



# INFORMATION SHEET

## BUILDING SERVICES

Ref: BCA 15-05  
Current at: July 2019

### Barriers and Handrails

The National Construction Code (NCC) Volume 2 2019 contains requirements barriers and handrails for Class 1 and 10 buildings. The purpose of this information sheet is to provide a brief overview of the barrier requirements and changes contained in the 2019 edition of the NCC.

The barrier requirements in Part 3.9.2 of the NCC set out the acceptable construction practice for barriers and handrails to minimize the risk of persons falling from a stairway, balcony, landing, trafficable roofs or the like and for the protection of openable windows in certain circumstances.

These provisions have changed over the last few years so it is important that members review these changes to ensure that they install compliant barriers and handrails.

The important change to 3.9.2.2 is that it refers to a trafficable surface when determining if a barrier is required.

A continuous barrier must be provided along the side of a trafficable surface of:

- any roof top space to which general access is provided;
- any stairway or ramp;
- a floor, corridor, hallway, balcony, deck, verandah, mezzanine, access bridge or the like; and
- any delineated path of access to a building,

Where it is possible to fall 1 m or more from the trafficable surface to the surface beneath.

#### What is a trafficable surface?

A trafficable surface is anywhere where a person would normally walk to get from one place to another, being either from the street, throughout the house or from the house to another building.

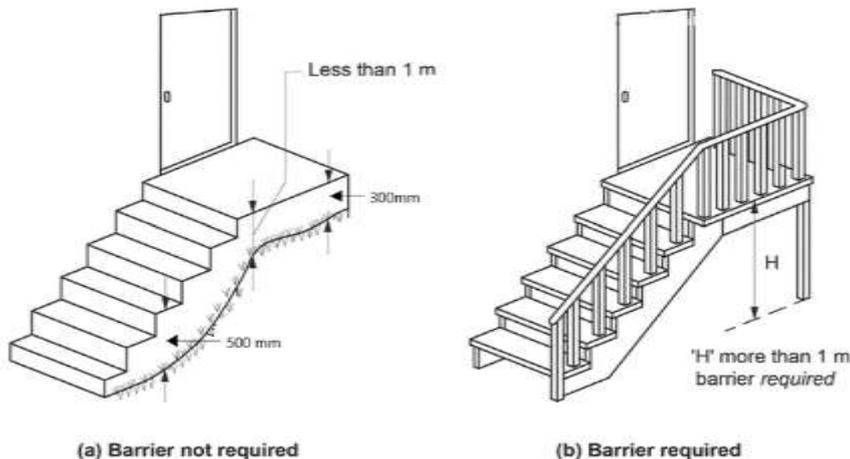


Figure 1

#### Barrier for retaining walls

This is particularly important when considering if a barrier is required adjacent to a retaining wall. The provisions only apply where the retaining wall is associated with a delineated path of access to a building from a road, or between buildings.

DISCLAIMER - The above is intended to provide general information in summary form. The contents do not constitute specific advice and should not be relied upon as such. Formal specific advice should be sought by members with respect to particular matters before taking action.

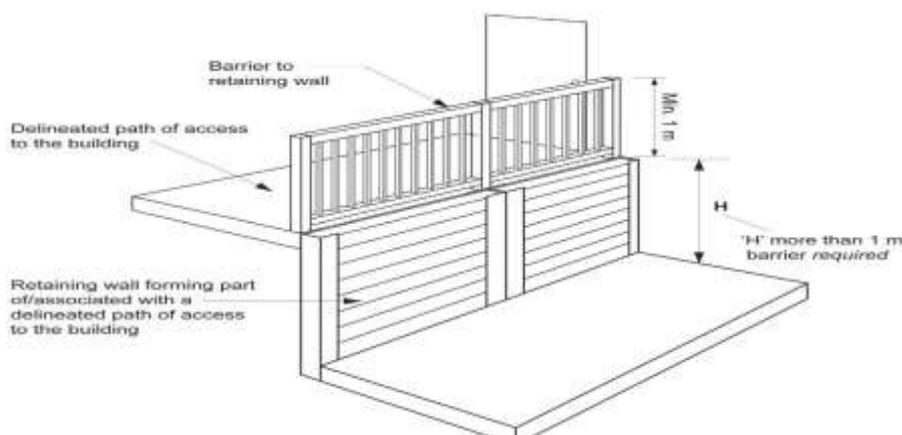
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This is not a new provision, the figure below has been added to clarify that where it is possible to fall 1m or more from a walkway or path leading from the street to the house, garage to a house, etc. that is supported by a retaining wall a barrier is required to be provided.

