



# Building Newsflash

## AMENDMENT 13 TO THE BUILDING CODE OF AUSTRALIA

### Purpose

The purpose of this Newsflash is to advise of changes to the Building Code of Australia (BCA) that will occur when Amendment 13 is introduced.

### Commencement dates for Amendment 13

Changes to the BCA resulting from Amendment No 13 will be commence in Queensland in two stages. They are as follows:

1. On 1 July 2003
  - All amendments to Volume 1 will commence.
  - All amendments **other than the energy efficiency** provisions in parts 2.6 and 3.12 of Volume 2 will commence.
2. On 1 September 2003, the energy efficiency provisions in Parts 2.6 and 3.12 of Volume 2 will commence.

A summary of the more significant changes follows and the complete list of changes will be available on the Australian Building Codes Board (ABCB) website <http://www.abcb.gov.au/content/publications/> under Building Code of Australia 96, List of Amendments - Amendment No 13 soon.

### AMENDMENTS TO BCA VOLUME 1

#### Clause C1.10 - Fire Hazard Properties<sup>1</sup>

C1.10 of the BCA contains provisions that deal with the fire hazard properties of materials used in the construction of a building. The purpose of the provisions is to limit the spread of fire and the development of smoke during a fire, until building occupants have had time to evacuate.

The BCA currently refers to AS/NZS 1530.3 “Simultaneous determination of ignitability, flame propagation, heat release and smoke release” as the test to determine the fire hazard properties of materials and assemblies. The test assesses materials according to their tendency to ignite and propagate flame, the heat they release once ignition has occurred, and their tendency to release smoke.

It is acknowledged that AS/NZS 1530.3 in certain applications does not adequately evaluate fire performance in the end use. This is particularly the case for floor materials and floor coverings.

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<sup>1</sup> The following is an edited version of an advisory note prepared by the Australian Building Codes Board on C1.10 of the BCA. The full text of the document can be viewed at the Department’s Web site at [http://www1.dlgp.qld.gov.au/estore/building\\_codes/](http://www1.dlgp.qld.gov.au/estore/building_codes/) in “Publications and Products” under the heading of “ABCB advisory note on C1.10 of the BCA”

Research was undertaken by the Fire Code Reform Centre (FCRC), which investigated the need to control the fire hazard properties of materials and assemblies, along with assessing the available test methodologies. The findings of the research form the basis of the amendments to C1.10 of the BCA.

### Outline of Changes

The changes concern the testing requirements for floor materials and floor coverings, and wall and ceiling linings. New tests have been specified for both. These tests will eventually replace AS/NZS 1530.3. The changes are being phased in over a two year period (see Implementation Strategy).

The new test for floor materials and floor coverings is ISO 9239.1 “Reaction to fire tests for floor coverings”. This test is more commonly known as the “Floor radiant panel test”. The main outcome from the test is a material’s critical radiant flux. The critical radiant flux is an indication of the amount of heat flux that needs to be applied to a material, to cause a small flame to ignite the material. The higher the material’s critical radiant flux, the better performing a material is.

There are 2 new tests for wall and ceiling linings. They are ISO 9705 “Fire tests – Full scale room test for surface products” and AS/NZS 3837 “Method of test for heat and smoke release rates for material and products using an oxygen consumption calorimeter”. ISO 9705 is commonly referred to as the “ISO room fire test”, whilst AS/NZS 3837 is better known as the “Cone calorimeter test”. Manufacturers of wall and ceiling linings will have the option of using either test.

### Implementation Strategy

The changes are being carried out in two phases to give industry time to test existing materials and to adjust to the changes. The first phase is the introduction of the new testing requirements for floor materials and coverings, and wall and ceiling linings. These will be introduced in Amendment 13. During this phase materials that comply with the previous requirements can continue to be used. Therefore materials that have been tested to AS/NZS 1530.3 and have the required indices will still comply.

The second phase is the removal of AS/NZS 1530.3 as an alternative for testing floor materials and coverings, and wall and ceiling linings. This will occur after 2 years. From this time all floor materials and coverings, along with wall and ceiling linings will need to be tested to the new tests and comply with the requirements of Specification C1.10a.

