

Guidelines - Disabled Access

PLEASE NOTE:

In October 2004 the Department for Transport initiated the Disabled Discrimination Act relating to issues regarding disabled persons and street furniture. The purpose of the notes and sketches below is to advise the uninformed that guidelines and rules do apply to HOW and WHERE street furniture products should ideally be used in regard to disabled pedestrians. Advice and guidance should be sought from the Department for Transport's Website. To the best of our knowledge the guidelines provided below are given in good faith and correct at the time of going to press, however Broxap Ltd cannot accept responsibility for the information contained below as accurate or current.

Mobility impaired and visually impaired people

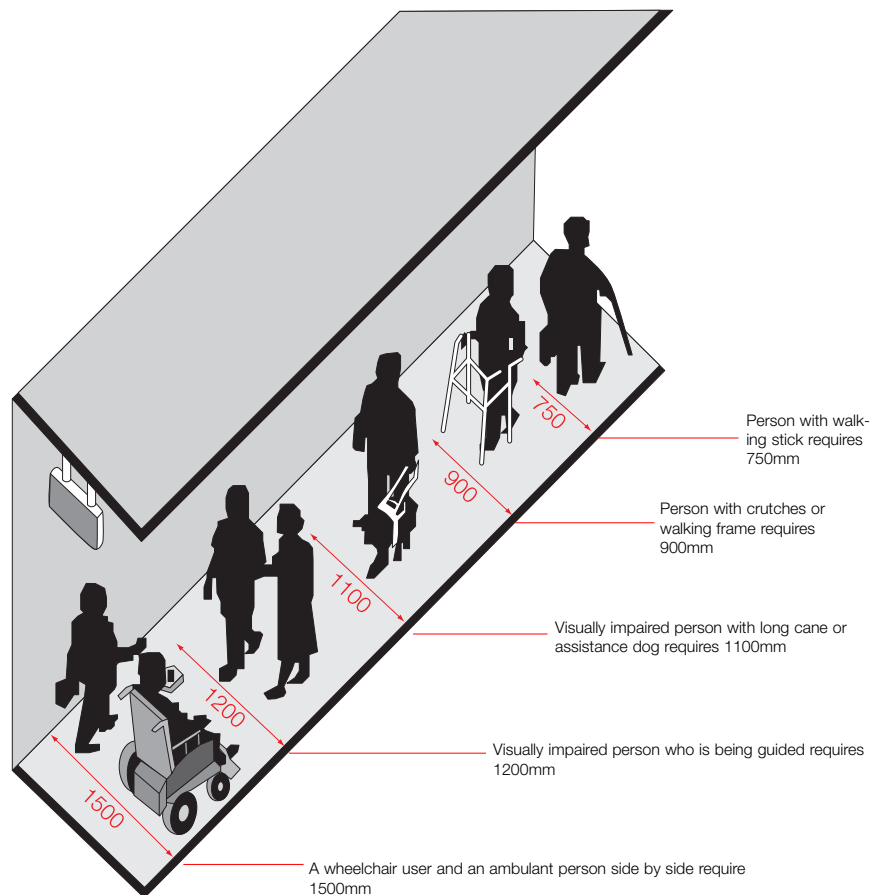
Someone who does not use a walking aid can manage to walk along a passage way less than 700mm wide, but just using a walking stick requires greater width than this; a minimum of 750mm (see diagram below). A person who uses two sticks or crutches, or a walking frame needs a minimum of 900mm, a blind person 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.

Footways, Footpaths and Pedestrian Areas

The distinction between a footway and a footpath is that a footway (usually called the pavement) is the part of a highway adjacent to, or contiguous with the carriageway on which there is a public right of way on foot. A footpath has no contiguous carriageway. Where reference is made to one, it can generally be regarded as applying to the other for design purposes.

