

Leveraging the Health and Safety at Work Act (2015) for disaster risk reduction

PROJECT TEAM

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1.0 INTRODUCTION

There is a well-established tradition within New Zealand of effectively using legislation and policy to help manage our significant earthquake risk. Current legislation with provisions seeking to reduce exposure to or limit the impact of earthquakes includes the Resource Management Act 1991, the Building (Earthquake-prone Buildings) Amendment Act 2016 (changes to the Building Act 2004), and the Civil Defence and Emergency Management Act 2002. Although not directly intended as a lever to reduce disaster risk, the Health and Safety at Work Act 2015 also has potential to support disaster risk reduction (DRR) efforts.

Disaster risk reduction is the practice of reducing disaster risks and includes avoidance or prevention, mitigation actions to reduce impacts and/or vulnerabilities, and strategies to improve preparedness for any adverse effects. The HSWA is primarily relevant to the mitigation strand of DRR.

The key objective of the Health and Safety at Work Act 2015 (HSWA) is to give “workers and other persons the highest level of protection against harm to their health, safety, and welfare from work risks as is reasonably practicable”¹. The HSWA was enacted in response to the Pike River mining disaster when it was discovered that New Zealand’s health and safety law was not sufficiently robust to hold those in charge accountable for their actions, or lack thereof, in relation to workplace health and safety. This Act has been a radical change to our health and safety law. One of its main purposes is to make those responsible for workplaces more accountable for the health and safety of workers and other people using workspaces. It also establishes the key role of WorkSafe New Zealand (WorkSafe),¹ a government agency, to oversee compliance with the Act.

This project investigates what (if any) influence this new legislation has had on organisational DRR behaviours, examines what organisations are doing to stay safe in our seismically active environment, and what motivates, helps, or hinders organisations implementing earthquake risk reduction efforts.

The project has three main objectives:

1. To understand organisations’ obligations under the Health and Safety at Work Act 2015 and other related legislation,
2. To understand the actual actions taken by organisations to reduce earthquake impacts on their organisation and employees, and
3. To identify ways in which policy and legislation can be better leveraged to encourage behaviour change within organisations.

¹ WorkSafe New Zealand website <http://worksafe.govt.nz/laws-and-regulations> - Worksafe New Zealand was established under the WorkSafe New Zealand Act 2013, s 5 and is responsible for administering the HSWA. See also the HSWA s 3 which states the main purpose of the Act is “to provide a balanced framework to secure the health and safety of workers and workplaces...”

2.0 METHODOLOGY

2.1 Overview

This project was undertaken in the following sequential steps:

1. A review of the Health and Safety at Work Act 2015 in relation to earthquake hazards, and how it interplays with other legislation. In particular, its interplay with the Building (Earthquake-prone) Amendment Act 2016².
2. Interviews with eight senior company representatives from organisations of different sizes and industries, exploring earthquake risk reduction attitudes, what drives or informs their approach, and what barriers they face in reducing earthquake impacts.
3. An invitation to over 4000 organisations nationwide to participate in a survey exploring themes from the above interviews and the generalisability of the interview findings and how they varied across industry and organisation size. 179 useable responses were received.

2.2 Interview respondents

Organisations of varying sizes and industries from around New Zealand were contacted to take part in an interview. Out of the eight organisations that accepted the invitation there was an even spread between small and medium enterprises (SMEs) and large organisations, with all the organisations having locations within regions of high seismic activity (e.g. Canterbury and Wellington).

There was a noticeable difference between the size of the organisation and their motivation to be involved in this research. Larger organisations were open to sharing their earthquake risk reduction strategies, which were mainly led by health and safety managers or through cross-departmental senior management teams. Smaller organisations were keen to learn what they should be doing or if what they were doing was enough.

2.3 Survey respondents

Survey invitations were sent by physical mail to 4000 organisations with contact details purchased from a business database company. Invited participants represented the demographics of New Zealand businesses across size, geography, and sector. The project was also featured in media coverage (sample below –Figure 1), on social media channels including paid promotion and in industry association newsletters including National Emergency Management Agency (NEMA), AF8 Project, West Coast Lab, Tourism Industry Aotearoa, and New Zealand Institute of Safety Management. Despite inviting over 4000 organisations to take part, we received only 179 useable responses. We suspect that COVID-19 has increased survey fatigue amongst businesses. COVID-19 has created extra work and business stresses to manage as well as increasing the number of survey requests being received.

² *These changes have been made to the Building Act 2004, subpart 6A – special provisions for earthquake-prone buildings, ss 133AA to 133AY.*

Forces of nature

New research to help businesses increase seismic safety

More than 3,500 people were injured in the Canterbury earthquakes by masonry, bricks or other projectiles and researcher Dr Tracy Hatton says the 10th anniversary of the first earthquake in Darfield is a good opportunity to remind businesses to look at seismic hazards on their premises that are not related to the strength of the building itself.

Tracy and co-researchers Sophie Horstfall (both from Resilient Organisations) and Toni Collins (University of Canterbury) have been funded by the Earthquake Commission (EQC) to evaluate what safety measures different organisations have developed to reduce risks and find out whether seismic safety is a priority for companies.

"We are currently conducting one-to-one interviews with a variety of organisations of all sizes and are impressed with the level of engagement from organisations around earthquake risk," Tracy says.

"We want to know what they are doing, what motivates them and what more they need to do."

She says there is no clear picture yet of whether seismic safety is a priority for Kiwi companies, but says that results from the research will help those who feel they need to do more, by learning from the experiences of others.

EQC chief resilience and research officer, Dr Jo Horrocks, says that as many New Zealanders spend a lot of their time at work, reducing risk in workplaces is vital.

"We know that most businesses are making sure they are in sound premises from a structural engineering point of view, but we don't know how people are managing non-structural risks like ceiling tiles, light fittings, falling cabinets and heavy items like air conditioning units," she says.

"This research will give us a much better picture of where business are successfully reducing these other risks for their staff and customers."

The initial interviews have pinpointed what businesses are interested in, and a wider nationwide survey will now collect more data that will help businesses keep people safe on their premises.



Tracy says it is vital that as many companies as possible participate.

"Even if you have not taken any steps and feel you have little to contribute, the survey will provide an opportunity for you to identify areas where the business community may need more support to better prepare for an earthquake. It will also help build a picture of how well-prepared New Zealand is across the board."

The research will result in a best practice booklet that will be shared with all participants.

Tracy says the report will inform what earthquake risk reduction looks like in New

Zealand and what methods and resources are being used by organisations.

"The research will also tell us what is helping or getting in the way of organisations taking steps to reduce risks and where improvements can be made."

She says Cantabrians have learned the painful way about the dangers of hazards like falling furniture and service equipment installed in ceilings, so the 10th anniversary is a perfect time to capture those learnings and remind the rest of the country to get prepared.

The survey can be found here: www.surveymonkey.com/r/EQCOrgs.

Figure 1 - Canterbury Today Feb/March 2021 edition

58% of survey respondents were SMEs having fewer than 20 full-time equivalent employees (FTE). 42% of respondents had over 20 FTE employees. Larger organisations were overrepresented in the survey with 2020 StatsNZ data showing that only 3% of New Zealand organisation have over 20 FTEs.

Although survey respondents were spread across Australia and New Zealand Industry Codes (ANSIC), there was an over-representation in manufacturing; electricity, gas, water and waste services; professional, scientific and technical services; public administration and safety; education and training; health care and social assistance; and arts and recreation services. Underrepresented industries were agriculture, forestry, and fishing; rental, hiring, and real estate services; and administrative and support services. Geographically, Canterbury and Wellington regions were over-represented. We suspect that participation rates reflect how relevant the survey topic was perceived by some organisations, with those from higher seismic zones or with recent earthquake experience more likely to participate.

3.0 OUR FINDINGS

3.1 What are organisations obligations under the law?

The HSWA is the primary legislation that governs workplace health and safety in New Zealand. It establishes the role of a Person Conducting a Business or Undertaking (PCBU) who has a primary duty of care to provide a safe workplace³. This duty requires the PCBU to ensure as far as reasonably practicable the health and safety of workers while they are at work and the health and safety of other people in that workplace⁴. As part of their responsibilities, PCBUs have a duty to engage with workers about their health and safety by sharing relevant information in a timely manner; providing opportunities for workers to express their views and to contribute to any decision-making process regarding workplace risks. PCBUs who fail to comply with their duties under the HSWA can incur significant fines and the possibility of a term of imprisonment.

The HSWA requires all PCBUs to be cognisant of, and reduce or eliminate, health and safety risks not only within their workplaces but also regarding the building they work within. This obligation includes an awareness of the risks relating to how their building and its fixtures and fittings will perform in a seismic event.

While this project focuses on commercial landlords, it should be noted that residential landlords are also considered a PCBU under the law.

There can be more than one PCBU for a given building – for example when a commercial building is tenanted. Both the landlord and the tenant would be a PCBU and are responsible for the health and safety of those working in that building. When this is the case, the HSWA has important implications for all parties because it requires both PCBUs to work together to fulfil their primary duty of care by communicating, consulting, co-operating, and coordinating their activities.⁵ This includes ensuring emergency plans work and people are safe during emergencies. A PCBU cannot delegate their obligations to another.⁶

As the HSWA does not give specific details about the liability of PCBUs in relation to the seismic safety of buildings, WorkSafe released a policy clarification entitled “*Dealing with earthquake-related health and safety risks: information for PCBUs and building owners*”. This document covers key actions PCBUs should be undertaking to meet their obligations under the HSWA.

³ A PCBU may be an individual person or an organisation. When the PCBU is an organisation, the obligations are performed by ‘officers’. An officer is a person who occupies a specified position or who occupies a position that allows them to exercise significant influence over the management of the business or undertaking. This includes, for example, company directors and chief executives. Officers must exercise due diligence to ensure the PCBU meets its health and safety obligations.

⁴ Health and Safety at Work Act 2015, s36.

⁵ Health and Safety at Work Act 2015, s35.

⁶ Health and Safety at Work Act 2015, s31.

The important points from the policy clarification were:

1. If a PCBU is meeting the requirements of the Building Act 2004, then WorkSafe will not enforce to a higher standard.
2. If a PCBU is not meeting the requirements of the Building Act 2004 then it is the Local Council who should intervene and take any necessary action. If the PCBU is not meeting the requirements of the Building Act 2004 and someone is harmed, then the PCBU may be liable under the HSWA and WorkSafe may take action against them.
3. All PCBUs are expected to:
 - a. proactively manage risks arising from objects in and around buildings in the workplace on a regular and ongoing basis.
 - b. keep abreast of new or emerging information that is relevant to the building's performance in an earthquake.
 - c. prepare for an earthquake.
 - d. work with other PCBUs with overlapping duties (e.g. landlords and tenants).

The policy clarification outlines broad obligations on PCBUs to prepare their workplaces for an earthquake, as well as a small number of specific activities. These specific activities include undertaking earthquake drills, fixing and fastening of furniture and equipment, provision of survival kits, and gathering up-to-date staff contact information.

The policy clarification does not make it clear what a PCBU is obliged to do to keep 'up to date with new or emerging information about their building'. The HSWA suggests that a PCBU must be proactive in this area and seek out new information on anything that could relate to their building and its seismic risk. It is unclear whether this means a PCBU must seek regular expert assessments of the building to meet their statutory obligations or if this action only needs to be taken if there are concerns.

Even with WorkSafe's policy clarification on earthquake-related health and safety risks in the workplace, the interplay between the HSWA and the Building Act 2004 is unclear and leads to uncertainty regarding the exact liability of a PCBU if their building fails in an earthquake. Where a building has been identified by a Territorial Authority as "earthquake-prone", policy guidance states that the PCBU is required to act in accordance with their obligations under the Building Act 2004. A problem arises for buildings that are not classed as earthquake-prone under the legislation but may still pose a risk in a seismic event. In this situation, it is unclear what action a PCBU must take to meet their obligations under the HSWA. There is an ongoing obligation to identify potential risks posed by the building, including those posed by non-structural elements and fixtures and fittings. What this means in practice is unclear.

