



Determination 2019/065

Regarding the refusal to grant a building consent for alterations to District Court buildings because of a dispute about the importance level of the buildings at 9-11 Ratanui Road, Henderson, Auckland

Summary

This determination considers the authority's purported refusal to grant a building consent for seismic strengthening work because the authority did not agree with the importance level classification proposed by the structural engineer. The determination discusses whether the subject building should be classified as Importance Level 2 or Importance Level 3 as set out in Australian/New Zealand Standard 1170.0. This standard is referenced by Verification Method B1/VM1, which is a means of compliance with Building Code Clause B1 Structure.

1. The matter to be determined

- 1.1 This is a determination under Part 3 Subpart 1 of the Building Act 2004 ("the Act") made under due authorisation by me, Katie Gordon, Manager Determinations, Ministry of Business, Innovation and Employment ("the Ministry"), for and on behalf of the Chief Executive of the Ministry¹.
- 1.2 The parties to the determination are:
 - the owner of the buildings, N Phua ("the applicant"), represented by an agent, who is the applicant's structural engineer ("the structural engineer")
 - Auckland Council ("the authority"), carrying out its duties as a territorial authority or building consent authority.
- 1.3 This determination arises from the authority's requests for further information regarding proposed seismic strengthening work to the Waitakere District Court buildings, and the purported refusal to grant a building consent for the work. The authority did not agree with the importance level classification proposed by the structural engineer, which was used in the detailed seismic assessment of the buildings. The structural engineer believes the buildings should be classified as Importance Level 2 ("IL2") as set out in AS/NZS 1170.0². This standard is referenced by Verification Method B1/VM1, which is a means of compliance with Building Code Clause B1 Structure³. The authority believes the buildings should be classified as Importance Level 3 ("IL3").

¹ The Building Act and Building Code are available at www.legislation.govt.nz. The Building Code is contained in Schedule 1 of the Building Regulations 1992. Information about the Building Act and Building Code is available at www.building.govt.nz, as well as past determinations, compliance documents and guidance issued by the Ministry.

² Australia/New Zealand Standard AS/NZS 1170.0:2002 Structural design actions Part 0: General principles

³ 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.

- 1.4 The matter to be determined⁴ is therefore whether the authority correctly exercised its power of decision in purportedly refusing to grant building consent for the proposed seismic strengthening work with regard to the classification of the buildings' importance level.
- 1.5 I note the authority, and the structural engineer in responding to the authority, have referred to the importance levels contained under Clause A3 Building importance levels of the Building Code. These importance levels relate to Building Code Clauses C1 to C6 Protection from Fire. As the matter in dispute relates to the importance level classification used in the detailed seismic assessment of the buildings, I consider matters relating to the buildings' importance level for Clauses C1 to C6 are outside the scope of this determination. However, I comment on the use of Clause A3 in paragraphs 5.2.10 to 5.2.11 of this determination.
- 1.6 In making my decision, I have considered the submissions of the parties and the other evidence in this matter. I have not considered any other aspects of the compliance of the proposed building work, the Act or Building Code beyond those required to decide on the matter to be determined.
- 1.7 The relevant extracts of AS/NZS 1170.0 and Clause A3 can be found at Appendix A and Appendix B of this determination.

2. The buildings and proposed building work

- 2.1 The Waitakere District Court facility comprises two buildings – the original building constructed in 1977 (“the original building”) and the addition constructed in 1997 (“the addition”).
- 2.2 The original building has office type occupancy, along with four small courtrooms, which range from 46m² to 68m² in size.
- 2.3 The original building is constructed from reinforced concrete shear walls, suspended concrete floors constructed from in situ and prestressed concrete, and is supported on reinforced concrete pad and strip footing foundations with connecting concrete ground beams. The original building has a light weight metal framed roof.
- 2.4 The seismic load resistance for the original building is provided by the reinforced concrete shear walls.
- 2.5 The addition contains two courtrooms, which are 137m² and 104m² in size. The addition also contains 13 holding cells, with 11 of these located on the ground floor, and two on the first floor.
- 2.6 The courtrooms are constructed from part height precast wall panels supported above the suspended floor by reinforced concrete framing and reinforced concrete masonry walls. These are supported on reinforced concrete pad and strip footing foundations, and with a light weight metal framed roof. Between the two courtrooms, there is a timber framed and long run metal clad roof structure, which links with the original building.
- 2.7 The seismic restraint for the addition above level 1 is provided by the precast concrete wall panels, where roof and face loads are transferred through roof plane trusses to the in-plane loaded concrete walls. The seismic restraint below level 1 is provided by the reinforced concrete masonry walls.