It does not apply to a retaining wall used for landscaping or terracing down the back yard. The clause states that:

The requirements do not apply to—

*a retaining wall unless the retaining wall forms part of, or is directly associated with a delineated path of access to a building from the road, or a delineated path of access between buildings (see Figure 3.9.2.2);*

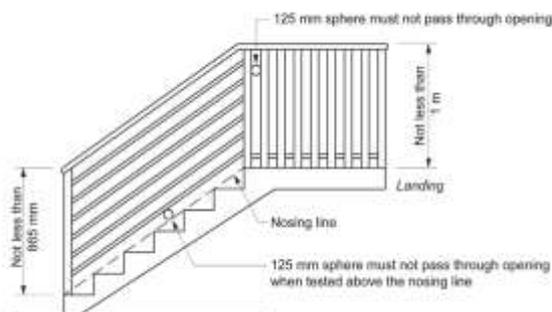


**Figure 3.9.2.2**

### **What are the construction requirements for barriers?**

The construction of a barrier must comply with the following (these provisions have not changed but they have been renumbered with some editorial improvements):

- The height must not be less than 865 mm above the nosing's of the stair treads or the floor of a ramp;
- The height must not be less –
  - 1 m above the floor of any access path, balcony, landing or the like (see NCC Figure 3.9.2.2 and figure 3.9.2.3) or
  - 865 mm above the floor of a landing to a stairway or ramp where the barrier is provided along the inside edge of the landing and does not exceed a length of 500 mm
- To enable a smooth transition from stairway flight to landing a transition zone may be incorporated where the barrier height changes from 865mm on the stairway flight or ramp to 1 m at the landing. (see NCC figure 3.9.2.4).
- Openings in barriers (including decorative balustrades) must be constructed so that they do not permit a 125 mm sphere to pass through it. For stairs the opening is measured above the nosing line of the stair treads. (see NCC figure 3.9.2.3)



**Figure 3.9.2.3**

- Where it is possible to fall more than 4 m from the floor of a trafficable surface to the surface beneath, any horizontal elements within the barrier between 150 mm and 760 mm above the floor must not facilitate climbing.

All barriers, except a window serving as a barrier, must be designed to take loading forces in accordance with AS/NZS 1170.1;

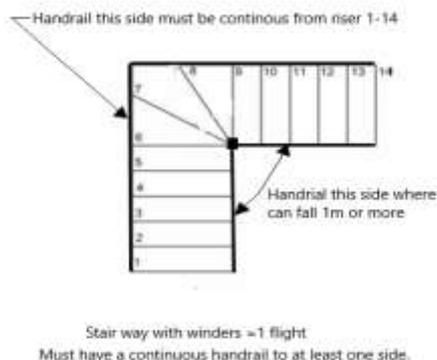
### Handrails to Stairways or Ramps

The provisions for handrails to stairs and ramps are now required to be provided in Class 10a buildings. The exemption in NCC 2016 not to apply to Class 10a has been removed. Therefore, in a Class 10a building as well as a Class 1 building where a stairway or ramp is providing a change in elevation of 1m or more (ie greater than 5 risers) a handrail will be required.

