



Improving Access to Buildings and Services

www.aberdeencity.gov.uk

Aberdeen
Access
Panel





	Contents	Considerations
Page		
5	Surfacing	Even, firm, non-slip
6	Pathways	Width, obstructions
7	Car Parking	Location, sizes, level or dropped kerb
8	Ramps	Suitable gradient, guard and handrails
9	Dropped Kerbs	Width, level with roadway
10	Lobbies	Suitably sized
11	Signposting	Clear, upper and lower case letters
12	Corridors and spaces	Widths, obstructions
13	Colour Contrast	To obstructions, walls, doors, toilets, etc.
14	Stairs	Tactile surfaces, nosings highlighted, handrails
15	Doors and furniture	Vision Panel, suitable ironmongery
17	Seats	Suitable location, highlighted, armrests
18	Lifts	Door width, internal size, controls, handrail
20	Counters	Counter heights, induction loops
21	Toilets	Door width, internal size, handrails colour contrast
25	Lighting	Well lit
25	Security	Height of entry controls, escape provision
26	Internal controls	Heights, easy operable/grasp

Access for People with Disabilities

Design Guidance Notes (for non domestic buildings)

Introduction

A common perception about people with disabilities is of people who use wheelchairs or are ambulant disabled, people who are blind or partially sighted and people who are deaf or hard of hearing. Many more people, however, suffer permanent or temporary disability through accident, injury or illness. In addition, elderly people often experience severe mobility problems. Official statistics estimate that around one household in five in Great Britain includes someone who is disabled in one way or another.

A more hospitable and well designed environment would greatly ease the lives and mobility problems of everyone. It would also aid people with children, pushing a buggy or carrying shopping and luggage. In fact, it benefits the whole community, since the kind of environment that suits people with disabilities also happens to suit non-disabled people.

Poor design can often cause major difficulties to people with a disability. If this is identified at the design stage, they may be relatively easy to avoid. After construction, however, they may be complicated and costly to rectify.

For these reasons Aberdeen Access Panel and Aberdeen City Council have together produced these Design Guidance Notes to identify appropriate responses to meet the needs of all sectors of society. The contents of the guide have been discussed with various groups representing people with disabilities. The information used in this guide has been drawn from a variety of sources including Scottish Accessible Information Forum's guide.

It is acknowledged that in an aspect of life where expectations and technical knowledge and skills are continually advancing the information and advice contained in these "Notes" will require to be reviewed in future editions of this publication.

Surfacing

All external and internal surfaces should be even, firm, non-slip and avoid glare in both wet and dry conditions. The surface should also be durable since cracked and uneven surfaces can be dangerous. Gravel surfaces should be avoided whenever possible.

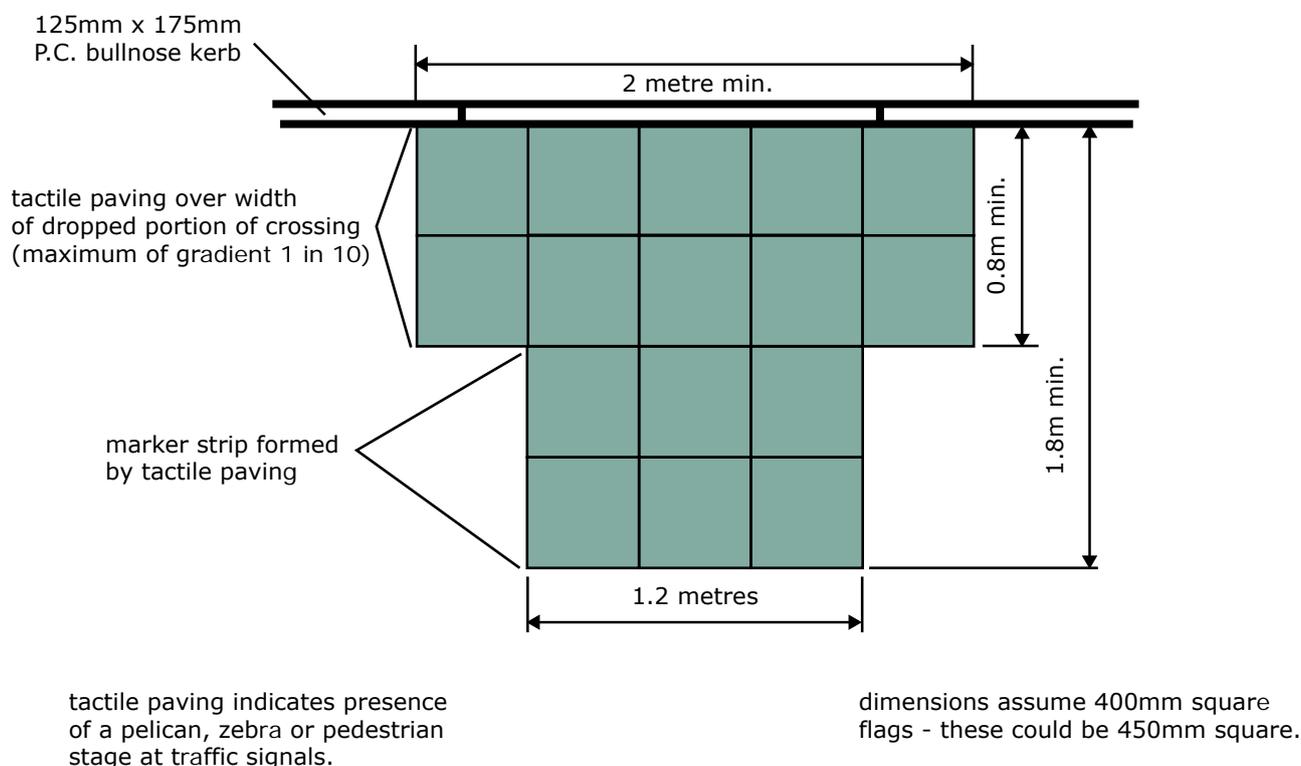
Hazards such as street furniture or changes in level should be announced by raised kerbs or the use of contrasting colour. Tactile blister surfaces should be used to identify pedestrian crossing places. Where patterned surfaces are used, the pattern should not look like steps.

Water channel covers, gratings etc, should be flush with the surface. Gratings should be at right angles to the line of pedestrian flow so as not to trap small wheels, etc. Open V gully water channels should be a contrasting colour.

Care should be taken when using coloured surfaces not to create situations which will confuse partially sighted people, e.g. use of striped areas on floors adjoining steps

A blister tactile surface should be provided at zebra and pelican crossings and at junctions controlled by traffic signals that include a push button operated "cross now" indication to pedestrians. Where a tactile surface is used it should form a T-shaped area, the head of the T being parallel to the dropped kerb.

Dropped kerbs should be kept as near flush as possible.



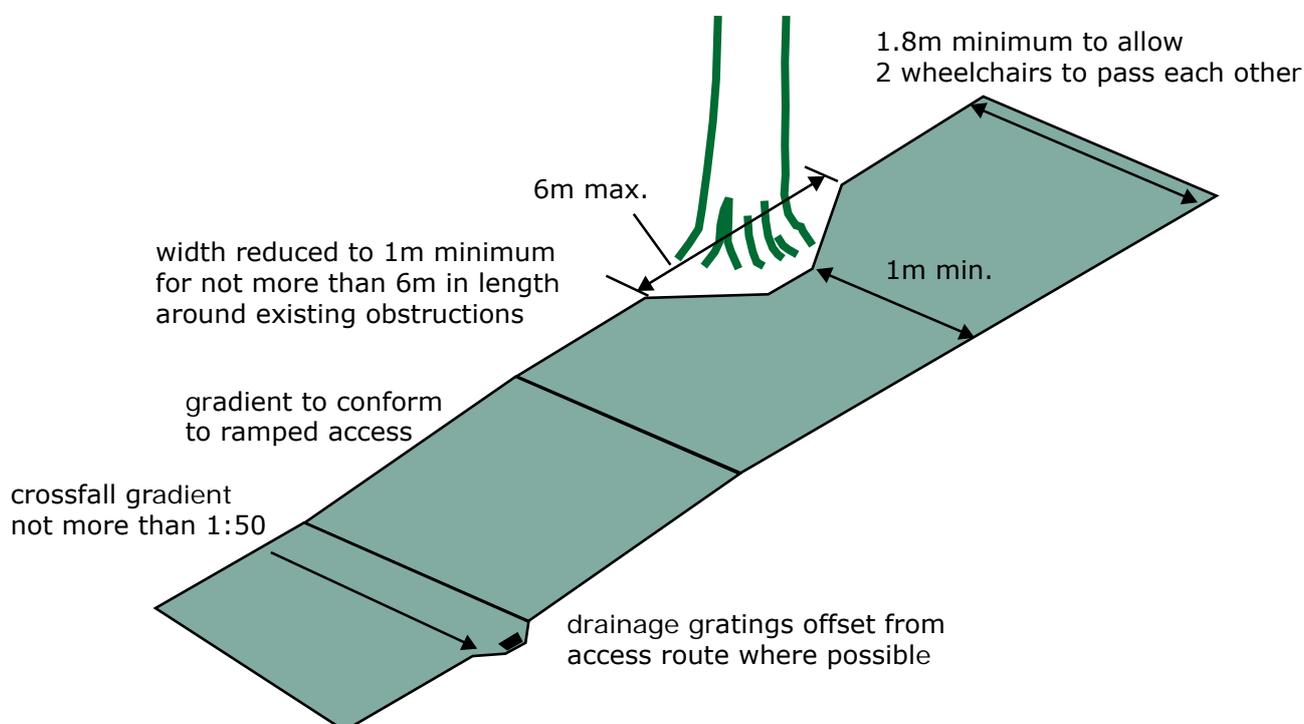
6 Pathways

Pathways should be 2.0 metres wide (1.8 metres minimum) to allow wheelchairs and prams to pass. A greater width may be required in some circumstances, such as where there are large pedestrian flows.

Pathways should be well lit and free from obstacles. Path edges and potential hazards such as flower beds and trees should be announced by raised kerbs, inclined edges or the use of contrasting colour.

