



SUMMARY

Earthquake-prone Building Owners' Survey

May 2021 - June 2022

Resilient Buildings Team, Wellington City Council

1. KEY FINDINGS

1.1 Background and Context

Wellington is a seismically active city and for over 15 years the Council has been identifying at-risk buildings in an effort to improve resilience. Following the Canterbury and Kaikoura earthquakes, a national framework for managing earthquake-prone buildings came into effect, under the Building Act 2017 Amendment.

The framework seeks to ensure the way buildings are managed for future earthquakes is consistent and strikes a balance between protecting people from harm, the costs of seismic work and the impact on New Zealand's built heritage.

The Council's Resilient Buildings team has a responsibility to identify, assess, notify, and advise on earthquake prone buildings (EPBs) within Wellington City. The role involves engaging with the owners of these buildings to enable the resolution of their EPB statuses; the Council also acts as a regulator to enforce the EPB provisions of the Building Act.

Some of these buildings are large and complex, like the Wellington Town Hall while many are smaller buildings like corner dairies, and fish and chip shops. Other buildings, like apartment blocks, have ownership structures that create complexity for collective decision-making.

The current regulatory framework has intensified a spike of seismic work that needs to be completed by 2027, when 216 buildings are required to complete work within that year alone. Under the framework, building owners aren't required to inform the Council of their intentions to undertake work before the EPB notice expiry date. This lack of evidence makes it difficult for the Council to plan and mitigate the impact of the spike. Additionally, there are questions about the owners' ability and the capacity of the market to undertake this work.

A total of 38 buildings within the Council's property portfolio have an EPB status, which constitutes 6% of all EPBs within Wellington City. These Council-owned EPBs have deadlines for seismic issues to be fixed within the next 3-15 years. These EPBs mostly consist of public buildings. Getting this work done contributes to making Wellington a vibrant, safer city for its citizens.

Since the EPB programme began, the Resilient Buildings team at the Council has assessed around 8,440 buildings within Wellington City and found more than 1,100 to be earthquake prone. Of those, approximately 520 have been remediated and removed from the list of at-risk buildings. This leaves around 600 EPBs that require seismic work completed by the year 2037.

These EPB owners have been served notices, with an expiry date by which the seismic issues must be remediated. The expiry date is usually 15 years from the date of issue, unless the EPB is a 'priority building' which means the deadline will be 7.5 years. Priority buildings have additional inherent risk associated with them such as unreinforced masonry on the front façade.

While some of the EPBs in this portfolio are already on the path of remediation and are expected to meet their expiry date, many EPBs await action from their owners.

Approximately 320 EPBs have an expiry date less than 4.5 years away, and about 280 EPBs have deadlines expiring after 2027. Given that seismic strengthening projects require engineering assessment, planning, and funding for physical works, there is concern regarding these EPBs being

remediated in the required time – especially those that have less than five years to complete the seismic work.

1.2 Survey Results

To understand more about the logistics of property owners' progress regarding seismic work, the team sought progress updates via the Earthquake-prone Building Owner Survey during May 2021 - June 2022. There was a 50% return rate for the survey, with most building owners indicating that they'd engaged an engineer to plan and undertake seismic work.

Key survey findings are that the largest group of EPBs are 1-2 storey commercial buildings with ownership predominantly a single company structure. Most people have owned their buildings for 15+ years.

The majority of owners intend to strengthen their buildings and a high percentage have already engaged with engineers. Most of the owners who are strengthening buildings will target beyond the legal minimum. A high proportion of those who had strengthening costs available fell into the >\$1-million-dollar range, and there is confidence that they can fund the work.

The Council's practical incentive suggestions of potential fee discounts on resource consents, construction parking zones and corridor access requests all rated highly as useful future support offerings, as did a ratepayer financing scheme. The possibility of technical support services such as early quantity surveying and project management advice as well as high level engineering advice were also popular.

Survey respondents were constructive in their feedback and have indicated that they are motivated in taking proactive steps towards completing requisite seismic work on their buildings. The cost of this work and the complexities in managing seismic work projects, especially for body corporates, are areas where professional advice and support are welcome.

The survey results will inform the next Impact Analysis phase of work; this analysis will quantify, where possible, the impacts of the application of the earthquake-prone building legislation. Specifically, this phase will look at the requirements for building owners to meet the notice expiry deadlines and the effect of any non-compliance. The Resilient Buildings team will report back to the Council on the completion of this work, in early 2023.

1.3 Next Steps

The Council is concerned that some building owners may not have the knowledge, tools, or resources to undertake the seismic work required by the EPB notice and will be challenged by a looming deadline and no progress made. It can take years for building owners to raise funds and prepare, plan, and implement a seismic work programme.

The Council could face multiple building owners not meeting their EPB notice deadlines, resulting in retained seismic vulnerability and the potential need for enforcement action. The Council can enforce the EPB notice deadline as a last resort. Penalties include putting up a hoarding, closing buildings, and prosecuting owners, who could be liable for a fine of up to \$200,000. The Council may also seek orders from the courts to undertake the seismic work and recover the costs from the owner.

For an earthquake centred on Wellington, scientific modelling forecasts hundreds of people will be killed or injured by falling buildings. While most people living in Wellington are aware of the inherent risk of earthquakes, the impact doesn't have to be catastrophic. The Council has a legal obligation

to ensure owners complete seismic work and will endeavour to do everything possible to minimise the consequences of the inevitable earthquake.

