



Building Newsflash

Definition of an Atrium

Purpose

To provide advice with respect to the interpretation of an atrium, as defined in the Part A1.1 of the Building Code of Australia (BCA).

Background

The Department has received a number of enquiries from practitioners concerning atriums. There appears to be some confusion over what constitutes an atrium and the application of clause G3.2 of the BCA with regard to the minimum required width of an atrium. An interpretation that is being placed on G3.2 is that if the atrium cannot contain a cylinder having a diameter of 6 metres, then it is not an atrium and need not comply with the deemed-to-satisfy requirements of G3 of the BCA. This interpretation is incorrect.

Legislation

Part A1.1 of the BCA defines *atrium* as follows:

Atrium means a space within a building that connects 2 or more storeys, and -

- (a) is wholly or substantially enclosed at the top by a floor or roof (including a glazed roof structure); and*
- (b) includes any adjacent part of the building not separated by an appropriate barrier to fire; and*
- (c) does not include a stairwell, rampwell or the space within a shaft.*

Clause G3.2 of the BCA - Dimension of atrium well, states:

An atrium well must have a width throughout the well that is able to contain a cylinder having a horizontal diameter of not less than 6 metres.

Interpretation

If a space within a building fits within the definition of an atrium, then it must comply with Part G3 or the relevant performance criteria of the BCA. Under clause G3.2, an atrium **must** have a width throughout not less than that necessary to contain a cylinder having a diameter of 6 metres. The 6 metre space replicates the separation distance between two buildings and is intended

to reduce the impact of radiant heat on people evacuating the building, and to reduce the likelihood of materials igniting, on the other side of the atrium well.

If an atrium doesn't meet the 6 metre criterion, it does not comply with the deemed-to-satisfy provisions of G3. For example if the atrium has a space that is only big enough to fit a cylinder having a 3 metre diameter, it is still an atrium, but it does not comply with Part G3.

In this case, the designer could either amend the design so that the atrium space is made big enough to contain the 6 metre cylinder or investigate the viability of an alternative solution that meets the relevant performance requirements.

Contact Officer

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