

# Chapter 1

## Ramps

### Accessible Standard

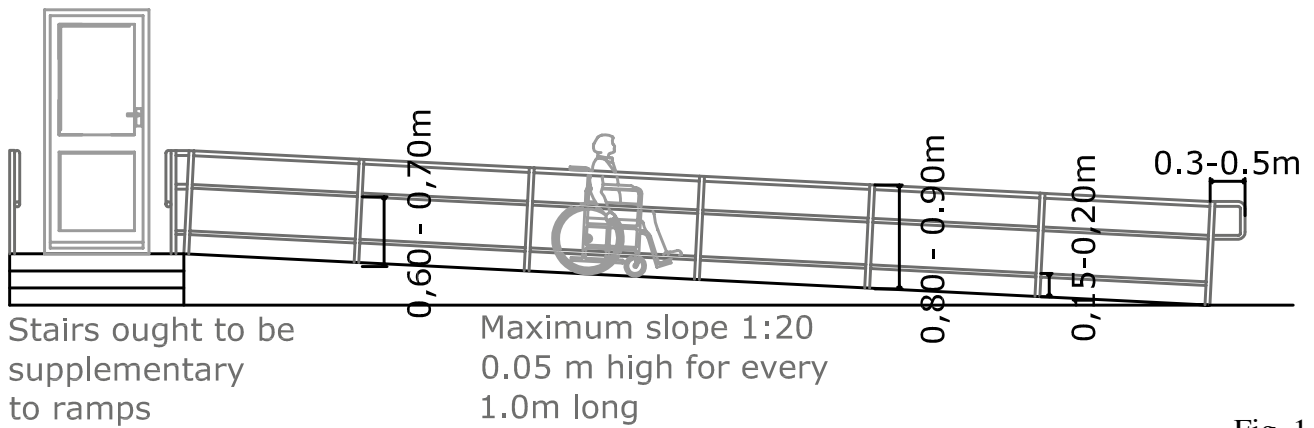


Fig. 1.1

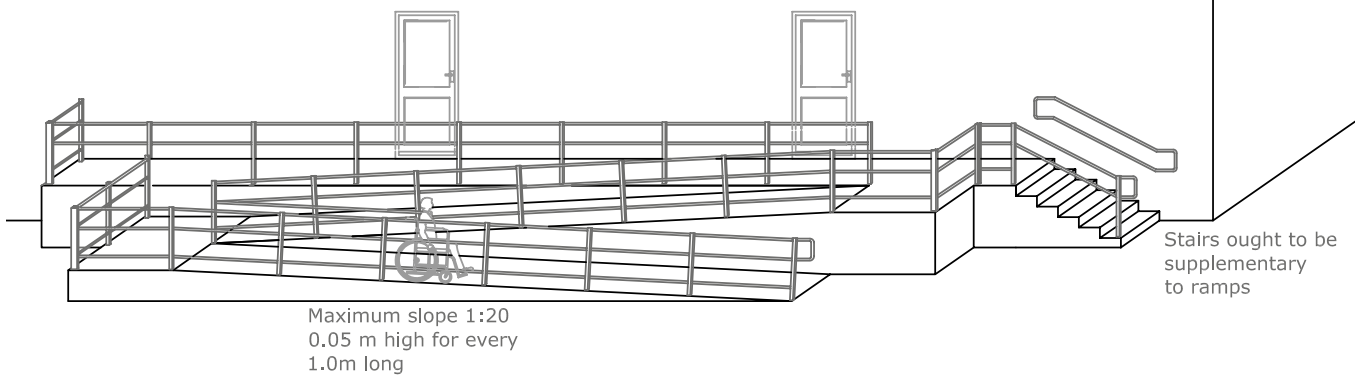


Fig. 1.2

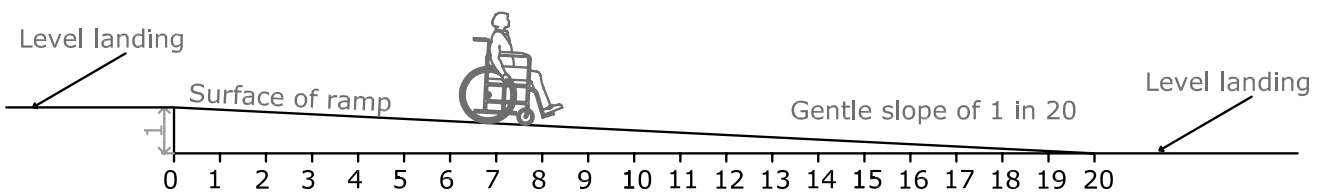


Fig. 1.3

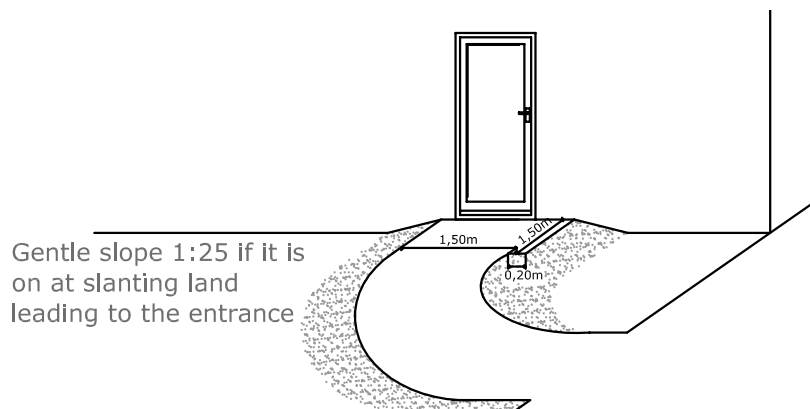


Fig. 1.4

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#### (1.1) PLANNING PRINCIPLE

To provide ramps wherever stairs or changes in level obstruct the free passage of an individual, mainly wheelchair users and people with movement difficulties.

#### (1.2) LOCATION

The ramp should be located in the continuation of the accessible pathway leading to the entrance.

The level difference from the horizontal landing area to the surrounding area should be aligned by a ramp to ease movement.

#### (1.3) SLOPE

The maximum recommended slope of ramps is 1:20 (5 cm pr. m) (See fig. 1.3). For small level differences and very short ramps of about 1 meter, the maximum slope of such a ramp should be 1:10 (10 cm pr. m).

Gentle slopes should be carried out, if it is on a slanting land leading to the entrance. In this case the maximum slope should be 1:25 (4 cm pr. m) and handrails may not be needed (See fig. 1.4).

Stairs should be constructed adjacent to the ramps because some persons with disabilities prefer to use the stairs rather than ramps depending on their ability (See Chapter : Stairs).

#### (1.4) WIDTH

The minimum width of a ramp should be 1.3m and preferably 1.5m, which makes it possible for a wheelchair user and a walking person to pass each other at the same time.

