



Determination 2012/043

Whether the special provisions for dangerous, earthquake-prone, and insanitary buildings in Subpart 6 of the Building Act that refer to a building can also be applied to part of a building

1. The matter to be determined

- 1.1 This is a Determination under Part 3 Subpart 1 of the Building Act 2004¹ (“the Act”) made under due authorisation by me, John Gardiner, Manager Determinations, Department of Building and Housing (“the Department”), for and on behalf of the Chief Executive of that Department.
- 1.2 This is a Determination made on the initiative of the Chief Executive as permitted under section 181 of the Act², in the absence of an application for a Determination having been made.
- 1.3 The decision of the Chief Executive to initiate this Determination arises from a recommendation from ‘The Canterbury Earthquakes Royal Commission’s Interim Report’³ that territorial authorities should take action to ensure public safety in earthquakes by eliminating falling hazards.
- 1.4 There has subsequently been some uncertainty amongst territorial authorities as to whether the special provisions of the Subpart 6 of the Act to deal with earthquake-prone buildings can apply to the parts of buildings that may be falling hazards (such as parapets, chimneys and gable ends). In other words, the issue is whether just these parts of buildings can be defined as earthquake-prone, in cases where the whole building would not otherwise meet the test under section 122 of the Act as an earthquake-prone building. The uncertainty seems to have arisen because the definition of an earthquake-prone building refers only to a ‘building’ and does not explicitly refer to ‘a part of a building’.

¹ The Building Act, Building Code, Compliance documents, past determinations and guidance documents issued by the Department are all available at ww.dbh.govt.nz or by contacting the Department on 0800 242 243.

² In this determination, unless otherwise stated, references to sections are to sections of the Act and references to clauses are to clauses of the Building Code.

³ <http://canterbury.royalcommission.govt.nz/Interim-Report>

- 1.5 Section 181 of the Act provides that the Chief Executive may make a determination on her own initiative as follows:
- (1) The chief executive may, if he or she considers it necessary for achieving the purposes of this Act, direct that he or she will make a determination on a matter referred to in section 177—
 - (a) on his or her own initiative; and
 - (b) without an application for a determination being made under that section.
- ...
- 1.6 A determination to consider this issue meets the test of section 181 of the Act, as it is necessary for achieving the purposes of the Act under section 3, which include that ‘people who use buildings can do so safely and without endangering their health’.
- 1.7 In order to consider this issue I have looked at an example of a territorial authority’s exercise of its powers in issuing a notice under section 124 of the Act for part of a building which required the repair of a parapet of a building. The parapet only was identified as being potentially earthquake-prone.
- 1.8 In this determination, I have therefore considered as parties:
- the territorial authority, Gisborne District Council, carrying out its duties as a building consent authority and a territorial authority (“the authority”)
 - the owner of the building at 36 Gladstone Road, Gisborne.
- 1.9 The matter for determination⁴ is therefore whether the authority correctly exercised its power of decision in respect of section 124 of the Act in issuing a notice for an earthquake-prone part of a building. This matter turns on whether the special provisions of Subpart 6 of the Act relating to dangerous, earthquake-prone, and insanitary buildings that simply refer to a ‘building’ can also be applied to a part of a building.

2. The background

- 2.1 The Canterbury Earthquakes Royal Commission’s Interim Report (refer to paragraph 1.3) recommended that territorial authorities take action to ensure public safety in earthquakes by eliminating falling hazards. There was subsequently some uncertainty amongst territorial authorities as to whether the special provisions of Subpart 6 of the Act to deal with earthquake-prone buildings can apply to the parts of buildings that may be falling hazards (such as parapets, chimneys and gable ends) and thus whether these parts of buildings can be defined as earthquake-prone, in cases where the whole building would not otherwise meet the test under section 122 of the Act as an earthquake-prone building. If the sections of the Act do not apply to parts of buildings, territorial authorities would have no powers to require action and could only encourage voluntary action.
- 2.2 Under section 132 of the Act, territorial authorities were required to review their earthquake-prone building policies after not more than five years after the policy was adopted. Most territorial authorities undertook to review their earthquake-prone building policies by 31 May 2011. Through information provided to the Department

⁴ Under section 177(1)(b) and 177(3)(f)

as a part of these reviews by the authority, and following the 6.8 magnitude Gisborne earthquake on 20 December 2007, I was aware that the authority was dealing with the risks posed by parts of buildings that may be falling hazards in the event of an earthquake.

