

Access for Disabled People



Sport England's mission:

To foster a healthier, more successful nation through increased investment in sport and active recreation.

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Introduction

This guidance note addresses the requirement to provide people with disabilities with full access to all sports facilities. While it cannot provide exhaustive advice, the guidance is intended to indicate what is reasonable provision in a modern sports facility. The checklists in the pocket at the end of the document are for use in conjunction with the access audits and audit methodology information in the section on Adapting and Improving Existing Buildings.

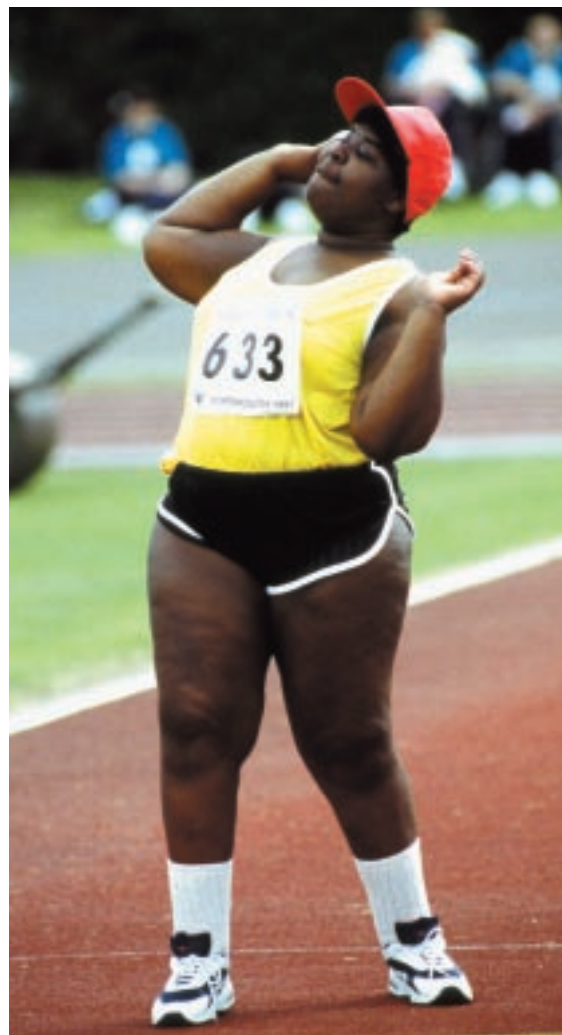
Full access means more than just being able to get through the front door and use the toilets. It means being able to make full use of the facility as a participant, spectator or as a member of staff. Enabling full access does not, in most cases, mean inflated costs. If integrated into the design and development process, it can be achieved easily and will result in a better facility for everyone.

Over eight million people in the UK have some degree of disability, for example mobility or sensory impairment or learning difficulties. However, the benefits of providing full access at all sports facilities extend far more widely: to the young and old, the fit and not so fit, parents with pushchairs, and people carrying large sports bags and cumbersome equipment. The following guidance will help make sports facilities more accessible and easier to use for everyone. It is not about 'special' provision, but applies to every sports facility. It should be noted that:

- Providing good access does not deter from creating a facility that is imaginative, efficient, attractive and enjoyable.
- A combination of good design and good management will integrate all users and increase the independence of everyone using the facility.

Good design alone will not remove all the barriers to full participation that are encountered by people with disabilities. Decisions on how the building will be managed, marketed and operated are equally important in making a sports facility inclusive rather than exclusive.

This guidance note presents the minimum requirements for achieving good access and should be used alongside the other guidance notes in this series.



Sport	Visual impairment				Learning disability				Mobility impairment				Wheelchair users			
	Recreational	National (GB)	International	Paralympics	Recreational	National (GB)	International	Paralympics	Recreational	National (GB)	International	Paralympics	Recreational	National (GB)	International	Paralympics
Angling	●	●	●		●	●	●		●	●	●		●	●	●	
Archery	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Athletics	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Badminton	●				●	●	●		●				●			
Basketball					●	●			●	●			●	●	●	●
Billiards/cue sports					●	●	●		●	●			●	●		
Boccia	●	●			●	●			●	●			●	●	●	●
Bowls	●	●			●	●	●		●	●	●	●	●	●	●	●
Boxing	●				●				●				●			
Canoeing	●	●	●		●	●	●		●	●	●		●	●	●	
Cricket	●	●	●		●	●			●	●	●		●	●	●	
Cycling	●	●	●	●					●	●	●	●				
Dragon boat racing	●	●	●		●	●	●		●	●	●		●	●	●	
Equestrian	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Fencing									●	●	●	●	●	●	●	●
Goalball	●	●	●	●												
Gymnastics	●	●	●		●	●	●		●	●	●		●	●	●	
Hockey	●	●			●	●			●	●			●	●	●	
Judo	●	●	●	●												
Netball					●	●							●	●		
Orienteering	●	●	●		●	●	●		●	●	●		●	●	●	
Rowing	●	●	●		●	●	●		●	●	●		●	●	●	
Rugby union					●	●			●	●						
Sailing	●	●	●	●	●	●			●	●	●	●	●	●	●	●
Shooting													●	●	●	●
Skiing	●	●	●	●					●	●	●	●	●	●	●	●
Soccer	●	●	●		●	●	●		●	●	●		●	●		
Sub-Aqua	●				●				●				●			
Swimming	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Table tennis					●	●	●		●	●	●	●	●	●	●	●
Tennis	●				●				●				●	●	●	●
Trampoline	●				●				●				●			
Triathlon	●	●	●		●	●	●									
Volleyball					●	●	●		●	●	●	●	●	●	●	●
Water skiing	●	●	●						●	●	●		●	●	●	
Weightlifting/powerlifting					●	●	●		●	●	●	●	●	●	●	●
Wheelchair rugby													●	●	●	●

Note: People with hearing impairment take part in all sports at all levels of participation, so have not been specifically referred to in the table.

Table 1 Disabled people participate and compete in a wide range of sports

Disability

Disability is often defined as what a person cannot do because of a medical condition. For example, it might be said that 'she cannot use the fitness equipment room because she is in a wheelchair.' This guidance, however, is written from the viewpoint that it is the design and management of a facility that create the barriers and limitations to its use. Consequently, the view would be that 'she cannot use the fitness equipment room because the equipment is inappropriate and the room is located on an inaccessible mezzanine floor.' Or 'she cannot use the fitness equipment room because the staff have not had adequate training.'

Disability is part of everyday life varying in degree, diversity and distribution and will more than likely affect most people to a greater or lesser extent at some point in their lives. It is estimated that there are between 8.3 and 11.7 million people in the UK with a disability or impairment that is covered by the Disability Discrimination Act (DDA). Some facts:

- 4 million people in the UK have a mobility impairment
- 25% of UK households have a disabled member
- 2% of UK households have a member who uses a wheelchair
- 5% of cars bought in the UK each year are for use by people with a disability.

As well as being equitable, it makes financial sense to attract rather than discourage *all* potential customers to your facility; sports facilities should be available for the use of *every* potential customer.

Legal requirement

Recently, legislation and regulations concerning the needs of people with disabilities have developed and expanded. The most significant are:

- Building Regulations Part M 1999



- Disability Discrimination Act 1995
- Special Education Needs and Disability Act 2001
- Code of Practice BS 8300: Design of Buildings and their Approaches to Meet the Needs of Disabled People.

An inclusive and fully accessible sports facility must do much more than simply comply with Part M of the Building Regulations and with the Disability Discrimination Act. These regulations and legislation define the minimum statutory requirements, but do not provide for appropriate and acceptable quality of access. While it cannot be all encompassing, this guidance note is concerned with how an acceptable standard of access for everyone can be achieved.

Building Regulations Part M 1999

In terms of sports facilities, Part M is limited in scope in that it only addresses the needs of some people with mobility, hearing and sight impairment. It merely requires that people with disabilities have access to all floors of new sports buildings including the provision of accessible WCs, unisex accessible changing rooms for swimming pools, and spectator seating.

A common misconception is that compliance with the Approved Document for Part M makes a facility fully accessible. This is not the case, particularly in sports facilities for which the requirements of Part M are too limited. For example, the Approved Document does not require accessible team changing rooms to be provided at a sports centre.

Disability Discrimination Act 1995

The Disability Discrimination Act (DDA) created a right of access to employment and services. Designers and service providers must anticipate the needs of people with disabilities and ensure that goods and services will be available to them on an equal basis. Unlike Part M of the Building Regulations there is no specific test or approval to demonstrate that the requirements of the Act have been met.

Currently the Act requires sports facility management to make 'reasonable adjustments' to enable people with disabilities to use facilities – this might mean providing extra help to overcome a barrier. From 2004 'reasonable adjustments' will have to be made to the physical features of a facility to overcome any physical barriers to access, for example making the reception desk accessible.

Specific exemptions to the requirements of the Act relate to some sports facilities, however implementing those exemptions will limit how the facilities can be used. For example, Part III of the Act does not cover services that are not normally available to the public, such as those provided by 'private clubs'. However, where a club does provide services to the public then the Act applies. For example, if a 'private' golf club refuses membership to a disabled golfer, this is not covered by the Act. However, if



the club hires out its facilities for a wedding reception, the Act applies to that service. Consequently, if the club allows non-members to use the course and the associated facilities, refusal to allow a disabled golfer to play is likely to contravene the Act.

The requirements of the DDA are the minimum statutory requirements and are not necessarily appropriate to a modern sports facility. This guidance note is intended to give an outline of what is appropriate in terms of the physical design of a sports facility. Detailed guidance on the management implications of the Act is available from the Disability Rights Commission (see contact addresses).

Sports facility designers and managers must aim to make all facilities fully accessible now, rather than wait until implementation of the Act in 2004.

Code of Practice BS 8300

This new standard explains how the built environment can be designed to anticipate and overcome restrictions that prevent or inhibit disabled people from making full use of facilities and their surroundings. The standard provides direction on a wide range of impairment and building types, however it refers readers to this guidance for more detailed information on sports-related projects – with the exception of stadia.





Design principles

Designing and managing an accessible building means more than providing ramps and sufficient door widths – these are important, but they must not become the focus of attention. There are many examples of projects with ramps and external doors that meet all the minimum requirements, yet they are totally inaccessible by a wide range of potential customers. There is a wide range of disabilities and they must all be taken into account when considering the design and management of a sports facility.

People with mobility impairment

Approximately one in 10 British adults have some form of mobility impairment and, of these, one in 100 use a wheelchair. Some of the problems for wheelchair users are:

- changes in level (high kerbs, steep ramps or unclimbable stairs)
- inaccessible changing, social and toilet facilities
- doorways and corridors that are too narrow
- controls that are too high to reach.

Problems for the ambulant person with mobility impairment include:

- uneven ground
- walking on any kind of gradient
- inadequate clearance for walking aids.

People with visual impairment

About one in 50 people have some form of visual impairment and, of these, approximately 96% have some degree of residual sight. The problems they might encounter include:

- lack of familiarity with the space around them
- difficulty in locating themselves due to confusing design and layout
- poor use of colour contrast thus hampering location and comprehension
- poor illumination – low levels, glare, confusing reflections

- poor, non-accessible signage
- poor acoustics that cause confusion and make it difficult to use sound as a navigational aid
- hazards such as steps or other fittings that project into circulation areas.

People with hearing impairment

One in 10 British adults have some form of hearing impairment. Often ignored by other people, this can be a very isolating and frustrating condition. The types of difficulties encountered are:

- insufficient information resulting in restricted independence
- too many hard surfaces leading to a noisy and confusing environment.

People with learning disability

People with learning disability face similar challenges as visually impaired users when finding their way around an unfamiliar facility, and this can result in them avoiding new places. Many people with a learning disability have problems reading or understanding signs and instructions and may also have visual and mobility problems. It is therefore very important that all the recommendations of this guidance are taken into account when designing a sports facility. In particular:

- Avoid 'clever' signs and colour schemes that are difficult to understand.
- Use signage, lighting and the layout of the building to define route ways and to make it clear which are public areas and which are private.
- Ensure that staff are easily identifiable and have the skills and training to assist people to find their way around the facility.

How will people use the facility?

When designing a sports facility it is necessary to visualise how people will use the facility as a whole, from transport links, to the initial approach, through to specific areas, for example the changing rooms, the social area and the

activity area. At the same time it is essential to identify the potential obstacles and restrictions that a person with a disability might face. Depending on the type of facility, some key areas of consideration might be:

- parking the car or getting off a bus or coach
- finding and reaching the entrance
- buying a ticket
- passing through doors
- finding and using the changing rooms
- accessing and using the fitness room, court, pool, athletics track and so on
- finding and using the toilet facilities
- finding and using the social facilities
- finding a convenient seat/location from which to view the game with friends
- most importantly, quick and safe evacuation of the building in an emergency.

In summary, when considering how people with a disability will use any part of the facility it is important to ask the following questions:

- How will they *find* it?
- How will they *reach* it?
- How will they *use* it?



Adapting and improving existing buildings

Many sports facilities were designed and constructed in a way that denies full access to all or part of the amenities. In some of these, enlightened management has overcome many of the barriers to access despite the physical constraints of the building.

When altering or extending a sports facility, it is essential that the project be developed with the clear aim of achieving full accessibility. The first step in achieving this is to carry out an access audit. This will establish the current situation and inform the design and development of the project. It will help create the basis for a programme of works and a written access policy.

Extensions

All new extensions to sports facilities must meet the requirements of this guidance note. The design of the extension must aim to improve access to the existing facility and must never make the situation worse.

Alterations

Where substantial work is planned at an existing facility the project must aim to comply with the full requirements of this guidance. When making alterations or simply carrying out maintenance, take the opportunity to consider access implications and how they can be improved. Bear the following points in mind:

- The proposed work must not make the access situation worse.
- Where it is not reasonably practicable to achieve full access immediately, a costed and prioritised action plan must be prepared with the aim of achieving full access in the medium to long term. The action plan must also identify how current poor access can be managed in the short term. This may require changes in the policies, practices and procedures of the facility to bring accessibility to an acceptable level; a written policy must be produced.