The HSWA places broad obligations on organisations. However, how WorkSafe or others will examine the liability of a PCBU, or officer should a worker suffer harm in a workplace in a seismic event is unclear. As a result, the HSWA may not currently be working as effectively as a tool to reduce earthquake risk in workplaces as it could.

Currently there is no case law regarding how the HSWA applies to natural hazard risks. The first major case will be WorkSafe's current case against multiple PCBUs over the management of health

and safety risks leading up to the 2019 Whakaari Island volcanic eruption, which resulted in the loss of 22 lives and serious injuries to a further 25. As the HSWA is modelled on the Work Health and Safety Act 2011 in Australia, New Zealand courts may look at how Australian courts have interpreted the legislation. Courts there have held that those responsible for health and safety at work must be active and diligent in obtaining information about the nature of the business, the risks, obtaining expert advice and ensuring the safety of employees. It is clear from our legal review that PCBUs under the HSWA are expected to prepare for an earthquake but there is uncertainty about what they are obliged to do to meet their legal responsibilities and these need to be clarified.

A full review of the HSWA and its implications for seismic safety can be found in Appendix 1.

3.2 How do organisations understand their obligations?

82% of survey respondents saw earthquakes as a risk for their organisations.

The majority of respondents understood that the HSWA is applicable to earthquake risks in the workplace. HSWA obligations and concern for staff safety and wellbeing were the top two motivators for organisations to manage their earthquake risk. Larger organisations are more motivated by legislation than smaller organisations. Top prompts to take action identified by respondents, were the 2011 Christchurch earthquake and the enactment of the HSWA.

3.2.1 PCBU responsibility for earthquake risk

Under the HSWA, PCBUs have a primary duty of care to provide a safe place of work as far as reasonably practicable. Given the HSWA requirements, it was expected that all organisations surveyed would allocate senior leadership as holders of earthquake risk responsibility within their organisation. However, 37% of respondents suggested earthquake risk reduction was the responsibility of others within the organisation. (Figure 2).

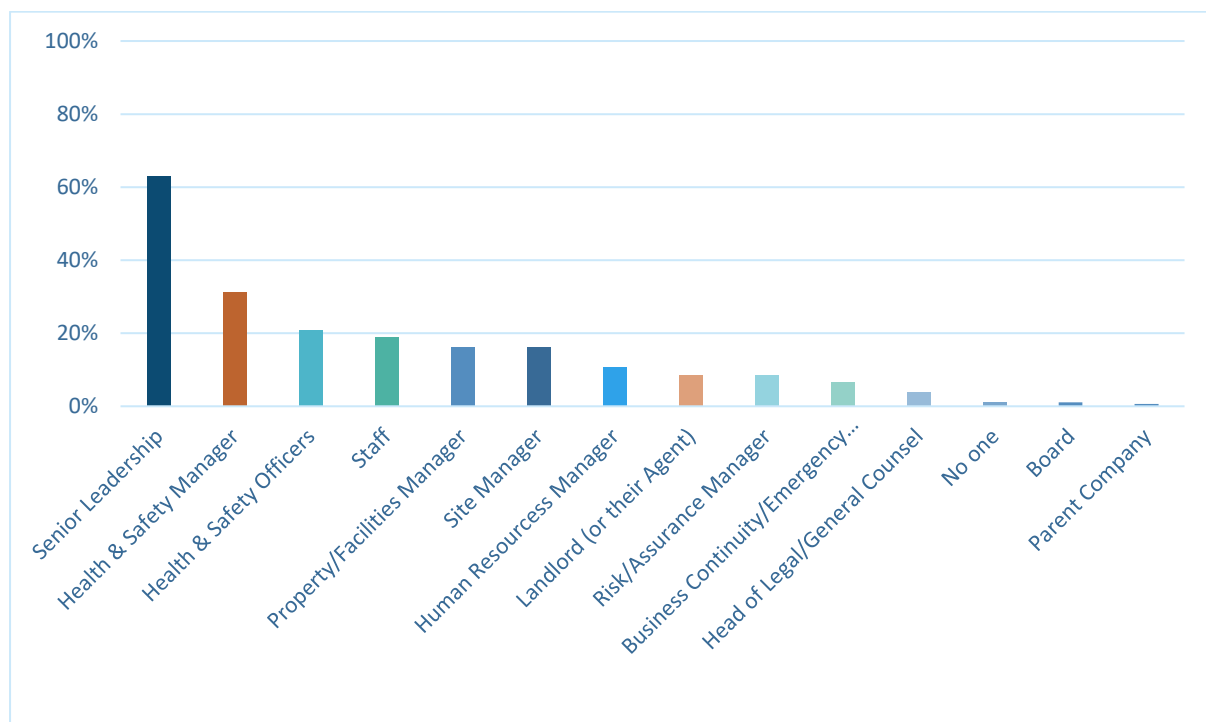


Figure 2 - Earthquake risk responsibility in organisations (multiple answers allowed)

Of the 37% of respondents who do not see senior leadership holding earthquake risk responsibility, 10% were senior leaders, 37% middle management and 30% staff. The HSWA states that PCBUs have a duty to engage with those who work in the workplace and should be communicating their involvement and mitigation of earthquake risk within their organisation. Although PCBUs may delegate their education responsibilities, we would still expect middle management and staff respondents to be aware of senior leadership responsibility. PCBUs cannot transfer or opt-out of their obligations.

The requirement for landlords and tenants to work together to manage risks is not well understood by survey respondents.

Over half of the survey respondents leased their premises but only 16% of them believe their landlord has an earthquake risk responsibility. The HSWA is clear that a building may have more than one PCBU. A commercial landlord and a tenant business owner are both PCBUs with a responsibility to manage the health and safety of those working in their building.

On a positive note, only 1% of organisations surveyed indicated that no one in their organisation was responsible for earthquake risk.

3.2.2 Keeping up to date with new or emerging information

The WorkSafe policy clarification requires PCBUs to keep up to date with new or emerging information to ensure that their workplace is prepared to deal with an earthquake. This includes information regarding their building. 65% of respondents indicated they use WorkSafe to find information to help them understand how to reduce earthquake risk. This is followed by EQC (57%), NEMA and CDEM websites (55%), engineers and other professionals (44%) and business.govt (40%) (Figure 3).

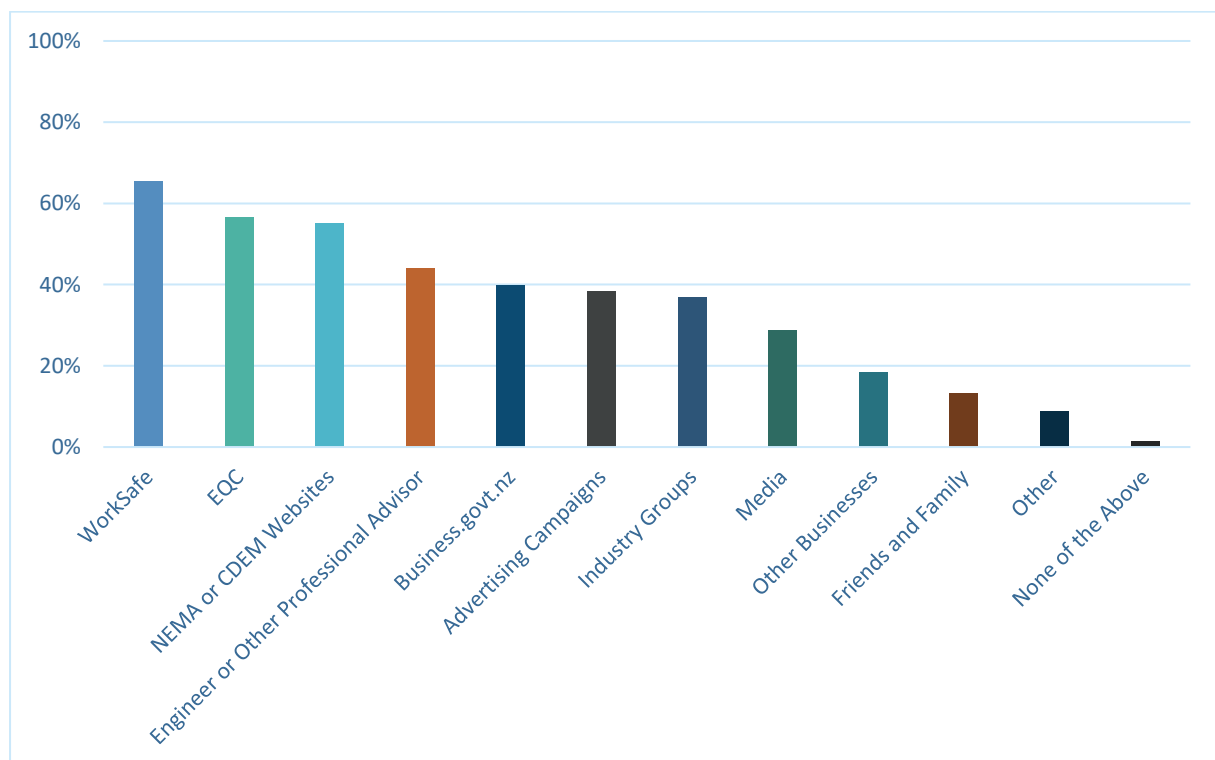


Figure 3 - Information sources used by survey participants to help understand how to reduce earthquake risk (more than one answer allowed)

3.3 What do organisations actually do to reduce earthquake risk?

There is a multitude of actions that organisations can take to reduce risks from seismic events or manage the impacts of these. Many of these actions are beneficial for multiple hazards. Survey respondents indicated they undertake a variety of earthquake risk reduction measures, with only 1% of the survey respondents taking no risk reduction actions (Figure 4).