2.3 I therefore sought from the authority, an example of a building to which the authority had issued a notice under section 124 of the Act for a part of a building. The example building is constructed of blockwork and concrete. It is a two storey building with a parapet at the corner of the building.

2.4 The authority had issued a notice under section 124 of the Act on 16 February 2010, which stated:

The [authority] believes that the parapets may be Earthquake-prone as defined by [the Act]. The [authority] requires that parapets that are earthquake-prone as defined by the Act be strengthened within two years of a notice being issued unless a report is received by a [Chartered Professional] structural engineer that the parapets are not earthquake-prone.

Consequently you are required to strengthen your parapets or provide [the authority] with a report as detailed above by 16 February 2012.

Please note that any required parapet strengthening is an interim measure only and is separate from any requirement to strengthen the whole building.

2.5 The owner had then obtained a building consent and had undertaken building work to remove the parapet, and the authority had subsequently issued a code compliance certificate for this building work on 28 December 2011.

2.6 I made a direction under section 181(1) of the Act under due authorisation, for and on behalf of the Chief Executive of the Department. In a letter dated 17 April 2012, I wrote to the parties initiating the determination and I invited the parties to make submissions on the matter. The direction was then publicly notified on 11 and 12 May 2012 in accordance with section 7 of the Act.

3. Submissions

3.1 I issued a draft determination on 8 May 2012 to the parties for comment.

3.2 Both parties accepted the draft determination, and the authority identified a minor typographical error, which has since been corrected.

4. Discussion

4.1 General

4.1.1 The issue to be considered in this determination is whether the special provisions of Part 2, Subpart 6 that relate to dangerous, earthquake-prone or insanitary buildings, and which only refer to a 'building', can also be applied to a part of a building.

4.2 Observations about Part 2, Subpart 6

- 4.2.1 There are a number of important preliminary observations that can be made about Part 2, Subpart 6 concerning buildings that are dangerous, earthquake-prone or insanitary.
- 4.2.2 First, an insanitary building is defined in section 123 by reference to the parts of the building that are insanitary. A building will be insanitary if one of the matters listed in section 123(a) to (d) are present. These paragraphs refer to matters such as not having a supply of portable water, not having adequate sanitary facilities, or having insufficient or defective provisions against moisture penetration. These deficiencies could occur in any part of a building or in the whole of a building. For a building to be insanitary only one of these deficiencies in respect of a part of the building has to be present. Thus, it is clear that a reference to a building that is insanitary includes a reference to a part of a building that is insanitary.
- 4.2.3 Second, similar considerations apply to the question of whether a part of a building can be dangerous under section 121 as discussed above in respect of whether a part of a building can be insanitary. If the references in Subpart 6 to a dangerous building were interpreted to only apply to a whole building the application of the special provisions for dangerous buildings would be wholly defective; and building would have different meanings depending on whether an insanitary building or dangerous building was being referred to. It would be a very rare circumstance when the whole of a building was dangerous and thus the provisions would apply only in the rarest of circumstances.
- 4.2.4 The most common scenario where a building is dangerous involves one aspect of the building or a part of the building being dangerous; for example, the absence of barriers to protect people from falling, inadequate means of escape from fire, damage to building elements supporting a deck making the deck structurally unstable etc. Any particular feature of a building or the absence of such a feature can make a building dangerous and this is sufficient to trigger the application of Subpart 6 and the remedial provisions for dangerous buildings.
- 4.2.5 This is the approach taken by the District Court in a previous court case⁵, in which the Judge stated:
- An interpretation of a 'building' which excludes 'part of a building' would prevent a local authority from issuing a [section] 124 notice unless the local authority was satisfied that the entire building, not just a part of it, was dangerous. I am unable to accept that it was Parliament's intention that a notice under [section] 124 may only be issued if a territorial authority is satisfied that an entire building is dangerous.
- 4.2.6 Third, there are two other provisions in Subpart 6 that specifically refer to a part of a building and support the interpretation of Subpart 6 as applying to buildings and parts of buildings.
- Section 127 refers to an order requiring work to be done under section 124 and expressly states that such an order may include the demolition 'of all or part of a building', thus presuming that it may just be a part of a building that is dangerous, earthquake-prone or insanitary.

