Ramp Location (NBC B-6)

In any place where there is a change in level there should be a ramp or a mechanical lift system.

Surface Material (NBC B-6.2.4)

It should be made of non-slip material but not heavily textured so as to cause vibration. **Raised traction strips should be avoided**.

Gradient or Angle of Slope (NBC B-6.2.2 Table 10)

- Maximum slope angle should be less than **1:12 (4.8°)** and only be used for short slopes up to the equivalent of **5 steps rise (750 mm)**.
- For **5 to 20** steps **(0.75 m to 3 m)** the gradient should be **1:15 (3.8°)**.
- If more than 20 steps, **(> 3 m)**, gradient maximum is **1:20 (2.9°)**.
- In rises above **3 m** in open areas, where the landscape requires a series of ramps **1:20** can be used. For buildings, if a rise is more **2000 mm** an alternative lift is required.
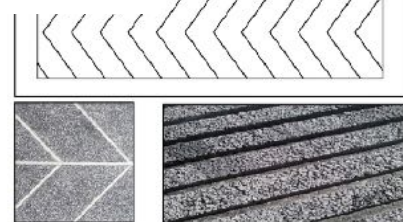
Width (NBC B-6.2.2 Table 10)

- Minimum width should be **1.2 m** for **1:12 (2.9°)** ramps up to **2 steps**.
- For ramps of a rise of **3 to 5 steps (750 mm)** the width should be **1.5 m**.
- For all ramps with a rise higher than 5 steps the width must be more than **1.8 m**.

Handrails Dimensions (NBC B-6.2.2.1.c, NBC B-6.2.7)

- Handrail must be on both sides.
- Handrail thickness should be **38 - 45 mm**.
- Upper Handrail Height should be **850 - 950 mm.**
- Lower Handrail Height should be **650 - 750 mm.**
- Handrail Extensions of **300 mm** beyond both ends of handrails at top and bottom of the ramp.
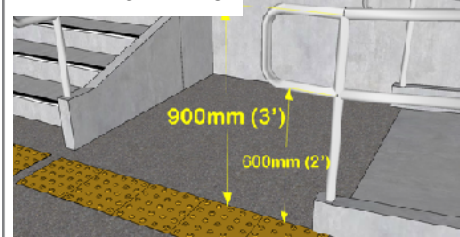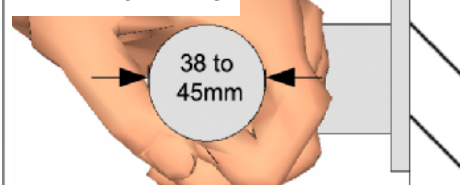

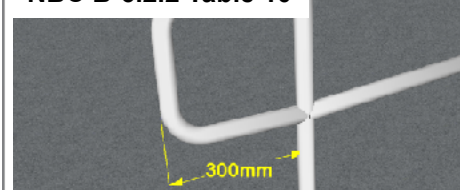NBC B-6.2.4
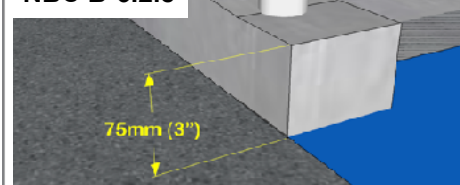

NBC B-6.2.2 Table 10

NBC B-6.2.2.2.e

NBC B-6.2.2.1.c

NBC B-6.2.2 Table 10

NBC B-6.2.8

NBC B-6.2.2 Table 10

Sn	Rise in metres	Equivalent Apprx No. of Steps	Max Gradient	Angle Degrees	Minimum Width	Max Length before landing	Landing of 1.5 m every
A	0 - 0.3	1 - 2	1:12	4.8°	1.2 m	N/A	NONE
B	0.3 - 0.75	3 - 5	1:12	4.8°	1.5 m	5 m	Every 5 m
C	0.75 - 3 m	5 - 20	1:15	3.8°	1.8 m	9 m	Every 9 m
D	3 m +	20 +	1:20	2.9°	1.8 m	9 m	Every 9 m

Kerb or Kicker Plate (NBC B-6.2.8)

Kerb or edge protection should be at least **75 mm** height. If there is no kerb on the slope then a "kicker plate" should be part of the railing and reach to **75 mm** height from the surface of the slope.