⁴ Under sections 177(1)(b) and 177(2)(a) of the current Act.

- 2.8 The structural systems of the original building and the addition were designed to be independent; however, during construction of the addition a number of structural elements were joined.
- 2.9 The proposed building work comprises seismic strengthening work and work to seismically separate the two buildings, so that the structural systems for each building work independently as was originally designed.

3. The background

- 3.1 The applicant applied for a building consent for the proposed building work during 2018 (application number BCO10270461). I have not seen a copy of the application or the detailed seismic assessment⁵ of the buildings that was provided as part of the building consent application.
- 3.2 On 17 July 2018, the authority sent a request for further information to the architect for the project. With respect to the importance level, the authority stated it was of the view the buildings should be IL3 in accordance with Table 3.2 of AS/NZS 1170.0 under ‘public assembly buildings, theatres and cinemas of greater than 1000m²’. The authority also noted the fire report for the building states that ‘the building has an Importance Level 3 (building of higher societal importance)’.
- 3.3 On 8 August 2018 and 18 September 2018, the structural engineer responded, noting that the original block and addition are discrete blocks, and that the courtrooms are only 9% of the area of the original building and it would be unreasonable to classify the original building as IL3 for an activity that occupies such a small part of the floor area. The structural engineer also noted the addition block has courtrooms that are 26% of the floor area, but that the total floor area of the addition is only 916m², well below the 1000m² threshold. The structural engineer also noted that the buildings act as a single building in terms of the fire safety systems, but from a seismic point of view the buildings act as two independent buildings.
- 3.4 On 9 October 2018, the authority sent another request for further information. The authority reiterated previous comments about the importance level of the buildings and noted that:
- a previous detailed seismic assessment (dated April 2012) of the building classified the building as IL3
 - the buildings contain holding cells, and under Clause A3 of the Building Code, jails and detention facilities or correctional facilities are classified as IL3. (I note here that Clause A3 IL3 includes “jails and detention facilities” and Table 3.2 of AS/NZS 1170.0 IL3 includes “correctional facilities”).
- 3.5 On 28 November 2018 the authority sent a further request for further information. The authority reiterated previous comments about the importance level of the buildings, and also stated with respect to the holding cells that:
- If we compare police holding cells which are also temporary holding cells which require an [Importance Level 4 (“IL4”)] classification and the temporary detention provided within court buildings (both very similar functions) the IL3 classification for the court building is the correct classification. We also believe that this building fulfils a role of increased importance to the local community with special post disaster

⁵ A Detailed Seismic Assessment (DSA) is a quantitative assessment (of for example, the structural load paths of the building, the capacities of the structural elements, and the global building response to earthquake) for the purpose of determining whether a building is earthquake-prone in accordance with section 133AB of the Act.

functions. This type of building is described in Clause A3 the “description of building types” for IL3.

- 3.6 On 30 November 2018, the structural engineer responded to the authority, reiterating previous comments about the importance level of the buildings and noting that Clause A3 of the Building Code only applies for the purposes of Clause C and that the structural engineer was using AS/NZS 1170.0. With respect to the holding cells, the structural engineer stated that police stations are classed as emergency service facilities and are meant to function post disaster under the civil defence banner, unlike a District Court. The District Court does not meet the definition of an IL4 building and the holding cells are not correctional facilities. There are only 13 holding cells, with intermittent occupation and no overnight facilities.
- 3.7 In the 30 November 2018 response, the structural engineer also noted that the previous detailed seismic assessment (dated April 2012) of the buildings, which, for the purpose of establishing the earthquake rating of the building, classified the building as IL3. The assessment noted there was no guidance in the design standards on importance levels for court buildings. Furthermore, if IL2 was adopted, the design of the buildings (at the time of writing the seismic assessment) would achieve an earthquake rating that would be 30% better than the rating if the buildings were assessed as an IL3 building. The structural engineer was of the view that these two statements indicated there could be some doubt about classification adopted in this assessment. The letter also requested that the authority consider the classification of the original building independently to the addition, as the original building does not include holding cells.
- 3.8 On 29 January 2019, the authority sent another request for further information, reiterating previous comments about the importance level of the buildings, and stating:
- Clause A3 refers to IL3 buildings as being those which ‘fulfil a role of increased importance to the local community or society in general’ and includes jails and correctional facilities.
 - In a post disaster situation, the buildings should be able to allow the Courts to fulfil important post-earthquake judicial and administrative functions.
 - The fact that there are only 13 holding cells and these are not used overnight does not mean the building can be classified as IL2, as the Building Act does not stipulate a minimum number of holding cells before triggering the IL3 classification, and earthquakes can occur at any time.
- 3.9 The Ministry received an application for a determination on 4 July 2019.