Handrails and kerbs or low rails should be provided at changes in level and slopes greater than 1 in 20. Handrails should extend 450 mm (300 mm minimum) beyond the changes in level at either end.

Where pathways join or change direction splayed or rounded corners should be used in order to ease progress in a wheelchair and aid visibility.



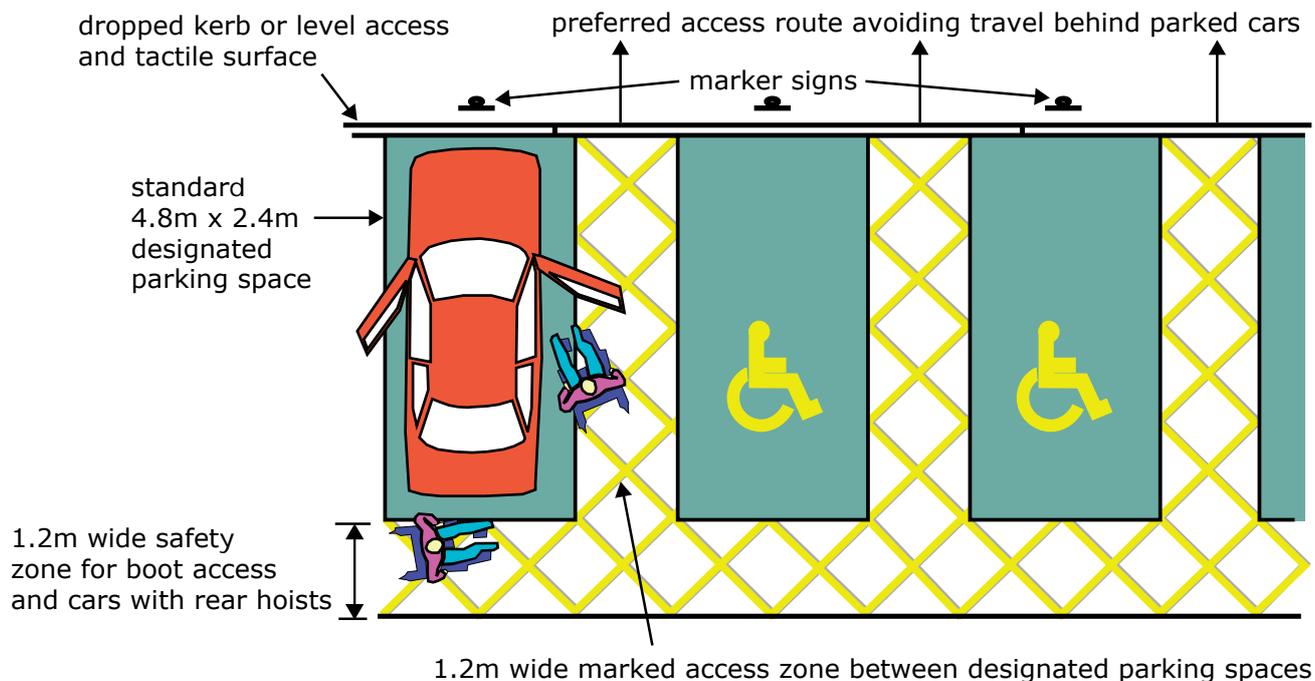
Car Parking Spaces

A minimum 5% of spaces for non-residential developments should be reserved specifically for people with disabilities. In surface car parks the spaces should be located as close to an accessible entrance to the building as possible (maximum distance 45 metres), whilst in basement or multi-storey car parks the spaces should be located as close to lifts or exits as possible. Ideally, all parking spaces in multi-storey car parks intended for use by disabled persons should be located on the ground floor.

Reserved spaces should be denoted by painting the internationally recognised disabled symbol on the ground using durable yellow paint and by clear signposting at the entrance to the car park and beside the spaces themselves. The size of the spaces should comply with the specifications given below, thereby enabling wheelchair transfer to and from the car. An identification post should also be provided.

Where appropriate, the pedestrian route from the parking spaces to an accessible entrance to the building should be clearly defined, well lit, level and/or with dropped kerbs to facilitate access to adjacent footpaths where necessary. Wherever possible, reserved spaces should be under cover with covered access to building entrances and so placed as to avoid disabled persons having to cross main access routes to obtain access to buildings.

Car parking, designated for disabled persons should be situated as near to any "Paymachines" as possible. Where appropriate, a "help button" or telephone facility to obtain help should be provided.

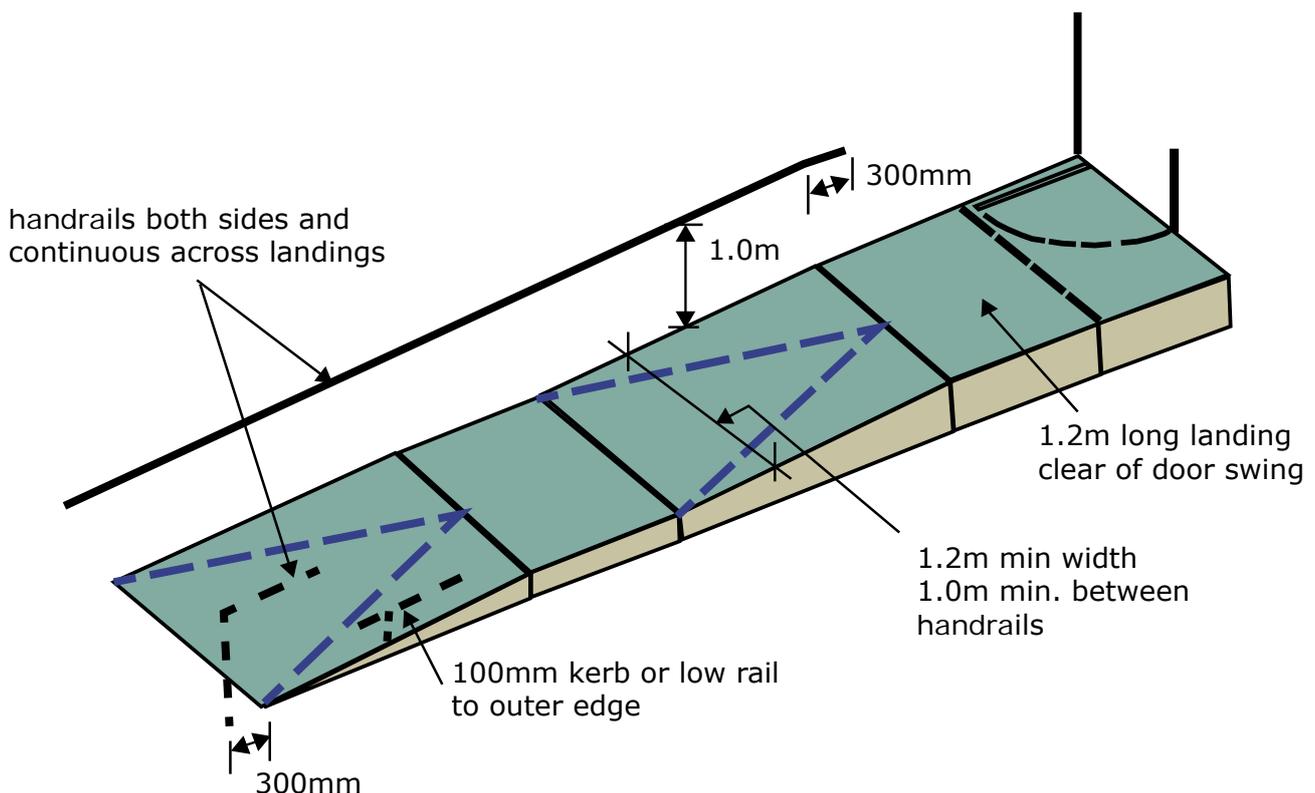


A zone of 1200mm wide should be provided between designated parking spaces and between the designated spaces and a roadway to enable a disabled driver or passenger to get in or out of a vehicle. These zones should be marked as above.

Wherever possible, changes in level should be avoided, especially at entrances and exits to buildings. Where this is impossible, however, a ramp no steeper than 1 in 20 should be provided, if not to all entrances, then at least to one entrance and, in these circumstances, preferably the principal entrance to the building.

If site constraints are such that a ramp steeper than 1 in 20 is necessary, the gradient should not be more than 1 in 12 and, in these circumstances, steps should also be provided for people who can more easily and safely manage steps than a steeper ramp.

Ramps should be a minimum of 1.8 metres wide to allow wheelchairs and pushchairs to pass. 1.2 metres would be acceptable on very short ramps. They should have a non-slip surface and avoid glare in both wet and dry conditions. Contrasting colours and patterns can aid partially sighted people, however patterns should not look like steps. A 100 mm kerb (minimum) should be used to denote any open edge of the ramp together with a handrail on both sides.