Clear Areas and Landings (NBC B-6.2.6.a, c)

- Ramps should have a level landing at the top and bottom of each run and where the run changes direction. There should be a clear area of **1500 x 1500 m.**
- Where a ramp ends at a doorway the clear area must be **1800 mm** long and **300 mm** on each side of doorway. **(HGSS 5.4.3)**
- Rest Landings to be provided at regular intervals of not more than **5 m** for rises between **300 - 750 mm.**
- For rises greater than **750 mm** a rest landing must be provided at least every **9000 mm** on a **1:20, 2.9° slope. (HGSS 7.2.5).**

Kerb Ramps on Accessible Route Paths (Fig.1)

To be provided at a pedestrian crossing and at each end of the footpath of a private street or access road.

Kerb Ramp Maximum gradient (NBC B-2.3.1)

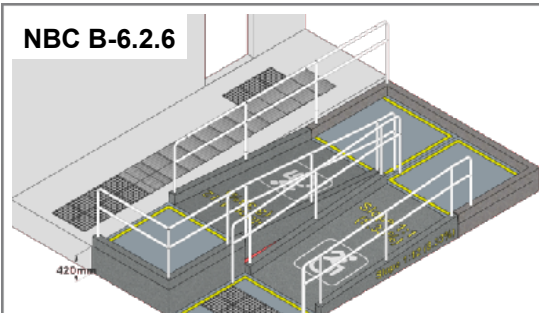To be **1:12 (2.9°)**; the flared sides should not be more than **1:10 (5.7°)**.

Kerb & Ramp Surfaces (NBC B-2.3.1.b)

Raised traction strips shall be avoided. Dropped kerb should have a slip-resistant surface with a minimum "static coefficient of friction" of "Very Good".
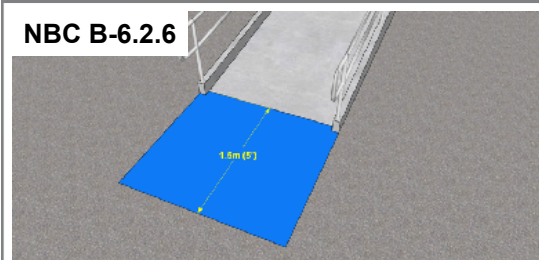
Tactile Paving (NBC B6.2.1.f)