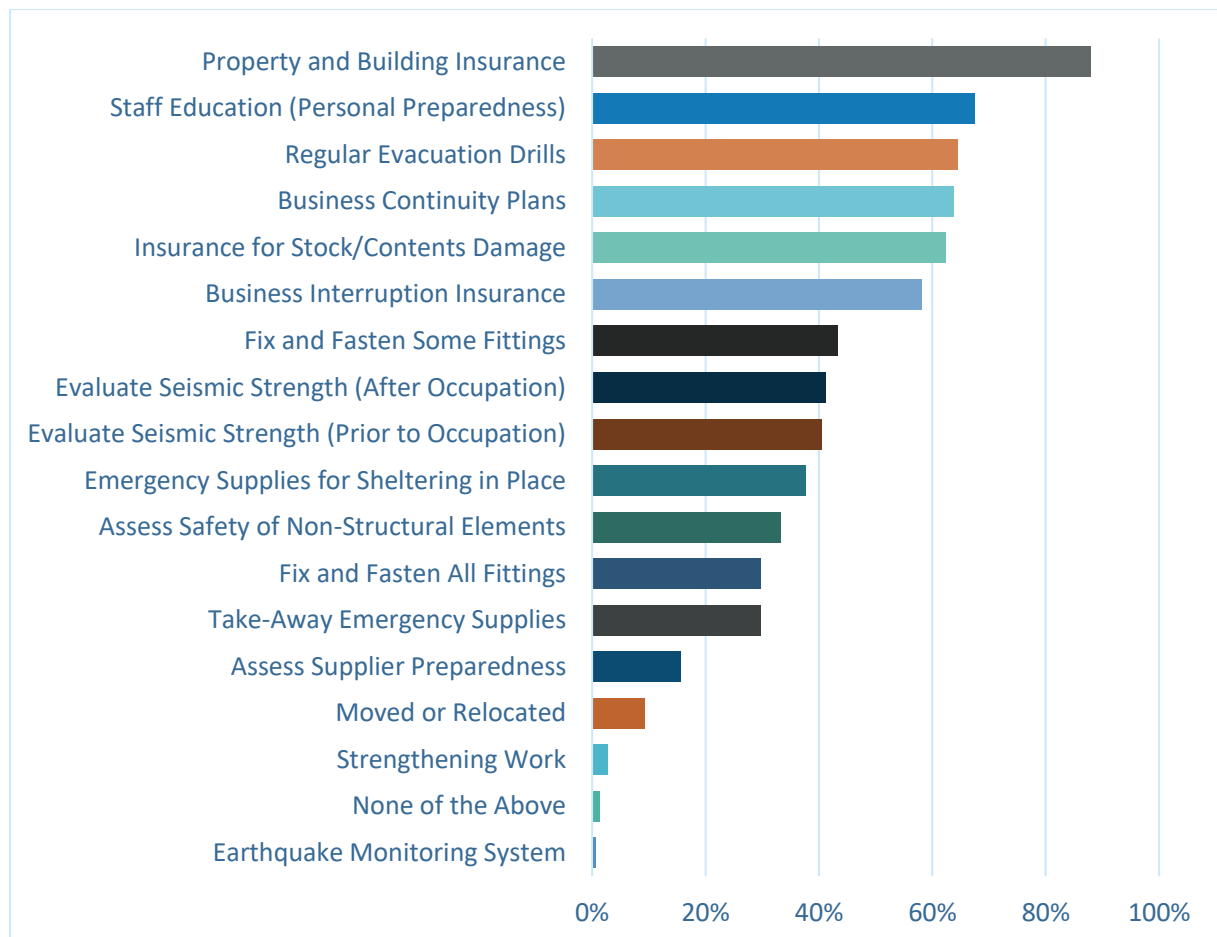


Figure 4 - Earthquake risk reduction/transfer activities undertaken by organisations (multiple answers allowed)

3.3.1 Insurance

Insurance remains a key element in organisations' risk transfer strategies.

88% of organisations surveyed have property and building insurance, 62% has stock and contents damage and 58% business interruption insurance. There was no statistically significant difference in insurance levels across organisation size.

3.3.2 Personal preparedness

67% of organisations surveyed indicated they make some effort to educate staff on earthquake preparation. This is a positive sign as personal preparedness needs to become a New Zealand norm, particularly in high seismic zones.

3.3.3 Drills

65% of survey respondents undertake regular evacuation drills as part of their risk reduction activities, with 89% of businesses with 20 or more full-time employees (FTE) undertaking evacuations drills compared to 44% of SMEs.

3.3.4 Business continuity planning

64% of respondents indicated their organisation has business continuity plans to assist with the impacts of any event. Larger organisations (89%) were more likely to have business continuity plans than smaller organisations (46%)., This indicates that there is still work required to ensure that smaller organisations engage with the increasingly wide range of freely available business continuity resources targeted at SMEs.

3.3.5 Fixing and fastening

Just under three quarters (73%) of respondents undertake some kind of fix and fastening activity of moveable items (e.g. bookcases, stock). Of those organisations, 30% had fastened all, while 43% indicated 'some'. Understandably, the prevalence of fix and fastening activity was highest in high seismic zones (such as Wellington and Christchurch) with 80% of organisations undertaking this risk reduction activity, compared to only 52% in lower seismic risk zones. Importantly, 27% of respondents had not undertaken this simple and cheap activity to reduce risk of harm.

3.3.6 Seismic strength and non-structural elements

41% of organisations evaluated seismic strength prior to or after occupation for one or all of their buildings. Assessment of the safety of non-structural elements was undertaken by 33% of respondents. Overall, larger organisations were statistically significantly more likely to undertake seismic strength evaluations of their buildings after occupation and assess non-structural elements of their building compared to smaller organisations. Those who owned and occupied their premises were more likely to assess the safety of non-structural elements (42%) compared to those who lease from others (22%).

3.3.7 Survival kits

Only 38% of organisations indicated that they had emergency supplies for sheltering in place and 30% had take-away emergency supplies. Wellington had a higher percentage of organisations providing emergency supplies for sheltering in place (60%) and evacuating (56%) compared to those in Christchurch who only had 30% (sheltering in place) and 22% (take-away). We suspect the geography of Wellington and likely scale of damage in an earthquake event may be a factor in this. Organisations in Auckland were more likely to have emergency supplies for sheltering in place (50%) than for evacuation (15%).

3.3.8 Summary

WorkSafe's policy clarification clearly outlines an expectation that risk reduction activities such as earthquake drills, fixing and fastening, and survival kits be undertaken. However, these results indicate there is still work required to improve engagement with these activities.

3.4 Organisations' earthquake impact concerns

For the organisations surveyed, their greatest concern around the impacts of an earthquake was the health and safety risk to employees and customers. Large businesses were statistically significantly more concerned with these risks than SMEs (Figure 5). Impact on business activities, for example, customers, loss of utilities and business confidence are also of significant concern to organisations.

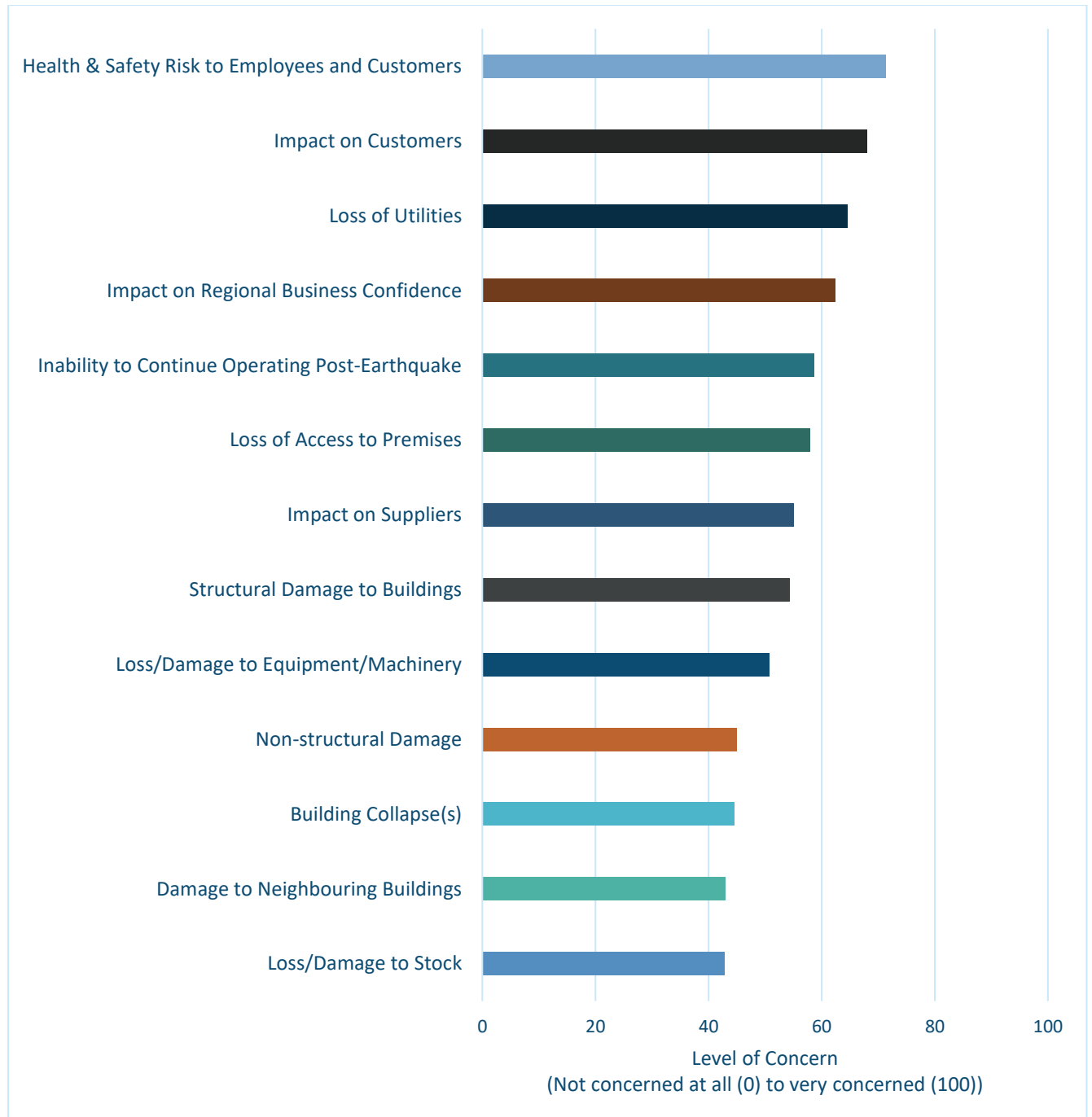


Figure 5 – Organisations' impact concerns following an earthquake.

3.5 Acceptable impacts

During a severe earthquake, survey respondents on average indicated they are accepting of up to three months of disruption as buildings are repaired. However, fatalities, injuries and building collapse are totally unacceptable impacts for survey respondents (Figure 6).

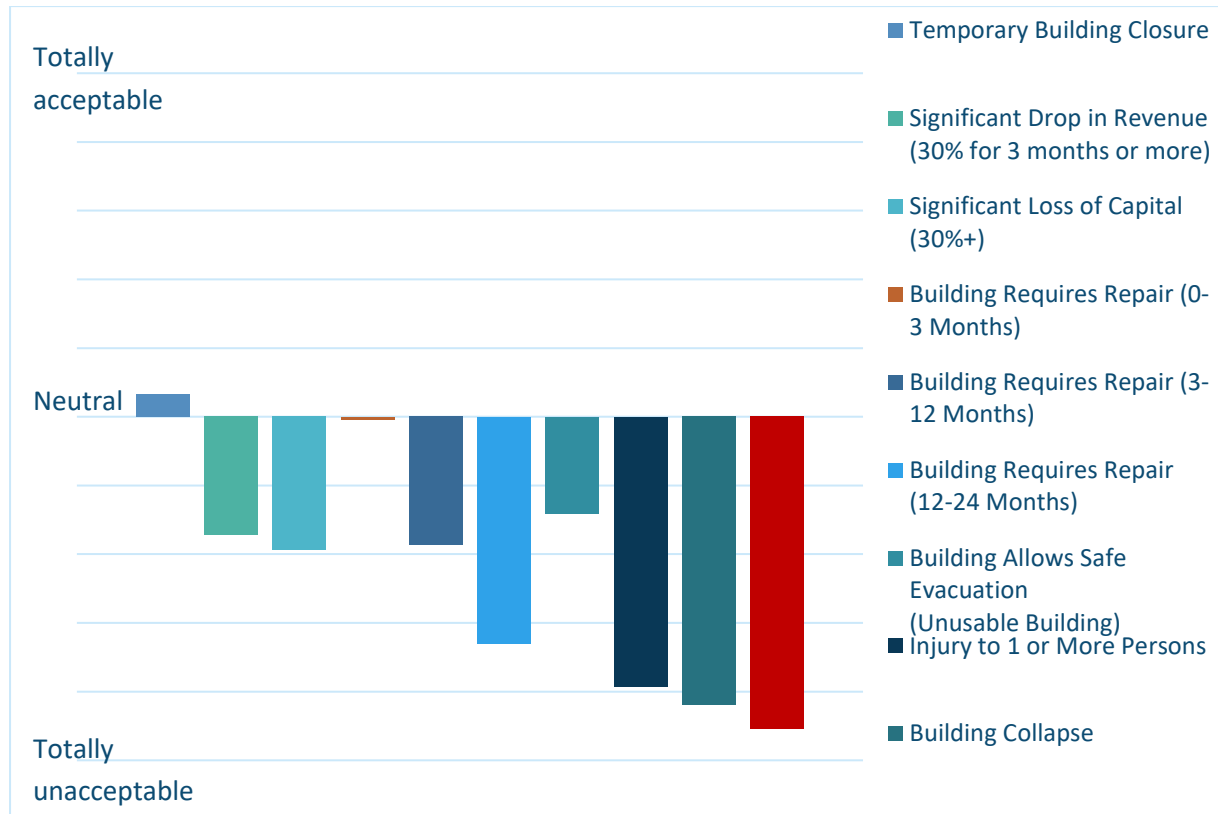


Figure 6 - Acceptability of impacts on organisations following a severe earthquake

3.6 Challenges to improved earthquake risk reduction

Cost and disruption to operations were the two biggest challenges organisations reported when trying to implement seismic risk reduction measures. Capacity to carry out activities, other priorities, access to relevant and usable information, and working with building owners/landlords were also seen as minor challenges (Table 1).