4. The submissions

- 4.1 The structural engineer provided a submission explaining the background to the dispute, a copy of the architectural plans, a copy of Table 3.1 and 3.2 of AS/NZS 1170.0:2002, and a copy of previous Determination 2015/0596. In the submission, the structural engineer summarised the reasons for the view that the buildings are IL2 as follows:
- The buildings fall outside IL4 because they do not serve a post disaster function, and they do not contain any dangerous activities. None of the

⁶ Determination 2015/059: Regarding the building importance level of two proposed buildings at Grey Base Hospital (30 September 2015)

examples provided in Table 3.1 and 3.2 of AS/NZS 1170.0 are applicable to a District Court.

- The buildings fall outside IL3 because they don't affect crowds and the examples given don't contain court type buildings. The only category that could possibly apply to a court is that of public assembly buildings greater than 1000m². The original building does not fall within IL3 as it is mainly offices, with four small courtrooms ranging from 46m² to 68m², which total 211m². The total building area is greater than 1000m², but the courtroom area is less than 1000m². The addition does not fall within IL3 as the total building is 916m², and the total area of the two courtrooms is 241m².
- The authority has incorrectly referred to Clause A3 of the Building Code, which does not apply.
- The Court has 11 short-term holding cells on the ground floor and 2 holding rooms on the first floor. The holding cells and rooms are only occupied during business hours and have no overnight stay capacity. The occupants of the holding cells are delivered to the District Court from the place they are being detained for the day and are returned at the end of the day. The cells therefore are not a correctional institution under AS/NZS 1170.0, or a jail under Clause A3. While the cells are occupied, they do detain people, however, the facility is different to a jail or correctional institution, which would include facilities such as a prison, youth justice residence, immigration detention facility, police custodial facility. These facilities affect crowds and are occupied on a full-time basis. The Court's holding cells don't affect crowds and are occupied on an intermittent basis.
- There is also a police office in the original building. The office is 13m² and functions as an office for police staff to do paperwork. The office is not a police station, and therefore the building is not IL4.

4.2 The structural engineer also noted in respect of the original designs of the buildings that:

- based on a review of calculations for the original building, the design engineer selected Importance Class III in accordance with NZS 4203:1976⁷, which is equivalent to IL2 in AS/NZS 1170.0
- based on a review of calculations for the addition, the design engineer selected Importance Class IV in accordance with NZS 4203:1992⁸, which is equivalent to IL2 in AS/NZS 1170.0.

4.3 On 9 July 2019, in response to a query from the Ministry about the background to the dispute, the structural engineer noted that a detailed seismic assessment (of which I have not seen a copy, refer to paragraph 3.1) had been carried out for the alterations and strengthening work, and is based on an IL2 classification. The structural engineer provided:

- a copy of the authority's 17 July 2018 request for further information and the 8 August 2018 and 18 September 2018 response from the structural engineer

⁷ New Zealand Standard NZS 4203:1976 Code of practice for the general structural design and design loadings for buildings (now superseded)

⁸ New Zealand Standard NZS 4203:1992 General structural design and design loading for buildings (now superseded)

- a copy of the authority's 28 November 2018 request for further information, and the 30 November 2018 response from the structural engineer,
- a copy of the authority's 29 January 2019 request for further information.