- Provided 300 mm from vehicle traffic areas.
- Provided with a tactile warning strip of the nominal width of 600 mm at the top of the ramp.
- Tactile warning strip should have a minimum luminous **contrast of 70%** with the adjoining surfaces.
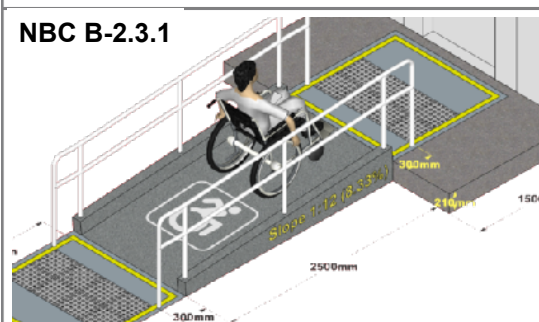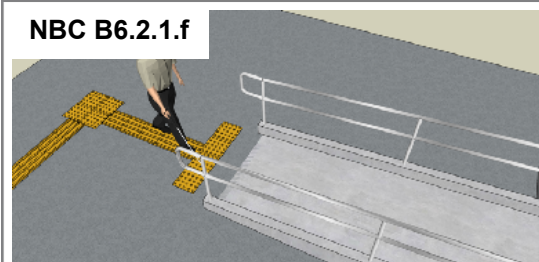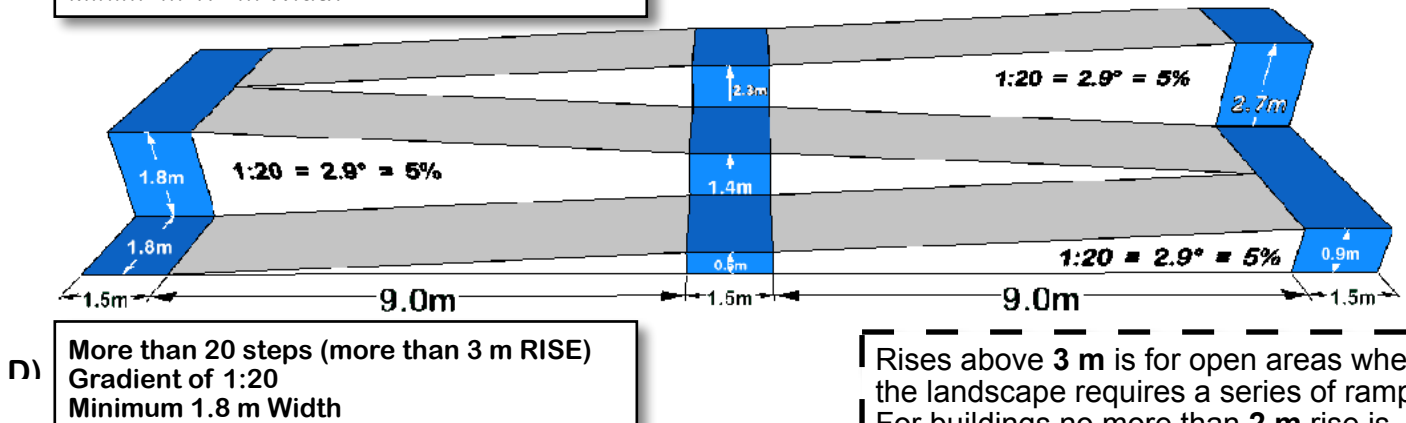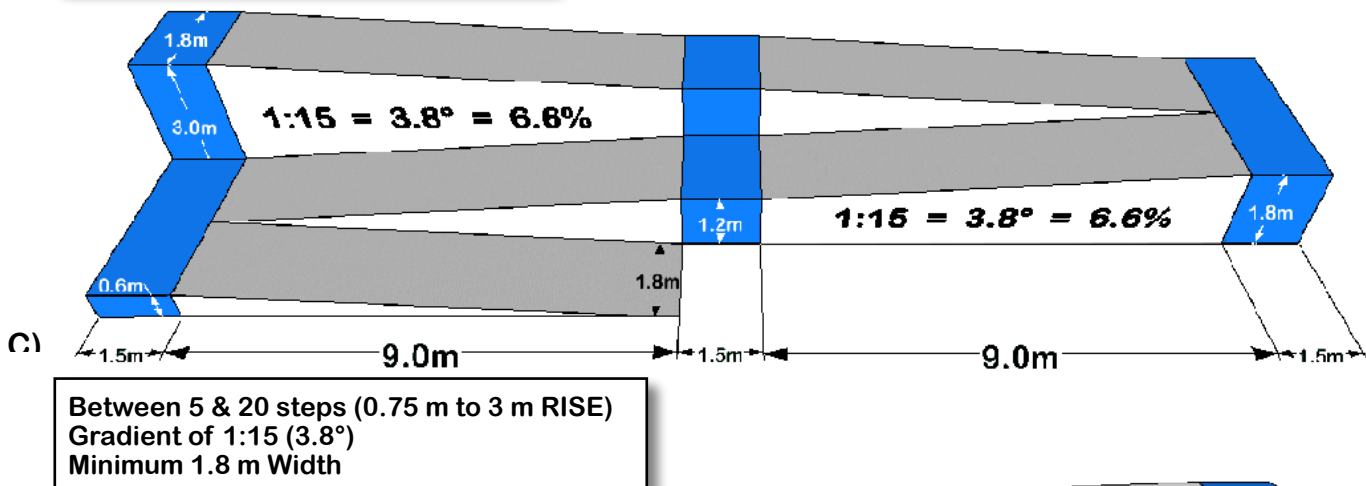

NBC B-6.2.6

NBC B-6.2.6

NBC B-2.3.1

Fig.1

NBC B-2.3.1   …shall avoid raised traction strips…

NBC B6.2.1.f

300mm

2

150mm **1**

300mm

← STEPS →

SLOPE

← GRADIENT OR ANGLE

RUN

PLATFORM

RISE

1.2m

0.3m

1:12 = 4.8° = (8.3%)

3.6m

1.5m

A) Up to 2 Steps (0.3 m RISE)
Gradient of 1:12 (4.8°)
Minimum 1.2 m Width

1.5m

0.7m

1:12 = 4.8° = (8.3%)