To effectively guide the EPB compliance process, the following next steps are being taken:

- To grasp and facilitate the success of the current EPB methodology, the Council intends to quantify the impacts of the application of the EPB legislation. This will be achieved through data-based scenario modelling, specifically the requirements for building owners to meet their EPB notice expiry dates and the affect of any non-compliance. This impact analysis will include the financial, economic, and social impact on Wellington City, the Council, and building owners. This work will help the Council to understand the potential roles that it could play, that is of a regulator, advocate, facilitator, funder, financier etc., in supporting building owners to meet the legislative deadlines. The impact analysis will ultimately provide the Council with an evidence base to establish what policy position(s) could be adopted. The Council has already initiated this investigative work with PricewaterhouseCoopers (PwC) Advisory Services as of September 2022.
- Work with Central Government agencies to provide further funding and ways to assist body-corporate owner groups in facilitating collective decision-making.
- Communicate with EPB owners about the funding incentives available through the Council and work with government agencies to promote their support offerings to EPB owners. Engage with EPB owners about the incentives offered by the Council and other Central Government agencies. The team intends to share this excerpt of the survey with a note of thanks to survey respondents acknowledging their inputs.
- For buildings with statutory deadlines looming between 2023 and 2027, the team will engage in a targeted outreach to engage with their owners to discuss progress and ensure they are getting the right advice and support to meet their EPB notice deadline.
- Consider what assistance might be provided specifically to small commercial building owners, that face hardship due to the costs of seismic work and their ability to manage seismic work projects. This group of building owners contribute significantly to the economy, heritage values and vibrancy of Wellington City.
- Initiate investigation into the likely costs of providing potential incentives in the future for those incentives rated most useful by building owners.

2. INTRODUCTION

2.1. Intent and Brief of the Survey

More than half of the currently active EPBs have deadlines expiring within the next 5 years, which is a cause of concern for the Council. Remediation of EPBs within the required timeframe is the prime objective.

To understand more about the logistics of property owner progress to undertake this work, the team sought progress updates via the Earthquake-prone Building Owner Survey during May 2021 - June 2022. Understanding and addressing the issues surrounding owners' intentions towards progressing seismic work is important in guiding the process.

The EPB survey posed the following questions:

- The building ownership structure (body corporate, cross lease, company share, single person/company etc.)
- If the building is owner-occupied or leased/rented
- The owner's plans to demolish, strengthen, sell, or other (including no plan) and the likely timeframe
- If the building is to be strengthened, the % of the New Building Standard (NBS) targeted
- If an engineer is engaged and the point in the planning and consenting process to which the owner has progressed
- The estimated cost of seismic work and how work might be funded
- The level of confidence in the above
- The owner's knowledge of the funds and incentives available, and if these have been taken up
- Any other potential incentives or support which might remove barriers for owners completing the work.

To mitigate the risk of owners not meeting their EPB notice deadlines, it is necessary to understand what progress each building owner has made to date. It is also essential for the team to understand the potential improvements in the Council's (and Central Government's) current support from the building owners' perspective as part of an evidence base for targeting additional tools, resources, and support for building owners in the future.

The survey included 17 questions, most of them objective and some subjective.

2.2. Survey Project Objectives

- The Resilient Buildings Team seeks understanding of owner's intentions and what the Council can do to support them, so that they resolve the EPB status of their building before the notice expires.
- To understand the gaps in the Council's current support with the possibility of providing more targeted tools and evidence-based resources for building owners in the future.
- To capture data to assist the team in determining an insightful, risk-based approach to tackle each EPB owner's challenges and mitigate the risk of building owners not meeting their deadlines.
- Ensure the survey results synchronise the EPB programme with Planning for Growth, NZ Forward Works Viewer, and infrastructure planning.

2.3. Communication Objectives

- To begin a proactive conversation with the owners of EPBs
- To initiate goodwill by engaging with owners and offering ways that the Council can provide support
- To generate awareness, all EPB owners should know the issues and risks if seismic work is not completed before the expiry date
- To communicate and encourage EPB owners to contact the Resilient Buildings Team to discuss their challenges and project plans.

2.4. Timeline and Targets

The team sought to reach the owners of ~600 buildings via letter, email, phone call, video call, and face-to-face meetings over two phases of work between May 2021 and June 2022. Just 50 percent (296 buildings) of owners took part in the survey, with the intentions of the balance of owners remaining unknown.

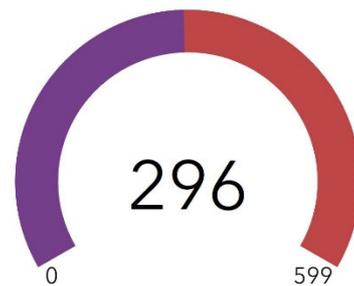


Figure 1. Surveyed EPBs of Total EPBs

2.5. Existing Building Information on EPBs in Wellington

The Council holds building information about the city's EPBs, including those buildings that are currently EPB and buildings that are no longer EPB (remediated). About 520 buildings, that were previously EPB, have been remediated either through seismic strengthening, partial or complete demolition, or through further investigation into the building's strength.

Successfully Remediated Buildings (previously EPBs)