⁵ *Queenstown Lakes District Council v Wanaka Gym Limited* (District Court, Queenstown, Judge Holderness, 19 April 2010, CRN 08059500156[etc])

- Section 133 states that Subpart 6 does not apply to a building or ‘a part of a building that is a dam’.

Both these provisions are drafted on the predication that the reference to a building in Subpart 6 includes a reference to a part of a building that is dangerous, earthquake-prone or insanitary.

- 4.2.7 In concluding my observations about Subpart 6, there is nothing in Subpart 6 that suggests it should not or could not apply to a part of a building that is dangerous, earthquake-prone or insanitary, and there are a number of important indications in Subpart 6 that Parliament intended the reference to a building to include a reference to a part of such a building. The various provisions in Subpart 6 relating to the notices issued by a territorial authority requiring work to be carried out and the enforcement provisions all apply equally satisfactorily to a part of a building or a whole building that is dangerous, earthquake-prone or insanitary (see sections 124 - 130).
- 4.2.8 It is also relevant to note here that the other Parts of the Act refer to building and part of a building inconsistently. Determination 2011/068⁶ analysed this specific point in respect of the issue of a notice to fix under section 164 to an owner of a ‘building’ and considered whether such a notice could also be issued to the owner of a part of a building. That determination concluded that whether a reference to a building includes a reference to a part of a building could only be determined by the specific context of the provision in which the reference to the term ‘building’ appears.

4.3 Observations about the definition of an earthquake-prone building

- 4.3.1 An earthquake-prone building is specifically defined in section 122 as:
- (1) A building is earthquake prone for the purposes of this Act if, having regard to its condition and to the ground on which it is built, and because of its construction, the building—
 - (a) will have its ultimate capacity exceeded in a moderate earthquake (as defined in the regulations); and
 - (b) would be likely to collapse causing—
 - (i) injury or death to persons in the building or to persons on any other property; or
 - (ii) damage to any other property.
- 4.3.2 The terms of the definition must also be considered to ascertain whether there is anything in the definition that suggests one way or the other that a reference to an earthquake-prone building includes or does not include a reference to a part of a building that is earthquake-prone.
- 4.3.3 In my view, none of the matters referred to in the definition in section 122 suggest that Parliament intended to exclude parts of a building that are earthquake-prone when it referred to a building that is earthquake-prone. Section 122 provides that a building will be earthquake-prone if having regard to its condition, the ground on which it is built, and its construction, the requirements of section 122(1)(a) or (b) are satisfied.

⁶ Determination 2011/068 ‘The issuing of a notice to fix to a body corporate for a multi-storey commercial and residential unit-titled building at 2 Queen Street, Auckland’