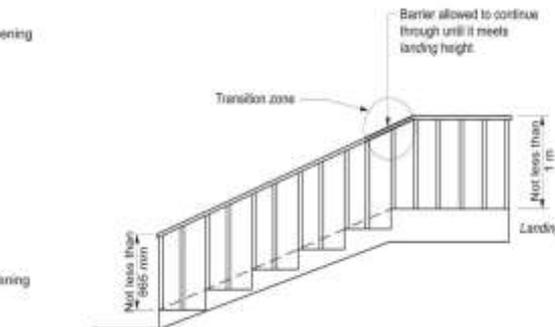
As a minimum requirement, handrails to a stairway flight or ramp must be provided on at least one side of the stairway or ramp and for the full length of the stairway flight or ramp. It must be continuous and have no obstructions that will tend to break a handhold except for a newel post or ball type stanchion.

As with barriers the top surface of the handrail must be at least 865mm vertically above the nosings of the stair tread or floor surface of a ramp.

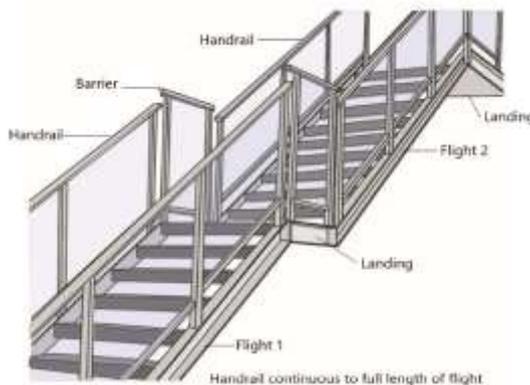
For stairways with winders it is important that the handrail continues on the same side from top to bottom to be a continuous handrail. It is not appropriate in stairs with winders to change the handrail to the other side of the stairway at the newel post as it will no longer be continuous from the top to the bottom. (Figure 2)



**Figure 2**



**Figure 3.9.2.4**



**Figure 3**

For stairways with landings, a handrails is not required to the landing at the top or bottom of a flight or between two flights. (except where a person could fall 1m or more) Figure 3

### What is a Flight?

A 'flight' is that part of a stair that has a continuous series of *risers*, including *risers* of *winders*, not interrupted by a landing or floor. (see figures 2 and 3)

## Protection of openable windows

The NCC has now changed the layout of the clauses relating to protection of openable windows. There are now two clauses:

- 3.9.2.6 for an openable window in a bedroom where the floor below the window is 2 m or more above the surface beneath; and
- 3.9.2.7 for an openable window in a room other than a bedroom where the floor below the window is 4 m or more above the surface beneath.

There are also new diagrams that clarify the clause requirements. (figures 4, 5 and 6))

3.9.2.6 requires any openable window where the sill is less than 1.7m above the floor must have a device capable of restricting the window opening or a securely fitted screen. If the device or screen can be removed then additional requirements must be provided.

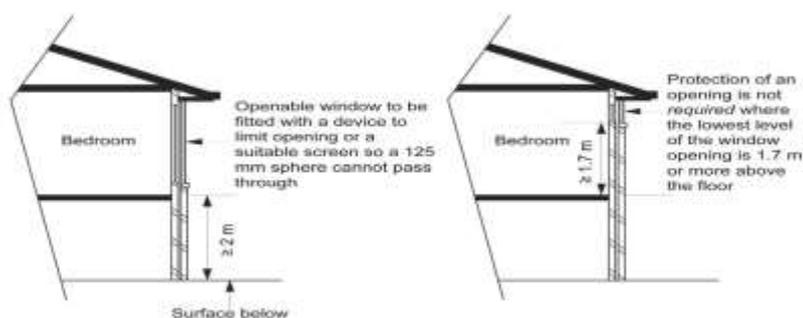


Figure 4

Figure 5

Clause 3.9.2.7 requires an openable part of the window if the sill is below 865mm from the floor to be protected with a barrier with a minimum of height of 865mm, have non climbable elements between 150 mm and 760mm above the floor and not permit a sphere of 125mm pass through the opening.



Figure 6

## Getting a copy of the NCC

You can download the new editions of the NCC from the ABCB website [www.abcb.gov.au](http://www.abcb.gov.au) or if you want a hardcopy you can get this from the HIA website [here](#).

**For further information on the changes HIA members can contact HIA's Building Services team on 1300 650 620 or email [hia\\_technical@hia.com.au](mailto:hia_technical@hia.com.au)**