

Double Deck Stand Build Regulations

Stepped Access

- A level landing must be provided at the top and bottom of each flight.
- Each landing must have an unobstructed length of not less than 1200mm.
- Flights shall have a minimum, unobstructed width of 1.1m
- Doors shall not swing across landings
- Flights between landings shall contain no more than 12 risers where the treads are less than 350mm and no more than 18 risers where the treads are 350mm or greater.
- The tread and riser of each step must be consistent throughout a flight.
- The rise of each step must be between 150mm and 170mm
- The tread of each step must be between 280mm and 425mm
- Risers must not be open.
- All nosings must be made apparent by means of permanently contracting material 55mm wide on both the tread and the riser.
- The projection of a step nosing over a tread below should be avoided, but if necessary it must not exceed 25mm.
- A continuous handrail must be provided on each side of flights and landings.
- A single staircase shall not exceed 1.8 metres in width.
- Where a staircase is divided into more than one channel, no single channel shall be less than 1 metre wide and an additional handrail must be provided between channels.
- Spiral staircases are only permitted for exhibiting staff use and not for members of the public.
- Helical stairs are permitted where they comply with this guidance and their use is approved by the venue.
- Where the means of access to trailers, boats, caravans and other, similar exhibits is manufactured as an integral part of the product, it may not comply with the above regulations. In such a case an appropriate risk assessment is required. As a minimum, it must comply with the following:
 - The headroom must be a minimum of 2m
 - The width may not be less than 450mm and must be at least equal to the width of the entrance to the exhibit
 - The risers must not exceed 170mm in height
 - Each tread must be a minimum of 280mm in depth
 - The width of landings at top and bottom must be equal to the width of the steps.
 - Handrails must be provided.

Handrails

- The vertical height to the top of the upper handrail from the pitch line of the surface of a ramp, flight of steps or landing must be between 900mm and 1000mm
- Handrails shall be continuous across flights and landings of ramped and stepped access.
- Handrails shall extend at least 300mm beyond the top and bottom riser of any steps
- Handrails shall contrast visually with the background against which they are seen, without being highly reflective.
- The surface of handrails shall be slip resistant.
- Handrails shall be terminated in a way that reduces the risk of clothing being caught.
- The profile of handrails shall be either circular, with a diameter of between 40 and 45mm, or oval, preferably with a width of 50mm.

- The clearance between the handrail and any wall shall be between 60 and 75mm
- Double-width staircases shall have a central handrail.
- The clearance between a cranked support and the underside of the handrail shall be at least 50mm.
- Handrails shall be non-climbable i.e with solid infills or vertical guardrails, which should be no more than 100mm apart and without horizontal members between verticals.

Barriers (Balustrades)

- Barriers shall be provided to protect exposed edges of staircases, landings, balconies, galleries and other changes of level. They shall:
- Provide guarding to all exposed edges of stairs and ramps at a height of 900mm above the pitch line and to landings and balconies at a height of 1.1m.
- Be capable of resisting the forces set out in BS 6399-1
- Be non-climbable i.e with solid infills or vertical guard rails at a maximum of 100mm apart.

Ramps

- If constraints necessitate an approach of 1:20 or steeper, an approach incorporating a ramp should be provided.
- A ramp must be either readily apparent or the approach to it is clearly sign-posted.
- The gradient of a ramp flight and its going between landings are in accordance with Table 1.

Table 1: Limits for ramp gradients

Going of a flight	Maximum gradient	Maximum rise
10m	1:20	500mm
5m	1:15	333mm
2m	1:12	166mm

Notes: For goings between the above lengths, the gradient will be adjusted accordingly

- Ramps must not be greater than 10m, or have a rise of more than 500mm.
- Ramps shall have a minimum, unobstructed width of 1.5m
- The ramp surface must be slip resistant, especially when wet, and of a colour that contrasts visually with that of the landings.
- A landing at least 1.2m long and clear of any door swings or other obstructions must be provided at the foot and head of the ramp.
- Intermediate landings must be at least 1.5m long and clear of any door swings or other obstructions.
- Intermediate landings at least 1800mm wide and 1800mm long must be provided as passing places when it is not possible for a wheelchair user to see from one end of the ramp to the other, or if the ramp has three flights or more.
- Handrails must be provided on both sides of a ramp which has a gradient steeper than 1:20. Where it is impractical to comply with this legal obligation, a risk assessment must be provided and approved by the Organiser.
- Where the change in level is 300mm or more, 2 or more clearly signposted steps should be provide din addition to the ramp.
- All landings should be level, subject to a maximum gradient of 1:60 along their length.
- A kerb at least 100mm high, which contrasts visually with the ramp or landing, must be provided on the open side of any ramp or landing, in addition to any guarding required.

Toeboards

- Toeboards to a minimum height of 50mm are required on landings and around the decks of two storey stands.

Travel Distance/Exits

Ideally we recommend that there should be a minimum of two separate staircases leading from any floor above ground level. However in the following situation, a single staircase is acceptable:

- No more than 60 people will occupy the level served by the staircase at any one time (public, performers and staff inclusive)
- No part of that floor of the upper storey of a stand is more than 20 metres away from the gangway. This should be reduced to 15 metres where alcohol is being served on the upper deck.

The occupancy of the upper deck is calculated according to the use of the area. For example, if the upper deck has tables and chairs (eg conference, sales area, bar or restaurant), the occupancy can be no more than 1 person per sqm.

Please also note:

- No bolting to the venue floor is allowed and the venues [floor loading restrictions](#) must not be exceeded.
- All two-storey structures must be self-supporting.
- Any structures lying over the duct covers must have base plates of a minimum area of 1m long and 1m wide.
- Enclosed offices, cupboards etc. formed beneath the upper floor should be lined throughout with non-combustible fire-resisting material.

The following loadings are to be adopted in the design:

- Upper Deck weight loading of 5kN/sqm
- Sway load 10% of vertical loading
- Handrails and Balustrades 3 kN/m applied at centre line of rail