- Most of the adjustments required to improve access do not need to be expensive or complicated.

Access audits

When considering work on an existing facility, be it maintenance, alteration or extension, the starting point is to carry out an access audit to identify the current access situation. An experienced architect or access consultant should carry out the access audit – one who is familiar with the needs of people with disabilities, in particular their sporting needs.

The audit must consider everyone's needs and is not, as is often believed, purely about wheelchair access. An access audit requires analysis and consideration of the existing facility – external works, design, layout and, equally importantly, the fittings and equipment used. The appraisal should not only consider the physical features of the building, it should also consider how the building is, or will be, managed and operated.

The access audit is the key to identifying how accessible a facility is. Once the audit has been prepared, design and management strategies must be developed to achieve and sustain quality access. The key requirements of an access audit are to identify how the facility works in terms of:

- physical design and constraints of the building
- specific sports spaces
- fixtures and fittings

- materials and finishes
- furniture and equipment
- how the building is used and managed
- opportunities and challenges.

Audit methodology

The audit should be approached in a logical way similar to designing a new building:

- Obtain any plans of the existing building that may be available.
- Research the general background to the building including how it is used.
- Solicit opinions from regular users and employees.

The access audit should compare the requirements of this guidance against existing provision. The checklists at the end of this document provide a summary of the guidance and should be used to record the findings. It is recommended that the audit be carried out in the following logical order:

- transport links
- external works and approach to the building
- entrance areas
- circulation areas, stairs, corridors, lifts, and so on
- changing provision
- toilet provision
- sports activity spaces – pool, gym, sports hall, and so on
- social and spectator provision
- staff, management and other non-public areas
- emergency evacuation routes and procedures
- general management issues.

The final report will outline the current access situation and suggest how this can be improved to facilitate access for all. Note that the same approach could be used during the design process when assessing drawings for new buildings.

Arriving at the facility

People with disabilities arrive at sports facilities by a variety of means, most commonly by car, minibus or taxi. However, arrangements should be made for those arriving by wheelchair, bicycle or on foot and, where possible, for those arriving by public transport. It is essential that there is clear signage at the entry from the public highway indicating routes to:

- car parking areas, specifically accessible car parking spaces
- drop-off point
- principal entrance to the facility.

Car parking

Detailed guidance on the design of car parking areas is available in the guidance note *Car Park and Landscape Design*, however the key issues are summarised here. A car is essential for many disabled people to access sport and leisure facilities, so it is vital to provide suitable parking with unhindered access to the entrance:

- Provide at least the minimum number of specifically reserved, accessible car parking spaces for people with disabilities appropriate to the scale of the facility as indicated in Table 2.
- Group bays together and signpost their location from the main entrance to the site.
- Bays must be clearly laid out and signed, both on the surface of the bay and by means of a vertical sign.



Clear signage at the entry from the public highway is essential

- Bays must be located as close as possible to the main entrance of the building. If the pathway to the entrance is uncovered the distance to the entrance must be no more than 50m; this can be increased to a maximum of 100m if the pathway is covered.
- The car park surface must be smooth and even. Unbound surfaces such as gravel are not acceptable.
- Kerbs must have dropped sections at all points where wheelchair users may want to cross. Tactile indicator paving should be provided at these points to show visually impaired people where they may conveniently cross.
- The height of ticket, swipe-card or key-activated car park barriers should conform to the requirements of BS 6571-4.

Provision	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
Minimum of two accessible car parking bays or 6%, whichever is the greater	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	
At least 8% of the car parking spaces to be accessible						○	●	●	○		○	○	○		○	○	○	○	○	●
Drop-off point adjacent to the entrance	○	○	○	○	●	●	●	●	●	○	●	○	●	○	●	○	○	●	●	●

Key: ● Required ○ Recommended

Table 2 Accessible car parking spaces – requirements

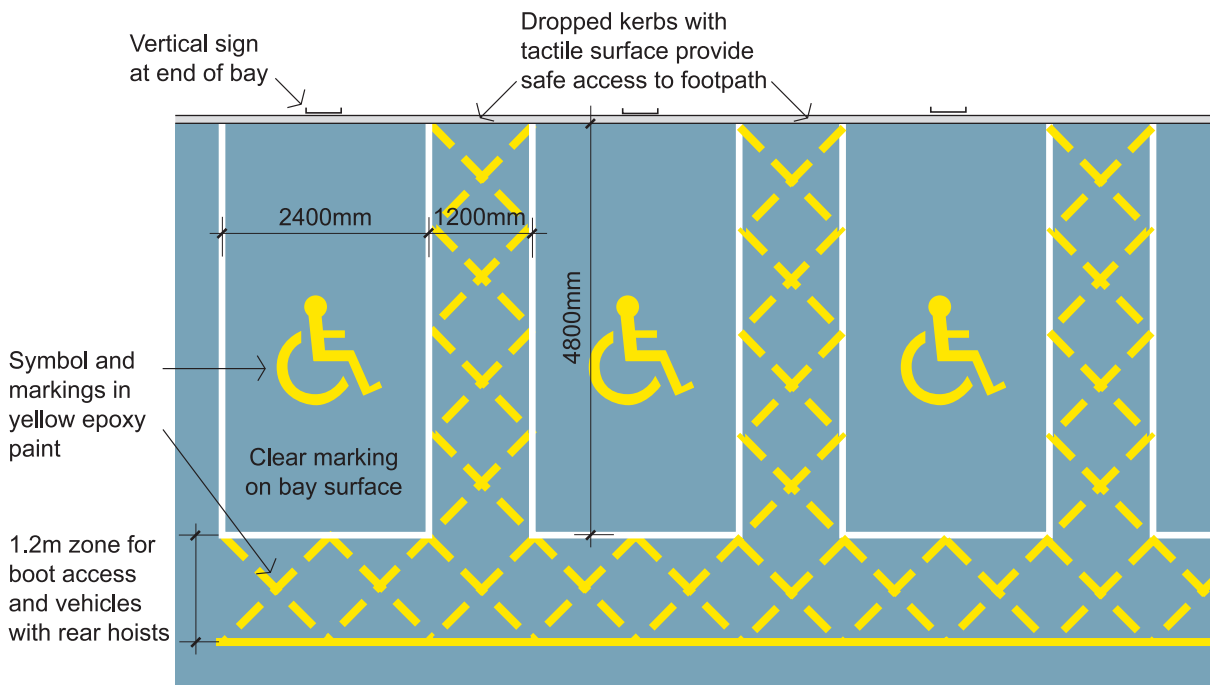


Figure 1 Accessible car parking bays

- Vehicle height barriers should have vertical clearance of 2.6m to allow the passage of high conversion vehicles.
- Audible barrier controls must have alternative provision for people with hearing and speech impairment.

Drop-off point

A drop-off bay must be provided. Ideally, this should be sheltered and immediately adjacent to the main entrance. Note the following points:

- The bay should be long enough to allow 'tail-loading'.
- For smaller facilities where a drop-off point at the main entrance may be impractical, the distance between the nearest drop-off point and the sports facility should be no more than 50m if the pathway is uncovered.

Routes to the facility

To enable everyone, particularly people with disabilities, to move conveniently and safely from their arrival point to the entrance demands careful attention to the layout and detail of paths, ramps, steps and handrails. All routes should give sufficient aural and tactile information, supplemented by visual clues, to help people with sight impairment.

- Provide landmarks along routes to help orientation.

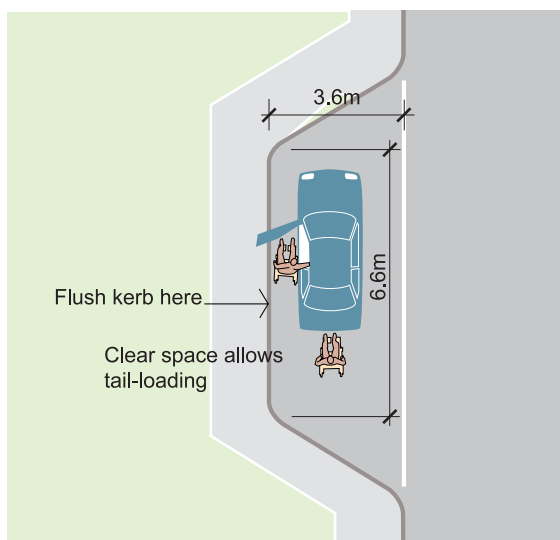
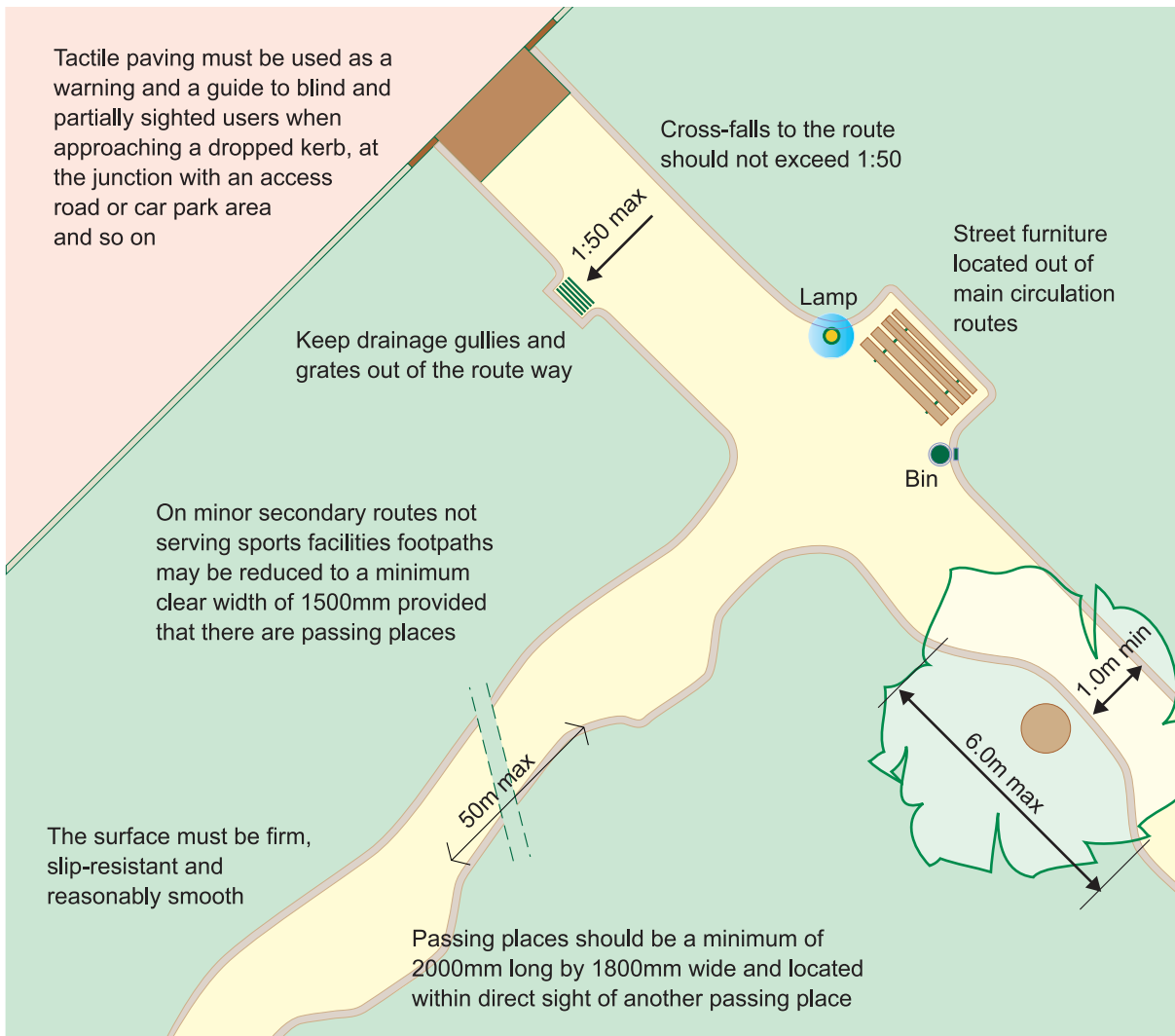


Figure 2 Drop-off point

- Traffic routes must be clearly distinguishable from pedestrian routes through use of texture and colour.
- Materials must be used thoughtfully. They can provide different sound and 'feel' qualities and, with proper use of colour, will aid location along the route. If used indiscriminately, however, they can be confusing and even dangerous.
- Provide current standard tactile surfaces where footpaths cross vehicle routes to provide warning and guidance to blind and visually impaired people. Ensure there are no obstacles or hazards, for example gratings, to obstruct crossing points.
- Crossings should be 1200mm wide minimum.
- Careful design of planting schemes will aid location by providing scent and colour clues and in some instances can provide key landmarks for the visually impaired user. Ensure plants do not overhang route ways.
- On access routes on level ground provide resting places not more than 50m apart for people with impaired mobility.



A dedicated footpath with olfactory and tactile information will assist visually impaired people



To be accessible, routes must be a minimum of 1800mm clear width where they serve sports facilities. This should be increased in large facilities.

Street furniture such as lamps, bins and so on must be out of the route way.

At unavoidable pinch points no greater than 6.0m in length the path can be reduced to 1.0m clear width.

Splay corners at junctions to ease manoeuvring for wheelchair users.

Ensure minimum clear height of 2.1m is maintained under trees, canopies, brackets and so on.

Access routes must be level or have the shallowest gradient possible. Where the gradient is 1:20 or steeper it must comply with the requirements for a ramp.

