



BUILDING SYSTEM

Building regulation advisory note

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Building Code of Australia 2013-key changes

This circular outlines to councils, certifiers, industry practitioners and other stakeholders the key changes made to the Building Code of Australia in 2013 as they apply to NSW.

Introduction

The National Construction Code (NCC) Series comprises the Building Code of Australia (BCA) as Volume One and Two and the Plumbing Code of Australia (PCA) as Volume Three. NCC 2013 took effect from 1 May 2013.

In NSW, NCC Volumes One and Two - the BCA, is administered by the Department of Planning and Infrastructure, while NCC Volume Three - the PCA is administered by NSW Fair Trading.

The BCA component of the NCC

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

The BCA is coordinated and published by the Australian Building Codes Board (ABCB) with each state or territory referencing it in their respective legislation. 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. New editions commence on **1 May each year**. This circular provides information on some of the key changes made in BCA 2013 and relies on the reader having a working knowledge of the BCA.

Information from the ABCB

This circular supplements the following sources of information from the ABCB regarding the changes made with BCA 2013.

- The **Lists of Amendments**, listing each individual change made under BCA 2013, are contained in the back of the respective volumes of the BCA – both hard copy and electronic.
- The **ABCB's seminar presentations** on BCA 2013 can be downloaded from the ABCB website at www.abcb.gov.au under Education: Events and Resources - NCC Information Seminars, following the completion of the seminar series.

The BCA 2013 amendment

Maintenance of format

The format of the BCA component of the NCC remains unchanged with BCA 2013 - the two volumes of the BCA 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 State and Territory variations and additions.
- Volume Two - deals with Class 1 and Class 10 buildings. State and Territory variations and additions to Volume Two provisions are contained within the document.

BCA 2013 Overview

- The majority of the amendments contained in BCA 2013 relate to:
 - New provisions for openable windows to reduce child falls in buildings.

- A new Performance Requirement and a new Deemed-to-Satisfy (DTS) provision requiring compliance with an ABCB Standard for construction in flood hazard areas.
 - Consolidation of the building related components of the AS 1735 lift series into the BCA.
 - A new Performance Requirement to provide a further option for the evacuation of building occupants; and
 - Enhancement of provisions to facilitate egress for people with a disability.
- Other amendments relate to:
 - Minor technical changes and update of referenced documents; and
 - Clarification, better understanding and application of the BCA.
 - NSW variations amended in BCA 2013 relate to:
 - A variation of the new defined term 'appropriate authority' applicable to provisions for flood hazard areas, and lift requirements;
 - The updating of references to reflect current terms and practices and to align with changes to national BCA provisions; and
 - A change to the swimming pool barrier provisions to maintain consistency with the Swimming Pools Act and Regulation, as a result of referencing the 2012 edition of the Australian Standard for swimming pool barriers.
 - The Guide for 2013, among other things, expands on the explanation of the definition of 'sole occupancy unit' (SOU) to clarify its intended application, especially in its application to student accommodation. See Planning Circular BS 13-002 regarding the Guide's expanded explanation of the definition.

Changes to Referenced Documents

• New editions and new references adopted

In Volumes One and Two:

- AS 1668.2 'The use of ventilation and air-conditioning in buildings - Mechanical ventilation in buildings.' 2012 edition referenced. 1991 edition retained for 12 month transition.
- AS 1926.1 'Swimming pool safety – Safety barriers for swimming pools'. 2012 edition referenced.
Note: The new edition treats a boundary fence acting as a swimming pool barrier separate from any other barrier. Another aspect of the new edition led to a change to the NSW Variations for Swimming Pool Barriers. (see NSW variations below).
- AS 4254 'Ductwork in air-handling systems in buildings' – Part 1 'Flexible duct' and Part 2 'Rigid duct'. 2012 edition referenced.
- AS/NZS 4505 'Garage doors and other large access doors' in the 2012 edition. New reference in BCA structural provisions.

