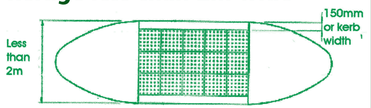
DESIGN

PEDESTRIAN REFUGES

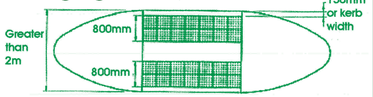
The layouts described below apply equally to controlled and uncontrolled crossings. The tactile surface should follow the colours described in the relevant type of crossing.

Refuge less than 2m wide



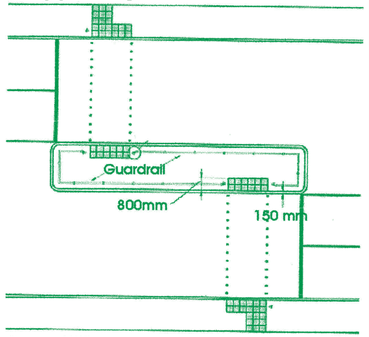
Where the refuge is less than 2 m wide - the surface should be laid across the full width, set back behind the kerb or 150 mm from the edge of the carriage way.

Refuge greater than 2m wide



Where the refuge area is 2 m or more in depth, two rows of the tactile surface 800 mm deep should be provided. Each row should be set back behind the kerb or 150 mm from the edge of the carriageway.

Staggered pedestrian island



Where guard rails are provided on islands at staggered crossings, the tactile surface needs to be installed to a depth of 800 mm behind the kerb or set back 150 mm from carriageway.

Signal poles with push button boxes should be installed in line with guard railing and close to edge of tactile paving.

DESIGN

MISCELLANEOUS

▶ Road Signs ◀

- Type should have lines of uniform thickness
- Type should have no flourishes
- Lower case lettering is easier to read
- Underlining should be avoided
- Signs should be located as not to cause an obstruction
- A large contrast between letters and their background, black lettering on a yellow background makes for good readability
- Overhanging signs should be affixed at least 2.1 m above the ground level

▶ Vegetation ◀

- Bushes and trees planted close to pedestrian areas tend to grow over into these areas and cause an obstruction.
- Plants at same height as a human being should be soft. Spiky-leaved plants can cause serious injury to blind persons.
- The minimum height of overhanging vegetation is 2.1m.

▶ Obstacles ◀

(Temporary or Permanent)

- Advertising signs placed on the pavement are one of the most common obstacles in pedestrian areas. They diminish the free width, thus reducing accessibility as well as constituting an accident risk.
- The placing of bollards and flower pots should also be considered in their potential to act as obstacles.

STREET PLANNING

CHECKLIST

When Planning Streets, decisions must be taken as to which design elements must be taken into consideration and checked as regards persons with disability.

At the planning stage, this is a question of both design standard and choice of materials for the elements in the street that affect accessibility and ease of orientation

▶ Pavements ◀

- Width.(1200 mm)
- Height of kerbstone (150mm max above road level)
- Surface evenness and material (nonslip, drain-well and no gaps).
- Cross Slope (1:20 max)
- Freedom from obstacles
- Physical guidelines: railings, kerbstones or contrasting materials.

▶ Pedestrian Crossings ◀

- Location
- Marking
- Length
- Traffic Island
- Traffic lights should have both light and sound
- Tactile warning
- Pavement edge - ramp or low kerb

▶ Ramps * ◀

- Slope gradient (according to height)
- Rest area (every 12 metres)
- Handrails on both sides.
- Handrail height (900-1000mm)
- Beginning and end markings withcorduroy type tactile surface

▶ Car Parking * ◀

- Number of reserved parking spaces.
- Distance to objective (50m uncovered or 100m covered)
- Protected Location
- Measurements (3.6m by 4.8m perpendicular parking or 3.6m by 6.6m parallel parking)
- Accessible from wheel chair (drop kerbs)
- Signs (on ground and signpost)

▶ Steps * ◀

- The step: form (no nosing), width (300mm), height (150mm)
- Number of steps (11 max in one flight)
- Stair width (1200mm min)
- Rest Area
- Handrails on both sides (max width 1800mm between handrails)
- Marking (tactile corduroy type and colour contrast both at top and bottom of flights of steps.
- Marking of treads or risers in contrasting colours.

▶ Information & Signs * ◀

- Location, height and distance to observer to be considered in terms of readability.
- Text size, colour, contrast and lighting of signs.