Figure 3 Designing an access route

External features

Layout

- Footpaths should be 1800mm wide minimum. At unavoidable pinch points around obstacles such as trees, an absolute minimum width of 1000mm is acceptable providing this does not exceed 6m in length.
- Provide splayed or rounded angles at junctions with other footpaths.
- The maximum gradient for footpaths is 1 in 21 – anything steeper than this is defined as a ramp and must comply with specific requirements.
- Cross-falls should not exceed 1 in 50.

Materials

- All surfaces must be slip-resistant in all weather conditions.
- Do not use unbound surfaces on principal routes to and between facilities, for example gravel hogging.
- All surfaces must meet with a level and even junction.



- All gratings should be flush with paving and located beyond the boundaries of the access route.
- Block paving should be laid evenly.
- Dished drainage channels are trip hazards and therefore unacceptable on access routes.
- Footpaths should be well illuminated to avoid the creation of contrasting pools of light and darkness.

Signs

Signs should be part of a carefully considered, comprehensive signage system to ensure that they are:

- carefully located
- clear, simple and logical
- non-reflective.

Further detailed information on the design of signs is provided later in this guidance note.

Ramps

Where it is not possible to use a level approach, a ramp will enable safe and convenient access for people with pushchairs or wheelchairs and for deliveries. It is essential that ramps be accompanied by a short flight of steps (see later) for use by those who find negotiating a ramp more difficult than using steps. Issues to bear in mind include:

- A gradient of 1 in 21 is considered level; any gradient steeper than this is classified as a ramp.
- The gradient must be as level as possible, between 1 in 20 and 1 in 15, maximum length 10m.
- The absolute maximum gradient is 1 in 12 over a maximum length of 5m.
- The surface colour of ramps should contrast in luminance with that of landings to enable visually impaired users to anticipate them.
- All ramps should have slip-resistant surfaces that are firmly fixed and easily maintained.

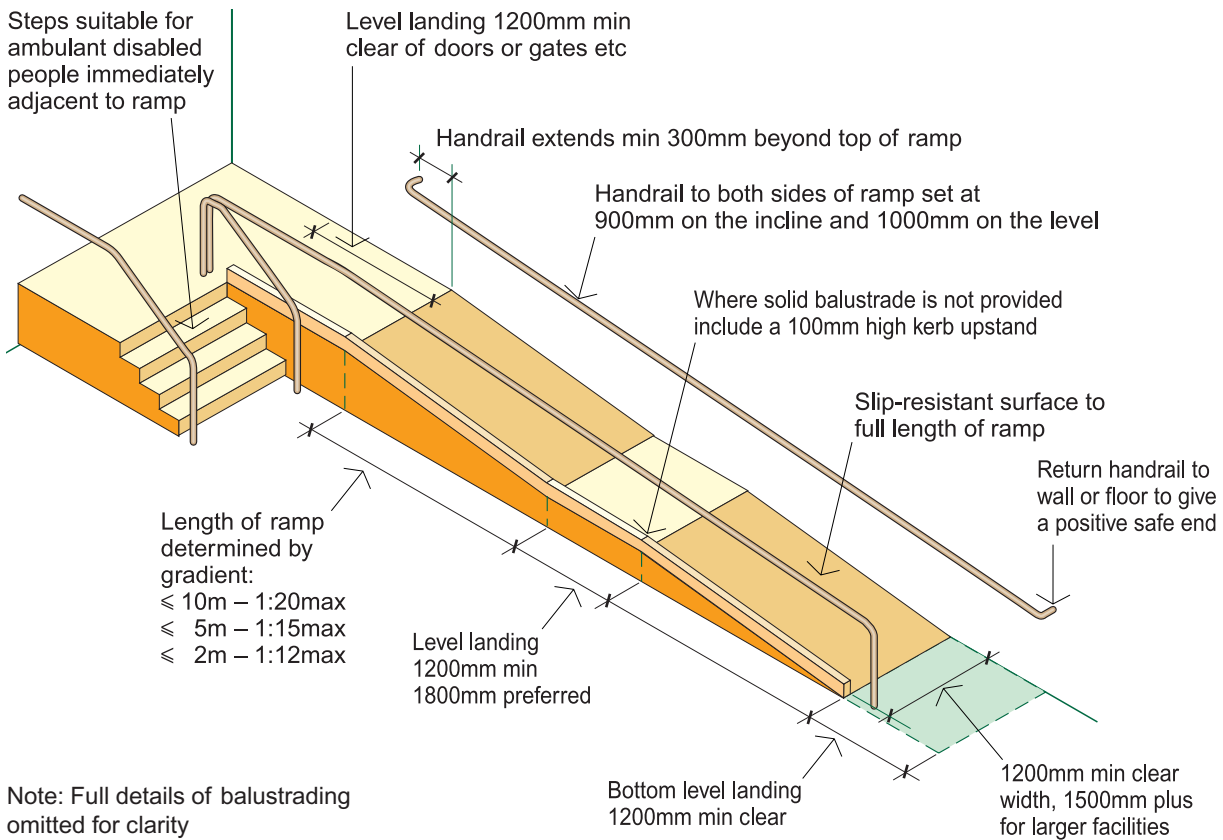


Figure 4 Ramped approach – key features

- Ramps should be illuminated to at least 100 lux.
- All ramps should be provided with handrails on both sides. Minimum clear width 1200mm except where sportschairs might be used – for example at tennis clubs or sports centres, in which case they should be at least 1500mm wide.
- Handrails should be made of materials that are not cold to the touch. For example, painted steel handrails are unacceptable while nylon-coated steel handrails are acceptable.
- The colour or brightness of the handrail should distinguish it from its background.
- If the ramp is exposed to the extent that people might feel vulnerable consider providing a solid balustrade.



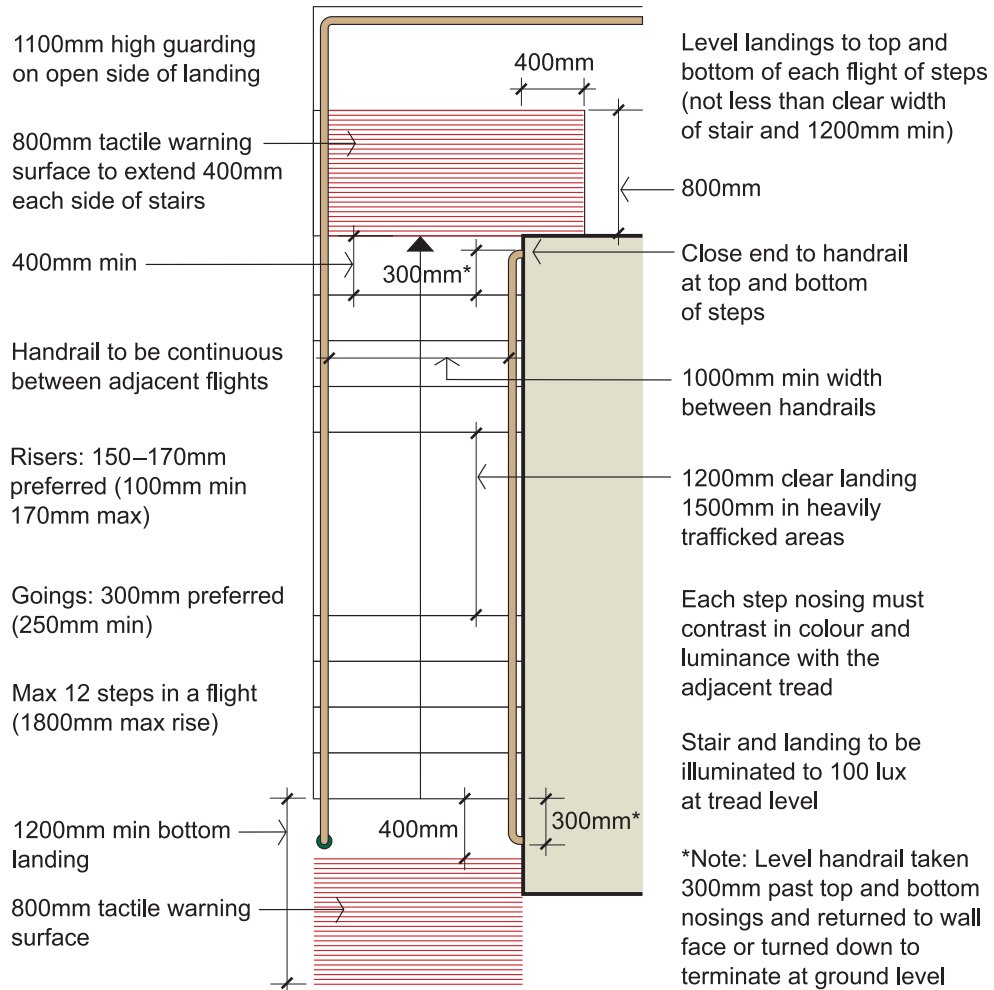


Figure 5 External staircase – requirements

Steps

- Some people, in particular ambulant disabled people, prefer ‘easy going’ steps and these should always be located adjacent to ramps.
- However short the flight of steps, handrails must be provided on both sides maintaining at least 1100mm clear width.
- Handrails should be made of materials that are not cold to the touch. For example, painted steel handrails are unacceptable while nylon-coated steel handrails are acceptable.
- The colour or brightness of the handrail should distinguish it from its background.
- Do not use open risers.
- All risers must be solid.
- Provide tactile warning surfaces with textured ribs parallel to the step nosing at the top of each flight of steps. This will give people with sight impairment early warning of a tripping hazard. The surface should be 1500mm wide and should extend 150mm either side of the stair.
- A minimum clear landing of 1500mm should be provided at the top and bottom of each flight of steps. All landings must be clear of door swings.
- Straight flights are easier to negotiate than curved or dogleg flights.

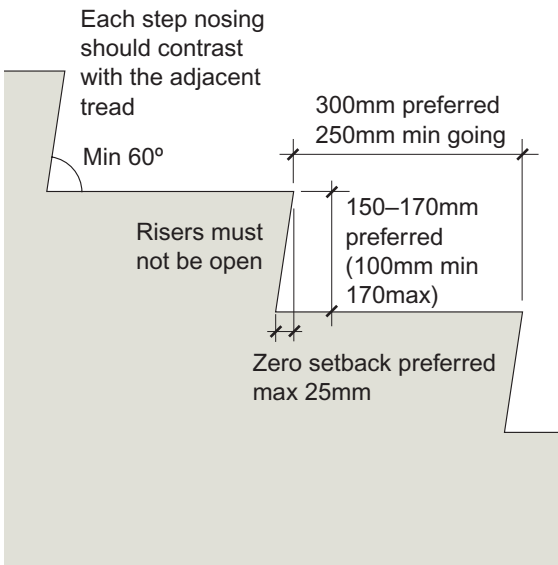


Figure 6 External step profile

- The rise of steps must be consistent and in the range 150–170mm, with goings in the range 250–300mm.
- Avoid single, isolated steps.
- Twelve is the maximum number of risers in any flight.
- Each step nosing should contrast in colour and luminance with the adjacent tread.

Street furniture

It is essential to locate street furniture carefully as it can create serious problems for people with sight impairment as well as causing obstacles for people with pushchairs and wheelchairs. Used correctly street furniture can create interest and give visual clues to aid location:

- Only locate street furniture outside a planned and clearly defined pedestrian route.
- Provide appropriate seating along inclined or long routes.
- Ensure that all street furniture is clearly distinguishable from its background by the use of colour banding. Provide distinctive surfaces around obstacles and street furniture.

- Avoid creating areas of low headroom or projections out into route ways.
- Avoid thin bollards.
- Bollards and other street furniture should be higher than 1000mm.
- Bollards and free-standing posts situated on or close to pedestrian routes must be highlighted with wide bands of contrasting colour located 900 and 1500mm above ground level.
- Do not link bollards with a chain or rope as this is hazardous to blind and visually impaired people.
- Ensure cycle racks are out of the line of travel with good colour contrast and a tactile warning surface surrounding the racks to accommodate overhanging wheels.

The approach

The approach to the entrance should be designed so that hard and soft landscaping reinforces the route to and the location of the entrance.

Do not design large areas to be uniform in colour and texture. This wastes the opportunity to relate the building to its surroundings and creates an unattractive and desolate approach. Additionally, it can prevent people with visual impairment from locating the entrance and/or main routes. Note the following requirements:

- Provide obvious and clear signage in the correct location.
- Windows, doors and other objects must not project into pathways. All doors that swing out should be recessed or safeguarded by railings.
- Columns, roof brackets and so on should be carefully located and detailed so that they are not a hazard.
- Carefully locate street furniture, canopy brackets, columns, and so on that are immediately adjacent to the entrance.
- Provide appropriate seating adjacent to the entrance.

The entrance

The design of the entrance should make the facility recognisable and inviting. Ensure the following:

- The entrance must be easily distinguishable from the facade as a whole.
- The entrance must be fully accessible with a level area immediately in front of the entrance doors.
- Do not segregate groups of people. For example, ensure that people with disabilities do not have to use an entrance at the back of the building.
- Entrance doors must be sited logically in relation to approach routes.

External doors

All large facilities, and those where a significant amount of wheelchair sport takes place, must be fitted with automatically controlled doors – do not use revolving doors.

Entrance doors must not be made of highly polished material such as stainless steel. They must, however:

- be a suitable width for the scale and type of facility (see Table 3)



- be fitted with level thresholds (maximum projection 13mm)
- be free of hazardous gratings adjacent to the door and its approach
- be distinguishable from adjacent walls and screens
- have vision panels.

Minimum clear width (mm)	Clubhouses/pavilions generally, except those serving tennis, athletics or outdoor basketball	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Basketball outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
800	●			●										●						
900	○	●	●		●				●			●	●	○	●			●	●	
1000					○	●			○		●	○	○		○	●	●	○	○	●
1200						○	●	●		●	○									
Automatic doors				○	●	●	●	●		●			●					○	●	●

Key: ● Required ○ Recommended

Table 3 External doors – requirements

Glazed doors and associated side panels must not incorporate fully glazed frameless entrance doors. They must, however:

- be distinguishable from their surroundings, with features such as signs and logos located at eye level, that is 1400–1600mm above ground level
- repeat safety markings at low level, that is 850–1000mm if the glazing goes to the floor
- display these distinguishing features, ensuring that they are visible from both sides of the door
- comply with BS 6262–4.