- AS/NZS 4654. 'Waterproofing membranes for external above-ground use - Part 1 'Materials' and Part 2 'Design and installation' - 2012 editions. New reference in BCA damp and weatherproofing provisions.
- ABCB Standard for Construction of Buildings in Flood Hazard Areas 2012. New reference in BCA structural provisions.

In Volume One only:

- AS 2118 'Automatic fire sprinkler systems'. 2012 editions of the following referenced. 1995 editions retained for 12 month transition
 - Part 4 'Sprinkler protection for accommodation buildings not exceeding four storeys in height'; and
 - Part 6 'Combined sprinkler and hydrant systems in multistorey buildings'.
- AIRAH-DA09 'Air conditioning Load Estimation'. 1998 edition referenced.
- CIBSE Guide A 'Environmental design' 2006. New reference in BCA energy efficiency provisions.

In Volume Two only:

- AS/NZS 3500.5 'Plumbing and drainage – Part 5 Housing installations'. 2012 edition referenced.
- AS 4055 'Wind loads for housing.' 2012 edition referenced, 2006 edition retained for 12 month transition.

• Amendments adopted

In Volumes One and Two:

- AS/NZS 1170.2 'Structural design actions - Part 2 Wind actions'. Amendment 1 referenced.
- AS 1684 'Residential timber framed construction'. Amendment 1 referenced for each of:
 - Part 2 'Non-cyclonic areas';
 - Part 3 'Cyclonic areas'; and
 - Part 4 'Simplified – non-cyclonic areas'.
- AS 2050 'Installation of roof tiles'. Amendment 2 referenced.
- AS 3500.3 'Plumbing and drainage – Part 3 'Stormwater drainage'. Amendment 2 referenced.
- AS 3740 'Waterproofing of domestic wet areas'. Amendment 1 referenced.

In Volume One only:

- AS 2904 'Damp proof courses and flashings'. Amendment 2 referenced.
- AS 1562 'Design and installation of sheet roof and wall cladding – Part 1 Metal'. Amendment 3 referenced.

In Volume Two only:

- AS 4234 'Heated water systems - Calculation of energy consumption'. Amendments 1 and 2 referenced.

Deletions

From Volumes One and Two:

- AS/NZS 1170.2 'Structural design actions - Part 2 Wind actions'. Reference to 2002 edition deleted due to completion of 12 month transition period; and
- AS 2870 'Residential slabs and footings - Construction'. Reference to 1996 edition deleted due to completion of 12 month transition period.

From Volume One only:

- AS 1735 'Lifts, escalators and moving walks'. Except for Parts 11 and 12, the suite of standards is deleted due to relocation of building-related lift provisions to the BCA. Parts removed are:
 - Part 1 'General requirements'
 - Part 2 'Passenger and goods lifts – Electric'
 - Part 3 'Passenger and goods lifts – Electrohydraulic'
 - Part 7 'Stairway lifts'
 - Part 8 'Inclined lifts'
 - Part 14 'Low rise platforms for passengers'
 - Part 15 'Lift for people with limited mobility – Restricted use – Non automatically controlled'
 - Part 16 'Lift for people with limited mobility – Restricted use – Automatically controlled'.

Key amendments to national BCA provisions

Changes in both Volumes of BCA 2013:

- **Protection of openable windows (D2.24 and 3.9.2.5)**
 - New requirements are made in new clauses in each volume for the protection of openable windows in buildings of Class 1, 2, 3 and 4 and in early childhood centres.
 - Application - The provisions will apply where the floor below the window is 2 metres or more above the surface beneath:
 - in early childhood centres; and
 - in bedrooms in buildings and parts of Class 1, 2, 3 and 4.

Where the lowest level of the window opening is 1.7 metres or more above the floor, the provisions do not apply.

- The openable part of the window is required to be protected with a screen or a device that is capable of restricting the opening. Neither the screen nor the device must permit a 125mm sphere to pass through it or the opening. Methods of restricting the opening are not specified; however numerous methods are available, such as a spacer, key lock, screw fix, blocking device, or the like.
- Where the screen or device is designed to be removed, unlocked or overridden, it must have a child resistant release mechanism. Such a mechanism could include one that

requires use of a tool to remove, a key to unlock or a coordinated two handed operation to release.

