

## BUILDING SYSTEM

Building regulation advisory note

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<b>Related</b>	

# Building Code of Australia 2015

## Key Changes

This circular outlines to councils, certifiers, industry practitioners and other stakeholders the key changes made to the Building Code of Australia 2015 as they apply to NSW.

### Introduction

The National Construction Code (NCC) Series contains the Building Code of Australia (BCA) as Volumes One and Two and the Plumbing Code of Australia (PCA) as Volume Three.

In NSW the BCA is administered by the Department of Planning and Environment and the PCA is administered by NSW Fair Trading.

This circular provides information about the BCA component of NCC 2015, which took effect on 1 May 2015.

### NCC 2015 now online

The 2015 edition of the NCC can be accessed free online by registering on the Australian Building Codes Board (ABCB) website:

<http://services.abcb.gov.au/NCCOnline/>

Note: The NCC will no longer be produced in hard copy form by the ABCB.

### The BCA component of the NCC

The BCA sets national standards to ensure that building works reflect an acceptable level of health, safety, amenity and sustainability for the community. It contains the technical requirements for the design and construction of buildings and other structures, and covers matters such as structural adequacy, fire resistance, access and egress, services and energy efficiency.

The BCA is coordinated and published by the ABCB, and is referenced within the relevant legislation of each State and Territory. It is given legal effect in NSW through the *Environmental Planning and Assessment*

*Act 1979 and Environmental Planning and Assessment Regulation 2000.*

The BCA is currently amended annually with a new edition commencing on **1 May each year**. It should be noted that from the 2016 edition, the NCC will be amended on a three yearly basis rather than annually.

This circular provides information on some of the key changes made in the BCA 2015. It is aimed at a technical audience and relies on the reader having a working knowledge of the BCA.

### Information from the ABCB

This circular supplements and complements the following information from the ABCB regarding the changes made in the BCA 2015:

- The **Lists of Amendments**, listing each individual change made under BCA 2015, which are contained in the back of the respective Volumes of the BCA.
- The **ABCB's seminar presentations** on BCA 2015, which can be downloaded from the ABCB website [www.abcb.gov.au](http://www.abcb.gov.au) under Education: Events and Resources – NCC Information Seminars.
- An **advisory note** detailing corrections to NCC 2015 following the identification of errors in the original published document. This advisory note can be downloaded from the ABCB website [www.abcb.gov.au/education-events-resources/publications/advisory-notes.aspx](http://www.abcb.gov.au/education-events-resources/publications/advisory-notes.aspx)

## The BCA 2015 amendment

### FORMAT OF THE CODE

As a consequence of the NCC being made available free online, the format of Volume One for BCA 2015 has changed. The national provisions and State and Territory appendices are now combined into a single document. The BCA component of the NCC for 2015 consists of the following volumes.

- Volume One that deals primarily with Class 2 to 9 buildings (i.e. multi-unit residential, commercial, industrial and public buildings).
- Volume Two that deals with Class 1 and Class 10 buildings. Appendix A of Volume Two contains the State and Territory Variations and Additions.

### BCA 2015 OVERVIEW

The majority of the amendments to the BCA 2015 relate to:

- the inclusion of new Verification Methods for structural reliability and weatherproofing;
- changes to the barrier (balustrade) provisions to improve useability;
- expanding the requirements for sprinkler protection to all new residential aged care facilities;
- a restructure of Part J5 of Volume One to improve usability;
- the removal of the provisions relating to access for maintenance of energy efficiency measures; and
- a revised Acceptable Construction Practice in Volume Two for Termite Management Systems.

The BCA 2015 also includes minor technical changes and other amendments including the updating of some referenced documents.

The NSW Variations and Additions in both volumes (where necessary) have also been amended and updated to reflect changes to the national provisions and clarify certain requirements.

A new NSW Addition has also been included in Volume Two for 'garage top dwellings'.

## Changes to the Referenced Documents

### NEW EDITIONS AND NEW REFERENCES ADOPTED

- **In Volumes One and Two**
  - AS 2047 – 'Windows in buildings – Selection and installation'. The 2014 edition is referenced.
  - AS 3660.1 – 'Termite management – Part 1: New building work'. The 2014 edition is referenced with the 2000 edition retained for a 24 month transition period.
  - AS 3786 – 'Smoke alarms'. The 2014 edition is referenced with the 1993 edition retained for a 24 month transition period.

