Memorandum

Corporate leadership team

Meeting date:	31 January 2024
Director:	Alison Geddes Director of Environment and Sustainability
Paper author:	Mishma Paul Building Compliance officer
Subject:	Earthquake-prone Building Status- Clock Tower buildings Hutt Hospital

Purpose (Executive Summary)

1. Council has received a Detailed Seismic assessment (DSA) prepared by aurecon dated 05 September 2023, from Te Whatu Ora, Health New Zealand, regarding the seismic performance of the clock tower buildings at Hutt Hospital. The Clock Tower buildings consist of three seismically separate, three-storey reinforced concrete structures from the 1940s, known as the **East Wing, West Wing, and Central Wing**.
2. The DSA confirms that the Clock Tower Buildings have a 20-30%NBS for an IL2 building.
3. This document outlines the process that Council is required to

undertake to accept this information. It also outlines the decisions that Council is required to make as a consequence of receiving this information.

Background/Discussion

1. The current framework for earthquake-prone buildings came into force on 1 July 2017 with changes to the Building Act 2004(BA04). This change moved from individual councils having earthquake prone building policies with a variety of timeframes to identify and resolve earthquake prone building issues to a national framework across New Zealand. This framework divided NZ into high, medium and low seismic risk, Lower Hutt being in the high seismic area. Council had 5 years from July 2017 to identify buildings that met the profile categories set in the EPB methodology-and this was completed by 30 June 2022. Building owners have 15 years to resolve earthquake prone building issues from a notice being issued. For priority buildings (as defined in section 133AE of the BA04) these timeframes are halved (7.5years).

2. The Building Act states in section 133AK that we must determine, in accordance with the Earthquake prone building methodology, whether a building is earthquake prone or not.

   This methodology (EPB methodology | Building Performance) sets out what the engineers are required to provide Council in an engineering assessment and we must accept the engineering assessment if it meets the criteria set out in section 2.5 of the methodology. There is also guidance for engineers that outlines the technical methods for engineering assessments of buildings (Seismic assessment of existing buildings | Building Performance).

3. One of the inputs into the structural design of building is the importance level. This is a multiplication factor on design loads relates to the use of the building- see table below based on table 3.3 of AS/NZS1170.0: 2002 and table 3.5 of NZS1170.5: 2004.

Importance level	Return period factor	Building type
4	1.8	Structures with special post disaster functions
3	1.3	Structures that may contain crowds or contents have high value to community

2	1.0	Normal structures and structures not in other importance levels

4. The Clock Tower buildings are an importance level 2 structure. The overarching definition in NZS1170.0 of an IL3 building states 'structures that as a whole may contain people in crowds or contents of high value to the community or pose risks to people in crowds.' In the case of the Clock Tower, it does not meet any of the example definitions for people in crowds.

5. Also, the phrase 'contents of high value to the community' is not well-defined in the standard and introduces ambiguity in assessing the importance levels. Due to this ambiguity in the overarching definition, the engineers were compelled to consider the specific examples provided within NZS1170.0. The relevant examples for a hospital building are 'emergency medical and other emergency facilities not designated as post-disaster' and 'health care facilities with a capacity of 50 or more resident patients but lacking surgery or emergency treatment facilities.' In the case of the Clock Tower, all medical procedures are elective (non-acute), and there are no facilities for emergency patients. Furthermore, the Clock Tower does not have any resident patients.

6. The percentage (%) NBS new building standard, is the rating given to a building as a whole expressed as a percent of new building standard achieved, based on an assessment of the expected seismic performance of an existing building relative to the minimum that would apply under the Building Code to a new building on the same site with respect to life safety.

7. In December 2023, the Hutt Valley DHB submitted a detailed seismic assessment (DSA1) that was undertaken on the clock tower buildings in May 2023, the Council is to send out an earthquake prone notice to Health New Zealand Te Whatu Ora regarding the clock tower buildings based on the DSA report provided to it and in accordance with the EPB methodology.

8. This DSA concluded that the Clock Tower buildings were earthquake prone and have a 20-30%NBS as an IL2 building. The %NBS is governed by the lowest individual building element that has been assessed and in the case of the clock tower this is the steel roof cross bracing, connections, Reinforced Concrete (RC) Shear walls, RC diaphragm and foundations in all the buildings.

Outcome

1. We are required to follow the process in the EPB methodology when determining whether a building is earthquake prone or not. This methodology sets out a series of requirements that any engineering assessment needs to meet and a territorial authority such as Hutt City Council must accept the engineering assessment if these requirements are met. The check sheet showing our acceptance of the DSA provided on 23 January 2024.

2. If a territorial authority such as Hutt City Council accepts an engineering assessment, then it must determine whether or not the building is earthquake prone in accordance with sections 133AB and 133AK of the BA04. The Council has accepted the engineering assessment provided on 23 January 2024 and has decided that the clock tower buildings are earthquake prone and is yet to advise the owner of this decision. The check sheet to record this decision is attached.

Risks

1. Council may receive another seismic assessment of the clock tower buildings in the future. The Council needs to make decisions when it receives information at a point of time based on the EPB Methodology that is cited in BA04.

Legal implications

1. The Building Act 2004 sets out a framework for earthquake implications on buildings. This framework is very prescriptive and documents the information to be provided by building owners, the engineering assessments and the decisions that Council is required to make as a territorial authority when it receives information.

Next steps

1. Council officers will confirm that the Clock Tower buildings are earthquake prone as documented on the Council property file and write to Health New Zealand Te Whatu Ora to inform them of the Council decision. The MBIE register of earthquake prone buildings will also be updated to reflect the current earthquake prone building status of the Clock tower buildings at Hutt Hospital.

Attachments

1. There are two attachments to this paper:

Attachment 1: DSA from Aurecon dated 05 September 2023(DSA).

520602-REP-ST-001
Hutt Hospital Clock1

Attachment 2: Check sheet detailing Councils acceptance of the engineering assessment dated 31 January 2024

EPB decision final
checksheet EQ2400(

Signed:

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