.

METHODOLOGY

The Review's methodology will include:

- an assessment of costs and benefits of the current system, including:
 - a revised model incorporating new data, including but not limited to:
 - the latest data estimating seismic hazard (National Seismic Hazard Model)
 - the updated statistical value of a life
 - current remediation costs
 - the number, location and types of earthquake-prone buildings
 - considering costs (including non-financial) and benefits and where they fall, at the individual building/owner level, as well as regionally and nationally
 - considering the limitations of cost-benefit analysis for low-likelihood, high-consequence events, potentially by exploring the costs and benefits in a range of scenarios and through other forms of impacts analysis
- gaining an understanding of public expectations for the performance of buildings in and following a seismic event – and 'willingness to pay' for seismic resilience including through upgrades to existing building stock
- an exploration of options for managing seismic risk in existing buildings, including:
 - analysis of approaches in comparable overseas jurisdictions
 - an examination of the case for regulatory intervention (eg through microeconomic market failure analysis) and the range of non-regulatory drivers/interventions
 - support and incentives to achieve the desired level of seismic risk mitigation.

SCOPE

The Review will consider questions of how to measure and mitigate risk, implementation and technical matters, finance and funding challenges, regulatory responses, and timeframes.

How to measure and mitigate risk

The Review will consider how seismic risk is best measured in existing buildings and the wider factors that should be taken into account when determining where to focus efforts to reduce risk, such as region, building typology and building use. It will also consider the degree to which building resilience is a priority for New Zealanders.

This could include (but not be limited to) questions such as:

- How should seismic risk be assessed and measured? What are possible alternatives to the percentage new building standard measure (%NBS), for example, a risk-based grading system accounting for consequence of building damage?
- Should different building types be subject to different regulatory requirements? For example, based on the age and construction method of buildings, their type of use, or the vulnerability of occupants.
- For what building use types would it be most important that resilience be prioritised, beyond the risk to life safety, such as hospitals, schools and retirement facilities?
- How should varying degrees of seismic hazard across New Zealand be reflected in different requirements in different areas?
- To what extent should risk be managed by mandatory requirements, as compared with the acceptance of risk facilitated by disclosure, or the action of non-regulatory drivers (such as insurer requirements)?
- How should risk be understood in relation to users of buildings who are not the owners, such as residential or commercial tenants, retail customers and other visitors, users of adjacent buildings and pedestrians in the vicinity?
- How important is it to ensure existing buildings are more resilient to damage?
- Can insurance estimates of risk be treated as a proxy for risk in relation to the prospect of damage to buildings (ie in relation to building resilience, as distinct from risk to life)?
- How will future changes in the availability of insurance in New Zealand impact the management of risk?

Implementation and technical matters

The Review will consider to what extent the current system has been implemented and operationalised as intended.

This could include (but not be limited to) questions such as:

- Is the system consistent in the way it identifies and assesses buildings? For example, % NBS assessments, territorial authority processes and practices. Where inconsistencies or unintended consequences are identified, what contributing factors may have influenced these outcomes?
- Where have good outcomes or unintended consequences been seen (including across different owner groups), and what can be learned from these?
- Can data collection and monitoring practices be improved?

- Are there other opportunities to make remediation easier or more cost effective? For example, exploring options for public or private acquisition of earthquake-prone buildings, or considering whether more guidance could be provided, or whether an enabling or educative approach could be taken to remediation techniques used to strengthen earthquake-prone buildings.
- Are there more efficient ways to identify and remediate earthquake-prone buildings?
- Was the balance between national and territorial level implementation adequate?

Barriers to remediation, including finance and funding challenges

The Review will consider how barriers to remediation, including finance and funding factors, impact the management of seismic risk in existing buildings, and possible support or incentives to overcome barriers.