4.4 On 26 July 2019, the authority acknowledged the application and made a submission. In its submission, the authority stated:

- The minimum requirements for a building housing justice and police facilities should be IL3.
- The comment on IL3 buildings in Table 3.2 of AS/NZS 1170.0 describes these buildings as “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”. The Court buildings fulfil a role of high value to the community and may contain people in crowds.
- Comparing the examples for IL2 and IL3 buildings described in Table 3.2 of AS/NZS 1170.0, IL3 is the appropriate category to be used for the buildings – IL2 covers buildings such as single-family dwellings and carparking buildings.
- The fire report provided for the buildings stated that the total occupant numbers allowed for this building is 466 persons. It is possible for more than 300 people to congregate in one area.
- A previous detailed seismic assessment (dated April 2012) of the buildings classified the building as IL3.
- The authority does not agree with the applicant's assessment that the holding cells are only occupied during the day and therefore the buildings do not fall into the IL3 category.

4.5 The authority provided a copy of the previous detailed seismic assessment (dated April 2012, refer paragraph 3.4 and 4.4) and copies of internal correspondence dated 10 October 2018 and 7 December 2018 in which officers of the authority stated their views were the buildings should be classified IL3.

4.6 The draft determination and submissions received in response

4.6.1 A draft determination was issued to the parties for comment on 4 September 2019.

4.6.2 The structural engineer responded on 18 September 2019 accepting the draft determination subject to non-contentious amendments.

4.6.3 The authority responded on 20 September 2019 and did not accept the draft determination. The authority provided a further submission and maintains the view that the buildings should be classified as an IL3 buildings (in summary):

- substituting Clause A3 with AS/NZS 1170.0 will still result in the subject buildings being classified as IL3
- the buildings with courtrooms do not fit within the examples of importance level 2 described in Table 3.2 AS/NZS 1170.0
- the subject buildings used as a court has a role of increased importance to the local community or to society in general in a post-disaster event, particularly the need for a judicial system post-disaster to deal with criminal activities
- the loss of the buildings would be more than a minor inconvenience to the community

- the fact that the courtrooms and holding cells are not occupied overnight or are occupied for short periods of time does not change the risk to occupants in a seismic event as they can happen at any time
- it is not feasible for the court to operate out of another building other than a purpose-built building because holding cells are required for the operation of the court.

4.6.4 The authority also clarified it had not received a response to the request for further information dated 29 January 2019, and had not refused to issue the building consent under section 50 of the Act.

5. Discussion

5.1 The importance level framework

5.1.1 In order to determine whether the authority correctly exercised its power of decision in its purported refusal to grant building consent for the seismic strengthening work, I must consider whether the building work as proposed would comply with Clause B1, based on establishing compliance via Verification Method B1/VM1 with an Importance Level 2 rather than Importance Level 3 for both buildings.

5.1.2 B1/VM1 is a Verification Method⁹ for Clause B1 Structure, and references Australia/New Zealand Standard AS/NZS 1170.0 as a means of compliance. AS/NZS 1170.0 uses importance levels, among other factors, to determine the loadings for earthquake, snow and wind that a building needs to be designed for. A building with a higher importance level is required to be designed for stronger forces than a building designed to a lower importance level.

5.1.3 The authority has provided a previous detailed seismic assessment (from April 2012) of the buildings, the procedure for which draws on B1/VM1 and requires an importance level to be established in accordance with AS/NZS 1170.0. Only the importance level of the buildings, which is in dispute between the parties, is considered in this determination.

5.1.4 The importance level classifications in AS/NZS 1170.0 are from 1 to 5. AS/NZS 1170.0 states that the importance level of a structure shall be determined in accordance with its occupancy and use as given in Tables 3.1 and 3.2 and notes that for those buildings not specifically mentioned, the designer will need to exercise judgment in assigning the appropriate level. The structural engineer believes the buildings should be classified as IL2, and the authority believes the buildings should be classified as IL3.

5.1.5 In Table 3.1 of AS/NZS 1170.0 (refer to Appendix A), which sets out the consequences of failure for importance levels, the description of IL2 is ‘medium consequence for loss of human life, or considerable economic, social or environmental consequences’, with a comment that this is ‘normal structures and structures not falling into other levels’. The description of IL3 (and IL4, which has the same description) is ‘high consequence for loss of human life, or very great economic, social or environmental consequences’, with a comment for IL3 that this is ‘major structures (affecting crowds)’.