Table 1 - Challenges organisations face implementing earthquake risk reduction methods

	Not a challenge	Minor challenge	Moderate challenge	Significant challenge	N/A	Don't know
Cost	17%	29%	29%	18%	4%	3%
Disruption to operations (from risk reduction activities)	26%	31%	16%	11%	11%	5%
Working with building owners/landlords	37%	19%	16%	7%	15%	6%
Capacity to carry out risk reduction activities	33%	35%	20%	6%	1%	5%
Access to relevant and usable information	38%	34%	17%	5%	3%	3%
Support from franchisor or parent company	20%	4%	5%	4%	62%	5%
Interest from employees	41%	29%	16%	3%	7%	4%
Not sure where to start/don't know what to do	36%	24%	10%	3%	21%	6%
Support from your organisation's owners/managers	58%	13%	9%	3%	12%	5%
Support from head office	39%	6%	7%	3%	41%	4%
Other priorities	26%	22%	16%	3%	23%	10%

The interview and survey results highlighted the need for clearer direction and help for SMEs. The larger organisations interviewed understood and actioned the HSWA within the organisation. Meanwhile, smaller organisations interviewed wanted to increase their knowledge in reducing earthquake risk and need help getting started. This trend was supported by survey results, with SMEs indicating that 'knowing where to start' was statistically significantly more challenging than for larger organisations. SMEs also included a greater number of comments in free text responses asking for more accessible and relevant information on what they should be doing.

A handful of survey respondents also noted challenges engaging or working with government agencies. Respondents with ministry owned buildings found challenges in the lack of engagement from ministry owners regarding earthquake risk reduction, while other public sector departments noted the lack of evacuation drills in some government sectors.

3.7 Where organisations want help

Interviewees and survey respondents were asked a free text question on ‘*What would help you to improve your organisation’s earthquake preparedness*’. The following table provides an overview of responses.

<p>Information, alerts, and reminders</p>	<p>The most common responses were for relevant and easy to find information regarding:</p> <ul style="list-style-type: none"> • plans or template for organisations to get started • one-pager on what organisations should be doing • learnings from Christchurch earthquakes (especially business continuity) • changes to regulation, preparedness, and hazard information • earthquake appropriate furniture and storage solutions for commercial businesses • guidelines for SMEs • guidance appropriate to specific industries (or help and support from industry groups) • how and where to get professional advice • history of earthquakes in less earthquake focussed areas (Auckland) • reminders for when drills should take place • regular newsletter • ongoing awareness programme by central government.
<p>Funding</p>	<ul style="list-style-type: none"> • Government grants, funding and real cost compensation were mentioned by respondents, in particular for cheaper go bags and shelter in place supplies. • Public sector and government contractor respondents noted a need for guaranteed financial support (especially in areas of social services to provide support during recovery) and equipment (e.g. generators).
<p>Infrastructure</p>	<ul style="list-style-type: none"> • Respondents noted a need for better transport infrastructure and more knowledge of how the power supply and road networks would be impacted in a large event. This was mentioned by multiple respondents from the Nelson region.
<p>Innovation</p>	<ul style="list-style-type: none"> • The need for the government to engage with seismic solution providers to provide more solutions for NZ organisations.
<p>Utilising businesses for earthquake response</p>	<ul style="list-style-type: none"> • A small number of organisations mentioned that their services could be used in an emergency but have not been asked to be involved in a coordinated response effort. • Increasing the opportunities of non-government employees to get external training (e.g. emergency management training) so their staff can assist in an earthquake event.

Organisations that mentioned they were already prepared and needed no additional help, highlighted that they had undertaken building strengthening, taken out insurance, experienced an earthquake event and learnt from that experience, or had/are currently working in an industry that deals with earthquake risk regularly (e.g. engineering, earthquake rebuilds). The majority of these comments came from large organisations.

3.8 COVID-19 and earthquakes

A common comment made by survey respondents in the open answer questions was the role COVID-19 has played in helping them improve their business continuity plans, thus making them more prepared for any hazards including an earthquake. Throughout the COVID-19 pandemic the desire from businesses to comply and do the right thing was generally evident, but media stories suggested that businesses were not always clear on what the right thing was. This is reflected in our survey findings where respondents want to do more to protect staff and customers but would like more information and guidance from the government on how to do this. We note that there has been huge progress in providing readily available resources for crisis preparedness from central and local government agencies, however survey findings suggest these are either not well known or are not entirely hitting the mark for many organisations.

4.0 LEVERAGING POLICY AND LEGISLATION TO ENCOURAGE BEHAVIOUR CHANGE WITHIN ORGANISATIONS

It is evident from this study that the HSWA and New Zealand businesses wanting to prevent harm to staff and customers are aligned. This creates a clear driver for organisations to understand and reduce earthquake risks.

4.1 What more needs to be done to improve organisational DRR action

For the most part, the survey results are encouraging. New Zealand organisations are undertaking a wide range of effective earthquake risk reduction activities. In particular, larger organisations with more resources are implementing a range of earthquake risk reduction activities to meet legislative requirements. However, we would note that there is still significant room for improvement for all organisations to follow, at least, the guidance given by WorkSafe in “*Dealing with earthquake-related health and safety risks: information for PCBUs and building owners*”. This document suggests the minimum requirements include assessments and regular checks of the building and building parts, fixing and fastening, discussions with other PCBUs (particularly between landlords and business owner tenants), earthquake drills, survival kits, and keeping up to date contact information. In addition, other actions businesses could be undertaken including staff education (personal preparedness), insurance (e.g. property and building, stock and contents damage, business interruption), business continuity planning, assessing supplier preparedness and earthquake monitoring systems,

This highlights a potential need for targeted information including:

- Fixing and fastening in a commercial setting. For example, EQC has a range of information at [Be Prepared | EQC | Fix. Fasten. Don't Forget](#) for homebuyers, tenants, and landlords but no specific information for commercial businesses. 57% of respondents reported using EQC as an information source and this presents an opportunity for education.
- Preparation for shelter in place and go bags for organisations in locations such as Wellington.
- Undertaking earthquake drills.
- Clarification about who is the PCBU in the organisation and the role they play in earthquake risk reduction responsibility.
- Requirements of PCBUs in commercial landlord and tenant agreements to work together and be involved in earthquake risk reduction.
- Expectations around the level of assessment building owners and tenants should undertake regarding seismic strength or non-structural elements of their building.

The largest request by respondents for government help was for relevant and easy to find information regarding changes to regulation, earthquake preparedness, and hazard information (including for areas of lower seismic risk, e.g. Auckland), guidance appropriate for specific industries

and support from industry groups, and learnings from the Christchurch earthquakes. Organisations want simple and accessible plans, templates and/or one-page checklists to help them get started, and to ensure they are undertaking everything they should be doing to reduce earthquake risks. Reminders for when drills should take place, regular newsletters, and ongoing awareness programmes were also key resources organisations would like to be able to access. There is an opportunity to utilise the already well-used information sources on WorkSafe, EQC and CDEM websites and produce targeted information for organisations (Refer to Appendix 3: A proposed earthquake preparedness handout for organisations).

While survey results supported the role of the HSWA as a driver of DRR behaviour in larger organisations, the results show that there is a need for support and guidance to enhance earthquake preparedness in SMEs. Specific guidance for SMEs outlining their obligations and requirements to reduce earthquake risk in the workplace would help to improve their earthquake preparedness. It is also important to note that most SMEs are tenants and may not understand the important role their landlord plays in providing critical information on how their building might perform in an earthquake. Providing SMEs with specific guidance on their role in this relationship will assist them in working together with their landlords as required by the HSWA.

5.0 CONCLUSION

This research identifies a key role the HSWA has in reducing disaster risk in New Zealand, in particular in motivating organisations to reduce health and safety risks of their employees and customers during an earthquake. While the majority of organisations are prompted and motivated by the HSWA, their ability to enact risk reduction measures is impacted by challenges such as cost, disruption to operations and the capacity to carry out risk reduction activities. Currently the HSWA is supporting earthquake risk reduction efforts, but it could be further leveraged by central agencies to reduce earthquake impacts in New Zealand organisations. The non-prescriptive nature of the HSWA is an enabler of outcomes (rather than compliance), but does need to be supported by information that helps organisations who generally wish to do ‘the right thing’

Our key recommendations are:

- A need for more relevant and easier to find information that outlines the obligations an organisation has to reduce earthquake risks and the steps organisations can take to achieve this. A suggested earthquake preparedness handout has been developed as a potential solution in Appendix 3.
- A need for education and guidance where there are PCBUS with overlapping duties. Although clearly stated in WorkSafe’s policy clarification, the understanding of the role of a PCBU in earthquake risk responsibility was lacking among surveyed organisations, particularly in those that leased their premises. Communication between landlords and their tenants is a vital obligation in the HSWA (and associated policy clarification). Clearer information regarding this subject is needed by both parties.

Limitations

Due to the poor survey response rate, we cannot infer generalisability of our survey findings across New Zealand. There is a likely bias in our results towards those organisations who are already thinking about or are highly conscious of the need to mitigate earthquake risks within their organisations.

APPENDIX 1: REVIEW OF THE LAW

EQC Biennial Contestable Grants Programme 2020

UNDERSTANDING ORGANISATIONS' PERCEPTIONS OF THEIR OBLIGATIONS UNDER THE HEALTH AND SAFETY AT WORK ACT 2015 AND COMPANIES ACT 1993 IN RELATION TO NATURAL HAZARDS

Legal Report

ORGANISATIONS' LEGAL OBLIGATIONS UNDER THE HEALTH AND SAFETY AT WORK ACT 2015 IN RELATION TO THEIR BUILDINGS AND WORKPLACES IN PREPARATION FOR A SEISMIC EVENT

*Dr Toni Collins

I Introduction

The Health and Safety at Work Act 2015 (HSWA) is the primary piece of legislation that governs workplace health and safety in New Zealand. It was enacted in response to the Pike River mining disaster during which it was discovered that New Zealand's health and safety law was not sufficiently robust to hold those in charge accountable for their actions or lack thereof, in relation to workplace health and safety. The new Act imposes duties and obligations on organisations to provide a safe working environment and this includes ensuring buildings in which the work is carried out are also safe.

The Building Act 2004 governs the regulation of building work in New Zealand. One of its purposes is to set performance standards for buildings to ensure those who use them can do so safely and without endangering their health.¹ It sets out a Building Code which all new building work must adhere to and against which older buildings are assessed in terms of their seismic vulnerability. It sets out earthquake performance requirements for buildings including for those that are earthquake-prone.

The two pieces of legislation are designed, in their own ways, to increase safety for building users. The purpose of this report is to examine the interplay between them to determine what it is that organisations should be doing to meet their obligations in terms of their buildings under both to avoid potential liability should there be a seismic event.