Widths

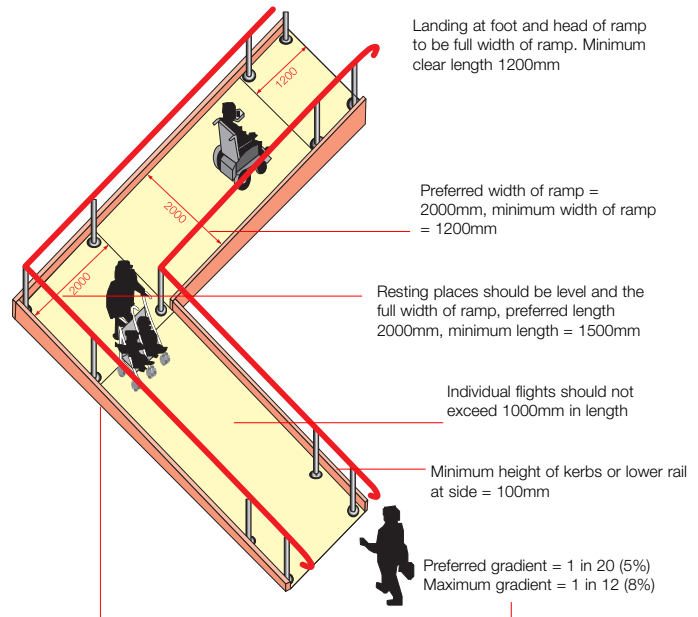
A clear width of 2000mm allows two wheelchairs to pass one another comfortably. This should be regarded as the minimum under normal circumstances. Where this is not possible because of physical constraints 1500mm could be regarded as the minimum acceptable under most circumstances, giving sufficient space for a wheelchair user and a walker to pass one another. The absolute minimum, where there is an obstacle, should be 1000mm clear space. The maximum length of restricted width should be 6000mm. If there are local restrictions or obstacles causing this sort of reduction in width they should be grouped in a logical and regular pattern to assist visually impaired people. It is also recommended that there should be minimum widths of 3000mm at bus stops and 3500mm to 4500mm by shops though it is recognized that available space will not always be sufficient to achieve these dimensions. Where a cycle track runs alongside a footway or a footpath best practice is to physically segregate the two as advocated in Local Transport Note (LTN) 2/86 Shared Use by Cyclists and Pedestrians. If this is not possible, appropriate tactile surfaces should be used to identify the cycle and pedestrian paths. The cycle track should be at least 1400mm wide with the cycle symbol on the ground every 50 yards. The pedestrian part should meet the standards given earlier in this section and should be separated from the cycle track by a raised dividing line 150mm wide and 12mm to 20mm high, with a 50mm wide top face.



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Changes in Level

Ramps where used should have a gradient of approximately 1:20 (maximum 1:12). Where ramps are steep (greater than 1:20) steps should also be made available. Long ramps require a level landing at 10 metre intervals. A level platform of adequate size should be provided at the entrance to the building and at the top and bottom of all ramps. Steps should have a maximum riser of 150mm and a minimum tread of 280mm. Handrails should be provided to both sides of ramps and steps. Intermediate handrails are necessary where the ramp or steps are wider than 2000mm. Handrails should extend beyond the top and bottom of the steps or ramp and should be provided with a positive safe end.