Automatically controlled doors should:

- have a sliding, bi-fold or telescopic arrangement – hinged (swing) or folding doors can be used in exceptional situations
- be carefully designed to minimise the risk of accident as an automatic swinging or folding door can be a serious hazard. In particular, the leading edge must be protected so that people cannot walk into it
- be capable of manual operation in the event of power failure.

In situations where an automatic door control is not required but a power-operated door is to be provided the ‘push-pad’ must be located at a height between 750–1000mm and be clearly visible. Additionally, it must be of a contrasting colour and luminance to its background.

Entrance lobby

- The layout and dimensions of the entrance lobby must be appropriate to the facility’s size and type. The dimensions are critical for wheelchair users as they will need to move clear of the first door before encountering the second.
- The entrance lobby should be finished with a recessed ‘cleaning surface’ that is firm and fitted flush with the surrounding floor finish so as not to become a trip hazard.
- Where space is tight, consideration should be given to omitting the inner doors, providing an overhead warm air curtain and adjusting the design of heating to the entrance area to compensate for any heat loss.
- The level of lighting in the lobby should be adjustable to provide a smooth transition from external to internal lighting levels and vice versa.

Provision	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
Reception desk including ‘hearing loop’					●	●	●	●	●	○	●	○	●	○	○	●	○	●	●	●
Accessible public telephone	○	○	○	○	●	●	●	●	●	○	●	○	●	○	●	●	●	●	●	●
Textphone					○	●	●	●	●	○	●		●		○	●	●	●	●	●
Seating/resting area	○	○	○	○	●	●	●	●	●	○	●	○	●	○	●	○	○	●	●	●

Key: ● Required ○ Recommended

Table 4 Reception area – requirements

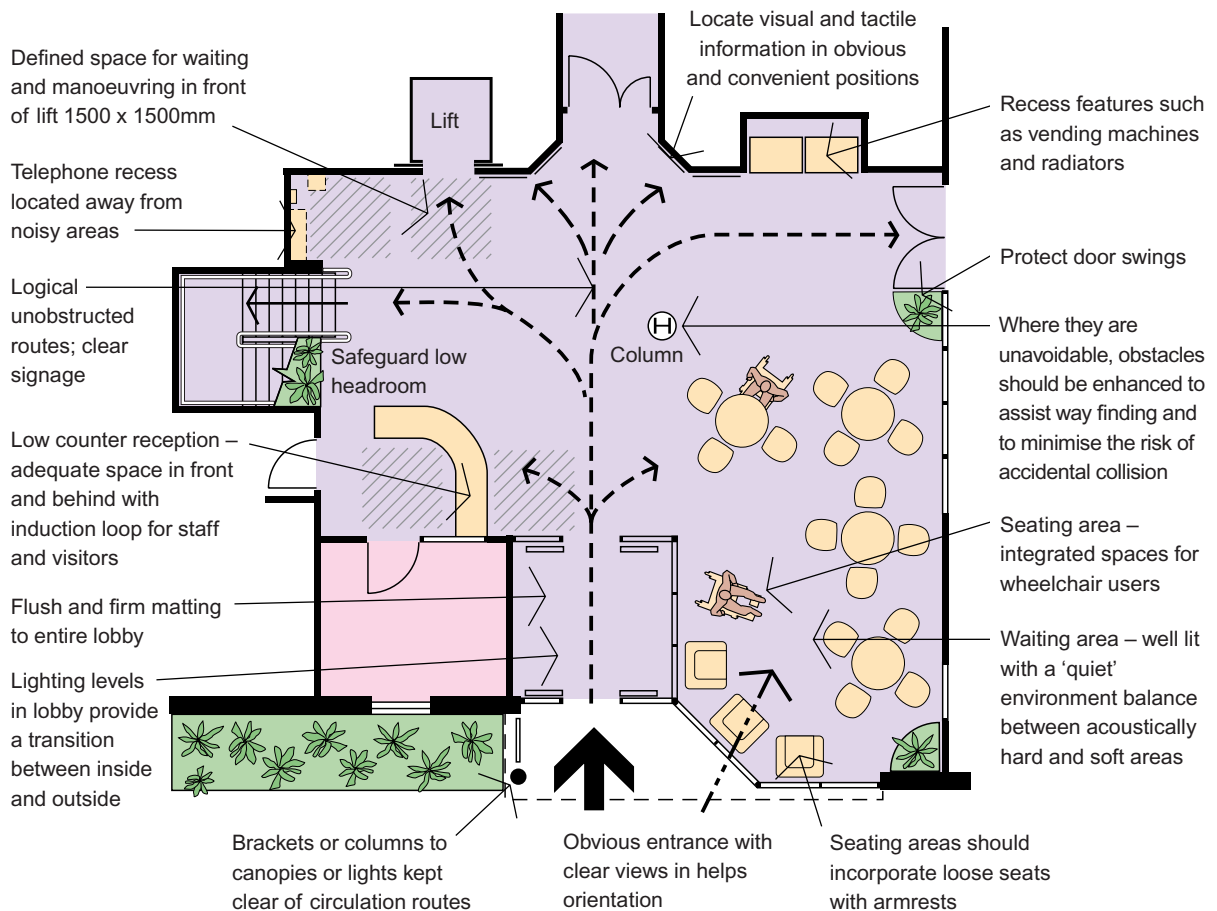


Figure 7 Reception area

Foyer/reception area

The layout of the reception area should be clear and logical and must not rely on signs to guide people through it. Close attention to detail is critical to the success of this space:

- People coming through the entrance door should have a clear view of the reception desk.
- If turnstiles are used ensure they are adjustable and/or provide a separate, adjacent route for people with pushchairs or wheelchairs who may be restricted by the mechanism.
- The lift, staircase and public telephone should be visible and close to the reception desk. Where a direct line of sight to these key facilities is not possible clear signage must indicate their whereabouts.

- Suitable seating is required for early arrivals and people who may be meeting friends before or after using the facilities.
- The reception area should be 'acoustically quiet' so that communication, particularly with staff at the reception desk, is clear and free of distractions. It is essential that hard reflecting surfaces, such as glass, be acoustically balanced with softer sound-absorbing surfaces, such as carpets and curtains.

Reception desk

In larger facilities where some form of reception/booking desk is required, it is essential that the desk or counter be properly designed to allow good access for all.

- Two work surface heights should be provided to accommodate customers and staff who may wish to stand or sit, including wheelchair users.
- Design the counter so that it can be run by a member of staff working from a wheelchair and to ensure that a wheelchair user on the public side of the counter can be served. To achieve this it is essential to have a lower section, and to give careful consideration to the location of information and equipment on the management side of the counter.
- Screens and grilles inhibit communication and should only be used when dictated by security considerations.
- An induction loop must be provided to assist users with hearing impairment and this must be clearly indicated by the standard symbol.

Public telephone

Except in the smallest facilities, such as small pavilions, a public telephone with an induction coupler must be located in the reception area to allow people to call taxis, organise lifts, and so on.



The reception desk is designed for use from both sides by people using wheelchairs

Signs

Good, clear information is essential in all facilities:

- Only use signage to locate specific facilities and reinforce logical routes, not to clarify a confusing layout.
- The layout of the building and the use of appropriate finishes and lighting can be used to convey navigational information.

Further detailed information on the design of signs is provided later in this guidance note.

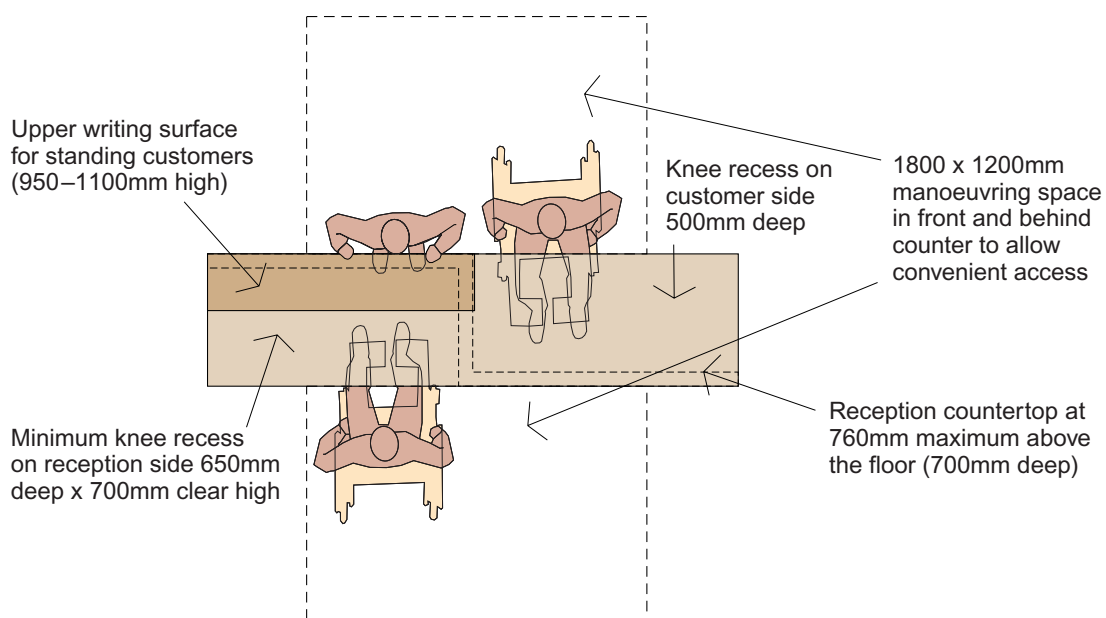


Figure 8 Reception desk – key dimensions

Internal features

Design the building to minimise the number of doors and the length of corridors that users have to negotiate. Consider carefully the location of internal columns and pillars; within the constraints of the design these should not be located in circulation areas. When this is not possible the obstruction needs to be 'highlighted' and protected by the use of appropriate details and decoration.

Corridors

- A minimum of 1200mm clear width must be provided in all facilities, but generally the preferred corridor width is 1500mm. In larger facilities or in those anticipating large numbers of wheelchair users, the corridor width should be increased to 2000mm to allow wheelchair users to pass each other freely along main routes.
- Corridors must be wide enough to allow wheelchair users to approach and gain easy access through doors off the corridor.

- Corridors should be unobstructed.
- Fire extinguishers, radiators, and so on should not project into the clear corridor width to ensure they do not present a hazard to children, wheelchair users or visually impaired people.
- Provide splayed or radius corners wherever possible.
- Doors must not open out into corridors.
- Avoid glazing at the end of corridors.

Lobbies

- Minimise the number of internal lobbies as they prevent efficient use of the facilities.
- Where they are necessary, all internal lobbies should be of the appropriate size and layout.

Ramps

Avoid small changes in level in corridors whenever possible. However, where this is not practicable, overcome the change with a carefully designed



Whenever possible doors should be held open to minimise the number of barriers on a route way. Splayed walls at corridor junctions will benefit visually impaired people and wheelchair users



Radiators and other hazards should not project into circulation areas



Where doors must swing out into a corridor they should be set in a recess

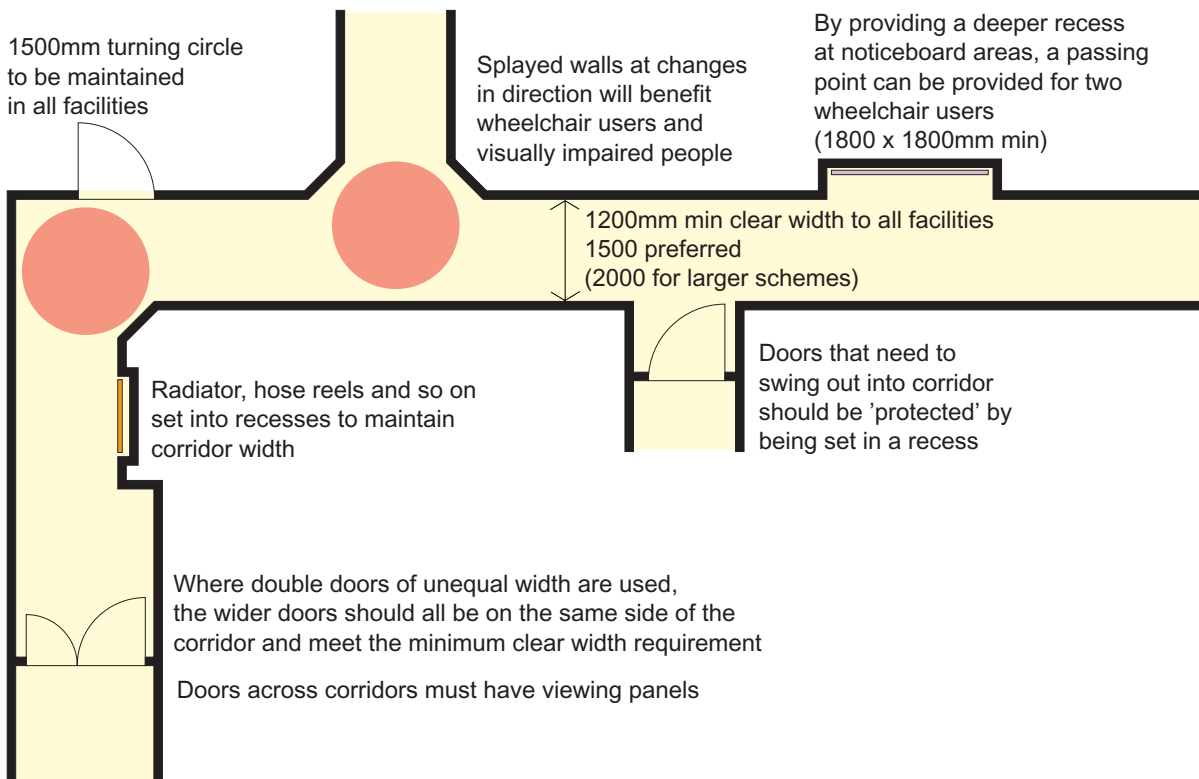


Figure 9 Internal circulation



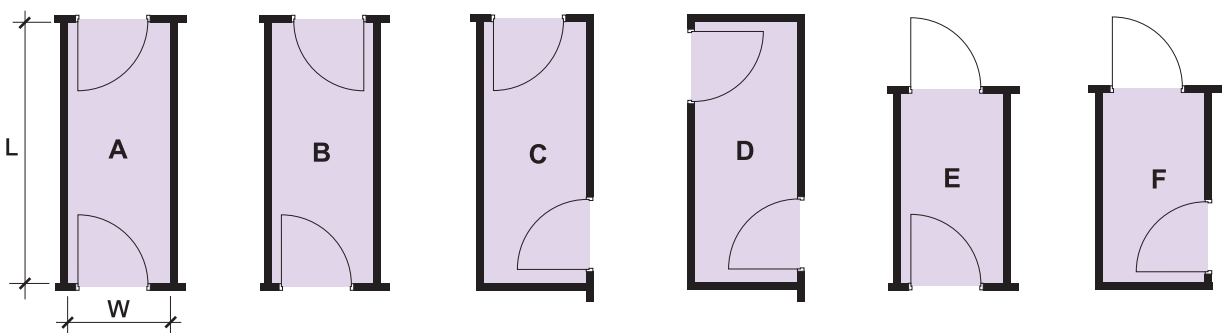
Wherever possible, a ramped change in level should be accompanied by a short flight of steps suitable for ambulant disabled people who may find a ramped surface difficult to negotiate. The steeper and more extensive the ramp configuration, the more important it is to provide a short flight of steps.