II Health and Safety at Work Act 2015

A The purpose of the legislation

The HSWA has been a radical change to New Zealand's health and safety laws in that one of its main purposes is to make those responsible for workplaces more accountable. It has established the role of a PCBU – “a person conducting a business or undertaking”,² who has the primary duty of care for the health and safety of those in the place of work. If a PCBU is a company, a partnership, a body corporate or an unincorporated body, the Act requires an officer³ of the PCBU to act to ensure the PCBU complies with its health and safety duties and obligations.⁴ An officer may be any person who exercises significant influence over the management of the business or undertaking. For the purposes of this report the use of

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¹ Building Act 2004, s 3.

² Health and Safety at Work Act 2015, s 17 defines a PCBU.

³ Health and Safety at Work Act 2015, s 18 defines an officer.

⁴ Health and Safety at Work Act 2015, s 44.

the acronym PCBU refers to PCBUs and the officers who have the duties and obligations for health and safety at work as set out in the legislation. The significance of this change is that it is a person who will be liable for failing to comply with their duties under the Act to ensure, as far as is reasonably practicable, the health and safety of workers and others in the work place.

The PCBU's primary duty of care for the health and safety of those in the place of work requires the PCBU to ensure as far as *reasonably practicable*:

- the health and safety of workers while they are at work;⁵ and
- the health and safety of other people is not put at risk from work carried out as part of the conduct of the business.⁶
- the provision and maintenance of a work environment that is without risks to health and safety.⁷

The term “reasonably practicable” is defined in the Act as:⁸

...that which is or was, at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters including –

- (a) the likelihood of the hazard or the risk concerned occurring; and
- (b) the degree of harm that might result from the hazard or risk; and
- (c) what the person concerned knows, or ought reasonably to know, about
 - a. the hazard or risk; and
 - b. ways of eliminating or minimising the risk; and
- (d) the availability and suitability of ways to eliminate or minimise the risk; and
- (e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

As part of their responsibilities for providing a safe place of work, PCBUs have a duty to engage with those who work in the workplace and consider their views. They are required to share relevant information in a timely manner (including engineering reports); provide opportunities for workers to express their views and provide opportunities for workers to contribute to any decision-making process regarding any risks.

To ensure workers' health and safety a PCBU has a duty to identify and manage risks in the workplace.⁹

a [PCBU] who manages or controls a workplace must ensure, so far as is reasonably practicable, that the workplace, the means of entering and exiting the workplace, and anything arising from the workplace, are without risks to the health and safety of any person.

This duty extends to the buildings in which the work takes place.¹⁰

The HSWA has established a government agency WorkSafe New Zealand (WorkSafe),¹¹ to oversee compliance with the Act. If it finds a PCBU has failed to comply with their duties serious consequences follow. If convicted of being reckless as to the risk to an individual of death or serious injury or serious illness without reasonable excuse, a PCBU is liable to a term of imprisonment not exceeding five years or a fine of up to \$600,000 or both.¹² If a PCBU is convicted for failing to comply with the duty which exposes an individual to risk of death, serious injury or serious illness, he, she or it is liable for a fine of up to

⁵ Health and Safety at Work Act 2015, s 36(1)(a).

⁶ Health and Safety at Work Act 2015, s 36(2).

⁷ Health and Safety at Work Act 2015, s 36(3)(a).

⁸ Health and Safety at Work Act 2015, s 22.

⁹ Health and Safety at Work Act 2015, s 37.

¹⁰ WorkSafe “Information for PCBUs and Building Owners” (June 2018) www.worksafe.govt.nz.

¹¹ WorkSafe New Zealand set up under the WorkSafe New Zealand Act 2013, s 5.

¹² Section 47.

\$300,000.¹³ A PCBU can also be liable for just a failure to comply with the duty and can be fined up to \$500,000.¹⁴

The HSWA is modelled on the Work Health and Safety Act 2011 in Australia. Courts there have held that those responsible for health and safety at work must be active and diligent in obtaining information about the nature of the business and the risks, obtaining expert advice and ensuring the safety of employees. As the HSWA has only been in force for nearly five years¹⁵ at the time of writing, there is little case law on it in New Zealand. However, the courts here will benefit from looking at how Australian courts have dealt with issues arising under its similar legislation.

B Implications for commercial landlords and tenants

The HSWA has important implications for commercial landlords and tenants because both landlords and tenants fall within the definition of a PCBU. Landlords are likely to be conducting a business or undertaking by leasing out the building and tenants are likely to be business owners and therefore in the same category. Therefore, landlords and tenants will both be PCBUs for the same building, which means they are each responsible for the health and safety of those working there.¹⁶ As a PCBU cannot delegate its responsibilities to another PCBU,¹⁷ WorkSafe requires those with overlapping duties to work together to fulfil their primary duty of care by communicating, consulting, co-operating and co-ordinating their activities to meet health and safety responsibilities.¹⁸

The HSWA requires PCBUs to be cognisant of, and reduce or eliminate, health and safety risks in relation to their workplaces. This obligation includes being cognisant of the risks relating to how the building will perform in a seismic event. The HSWA does not give specific details about liability in these circumstances and this led to WorkSafe releasing a policy clarification about earthquake-related health and safety risks in workplaces and when it is likely to intervene.¹⁹ The important points to take from this are:

1. If a PCBU is meeting the requirements of the Building Act then WorkSafe will not enforce to a higher standard.
2. If a PCBU is not meeting the requirements of the Building Act 2004 then it is the local council's responsibility to intervene and take any necessary action. If the PCBU is not meeting the requirements of the Building Act 2004 and someone is harmed, then the PCBU may be liable under the HSWA and WorkSafe may take action against that person.
3. PCBUs are expected to:
 - proactively manage risks arising from objects in and around buildings in the workplace on a regular and ongoing basis;
 - keep abreast of new or emerging information that is relevant to the building's performance in an earthquake;
 - ensure the workplace is prepared for an earthquake.

Each of these matters can be examined individually.

1. Meeting the requirements of the Building Act 2004

¹³ Section 48.

¹⁴ Section 49.

¹⁵ Health and Safety at Work Act 2015, s 2; the HSWA 2015 came into force on 4 April 2016.

¹⁶ Health and Safety at Work Act 2015, s 33. Others who may be working in or using the building would include members of the public and contractors.

¹⁷ Health and Safety at Work Act 2015, s 31.

¹⁸ Health and Safety at Work Act 2015, s 35; also see <<https://i.stuff.co.nz/national/nz-earthquake/87304877/john-goddard-confusion-and-lack-of-clarity-around-assessing-quake-damaged-buildings>>

¹⁹ WorkSafe "Information for PCBUs and Building Owners: Dealing with earthquake-related health and safety risks" (June 2018); can be accessed at <<https://worksafe.govt.nz/laws-and-regulations/operational-policy-framework/operational-policies/dealing-with-earthquake-related/>>

The Building Act 2004 governs building work, building practitioners and performance standards for new and existing buildings in New Zealand. Its main purpose is to ensure buildings are safe to use.²⁰ To achieve this purpose the Act sets out a Building Code²¹ to “prescribe the functional requirements for buildings and the performance criteria that they must comply with in their intended use”.²² All new building work must comply with this code,²³ which is found in the Building Regulations 1992. Another purpose of the Building Act 2004 is to seek accountability from those who have responsibilities for ensuring building work complies with the Building Code.²⁴ The Act is administered by the Ministry of Business, Innovation and Employment (MBIE) and regulated by territorial authorities.

All PCBUs are expected to ensure their buildings, as workplaces, meet the earthquake performance requirements of the Building Act 2004.²⁵ To meet this obligation, PCBUs may need to have their building assessed. MBIE provides information to building owners (not tenants as it is not concerned with PCBU obligations) about when they should obtain a building assessment by a qualified professional.²⁶

(a) A significant earthquake or natural hazard occurs

If a major earthquake or other natural hazard occurs that could have affected the building, the building owner is responsible for ensuring the building is structurally sound and therefore safe to occupy.²⁷

(b) Concern about building performance in an earthquake

Building owners have general responsibilities for their buildings in relation to how they might perform in an earthquake. If a building owner is concerned, they should seek professional engineering advice and prepare a plan to manage and mitigate any risks. It is clear that the government expects building owners take on this responsibility and not wait for the council to act even though it is the council’s responsibility to identify earthquake-prone buildings.²⁸

In some situations, a building owner may be required to undertake a structural upgrade of the building. If there is going to be a change in the building’s use, then this change must be notified to the territorial authority.²⁹ The territorial authority must be satisfied that the new use will mean the building will still comply with the Building Code in relation to inter alia structural performance.³⁰

If a building owner plans to alter an existing building then certain requirements must be met.³¹ First the building must continue to comply with the Building Code, second, it must comply ‘as nearly as is reasonably practicable’ (ANARP) with current Building Code requirements for the means to escape from a fire and

²⁰ Building Act 2004, s 3.

²¹ Building Regulations 1992, Schedule 1.

²² Building Act 2004, s 16.

²³ Building Act 2004, s 17.

²⁴ Building Act 2004, s 3.

²⁵ WorkSafe “Information for PCBUs and Building Owners: Dealing with earthquake-related health and safety risks” (June 2018); can be accessed at <<https://worksafe.govt.nz/laws-and-regulations/operational-policy-framework/operational-policies/dealing-with-earthquake-related/>> at 1.

²⁶ General Information on Building Safety in Earthquakes (MBIE, 28 February 2017) at <https://www.building.govt.nz/managing-buildings/building-safety-in-earthquakes/#jumpto-everyday-building-owner-responsibilities>. A qualified professional is not defined but is likely to be a structural engineer or similar who is able to give professional advice as to the structural soundness of the building.

²⁷ In the event of an emergency, new provisions introduced to the Building Act 2004 by the Building Amendment Act 2019, provide that areas can be designated for emergency management of the buildings located within them. Under these provisions a responsible person has powers to remove or reduce risks associated with buildings in these areas for, among other things, the protection of human life and safety.

²⁸ General Information on Building Safety in Earthquakes (MBIE, 28 February 2017) at <https://www.building.govt.nz/managing-buildings/building-safety-in-earthquakes/#jumpto-everyday-building-owner-responsibilities>; See discussion relating to earthquake-prone buildings below.

²⁹ Building Act 2004, s 114.

³⁰ Building Act 2004, s 115.

³¹ Building Act 2004, s 112.

for access facilities for persons with disabilities. Finally, if an earthquake-prone building³² is to have a substantial alteration,³³ the building owner must demonstrate that the proposed alteration includes the required seismic work so that it is no longer earthquake-prone.³⁴

Building owners must also be satisfied as to the risks related to non-structural elements of their buildings in an earthquake.³⁵ Non-structural elements include ducting, pipework and suspended ceilings. Tenants and occupiers should also take steps to secure building contents from the effects of an earthquake.³⁶

2. Earthquake-prone buildings under the Building Act 2004

Owners of earthquake-prone buildings (EPBs) have additional responsibilities to complete seismic work on their buildings in accordance with the timeframes set out in the Building Act 2004. EPBs are defined in the Act:³⁷

133AB Meaning of earthquake-prone building

- (1) A building or a part of a building is **earthquake prone** if, having regard to the condition of the building or part and to the ground on which the building is built, and because of the construction of the building or part –
 - a. The building or part will have its ultimate capacity exceeded in a moderate earthquake; and
 - b. If the building or part were to collapse, the collapse would be likely to cause –
 - i. Injury or death to persons in or near the building or on any other property; or
 - ii. Damage to any other property.
- (2) Whether a building or a part of a building is earthquake prone is determined by the territorial authority in whose district the building is situated: see section 133AK.
- (3) For the purpose of subsection (1)(a), **ultimate capacity** and **moderate earthquake** have the meanings given to them by regulations.³⁸

There is a positive obligation on territorial authorities to identify potential EPBs.³⁹ They do this by ascertaining the earthquake rating of a building in accordance with an EPB methodology.⁴⁰ The earthquake rating means the degree to which the building, or a part of the building, meets the requirements of the Building Code.⁴¹ The earthquake rating is usually expressed as a percentage of the requirements of the Building Code.⁴² Once the earthquake rating is determined, the area in which a building is located becomes important because the seismic risk of that area will determine the time-frame within which a territorial authority must act to identify earthquake prone buildings or parts and when seismic work on a building or a part must be completed.⁴³

If a building is an EPB the territorial authority will issue an EPB notice which is displayed on the building and copies given to the building owner and other specified interested parties; the details of the EPB notice

³² Earthquake-prone buildings are discussed below.