- When a child resistant mechanism is used, in addition, a barrier of not less than 865mm must be provided under the openable window so that additional protection is provided in the case of the screen or limiting device being removed or disengaged.
- For windows to which the new provisions do not apply, the current requirements remain.
- Relationship with ventilation provisions: The 'openable size' of a window intended to meet natural ventilation requirements of F4.6, is based on the potential to open the window that is built into the design, and the potential openable size this would provide in the plane of the wall in which it is installed. The BCA does not require the window to be opened, simply that the window is able to be opened.

The design of the window will determine the 'openable size' for ventilation, while any limiting device will determine the restriction for protecting the opening. A device installed for the purposes of protecting the opening is not considered to affect the 'openable size' of the window for the purposes of ventilation.

- **Building in flood hazard areas (B1.6 and 3.10.3)**
 - New provisions have been inserted for residential buildings to meet requirements and resist actions associated with a defined flood event, if located in a flood hazard area. This includes a DTS provision requiring compliance with the ABCB Standard for Construction of Buildings in Flood Hazard Areas – available free of charge on the ABCB's website.
 - See a further Planning Circular BS 13 004 – regarding how the new BCA provisions for flood hazard areas and the NSW Planning System relate to each other and work together.
- **External waterproofing membranes (F1.4 and 3.8.1.3)**
 - New provisions have been included to provide reference to AS 4654 Parts 1 and 2 as a DTS solution when an external waterproofing membrane is proposed for use in the construction of a building.
 - In Volume Two, this also required amendment of the title of Part 3.8.1 and the 'Appropriate Performance Requirements' section.
- **Structural requirements for large garage doors (B1.4(l) and 3.11.6)**
 - In response to concerns arising from Cyclone Yasi, requirements have been inserted for garage doors and other large access doors in cyclonic areas to comply with a specified Australian Standard.
- **Minor technical changes** (various provisions)
Minor changes for clarity and improvement have been made to various provisions in each volume, including

those dealing with energy efficiency, as a result of feedback from BCA users.

Changes in Volume One of BCA 2013:

- **Lifts to assist with evacuation** (*DP7, EF3.3 and EP3.3*)
 - Feedback from BCA users indicates that the optional use of lifts to assist in evacuation is increasing as a design solution for tall buildings.
 - Therefore, in order to facilitate this option, a new Performance Requirement DP7 has been added, along with changes to the performance criteria for lift installations in Part E3.
 - The new provision is included to facilitate the evacuation of people with a disability and other occupants of tall buildings.
 - DP7 is only applicable where a building design specifies the use of lifts to assist evacuation.
 - Where a designer chooses to use lifts to assist evacuation, an Alternative Solution must be developed to address DP7 as there are no corresponding DTS provisions.
 - To provide guidance in developing an Alternative Solution, an Information Handbook has been developed by the ABCB and is available free of charge on the ABCB's website.
 - The use of lifts to assist evacuation is optional. When such a choice is made, use of the lift or lifts is additional to any required exits, such that the current system for determining the number and dimensions of exits required to serve a building would still apply.
 - Where a designer does not choose the option of designing a lift for evacuation, the design would need to comply with the DTS provisions of Part E3.
- **Egress for people with a disability** (*D2.15, D2.17, D2.21 and D3.6*)
 - Amendments have been made to facilitate egress for people with a disability in areas that are required to be accessible, or are serving an area required to be accessible. Newly required facilities are, as follows:
 - D2.15 - an accessible threshold.
 - D2.17- handrails in a required exit to comply with AS 1428.1.
 - D2.21 - door furniture to meet requirements for suitability for a person who cannot grip.
 - D3.6 – Braille and tactile signs to identify doors required by E4.5 to have an exit sign and to state 'level' followed by the floor level number. The use of the word 'number' is not intended to restrict the use of alphabetical descriptors such as "G" or "Ground" and the wording of the provision is likely to be clarified in the future.