- AS/NZS 4284 – 'Testing of building facades'. The 2008 edition is referenced. This is a new referenced document.
- NASH Standard – 'Residential and Low-Rise Steel Framing - Part 2; Design Solutions'. The 2014 edition is referenced. This is a new referenced document.

- **In Volume Two only**

- AS/NZS 2179.1 – 'Specifications for rainwater goods, accessories and fasteners – Part 1: Metal shape or sheet rainwater goods, and metal accessories and fasteners'. The 2014 edition is referenced.
- AS 3660.3 – 'Termite management – Part 3: Assessment criteria for termite systems' The 2014 edition is referenced. This is a new referenced document.
- NASH Standard – 'Steel Framed Construction in Bushfire Areas'. The 2014 edition is referenced. This is a new referenced document.

### AMENDMENTS ADOPTED

- **In Volumes One and Two**

- AS 1668.2 – 'The use of ventilation and air conditioning in buildings – Part 2: Mechanical ventilation in buildings'. Amendment 1 is referenced.
- AS 1684.2 – 'Residential timber framed construction - Part 2: Non cyclonic areas'. Amendment 2 is referenced.
- AS 3700 – 'Masonry structures'. Amendment 1 is referenced.

- **In Volume One only**

- AS 1860.2 – 'Particleboard flooring – Part 2: Installation'. Amendment 1 is referenced.
- AS 2293.1 – 'Emergency escape lighting and exit signs for buildings - Part 1: System design, installations and commissioning'. Amendment 2 is referenced.
- AS/NZS 3837 – 'Method of test for heat and smoke release rates for material and products using an oxygen consumption calorimeter'. Amendment 1 is referenced.

- **In Volume Two only**

- AS 1397 – 'Continuous hot dip metallic coated sheet steel and strip – coatings of zinc and zinc alloyed with aluminium and magnesium'. Amendment 1 is referenced.

### DELETIONS

There are no referenced standards that have been deleted or transitional periods that end in the BCA 2015.

## Key amendments to the national BCA provisions

### CHANGES TO BOTH VOLUMES OF BCA 2015

- **Structural reliability Verification Method (BV1 and V2.1.1)**
    - A new Verification Method has been included as a means of verifying compliance with Performance Requirements BP1.1, BP1.2 and P2.1.1 (a), (b) and (c) in terms of the structural reliability of structural components and connections.
  - **Weatherproofing Verification Method (A1.1, FV1, 1.1.1 and V2.2.1)**
    - A new Verification Method has been included as a means for verifying compliance with Performance Requirements FP1.4 and P2.2.2, in terms of the ability of an external wall system to prevent the penetration of water.
    - To apply this Verification Method, new definitions for 'cavity wall', 'direct fix cladding wall' and 'unique wall' have been included in both Volumes.
    - The Verification Method requires a prototype of the external wall system to be tested for compliance using a specified test procedure based on the type of wall.
    - The use of the Verification Method is limited to external walls that achieve a maximum risk factor score, wind pressure and incorporate windows complying with AS 2047.
  - **Barriers to prevent falls (D2.16 and Part 3.9.2)**
    - The term 'balustrade or other barrier' has been simplified to 'barrier' to reflect the various means of providing a barrier to prevent falls, and that a barrier may not always be a 'balustrade'. For example, a wall may satisfy the requirements of a barrier.
  - **Steel framing (Various clauses)**
    - NASH Standard – 'Residential and Low-Rise Steel Framing - Part 2; Design Solutions', has been included as an additional Deemed-to-Satisfy compliance pathway for low rise steel framing.
  - **Energy efficiency (Various clauses)**
    - The thermal properties of in-slab heating or cooling systems have been extended to also include in-screed systems which provide both heating and/or cooling.
  - **Minor technical changes (Various clauses)**
    - Minor changes for clarity and improvement have been made to various provisions in each Volume.
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- **Definitions (A1.1)**
    - The definition of 'air-conditioning' has been amended to exclude services that are intended to maintain specialised conditions for equipment or processes. An example of this would be computers or servers in a data centre.
    - 'Open space' - Although there has been no change to the BCA definition, additional explanatory information has been included in the Guide to Volume One in relation to the use of the terms 'road' and 'public road' in the BCA. A public road is usually one that is controlled and maintained by or on behalf of a government body.
  - **Suitability of materials (A2.1)**
    - Clause A2.1 has been amended to identify the need to consider access for 'maintenance' for all parts of a building.
    - Refer also to changes to JP2 and J8.2.
  - **Fire hazard properties (Specification A2.4)**
    - The formulas for the calculation of the rate of heat release indices in Specification A2.4 for predicting a materials group number have been amended to include time difference ( $dt$ ).
  - **Open spectator stands (D1.6)**
    - This clause has been amended to clarify that exit width provisions in D1.6 apply to open spectator stands that accommodate 2000 persons or less.
  - **Barriers to prevent falls (D2.16)**
    - Certain parts of D2.16 have been restructured and tabulated for improved clarity and useability. The new table contains and separates the requirements for barrier height, barrier openings and the barrier climbability.
    - Whilst the technical requirements of D2.16 have essentially not changed from BCA 2014, there has been a minor change in the application of the clause. A barrier is now required where the floor or other area is 1 metre or more above the surface beneath. Previously, it only applied where the area was more than 1 metre above the surface beneath. This change has been made for consistency with the Performance Requirement.
  - **Openable windows (D2.24)**
    - The provisions relating to the protection of openable windows in fire isolated stairways and the like, and in Class 7 & 8 buildings, have been relocated from D2.16 to the more appropriate D2.24.