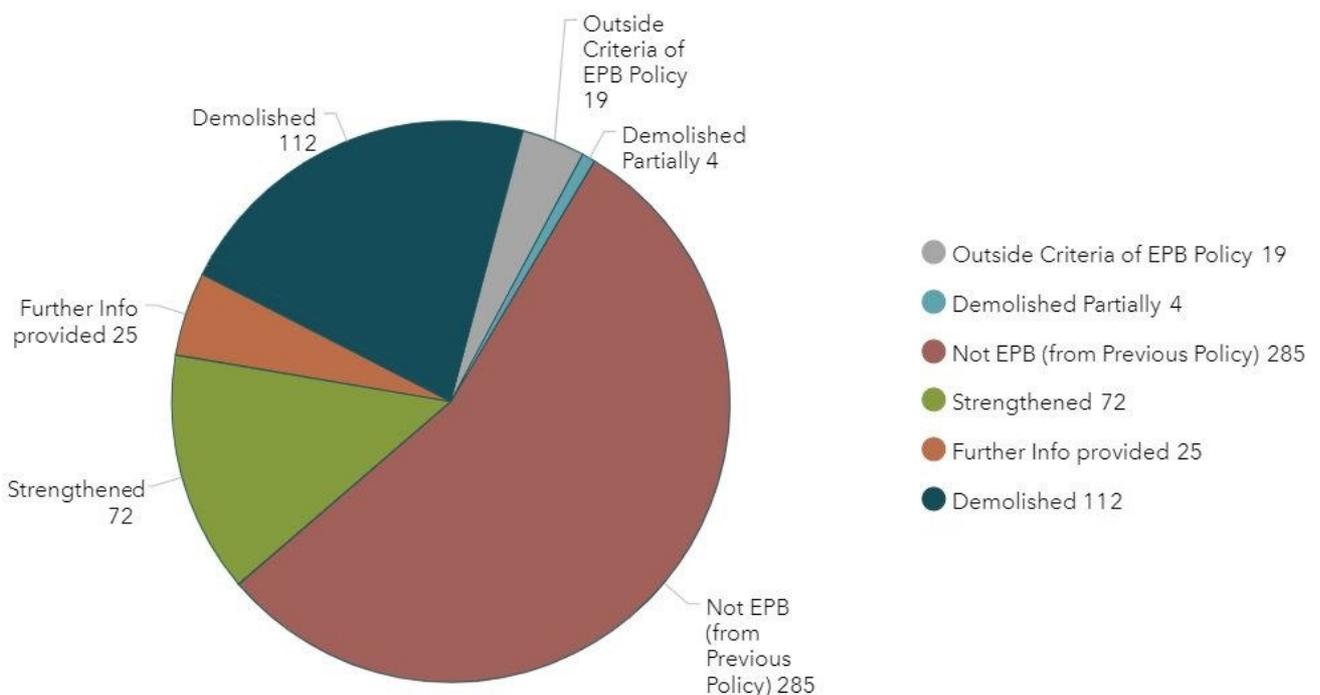


Figure 2. Successfully remediated buildings to date, that used to be EPBs.

14 percent (72 buildings) of the remediated buildings have been strengthened through seismic work while 22 percent demolished (partially or completely) as seen in Figure 2.

Currently, active EPBs have an information record at the Council that includes the location of the buildings, number of storeys, priority status, heritage status and EPB notice expiry date. Combined building information can provide valuable insights into the EPB stock in the overall programme.

EPB Notice Expiry Dates

There is a significant spike in 2027 when 216 notices expire, equating to 36 percent of the current total number EPBs.