- **Compartmentation of Class 9a buildings** (*C2.5*)
 - The requirements for smoke separation between ward and treatment areas and the remainder of a patient care area have been clarified to better reflect the original intent.
 - The redrafting clarifies that smoke separation must be provided between ward and treatment areas and the remainder of a patient care area, regardless of the floor area of those areas.
- **Lift requirements** (*various provisions*)
 - Building-related requirements for lifts have been relocated from the AS 1735 suite of standards into the BCA.
 - Consequently, the majority of references to the AS 1735 suite have been deleted, (see 'Referenced Documents, Deletions' above) and been replaced by extracted provisions. The references that remain are to:
 - AS 1735.11 - C3.10 for lift landing doors;
 - AS 1735.12 - E3.6 for handrails in lifts; and
 - AS 1735.12 - H2.6 for lifts in public transport buildings.

Changes in Volume Two of BCA 2013:

- **Stormwater** (*P2.2.1*)
 - The Performance Requirements relating to stormwater have been amended to quantify the requirements for storms of different average recurrence intervals.
- **Corrosion controls** (*3.4.2*)
 - Another option for corrosion protection of steel framing has been added to the general provisions.

NSW Variations – amendments for BCA 2013:

NSW - Volumes One and Two:

- **Definition of 'appropriate authority'** (*NSW A1.1 and NSW 1.1.1*)
 - The NSW definition permits a council or other authority to be considered as the 'appropriate authority' where relevant.
- **Updating references to other legislation**
 - References have been updated to reflect new names of departments and agencies and reflect changes to the names of legislation in:
 - both Volumes, Footnote: Other legislation affecting buildings; and
 - In Volume one, NSW FF2.1, NSW FP2.6 NSW F2.7 NSW F4.5 NSW G1.101 and NSW I1.2.

NSW - Volume One

- **Definition of 'special fire protection purpose'** (*NSW A1.1*)
 - The definition has been updated to correctly reference the name of the NSW State Environmental Planning Policy for Affordable Rental Housing.

- **Schedule of referenced documents** (*NSW Table 1*)
 - Update to reference the 2008 edition of AS/NZS 1596 'The Storage and Handling of LP Gas' that is referenced for 'entertainment venues' in NSW H101.24.1.
 - Update clause references to NSW legislation for swimming pools, to reflect the relocation of variations to swimming pool provisions from the national provisions to the State and Territory Appendices (see below).
- **Alignment with changes to national provisions** (*various provisions*)
 - References to subclauses in NSW D2.15, NSW D2.21 and NSW J(B), have been amended to reflect national changes to those provisions.
Note that in NSW D2.21, the renumbered (d) refers to the provisions of subclause (a) of the national D2.21, and subclause (c) of NSW D2.21.
- **Flag to specified sprinkler requirements under NSW legislation** (*NSW Section E*)
 - A new Note has been included in the NSW variations to flag the fact that NSW has additional requirements for fire sprinkler systems in certain residential aged care facilities. Readers are directed to the department's website address for details of the relevant legislation.
- **Swimming pool requirements** (*NSW Part G1*)
 - The current NSW variations to the swimming pool barrier provisions have been relocated from the national provisions of Part G1 to the NSW Appendix to Volume One.
 - The NSW variations for swimming pool barriers now exclude the walls of out-of-ground swimming pools from consideration as a barrier, in order to align with the policy and intent of the Swimming Pools Act and Regulation. This variation results from the referencing of the 2012 edition of AS 1926.1.

NSW - Volume Two

- **Damp-proofing membrane** (*NSW 3.2.2.6*)
 - Updating references to other BCA provisions and the Australian Standard.
- **Swimming pool access** (*NSW Part 3.9.3*)
 - The NSW variations for swimming pool barriers now exclude the walls of out-of-ground swimming pools from consideration as a barrier, in order to align with the policy and intent of the Swimming Pools Act and Regulation. This variation results from the referencing of the 2012 edition of AS 1926.1.

Further Information

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

Department of Planning & Infrastructure circulars are available from

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

Authorised by:

Sam Haddad
Director-General

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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