³³ Building (Specified Systems, Change of Use and Earthquake-prone Buildings) Regulations 2005, cl 11 defines “substantial alteration” using a formula.

³⁴ Building Act 2004, s 133AT.

³⁵ Practice Advisory 19: Improving earthquake performance of non-structural elements (23 November 2016) at https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/practice-advisory-19/#jumpto-non_002dstructural-elements

³⁶ NZS 4104:1994, Seismic restraint of building contents.

³⁷ Earthquake-prone buildings are defined in the Building Act 2004 at s 133AB.

³⁸ Building (Specified Systems, Change the Use and Earthquake-prone Buildings) Regulations 2005.

³⁹ Building Act 2004, s 133AG.

⁴⁰ Building Act 2004, s 133AK.

⁴¹ Building Act 2004, s 133AC.

⁴² The earthquake rating can also be expressed as a percentage range eg 0% to 10%.

⁴³ Building Act 2004, s 133AD. For more information see <https://www.building.govt.nz/managing-buildings/managing-earthquake-prone-buildings/how-the-system-works/> which also contains a map of the seismic risk areas in New Zealand as defined by the Building Act 2004.

are recorded in the EPB register.⁴⁴ The building owner must complete the necessary seismic work by the statutory deadlines.⁴⁵ WorkSafe has stated that even though a building is identified as an EPB, it does not mean that it cannot be occupied in terms of the HSWA. Section 35 of the HSWA says

In determining whether a duty imposed on a person by or under this Act is being, or has been complied with, a person or a court may have regard to the requirements imposed under any other enactment (whether or not those requirements have a purpose of ensuring health and safety) that apply in the circumstances and that affect or may affect, the health and safety of any person.

In this regard the Building Act 2004 sets out the time-frames for a building owner to complete strengthening or demolition work and therefore WorkSafe will not enforce to a higher standard. The HSWA is clearly using the Building Act 2004 as the standard for the evaluation of buildings in relation to earthquake risk. However, although the risk of harm to people in or around an EPB is greater in a moderate earthquake than buildings that have a higher rating under the Building Code, the Building Act 2004 does not contemplate action being taken immediately. Instead it balances the risk of the occurrence of a seismic event with the risk to the health and safety of those working in and using the EPB which allows a timeframe to be set for action to be taken. The term EPB is a legal one used to categorise buildings for the purposes of the Building Act 2004. It does not necessarily mean a building will fail in a seismic event because to ascertain this outcome as a certainty is difficult to do. That is why buildings classified as EPBs are still being occupied and used.

Nevertheless, landlord and tenant PCBUs who own or work in an EPB must be cognisant of the vulnerabilities of their building and be able to prove they are complying with the requirements of the Building Act 2004 by abiding by the terms of the EPB notice in order to meet their obligations under the HSWA.

3. Managing risks from objects in or around buildings in the workplace

A PCBU must identify and make safe building parts that may pose a risk to health and safety where reasonably practicable.⁴⁶ “Building parts” are individual building elements that would pose a significant life safety hazard to a number of people and include parapets, heavy ceilings, masonry walls and other features.⁴⁷ The policy clarification sets out an expectation that PCBUs proactively manage these risks, particularly for an earthquake-prone building. If a tenant is concerned about a building part it should take action to make it safe. If the tenant cannot do this, it should seek assistance from the building owner and the building owner must do what is reasonably practicable to manage the risk. If the parties cannot agree on the risks and how to manage them, they must follow the dispute resolution process in their lease. It is important the parties deal with these risks because if a PCBU fails to address them and the non-action results in people being harmed then WorkSafe may prosecute for the failure.

4. Keeping up-to-date with new or emerging information about the building

PCBU’s must keep abreast of new or emerging information about buildings. This involves paying attention to current events. They should also be aware of what others are saying and doing with their buildings by talking to other PCBUs, keeping in contact with the Council, undertaking regular checks of the building and its parts, and dealing with any issues or concerns that are raised about the building. Importantly,

⁴⁴ Building Act 2004, s 133AL.

⁴⁵ Building Act 2004, s 133AM.

⁴⁶ WorkSafe “Information for PCBUs and Building Owners: Dealing with earthquake-related health and safety risks” (June 2018); can be accessed at <<https://worksafe.govt.nz/laws-and-regulations/operational-policy-framework/operational-policies/dealing-with-earthquake-related/>> at 2.

⁴⁷ Ministry of Business, Innovation and Employment “Considering parts of buildings, EPB methodology” (2017) at 17. Building parts are different from objects within the building. Ensuring objects within a building and therefore within a workplace are safe is the responsibility of the tenant and occupant. Securing heavy furniture such as bookcases to prevent them falling in an earthquake is a good way to address this risk. PCBUs can be liable under the HSWA if these risks are not identified and properly managed.

WorkSafe requires PCBUs to consider any new information that might be relevant to how their building might perform in an earthquake.⁴⁸ If the new information raises issues about the building's structural integrity or safety PCBUs are required to obtain professional advice from a relevant expert, such as a structural engineer, on the matter.

5. *Preparing the workplace for an earthquake*

Finally, the policy clarification makes it clear that PCBUs should prepare the workplace for an earthquake. It is imperative those using the workplace should know what to do should a seismic event occur. Earthquake drills, provision of survival kits and the gathering of up to date contact information are ways that PCBUs can fulfil their obligations. It is also important that building owners and tenants work together to ensure any critical systems in the building will function after an earthquake.

III The interplay between the HSWA and the Building Act 2004

I Complying with the HSWA and the Building Act 2004

An examination of the interplay between the HSWA and the Building Act 2004 reveals gaps that lead to uncertainty about the exact liability of a PCBU of a building should it fail in an earthquake. WorkSafe clearly recognised this problem because it issued the policy clarification document to reassure PCBUs of EPBs that as long as they are meeting the earthquake performance requirements of the Building Act 2004, it would not enforce their obligations and duties under the HSWA to a higher standard. However, if the building is not an EPB then it will not be the subject of an EPB notice and the requirement to be assessed as to its seismic risk. If a building is not identified as an EPB that does not mean it will not fail in an earthquake. Think of those buildings that are 34% to 99% of Code – they too could pose risks in an earthquake – the risk of failure is just lower than for an EPB.

PCBUs are obliged to be cognisant of all health and safety risks to people in its workplace under the HSWA, and that includes the risk of the building failing in an earthquake and causing injury or death. Therefore, it seems clear that PCBUs should be fully aware of how their buildings will perform in a seismic event irrespective of its earthquake rating. The legislation, however, does not provide clear direction on this point.

If the building is an EPB it will be assessed. However if the building is not classified as an EPB the decision of whether or not to assess the building is for the owner. Such assessments are usually carried out if certification of the NBS rating is required to satisfy potential tenants or potential purchasers if the owner wishes to sell the building. Under the Building Act 2004, building owners are not under any obligation to have the building assessed as to its earthquake rating unless they have concerns about the building's structural integrity and safety in a seismic event. This acts as a disincentive for building owners (particularly those with buildings with a low earthquake rating) to obtain building assessments. First, it may be an expensive exercise because it involves instructing an expert to provide professional advice and second, it may uncover work that needs to be done to strengthen the building – in other words what you don't know you don't have to act on. The lack of a legislative requirement to get all buildings assessed, irrespective of their earthquake rating, has the potential to lead to ignorance of the true situation at best and wilful blindness as to the risks posed at worst.

There are many examples of buildings that have not performed well in an earthquake even though they are not EPBs. As a result of the large M7.8 Kaikoura earthquake in 2016, Council inspectors found 60 buildings

⁴⁸ A good example is the warning that was issued by engineers after the Kaikōura earthquake in 2016 about hollowcore concrete floors which caused serious damage to a number of Wellington multi-storey buildings- see <https://www.rnz.co.nz/news/national/343294/engineers-issue-warning-over-hollowcore-floors>

in Wellington showed signs of having suffered structural damage and 28 were at risk of part of the building collapsing.⁴⁹

II An Example: Pre-cast concrete floor failures and the repercussions for PCBU's

The building called Statistics House in Wellington, completed in 2005, was considered a modern building. Yet, at just over 10 years of age, some of its pre-cast concrete floors collapsed as a result of the Kaikōura earthquake.⁵⁰ Fortunately, there was no loss of life owing to the timing of the quake in the early hours of the morning. However, had the quake occurred during the day injury and death were a likely consequence. The failure of this building came as a shock. The Chief Executive of Statistics New Zealand, Liz MacPherson said:⁵¹

"How is it that a building that is as new as Stats House, with the [earthquake] code rating it had could suffer this sort of damage. I'll continue to ask those questions".

The effect of the Kaikōura earthquake on buildings in Wellington highlighted problems with pre-cast concrete flooring systems.⁵² Subsequently in 2018, a technical proposal was published to revise Part C of the Engineering Assessment Guidelines, containing new information that pre-cast concrete flooring systems present a significant risk of collapse during an earthquake.⁵³

In light of this new knowledge, PCBU's with buildings that have pre-cast concrete floors should get an engineering assessment to evaluate the structural integrity of the floors in order to meet their obligations under the HSWA. As these types of floors are now known to be a risk to occupiers of the building, any PCBU who does nothing to assess their safety may risk prosecution under the HSWA if the floor fails in an earthquake and someone is harmed.

There are still many buildings in New Zealand with pre-cast concrete flooring systems that may pose a considerable risk to health and safety in a seismic event and yet these buildings do not come under the definition of an EPB as the proposed revision to section C5 of the Engineering Assessment Guidelines has not yet been incorporated into the regulatory system governing EPBs. Therefore, unless the PCBU has concerns about the performance of its building in an earthquake, there is no direct requirement for it obtain a seismic assessment. Although the Wellington City Council dealt with the Central Library in a proactive way, many other owners of buildings with similar issues may not even be aware of the risks their buildings pose, are wilfully blind to the risks or are aware but do not wish to pay the cost of strengthening their buildings if they have no legal obligation to do so.

III The Closure of Buildings

Since the enactment of the HSWA there has been a spate of building closures around the country after assessments revealed they may pose a risk in an earthquake. Wellington's Central Library was closed on 19 March 2019 after an engineering assessment found there were concerns about structural weaknesses in the building and its pre-cast concrete floors which may fail in an earthquake.⁵⁴ The New Zealand Law Society moved out of its building on 5 July 2019, the Levin District Court building was closed on 18 November

⁴⁹ https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11750524

⁵⁰ <https://i.stuff.co.nz/national/nz-earthquake/100213379/demolition-begins-on-earthquakedamaged-statistics-house-in-wellington>

⁵¹ Liz Macpherson, Statistics NZ, in https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=11750005

⁵² Statistics House and Freyberg House are good examples. See Kestrel Group "Summary Report; Wellington City Council Targeted Assessment Programme following the Kaikōura Earthquake of 14 November 2016" (Kestrel WCC TAP Summary Report 20170507; 7 May 2017).