and detailed ramp. Where the complex is on two levels the following provision must be made:

- Ramps should have a minimum clear width of 1200mm.
- Ramps should be as flat as possible, with a gradient between 1 in 20 and 1 in 15 and a maximum length of 10m between landings.
- In exceptional circumstances, short ramps with a maximum length of 5m between landings may be incorporated with a gradient no steeper than 1 in 12.
- Intermediate landings between ramps should be at least 1500mm long.
- Ramps must be surfaced with firmly fixed, slip-resistant and easy to maintain material.

Stairs

- There must be clear width of 1.1m except in small facilities where a minimum of 1m is acceptable.
- The maximum rise of each flight is 1.8m with risers no greater than 170mm and treads no less than 250mm.



Layout	Door size (no vision panels)						Door size (with vision panels)					
	826		926		1026		826		926		1026	
	L	W	L	W	L	W	L	W	L	W	L	W
A,B,C,D	3250	1250	3450	1350	3650	1450	2400	1250	2500	1350	2600	1450
E,F	2400	1250	2500	1350	2500	1450	2400	1250	2500	1350	2600	1450

Table 5 Lobbies and single-leaf doors – minimum dimensions (mm)



- All staircases must be fitted with a suitable handrail on both sides (see later section).
- All landings must be level, at least 1.2m long and clear of obstructions such as door swings.
- All changes in level, including landings, must have a continuous handrail.
- Tapered treads, spiral stairs and open risers must not be used.
- All stair nosings must be clearly visible and made of contrasting slip-resistant material. The nosing should wrap around the riser so that it extends between 30–50mm on the tread and 30mm down the riser.
- All staircases must be illuminated to at least 100 lux at tread level and be designed to ensure that people do not have to negotiate stairs in their own shadow.
- Avoid using shiny, polished materials that cause glare.
- Tactile warnings can also be incorporated into handrails and floor surfaces at the top and bottom of stairs.
- Ensure open areas under stairs are free from head injury hazards.

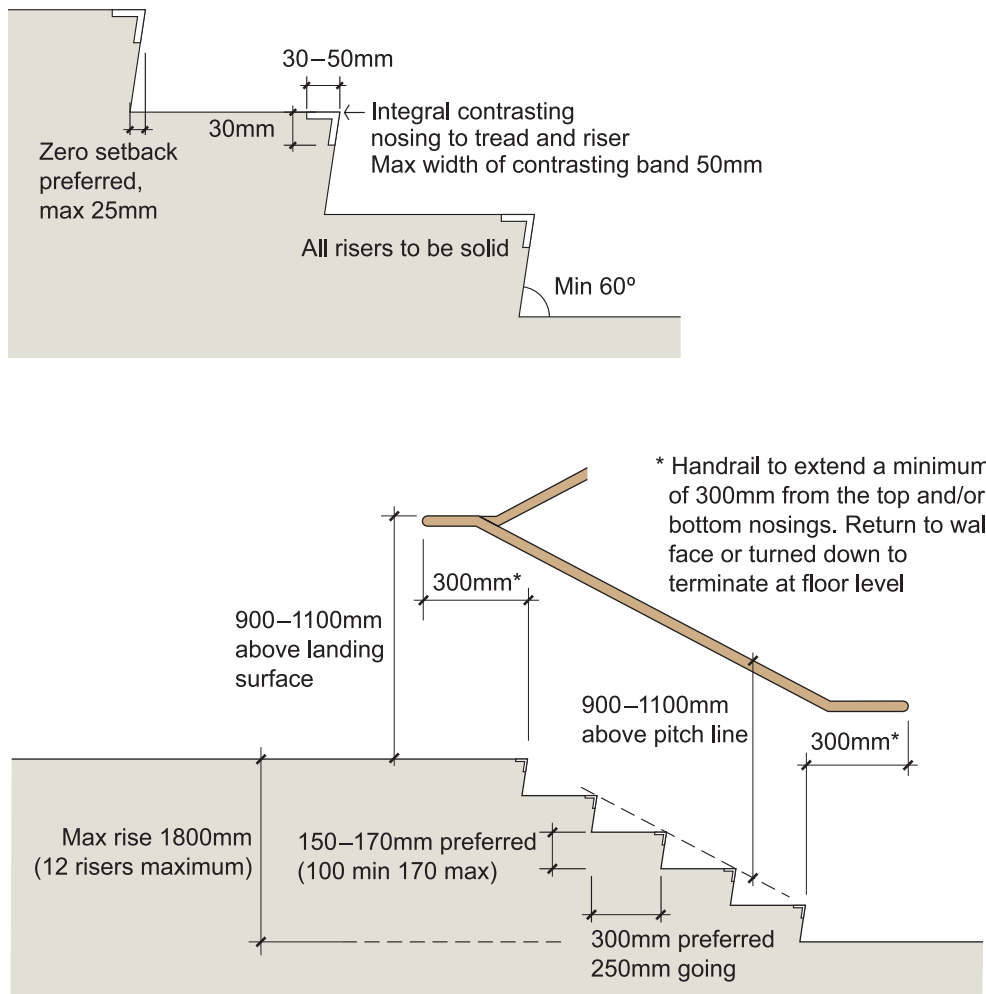


Figure 10 Internal stair details

Handrails

- Handrails must be provided at all changes in level, however small, and give adequate grip and support.
- Colour or brightness should contrast against the background so that they are easily distinguishable.
- They should be made from materials that are comfortable to hold and not cold to the touch, for example timber or nylon-coated metal.
- Handrails must have an outside diameter of 45–50mm.
- Handrails must be continuous and fitted with ‘returned ends’ a minimum of 300mm past the top of the ramp or the first and last risers of a staircase.
- They should not project into the minimum clear width of the stair, ramp or corridor.
- They should be robustly fixed.
- Balustrades must be designed to provide physical and visual security.

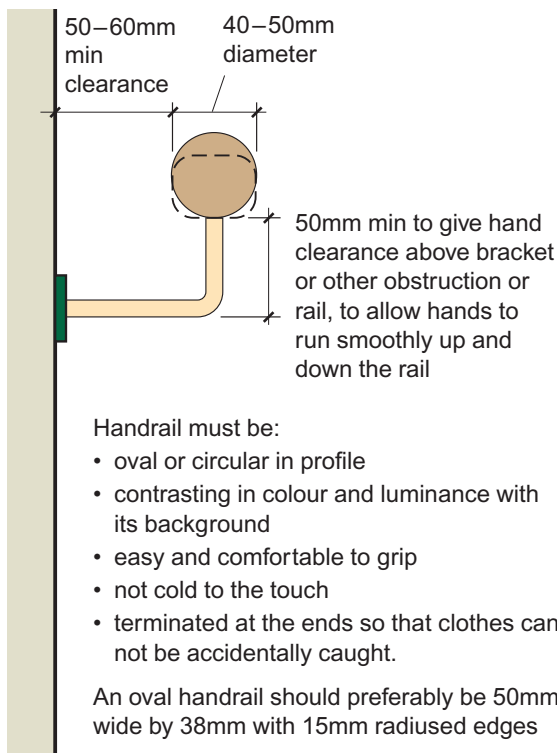


Figure 11 Handrails – design

Doors

Design

Keep the number of doors to a minimum as they can restrict progress. Doors can be heavy and awkward to operate if not properly designed and specified. Where they are necessary they should comply with the guidance below:

- All internal doors must be designed to provide at least the minimum clear door opening appropriate to the type and scale of the facility.
- Double doors must have at least one leaf that provides the minimum clear opening appropriate to the type and scale of the facility.
- Wherever possible, double doors should incorporate a double swing action rather than an interlocking arrangement, which is more difficult to negotiate.

Location

- Locate all doors so that there is clear wall space of at least 300mm to the leading

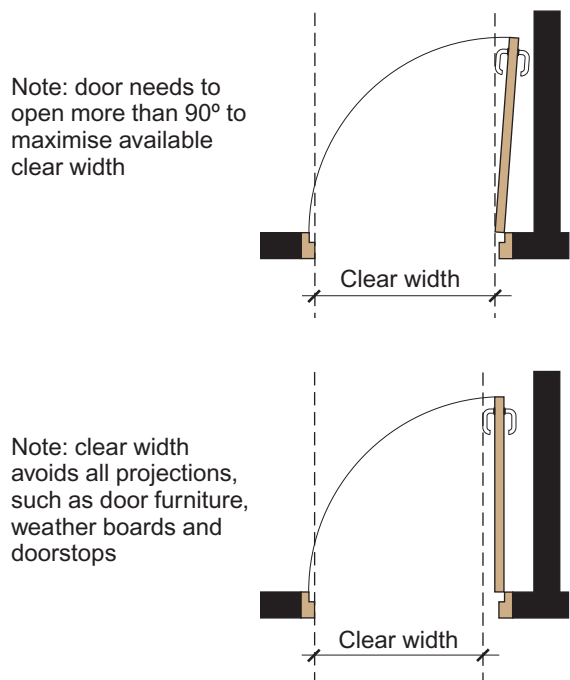


Figure 12 Doors – clear widths

edge side. Ideally – and for sport-specific situations – this should be increased to 500mm.

- All doors should be designed and located so that they can swing to at least 90°, to ensure maximum door opening.
- Doors should swing into rooms, not into corridors. Where there is no alternative, doors swinging into a corridor must be located in a recess or protected by a guardrail that leads people away from the door swing. Note that this guardrail must not restrict the minimum clear width of the corridor.

Appearance

- Whenever possible, visibility panels should be provided as they help prevent collisions when people are negotiating doors quickly. They also allow views of children and of people in wheelchairs on the other side of the door.
- Position visibility panels so that they accommodate people’s eye levels when standing and sitting.
- Fully glazed doors can be a hazard to visually impaired people. All glass doors must be clearly identified by contrasting bands of colour at 1050 and 1650mm

above floor level. Equally, they should be clearly distinguishable from any adjacent glazing.

- Colour contrast should be used to help distinguish the doorframe from its surroundings.

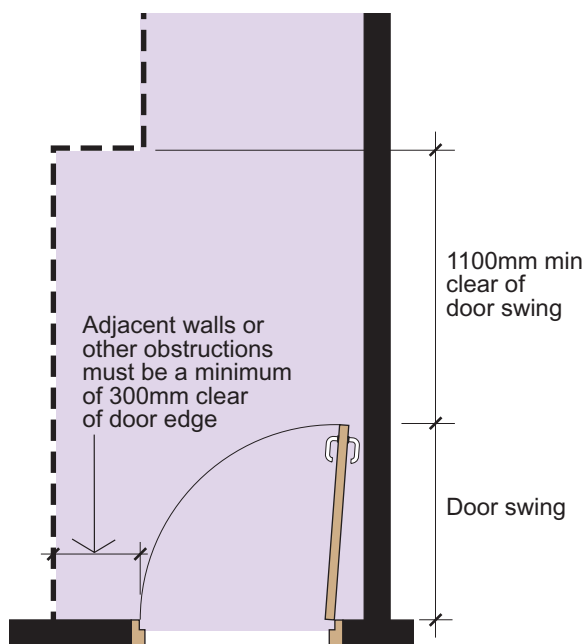


Figure 13 Doors – side clearances

Minimum clear width (mm)	Clubhouses/pavilions generally, except those serving tennis, athletics or outdoor basketball	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Basketball outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
775	●	●	●	●										●						
875	○	○	○	○	●				●			●	●	○	●			●	●	
1000					○	●		●	○	●	●	○	○		○	●	●	○	○	●
1200						○	●	○		○	○									

Key: ● Required ○ Recommended

Table 6 Internal doors – requirements (except accessible toilets and changing rooms)

Door closers

Doors can act as barriers if great force is required to overcome the door closer. The door closer must be set to the minimum force necessary to close the door. The door design and installation must ensure that the maximum opening force does not exceed 20 newtons.