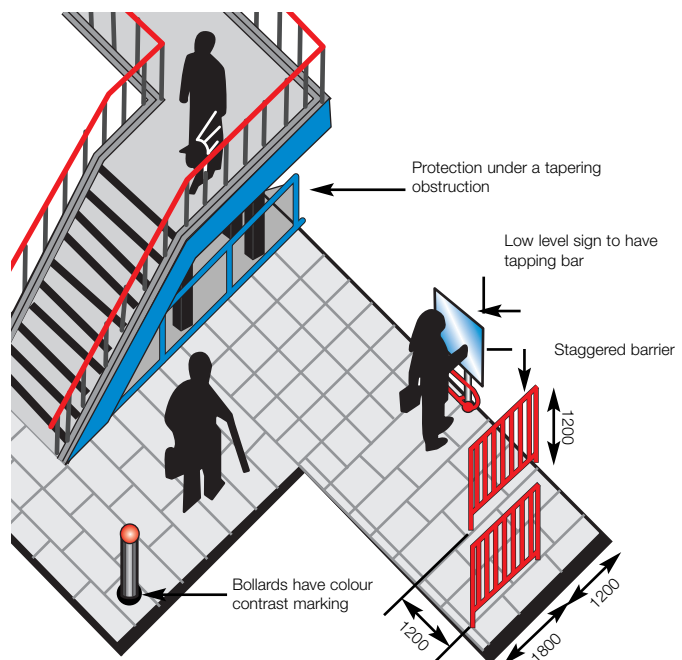
Street furniture

Street furniture should be located so that it does not obstruct pedestrian pathways. Where possible such furniture should be at least one metre in height (800mm minimum), with good colour contrast. Street furniture can cause problems for both wheelchair users and for people who are visually impaired. It is essential, taking account of heritage issues, to consider both the position of any furniture and the means of making it apparent to people with reduced vision. Posts, poles, bollards etc should be positioned to leave at least the minimum footway widths (see previous page) It helps visually impaired people if, within an area, the positioning of posts etc is consistent and away from general lines of movement. Thus lamps (and signs) should be mounted on walls or buildings whenever possible; if not, then placing them at the back of the footway as near the property line as possible is acceptable. In this position the maximum distance from the property line to the outer edge of the pole should be 275mm. If they are placed on the road side of the footway, they should be at least 500mm away from the edge of the carriageway, increased to 600mm where there is severe camber or crossfall. If there is more than one pole, they should be at least 1000mm apart. Waste bins should be approximately 1300mm in height, should continue down or close to ground level and should not have sharp corners. The bin opening should be about 1000mm above ground level. Bins should be colour contrasted to their surroundings. Bollards are recommended to be at least 1000mm in height. The same minimum height (1000mm)

applies to other freestanding objects such as raised flowerbeds, which should also be designed with rounded edges. Under no circumstances should adjacent bollards be linked with chain or rope as this is a hazard for blind and partially sighted people. Low level signs supported on two vertical poles (eg city maps) should have a lower tapping rail or skirting between the posts to prevent visually impaired pedestrians inadvertently walking between them and colliding with the sign. The rail or skirting should be 300-400mm above ground level. The sign should not extend more than 150mm beyond the supporting posts. Colour contrasted bands (150mm deep) on poles and colour contrast on the tops of bollards will help partially sighted people, but the choice of colour for the overall post or bollard also affects visibility. Grey poles in particular are often problematic as they tend to blend into the general background. The incorporation of a light at the top of bollards is also an effective way of making them more easily seen. Overhead signs (and any other obstacles over a footway) should give the height clearances specified in (Mobility Impaired and Visually Impaired on previous page) (2100mm minimum below suspended signs, 2300mm otherwise). Tapering obstructions are usually inside buildings, but can also be found in the outside environment, for example where there is a pedestrian bridge over a road. Any part below a stairway which is 2100mm or less in height should be protected with a barrier to warn blind and partially sighted pedestrians. In some circumstances (where there is sufficient space) protection can be given by a warning surface which extends out from the obstacle. In this context it should be remembered that pedestrians take time to come to a halt. Finnish guidelines, for example, give a braking distance for pedestrians of 500mm and a reaction distance of 1400mm.

Barriers on footways

Where it is necessary to provide staggered barriers across footways and footpaths in order to prevent conflict with other forms of traffic (for example at junctions with main roads) the barriers should be constructed of vertical bar sections 1200mm high and colour contrasted with their surroundings. An offset between the two barriers of 1200mm allows wheelchair users convenient passage but discourages the riding of bicycles.



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Fences and guardrails

If there is a steep slope or drop at the rear of the footway, precautions must be made to prevent wheelchair users running over the edge or blind or partially sighted people walking over it. Guardrails and barriers at the side of or across footways should be at least 1100mm high; preferably 1200mm measured from ground level. In common with other street furniture on or close by footways, guardrails should be clearly colour contrasted from their surroundings: simple galvanized railings are not acceptable. If, for reasons of economy, this type of railing has to be used it should at minimum have colour contrasted markings on it. These requirements also apply to rails around street works. Guardrails should also be designed to prevent guide dogs from walking under the rails, but there should be sufficient openings between vertical members to ensure that children and wheelchair users can see, and be seen, through the railings. The top rail should have a smooth profile and, if intended to provide support, should be circular with a diameter of between 40 and 50mm. There should also be an upstand a minimum of 150mm in height at the rear of the paved area, which can then act as a tapping rail for long cane users as well as a safeguard for wheelchair users.