- **Residential aged care buildings** (*Table E1.5 and Specification E1.5*)
  - Table E1.5 has been amended to require sprinkler systems in Class 3 buildings and Class 9a healthcare buildings that are used for residential aged care.
  - Specification E1.5 has also been amended to reflect this change and allows the use of an AS 2118.4 (residential) sprinkler system, consistent with the requirements for a Class 9c aged care building.
  - Note: NSW also has requirements for sprinkler protection applicable to certain existing aged care facilities. Refer to <http://www.planning.nsw.gov.au/Policy-and-Legislation/Buildings/Safety-Campaigns/Fire-Sprinklers-in-Aged-Care-Facilities>
- **Access for maintenance of energy efficiency measures** (*JP2 and J8.2*)
  - The access for maintenance provisions within Section J have been removed from BCA 2015.
  - This follows on from the decision to remove maintenance requirements from the NCC as demonstrated with the removal of Section I in 2014.
  - It should be noted that access for maintenance must still be considered. See also previous comments relating to A2.1.
- **Energy efficiency of air-conditioning and ventilation systems** (*Part J5*)
  - Part J5 has been restructured and amended to simplify the provisions and improve useability.

#### **CHANGES TO VOLUME TWO OF BCA 2015**

- **Termite management systems** (*3.1.3*)
  - The Acceptable Construction Practice (ACP) for termite management systems has been restructured and amended to improve useability.
  - Table 3.1.3.1 has been revised to identify the type of termite management systems that can be used for different methods of floor construction.
  - New provisions have been included in the ACP to provide an additional compliance pathway for steel sheeting in suspended floor construction.
  - AS 3660.3 has been referenced to provide an additional compliance pathway for chemical barriers.
- **Allowable encroachments** (*3.7.1.7*)
  - Explanatory information has been added to clarify that a deck is not considered to be an allowable encroachment.
- **Bushfire areas** (*3.7.4.0*)
  - NASH Standard – ‘Steel Framed Construction in Bushfire Areas’ has been included as an additional Deemed-to Satisfy compliance pathway for the construction of buildings in bushfire areas.
  - A subsequent change has also been made to the NSW Variation. Refer to the commentary below.