- Specify and install door closers to minimise the effort needed to open the door.
- Do not set door closers at a high force level in order to overcome badly fitting hinges or smoke seals.
- Set door closers to give the maximum possible time delay before closing.
- Doors that are easy to open benefit everyone and are less likely to be abused.
- Wherever possible, use electromagnetic catches linked to the fire alarm to hold the door open during normal use.
- In large facilities and in those where significant numbers of wheelchair users are anticipated, consider installing automatic internal doors, either linked to a sensor or to suitably located push pads.

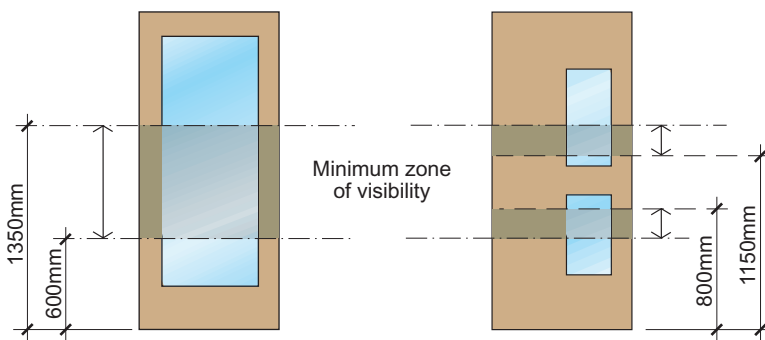
Door furniture

- Wherever possible doors must be fitted with ironmongery to facilitate use by push or pull operations.
- If it is necessary to install a door catch or lock rather than a latch mechanism to hold



the door closed, use a lever handle. Doorknobs must not be used.

- Door handles and pull handles should be located at a comfortable height for wheelchair and ambulant users.
- Door handles and pull handles should contrast with the door.
- Use escutcheons that contrast with the face of the door to aid location of keyholes.
- Provide a door pull on doors where no external handle is fitted so that it is not necessary to use the door key.
- Do not use 'break glass' emergency bolts as they are obstacles for disabled people. Large push pads, which can be alarmed if necessary, should be used to allow speedy departure from the building.



Where it is necessary to introduce a horizontal member, two viewing panels should be provided as shown, located within the zone of visibility

Single viewing panel
Note: manifestation zone
1400–1600mm

Split viewing panel

Figure 14 Doors – location of vision panels

Lifts

Passenger lift

The lift should be located close to the reception and main circulation routes. Specification is as follows:

- The lift door must have a clear opening width appropriate to the size and scale of the facility.
- The internal lift space must be at least 1100mm wide x 1400mm clear depth internally and preferably 2000mm wide and 1400mm deep.
- Within the car and at each landing there must be audible announcements and a clear visual display of the level reached.
- The lift controls should be clearly distinguishable and easy to operate, giving clear visual and tactile indications of the floor buttons pressed.
- Within the car the controls should be located on a side wall.
- In addition to tactile markings to all controls, Braille markings can be provided.
- Accurate levelling at landings is critical.

- There should be a minimum five-second delay to the lift door closing mechanism.
- Consider providing a fold-down seat in larger lifts.
- An alarm button should be provided, with a repeater light to show that the alarm bell has sounded.
- The emergency telephone in the lift must incorporate inductive couplers for hearing aid users.
- In association with the fire officer and/or building control officer, agree whether the lift is to be designed and designated for use in emergency evacuation.

At each floor level:

- There should be clear space of at least 1500 x 1500mm in front of the lift.
- Opposite and adjacent to the lift there should be raised numerals/letters indicating the floor level.

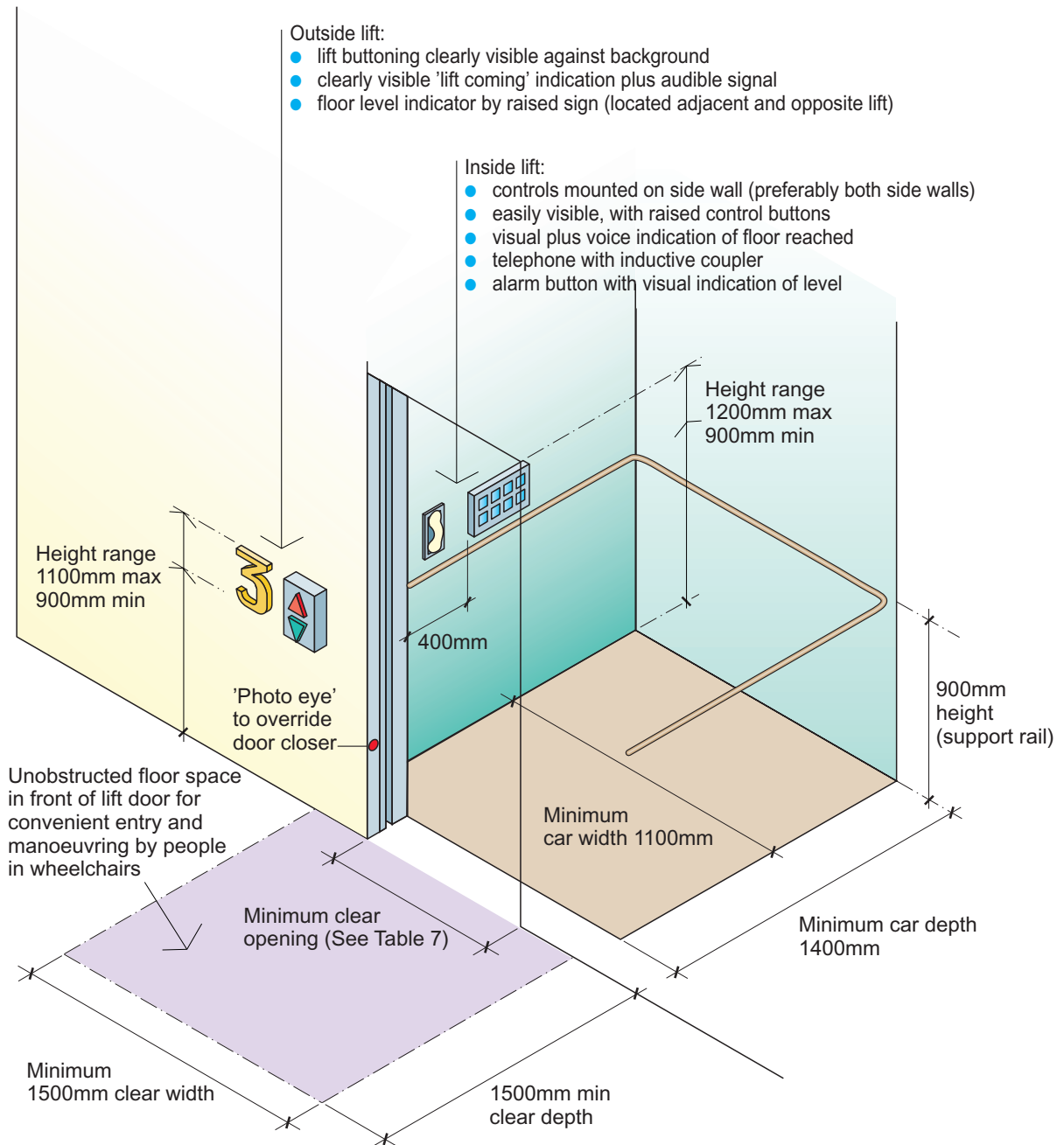
Vertical platform

In exceptional circumstances where a passenger lift cannot be accommodated, short-rise vertical platform lifts are acceptable in small facilities. These lifts can be particularly useful in

Minimum clear door width into lift (mm)	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
800	●	●	●	●	●					●			●	●						
900	○		○	○		●	●					●	○		●	●	●	●	●	●
1100						○	○	●	●		●					○				○
Short-rise vertical platform lift	▲	▲	▲	▲	▲					▲		▲		▲	▲			▲		

Key: ● Required ○ Recommended ▲ May be acceptable

Table 7 Lifts – requirements



Note:

- Lift doors should remain open for five seconds to allow adequate time for entry.
- Lift doors must be easily distinguishable from the adjoining wall.
- Consider fold-down seats in larger lifts.

Figure 15 Lift – critical details



existing buildings where a significant change in level would necessitate an extensive ramp arrangement or where space is limited. Note the following details:

- suitable for changes in level up to 2.0m without a lift enclosure where there is no floor penetration
- suitable up to 4.0m where there is an enclosure
- greater heights will require a relaxation of the regulation by the building control officer
- lifts should comply with BS 6440
- minimum clear platform size must be at least 1100mm wide x 1250mm long.

Wheelchair stair lift

This is not an acceptable means of access for any type of sports facility and could be a hazard if fitted on escape stairs.

Emergency escape

Detailed guidance on means of escape for disabled people is given in BS 5588: Part 8 *Code of Practice for Means of Escape for Disabled People* (1988). The main requirements for a sports facility are set out below.

Planning

Give detailed consideration to how disabled people will be evacuated from the building at an early stage of the project. Their safe and successful evacuation is dependent upon:

- management arrangements
- layout and construction of the building.

These two issues cannot be dealt with in isolation even in the smallest facilities. Early consultation should take place, initially between the architect and the building managers, to establish:

- potential number of disabled people who may use and work at the facility
- nature of their impairment
- areas of the building they are likely to use.

Using this information an outline fire plan evacuation strategy should be developed. In all but the smallest projects the architect should then consult with the building control officer and the fire officer to obtain advice and guidance on the proposed building and evacuation strategy.

Multi-storey buildings

In a multi-storey building great care must be taken to ensure that management of the facility takes account of disabled people's needs – especially with regard to emergency evacuation.

As all parts of a sports facility must be accessible to everyone, the basic assumption for evacuation procedures is that everyone can make their way to a place of relative safety protected from fire and smoke whatever floor they are on. From this point they can be assisted either by management or by the fire service.

Fire evacuation

The fire plan evacuation strategy must ensure that:

- every part of the building has a safe means of escape in emergencies
- every escape route is fully usable by everyone, including people with disabilities.

All evacuation plans must provide comprehensive management procedures for the evacuation of disabled people:

- Make arrangements to ensure people in wheelchairs are assisted.
- Ensure people with walking or other impairment are helped up or down stairways.

- All fire exits on the ground floor should have level access.
- Where there is spectator seating the design should provide a means of escape for disabled spectators without placing restrictions on where they sit.
- The number of disabled people using a sports facility will vary significantly according to the nature of the use, ranging from an individual user to large numbers of participants, spectators and officials at large competitions. The evacuation plan must anticipate these situations and ensure the adequacy of the design and of management procedures.

Refuges

Disabled people will often need to rest or wait for assistance, for example before negotiating a flight of stairs. To achieve this the design might incorporate the use of 'refuges' on escape routes, together with an evacuation lift. Refuges are places of relative safety where disabled people can wait for short periods of time before making their way to the final exit.

Existing buildings often have spaces that can be used as refuges without the need to create new areas.

- The minimum size for a refuge is 900 x 1400mm except in facilities such as sports halls that are likely to accommodate sports-chairs. In such cases the minimum size is 1200 x 1500mm.
- The potential number of wheelchair users will determine the size of the refuge.
- The location of refuges, and wheelchair spaces within them, must not hamper the means of escape.
- A refuge of suitable size must be provided at each floor level for every fire escape staircase.
- The refuge area must not restrict the escape width.
- In large, complex sports facilities it is essential that the management/fire officer

can communicate with people occupying refuge areas. The specification of the intercom system must be agreed with the fire officer at an early stage in the development of the project.

- Where a refuge is located in a lobby or stairway a sign must be displayed: 'Refuge – Keep clear'. This sign is mandatory.

Evacuation lift

To operate in the event of fire, an evacuation lift must:

- be a passenger lift that is always available for evacuation purposes
- comply with BS 8300 and BS 5655–1 or –2
- be within a fire-protected shaft and have its own independent electrical supply and control
- be clearly signed
- be located so as to be associated with a refuge
- be within a protected enclosure, that is, the lift shaft itself and have protected lobbies at each floor level and a direct route to the outside at the exit level.

In a building over two storeys, install a communications system to relay information to the person operating the lift car.

Note that a goods lift cannot be operated as an evacuation lift.

Sounders/alarms

In large facilities supplement audible alarms with approved flashing beacons for people with a hearing impairment. The beacons should be located in areas where people with a hearing impairment might find themselves alone and unaware that an emergency evacuation alarm had been sounded.

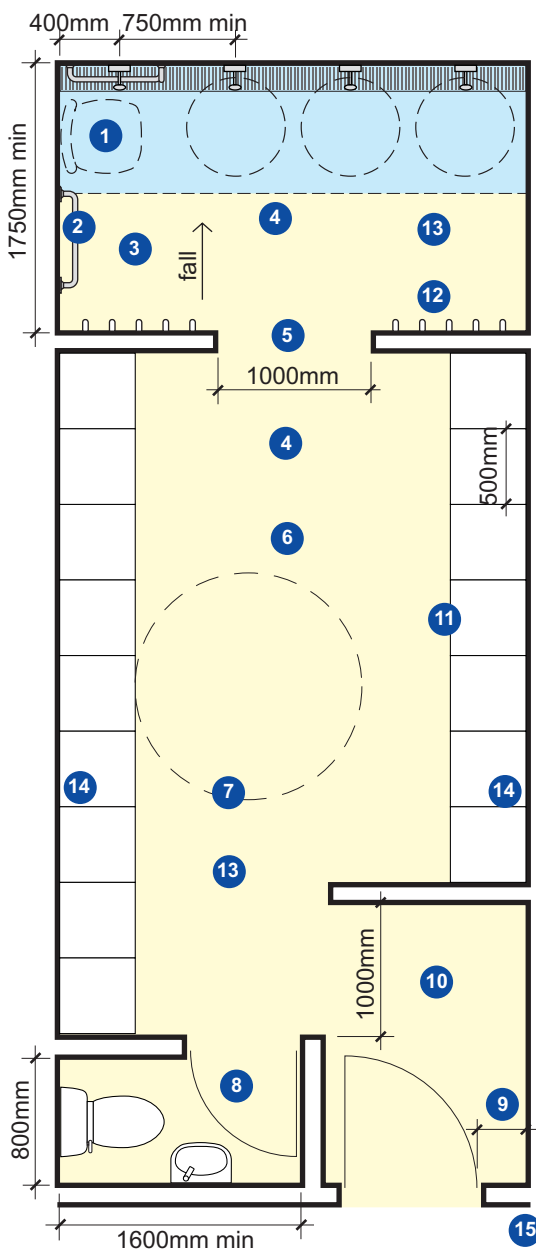
In smaller facilities consideration should be given to providing personal vibrating pagers linked to the alarm system.