- 4.3.4 The second limb of the definition in section 122(1)(b) provides that an earthquake-prone building is one that is likely to collapse causing injury or death to persons, and this paragraph could apply equally to the whole of a building or part of a building.
- 4.3.5 The first limb of the definition is contained in section 122(1)(a) and requires the ultimate capacity of the building to be exceeded in a moderate earthquake (as defined in “the Regulations”⁷). I have considered below whether there is anything in the meaning of this term that would prevent the definition of an earthquake-prone building applying to a part of a building.
- 4.3.6 The term ultimate capacity is not a specific structural engineering term, and I am therefore of the view that I should consider the natural and ordinary meaning of the words ultimate capacity. “Capacity” is defined⁸ as ‘the maximum amount that something can contain’ and “ultimate” in a structural sense is defined as ‘denoting the maximum possible strength or resistance beyond which an object breaks’. In my view, the reference to the ultimate capacity of a building is therefore a reference to the point at which the building fails in a structural sense and could collapse.
- 4.3.7 Comparing this with structural engineering practice, the commonly used structural design methodology in New Zealand considers the criteria for the acceptable behaviour of buildings and their components. The verification method for Building Code Clause B1 Structure, B1/VM1, cites AS/NZS 1170⁹ (with modifications) as a method for the design of structures to comply with the performance requirements of Clause B1. AS/NZS 1170.5:2004 has a specific section concerning the structural stability of parts and components of buildings (see section 8). The section sets out the appropriate design methodologies and basis of calculation for determining the structural strength of “all parts of structures, including permanent, non-structural components and their connections, and permanent services and equipment supported by structures” (at page 45 of NZS1170.5:2004) and requires such parts to be designed for the earthquake actions specified in the section.
- 4.3.8 These compliance documents require the behaviour of buildings to be within acceptable limits when subjected to particular actions such as earthquakes. When a structure fails to fulfil its basic functions it is said to have reached a limit state.
- 4.3.9 AS/NZS 1170 refers to two limit states:
- the ultimate limit state, which is the state at which the strength or ductility capacity of the structure is exceeded, when it cannot maintain equilibrium and becomes unstable, and is the limit beyond which the structural integrity of the building cannot be maintained
 - the serviceability limit state, which is the state at which a structure becomes unfit for its intended use through deformation, vibratory response, degradation etc and that affects the appearance or amenity of the building.

⁷ Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005

⁸ Oxford Dictionaries, Oxford University Press 2012

⁹ Australian/New Zealand Standard Structural design actions AS/NZS 1170.0:2002

- 4.3.10 At ultimate limit state, a building may be damaged but there is no injury or loss of life, and the following criteria are therefore assumed to be met:
- people within, and adjacent to the structure are not endangered by the structure or part
 - displacements of the structure are such that there is no contact between any parts of a structure for which contact is not intended, or between separate structures on the same site, if such contact would damage the structures or parts to the extent that persons would be endangered, or detrimentally alter the response of the structure(s) or parts, or reduce the strength of structural elements below the required strength
 - the structure does not deflect beyond a site boundary adjacent to which other structures can be built
 - there is no loss of structural integrity in either the structure or part.
- 4.3.11 The New Zealand Society for Earthquake Engineering publication ‘Assessment and Improvement of the Structural Performance of Buildings in Earthquakes’ (“the NZSEE guidelines”) considers the differences between the reference in section 122 to ultimate capacity and the engineering term ‘ultimate limit state’ and for practical reasons, equates ultimate capacity with ultimate limit state as defined in current design standards.
- 4.3.12 Therefore, there is nothing in the application of the ordinary meaning of the term ultimate capacity in relation to a building that prevents the consideration of whether a part of a building may have its ultimate capacity exceeded.
- 4.3.13 The section 122 definition of earthquake-prone building also contains the phrase ‘likely to collapse’ (section 122(1)(b)). I note that collapse limit state in engineering parlance is different to ultimate limit state. Collapse limit state is difficult to accurately assess and predict. I also note that the NZSEE guidelines observe that the collapse criterion in section 122(1)(b) do not relate back to expected performance in a moderate earthquake but rather to an overall expectation, as it is almost impossible to predict collapse.
- 4.3.14 The NZSEE guidelines also note that if the ultimate limit state of a building is exceeded in a moderate earthquake then a building will be earthquake-prone and there is no need to consider further whether the building would be likely to collapse causing injury or death to persons in the building or on any other property.
- 4.3.15 While this may be the case when the whole of a building is earthquake-prone, the collapse criterion requirements in section 122(1)(b) are particularly relevant to the consideration of a part of a building that is earthquake-prone. If the ultimate capacity of a part of a building will be exceeded in a moderate earthquake that part may not be significant enough to cause any damage or injury. Hence, the requirements of section 122(1)(b) are that, in addition to a part of a building having its ultimate capacity exceeded in a moderate earthquake, that part must also be likely to collapse causing injury or death to persons in the building or on other property.