⁹ A Verification Method is a means to establish compliance with the Building Code; refer section 19 of the Act.

- 5.1.6 Table 3.2 of AS/NZS 1170.0 (refer to Appendix A) sets out importance levels for different building types. This table repeats the Table 3.1 comment for IL2 buildings, and for IL3 buildings states these are ‘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’.
- 5.1.7 Table 3.2 also includes examples of types of buildings for each importance level. As discussed in Determination 2015/059, the examples in Table 3.2 should not be used in a strict and rigid manner without taking into account the intent and principles of the various importance levels.

5.2 The application of the importance level framework to the buildings

- 5.2.1 The authority is of the view that the buildings are IL3 because they fulfil a role of high value to the community, are used for justice and police purposes (and that these purposes are also carried out post-disaster), and may contain people in crowds. The authority has referred to the occupant load for the buildings being greater than 300 people. The authority considers the presence of holding cells brings the addition within the scope of IL3, as jails and detention facilities (as described in Clause A3), and correctional institutions (as described in AS/NZS 1170.0) have an IL3 classification, and the holding cells are similar to police holding cells, which require an IL4 classification.
- 5.2.2 As described in paragraphs 5.1.4 and 5.1.5, IL3 buildings are major structures and therefore are those that contain people in crowds, where significant numbers of people can congregate in one area. With respect to the principle of the consequences of failure, for IL3, the consequence relates to safety of crowds as well as emergency services personnel. I am of the view that the Court buildings considered in this determination are not buildings that contain crowds of people. A significant proportion of the buildings’ footprint is used by people working in the building and not accessible to members of the public, thereby limiting the numbers of people in many parts of the buildings. The parts of the building that the public use are limited to the foyer areas, courtrooms and associated meeting rooms, and the court registry counter area; I do not consider these spaces are configured in such a way or are of a size where more than 300 people could congregate in one area.
- 5.2.3 As well as safety, the description of IL3 refers to a high consequence of failure from an economic, social, or environmental point of view. The Courts serve a fundamental role in our society to protect peoples’ rights and uphold the rule of law. However, while the operation of Courts is essential, arrangements can be made to operate Courts out of other facilities, in comparison to many of the services mentioned in IL3 and IL4 classifications for which the actual buildings are required to facilitate the specialist functions of the services.
- 5.2.4 With reference to the examples of IL3 buildings in Table 3.2 of AS/NZS 1170.0, the buildings do not fit within the thresholds of size and occupancy numbers specified in the examples. The size and configuration of the original building and the addition are not such that more than 300 people would congregate in one area. The addition is less than 1000m² and the original building, while greater than 1000m², contains only four small courtrooms with a floor area of 211m².
- 5.2.5 I am of the view that although holding cells are used to detain people, holding cells are not the same as those in a “correctional institution”, which is the term listed as an example in Table 3.2. Furthermore, the 13 holding cells in the addition do not mean the addition as a whole is a building that may contain people in crowds or pose risks

to people in crowds, which is the key principle of IL3. Therefore, the presence of holding cells within the addition is not a factor that means the building should be classified as IL3. I also note that a police station is classified as IL4 because of its post-disaster operational functions, not because it also has holding cells within the building.