Changing areas

All changing areas must be designed so that disabled people can use them. This does not necessitate expensive design features but it does require attention to detail and layout. In addition, all sports facilities, except those serving only grass pitches, must always provide

an individual unisex accessible changing room complete with shower and toilet. This enables assistance to be given by someone of the opposite sex.

The key design requirements are set out below. For sport-specific requirements see the later sections.



Key

- 1 Robust 500 x 500mm shower drop-down seat with horizontal and vertical grabrails to give extra support to users
- 2 Horizontal grabrail in drying area gives extra support and can be used as a towel rail
- 3 Simple, safe falls to drainage channel
- 4 Slip-resistant floors
- 5 Level threshold between changing and shower areas
- 6 Minimum 1m² per person in changing area
- 7 1500mm minimum turning circle to be maintained in the changing area in front of benches
- 8 WCs and wash basins can be planned adjacent to shower area – where space allows design cubicle to be suitable for ambulant disabled people
- 9 Minimum 300mm clear (450 preferred) from door edge to wall
- 10 Entrance lobby provides privacy by screening the changing area but maintains the minimum clear width of 1000mm
- 11 Benches 450mm minimum width (500 preferred) set at height 480mm with a smooth finish to surfaces and edges
- 12 Towel hooks in shower located alternately at 1400 and 1050mm
- 13 Ensure adequate colour and tonal contrast between fittings, walls, ceilings, floors and so on to assist people with visual impairment
- 14 Locate coat hooks so that they can be accessed by everyone
- 15 Locate signs on wall adjacent to door edge to allow easy identification of the changing facilities

Figure 16 Key design requirements for all changing areas

Main changing areas

Layout

A well-designed layout is critical to achieving maximum access. Careless design can reduce a person's independence and, at worst, physically prevent use of a facility. It is therefore essential that:

- sufficient space is provided for manoeuvring wheelchairs
- allowance is made for a wheelchair user to change without obstructing other users
- direct access is provided to the shower area from the changing room
- toilet provision is in very close proximity to the changing area.

Some disabled users may prefer the privacy of an individual cubicle and, wherever possible, these should be provided.

Where significant wheelchair use is anticipated, for example where wheelchair team sports could be played, the layout and design of the changing area must reflect this. This might include:

- an individual accessible changing cubicle or cubicles within the main 'team' changing area, which can double up as family changing to allow personal privacy within the team context
- where appropriate these individual accessible cubicles can be fitted with support facilities such as hoists and additional rails.

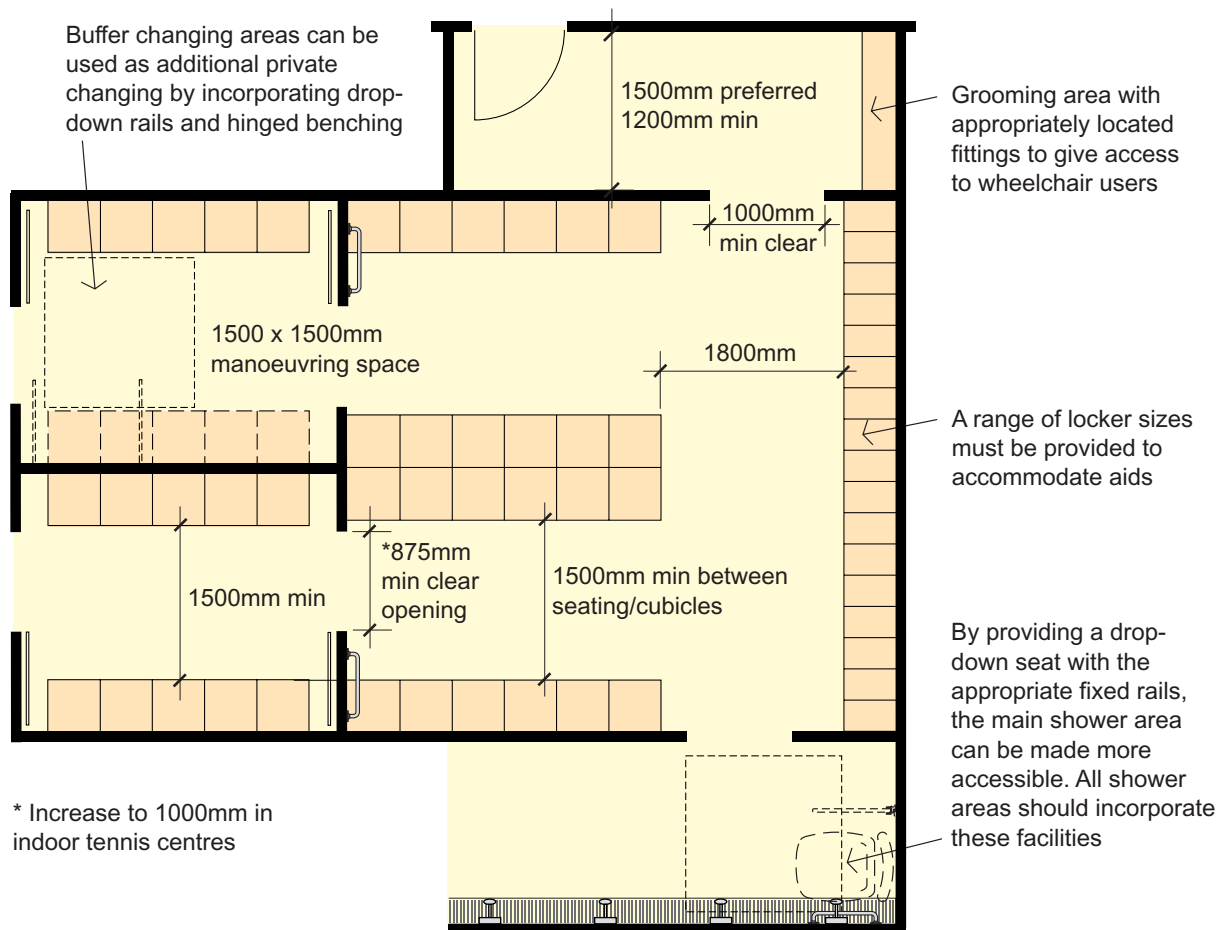


Figure 17 Ensure main changing areas are accessible

Benches

- All benches must have a minimum depth of 450 – ideally 500mm – and be set at a height of 450mm to allow easy transfer from a wheelchair.
- Additional non-toxic foam matting will be necessary to lay over the benching as extra protection for people with sensitive skin. The matting should be kept readily available in a convenient store.
- Where wheelchair competitions are likely but infrequent events, consider making some movable benching available to provide temporary additional manoeuvring space for extra wheelchair users.
- Many sports facilities incorporate 'buffer' changing spaces to accommodate peak demand on changing provision. When not required, and if designed correctly, these spaces can provide additional private changing for disabled users.

Coat hooks

- Alternate coat hooks should be located 1400 and 1050mm above floor level to enable use by children and wheelchair users.

Lockers

- Sufficient lockers should be set at heights between 400mm and 800mm and be at least 300mm wide.
- Ten per cent of lockers should be at least 1200mm high to accommodate mobility aids and so on. Ideally some full-height lockers must be provided.
- Locks must be positioned no higher than 1150mm and be easy to operate one-handed by a person with poor dexterity or limited hand or arm strength.
- Locks and lockers should incorporate tactile numbers.
- Where there are large banks of lockers some form of orientation assistance should be given, for example by using very strong colour contrasts and/or symbols and by replicating this as part of the key design.

Equipment

- Chairs for use in pools, showers and other wet areas should be readily available. There must be enough floor space to enable the user to transfer from his or her chair onto the shower chair.

Hairdryers/mirrors

- Position these to allow everyone to use them.

Heating

- To avoid accidentally burning children and people with insensitive skin, heating pipes and heating equipment must be carefully located and fitted with thermostatic controls.

Unisex accessible changing

Minimum provision is indicated in Table 8 on page 36, however consider providing additional spaces to meet likely demand. Generally, whatever changing is provided it must be complemented with unisex accessible changing facilities.

- Dedicated accessible changing areas allow a helper from the opposite sex to provide assistance in privacy.
- Each room must contain a tip-up seat, shower, WC and washbasin and meet the dimensional criteria set out in Figure 18.
- Unisex accessible changing rooms must be clearly signposted.
- Layout and relationships to other areas are critical.
- Dedicated lockers must be located outside the changing area to allow access by more than one person.
- Except in small sports facilities that serve only grass pitches, there must be at least one unisex accessible changing room. The number of accessible changing rooms provided will depend on the type and scale of the facility.
- The design and quality of the changing area should be similar to the other changing facilities; fittings must contrast clearly with their background.

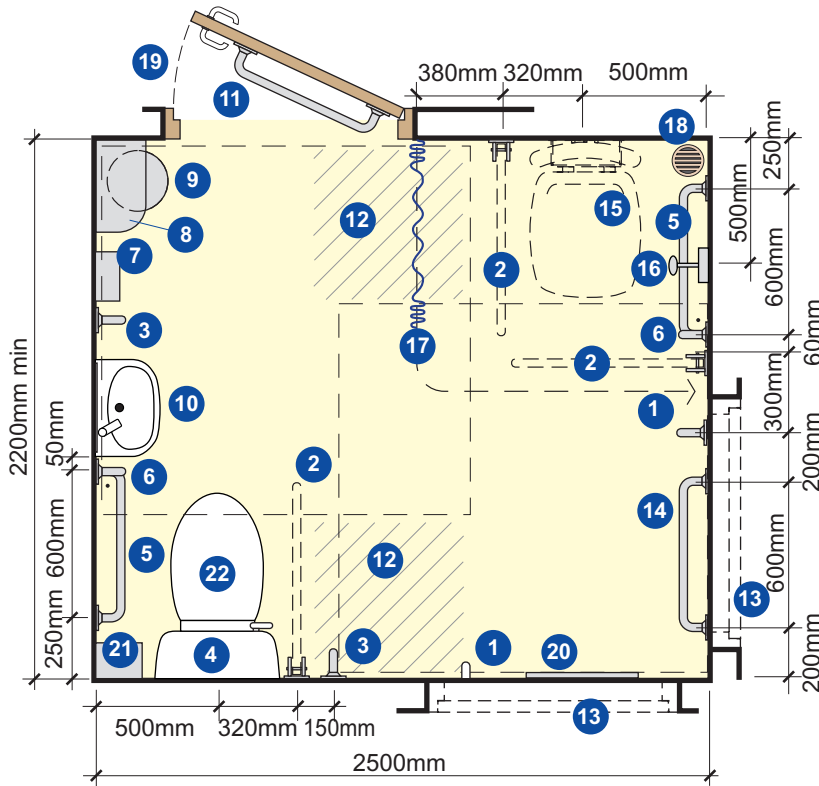


Figure 18 Unisex accessible changing room with shower and WC 2.5 x 2.2m (left hand transfer)

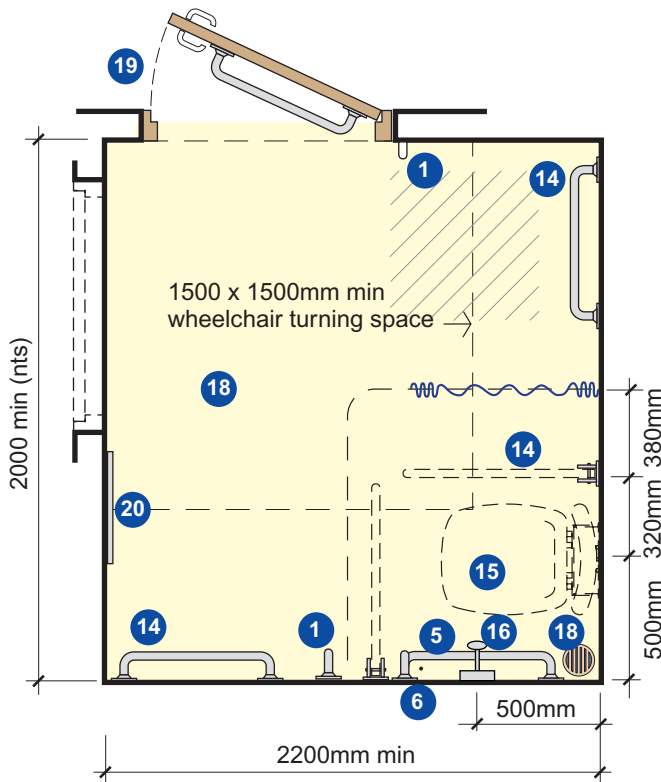


Figure 19 Accessible changing area with shower (left hand transfer)

Key

- 1 Two clothes hooks set at 1400mm and 1050mm above floor level
- 2 Drop-down rail
- 3 Fixed vertical rail
- 4 Provide 'secure' low level cistern or concealed cistern with duct fitted with horizontal grabrail. Note: flush to be located on transfer side
- 5 Fixed horizontal grabrail
- 6 Fixed vertical rail and adjacent alarm pull-chord with two red triangles
- 7 Automatic hand dryer
- 8 Low shelf with rounded arris
- 9 Disposal bin for miscellaneous items with sanitary dispenser above (750–1000mm above floor level)
- 10 Hand basin
- 11 Horizontal door pull to enable door to be closed when entering
- 12 It is essential to keep the area adjacent to the WC clear to allow transfer onto the WC
- 13 Alternative door position
- 14 Horizontal grabrail used as towel rail
- 15 Padded tip-up shower seat with back rest. Front edge set 600–700mm from back wall to allow lateral transfer
- 16 Shower controls – lever-operated, thermostatically controlled (max 41°C)
- 17 Shower curtain and rail
- 18 Floors laid with simple falls to flush gully or grating
- 19 Minimum clearance 875mm; 975mm in large facilities and tennis centres
- 20 Mirror 1000mm high, located 500mm above floor
- 21 Colostomy changing shelf for ambulant users 950mm above floor level
- 22 Transferring from a wheelchair to a WC imposes significant forces, therefore all fittings should be robust. Wing nut fixings should not be used to secure the toilet seat

Note: See Figure 25 for key vertical dimensions and fittings for accessible WCs and changing areas.

