

Safety Alert – Fencing Standards for Juvenile Rollercoaster's

Background & Scope

This alert refers to the operation of Juvenile Rollercoasters such as the Go-Gator ride. An accident occurred on one of these rides in May 2009, where a three year old child gained access to the tracks of the ride and was fatally injured. The HSE investigation is ongoing.

HSE Inspectors have reported a number of incidences where it would have been possible for small children to access the tracks of Juvenile Rollercoasters. Therefore it is important for ride controllers and operators to consider both the sufficiency of the fencing around their rides and the checks carried out on these rides before and during their operation.

Action Required

Fencing is designed to act as both a physical and psychological barrier to prevent individuals gaining access to danger areas. However, guard fences around Juvenile rollercoaster's should be of sufficient construction so that children are unable to gain access beneath, through or over the fence.

British Standard 7818:1995 provides the closest relevant standard and requires the fence to be a minimum of 1000mm from ground to top. You should ensure that when replacing existing fences that this standard is met. However, at present we would expect that the fence should be a:

- minimum 960mm from ground to top, with a
- maximum gap of 150mm between the ground and bottom rail, and a
- where vertical bars are used, a maximum gap of 100mm between bars

The fencing should be constructed, through the use of an interlocking design and tie straps, to prevent the sections being easily parted or opened. Additionally, when employing fences that use separate 'feet' which the panels slot into, you should ensure that the panels are properly pushed into the slots.



Examples of poor practice when installing fencing

Further to this, operators should ensure that the fencing is placed at a sufficient distance, so that persons cannot access the track or moving ride by reaching over with their hands or arms, but no less than 1400mm. Operators should also ensure that there are no structures near the fence which offer scope for climbing onto to assist in getting over the fence. In addition it is important that operators have a clear line of view from the control box of the ride, to ensure that they can monitor any activity whilst the ride is in operation.

The layout of some fairs, where there is a substantial camber, uneven ground, kerb or pavement, may make it impossible for fencing to be erected on a flat surface. This can create a substantial gap between the fence and the floor. In these circumstances operators should take steps to ensure that any gaps greater than 150mm are closed to prevent access.

An initial, documented check should be carried out on the fencing arrangements prior to opening and further checks should be carried out regularly during the operation of the fair. These should include a detailed check that the fences are secured so that the fencing cannot be easily opened by members of the public and that the ground below the fencing does not create a gap in excess of 150mm. Such checks should involve an active 'walk round' of the fence perimeter in which each panel and any links or ties are checked and noted.