Limits for ramp gradient	
Going for a flight	Maximum gradient
10m	1:20
5m	1:15
Not exceeding 2m	1:12

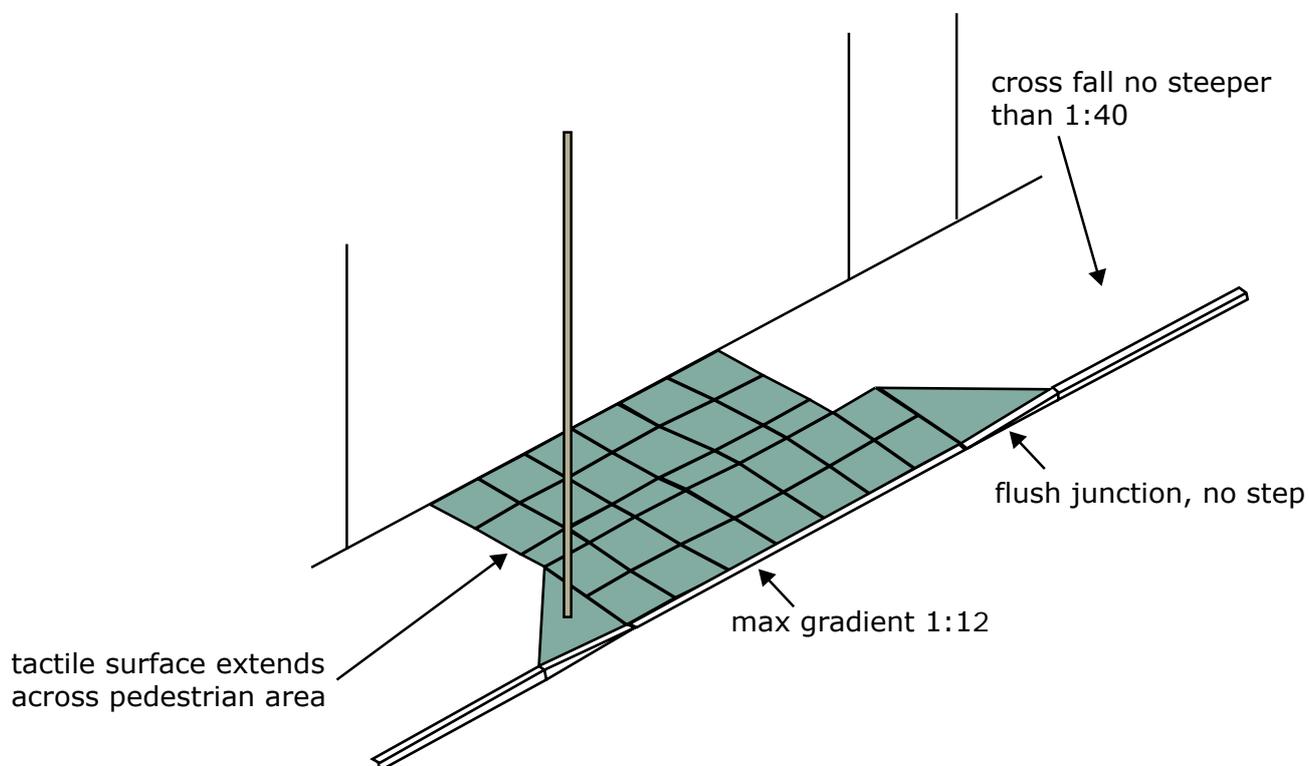
Dropped Kerbs

Where transfer has to be made from a vehicular surface to a pedestrian surface, such as at a pedestrian crossing, road junction or car park area, a dropped kerb should be provided. The gradient of the slope should be a maximum 1 in 12 with the edge of the pavement flush with the vehicle surface. The length of the flush surface should be a minimum of 1400 mm. Blister tactile paving should be provided at crossing points.

Landscaping

Overhanging tree branches should not be low enough to represent a hazard and care should be taken to keep low branches trimmed as necessary. Bushes should also be cut back from the sides of paths to ensure clear movement along path.

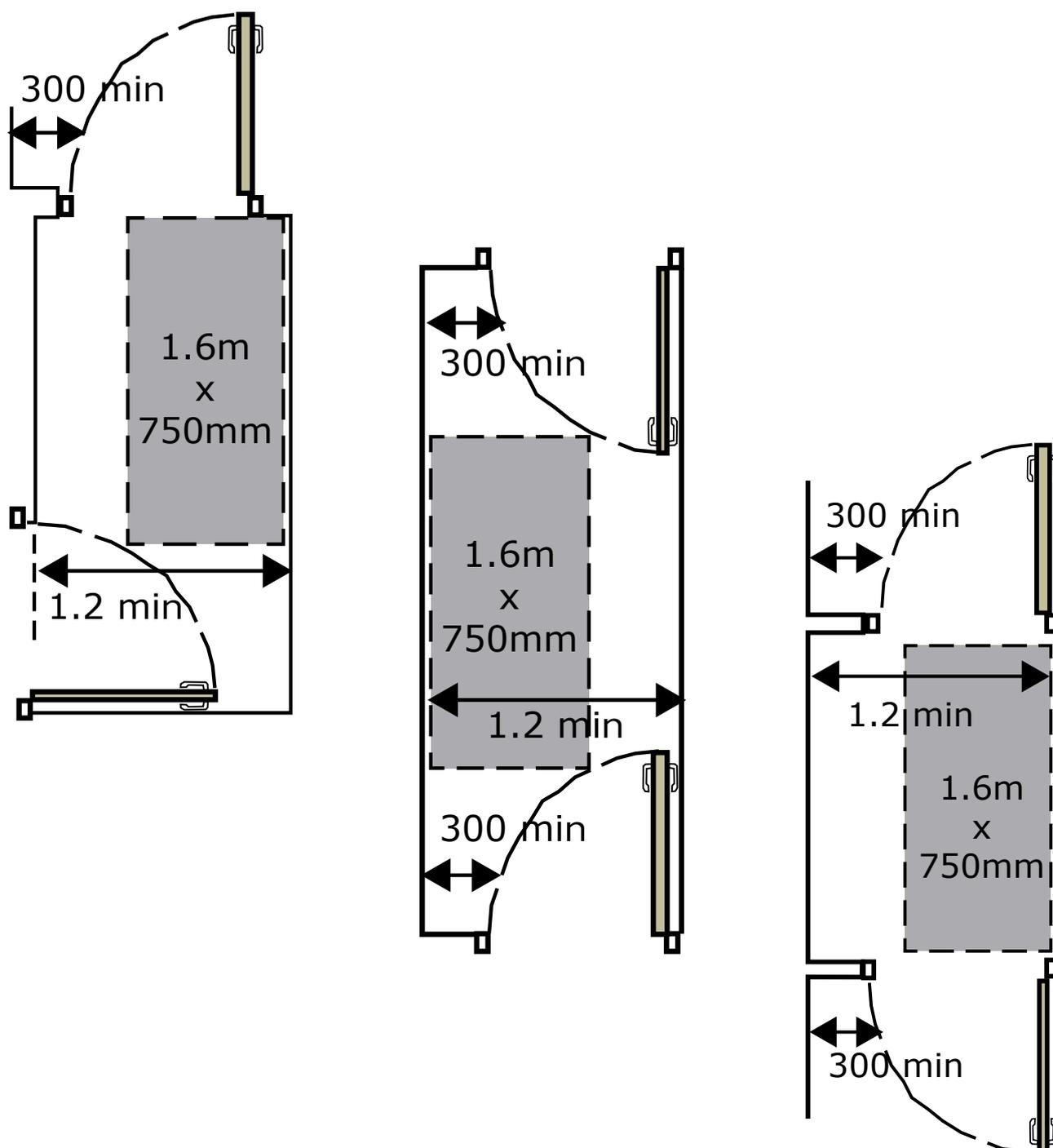
Plant species, carefully chosen to emphasise colour, aroma and texture, can assist orientation for blind and partially sighted people, especially near sitting areas. Similarly, fountains or waterfalls can provide an audible reference point for blind or partially sighted persons. Care must, however, be taken with fountains, etc not to mask sounds such as escalators which might provide a hazard. Water features should have a clearly defined edge to prevent visually impaired people walking into them.



Page 10 Lobbies

Any lobby provided at the entrance to or within a building should allow a person to pass through whilst remaining clear of the swing of doors. A rectangular area, of at least 1.6m long by 750mm wide, outwith any door swing, would permit safe passage of, for example, a person in a wheelchair and a companion.

Examples of accessible lobby dimensions



Where either door can be secured by a locking device, the lobby should be not less than 1.5m wide. This will permit a wheelchair or pram to be turned around should passage be denied.

Signposting

All signposting should be clear, legible and distinguishable from the background by use of strong contrast.

Strong colours - especially yellow - assist partially sighted people.

Wherever facilities are provided for people with disabilities, they should be clearly and consistently signposted, e.g. ramps, car parking spaces, toilets, lifts, accessible routes, entrances, emergency exits and refuges.

Standard symbols, such as those illustrated below, should be used where appropriate to indicate facilities, also pictures/symbols to indicate room use, e.g. picture of computer. Symbols and pictorial signs are easily read and can also help people who do not read or understand English. Signs in other languages may be appropriate in some circumstances.

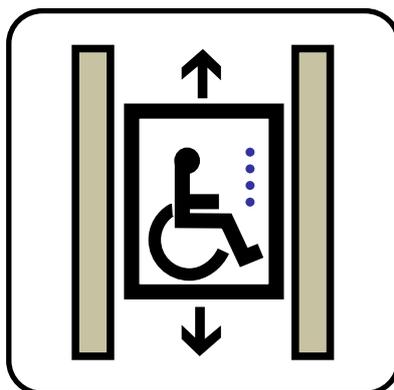
Positioning of signs should not impede or present a hazard to disabled people.

Upper and lower case letters must be used.

Where appropriate tactile information should be included on signage.



