



# Definition: Building complexity

Exposure Draft

2020

**Building complexity** means those attributes that are complicated or organisational, which increase the likelihood of non-compliance in a situation where the safety and/or health consequences of that non-compliance would be significant. [Table 2](#) defines the *building complexity* levels from level 0 to level 5.

**Note:**

The defined term *building complexity* is not currently used in the NCC. *Building complexity* does not affect a building or *plumbing* or *drainage* installation, or its design, unless the definition is applied in the future by the NCC or in legislation.

**Table 2 Building complexity levels**

<b>Complexity level</b>	<b>Building types</b>
0	Non-complicated building without organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a very low number of vulnerable occupants (10 or less)
1	Non-complicated building with organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a very low number of vulnerable occupants (10 or less)
1	Complicated building without organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a very low number of vulnerable occupants (10 or less)
1	Non-complicated building without organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a large number of vulnerable occupants (more than 10)
1	Non-complicated building without organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a very low number of vulnerable occupants (10 or less)
2	Complicated building with organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a very low number of vulnerable occupants (10 or less)
2	Non-complicated building with organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a large number of vulnerable occupants (more than 10)
2	Complicated building without organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a large number of vulnerable occupants (more than 10)
2	Non-complicated building with organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a very low number of vulnerable occupants (10 or less)
2	Complicated building without organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a very low number of vulnerable occupants (10 or less)
2	Non-complicated building without organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a large number of vulnerable occupants (more than 10)
3	Complicated building with organisational attribute(s) designed to accommodate a low number of occupants (100 or less) including a large number of vulnerable occupants (more than 10)
3	Complicated building with organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a very low number of vulnerable occupants (10 or less)
3	Non-complicated building with organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a large number of vulnerable occupants (more than 10)
3	Complicated building without organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a large number of vulnerable occupants (more than 10)
4	Complicated building with organisational attribute(s) designed to accommodate a large number of occupants (more than 100) including a large number of vulnerable occupants (more than 10)
5	Building essential to post-disaster recovery or associated with hazardous facilities whose failure poses a catastrophic risk to a very large number of people (more than 1000)

**Note:**

For the purposes of [Table 2](#) the following apply:

1. A complicated building is a building which has one or more of the following attributes:
  - (a) For Volumes One and Two, constructed using innovative materials or systems, where compliance is demonstrated by a [Performance Solution](#).
  - (b) Structurally complex or outside of established and codified design principles.
  - (c) An [effective height](#) of more than 50 m.
  - (d) Located in an area of high natural hazard risk or high environmental risk.
2. Organisational is where a building has one or more of the following attributes:
  - (a) Complex procurement arrangements, including design and construct, but not traditional contractual models or own, build and operate structures.
  - (b) A building system (or systems), relevant to structural, fire or life safety, which necessitate special maintenance or inspection and testing requirements.
3. Vulnerable occupants are occupants who require assistance to evacuate the building during an emergency, and include the following:
  - (a) Children in an [early childhood centre](#).
  - (b) Residents of an [aged care building](#) or [residential aged care building](#).
  - (c) People with a disability in a [residential care building](#).
  - (d) Patients in a [health-care building](#).

**Explanatory information:**

The key criteria that determine the level of safety and health risk in buildings are:

- Potential consequences in terms of the number of occupants exposed (N).
- The vulnerability of those occupants (V).

The key criteria that determine the likelihood of error in design or construction are:

- The complication of the building design, construction and material used (C).
- The organisational (O) factors, including the ownership structure, the method of procurement and the future maintenance requirements for life safety systems.

Levels of [building complexity](#) are:

- Level 0: No criteria present.
- Level 1: One criterion present.
- Level 2: Two criteria present.
- Level 3: Three criteria present
- Level 4: Four criteria present.
- Level 5: Post-disaster recovery buildings or hazardous facilities.

[Figure 2](#) illustrates the decision process to determine the [building complexity](#) of the subject building.