8.9m

1.5m

B) Between 3 & 5 Steps (0.75 m RISE)
Gradient of 1:12 (4.8°)
Minimum 1.5 m Width

1.8m

3.0m

0.6m

1:15 = 3.8° = 6.6%

1.2m

1.8m

1:15 = 3.8° = 6.6%

1.8m

1.5m   9.0m   1.5m   9.0m   1.5m

C) Between 5 & 20 steps (0.75 m to 3 m RISE)
Gradient of 1:15 (3.8°)
Minimum 1.8 m Width

1.8m

1.8m

1:20 = 2.9° = 5%

2.3m

1.4m

0.5m

1:20 = 2.9° = 5%

2.7m

1:20 = 2.9° = 5%

0.9m

1.5m   9.0m   1.5m   9.0m   1.5m

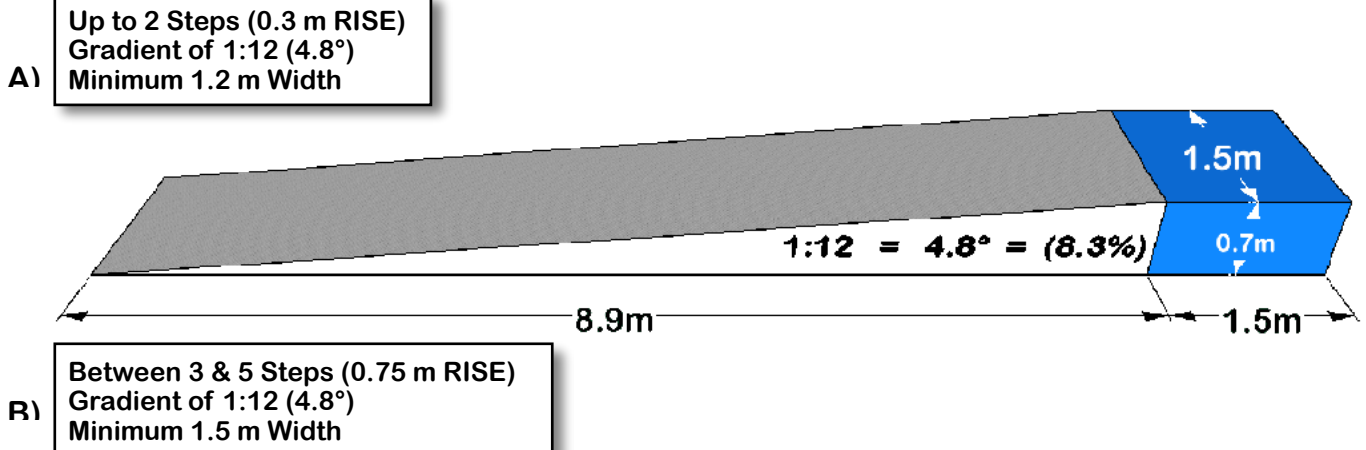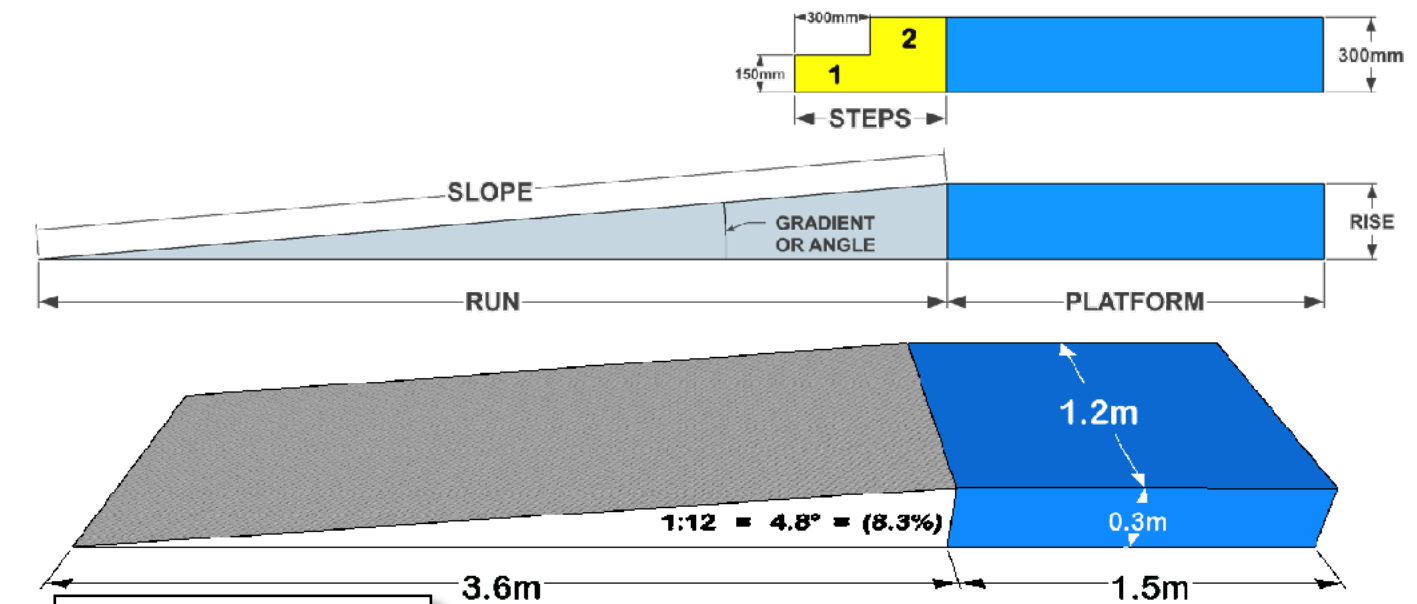**D)** More than 20 steps (more than 3 m RISE)
Gradient of 1:20
Minimum 1.8 m Width