Colour contrast

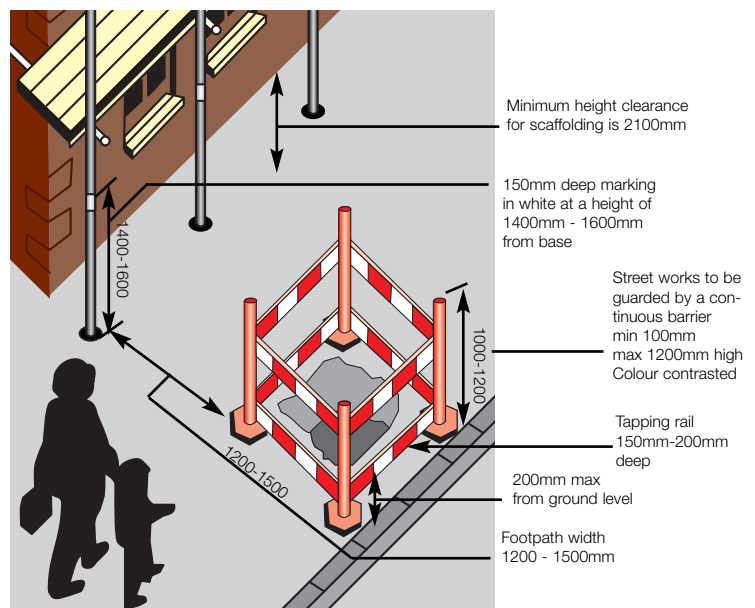
Many guidelines advocate the use of colour / tonal contrasted marking to identify street furniture, railing or boarding around street works, scaffolding, tactile paving surfaces and so on (it may not be appropriate to use such treatments in historic areas. Consultation with those responsible for these areas should take place at the earliest opportunity). The main purpose of using contrasted marking is to help partially sighted people avoid obstacles that they might walk into or trip over. The dimensions and placing of colour contrasted bands on poles and similar obstructions are a minimum depth of 150mm placed with the lower edge of the band between 1400mm and 1600mm above ground level. Some guidelines advocate deeper bands (300mm) or more than one band (three dark, two light bands each 100mm deep), but the single band, minimum 150mm, is considered satisfactory by the Royal National Institute for the Blind (RNIB). Colour contrast is also necessary on structures other than poles and guardrails, for example on glass doors and on bus shelters. The principles underlying colour and contrast have been researched in detail but, in summary, it is essential to ensure that the colours used contrast with their surroundings. Colours which appear to be different from one another in colour (chroma) can be very similar tonally (eg green and brown) and therefore do not give sufficient contrast. Contrast is the difference in reflectivity between two surfaces. An easy way of judging whether there is good contrast is to take a black and white photograph of the scene or a photocopy of a colour photograph. A good contrast will show up black and white, poor contrast will show up as grey. Further detailed information on the use of colour and contrast can be found in A design guide for the use of colour and contrast.

Surfaces

Uneven surfaces, gaps between paving slabs etc whether within or outside buildings can cause problems for people using sticks and crutches, visually impaired cane users and wheelchair users. Joints between flags and pavers should not be less than 2mm and not more than 5mm wide. For pedestrian-only footways, flags can be laid with wider joints (6-10mm) filled with compacted mortar. Maximum deviation of the footway surface under a 1 metre straight edge should not exceed 3mm. New cobbled surfaces are unlikely to be appropriate and, even in historic environments, alternatives should be sought. Covers and gratings can also cause problems and may be mistaken by blind people as a tactile surface. It is recommended that the maximum size of openings should be 13mm and if openings are elongated they should be placed at right angles to the predominant direction of travel. It is also recommended that the spaces should not be more than 150mm long. Wherever possible gully covers and drainage slots should be positioned as far as possible from main pedestrian flows. Inspection chamber covers and service inspection chambers should be flush with the surface.

Street works

Street works not properly safeguarded pose a hazard for many disabled people and particularly blind and partially sighted pedestrians. Street works should be guarded for their full extent by a continuous barrier, minimum 1000mm high, maximum 1200mm, with a tapping rail (depth 150mm to 200mm with its bottom edge on the ground or up to a maximum height of 200mm above the ground). The barriers must be placed so that they cannot be knocked over and should be reasonably rigid. Illumination of the street works at night-time helps partially sighted people; audible warnings help blind people. Colour and tonal contrasting of the protective barriers is essential. If the extent of the works means that pedestrians will have to use the carriage way, kerb ramps or raised footways should be provided to help wheelchair users. Where scaffolding is erected on or over a footway, there must be adequate height clearance (2100mm minimum) and an absolute minimum footway width of 1200mm in lightly populated areas, 1500mm in busier areas. Enclosing the actual building works with a hoarding is the safest measure for blind, deafblind and partially sighted people. The name and contact details of companies undertaking works should be clearly displayed so that any problems can be reported immediately.