#### **NSW VARIATIONS – AMENDMENTS FOR BCA 2015**

##### NSW - Volume One:

- **Class 9c buildings** (*NSW C2.5*)
  - This clause has been amended to clarify that a floor separating a fire compartment in a Class 9c building may have an FRL of 60/60/60 despite the requirements of C2.7, which requires a floor separating fire compartments to have the same FRL as a fire wall.
  - This change has been made for consistency with the national provisions.
- **Bounding construction** (*NSW C3.11*)
  - NSW subclause (d)(iii) has been amended to remove the provisions that related to non-sprinkler protected Class 3 buildings used for residential aged care, which are now redundant as a consequence of the requirement to provide sprinkler protection in residential aged care buildings.
- **Barriers** (*NSW Table D2.16 1 Barrier heights*)
  - The NSW Variation has been restructured consistent with the national provisions for useability. The technical requirements of the Variation have not altered and relate to Class 9b buildings used as entertainment venues.
  - It should be noted only Section 1 of Table 2.16a has been amended by the NSW variation. Section 2 (Barrier openings) and Section 3 (Barrier climbability) of the national Table 2.16a still apply in all instances in NSW.
- **Smoke hazard management** (*NSW Table E2.2b*)
  - In the part of the Table relating to night clubs, discotheques, and the like, the term ‘auditorium’ is no longer expressed as a defined term. The purpose of this change is to convey that the intended application of the term for the purpose of this entry in the Table is not limited to entertainment venues as defined in the *Environmental Planning and Assessment Regulation 2000*.
  - This clarifies that the smoke hazard management requirements apply to an auditorium in any nightclub, discotheque or the like. An auditorium in these buildings is an area designed principally to accommodate an audience to an entertainment, such as a dance floor.

- **Access for maintenance of energy efficiency measures** (*NSW J(A)P4, NSW J(A)5 and NSW Subsection J(B)*)
  - The variations relating to the access for maintenance of energy efficiency measures have been removed to reflect the changes to the national provisions.
- **Alignment with the national provisions** (*NSW E4.6, NSW J(A)P2, NSW J(A)1.2, NSW J(A)2.1, NSW J(A)2.2 and NSW J(A)3.2*)
  - The various clauses listed above have been amended or updated to reflect changes made to, or for consistency with, the national provisions.

NSW - Volume Two:

- **Referenced documents** (*Table 1.4.1*)
  - AS 1603.3 – ‘Automatic fire detection and alarm systems – Part 3 Heat alarms’. The 1996 edition is referenced in NSW only. This is a new reference as part the new Addition in NSW for garage top dwellings (See below).
- **Bushfire areas** (*3.7.4.0*)
  - The NSW Variation has been amended to include the adoption of the NASH Standard for Steel Framed Construction in Bushfire Areas. This Standard can be used as a Deemed-to Satisfy solution in NSW up to and including Bushfire Attack Level (BAL) 40, consistent with the current application of Planning for Bushfire Protection 2006 and AS 3959 – ‘Construction of buildings in bushfire-prone areas’.
  - The NSW Rural Fire Service (RFS) has published a Factsheet that provides information on the application of the NASH Standard in NSW and compliance with Planning for Bushfire Protection 2006. The Factsheet is available on the RFS website [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)
- **Energy efficiency** (*Various clauses*)
  - NSW 3.12.1.1 for in-slab and in-screed heating and cooling systems has been amended to reflect the changes to the national provisions.
  - The building sealing provisions in NSW P2.6.1(b) and NSW 3.12.3 have been amended to not apply to buildings in climate zones 2 and 5 where the only means of air conditioning is provided by an evaporative cooler. This amendment provides consistency with NSW Section J.
  - The application of the limitation to NSW P2.6.2 and 3.12.5 for existing services has been amended to clarify that the provisions do not apply to existing buildings being relocated.

Note: The energy efficiency provisions in the NSW Addition to Volume Two are additional to the

requirements of BASIX and support and complement BASIX.

- **Garage top dwellings** (*NSW 1*)
  - A new NSW Addition has been included in the BCA 2015 to address the construction of garage top dwellings.
  - A ‘garage top dwelling’ is a dwelling located above a non-appurtenant Class 10a private garage, also commonly referred to as ‘Fonzie flats’.
  - The NSW Addition has been included to support and complement various planning policies and initiatives that provide for this type of construction.
  - The provisions require the fire separation of the garage top dwelling from the non-appurtenant garage below, through wall and floor construction.
  - The provisions also include the requirement for a heat alarm in the non-appurtenant garage that is interconnected to the smoke alarm/s in the dwelling above. This will provide early warning of a fire to the occupants of the garage top dwelling. There is also a requirement to provide durable notices in the building so all occupants are aware of this fire safety measure.
  - The requirements for ‘garage top dwellings’ are in addition to all the other applicable national provisions.

**Further Information**

Please contact the Department of Planning and Environment’s information centre on 1300 305 695.

Department of Planning and Environment circulars are available at <http://www.planning.nsw.gov.au/circulars>

**Authorised by:**

**Carolyn McNally  
Secretary**

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**Important note:** This circular does not constitute legal advice. Users are advised to seek professional advice and refer to the relevant legislation, as necessary, before taking action in relation to any matters covered by this circular.

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