## **Class 9C aged care buildings**

### Clause C2.5(b)(iii)

A new sub-clause has been inserted allowing internal walls, other than walls bounding lift and stair shafts, if supported by floors provided in accordance with C2.5(b)(ii), i.e. floors with an FRL of 60/60/60, to have the same FRL as the floor. The amendment eliminates an anomaly whereby floors having a lesser FRL than the walls could support internal walls.

### Clause D1.6(f)(iv)

Clause D1.6(f)(iv) allows doorways in Class 9c buildings to be fitted with two leaves. However, if one leaf is secured in the closed position in accordance with D2.21(f), the other leaf must have an unobstructed opening not less than 870 mm wide. This provision is similar to that allowed in a patient care area of Class 9a buildings.

### Clause D2.21(f)

Reference has been included to Class 9c buildings and D1.6(f)(iv). The amendment is a consequence of the changes to D1.6(f)(iv) allowing one leaf of a two leaf door in a Class 9c building to be secured in the closed position.

### Table 5 of Specification C1.1

D1.3 of the BCA requires all stairways in class 9c buildings to be fire isolated even if Type C construction. However, Table 5 of Specification C1.1 does not specify an FRL for walls bounding a stairway in 9c buildings. To correct the anomaly, a new provision has been inserted setting the required FRL for walls of fire-isolated stairways in Class 5 to 9 buildings.

## **Separation of electrical equipment**

### Clause C2.13 (d) and (e)

Queensland currently has a Variation to C2.13 of the BCA which includes additional subclauses (d) and (e). The Queensland provisions are concerned with the separation of electrical switchboards that serve emergency equipment.

Amendment 13 will see the inclusion of a national provision to address the same issues. Therefore, the Queensland Variation will be deleted in favour of the national requirement.

## **Portable fire extinguishers in primary and secondary schools**

### Table E1.6

An exemption from the requirements to install in classrooms and corridors of primary and secondary schools was made in to E1.4 in Amendment 10 of the BCA. This was on the basis that portable fire extinguishers would be installed. Table E1.6 requires portable fire extinguishers in fire compartments of less than 500m<sup>2</sup> not provided with fire hose reels. Larger fire compartments are not covered.

Table E1.6 of the BCA has been amended to require portable extinguishers to be installed to cover Class A fire risks in all classrooms and associated corridors in primary and secondary schools not provided with fire hose reels.

## **AMENDMENTS TO BCA VOLUME 2**

The amendments to Volume 2 of the BCA predominantly relate to the energy efficiency provisions for housing. The Department produced Newsflash number 131, which provides details of the Queensland variations to the BCA which will commence on 1 September 2003. The Newsflash can be found at the following Web address  
[http://www.dlqp.qld.gov.au/corporate/publications/building\\_codes/newsflash/2003/pdf/131.pdf](http://www.dlqp.qld.gov.au/corporate/publications/building_codes/newsflash/2003/pdf/131.pdf)

A detailed explanation of the other provisions of Parts 2.6 and 3.12 (the national provisions) concerning energy efficiency can be found at the Australian Building Codes Board Web site at <http://www.abcb.gov.au/content/publications/Amdt12listVol2.pdf>

## **R-Values for the external walls of light weight construction**

### Reflective building membrane (RBM)

The deemed to satisfy R-Value for external walls in Climate Zones 1, 2, and 3 is R1. To achieve an R1, the construction details in Queensland Figure 3.12.1.3 can be used. For lightweight construction using weatherboards, an additional R-Value of 0.53 needs to be provided. For fibre cement, an addition 0.60 is required.

The explanatory notes to Figure 3.12.1.3 indicate that an RBM will provide an added R-Value of 0.45, which leaves both forms of construction marginally short of the R1 requirement.

The University of Adelaide has produced data that indicates a higher R-Value than the BCA for typical lightweight construction details. Building certifiers may wish to use these figures when assessing development applications. Details can be found at the following Web site <http://www.timber.org.au/ThermPerf/R-valuesfortimberframedbuildingelements.htm>

## **Further Information**

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