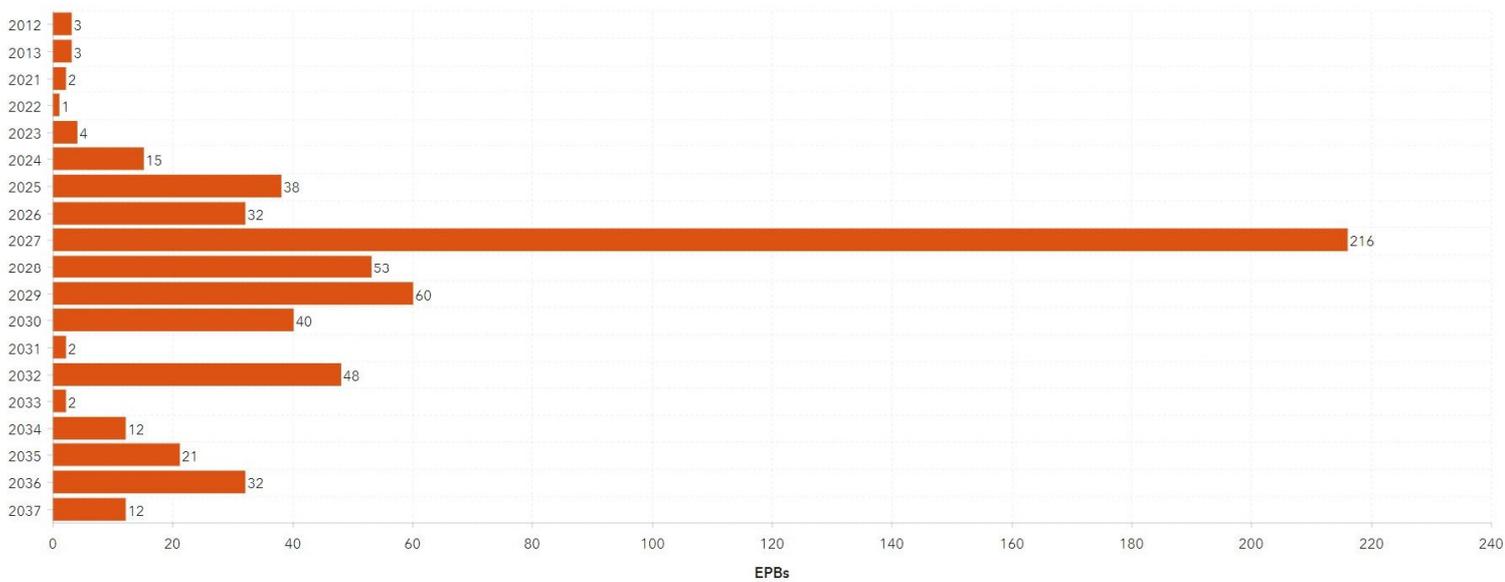


Figure 3. Total EPBs and their Expiry Year

Number of Storeys

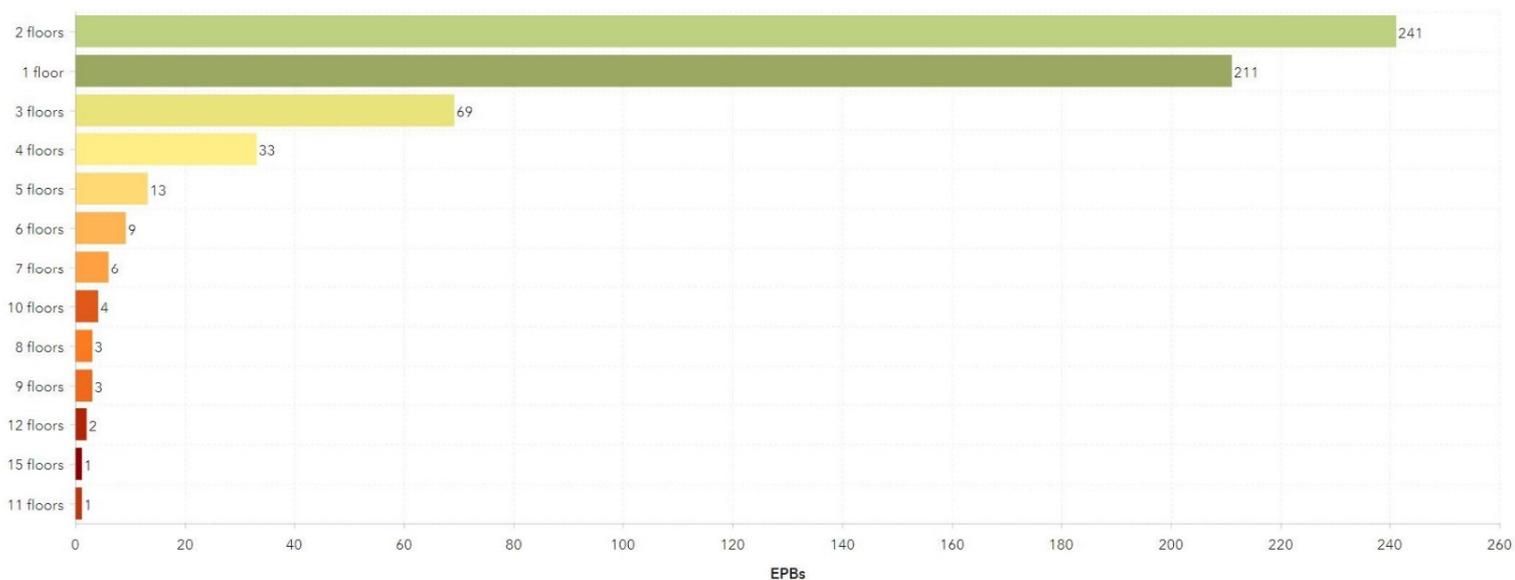


Figure 4. Total EPBs and their Number of Floors

The graph in Figure 4 shows the number of floors for each EPB. 76 percent of EPBs are single or two-story buildings, and only 7 percent are five-stories or higher, highlighting that smaller, low-density buildings dominate the EPB stock in Wellington.

Priority Buildings

An EPB is categorised as a 'priority building' if the respective EPB is considered higher risk because of its construction type, use or location and must be identified and then remediated in half the time allowed for other buildings in Wellington i.e., in 7.5 years' time instead of 15 years.

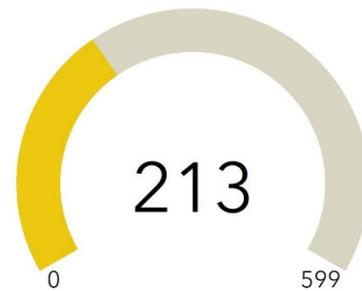


Figure 3. Priority EPBs in Total EPBs

Specifically, any identified EPB is a priority building that:

- i. Either has a specific usage that can make it an emergency service or education centre. Such uses include some hospitals, civil defence buildings, schools, university buildings, early childhood education centres and private training establishments
- ii. Or could collapse in an earthquake and block an emergency transport route
- iii. Or has unreinforced masonry (URM) that could fall onto a high traffic route.

There are 213 priority buildings active currently, equating to 36 percent of the total EPBs. Nearly half the EPBs expiring in 2027 have priority status, see Figure 6.

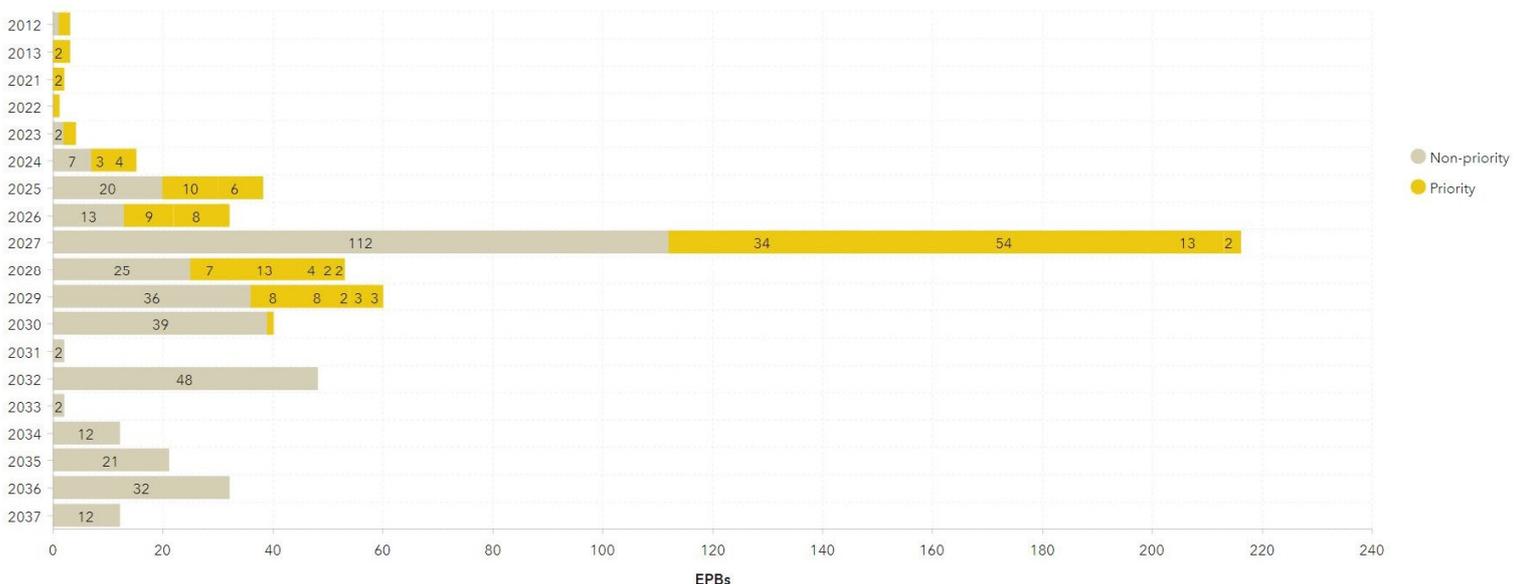


Figure 4. Total EPBs Expiry Year vs their Priority Status

Designated Land/Building Use

Land usage is the use of the building as designated through the Council's Rating Database. Figure 7 illustrates the current land usage for EPBs in Wellington. 32 percent of EPBs are used for commercial purposes, with residential and multi-use being the next at 18 percent and 17 percent, respectively.

