

Guardrails on Rigid Bridges, Ramps & Stairs

The playground Standards require that rigid bridges, ramps, and stairs on equipment that is deemed easily accessible to all ages must have barriers once they exceed 1m in height. In practice, the use of rigid bridges, ramps, and stairs at heights above 1m on playgrounds without full barriers is fairly common in Australia.

It is the consensus view of the Play Australia Risk Assessors' Network that the use of guardrails or handrails on rigid bridges, ramps, and stairs does not provide an unacceptable risk when the standing surface is less than 1.5m, provided the surface below and around the element is adequately impact-attenuated and free of objects that could be hazardous if fallen on.

Rationale

Flexible bridges are exempt from this requirement, with the openings between the bridge and rails needing to be at least 230mm to avoid entrapment in the worst case of loading. (In such instances, the use of barriers, which, by definition, must prevent a user from passing beneath, would have the potential to create an entrapment hazard if the gap below the barrier was less than 230mm.) If the risk associated with the use of guardrails or handrails on flexible bridges is deemed acceptable, the use of guardrails or handrails on rigid bridges, ramps, or stairs greater than 1m in height poses no greater risk.

The restriction to heights of 1.5m has been deemed as a reasonable compromise. The 2014 Australian Standard provided a variation to this requirement, allowing the use of guardrails or handrails on rigid bridges, ramps, and stairs up to 1.5m in height. This variation was not carried over into the 2021 Australian Standard due to the need for all changes to the European Standard EN 1176 (on which AS 4685 is based) to be approved by CEN, and their mandate was to reduce the number of variations in the Australian document. This was not dropped by the Australian Standards Committee because of any perceived unacceptable risk.

Note:

This document and the adoption of any recommendations listed is not a guarantee that an incident will not occur. Accidents can occur anywhere regardless of design, be it through misuse, skylarking, rough play, poor supervision, use by inappropriate age groups, misfortune, vandalism or poor maintenance, etc. Ultimately, it is the decision of the owner/operator as to what levels of risk they deem acceptable.

AS4685.0–2017, clause 8.2 states: "When assessing the risk associated with any particular playground, the operator(s) shall also take into account the context of the playground, its purpose and likely users, and the need for benefit assessment procedures instead of standard risk removal."

Examples