4.4 Conclusion

- 4.4.1 For the reasons discussed in paragraphs 4.2 and 4.3, I therefore conclude that the special provisions of Subpart 6 of the Act relating to dangerous, earthquake-prone, and insanitary buildings that simply refer to a ‘building’ can also be applied to a part of a building.

5. Decision

- 5.1 In accordance with section 188 of the Act, I hereby determine that the authority correctly exercised its powers in issuing a notice under section 124 of the Act for a part of a building that was earthquake-prone.

Signed for and on behalf of the Chief Executive of the Department of Building and Housing on 7 June 2012.

John Gardiner
Manager Determinations

Appendix A:

A.1 The relevant sections of the Building Act 2004 (the Act):

122 Meaning of earthquake-prone building

- (1) A building is earthquake prone for the purposes of this Act if, having regard to its condition and to the ground on which it is built, and because of its construction, the building—
- (a) will have its ultimate capacity exceeded in a moderate earthquake (as defined in the regulations); and
 - (b) would be likely to collapse causing—
 - (i) injury or death to persons in the building or to persons on any other property; or
 - (ii) damage to any other property.

...

124 Powers of territorial authorities in respect of dangerous, earthquake-prone, or insanitary buildings

- (1) If a territorial authority is satisfied that a building is dangerous, earthquake prone, or insanitary, the territorial authority may—
- (a) put up a hoarding or fence to prevent people from approaching the building nearer than is safe;
 - (b) attach in a prominent place on, or adjacent to, the building a notice that warns people not to approach the building;
 - (c) give written notice requiring work to be carried out on the building, within a time stated in the notice (which must not be less than 10 days after the notice is given under section 125), to—
 - (i) reduce or remove the danger; or
 - (ii) prevent the building from remaining insanitary.

...

125 Requirements for notice given under section 124

- (1) A notice given under section 124(1)(c) must—
- (a) be fixed to the building concerned; and
 - (b) state whether the owner of the building must obtain a building consent in order to carry out the work required by the notice.
- (2) A copy of the notice must be given to—
- (a) the owner of the building; and
 - (b) an occupier of the building; and
 - (c) every person who has an interest in the land on which the building is situated under a mortgage or other encumbrance registered under the Land Transfer Act 1952; and
 - (d) every person claiming an interest in the land that is protected by a caveat lodged and in force under section 137 of the Land Transfer Act 1952; and
 - (e) any statutory authority, if the land or building has been classified; and
 - (f) the New Zealand Historic Places Trust, if the building is a heritage building.
- (3) However, the notice, if fixed on the building, is not invalid because a copy of it has not been given to any or all of the persons referred to in subsection (2).

126 Territorial authority may carry out work

- (1) A territorial authority may apply to a District Court for an order authorising the territorial authority to carry out building work if any work required under a notice given by the territorial authority under section 124(1)(c) is not completed, or not proceeding with reasonable speed, ...

127 Building work includes demolition of building

Any work required or authorised to be done under section 124(1)(c) or section 126 may include the demolition of all or part of a building.

128 Prohibition on using dangerous, earthquake-prone, or insanitary building

- (1) If a territorial authority has put up a hoarding or fence in relation to a building or attached a notice warning people not to approach a building under section 124(1), no person may—
 - (a) use or occupy the building; or
 - (b) permit another person to use or occupy the building.

...

129 Measures to avoid immediate danger or to fix insanitary conditions

- (1) This section applies if, because of the state of a building,—
 - (a) immediate danger to the safety of people is likely in terms of section 121 or section 122 or section 123; or
 - (b) immediate action is necessary to fix insanitary conditions.
- (2) The chief executive of a territorial authority may, by warrant issued under his or her signature, cause any action to be taken that is necessary in his or her judgment to—
 - (a) remove that danger; or
 - (b) fix those insanitary conditions.

...

130 Territorial authority must apply to District Court for confirmation of warrant

- (1) If the chief executive of a territorial authority issues a warrant under section 129(2), the territorial authority, on completion of the action stated in the warrant, must apply to a District Court for confirmation of the warrant.

...