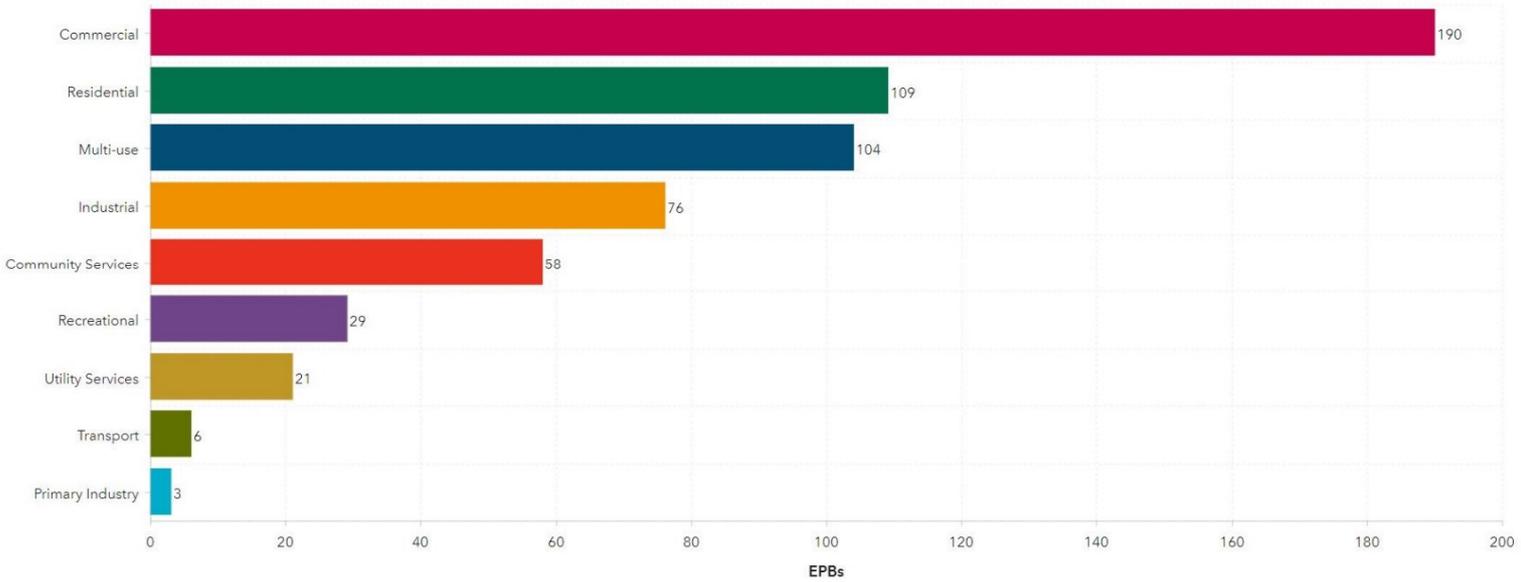


Figure 5. Total EPBs and their Land use

Land use combined with the EPB notice expiry year, in Figure 8, shows the year 2027 has predominantly commercial use buildings, followed closely by multi-use and industrial use buildings.