Building works within bus and rail stations, or in other transport facilities used by the public, should also be guarded in a manner similar to that described for street works.

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Seating

Mobility impaired people need seating at reasonably frequent intervals. In commonly used pedestrian areas, and transport interchanges and stations, seats should be provided at intervals of no more than 50 metres. Wherever possible seats should also be provided at bus stops and shelters. Seating should be placed adjacent to, but not obstructing, the pedestrian route and should be picked out in contrasting colours to help people with visual impairment.

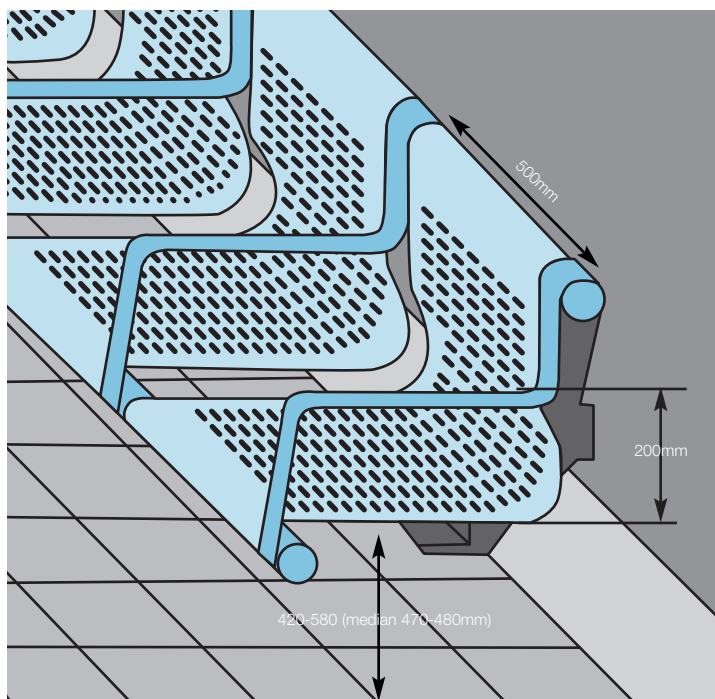
Seating/waiting areas

Use of public transport usually involves waiting, so provision of seating is important. Guidance on conventional seat heights varies over the range of 420- 580mm, with a median height around 470 - 480mm. Armrests are helpful for some people and should be placed about 200mm above seat level. Seats placed in a row either should all have armrests or no armrests; a mixture within a single row can cause difficulties for visually impaired people. Seat widths are recommended to be a minimum of 500mm.

Although conventional seating to the dimensions given above will meet the needs of most disabled people, there are some who find perch-type seating, against which people half lean and half sit, easier to use. There may also be constraints on the amount of space available for seating, in which case fold down seats may be appropriate. Perch-type seating is recommended to be at a height of 700mm and fold down seating at 550mm to 600mm. If space permits it is helpful for people of restricted growth (and children) if there are some seats at a lower level than the standard height. Also, in designing the layout of the seats, space should be left for wheelchair users to sit with their companions. For outdoor seating it is vital that rain water is not allowed to collect on any part of the seat; wire top or wire-mesh seats are an obvious way of preventing this. Seats should be made of vandal resistant easy clean material. The need for seating is not limited to transport terminals; it also applies to the pedestrian environment as a whole. Where audible announcements are made in seating/waiting or refreshment areas, they should also be provided visually for the benefit of deaf and hard of hearing people.

Waiting and refreshment rooms

Waiting and refreshment rooms should make provision for the needs of disabled travellers. Doorways must provide level access and have, preferably, automatic doors or ones which are capable of being opened easily



PLEASE NOTE:

For Waterside Safety and Disabled Access Official Guidelines and Information we strongly recommend you consult the ROSPA or the Department of Transport's official websites for all current and up-to-date information:

www.rospa.com
www.dft.gov.uk

http://www.dft.gov.uk/stellent/groups/dft_mobility/documents/page/dft_mobility_503282.hcsp