Access for
wheelchair users



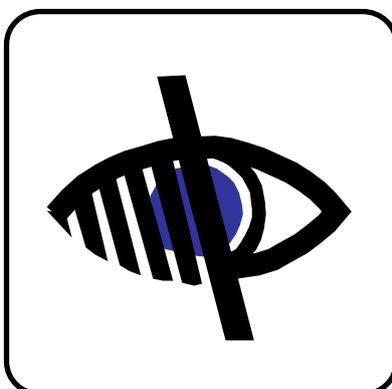
Lifts usable by
wheelchair users



Ramp suitable for
people in wheelchairs



Provision for
guide dogs



Facilities for people
with visual impairment



Induction loop facility
for hearing aid users

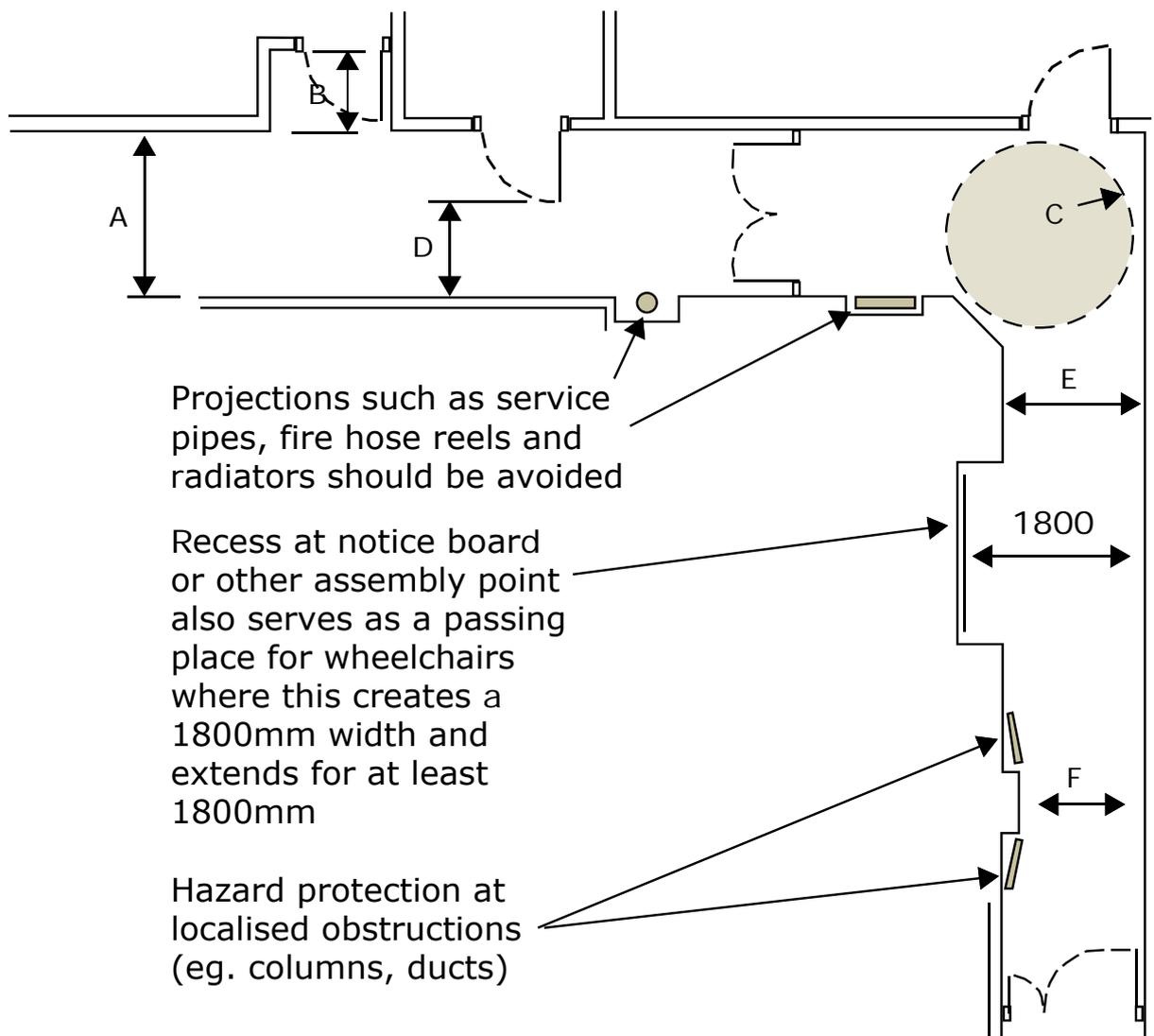
12 Corridors and Spaces

Where possible circulation spaces should be unobstructed with corners splayed or rounded. Unexpected changes of level should be avoided, particularly at doorways.

Corridors should be 1800 mm wide (minimum 1200 mm) with all doors across the corridor fitted with vision panels.

On walls, projections, such as fire extinguishers, should be avoided. It may be possible to recess these into the wall.

On longer corridors handrails, 900 mm high, should be provided.



A - A clear width of 1800mm will allow two wheelchair users to pass each other

B - Depth of recess not less than the width of the door leaf

C - Turning circle of 1800mm diameter at a corridor junction acts as a passing place and allows a wheelchair user to turn and return in the other direction

D - 900mm clear space where doors open into a corridor

E - A clear width corridor not less than 1200mm

F - Clear width of at least 1000mm where there is a permanent obstruction over a short distance

Colour Contrast

A contrasting colour decor must be provided throughout to assist people with a visual impairment to distinguish columns, floor coverings, walls, doors, door furniture, sanitary ware and other furnishings. Ceilings should also contrast with walls as visually impaired people often refer to the ceiling to assess the size of the room.

Full Length Glazing

All full length glazing must be clearly identifiable to people with a visual impairment by the use of a visual panel or logo at eye level. This should be situated at a height of 1.0 metre and 1.5 metres above the finished ground or floor level.

Consideration should also be given to providing low level warning to glass which would assist children and persons of lower stature.

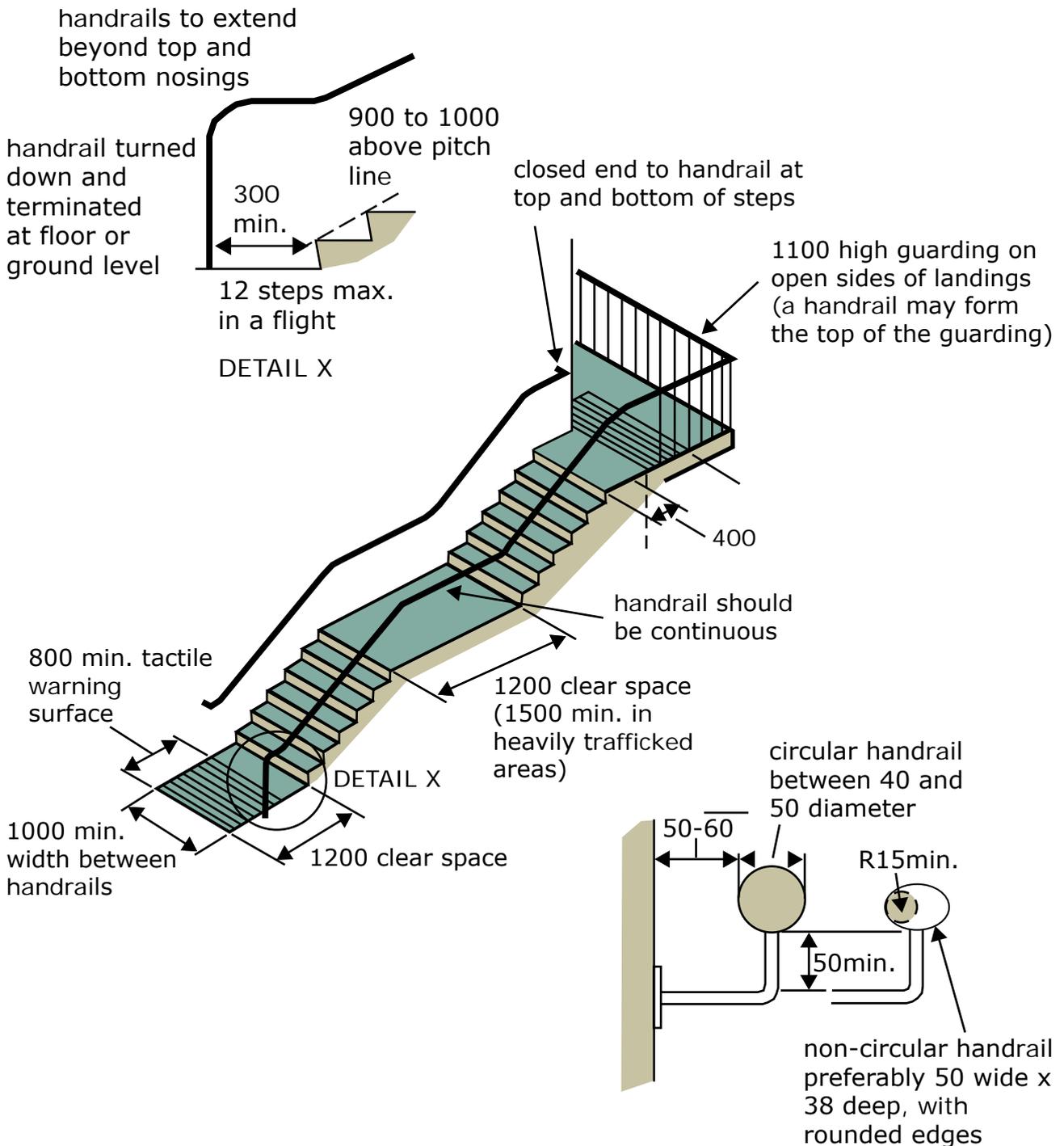
An etched effect will not usually provide sufficient contrast to the background seen through the glass. A coloured logo or panel is preferable.

Page 14 Stairs

All stepped approaches must be designed for ambulant disabled people to access having a maximum rise of 170 mm and minimum going of 250 mm.

Handrails should be provided to both sides of the steps and be of hardwood or nylon coated metal which are more comfortable to touch. Handrails should be highlighted against the background and be continuous at intermediate landings.

Nosings to steps should be highlighted on the riser and tread and tactile corduroy surface should be provided to top and bottom of steps. Corduroy tactile surfaces are particularly important on steps where people do not expect to encounter steps. The tactile surface should be of a contrasting colour to the surrounding floor finish.



