



LICENSED
BUILDING
PRACTITIONERS



Glass barrier changes

Requirements for glass barriers, including new construction details, have been incorporated into the recent amendment to the Acceptable Solution for glazing in buildings.

ACCEPTABLE SOLUTION B1/AS1 was recently amended and now cites the glass barrier requirements in section 22 of NZS 4223.3:2016 *Glazing in buildings - Part 3: Human impact safety requirements*.

The changes became effective on 1 June 2016 with Amendment 13 to B1/AS1. The 1999 version of Part 3 gave thicknesses for glass in barriers but no details of the construction of the whole barrier. Designers need to be aware of this important change.

Diagrams for nine glass barriers

NZS 4223.3:2016 now has diagrams for nine different barrier configurations that incorporate glass (see Figure 1 for one example). The necessary glass thicknesses are provided for different types of safety glass.

Interlinking rail a second line of defence

Where these barriers have an unsupported glass top edge, there must be an interlinking rail of some type either at the top edge (1000 mm or 1100 mm height) or alongside it. This must be strong enough to provide reasonable support for a person impacting the barrier should a glass pane fail.

The objective is to provide a 'second line of defence' because, while glass barriers can be very strong, glass is a brittle material and doesn't break or fail in a ductile way.

The interlinking rail must be able to span the gap that would result from any individual pane failing or breaking so needs significant

bending strength. The frame, as well as any interlinking rail that is needed, will still require specific structural design.

Applicable from 1 June

The Amendment 12 version of B1/AS1 and the associated glass barrier requirements ceased to have effect on 31 May 2016. However, building consent applications for glass barriers that were accepted before 1 June 2016 may use the old version of B1/AS1 (Amendment 12) to show compliance with the Building Code.

Building consent applications for glass barriers made on or after 1 June 2016 must comply with the new barrier requirements in Amendment 13 (section 22 of NZS 4223.3:2016) if B1/AS1 is used. Alternatively, an equivalent level of performance can be achieved using an Alternative Solution.

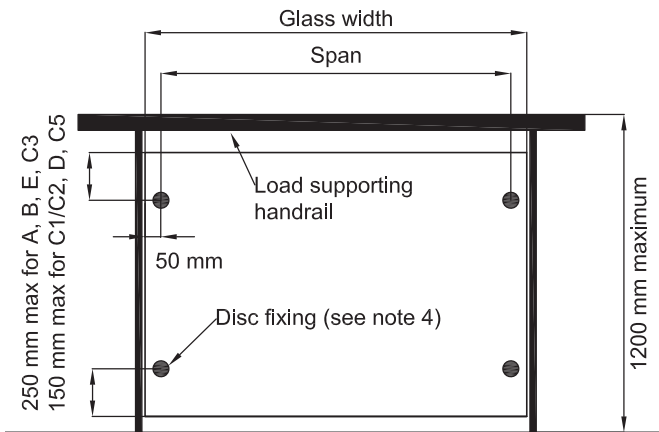
The application should include appropriate documentation, showing compliance with the barrier requirements in B1/AS1 Amendment 13, sourced from barrier suppliers or suitably qualified engineers.

Only section 22 of NZS 4223.3:2016 comes into force in B1/AS1 on 1 June. The remaining sections of NZS 4223.3:2016 are not part of B1/AS1 Amendment 13 but may be used as part of an Alternative Solution.

During July and August 2016, the Ministry of Business, Innovation and Employment will be consulting on:

- confirming the 1 June Amendment 13 on glass barrier changes in B1/AS1

Table 11 – Infill balustrade – two-edge support – point fixed



4223.3:2016. Provided by Standards New Zealand under licence LN001204.

- proposals to incorporate the other sections of NZS 4223.3:2016 and other parts of NZS 4223 into Acceptable Solutions.

No upgrade needed

Existing glass barriers are not required to be upgraded to comply with the new requirements, although retrofitting structural glass barriers to comply with NZS 4223.3:2016 may be possible. ◀

Quiz

1. When did Amendment 13 to B1/AS1 citing NZS 4223.3:2016 come into force?
2. If you design or specify a proprietary glass barrier that does not meet the recently amended B1/AS1 requirements, what is your applicable compliance pathway?
3. What is the purpose of providing an interlinking rail as part of the barrier assembly?
4. Do existing barriers have to be upgraded to comply with the new requirements?

ANSWERS

1. 1 June 2016.
2. An Alternative Solution.
3. To provide a second line of defence in the event of the glass failing.
4. No.