#### (1.5) LANDING AREA

Ramps should be provided with landing areas (flat surface) for resting, maneuvering and avoiding excessive speed (See fig.1.2).

The minimum length of the landing area is 1.3m and preferably 1.5m and the minimum width has to be equal to the width of the ramp (1.3m) and preferably 1.5m.

Landings should be provided at every 10m, at every change of direction and at the top and bottom of the ramp.

#### (1.6) HANDRAILS

There should be handrails on both sides of the ramps to avoid risks of fall. If one of the sides is a wall, it is not necessary to put up a handrail on this side.

Double handrails at different heights where one at a height of 0.60m – 0.70m from the ground level for the use of the children and wheelchair users, one at a height of 0.80m - 0.90m for the use of other users.

At the bottom of the railing, rails for the wheels must be placed at a height of 0.15 – 0.20m to avoid risks of wheels fall out of the ramp edge.

For ramps more than 3.0m wide, there should be sides and intermediate handrails and painted in contrasting colours.

The handrails should end 0.3m from the top and at the bottom of the ramp (See fig. 1.1).

Handrail should be made of preferably metal or any other approved strong and sturdy material.

The handrail surface should be neither too smooth nor rough.

#### (1.7) SURFACE

The ramp surface should be hard and non-slip.

#### (1.8) TACTILE MARKING

A tactile marking with contrasted colours should be placed at the beginning and end of the ramp to alert the blind person and persons with visual impairment about the length and width of the ramp. Width of the marking should be 0.60m