

## BUILDING SYSTEM

Building regulation advisory note

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# Building Code of Australia 2014 – Key Changes

This circular outlines to councils, certifiers, industry practitioners and other stakeholders the key changes made to the Building Code of Australia 2014, as they apply to NSW.

## Introduction

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

NCC 2014 took effect from 1 May 2014.

In NSW, the BCA is administered by the Department of Planning & Environment, while the PCA is administered by NSW Fair Trading.

This circular provides information in relation to the BCA component of NCC 2014.

## 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 Australian Building Codes Board (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 (EP&A) Act 1979* and *EP&A Regulation 2000*.

The BCA is amended annually with a new edition commencing on **1 May each year**.

This circular provides information on some of the key changes made in BCA 2014, and relies on the reader having a working knowledge of the BCA.

## Information from the ABCB

This circular supplements the following information from the ABCB regarding the changes made with BCA 2014.

- The **Lists of Amendments**, listing each individual change made under BCA 2014, which are contained in the back of the respective Volumes of the BCA.
- The **ABCB's seminar presentations** on BCA 2014, 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.

## The BCA 2014 amendment

### Format of the Code

The format of the BCA component of the NCC remains unchanged with BCA 2014 – the two Volumes will continue to comprise three books, as follows:

- Volume One – deals with Class 2 to 9 buildings (i.e. multi-unit residential, commercial, industrial and public buildings).
- Volume One – Appendices – contains the State and Territory variations and additions.
- Volume Two – deals with Class 1 and Class 10 buildings (i.e. Housing provisions). State and Territory variations and additions to the Volume Two provisions are contained within the document.

## Overview of the Building Code of Australia 2014

The majority of the amendments to BCA 2014 relate to:

- Quantifying the slip resistance of ramps stairways and landings;

- New provisions which provide for the use of photoluminescent exit signs;
- New provisions requiring smoke alarms in Class 1, 2, and 3 buildings and Class 4 parts of a building to be interconnected;
- An exemption from the requirement for fire hose reels to be provided in certain Class 2 and 3 buildings and Class 4 parts of a building, in lieu of additional portable fire extinguishers;
- The transfer of the energy efficiency provisions for heated water systems from the BCA to the PCA; and
- The deletion of Section I relating to maintenance.

BCA 2014 also includes other amendments relating to minor technical changes and the update of referenced documents.

The NSW Variations have also been amended to reflect changes to the national provisions, update references and clarify certain requirements.

## Changes to the Referenced Documents

### • New editions and new references adopted

#### In Volumes One and Two:

- AS 1657 – ‘Fixed platforms, walkways, stairways and ladders – Design, construction and installation’. The 2013 edition is referenced.
- AS 4586 – ‘Slip resistance classification of new pedestrian surface materials’. The 2013 edition is referenced.

Note: Test reports based on the 2004 edition of AS/NZS 4586 and issued prior to 1 May 2014 remain valid. The schedule of referenced documents for both volumes outlines the equivalent rating classifications used in the 2004 edition of the standard, when compared to the 2013 edition.

#### In Volume One only:

- AS 1668.4 – ‘The use of ventilation and air conditioning in buildings’ – Part 4 ‘Natural ventilation in buildings’. The 2012 edition is referenced.
- AS/NZS 3823.1.2 – ‘Performance of electrical appliances – Airconditioners and heat pumps’ – Part 1.2 – ‘Ducted airconditioners and air-to-air heat pumps – Testing and rating for performance’. The 2012 edition is referenced.
- ASTM E2073-10 – ‘Standard Test Method for Photopic Luminance of Photoluminescent (Phosphorescent) Markings’. The 2010 edition is referenced.

#### In Volume Two only:

- AS 1859.4 – ‘Reconstituted wood-based panels – Specifications’ – Part 4 ‘Wet-processed fibreboard’. The 2004 edition is referenced.
- AS/NZS 2269.0 – ‘Plywood – Structural’ – Part 0 ‘Specifications’. The 2012 edition is referenced.

### • Amendments adopted

#### In Volumes One and Two:

- AS/NZS 1170.2 ‘Structural design actions’ – Part 2 ‘Wind actions’. Amendment 3 to the 2011 edition is referenced.
- AS 3600 – ‘Concrete structures’. Amendment 2 to the 2009 edition is referenced.

### • Deletions

#### From Volumes One and Two:

- AS 1668.2 - ‘The use of mechanical ventilation and air-conditioning in buildings’ – Part 2 ‘Mechanical ventilation for acceptable indoor air quality’. Reference to the 1991 edition is deleted following the completion of the 12 month transition period.
- AS 3500.4 – ‘Plumbing and Drainage’ – Part 4 – ‘Heated water services’. Reference to the 2003 edition has been deleted as a consequence of consolidating the heated water requirements into NCC Volume Three – The PCA.