Rises above **3 m** is for open areas where the landscape requires a series of ramps. For buildings no more than **2 m** rise is allowable (an alternative lift is required).

	Establishment Name **Building Name**			**Address**	
	Description	**Required**	**Y/N**	**Actual**	**Notes**
01. 04. 01	**Slope Angle:** (based on RISE) 0 - 300 mm (<= 2 steps) 300 - 750 mm (3 - 5 steps) 750 - 3000 mm (7 - 20 steps) Above 3000 mm (> 20 steps	1:12 = 4.8° 1:12 = 4.8° 1:15 = 3.8° (> 2000 mm lift is required) 1:20 = 2.9° (lift required)			
01. 04. 02	**Width of slope:** for RISE 0 - 300 mm 300 - 750 mm 750 - 3000 mm More than 3000 mm	1.2 m 1.5 m 1.8 m 1.8 m			
01. 04. 03	**Max. Run:** (based on rise) 0 - 300 mm rise 300 - 750 mm rise 750 - 3000 mm rise More than 3 m rise	Max. Run Length: < 3.6 m (No resting landings required) 3.6 < 5 m (Every 5 m) 5 < 20 (Rest landing every 9 m) Above 20 (Rest landings every 9 m)			
01. 04. 04	**Clear Area**	Both ends of ramp must have a clear area of minimum 1500 mm long.			
01. 04. 05	**Door Landings** Where a ramp ends at a door entrance.	**Length:** 1800 mm long **Width:** 300 mm wider on both sides of doorway.			
01. 04. 06	**Resting Landings** for rises greater than 750 mm	Ramps of slopes with rise greater than 750 mm must have resting landings at not more than 9m RUN length.			
01. 04. 07	**Handrail Thickness**	**Rail Thickness:** 38-45 mm dia			
01. 04. 08	**Handrail Height**	**Heigh, Top Rail**: 850 - 950 mm **Lower Rail:** 550 - 650 mm			
01. 04. 09	**Handrail Extension**	**Extension:** 300 mm both ends			
01. 04. 10	**Handrail Material Colour LRV Clearance from Wall**	Smooth Colour LRV contrast > 30% 50 mm from surfaces/objects.			
01. 04. 11	**Ramp Surface**	Non-slip without raised-traction strips?			
01. 04. 12	**Ramp Raised Edges "Kerb"** Open sides must have a kerb.	**Height:** Minimum 75 mm			
01. 04. 13	**Tactile Ground Surface Indicators (TGSI):** top & Bottom	**Distance from Ramp end:** 300 mm **Width:** Full width of ramp.			
01. 04. 14	**Kerb ramps provided at**	Pedestrian crossings? End of the footpath?			
01. 04. 15	**Kerb Ramp Gradient**	Gradient: 1:12 (4.8°) Flared sides should not be more than 1:10 (5.7°).			
01. 04. 16	**Other**				