⁵³ Revised version of section C5 Seismic Assessment of Existing Buildings Guidelines, December 2018. These provide the Engineering Assessment Guidelines component of the earthquake-prone building regulations and EPB Methodology that came into force on 1 July 2017; see <http://www.cq-assess.org.nz/>

⁵⁴ <https://i.stuff.co.nz/dominion-post/news/111434570/wellingtons-central-library-will-be-closed-for-at-least-a-year>

2019,⁵⁵ the Leys Institute buildings in Auckland which house the Ponsonby Library closed on 20 December 2019,⁵⁶ and the building housing the Wellington underground market closed on 14 March 2020.⁵⁷ While the buildings may be meeting requirements under the Building Act 2004, it seems that any potential risk to the health and safety of people using them may now be unacceptable to some PCBUs. The HSWA may be encouraging a far more cautious approach than a professional assessment would deem necessary. As a consequence anecdotal evidence suggests that making PCBUs accountable for the health and safety of their workers has meant PCBUs are unwilling to accept any risk in light of their obligations under the Act. This has resulted in the closure of buildings rather than continuing to use the building until the strengthening work is undertaken.

IV Keeping up to date with new or emerging information about buildings

Another area of uncertainty under the HSWA is the requirement of PCBUs to keep up-to-date with new or emerging information about building and how that affects their buildings. What must PCBUs do to fulfil their obligations in this regard? PCBUs are not experts on their buildings, and nor does the Act require them to be. However, the HSWA suggests PCBUs must be proactive in this area by seeking out new information that could relate to their buildings and their seismic risk. What exactly this entails is unclear but at the very least it may mean that PCBUs should look to experts for emerging information and obtain regular expert assessments of their buildings to understand how any new information may affect their obligations under the HSWA.

IV Conclusion

The HSWA may be having a positive effect on the behaviour of those who are charged with health and safety in workplaces, by making them more aware and perhaps more cautious about the safety of their buildings. However, the interplay between the HSWA and the Building Act 2004 and the obligations of PCBUs for their buildings in relation to their seismic vulnerability remains unclear. WorkSafe's policy clarification states that PCBUs will not be liable under the HSWA if they are complying with their obligations under the Building Act 2004. This is clear for PCBUs with EPBs. However it is less clear for PCBUs with buildings that are not EPBs. Under the HSWA PCBUs have an ongoing obligation to identify potential risks and consider any information that is relevant to the building's performance in an earthquake and yet the Building Act 2004 does not require them to get the building assessed by an expert unless they have concerns about its risk of failure in a seismic event. The PCBU's actual obligations in this regard need to be clarified.

Furthermore, although the legislative framework for buildings plays a major role in regulating how building owners deal with the seismic safety and resilience of buildings, not all buildings are captured by it. Are PCBUs clear about their liability under the HSWA for buildings that are not defined as EPBs but may still be vulnerable to earthquakes.

The HSWA imposes clear duties and obligations on PCBUs to ensure their buildings are safe as work places. What remains unclear is the interplay between the HSWA and the Building Act 2004 and how this affects PCBUs in terms of their duties under both pieces of legislation and their ultimate liability should workers be harmed if the building fails in a seismic event.


⁵⁵ https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12284297

⁵⁶ https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12295472

⁵⁷ <https://www.rnz.co.nz/news/national/408706/wellington-underground-market-to-close-due-to-being-quake-prone>

APPENDIX 2: STAKEHOLDER TWO PAGER

What are organisations doing to stay safe in New Zealand's seismically active environment?

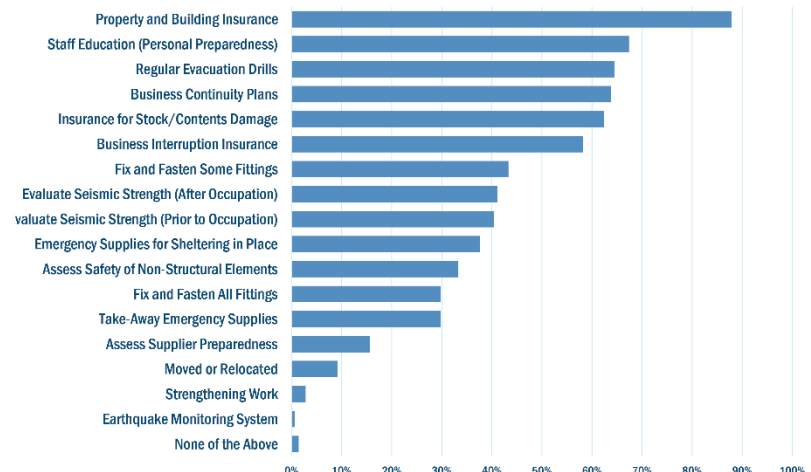


What helps or hinders them?
What influence has the Health and Safety at Work Act 2015 (HSWA) had on their actions?

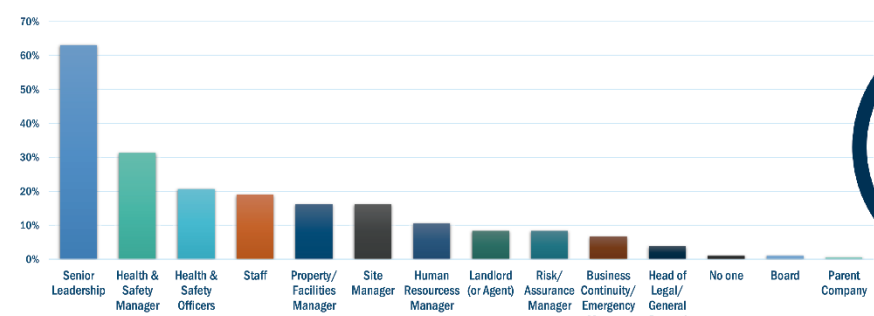
In 2020 we conducted an EQC funded survey to examine these questions.

Who did the survey?	179 organisations	Size of businesses	Seismic zone location
		58% Small 15% Medium 27% Large	59% High 19% Medium 22% Low

What seismic risk reduction activities are organisations doing?



Activity	Percentage
Property and Building Insurance	85%
Staff Education (Personal Preparedness)	65%
Regular Evacuation Drills	60%
Business Continuity Plans	58%
Insurance for Stock/Contents Damage	55%
Business Interruption Insurance	52%
Fix and Fasten Some Fittings	45%
Evaluate Seismic Strength (After Occupation)	40%
valuate Seismic Strength (Prior to Occupation)	38%
Emergency Supplies for Sheltering in Place	35%
Assess Safety of Non-Structural Elements	32%
Fix and Fasten All Fittings	28%
Take-Away Emergency Supplies	25%
Assess Supplier Preparedness	15%
Moved or Relocated	10%
Strengthening Work	5%
Earthquake Monitoring System	2%
None of the Above	1%



Role	Percentage
Senior Leadership	65%
Health & Safety Manager	30%
Health & Safety Officers	20%
Staff	18%
Property/Facilities Manager	15%
Site Manager	15%
Human Resources Manager	10%
Landlord (or Agent)	8%
Risk/Assurance Manager	8%
Business Continuity/Emergency Manager	5%
Head of Legal/General Counsel	3%
No one	2%
Board	1%
Parent Company	1%

Who in the organisation is responsible for managing earthquake risks?*

*multiple responses allowed

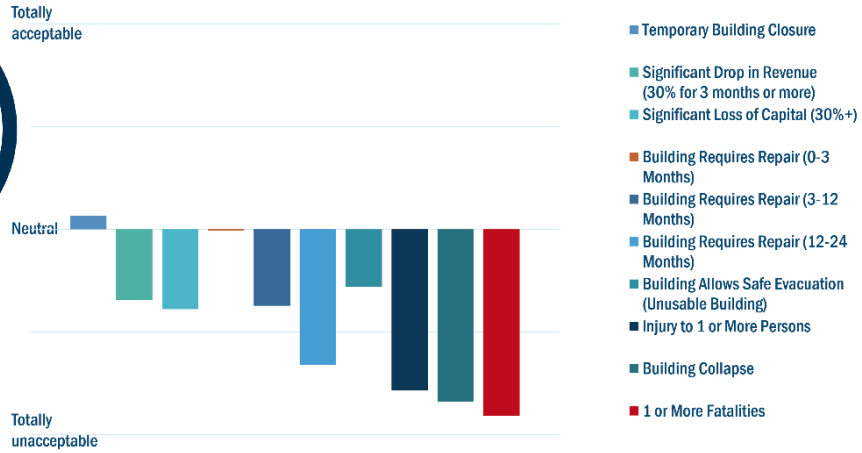
Over half of the respondents leased their premises, but only 16% saw their landlord as having an earthquake risk responsibility.

Top motivators for reducing earthquake risk

1 Health and safety risk to employees and customers during a severe earthquake.

2 Compliance with the Health and Safety at Work Act 2015.

We live in a seismically active country. What are we willing to accept?



What are the top barriers to taking further action?

- Cost
- Disruption to operations
- Capacity to carry out risk reduction activities
- Working with building owners and landlords
- Access to relevant and usable information

What were respondents top three information sources?

- ✓ WorkSafe
- ✓ EQC
- ✓ NEMA/CDEM

What does the HSWA and associated guidance say organisations must do?

- ✓ Any Person Conducting a Business or Undertaking (PCBU) is expected to prepare for an earthquake.
- ✓ Tenants and landlords are both PCBUs and should work together to reduce earthquake risks to their building.
- ✓ PCBUs must proactively manage risks arising from objects in and around the workplace on a regular and ongoing basis.
- ✓ PCBUs must keep abreast of new or emerging information that is relevant to their building's performance.

We have prepared this information using our best endeavours to understand all appropriate legislation, policy guidance and best practice. All the information published here is true and accurate to the best of the authors' knowledge. Information in this guide should not be a substitute for legal advice. No liability is assumed by Resilient Organisations Limited for losses suffered by any person or organisation relying directly or indirectly on information provided in this document.

APPENDIX 3: PROPOSED EARTHQUAKE PREPAREDNESS HANDOUT

Earthquake preparedness checklist

Resilient ORGANISATIONS

This guide is intended to help organisations prepare for earthquakes. It is based on Resilient Organisations' 2020 research reviewing legislative and policy requirements for organisations, along with best practice risk management processes.

Many of the actions below will also help your organisation recover faster from other disruptions.



KNOW YOUR EXPOSURE

Check your [local civil defence emergency management \(CDEM\) website](#) for information on the potential earthquake and tsunami risk in your area.

Low risk does not mean no risk.



KNOW AND MANAGE YOUR RISKS

Under the 2015 Health & Safety at Work Act (HSWA), any person conducting a business or undertaking (PCBU), must identify and manage risks in their workplace (including the building) so far as is reasonably practicable.

KNOW THE SEISMIC STATUS OF YOUR BUILDING, AND ANY PARTICULAR VULNERABILITIES

- Has a seismic assessment of your building been done recently?
- Do you know the seismic rating of your building?
- Do you know if your building has any key vulnerabilities (either structural or non-structural)?
 - Have these been explained to you?
 - Have you taken these into account in your emergency response plans?

If you are a tenant and not sure, check with your landlord.



For more information on preparing your workplace check out these resources from Worksafe and EQC:

- ✓ [Dealing with earthquake-related risk in the workplace](#)
- ✓ [Stacking and shelving to withstand earthquakes](#)
- ✓ [Fix, Fasten, Don't Forget](#)

Both landlords and tenants are PCBUs responsible for identifying and managing risks within your building. Make sure you work together to manage these risks.

Businesses that proactively develop plans for disruptions are more likely to recover quickly and effectively after an earthquake.



KEEP UP-TO-DATE

- Pay attention to current events to learn from the outcomes and impacts of earthquakes in other locations.
- Chat with other local business owners to share ideas on reducing earthquake impacts.
- Stay in contact with your council, local Chamber of Commerce, and industry groups.
- Check the [Get Ready website](#) for earthquake risk information and preparation activities.
- Check annually to make sure all objects are fixed or fastened.



