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BALUSTRADES IN HIGH RISE BUILDINGS

Purpose

The purpose of this Newsflash is to clarify the interpretation and implementation of the provisions relating to balustrades in buildings.

Background

A number of incidents involving structural failures of balustrades have been reported in recent years. Combined with the increase in the number of high-rise buildings, particularly residential apartments, this situation is of concern to both government and industry. In southern States, similar incidents where injury to persons has occurred, legal action against the parties involved i.e. builder and certifier has been initiated.

In Queensland, events such as the Indy 500 race on the Gold Coast, cause many people to use balconies on apartments and buildings as vantage points. The loads sustained by the balustrades in these and similar situations are higher than the normal residential situation.

Responsibilities of Certifier

A certifier is responsible for assessing compliance with the Building Code of Australia (BCA), which requires the performance requirements to be met. While the BCA includes a number of deemed-to-satisfy provisions relating to balustrade heights and locations, it is the referenced Australian Standards and performance statements which provide direction on such matters as loads to resist, materials, fixings and protection of materials.

A certifier must have due regard to the performance statements and the requirements of the Australian Standards. Failure to ensure compliance with such documents could lead to possible legal action should injuries be sustained from failures of structures.

Compliance with BCA

The BCA contains performance statements in both Volume 1 and 2 that require the balustrades to be “*of strength and rigidity to withstand – (i) the foreseeable impact of people; (ii) and where appropriate, the static pressure of people pressing against it*”. The deemed-to-satisfy provisions also require the building to resist loads determined in accordance with AS1170 parts 1 to 4.

AS 1170.1 Section 4.7.1 includes a note – *On railings or balustrades which may be called upon to restrain crowds or people under panic conditions, a load of up to 3kN/m run may be*



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exerted. This means that in localities where crowds are likely to occur on balconies, a higher live load should be used for calculations in the design of balustrades.

The BCA also contains a provision in A2.1 that states “ *every part of a building must be constructed in an appropriate manner to achieve the requirements of the BCA, using materials that are fit for the purpose for which they are intended*”.

The combination of each of these statements places a significant responsibility on a certifier to ensure the balustrades on buildings are designed and built correctly for the intended situation and purpose.

Responsibilities of Building Owners

Building owners are responsible for maintaining their buildings, particularly in corrosive marine environments. Failure to do this could contribute to a structural failure and possibly become the respondent in any legal action. However, the choice of materials at the design / approval stage must also be appropriate for the particular environment.

Please contact Mr Bruce Robb on (07) 3237 1705 should you require further information on this matter.