Doors and Furniture

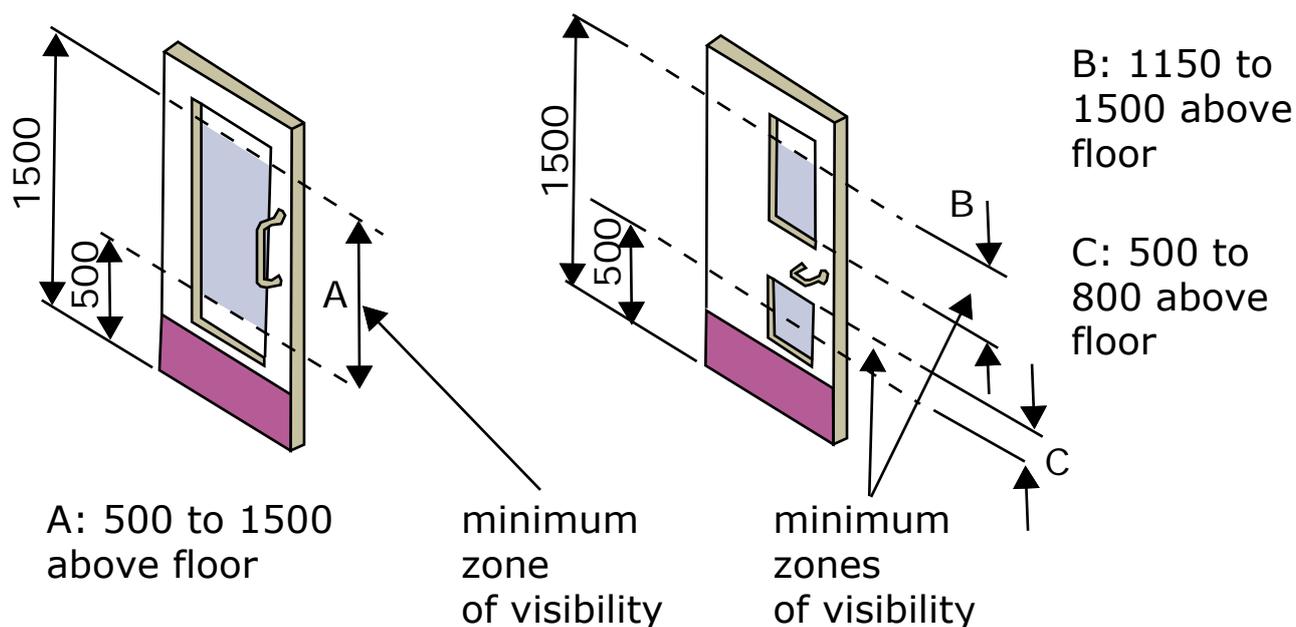
External doors should have a minimum clear opening width of 800 mm. Internal doors should have a minimum clear opening width of 750 mm. They should be sited to provide an easy approach and access.

Vision panels should be provided to doors located in circulation areas and to rooms where possible.

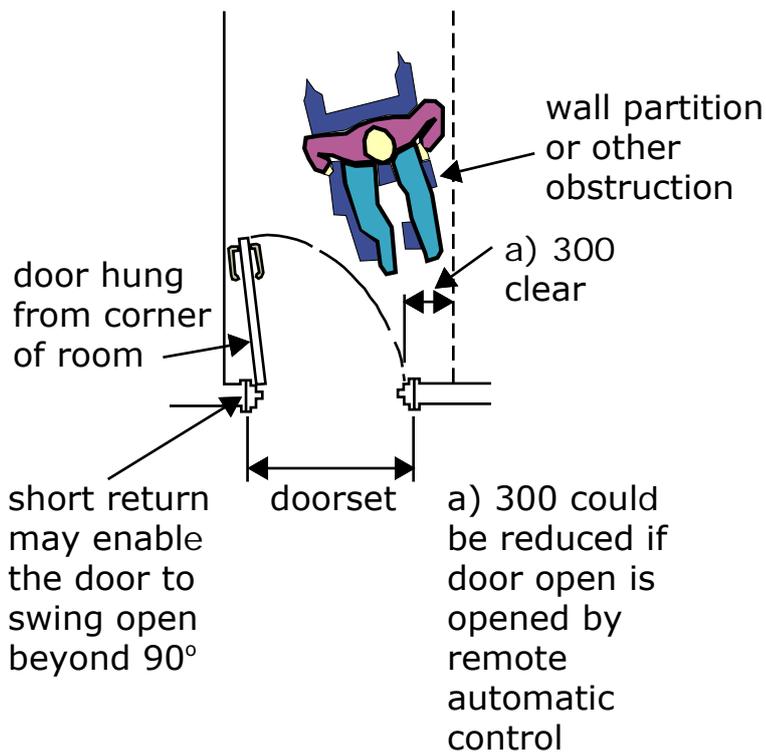
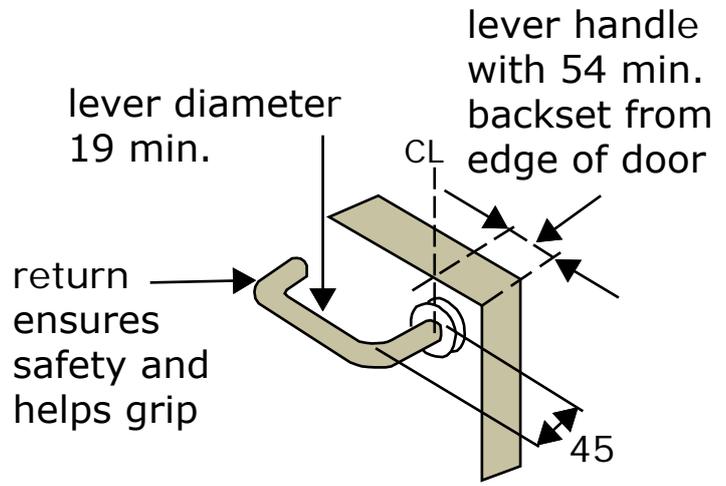
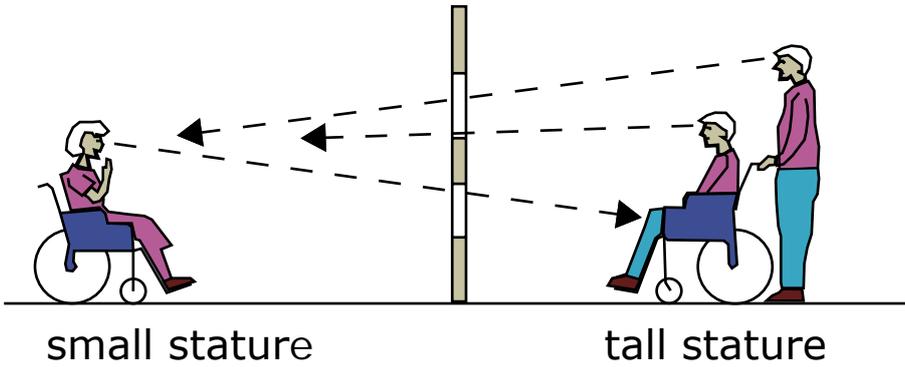
Door handles should be easy to grasp and be easily recognised through colour and tonal contrast. There should also be colour and tonal contrast between walls and doors.

300 mm to opening side of door must be provided to allow a wheelchair user to access the door furniture. Locks should be easy to manipulate with large hand movements, avoiding small twisting or sliding locks.

Fully glazed doors should have a visible panel, logo or poster applied to the glazing to alert visually impaired people that there is a door. Logo, etc. should be at a height of 1.0 metre and 1.5 metres above finished ground or floor level.



16 Doors and Furniture

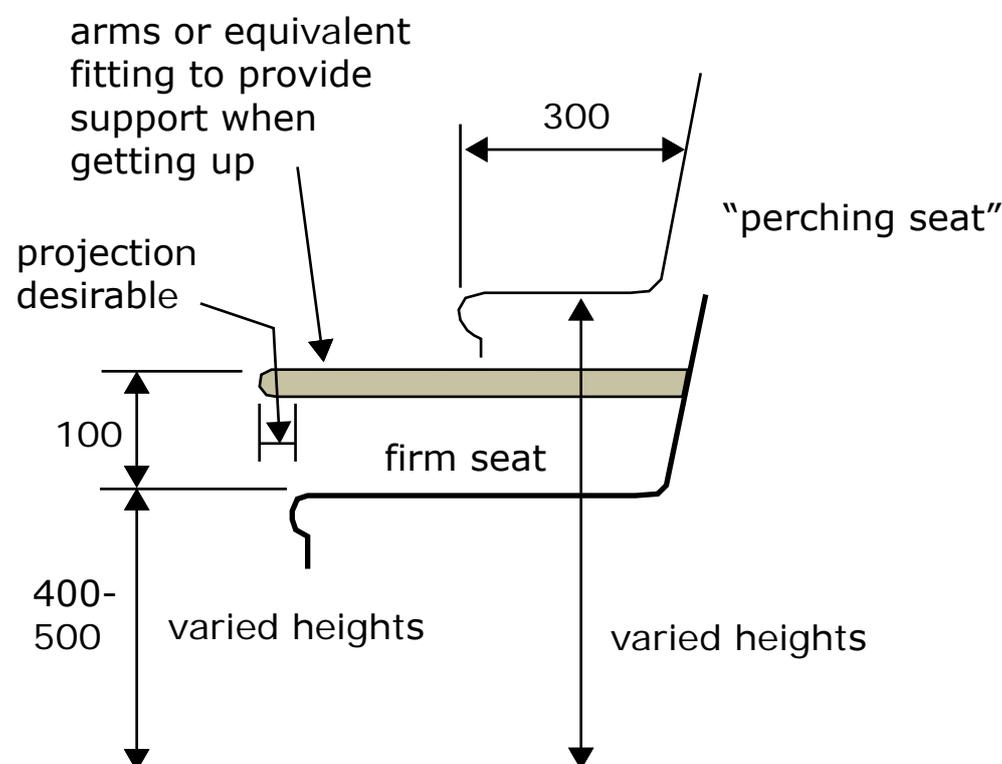


Seats

Seating should be provided along pedestrian routes and where possible in areas where waiting is likely, such as entrance halls, beside lifts, telephones, information desks, check outs, shop counters and shopping malls.

Seats should be positioned in a safe, clearly visible and well lit area, with adjacent space for wheelchairs and pushchairs. They should not present a hazard to blind people.

Variable height seating, some with armrests, should be provided in reception and waiting areas, office, meeting rooms, etc. to assist people with disabilities getting out of a chair. Seating should also contrast against the background to assist people with locating the chairs.



Lifts to all floors should be provided in non-domestic buildings of more than one storey. This enables people in wheelchairs to have access throughout the building to the same extent as non-disabled people. Exceptions may be considered in certain circumstances.

In some cases the use of stair lifts will require to be considered, particularly in alterations to existing buildings or in situations linking old buildings to new buildings.

It is essential in such cases to ensure that stair widths are adequate to accommodate such stair lifts. The advice of the fire prevention officer should be sought in such cases.

Lifts should stop precisely at floor level and the entrance door should have 850 mm of clear opening width (minimum 800 mm).