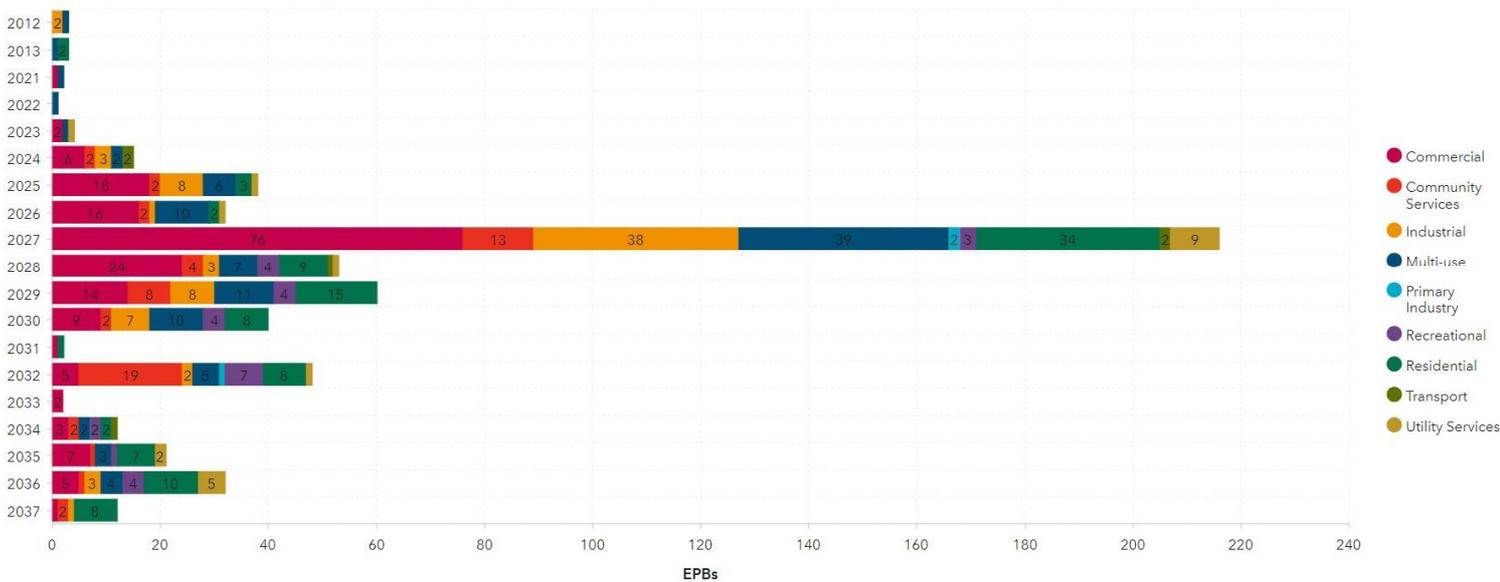


Figure 6. Total EPBs Expiry Year vs Land use

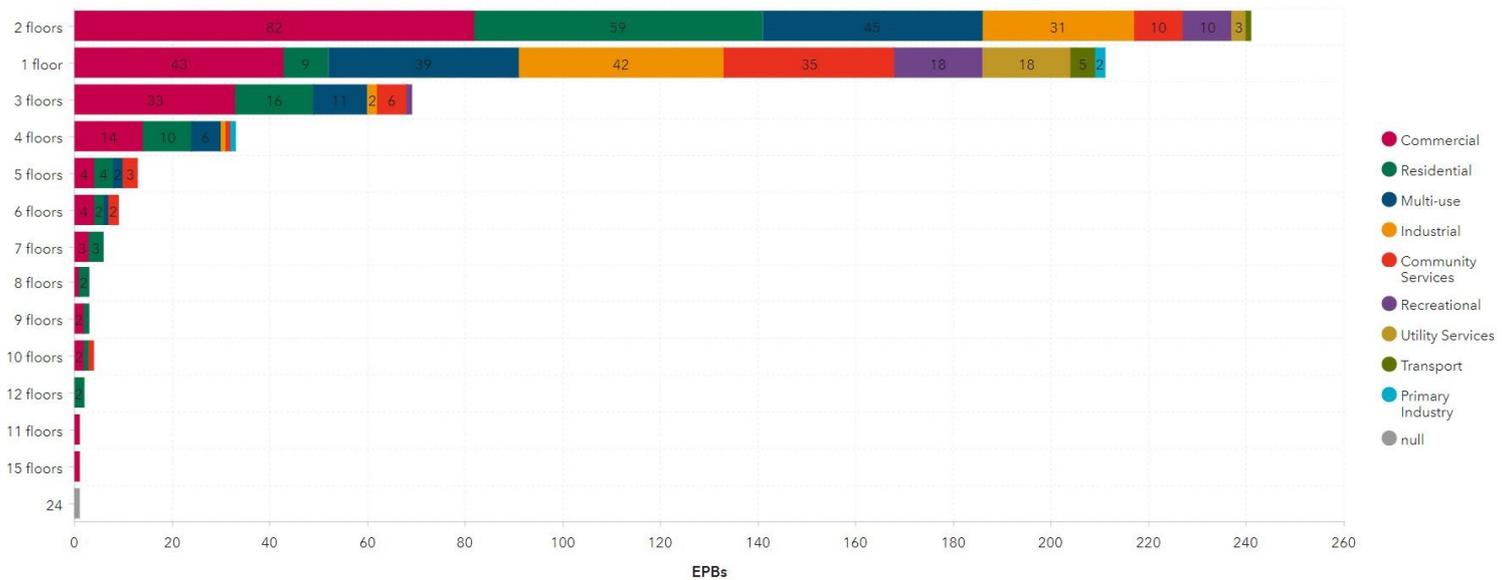


Figure 7. Total EPBs Expiry Year vs Land use vs the Number of Storeys

When building use and building height are combined, the largest group of EPBs are small commercial buildings as shown in Figure 9. These are commercial buildings with three stories or less. This group is 27 percent (158 buildings) of the total number of EPBs.

Heritage Buildings

Over the course of the last 15 years, the Council has assessed over 260 'heritage' buildings as EPBs. The term 'heritage' in this context encompasses EPBs that are either:

- Listed as heritage buildings by the Council on the District Plan; or
- Listed as Category I or Category II buildings by Heritage New Zealand; or
- Listed as contributing buildings within a defined Heritage Area by the Council on the District Plan.

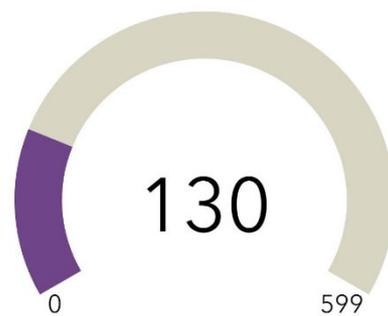


Figure 8. 'Heritage' EPBs in Total EPB

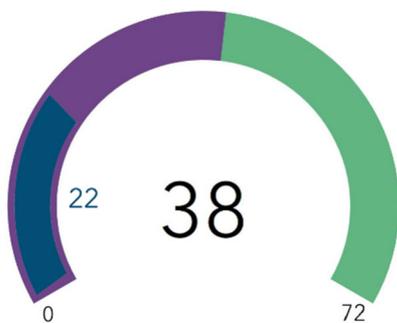


Figure 9. Funded heritage buildings (22) among strengthened heritage buildings (38) among total strengthened buildings to date.

Of all those heritage EPBs assessed so far, 50 percent (131 heritage buildings) have already been remediated and are no longer EPBs while the other half (130 heritage buildings) are currently EPBs.

As noted in Figure 2, a total of 72 remediated buildings that have been strengthened to date. 53 percent (38 buildings) of those strengthened have been heritage buildings.

Of the 38 strengthened heritage buildings, 22 were granted the Council funding through the Built Heritage Incentive Fund (now known as Heritage Resilience and Regeneration Fund) as shown in Figure 11.

The 130 heritage buildings in the current 600 EPBs are identified to be heritage in three different lists and the listing statuses may overlap, as illustrated in the diagram in Figure 12.