▶ Street Furniture ◀

Benches, Bus Shelters, Utility Poles, Letter Boxes, Public Telephones, Push Buttons etc

- To be positioned to allow a clear width of 1m.
- Bench height (Seat 0.5m and arm rests 0.7m)
- Benches Location (every 50m)
- Bus stops (height of timetable etc - 1.5m to 1.7m)
- Knobs, force (5N) and form (lever type where possible, embossed buttons)
- Any item that needs to be reached (e.g., push buttons, letter boxes, telephones and so on) should be fixed at a height between 0.9m to 1.2m

*More details: *Access for All Design Guidelines*, KNPD, 2000

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Pavements
Pedestrian Crossings
Piazzas
Bus Stops
Signage
Ground Surfaces
Steps and stairs
Ramps
Playgrounds
Public Gardens

STREETS FOR ALL

A GUIDE FOR ACCESS FOR ALL IN OUTDOOR AREAS

PEOPLE AND NEEDS

When mobility, visually or hearing- impaired people, the elderly and children make their way along a public area, it is important that they do so with reasonable convenience and total safety.

WHAT CAN YOU DO?

This brochure is intended to raise general awareness regarding the importance of providing outdoor areas in a way that 'everybody' can use them.

Central Government and Local Councils in particular can exert great influence in shaping the outdoors areas in their locality.

This brochure is designed to assist them in discharging their responsibilities in a manner which provides Access for All in their locality.

It is also intended for architects, designers and contractors and anyone else interested in the design and construction of outdoors area features.

Kummissjoni Nazzjonali Persuni b'Diżabilità **www.knpd.org**

PAVEMENT DESIGN

DESIGN FOR WALKING

Access for All

does not mean catering exclusively for wheelchair users. Much can be done to improve Access for ambulant disabled persons, especially elderly people.

Steps

A step is an insurmountable obstacle for many people the step can very often be removed, or replaced by a ramp.

Inclination

Surfaces with steep lateral or longitudinal gradients are a major problem for people with reduced mobility or strength.

Changes in level

Sudden changes in the level of the surface of pavements, such as dropped kerbs and pavements in front of garages, are dangerous for ambulant disabled persons and the elderly, and should be avoided.

Benches

Walking long distances is tiring. Being able to take rests expands the disabled person's range of action.

Handrails

A handrail (of approved profile) on either side of steps, ramps or sloping footpath provides crucial support.

PAVEMENT DESIGN

DIMENSIONS & MATERIALS

Pavement Dimensions

- Width (1200mm minimum)
- Height of kerbstone (150mm max above road level)
- Surface that is uniform & even
- Material that provides a smooth and level surface.
- Transverse Slope (1:20 max)
- Longitudinal slope (1:20 max)
- Freedom from obstacles (permanent and temporary)
- Physical guidelines: railings, kerbstones, contrasting colours or tactile material.

Drop Kerb Dimensions

- Slope 1:10 maximum
- Kerb to drop flush with road surface.
- Width (1200mm minimum)

Pavement Material

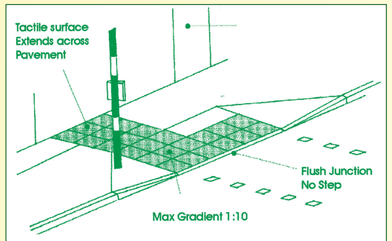
- Asphalt, prefabricated concrete paving slabs and paving blocks and in-situ concrete are suitable materials.
- Any surface with many gaps is unsuitable.
- Gravel is also an unsuitable material.
- Cobbled and similar uneven surfaces are unsuitable for both ambulant disabled people as well as wheelchair users. If cobble - type surfaces are used for carriage ways, a suitable smooth and even footpath should be provided.
- It is important that all pavement materials are of the non-slip type.

DESIGN

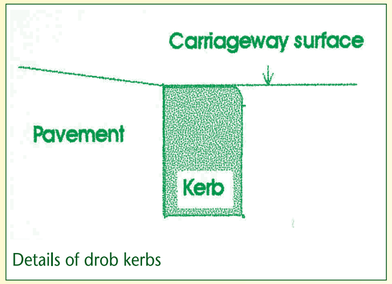
PEDESTRIAN CROSSINGS

The pedestrian crossing is a complicated place and has to satisfy many different needs. In particular, it must satisfy the needs of persons using wheelchairs and visually impaired persons.

