

Acceptable Solution F4/AS1

1.0 Barriers in Buildings

1.1 Barrier heights

1.1.1 Minimum barrier heights are given in Table 1.

COMMENT:

Refer to NZBC Clause D1 for *handrails* on stairs. *Handrails* can be constructed as an integral part of a barrier.

1.2 Barrier construction

1.2.1 In housing and other areas likely to be frequented by children under 6 years of age:

- Figures 1-4 show acceptable barrier constructions
- Openings anywhere over the full height of the barrier shall be such a size that a 100 mm diameter sphere cannot pass through them, and
- The triangular opening formed by the riser, tread, and bottom rail of the barrier on a stair shall be of such a size that a 150 mm diameter sphere cannot pass through it (see Figure 4).

COMMENT:

- Buildings* classified as housing are always likely to be frequented by children under 6 years of age. However, 'Likely to be frequented' in regard to other *buildings* means something more than that children under 6 will be present from time to time. There should be an expectation that small children will be present on a regular basis (see Determination No. 2001/9 on www.dbh.govt.nz). Different parts of a *building* may have different barrier requirements, such as shopping malls where children under 6 are likely to frequent the public areas, but not the areas used for food preparation or the handling of stock.
- The Clause F4.3.4(g) requirement that barriers restrict the passage of children under 6 years of age does not mean that all children under 6 must be unable to climb them. The Acceptable Solutions given here will prevent almost all children up to the age of 3 years from climbing. They can also be used as a guide for alternative designs.
- Barriers with full height vertical members are the hardest for children to climb. Horizontal or near horizontal rails can easily be climbed by 2 year olds if the rails extend the full height of a barrier, even if the barrier includes a 200 mm wide top rail or if it slopes inwards at 15°.

Table 1: Minimum Barrier Heights
Paragraph 1.1.1, Figures 1-5

Building type	Location	Barrier height (mm) (Note 1)
Detached dwellings and within <i>household units</i> of multi-unit dwellings	Stairs and ramps and their landings	900
	Balconies and decks, and edges of internal floors or mezzanine floors	1000
All other <i>buildings</i> , and common areas of multi-unit dwellings	Stairs or ramps	900
	Barriers within 530 mm of the front of fixed seating	800
	All other locations	1100

Note:

- Heights are measured vertically from finished floor level (ignoring carpet or vinyl, or similar thickness coverings) on floors, landings and ramps. On stairs the height is measured vertically from the *pitch line* or stair *nosings*.
- A landing is a platform with the sole function of providing access.
- Clause F4.3.1 has a limit on its application that may exclude the need for barriers in certain locations such as working wharves and loading docks.
- An 800 mm high barrier in front of fixed seating would be appropriate in cinemas, *theatres*, and stadiums.