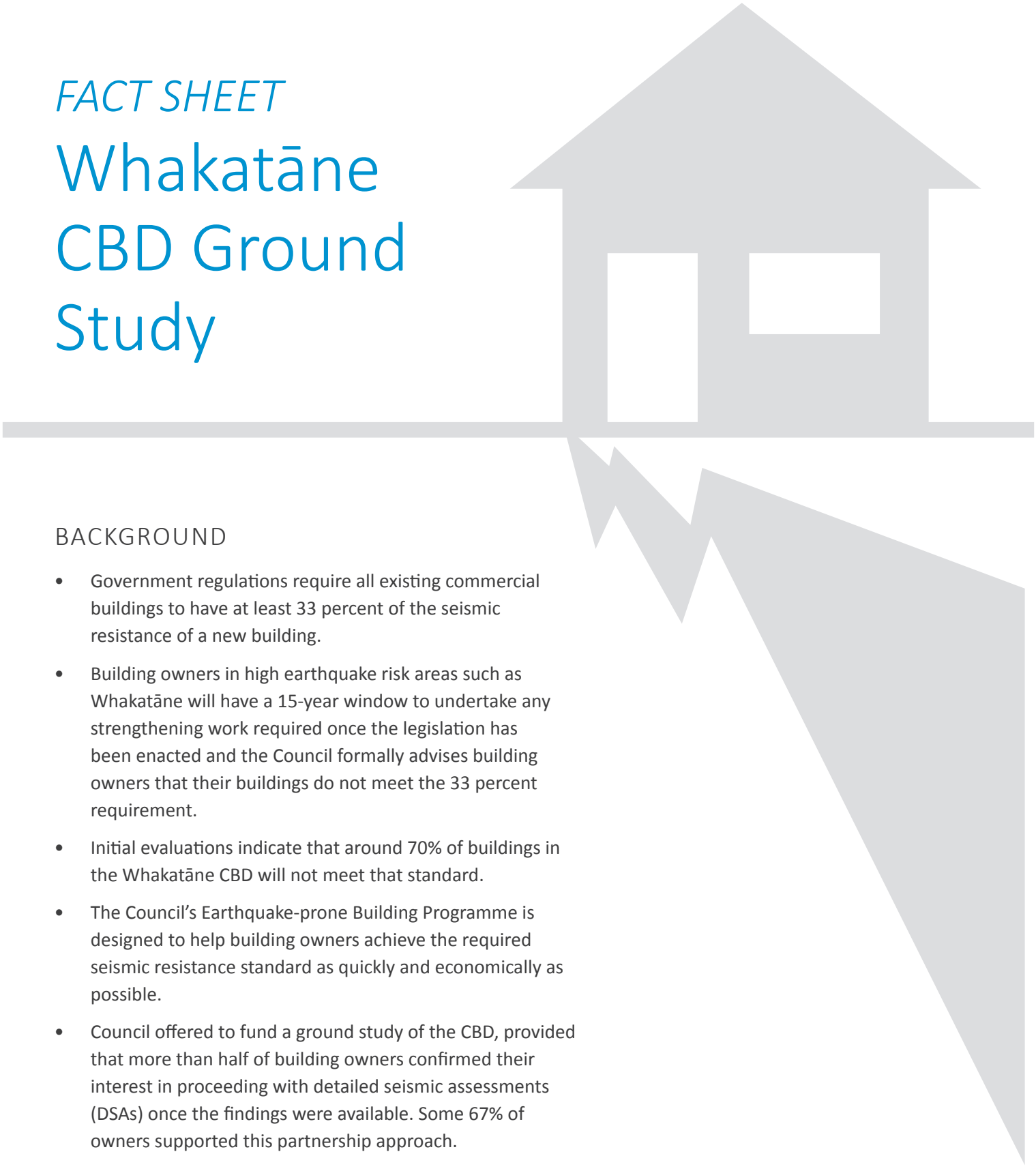
FACT SHEET

Whakatāne CBD Ground Study



BACKGROUND

- Government regulations require all existing commercial buildings to have at least 33 percent of the seismic resistance of a new building.
- Building owners in high earthquake risk areas such as Whakatāne will have a 15-year window to undertake any strengthening work required once the legislation has been enacted and the Council formally advises building owners that their buildings do not meet the 33 percent requirement.
- Initial evaluations indicate that around 70% of buildings in the Whakatāne CBD will not meet that standard.
- The Council's Earthquake-prone Building Programme is designed to help building owners achieve the required seismic resistance standard as quickly and economically as possible.
- Council offered to fund a ground study of the CBD, provided that more than half of building owners confirmed their interest in proceeding with detailed seismic assessments (DSAs) once the findings were available. Some 67% of owners supported this partnership approach.
- The CBD ground study provides reliable subsoil information that structural engineers can use when they undertake DSAs of CBD buildings, on the owners' behalves.

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OBJECTIVES & OUTCOMES

- The ground study was undertaken to provide a sound understanding of the ground conditions under the CBD – information which is required to make informed decisions about the seismic strengthening or replacement of existing buildings.
- It has provided high-quality information, which has been analysed by GNS Science to create a 3-D geological model and geotechnical database of the CBD area, which will continue to be developed and refined over time.
- The study confirms that the land in the CBD is predominantly Class C – shallow soil – which is typical of land infilled over time by alluvial deposition. Similar ground conditions are found in many urban centres, including Auckland, Hamilton, Tauranga, Palmerston North, Wellington and Nelson.
- Data derived from the Christchurch earthquake provides useful guidance on how our soil classes will behave if there is a major seismic event.
- We have the benefit of access to extensive, well-researched assessment methods; foundation design and retrospective strengthening options; and infrastructure replacement guidelines developed by the Earthquake Commission, Ministry for Business Innovation and Employment, Ministry of Education and the Canterbury Earthquake Recovery Authority.
- That body of work provides a high level of confidence that our liquefaction hazard is readily manageable, both in terms of new buildings and the seismic strengthening of existing buildings.
- A 200-metre wide strip of land parallel to the southern bank of the Whakatāne River could also be subject to a 'lateral spreading' hazard in the event of a strong earthquake. Based on the Christchurch earthquake experience, design solutions are available to address that hazard.
- Only minor liquefaction and ground spreading was experienced in the Whakatāne urban area as a result of the Edgecumbe earthquake.

Next Steps

- The ground study report will be made available on the Council website by the end of June.
- Groundwater monitoring will be undertaken to provide a better understanding of the liquefaction hazard.
- Work undertaken by GNS Science to identify the location of the Whakatāne Faultline indicates that it lies further west than previously thought. It has been recommended that several 40-metre deep drillholes be drilled to refine the fault location and the likely extent of surface rupture and uplift or subsidence.
- Once the full ground study report is available, building owners can proceed with DSAs.

FOR FURTHER INFORMATION CONTACT:

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