The provision of a passenger lift in accordance with BS EN 81-1 and BS EN 81-2:

- i) there must be a clear landing not less than 1500 mm by 1500 mm in front of the lift entrance doors
- ii) the lift door or doors must provide a clear opening width of at least 800 mm
- iii) the lift car must be at least 1100 mm wide and 1400 mm long
- iv) the controls must be sited between 900 mm and 1100 mm above the lift floor and at least 400 mm from the front wall
- v) the lift installation must be provided with tactile call buttons (both in Braille and raised numbers/letters) on each storey served, and, within the lift, tactile storey selector buttons and, in a lift serving more than two storeys, visual and voice indicators of the storey reached
- vi) a flashing red light should be installed inside the lift to warn deaf persons of a fire within the building

Touch sensitive, illuminated and audible lift controls with embossed digits should be used both inside and outside the lift. These should be positioned no higher than 900 mm and 1100 mm above the floor. Embossed numerals should also be used to identify the floor number level.

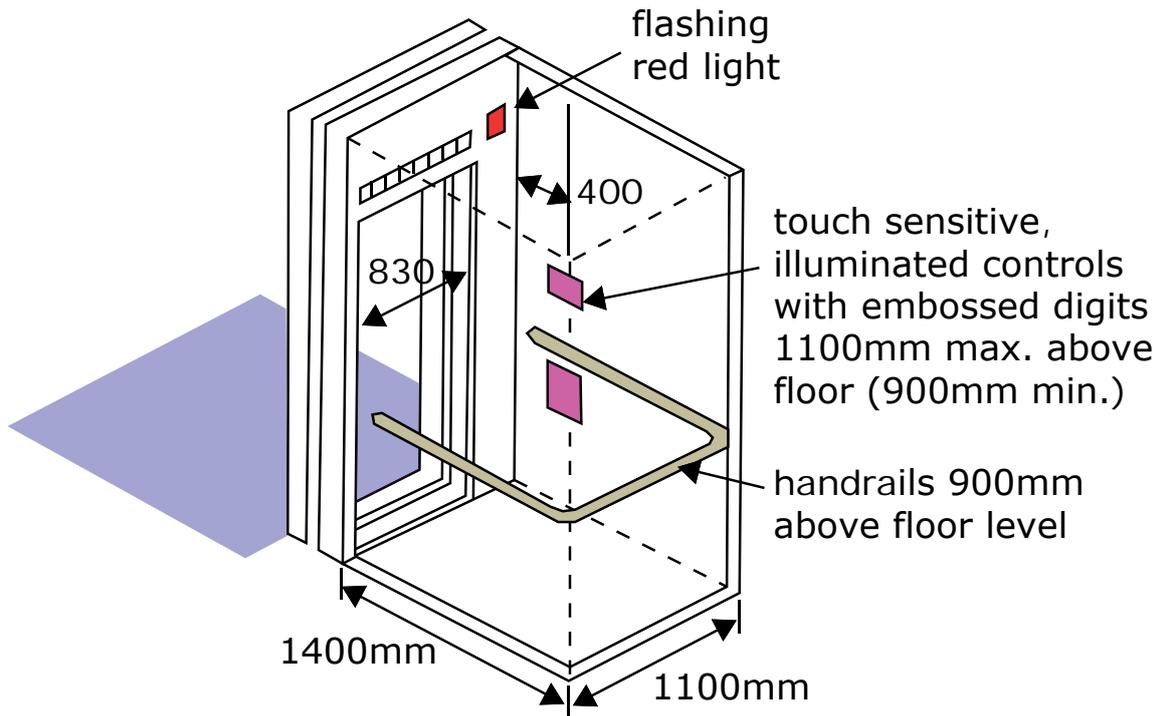
Lift doors should be fitted with a photoelectric cell or other device to prevent them closing when someone is moving into or out of the lift.

Seats outside and handrails inside the lift are recommended. Handrails should be 900 mm above floor level.

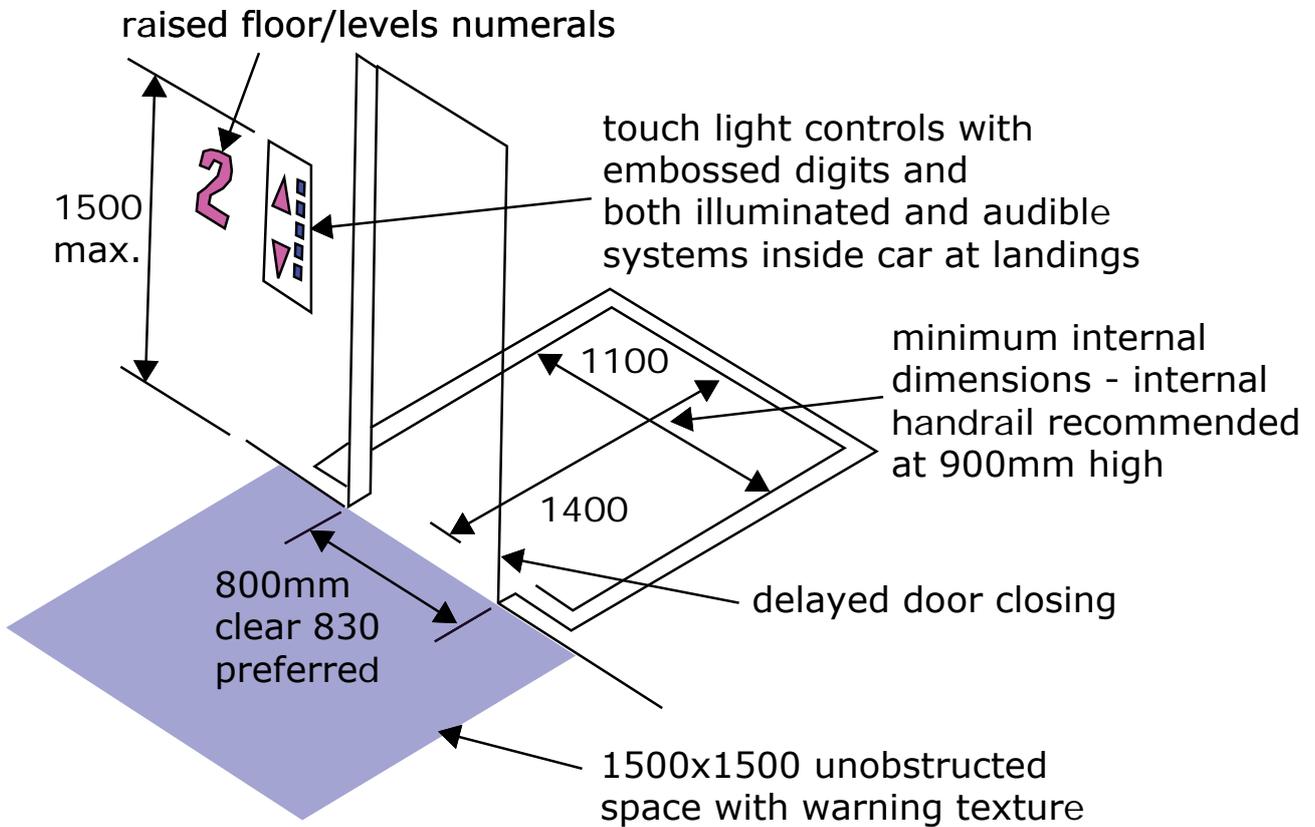
Provision of a small mirror on the rear wall of the lift will assist people using wheelchairs with reversing into/out of the lift.

Emergency telephones in lifts should be capable of use by disabled people including those with visual impairments and should have embossed digits and Braille letters on the buttons. For people with hearing impairment a light should indicate when the call has been answered.

Lifts



Interior of Lift



External approach to Lift

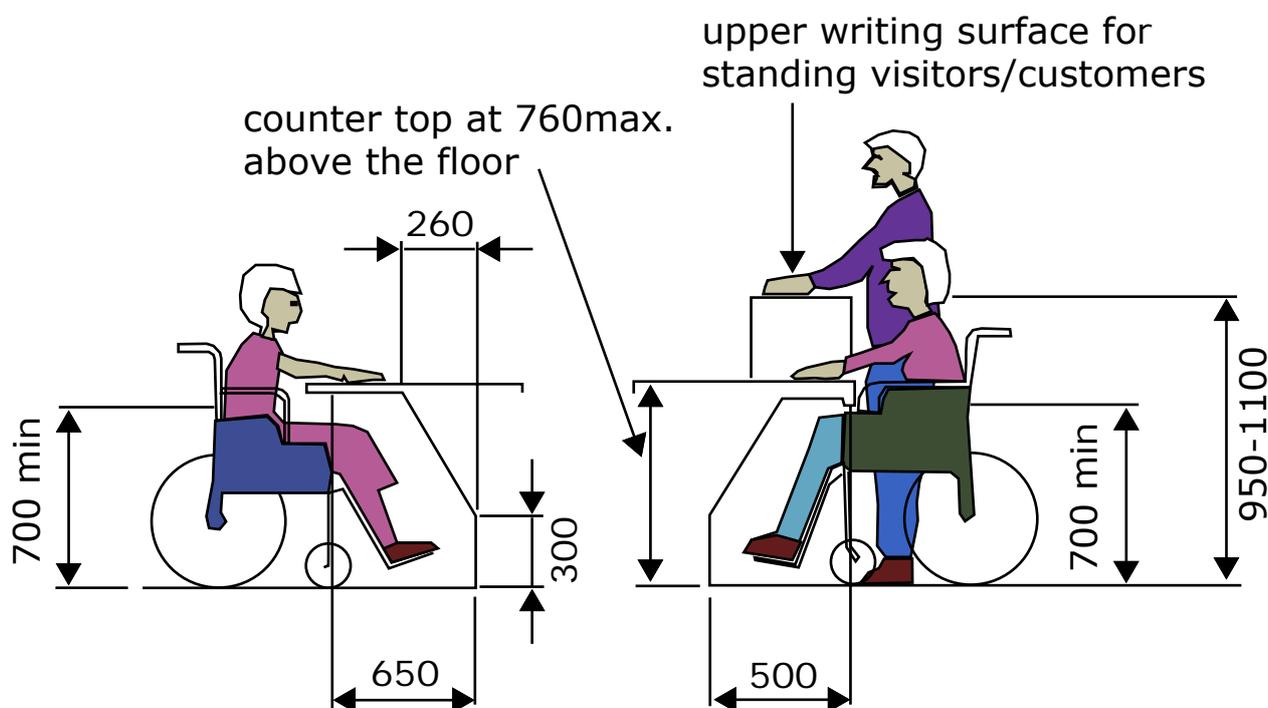
20 Counter and Shop Checkouts

Counters, information desks and shop checkouts should be a maximum of 0.8 metres high to allow use by people in wheelchairs. Aisle widths between shelves and displays in shops should not be less than 1200 mm.

