

extract from "inclusive mobility"

OP:

given below are used then the great majority of disabled people will be able to move around buildings and the environment much more easily.

2.2 Mobility impaired and visually impaired people

Someone who does not use a walking aid can manage to walk along a passage way less than 700mm wide, but just using a walking stick requires greater width than this; a minimum of 750mm. A person who uses two sticks or crutches, or a walking frame needs a minimum of 900mm, a blind person using a long cane or with an assistance dog needs 1100mm. A visually impaired person who is being guided needs a width of 1200mm. A wheelchair user and an ambulant person side-by-side need 1500mm width.

Unobstructed height above a pedestrian way is also important, especially for visually impaired people. Generally, this should be a minimum of 2300mm except on sub-surface station platforms where it should be 3000mm. Where a sign is suspended over a footway or pedestrian area, for example in a railway station a minimum clearance of 2100mm is acceptable (2300mm on cycleways). Where trees overhang a footway it is advisable to cut them back to at least 3000mm clear height to allow room for regrowth.

Mobility impaired and visually impaired people

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2.3 Wheelchair users

Although a minority among disabled people, wheelchair users need quite a lot of space to move around comfortably and safely: usually more than mobility impaired people, although those who walk with two sticks can occupy a greater width than someone using a wheelchair.

A comprehensive set of measurements of wheelchair visitors to the Mobility Roadshow (1999) gave the figures for length and width summarized on the opposite page. The range of dimensions is considerable, particularly that for overall length. The greatest lengths are those of conventional wheelchair users with leg supports (maximum 1545mm, though this was the only measurement out of 745 of more than 1500mm) and electric scooters with a maximum of 1500mm. Conventionally seated wheelchair users do not occupy more than approximately 1250mm. However, if a wheelchair user has a personal assistant, their combined length will be typically 1750mm.

The figures given for width, with a 95th percentile of slightly over 700mm at maximum (for powered chairs), do not make allowance for the wheelchair users elbows and hands. The ISO standard for wheelchairs (ISO 7193) notes that to propel a wheelchair manually needs a clearance of not less than 50mm, preferably 100mm, on both sides.

The Mobility Roadshow survey also measured the heights of wheelchair / users. The overall mean height for all types of wheelchair users was 1243mm, with a 5th percentile of 1076mm, 95th percentile of 1374mm and a maximum of just over 1450mm. As with overall length, scooter users gave slightly greater figures, with a mean height of 1340mm, 5th and 95th percentiles of 1202mm and 1438mm respectively and a maximum of 1502mm.

Other basic measurements which are of importance when considering design standards to accommodate wheelchair users are:

- Eye height, which is around 120-130mm below seated height giving a 5th-95th percentile range for wheelchair users from 960mm to 1250mm (1080mm to 1315mm for scooter users)
- Knee height, 500mm to 690mm
- Seat height, 460mm to 490mm
- Ankle height, manual wheelchair users 175mm to 300mm; electric wheelchair users 380mm to 520mm
- Height to bottom of foot support, 60mm to 150mm.

The ability of a person in a wheelchair to reach, sideways or forward, is also important and a number of guidelines give figures for this.

Wheelchair users