



Class 2 and 3 buildings: Concessions for use of timber framing and/or non-combustible materials

Advisory Note
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Clarification of Specification C1.1 Clauses 3.10(a) and 4.3(a) to reflect NCC 2019 Volume One Amendment 1

Application

NCC Volume: One

Section/Part: Specification C1.1, Clauses 3.10(a) and 4.3(a)

Background

This Advisory Note was first released in July 2019. Since that time, Specification C1.1, Clauses 3.10(a) and 4.3(a) of NCC Volume One were amended by NCC 2019 Amendment 1. The Advisory Note has been updated to reflect changes made to these clauses.

Introduction

This Advisory Note provides information to explain the application and intent of the concessions contained in NCC Volume One, Specification C1.1, Clauses 3.10(a) and 4.3(a). This Advisory Note is provided to assist practitioners in future decisions on design, assessment, approval/certification and installation.

NCC Volume One, Specification C1.1, Clauses 3.10 and 4.3

Clauses 3.10(a) and 4.3(a) of Specification C1.1 contain concessions that allow low-rise Class 2 and Class 3 buildings of Type A or Type B construction to be constructed with timber framing and/or non-combustible materials in circumstances where non-combustible materials, concrete or masonry would otherwise be required. The concessions (as found in Clause 3.10(a) of Specification C1.1) are reproduced below:

- (a) In a Class 2 or 3 building having a *rise in storeys* of not more than 3—
- (i) notwithstanding C1.9(a) and (b) and C2.6, timber framing may be used for—
 - (A) external walls; and
 - (B) common walls; and
 - (C) the floor framing of lift pits; and
 - (D) non-loadbearing internal walls which are required to be fire-resisting; and
 - (E) non-loadbearing shafts, except shafts used for the discharge of hot products of combustion; and
 - (F) spandrels or horizontal construction provided for the purposes of C2.6; and
 - (ii) notwithstanding Clause 3.1(d) of Specification C1.1, for *loadbearing internal walls and loadbearing fire walls*—
 - (A) timber framing may be used; and
 - (B) *non-combustible* materials may be used.

Clause 4.3(a) of Specification C1.1 is equivalent to Clause 3.10(a) other than it applies to Class 2 and Class 3 buildings of Type B construction with a rise in storeys of not more than 2.

The concessions allow the use of timber framing (that is, the studs, plates and other such components of a building element) and/or non-combustible materials by removing the need for certain elements to fully comply with the following:

- Clauses 3.1(d) and 4.1(e)¹ of Specification C1.1, which require loadbearing internal walls and loadbearing fire walls to be built of concrete, masonry or (in certain circumstances) fire-protected timber.
- C1.9(a), which requires the following to be non-combustible: external walls, common walls, flooring and floor framing of lift pits, and non-loadbearing internal walls that are required to be fire-resisting.
- C1.9(b), which requires certain non-loadbearing shafts to be non-combustible.

¹ Reference to Clause 4.1(e) of Specification C1.1 appears in Clause 4.3(a) of Specification C1.1.

- C2.6, which requires spandrels and horizontal construction provided to inhibit fire spread via openings in different storeys to be non-combustible.

It should be noted that there are other provisions that, in some circumstances, require a component to be non-combustible. For example, in bushfire-prone areas, some Class 2 or Class 3 buildings are required to have non-combustible external walls. The concessions do not override these provisions.

Intent of concessions

The intent of the concessions is to allow the use of elements containing timber framing and/or non-combustible materials for Class 2 and Class 3 buildings in certain situations where non-combustible material, concrete or masonry is otherwise required. The ability to combine timber framing with non-combustible components, such as steel framing, columns or beams, is also permitted.

Consistent with this intent, when complying with the Deemed-to-Satisfy Provisions, all other requirements of the NCC continue to apply when using these concessions, including the need for non-framing components to comply with Clauses 3.1(d) and 4.1(e) of Specification C1.1, and C1.9(a), (b) and C2.6 where applicable.

Accordingly, in a building that utilises the concessions, the following components are to be non-combustible:

- The external cladding of a framed, external wall.
- The covering of a framed spandrel provided in accordance with C2.6.
- The lining of a framed garbage shaft.
- The flooring of a framed lift pit.

Further explanation of the concessions, including their intent, can be found in the Guide to NCC Volume One.

Relevant Performance Requirements

This Advisory Note explains the intent of Deemed-to-Satisfy Provisions. It is possible to develop a Performance Solution using the process outlined in A2.2(4), to

demonstrate compliance with the relevant Performance Requirements rather than use the Deemed-to-Satisfy Provisions described above. The following Performance Requirements are relevant to such a Performance Solution, together with any other Performance Requirements identified under A2.2(3):

- CP1, which requires that a building must have elements that maintain structural stability during a fire in a manner appropriate for that building.
- CP2, which requires, among other things, that a building must have elements that will avoid the spread of fire in a building and between buildings, in a manner appropriate for that building.

Class 1, Class 10 and Type C buildings

The concessions that are the subject of this Advisory Note apply to Class 2 and Class 3 buildings of Type A and Type B construction. NCC Volume One, Clauses 3.1(d) and 4.1(e) of Specification C1.1, and C1.9(a), (b) and C2.6 do not require elements of Type C buildings to be non-combustible. Similarly, these provisions do not apply to Class 1 or Class 10 buildings, which are covered by NCC Volume Two.