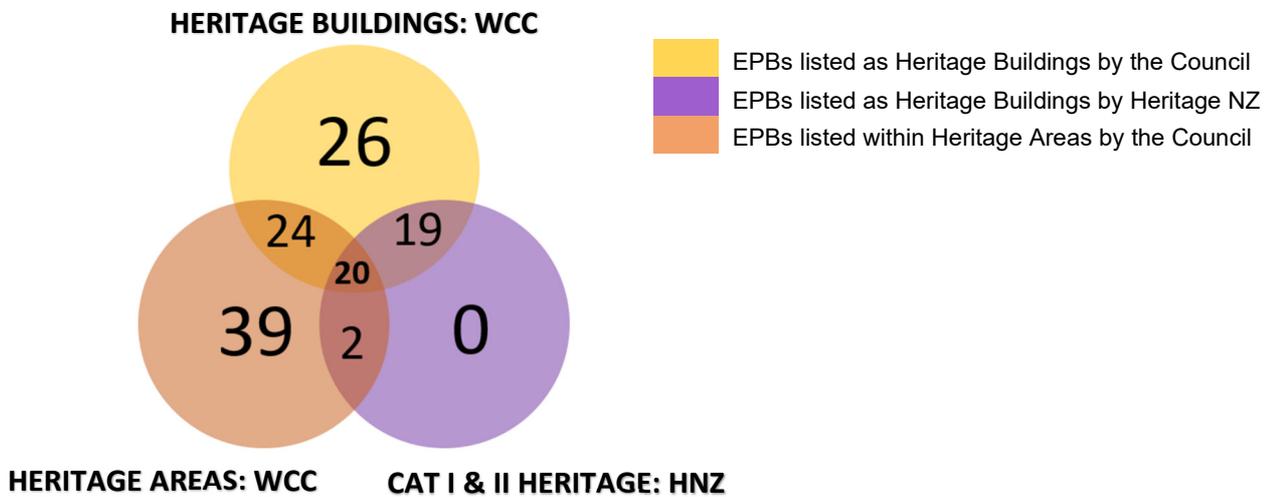


Figure 10. Venn diagram showing the distribution and overlap of different types of heritage buildings for all current EPBs

These 130 heritage EPBs constitute 22% of all the current EPBs, with 'commercial' being the most common building use. The majority (91 buildings) of the heritage EPBs having their deadlines expiring prior to or during the year 2027.

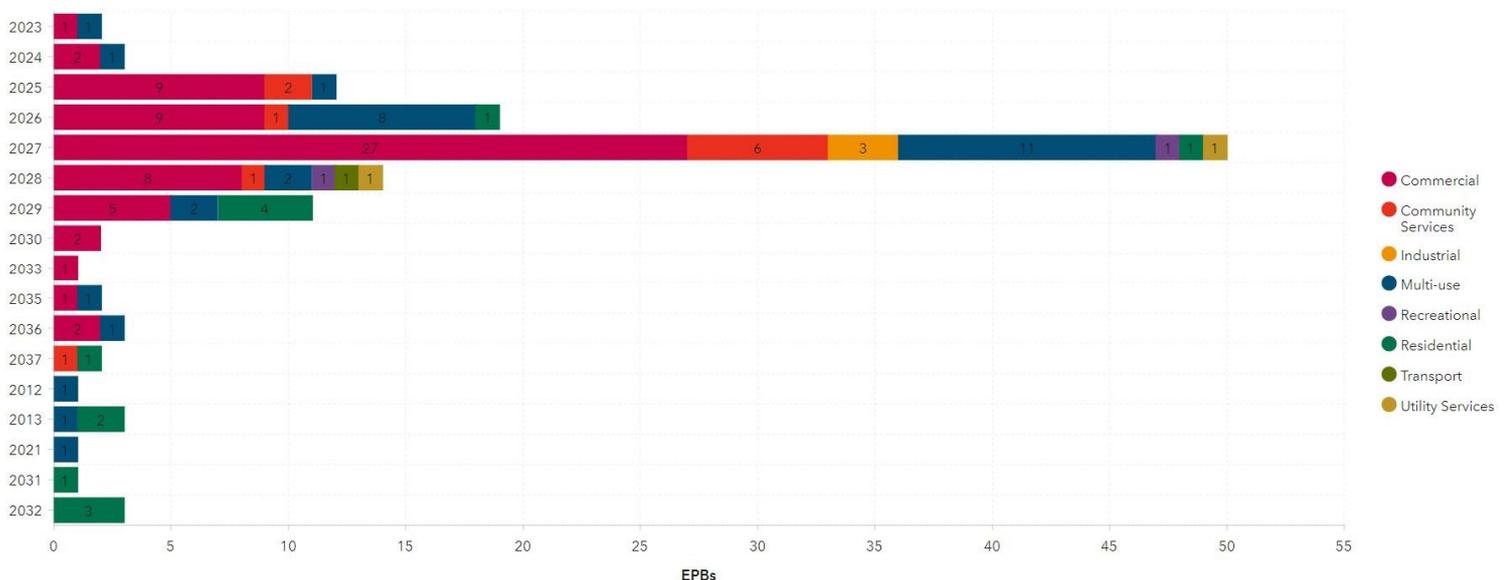


Figure 11. 130 Heritage EPBs vs Expiry year and Land usage (either on the Council's List, in the Council's Heritage Area or listed by Heritage New Zealand)