Ideally, all shop checkouts should be a minimum of 1.0 metres wide to allow wheelchair and buggie access. At least one checkout in every shop should be 1.0 metres wide.

Turnstile type barriers at entrance to shops should be avoided.

It is important for those who lip-read that visual obstructions at counters be avoided as far as possible as should lighting and other arrangements which create glare. Induction loop and microphone systems can assist those with hearing difficulties.



Receptionist side

The dimensions allow a receptionist using a wheelchair with desk armrests to sit close to a counter at normal desk height.

Visitor/customer side

The dimensions allow a visitor in a wheelchair to bring the arms of their wheelchair to the edge of the counter in order to read and sign a paper.

NOTE - Profiling the space below a counter will allow a number of structural support solutions.

Toilets

At least one toilet suitable for use by wheelchair users should be provided in all buildings open to the public. Unisex toilets are preferred, as this allows help from persons of either sex. Where more than one unisex toilet is provided one should be the mirror image version of the other.

The internal dimensions of a toilet cubicle should be a minimum of 2.2 metres by 1.5 metres. Doors should open outwards or slide and be 0.83 metres wide (a minimum of 0.8 metres of clear opening). Doors may open inwards provided there is 1.1 metres by 0.7 metres of unobstructed space clear of the door swing. The turning circle of a standard wheelchair is 1.5 metres.

The door should be openable from the outside in the event of an emergency. Care should be taken that the door is not too heavy for wheelchair users.

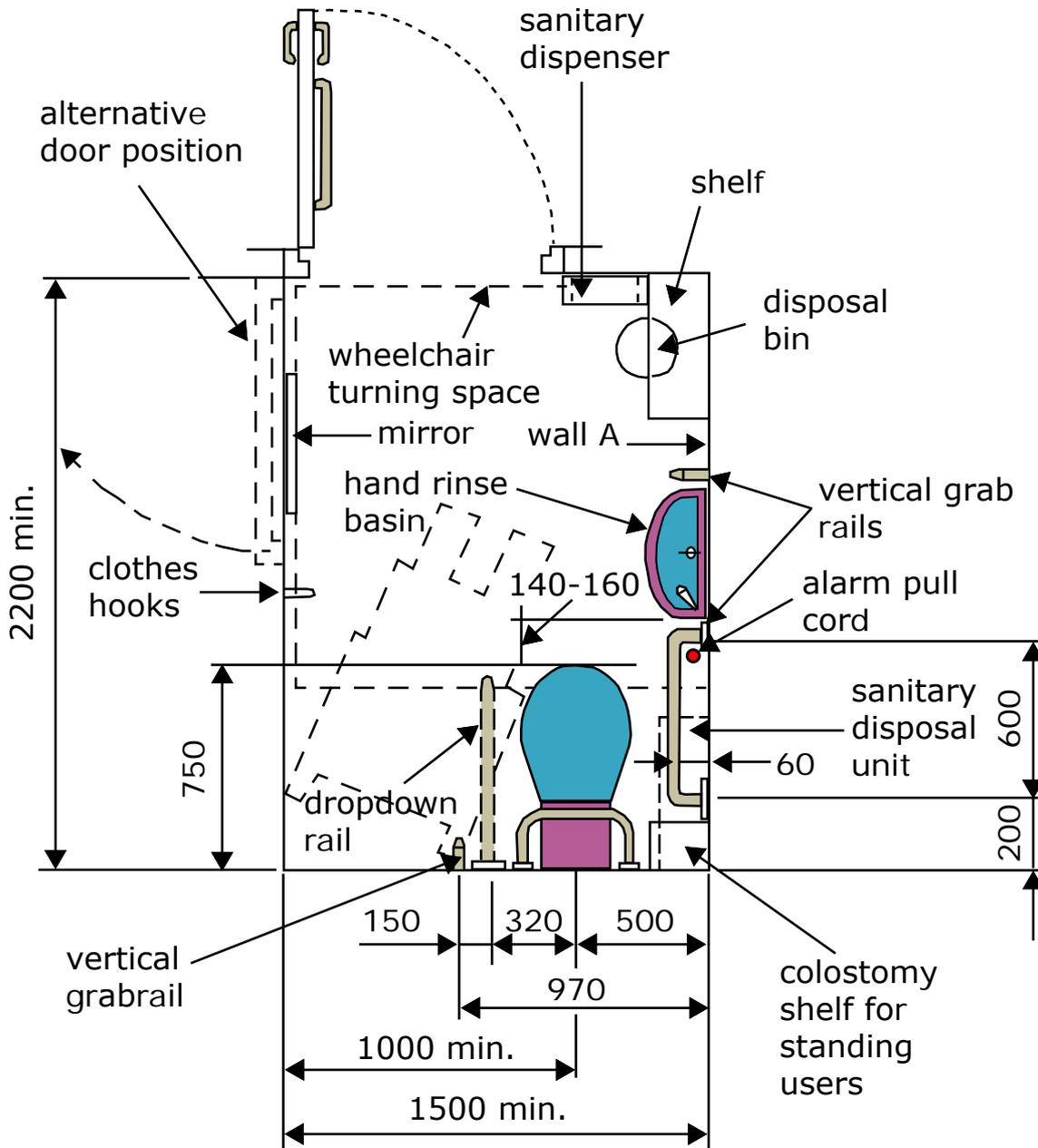
The internal layout is important for the effective use of the facility. Wherever possible, the layout illustrated below should be used. Non provision, over provision or inaccurate positioning of support rails can render the facility useless, therefore the provision and accurate positioning of support rails is critical. Similarly, a pull rail on the inside of the entrance door is essential. It is important that all fittings are securely fixed and of good quality. An red alarm cord should always be fitted and extended to the floor. Internal features, fittings and fixtures, particularly the grab-rails, should be highlighted with strong colour contrast against the background. Thought should be given to the position of the alarm indicator, to ensure staff are aware that assistance is required.

In general terms, ambulant toilets are permitted where the number of people expected into a building does not exceed 20. However, where space permits, a fully accessible disabled toilet should always be provided. Provision of a grab-rail at urinals will assist ambulant disabled people to gain additional support.

In general, toilet areas, require to have colour contrast to fixtures and fittings, provide easy to use locks and at least one lever tap.