- 5.2.6 The buildings do not fit within the scope of the remaining examples listed in Table 3.2 for IL3 buildings, which include particular educational facilities, medical facilities, transport facilities, utilities, and facilities containing hazardous materials.
- 5.2.7 The authority has also referred to the need for the buildings to operate in a post disaster situation to allow the Courts to provide judicial and administrative functions. I acknowledge it is essential to have functioning Courts after a disaster and that after a disaster the Courts could well have a higher than normal workload to administer justice and operate functions such as Coronial Court. However, arrangements can be made to operate Courts out of makeshift or temporary facilities, unlike some other essential post disaster services, such as hospitals, which require specialist buildings and equipment, and for which they are reliant on the building being designed to accommodate that service. I also note that the buildings and services that are the intended focus of IL4 and some IL3 examples are those with a requirement to be part of the initial response phase after a disaster, e.g. medical emergency facilities, emergency services facilities, and designated emergency shelters.
- 5.2.8 This determination reflects the current definitions (and the associated examples) of importance levels which categorises buildings based on the consequence of failure. The function of Courts are not specifically covered in the examples that are listed in Table 3.2 of AS/NZS1170.0, nor are holding cells (as opposed to correctional institutions).
- 5.2.9 Neither vulnerability of occupants, nor an inability to be able to use the facility for essential services in the response and early recovery phase points to the need for an elevated importance level above IL2 within AS/NZS1170.0. There are many buildings within the scope of IL2 that fulfil important functions for the community and the loss of which would inconvenience the operators and users of the building and the community more generally. I note that building owners can choose to have their buildings designed for or assessed against higher loadings, including by using a higher importance level. For example, the applicant, in preparing their final design, might give consideration to increasing the seismic gap between the two buildings to be those appropriate for IL3 load cases. However, that is a decision to be made by the building owner, rather than a building consent authority. In considering whether to design or assess their building against higher loadings an owner may wish to consider, for example but not limited to, the specific features of the building (for example, in this case the holding cells), the use of the building, and/or the desired performance or operation of a building post-emergency.
- 5.2.10 As well as the importance level framework under AS/NZS 1170.0, which is referenced in B1/VM1, Clause A3 of the Building Code (refer Appendix B) classifies buildings by importance levels; however the Clause A3 importance levels relate to Clauses C1 to C6 Protection from Fire. The authority has referred to Clause A3 of the Building Code in its correspondence requesting further information about the building consent application, and has conflated the descriptions of the types of buildings given as examples.

5.2.11 As discussed in Determination 2015/059, the establishment of importance levels under AS/NZS 1170.0, as a standard referenced in B1/VM1, is distinct from establishing importance levels under Clause A3 of the Building Code for the purposes of applying the provisions of Clauses C1 to C6. I am of the view that it is not correct to draw on the wording and terminology used in Clause A3 to interpret the importance levels as set out in AS/NZS 1170.0.

6. The decision

6.1 In accordance with section 188 of the Building Act 2004, I hereby determine the authority was incorrect in its purported refusal to grant the building consent for the proposed seismic strengthening work with regard to the classification of the buildings as Importance Level 3 (in accordance with AS/NZS 1170.0). I reverse that decision, thus requiring the authority make a new decision taking into account the findings of this determination.

Signed for and on behalf of the Chief Executive of the Ministry of Business, Innovation and Employment on 20 December 2019.

Katie Gordon
Manager Determinations

Appendix A

A.1 The relevant tables from AS/NZS 1170.0 are:

Table 3.1 Consequences of failure for importance levels

Consequence of failure	Description	Importance level	Comment
Low	Low consequence for loss of human life, or small or moderate economic, social or environmental consequences	1	Minor structures (failure not likely to endanger human life)
Ordinary	Medium consequence for loss of human life, or considerable economic, social or environmental consequences	2	Normal structures and structures not falling into other levels
High	High consequence for loss of human life, or very great economic, social or environmental consequences	3	Major structures (affecting crowds)
		4	Post-disaster structures (post disaster functions or dangerous activities)
Exceptional	Circumstances where reliability must be set on a case by case basis	5	Exceptional structures

Table 3.2 Importance levels for building types – New Zealand structures

Importance level	Comment	Examples
1	Structure presenting a low degree of hazard to life and other property	Structures with a total floor area of <30m ² Farm buildings, isolated structures, towers in rural situations Fences, masts, walls, in-ground swimming pools
2	Normal structures and structures not in other importance levels.	Buildings not included in Importance levels 1, 3 or 4. Single family dwellings Car parking buildings
3	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	Buildings and facilities as follows: (a) Where more than 300 people can congregate in one area (b) Day care facilities with a capacity greater than 150 (c) Primary school or secondary school facilities with a capacity greater than 250 (d) Colleges or adult education facilities with a capacity greater than 500 (e) Airport terminals, principal railway stations with a capacity of greater than 250 (f) Correctional institutions (g) Multi-occupancy residential, commercial (including shops), industrial, office and retailing buildings designed to accommodate more than 5000 people and with a gross area greater than 10000m ² (h) Public assembly buildings, theatres and cinemas of greater than 1000m ² Emergency medical and other emergency facilities not designated as post-disaster Power-generating facilities, water treatment and waste water treatment facilities and other public utilities not designated as post-disaster Buildings and facilities not designated as post-disaster containing hazardous materials capable of causing hazardous conditions that do not extend beyond the property boundaries
4	Structures with special post-disaster functions	Buildings and facilities designated as essential facilities Buildings and facilities with special post-disaster function Medical emergency or surgical facilities Emergency service facilities such as fire, police