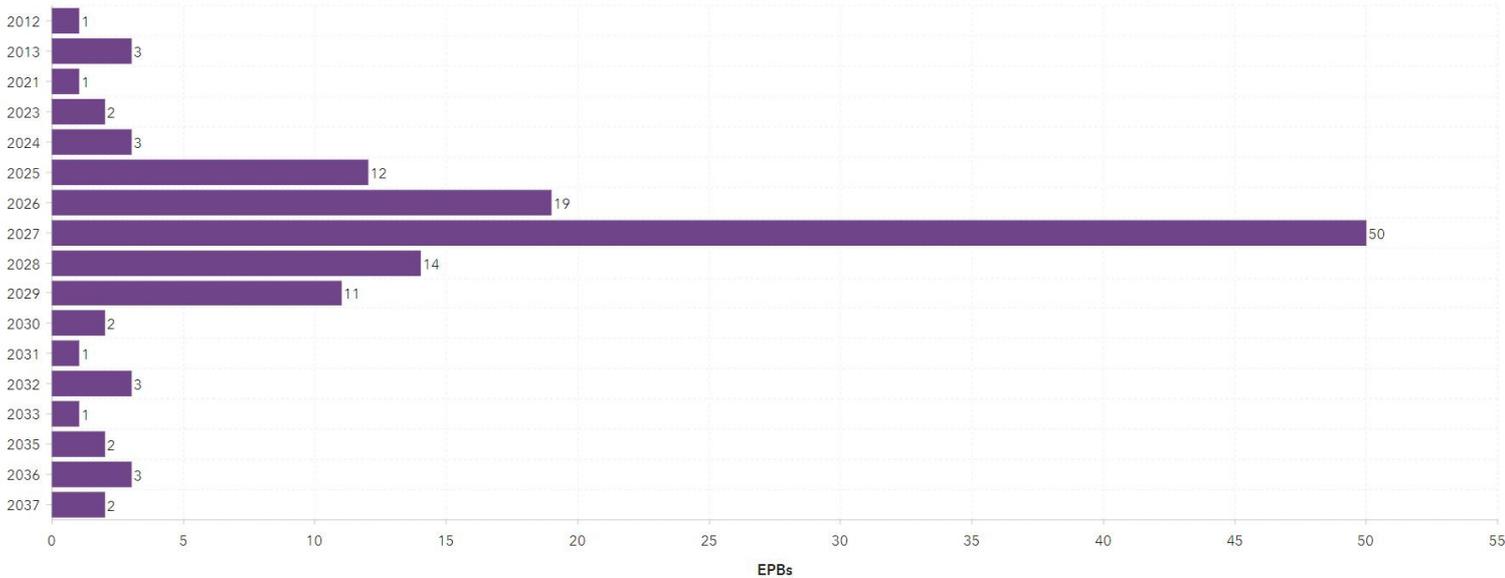


Figure 12. 130 Heritage EPBs vs Expiry year

3. SUMMARY & NEXT STEPS

3.1 Summary Statements

Overall, the response to the survey was constructive and indicated more momentum among EPB owners than has been previously observed. The key lessons and observations that have stood out in this year-long exercise are as follows:

i. Many EPBs are on Track to Meet Deadlines

Most EPB owners who responded appear to have a plan, and the majority have embarked on a course of action to meet their statutory timeframe. Where buildings are to be strengthened, most owners aim for a higher % of the New Building Standard rating than the legal minimum of 34%NBS, ultimately leading to a more resilient, safer city.

ii. Awareness of Incentives and Support is Lacking

While the incentives offered by the Council and other government agencies are not new, the EPB owners lack awareness of each incentive. Based on the responses, there is work to do to increase awareness and understanding of current offerings, especially the rates and building consent rebates offered by the Council. Following up with survey respondents and non-respondents about the incentives on offer are one of the Council's next steps.

iii. Non-responsive EPBs with Deadlines Approaching

There is a growing concern about the absence of engagement from some owners, particularly those whose EPB notices expire between 2023 and 2027. More specifically, in 2027, the spike in expiring notices is exacerbated by low engagement with owners. Sixty-

three percent of owners (136 buildings) whose notice expires in 2027 did not respond to the survey, and across the ~600 EPBs, more than half chose not to respond.

While assumptions can be made about those ~300 non-responsive EPBs, this is still a substantial concern for the Council. Even if 75 percent of this group manages to complete seismic work by their deadlines, that still leaves 65 buildings that may not, and could be subject to further enforcement action. In a housing crisis, the consequences for the city with that level of vacant buildings are potentially very harmful.

The Council understands the impact this can have on the city and the residents and is taking steps to unpack the concerns through scenario modelling for this very vulnerable group. This work is due in early 2023.

iv. Numerous EPBs are Commercial Smaller Buildings

Smaller (1,2, and 3-storey) commercial buildings make up a large portion of the current EPB stock. These EPBs are owned or occupied by many small, family-run businesses that uniquely add to Wellington's economy and culture. Further thought about how best to support this common building owner group to meet the EPB notice deadlines is required.



Figure 13. Street view of Tinakori Village. Source: Maanvi Chawla

v. Concern for Body-corporate EPBs

The survey findings have highlighted that EPBs, with body corporate ownership structures, are at the highest risk by the ratio of buildings. Fifty percent of EPBs owned by body corporates are rated as high risk, compared to 14 percent in single person owned and 25 percent in single/couple owned. Additionally, when individual owners provided comments about specific concerns or ideas that weren't covered by the survey questions, 'Body Corporate Consensus Issues' was a significant theme.

4. CONCLUSION

Close to five years have passed since the rollout of the current EPB legislation. The Council's Earthquake Prone Building Owners' Survey was conducted to check in with EPB owners to gauge progress made towards seismic strengthening requirements. The survey was well received with a 50 percent return rate from owners, and self-reporting indicating a good understanding of their responsibilities.

Overall, the response to the survey was constructive and indicated more momentum among earthquake-prone building owners than previously observed. Most survey respondents indicated

that they'd engaged an engineer and plan to undertake seismic work. Intentions of the balance of owners (of approximately 300 buildings) remain unknown.

Since the survey, further buildings in Wellington have been assessed to be earthquake-prone and are now active EPBs.

More than a third of the current EPBs have an expiring deadline in the year 2027, and only 37 percent of owners of EPBs expiring that year responded to the survey. A concerning 63 percent of owners (136 buildings) whose notice expires in 2027 did not respond to the survey. Left unchecked, this unknown regarding seismic work plans is a risk to the work programme. The Council will continue to actively pursue this, as earthquake risk persists and the deadline year looms, putting pressure on the owners.

Owners seek compliance with EPB legislation, yet this intention does not necessarily match with their financial capability.

More than a fifth of owners that want to strengthen their EPBs are doubtful about their ability to fund the seismic work. The need for financial assistance through potential incentives or creative funding schemes is a highlight of the survey findings; discounts on various types of fees (resource consent, construction zone parking, corridor access request fees) appear as top-rated by responding owners.

Wellington's EPBs are deemed to be earthquake prone in terms of a moderate earthquake, as per the legislation. EPB deadlines are a legislative tool to make the city more resilient, one building at a time. The success of the EPB policy is evident through the 520 buildings that are no longer EPB. While the initiative and resource of the owners who remediated their EPBs is to be appreciated, it must be acknowledged that at least 7 percent of the current EPB owners surveyed have not decided or have no plan to remediate their EPBs.

The survey results will inform the next Impact Analysis phase of work; this analysis will quantify, where possible, the impacts of the application of the earthquake-prone building legislation., Specifically, this phase will look at the requirements for building owners to meet the notice expiry deadlines and the affect of any non-compliance.

With the COVID -19 pandemic disrupting supply chains and taking up most of the public's attention, earthquake risk in Wellington is expected to have faded from public memory. Effective and meaningful communication regarding the earthquake risk and the incentives on offer to reduce that risk is a prudent council approach.

The sooner we achieve seismic resilience the safer Wellington City will be.

September 2022

Resilient Buildings Team – Wellington City Council.