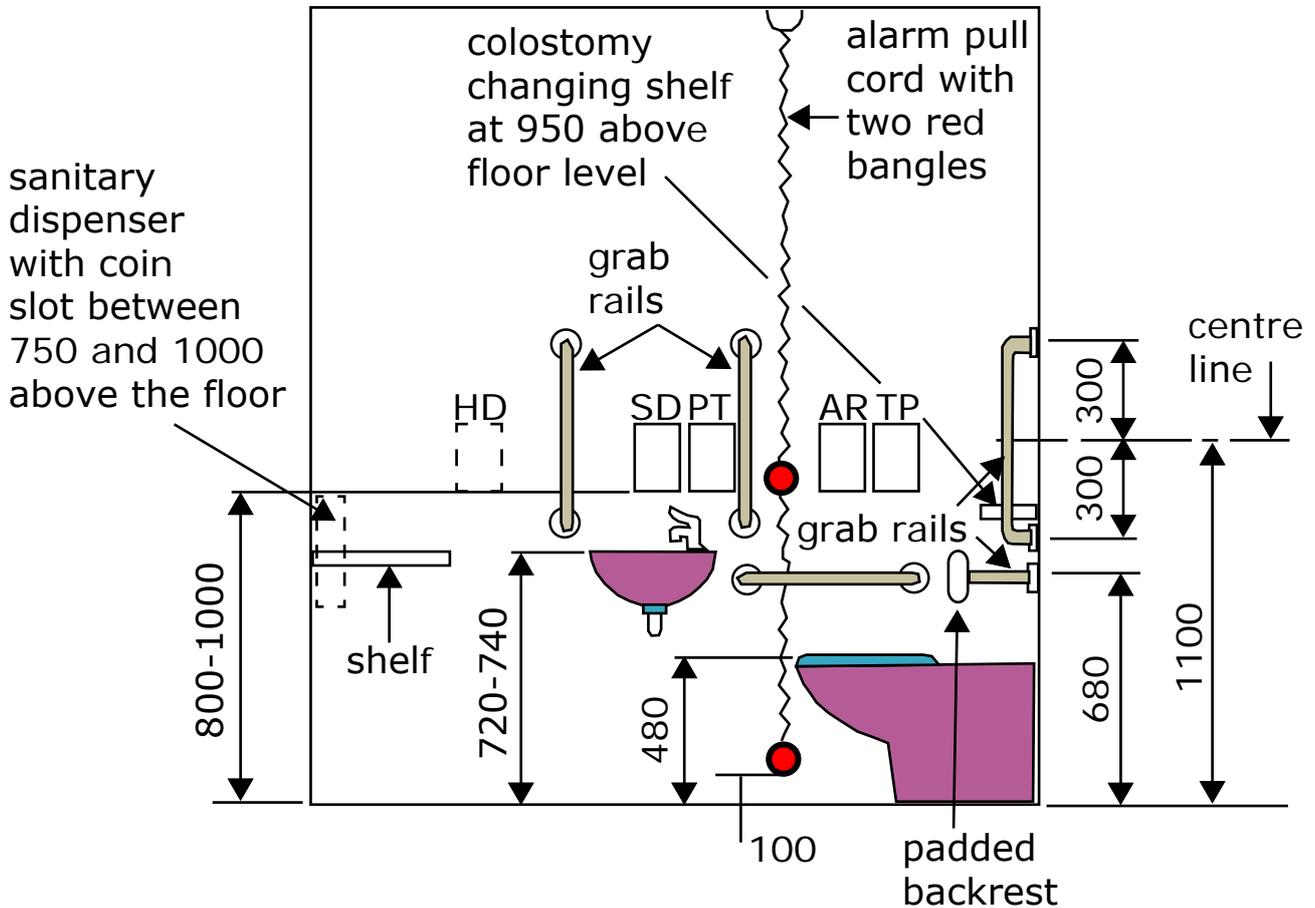
Page 22 Toilets

Unisex accessible corner WC layout



Toilets

Heights of fittings and fixtures on wall A for corner WC layout



HD - Possible position for automatic hand dryer

SD - Soap dispenser

PT - Paper towel dispenser

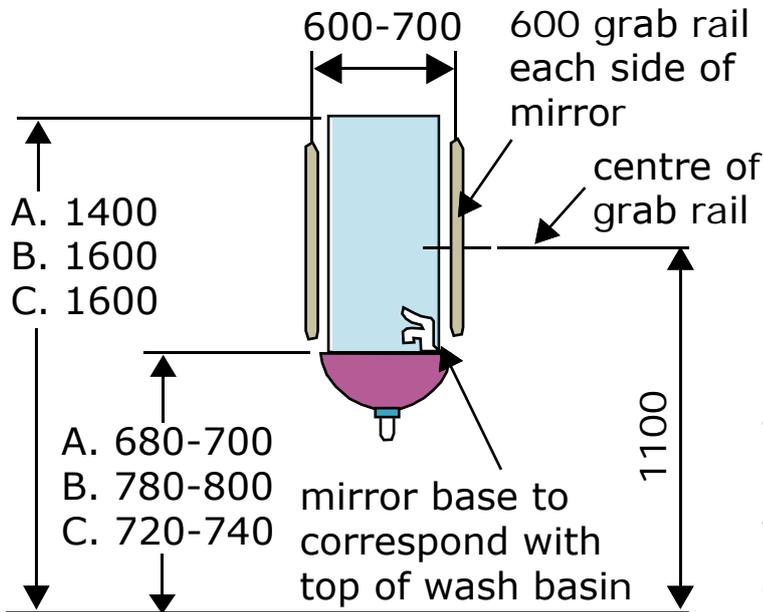
AR - Alarm reset button

TP - Toilet paper dispenser

Height of drop down rails to be the same as the other horizontal grab rails.

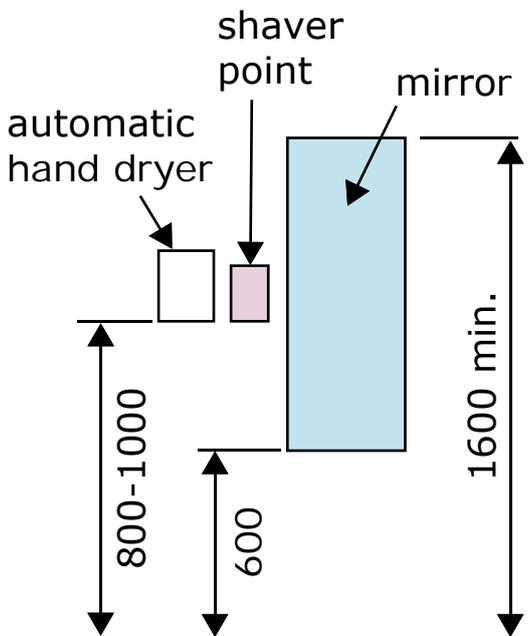
Page 24 Toilets

Location of mirrors, accessories and wash basins



Location of independent wash basin and associated fittings, for wheelchair users and ambulant disabled people.

- A** - Wheelchair users only
- B** - Ambulant disabled people only
- C** - For both A and B users



Mirror located away from wash basin suitable for wheelchair users and ambulant disabled people.

Mirror and associated fittings used within a W.C. compartment or serving a range of compartments.

Lighting

All facilities should be well lit by either natural or artificial light as appropriate. Lighting should be designed to prevent glare, and should be even to avoid shadows. It is particularly important to provide adequate artificial lighting to all external areas frequented by the public including raised decks, squares and public streets. Light fittings should be cleaned regularly and blown tubes replaced promptly. Windows may require to be treated with anti-glare foil to reduce the impact of glare.

Security

Where entry phones and other security systems are installed, it should be in such a way as to allow use by people with disabilities. Highlighting the press button on the entry system and providing the button at a height between 750 mm and 1000 mm.

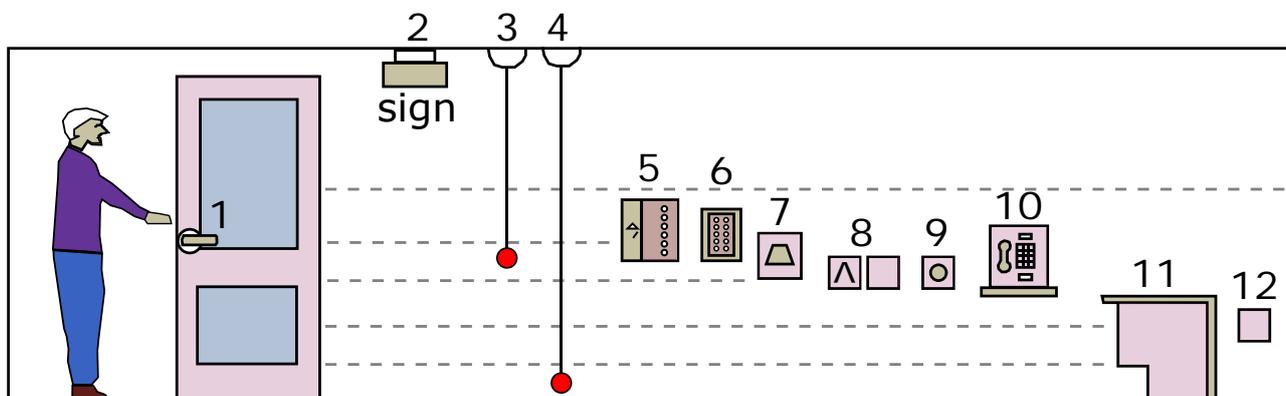
Fire escapes and emergency exits should be accessible to disabled people and should extend or lead to a safe level area. Visible as well as audible fire alarm systems are preferred.

Every floor of all buildings should have clearly documented and signed procedures indicating the arrangements for people, with various forms of disability, in the event of an emergency. The advice of the fire prevention officer should always be sought in such matters.

26 Internal Fixtures and Controls

Internal fixtures and controls should be accessible to disabled people. The diagram below illustrates the recommended heights.

Controls should be easily manipulated, incorporating raised symbols and indicator lights where necessary and be colour contrasted to background.



1 - Door handles 900-1100mm	7 - Electric hand dryer 800mm
2 - Suspended & wall-mounted signs 2100mm	8 - Heating & vent controls 750-1000mm
3 - Pull cord 750-1000mm	9 - Light switches 750-1200mm
4 - Alarm cord 1000mm	10 - Public telephone 700mm
5 - Lift controls 900-1100mm	11 - Counters 700mm height, 300mm toe recess
6 - Door entry system 750-1000mm	12 - TV, telephone sockets 400-700mm

Induction Loops

Halls, meeting places, information counters and other appropriate places should be fitted with induction loops.

An induction loop is an insulated cable laid around a listening area with a microphone or other input source such as a TV or loop amplifier. The loop sets up a magnetic field so that a person using a hearing aid with a pick up coil can receive sound without loss or distortion through bad acoustics or extraneous noise.

An alternative to the wire loop system is an infra red system where invisible infra red waves carries sound to portable receivers. Sound is picked up by a microphone and distributed throughout the room by a modulator or radiator. There are four main uses for loops:

- 1 Portable loops which are for one to one discussions and which can be taken from location to location very easily.
- 2 Fixed counter loop system which is located in a fixed position such as a reception.
- 3 Room loops may be fixed or portable and suitable for meetings etc.
- 4 Large hall loops for buildings such as theatres and cinemas.

Contacts

Aberdeen Access Panel

84 Spring Garden
Aberdeen
AB25 1GN

Telephone: 01224 641951

Building Standards

Strategic Place Planning
Aberdeen City Council
Business Hub 4
Marischal College
Broad Street
Aberdeen
AB10 1AB

E-mail: pi@aberdeencity.gov.uk

Telephone: 03000 200 292

Further information

For further information on creating accessible environments reference should be made to **British Standard 8300: Design of Buildings** and their approaches to meet the needs of disabled people.

Certain sketches within this guide have been taken from this British Standard.

www.bsi-global.com/building/disability/

Aberdeen Access Panel



Should you require the assistance of an interpreter to help you understand this document, please contact the **Interpreting and Translation Service**, Telephone **01224 523542**

إذا كنتم في حاجة إلى مترجم من أجل فهم هذه الوثيقة
فالرجاء الإتصال بقسم الترجمة
الهاتف: ٥٢٣٥٤٢ (٠١٢٢٤)

এই লিফলেট বুঝতে আপনার যদি অনুবাদকের
প্রয়োজনবোধ মনে করেন তাহলে যোগাযোগ
করুন ইন্টারপ্রেটিং এবং ট্রান্সলেশান সার্ভিস।
টেলিকোন : ০১২২৪ ৫২৩৫৪২

如果你需要翻譯人員幫助你理解這份文件，
請聯繫翻譯社 (The Interpreting and Translation Service)
電話 01224 - 523542

اگر آپکو اس لیفلٹ کو سمجھنے کے لیے ترجمان یا مترجم
کی ضرورت ہو تو براے مہربانی انٹرپرائٹنگ اینڈ ٹرانسلیٹنگ
سروس سے رجوع کریں
یا اس نمبر پر رابطہ کریں ٥٢٣٥٤٢ ٠١٢٢٤

Arrangements can be made to have this booklet
available in audio-cassette, Braille and large print.