

# Industry Alert

Issued 8 March 2018

## Air-conditioners on Balconies

Air-conditioner condenser units and planter boxes are often installed on upper-storey balcony floors in residential buildings. The issue is that they are often installed close to a balcony barrier (balustrade), which can facilitate climbing by children who could then fall over the barrier with tragic consequences.

The National Construction Code (NCC) provides performance provisions and Deemed to Satisfy (DtS) solutions for barriers. However, it is not clear on how to address the issue of fixed items like air-conditioner condenser units.

The NCC Volume One Performance Requirement DP3 requires in part that: Where people could fall 1 m or more a barrier must be provided which must be continuous and extend for the full extent of the hazard; and be of a height to protect people from accidentally falling from the floor or roof or through the opening or an openable window.

The DtS solution clause D2.16 (c) requires that a barrier is to be constructed in accordance with Table D2.16a. Part 3(c) Barrier Climability, replicated below, identifies where a non-climbable barrier is required.

3 Barrier climbability	
Location	Requirement
(a) Fire-isolated stairways, fire-isolated ramps and other areas used primarily for emergency purposes, excluding— (i) external stairways; and (ii) external ramps. (b) Class 7 (other than <i>carparks</i> ) and Class 8 buildings.	No requirement.
(c) For floors more than 4 m above the surface beneath in all other locations.	Any horizontal or near horizontal elements between 150 mm and 760 mm above the floor must not facilitate climbing

Note, similar provisions apply in NCC Volume Two BCA Class 1 and 1 buildings.

The wording in the table applies to the construction of the barrier and not to any adjacent fixtures that may be near the barrier.

### DP3

#### Barriers

**DP3** principally relates to barriers which are meant to prevent people accidentally falling through an opening, etc.

#### Barriers and children

Children are at risk of falling off, over or through ineffectively designed or constructed barriers. Accordingly, **DP3** aims to make sure a barrier does not facilitate climbing to reduce the likelihood of children being able to climb over a barrier or fall through a barrier.

# Industry Alert

With the increasing number of families being accommodated in apartment blocks, many of these multi-storey residential buildings have external balconies and decks that contain air-conditioning condenser units and planter boxes. If these objects are placed near the barrier, and a young child can climb on them, they could provide means of climbing over the barrier resulting in a fall from the balcony or deck.

This is not just an issue for young children but could equally apply to an adult.

Examples of area of concern:



## What can be done to reduce the risks?

How do we address this inconsistency between the intent of the Performance Requirement and the DtS provision of the NCC?

To reduce the impact that air-conditioning condenser units, planter boxes and the like will have on meeting the intent of the NCC, the VBA suggests that the following options be incorporated to ensure the safety of all people using the balconies and decks:

1. Provide screens with non-climbable elements around or in front of the air-conditioning condenser unit;
2. Provide a 900 mm non-climbable zone from the top of the barrier, similar to that of a swimming pool barrier;
3. Install a steeply angled capping to the top of the unit to prevent climbing on to the unit,
4. Install the unit above the height of the barrier;
5. Ensure that there are no fixed items between 150 mm and 760 mm above the floor within a horizontal dimension of 600 mm from the inside face of the

# Industry Alert

barrier or in the case of the planter box on the outside that the planter box is not situated at an open joint between the glass panels, where that opening is greater than 10 mm.

6. Ensure that any conduits, pipes, taps and hose cocks are also placed behind guards



Please note: For air-conditioning condenser units, any screen/barrier will need to have adequate ventilation openings, without providing toe holes to aide in climbing. Also consider the method of gaining access for maintenance.