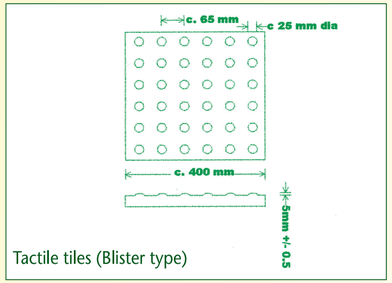
The use of drop kerbs provides a level crossing at the end of the kerb and the use of tactile and contrasting material indicate the existence of crossings to visually impaired persons.



Typical drop kerb arrangement



Details of drob kerbs



Tactile tiles (Blister type)

General Considerations

Pedestrian Crossings should be well illuminated and well defined with well-maintained road markings.

Tactile Tiles

To assist visually disabled people to find pedestrian crossings, tactile surfaces (blister type) should be used on all crossings.

Tactile surface strips are also an essential safety feature to differentiate between the pedestrian footway and vehicle carriageway where the footway is flush with the carriageway.

Dropped kerbs

Dropped kerbs should be provided wherever possible at all pedestrian crossing points and where level access is required between the pavement and carriageway (e.g., in a car park).

Dropped kerbs should finish completely flush with the carriageway as a lip can cause difficulties for wheelchair users and especially ambulant disabled such as elderly persons.

They should be complemented by a dropped kerb on the other side of the road.

Dropped kerbs should be indicated to visually disabled people by a contrast in colour to the adjacent ground surfaces.

At uncontrolled crossings the tactile surface should be buff or any other colour (except red) which provides a contrast with the surrounding ground surface.

At controlled crossings the tactile surface should be red signifying that the pedestrian may signal traffic to stop (e.g., pelican crossing).

TYPICAL GOOD PRACTICE LAYOUTS

UNCONTROLLED CROSSINGS

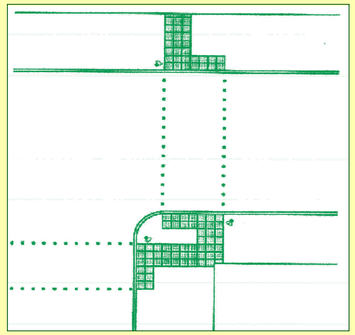
At uncontrolled crossings the pedestrian does not have priority over vehicular traffic and must make a decision about whether it is safe to cross.

TYPICAL GOOD PRACTICE LAYOUTS

CONTROLLED CROSSINGS

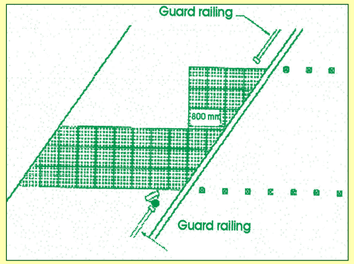
At controlled crossings the pedestrian is able to establish priority over vehicular traffic (zebra, pelican crossings etc.).

Overlapping uncontrolled crossing



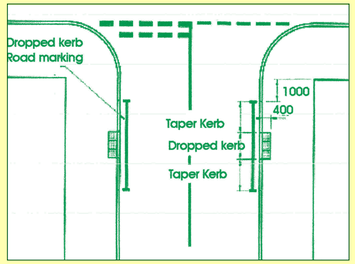
The tactile surface to be installed the full width of flush dropped kerb.

Back edge not parallel to the kerb



Where the back edge is not parallel to the kerb, and as a result the depth of the tactile surface varies, it should be no less than 800 mm at any point.

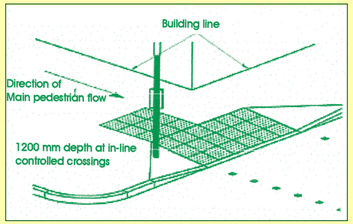
Inset uncontrolled crossing



Where possible, crossings at side roads should be inset into the side road approx. 1 metre beyond the radius kerb. The raised radius kerb provides positive guidance for drivers.

Dropping the radius section of the kerb will create difficulties for persons with disability and should be avoided.

In line of travel controlled crossing



Where the dropped kerb at the controlled crossing is in direct line of travel (eg. At crossing points on junctions), the tactile surface should be laid to a depth of 1200 mm (as shown in diagram above). At all other controlled crossings a depth of 800 mm should be provided.