#### From Volume One only:

- AS 2118 – ‘Automatic fire sprinkler systems’. References to the 1995 editions of the following parts are deleted following the completion of the 12 month transition period.
  - Part 4 – ‘Residential’
  - Part 6 – ‘Combined sprinkler and hydrant’

#### From Volume Two only:

- AS 1397 – ‘Steel sheet and strip – Hot-dipped zinc coated or aluminium/zinc coated’. Reference to the 2001 edition is deleted due to the completion of the 24 month transition period.
- AS 4055 – ‘Wind loads for housing’. Reference to the 2006 edition is deleted due to the completion of the 12 month transition period.

## Key amendments to the national BCA provisions

### Changes to both volumes of BCA 2014

- **Slip resistance** (*D2.10, D2.13, D2.14 and 3.9.1.3*)

- Where the BCA previously required the surfaces of landings and ramps in Class 2 - 9 buildings and the stairway treads in all buildings to be “non-slip” or have a “non-skid nosing strip”, these surfaces are now required to meet a specified minimum slip resistance classification when tested in accordance with AS 4856.
  - In assessing the slip resistance classification, it is necessary to determine the likely conditions the tread will be subject to over the life of the building. This can be either wet, dry or both.
    - A dry surface is one that is not normally wet or likely to be made wet other than by an accidental spill.
    - A wet surface is one that is normally wet or likely to be made wet, including areas exposed to the weather.
  - There are two test methods within AS 4586 that can be used to determine the slip resistance classification, being the wet pendulum test and the oil-wet ramp test.
  - There are various compliance options available including: the inherent slip resistance of the surface material, surface treatments or coatings and nosing strips.
- **Interconnection of smoke alarms** (*Specification E2.2a and 3.7.2.2*)
    - The provisions relating to smoke alarms have been amended. Smoke alarms in Class 1 buildings, and in the sole occupancy units of Class 2 and 3 buildings and Class 4 parts of a building, must now be interconnected where there is more than one alarm installed.
  - **Heated water provisions** (*various clauses*)
    - As part of the consolidation of the heated water provisions, the technical requirements for heated water systems have been transferred to NCC Volume Three - the PCA. A cross reference to Volume Three has been included in both Volumes One and Two.
  - **Laundry facilities** (*FP2.2 and P2.4.3*)
 

The Performance Requirements for laundry facilities have been expanded to recognise the need for a building to be provided with facilities for the sanitary disposal of waste water, where the water has been used for things such as clothes washing, mopping floors and other domestic cleaning processes.
  - **Protection of openable windows** (*D2.24 and 3.9.2.5*)
    - The provisions have been amended to clarify that a window restricting device provided to protect a window in an early childhood centre or a window in a bedroom of a Class 1, 2 and 3 building or a Class 4 part of a building, need only be capable of restricting the window opening.
    - It has also been clarified that the height used to determine whether other openable windows need to be protected is measured from the floor of the room and not the sill of the window.
    - The Guide to Volume One and the explanatory information in Volume Two, has been expanded to include information on the term “child resistant” and how child resistance could be achieved.
- **Minor technical changes** (*various clauses*)
    - Minor improvements have been made to various provisions in each Volume to provide greater clarity, including those dealing with energy efficiency, as a result of feedback from BCA users.
- Changes to Volume One of BCA 2014**
- **Fire resistance concessions for Class 3 buildings** (*Specification C1.1*)
    - Specification C1.1 has been amended to extend the fire-resistance concession in Type A and B construction that is currently applied to certain Class 2 buildings, to include certain Class 3 buildings.
  - **Fire Resistance Level of building elements** (*Specification C1.1*)
    - Table 4 (Type B construction) has been amended to clarify that a load-bearing external column not incorporated in an external wall, does not need a Fire Resistance Level (FRL) when located more than 18 metres from a fire source feature.
  - **Exemption for fire hose reels** (*E1.4, E1.6 and G4.8*)
    - The provisions for fire hose reels have been amended to remove the requirement to install fire hose reels in a Class 2 or 3 building or a Class 4 part of a building.
    - This exemption does not apply in alpine areas and G4.8 has been amended accordingly.
    - As a consequence of the changes to the fire hose reel provisions, the provisions for portable fire extinguishers have also been enhanced to provide specific installation requirements for portable fire extinguishers in Class 2 and 3 buildings or Class 4 parts of a building. Such requirements include extinguisher type, size and location.
  - **Photoluminescent exit signs** (*E4.8 and Specification E4.8*)
    - New provisions have been inserted which allow the use of photoluminescent exit signs as an alternative to internally illuminated exit signs.