KNOW YOUR RESPONSE PLANS AND ESCAPE ROUTES

- Make sure you have an up-to-date emergency plan that details your immediate response after an earthquake.
- If you are in or near a tsunami zone make sure your emergency plan includes tsunami evacuation routes.
- Make sure all your staff and building users are up-to-date with your response plans and evacuation routes.



Check out [WorkSafe's website](#) for more info on workplace emergency plans.



PREPARE YOUR STAFF

- Have emergency supplies in the workplace in case staff need to shelter in place i.e. water, food, torches, and battery radios.
- Have 'go bags' – takeaway supplies that staff can utilise in the event of a potential long walk home.
- Take part in the annual [ShakeOut](#) exercise to practice 'drop, cover, and hold'.
- Help staff be prepared at home as well. Encourage them to prepare their own [household preparedness plan](#).



PLAN FOR CONTINUITY OF OPERATIONS

- Make sure you have a Business Continuity Plan. It should:
 - ✓ Assess the minimum requirements for your business to operate and how you can make sure these requirements are available post-event.
 - ✓ Consider likely supply and demand changes following any event.
 - ✓ Include clear plans for communicating with your staff, customers, suppliers, and other key stakeholders.
- ✓ Include basics such as keeping up to date contact information and maintaining IT backups or cloud storage of key information.
- ✓ Consider how you might support your community post-earthquake.
- ✓ Consider what information would be needed and/or what delegations need to be in place if key personnel are unable to work.

- Check your insurance policies - do they provide the amount and length of cover you need? Not sure? Our free resource, [Cover Your Assets](#) is a short guide to commercial insurance.



For more information on business continuity planning visit these websites: [Work Ready](#) or [Get Prepared](#).

We have prepared this information using our best endeavours to understand all appropriate legislation, policy guidance and best practice. All the information published here is true and accurate to the best of the authors' knowledge. Information in this guide should not be a substitute for legal advice. No liability is assumed by Resilient Organisations Limited for losses suffered by any person or organisation relying directly or indirectly on information provided in this document.

APPENDIX 4: SURVEY QUESTIONS

Earthquakes and Organisations Survey

Introduction

Thank you. We really appreciate your participation.

Please read the following note before completing the questionnaire.

This project investigates earthquake risk reduction behaviours in organisations. We want to understand what organisations are doing to stay safe in our seismically active environment, and what helps or hinders organisations implementing earthquake risk reduction efforts.

You are being asked to participate in this survey as a representative of your organisation. This survey will contribute to the Earthquakes and Organisations research project carried out by Resilient Organisations and the University of Canterbury. This research project is funded by the New Zealand Government through the Earthquake Commission (EQC).

The survey will take approximately 15-20 minutes to complete. Your responses are anonymous.

The results of this survey may be published, but you can be assured of the complete anonymity of data gathered in this survey: your identity will not be evident at any stage. To ensure anonymity, there are no identifiable questions in our survey, no IP addresses tracked, and no identifiable custom data or custom variables were used to send out this survey. Survey data will be stored in password protected files in a secure server and will be destroyed after ten years. Anonymised and aggregated data may also be shared with researchers on future projects investigating earthquake risk reduction.

By completing the survey, you are consenting to participation in the project. You are also indicating you have authority to speak on behalf of your organisation and that you consent to publication of the results of the project with the understanding that anonymity will be preserved.

This project is being led by Dr Tracy Hatton and Sophie Horsfall from Resilient Organisations Ltd, who can be contacted at tracy.hatton@resorgs.org.nz (021 160 7707) or sophie.horsfall@resorgs.org.nz (027 610 2354). They will be pleased to discuss any concerns that you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee. Participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

Section 1: Organisation demographics

1. Please indicate which of the following industry categories best describes your organisation (please choose the one that most represents your organisation)

- Health Care and Social Assistance
- Professional, Scientific and Technical Services
- Education and Training
- Manufacturing
- Transport, Postal and Warehousing
- Construction
- Retail Trade
- Agriculture, Forestry and Fishing
- Accommodation and Food Services
- Wholesale Trade
- Information, Media and Telecommunications
- Electricity, Gas, Water and Waste Services
- Financial and Insurance Services
- Rental, Hiring and Real Estate Services
- Administrative and Support Services
- Public Administration and Safety
- Art and Recreation Services
- Mining
- Other (please specify)

2. Describe your business type in one word (e.g. Hospitality, Engineering, Winery etc)

3. How many branches, offices or sites within New Zealand does your organisation operate?

- 1
- 2-5
- 6-10
- 11+

Section 1: Organisation demographics cont.

4. Are you answering the rest of this survey from the perspective of the entire New Zealand operation or one specific branch or site?

- My site/branch of a larger operation
- Entire New Zealand/regional operation (i.e. all sites)

Section 1: Organisation demographics cont.

5. What areas of New Zealand are your branches, offices or sites located? (select all that apply):

- Northland
- Auckland
- Waikato
- Bay of Plenty
- Gisborne
- Hawke's Bay
- Taranaki
- Manawatu-Whanganui
- Wellington
- Tasman and Nelson
- Marlborough
- West Coast
- Canterbury
- Otago
- Southland

6. Which of the following best describes the ownership of your branches/offices/site? (tick all that apply)

- We own and occupy
- We own and lease to others
- We lease from others

7. How many full-time equivalent employees work in your organisation (including yourself)?

- 1-5
- 6-9
- 10-19
- 20-49
- 50-99
- 100+

Section 1: Organisation demographics cont.

8. Where is your branch, office or site located?

- Northland
- Auckland
- Waikato
- Bay of Plenty
- Gisborne
- Hawke's Bay
- Taranaki
- Manawatu-Whanganui
- Wellington
- Tasman and Nelson
- Marlborough
- West Coast
- Canterbury
- Otago
- Southland

9. Which of the following best describes the ownership of your branch/office/site? (tick all that apply)

- We own and occupy
- We own and lease to others
- We lease from others

10. How many full-time equivalent employees work in your branch/office/site (including yourself)?

- 1-5
- 6-9
- 10-19
- 20-49
- 50-99
- 100+

Section 1: Organisation demographics cont.

11. Which of the following best describes your role in your organisation?

- Senior leadership/Owner
- Middle management
- Staff

12. Does your organisation have a centralised head office, franchisor or parent company?

- Head office
- Franchisor
- Parent company
- None of the above

Section 1: Organisation demographics cont.

13. Are your organisation's earthquake risk management guidelines designed:

- Primarily by head office
- Primarily by each site
- Primarily by parent company or franchisor
- Jointly by head office/parent company/franchisor and each site
- We don't have any earthquake guidelines
- Other (please specify)

Section 2: Earthquake risk understanding

14. Do you consider earthquakes a risk to your organisation?

- Yes
- No
- Not sure

Section 2: Earthquake risk understanding

15. What is your reason for not considering earthquakes as a risk to your organisation? (Select one that best applies)

- We are not in a seismically active area of New Zealand
- We are very well prepared for an earthquake
- We don't think we'll be impacted by an earthquake
- Even if an earthquake happens, we think the impacts won't be that bad
- Other (please specify)

Section 2: Earthquake risk understanding

16. Who is responsible for managing earthquake risk within your organisation? (Tick all that apply)

- Managing Director/Owner/Chief Executive
- Property Head or Facilities Manager
- Health and Safety Manager
- Head of Legal/General Counsel
- Human Resources/People and Capability Manager
- Risk/Assurance Manager
- Business Continuity/Emergency Manager
- Site Manager
- Health and Safety Officers
- Staff
- Our Landlord (or their agent)
- No one
- Other (please specify)

17. Have you or your organisation ever experienced an earthquake event?

- Yes
- No
- Don't know

18. In the event of an earthquake, how concerned are you about the following impacts on your organisation? (tick one for each line).

	Not at all concerned	Slightly concerned	Moderately concerned	Concerned	Very concerned	N/A
Building collapse(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Structural damage to buildings (integrity of building compromised)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-structural damage (internal building fit out /décor)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loss/damage to equipment/machinery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loss/damage to stock	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health and Safety risk to employees and customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loss of access to premises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inability to continue operating post-earthquake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loss of electricity/water/telecoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact on suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact on customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Impact on regional business confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Damage to neighbouring buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

19. How important are each of the following factors in motivating your organisation to manage earthquake risks? (Tick one for each line)

	Not important	Slightly important	Moderately important	Important	Very important	Don't know	N/A
Building Act obligations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial impact of an earthquake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff safety and wellbeing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current financial position	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Board directives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Staff concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Likelihood of an earthquake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Importance of our organisation to the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability or price of insurance cover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health and Safety at Work Act obligations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Following a severe earthquake, how acceptable are the following impacts to your organisation? (Tick one on each line)

	Totally unacceptable	Somewhat unacceptable	Neutral	Somewhat acceptable	Perfectly acceptable	Don't know
Temporary closure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Significant drop in revenue (30%+ for 3 months or more)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Significant loss of capital (30%+)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building requires repair (taking 0-3 months)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building requires repair (taking 3-12 months)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building requires repair (taking 12-24 months)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building allows safe evacuation but unable to be used again	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injury to 1 or more persons	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Building collapse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1 or more fatalities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Section 3: Earthquake risk reduction

21. What does your organisation do to reduce earthquake impacts on your organisation (select all that apply)?

- Fix or fasten all stock/equipment/furniture
- Fix or fasten some stock/equipment/furniture
- Property and building insurance
- Business interruption insurance
- Insurance for stock/contents damage
- Emergency supplies for sheltering in place
- Take-away emergency supplies e.g. Go Bags
- Business continuity plans
- Regular evacuation drills
- Staff education around personal preparedness
- Assess supplier preparedness
- Evaluated seismic strength of building prior to occupation (e.g. new build or asked questions around strength)
- Evaluated seismic strength of building after occupation (e.g. commissioned assessment or asked landlord to do so)
- Assess safety of non-structural elements of our building (e.g. ceiling tiles, ducting, pipework)
- Move or relocate to a higher strength building
- None of the above
- Other (please specify)

Section 3: Earthquake Risk Reduction

22. To what extent did the following events prompt your organisation to undertake earthquake risk reduction activities?

	Not at all	Slight impact	Moderate impact	Significant impact	Don't know
2010 Darfield earthquake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2011 Christchurch earthquake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2013 Seddon/Cook earthquake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2015 Health and Safety at Work Act legislation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2016 Kaikoura earthquake	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2016 Building (Earthquake Prone Buildings) Act Amendment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

Section 4: Earthquake preparedness

23. Where do you find information to help understand how to reduce earthquake risk? (Select all that apply)

- WorkSafe
- Business.govt.nz
- National Emergency Management or Local Civil Defence websites
- EQC *Fix. Fasten. Don't Forget* website (now called *Be Prepared*)
- Media
- Advertising campaigns (e.g. *Be Prepared, Shakeout*)
- Other businesses
- Industry groups
- Engineer or other professional advisor
- Friends and family
- None of these
- Other (please specify)

24. What challenges do you face implementing earthquake risk reduction measures?

	Not a challenge	Minor challenge	Moderate challenge	Significant challenge	N/A	Don't know
Access to relevant and usable information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with building owners/landlords	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interest from employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support from your organisation owners/managers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capacity to carry out risk reduction activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support from head office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support from franchisor or parent company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disruption to operations (from risk reduction activities)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not sure where to start/don't know what we should be doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other priorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

25. What would help you to improve your organisation's earthquake preparedness?

26. Have you found a new or creative way to keep people seismically safe in your workplace? We would love to hear what you have done. Please describe briefly below and/or get in touch at sophie.horsfall@resorgs.org.nz

Thank you very much for participating.

We appreciate your input.

*At the end of this study we will be producing an **Earthquake Risk Reduction Best Practice** document available to all survey participants.*

If you would like to receive this document, please use the following link to provide your details (this is to ensure your identifying information is separated from your responses).

<https://www.surveymonkey.com/r/bestpracticehandout>