This could include (but not be limited to) questions such as:

- Are there different drivers and barriers for different types of building owners (eg large commercial, small business, community, residential, mixed use)? What services or mechanisms would better support compliance?
- What additional funding mechanisms might be made available to enable the strengthening or demolition and replacement of earthquake-prone buildings?
- Could any incentives be offered by government or territorial authorities that could assist owners to strengthen or demolish and replace earthquake-prone buildings? For example, through building consent requirements, educating about the benefits of retrofitting, tax settings or other mechanisms.
- What are the industry barriers to remediation and redevelopment? For example, building/engineering sector capacity, materials, consenting and availability of finance and insurance.

Regulatory responses

The Review will consider which buildings should be subject to regulatory requirements, based on an understanding of where market failure might occur if no regulation were in place, the impact that regulation has on private property owners and rural/small-town economies, and how this impact would be mitigated. The Review will also consider the balance between regulatory and non-regulatory controls, and interactions with other legislation.

This could include (but not be limited to) questions such as:

- What compliance and enforcement challenges exist under the current system and how could these be addressed? Do these challenges differ according to building type or region?
- How does the seismic risk regime interact with other legislation, for example, duties under the *Health Safety Work Act 2015*, natural hazard management, and existing powers in the *Building Act 2004* whereby a territorial authority can declare a building “dangerous” in other respects?
- Are there risks or opportunities in relation to heritage and other planning-related matters, collective property ownership, investment settings, and the roles and responsibilities of local government?
- How should regulatory requirements for existing buildings respond to evolving knowledge about seismic risk and building performance, given the importance of ensuring certainty for those planning and investing in the built environment?

- How should requirements for existing buildings relate to requirements for new buildings, if at all?
- Does decision-making to manage seismic risk sit most appropriately with local government, central government or a combination (for example, through inclusion in city or regional deals)?
- To what extent should environmental sustainability and other considerations be taken into account in regulatory settings? For example, considering trade-offs, such as waste and carbon impacts and loss of heritage and amenity value, between options to remediate or demolish and replace buildings.

Timeframes

The Review will consider whether the timeframes for identification and remediation of earthquake-prone buildings are equitable and proportionate to the level of risk posed.

This could include (but not be limited to) questions such as:

- What is the best method to determine timeframes afforded for remediation?
- To what extent should local or central government influence remediation works, in relation to buildings that are publicly and privately owned?
- What factors should influence decision-making about sequencing and prioritisation? In particular, how should risk be weighted in relation to likelihood of building failure, as compared with the seriousness of consequence of such failure?
- Are other provisions of the *Building Act 2004* influencing timely outcomes for earthquake-prone buildings? For example, change of use and alterations requirements.
- How should progress within regions and nationally be measured across time?

Notes on scope:

- The Review's recommendations will primarily relate to managing the risk associated with existing buildings, but findings and recommendations from the Review will inform (where appropriate) future work on the management of seismic risk in new buildings.
- Recommendations made by the Review will not necessarily be limited to the current scope of the *Building Act 2004* and related legislation and regulations. It is noted, however, that recommended responses outside the scope of such existing frameworks may not be possible to enact at the same time as any changes recommended to the *Building Act 2004*.
- The Review will not consider the management of risk posed by hazards that are not earthquakes, for example tsunamis.
- The Review will not consider wider building system settings, such as joint and several liability, that are being considered by other parts of the Building and Construction work programme.

REVIEW PROCESS

The Review will consider the questions in the section above and make recommendations to the Government about how best to address the issues raised.

The Government will then consider which of the Review's recommendations to accept and then how to respond in terms of legislation or regulation, including undertaking a detailed cost-benefit analysis of proposed reforms.