- Where installed, photoluminescent exit signs must comply with specific provisions relating to illumination, size, pictorial elements and viewing distance.
- **Provision of floor wastes (F1.11)**
  - The clause has been amended to clarify that a floor waste must be provided in certain circumstances and the floor of the room where the floor waste is required must be graded to permit the drainage of water to that floor waste.
- **Ventilation of car parks (F4.11)**
  - The clause has been amended to require that where ventilation to a car park is provided by way of a system of natural ventilation, this must comply with the relevant sections of Part 4 of AS 1668.
- **Section I – Equipment and safety installations**
  - This Section has been removed in recognition that maintenance is primarily a State and Territory regulatory function.
  - Refer also to comments relating to ‘Maintenance’ under ‘NSW Variations – Amendments for BCA 2014’.

#### Changes to the Guide to Volume One of the BCA 2014

- **Definitions (A1.1)** – “Sanitary compartment”
  - Additional guidance has been provided in terms of what constitutes a sanitary compartment.
- **Mixed classifications (C2.2)**
  - The Guide has been amended to clarify that the method for calculating the maximum allowable size of a fire compartment in buildings containing mixed classifications, applies to the floor area component of the calculation only.
- **Dimensions of exits and paths of travel to exits (D1.6)**
  - The Guide has been amended to clarify that projections below a ceiling must be considered when calculating the ceiling height in exits and paths of travel to any exits. In addition, it is also noted that exits and any path of travel to an exit must also comply with the minimum ceiling heights in F3.1.
- **Ceiling heights (F3.1)**
  - It has been clarified within the Guide that when measuring the height of a room, allowance should be made for floor finishes such as carpet and tiles to ensure the minimum ceiling height is achieved.

#### Changes to Volume Two of BCA 2014

- **Definitions (Part 1.1.1)**
  - ‘Design wind speed’ - The definition has been amended to clarify that non-cyclonic (N) and cyclonic (C) region wind classes are not equivalent, because of inherent differing wind pressure coefficients.
  - ‘Sanitary compartments’ - Additional guidance within the explanatory information has been provided in terms of what constitutes a “sanitary compartment”.
- **Wall cladding (3.5.3.3 and 3.5.3.4)**
  - The clauses have been amended to provide for the use of hardboard wall cladding boards and sheet wall cladding.
  - Hardboard wall cladding material must comply with AS 1859.4 which is a new referenced Standard.
  - New tables have been included within each clause which specifies the fixing requirements for both sheet and hardboard wall cladding.

#### NSW variations – Amendments for BCA 2014

##### NSW - Volumes One and Two:

- **Swimming pool barriers (NSW G1.1 and NSW 3.9.3)**
  - The wording of the NSW Variation has been amended to align with the terminology used in the referenced Australian Standard relating to ‘out-of-ground’ pool walls. This change does not result in a change to the intent or application of the NSW Variation.
- **Updating references to other legislation**
  - In both Volumes the references in the ‘Footnote: Other legislation affecting buildings’, have been updated to reflect new names of departments and agencies and reflect changes to the names of legislation. A reference to the *Boarding Houses Regulation 2013* has also been included.

##### NSW - Volume One:

- **Section I - Maintenance**
  - As the national provisions relating to maintenance have been deleted, the corresponding NSW Variations within NSW Section I have also been deleted.
  - It should be noted that this change does not have any effect on the relevant requirements relating to this matter within the *EP&A Regulation 2000* and the *Public Health Regulation 2012*.
- **Energy efficiency (NSW J(A)5.2, J(A)5.3, J(B)1 and J8.2)**
  - These variations have been amended so as to now apply the national provisions of J8.2 relating to access for the maintenance of energy efficiency measures in NSW.

NSW - Volume Two:

- **Building services** (NSW P2.6.2)
  - The wording of this Performance Requirement has been amended to be consistent with the change in terminology within the national provisions.
- **Thermal breaks** (NSW 3.12.1.1)
  - Subclause (b)(ii) has been amended to correct the cross reference to the national provisions.
- **Spa pool heating** (NSW 3.12.5.1)
  - The explanatory information has been amended to reflect the new clause within the national provisions, which does not apply in NSW, as spa pool heating is regulated under BASIX.

## Further information

For further information please contact the Department of Planning & Environment's information centre on 1300 305 695.

Department of Planning & Environment circulars are available from

<http://www.planning.nsw.gov.au/circulars>

### Authorised by:

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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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