Importance level	Comment	Examples
		stations, and emergency vehicle garages Utilities or emergency supplies or installations as required as backup for buildings and facilities of Importance Level 4 Designated emergency shelters, designated emergency centres and ancillary facilities Buildings and facilities containing hazardous conditions that extent beyond the property boundaries
5	Special structures (outside the scope of this Standard – acceptable probability of failure to be determined by special study)	Structures that have special functions or whose failures poses catastrophic risk to a large area (e.g., 100km ²) or a large number of people (e.g., 100 000) Major dams, extreme hazard facilities

Appendix B

B.1 The relevant paragraphs of Building Code Clause A3 – Building importance levels are:

For the purposes of Clause C, a *building* has one of the importance levels set out below:

Importance level	Description of <i>building</i> type	Specific structure
Importance level 1	<i>Buildings</i> posing low risk to human life or the environment, or a low economic cost, should the <i>building</i> fail. These are typically small non-habitable <i>buildings</i> , such as sheds, barns, and the like, that are not normally occupied, though they may have occupants from time to time.	<ul style="list-style-type: none"> • Ancillary <i>buildings</i> not for human habitation • Minor storage facilities • Backcountry huts
Importance level 2	<i>Buildings</i> posing normal risk to human life or the environment, or a normal economic cost, should the <i>building</i> fail. These are typical residential, commercial, and industrial <i>buildings</i> .	<ul style="list-style-type: none"> • All buildings and facilities except those listed in importance levels 1, 3, 4, and 5
Importance level 3	<i>Buildings</i> of a higher level of societal benefit or importance, or with higher levels of risk-significant factors to <i>building</i> occupants. These <i>buildings</i> have increased performance requirements because they may house large numbers of people, vulnerable populations, or occupants with other risk factors, or fulfil a role of increased importance to the local community or to society in general.	<ul style="list-style-type: none"> • <i>Buildings</i> where more than 300 people congregate in 1 area • <i>Buildings</i> with primary school, secondary school, or daycare facilities with a capacity greater than 250 • <i>Buildings</i> with tertiary or adult education facilities with a capacity greater than 500 • Health care facilities with a capacity of 50 or more residents but not having surgery or emergency treatment facilities • Jails and detention facilities • Any other building with a capacity of 5000 or more people • <i>Buildings</i> for power generating facilities, water treatment for potable water, wastewater treatment facilities, and other public utilities facilities not included in importance level 4 • <i>Buildings</i> not included in importance level 4 or 5 containing sufficient quantities of highly toxic gas or explosive materials capable of causing acutely hazardous conditions that do not extend beyond property boundaries
Importance level 4	<i>Buildings</i> that are essential to post-disaster recovery or associated with hazardous facilities.	<ul style="list-style-type: none"> • Hospitals and other health care facilities having surgery or emergency treatment facilities • <i>Fire</i>, rescue, and police stations and emergency vehicle garages • <i>Buildings</i> intended to be used as emergency shelters • <i>Buildings</i> intended by the owner to contribute to emergency preparedness, or to be used for communication, and operation centres in an emergency, and other facilities required for emergency response • Power generating stations and other utilities required as emergency backup facilities for importance level 3 structures

Importance level	Description of <i>building</i> type	Specific structure
		<ul style="list-style-type: none">• <i>Buildings</i> housing highly toxic gas or explosive materials capable of causing acutely hazardous conditions that extend beyond property boundaries• Aviation control towers, air traffic control centres, and emergency aircraft hangars• <i>Buildings</i> having critical national defence functions• Water treatment facilities required to maintain water pressure for <i>fire</i> suppression• Ancillary <i>buildings</i> (including, but not limited to, communication towers, fuel storage tanks or other structures housing or supporting water or other fire suppression material or equipment) required for operation of importance level 4 structures during an emergency