This overall process will have three key stages, of which this document concerns the first:

- **Stage 1 – Review:** Review of current state, resulting in findings and high-level recommendations.
 - **Deliverable:** A report to the Minister for Building and Construction, and Cabinet, outlining recommendations for regulatory reform and non-regulatory measures to address the findings of the Review.
 - **Decision point:** The Government will consider which of the Review’s recommendations to accept and progress to development of detail.
- **Stage 2 – Respond:** Detailed development and assessment of options to deliver on the recommendations accepted by the Government at Stage 1.
 - **Deliverables:** Detailed design and analysis of options, including full public consultation.
 - **Decision point:** Final policy decisions to implement change via legislative amendment and non-regulatory measures.
- **Stage 3 – Implement:** Legislative process for any legislative changes; implementation of non-legislative changes.
 - **Deliverables:** Drafting, introduction and passage of legislation to implement changes to the current earthquake-prone building system; commence implementation of non-regulatory measures.

ROLES AND ENGAGEMENT

The Review will be overseen by a Steering Group chaired by a person independent of the Ministry of Business, Innovation and Employment (MBIE). Work will be carried out by MBIE staff and through contracted research projects and technical experts where required.

External peer review will be used to provide assurance that technical details are robust and that review findings are impartial and balanced.

MBIE will consult with officials from the Ministry for Regulation, as the agency mandated to strengthen the regulatory management system and improve regulatory quality.

MBIE will also work with officials from relevant agencies, such as Ministry for the Environment, Ministry for Culture and Heritage, Ministry of Housing and Urban Development, Department of Internal Affairs, Earthquake Commission, Ministry of Education, Ministry of Health/Te Whatu Ora and Treasury.

Review Steering Group

Oversight of the review will be provided through a Steering Group, the purpose of which will be to provide oversight to ensure the review:

- effectively delivers the review as detailed in this document
- is impartial and balanced
- accurately and adequately reflects public/sector/building owners’ voices
- effectively draws on expert and sector/practitioner knowledge.

The Steering Group will be led by an independent Chair, and membership will include representatives from at least two relevant central government agencies, at least two local government agencies, and at least one independent technical practitioner and at least two representatives of owners of different types of earthquake-prone building.

Engagement

The Review will make use of information already gathered. It will also engage directly with those impacted by, and subject to, the earthquake-prone building system. It will use a variety of engagement methods, including reference groups and direct (face-to-face and online) engagement as appropriate. The Review will gather a diverse range of views from regulated parties and other stakeholders including but not limited to:

- earthquake-prone building owners, including but not limited to: multi-unit residential; commercial (eg office, industrial, retail and so on); heritage; Government-owned (central and local); regional/rural, including commercial and community buildings
- territorial authorities from a range of seismic risk areas, both urban and regional
- sector practitioners and technical experts
- market actors, such as insurers and lenders.
- communities and groups who may be affected by seismic risk and risk management strategies, including Māori and disabled people.

There will also be a formal consultation and submission process on the policy proposals developed following the Review (refer Stage 2 above).

PRINCIPLES

The Review will take a principles-based approach to examine the earthquake-prone building system and how it should operate. In considering regulatory interventions, it will draw from the principles in the Government Expectations for Good Regulatory Practice¹. Among other analytical tools, it will use the lens of microeconomics to examine market behaviour, identify market failures and determine the case for regulation.

REPORTING AND KEY MILESTONES

- The Review team will provide regular updates to the Minister for Building and Construction, as minister responsible for the earthquake-prone building system (and any other relevant ministers – to be determined).
- The Minister for Building and Construction will keep relevant ministerial colleagues apprised of progress and engage them on questions arising from the Review as appropriate.
- Key milestones for the Review are:
 - Initial findings on examination of the current state of the Earthquake Prone Building System (Q4 2024)
 - Summary of the options and assessment of potential future states, and a draft, high level outline of final report (Q1 2025).
 - Final report summarising findings and providing recommendations for changes to the Earthquake Prone Building system to manage life-safety risk in existing buildings in a workable, equitable and proportionate way (Q2 2025).
- At the end of the Review, the Minister for Building and Construction will provide the Final Report to Cabinet, alongside a Cabinet paper seeking decisions on its recommendations and next steps.
- The Review report will be published after it has been considered by Cabinet.

¹ <https://www.treasury.govt.nz/sites/default/files/2015-09/good-reg-practice.pdf>