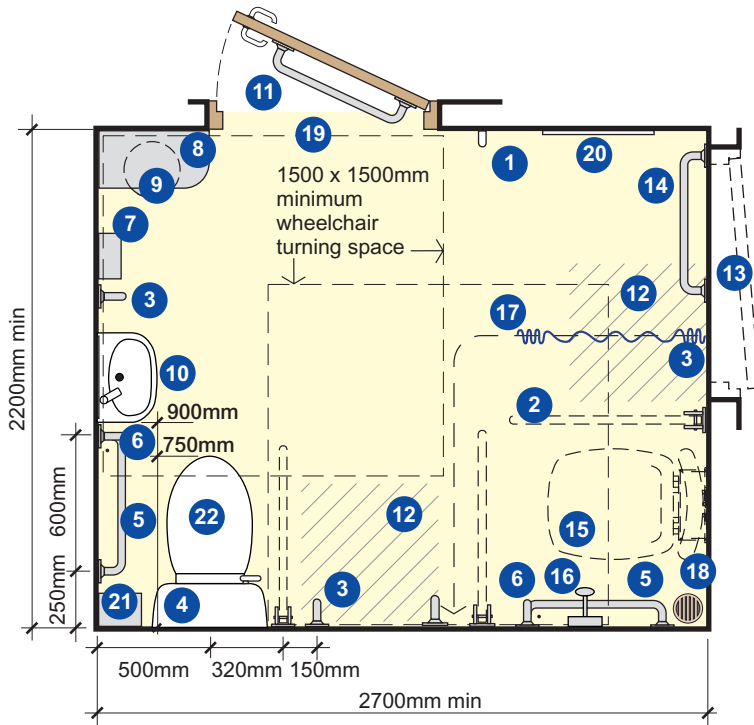


Figure 20 Accessible changing room with shower and WC

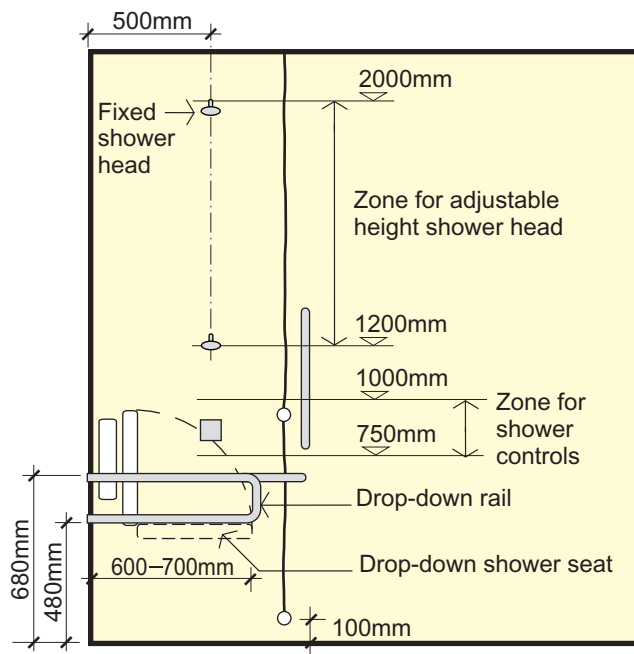


Figure 21 Key vertical dimensions to accessible shower area

Key

- 1 Two clothes hooks set at 1400mm and 1050mm above floor level
- 2 Drop-down rail
- 3 Fixed vertical rail
- 4 Provide 'secure' low level cistern or concealed cistern with duct fitted with horizontal grabrail. Note: flush to be located on transfer side
- 5 Fixed horizontal grabrail
- 6 Fixed vertical rail and adjacent alarm pull-chord with two red triangles
- 7 Automatic hand dryer
- 8 Low shelf with rounded arris
- 9 Disposal bin for miscellaneous items with sanitary dispenser above (750–1000mm above floor level)
- 10 Hand basin
- 11 Horizontal door pull to enable door to be closed when entering
- 12 It is essential to keep the area adjacent to the WC clear to allow transfer onto the WC
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- 14 Horizontal grabrail used as towel rail
- 15 Padded tip-up shower seat with back rest. Front edge set 600–700mm from back wall to allow lateral transfer
- 16 Shower controls – lever-operated, thermostatically controlled (max 41°C)
- 17 Shower curtain and rail
- 18 Floors with simple falls to flush gully or grating
- 19 Minimum clearance 875mm; 975mm in large facilities and tennis centres
- 20 Mirror 1000mm high, located 500mm above floor
- 21 Colostomy changing shelf for ambulant users 950mm above floor level
- 22 Transferring from a wheelchair to a WC imposes significant forces, therefore all fittings should be robust. Wing nut fixings should not be used to secure the toilet seat

Provision	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool	
One unisex changing room and WC (min)	○	●	●	●	●	2	2	2	●	●	2	●	○	○	●	●	●	●	●	●	2
In addition provide an accessible cubicle within the main changing area	○	○	○	○	○	○	○	●	○	○	○	○				○	○	○	●	●	
Changing rooms large enough for wheelchair teams						●	●	●	●												
Key: ● Required ○ Recommended																					

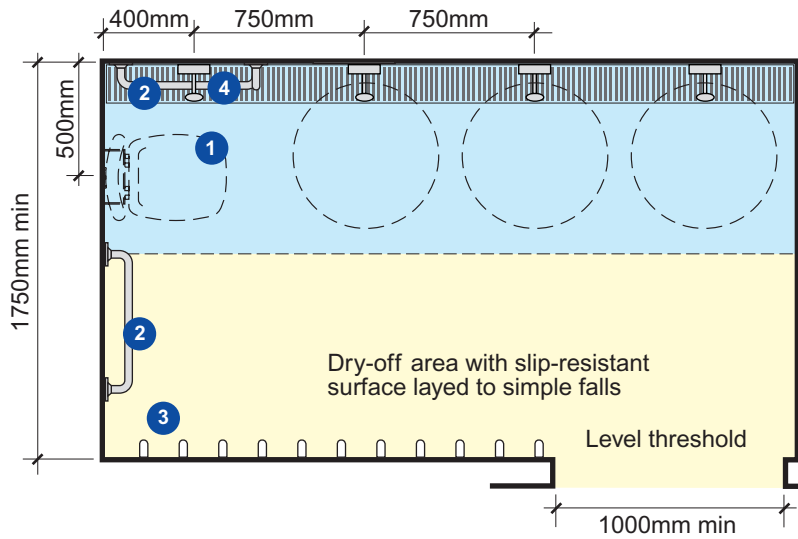
Table 8 Changing areas – requirements

Showers

- All shower areas must be usable by everyone. An area designed to meet the needs of disabled users will accommodate use by non-disabled people.
- Except in small pavilions serving only natural grass pitches, all shower areas must be fitted with at least one drop-down seat and appropriate grabrails. The seat must fold up out of the way when not required.
- Shower seats must not be fitted with vertical support struts as these impede access.
- Large facilities must provide a shower chair that can be conveniently stored when not in use.
- Shower controls must be lever-operated and located at an accessible height. They must be thermostatically controlled with a maximum temperature of 41°C.
- Floor finishes must be slip-resistant even when wet.
- Water must be contained in the wet area.

- Avoid complex falls in the floor that will make standing or manoeuvring a chair difficult and hazardous; the slope must be simple and shallow.
- Upstands separating wet and dry zones must not be used.
- Design the shower area so that a wheelchair user can transfer to a seat within the wet area without getting the wheelchair wet, and so that the wheelchair is within reach.
- In larger facilities shower curtains or robust hinged or folding screens should be provided to give additional privacy.





Key

- 1 500 x 500mm tip-up shower seat set in corner with grabrail set on shower head wall
- 2 600mm long horizontal grabrail providing additional support and can be used as towel rail
- 3 Towel hooks set at alternate heights of 1400 and 1050mm
- 4 Shower controls set at 1000mm above floor level with two shower heads at 1400 and 1800mm above floor level

Note: Where practicable, provide a privacy curtain, drop-down grabrail and emergency pull-cord with two red triangles.

Figure 22 Typical shower area for general use

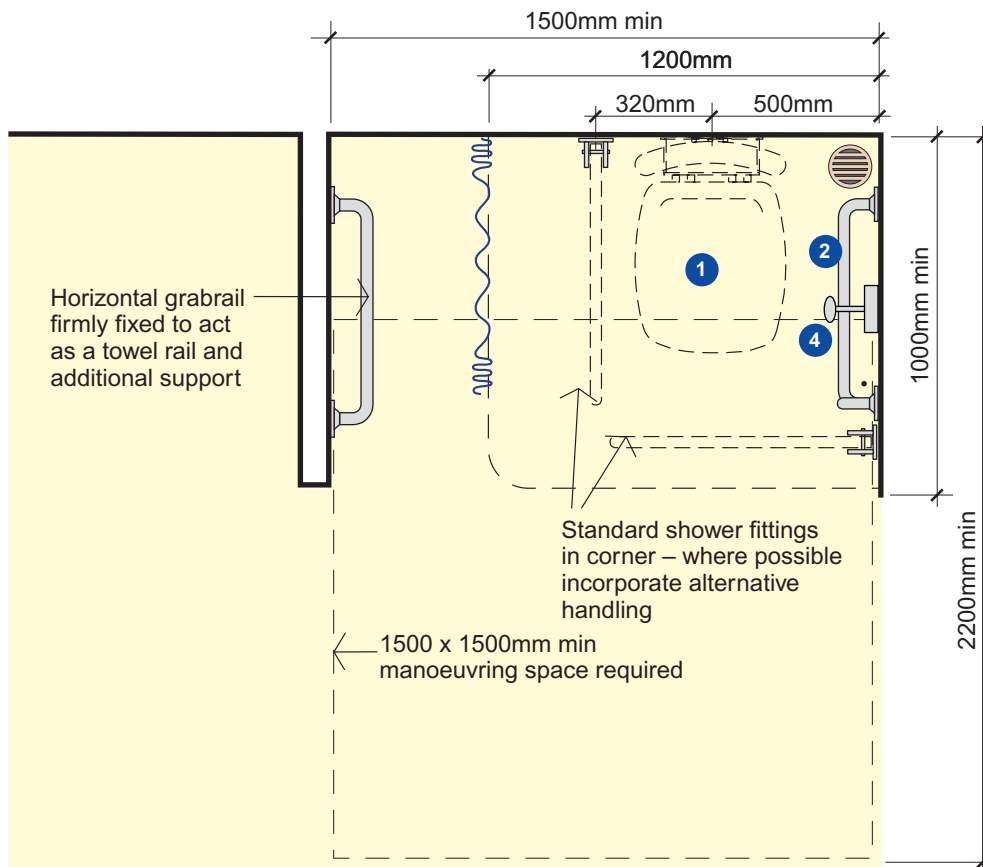


Figure 23 Accessible shower cubicle incorporated into main shower cubicle run

Toilet provision

Unisex accessible provision

All sports facilities must have at least one clearly signposted unisex accessible WC cubicle on every floor of the facility. Unisex provision allows helpers of the opposite sex to give assistance, which would not be possible if the accessible toilet provision were within a dedicated male or female area.

The provision of accessible toilet cubicles within dedicated male or female areas is considered to be additional provision and cannot replace unisex provision.

It should be noted that these toilets are used by people with a wide range of disabilities and not, as is often presumed, by wheelchair users only.

- The cubicle must be accessible from all areas of the facility including the social, refreshment, changing and staff areas.

- Every part of the sports facility, including the pool or field, must be within 40m of a unisex accessible WC.
- The cubicle should be located close to the changing areas unless there are dedicated unisex accessible changing rooms incorporating WCs within the changing areas. In that case the cubicle should be located close to the entrance to the main facility so that it can serve visitors and spectators as well as participants and staff.
- The scale and type of the facility will determine the number of accessible toilets. However, unisex accessible toilets must be provided wherever there is toilet accommodation.

Design

The layout and dimensions of an accessible toilet are critical to ensure that the cubicle will be properly and safely used.

Minimum provision	Clubhouses/pavilions (serving only natural turf pitches)	Clubhouses/pavilions generally	Full-size synthetic pitch	Multi-use games area	Fitness equipment room	Four-court sports hall	Six-court sports hall	Nine-court sports hall or larger	Cricket indoor	Gymnastics hall	Tennis indoor	Tennis outdoor	Bowls indoor	Bowls outdoor	Table tennis centre	Athletics indoor	Athletics outdoor	20m swimming pool	25m swimming pool	50m swimming pool
Accessible unisex WC compartment on each floor (can be shared with unisex changing)*	●	●	●	●	●					●		●	●	●	●		●	●		
Dedicated unisex WC compartment (in addition to any provision within unisex changing). Numbers/flow to be determined by the size and layout of the building*		○	○	○		●	●	2	●	○	●	○			○	●	○	○	●	●
Provide a minimum of at least one cubicle each within the 'general' male and female toilets suitable for an ambulant disabled person	○	○	○	○	○	●	●	●	●	○	●	○	●	○	○	●	○	○	●	●
Key: ● Required ○ Desirable * Unisex accessible toilets must be located wherever there is general toilet provision																				

Table 9 Accessible toilet provision – requirements

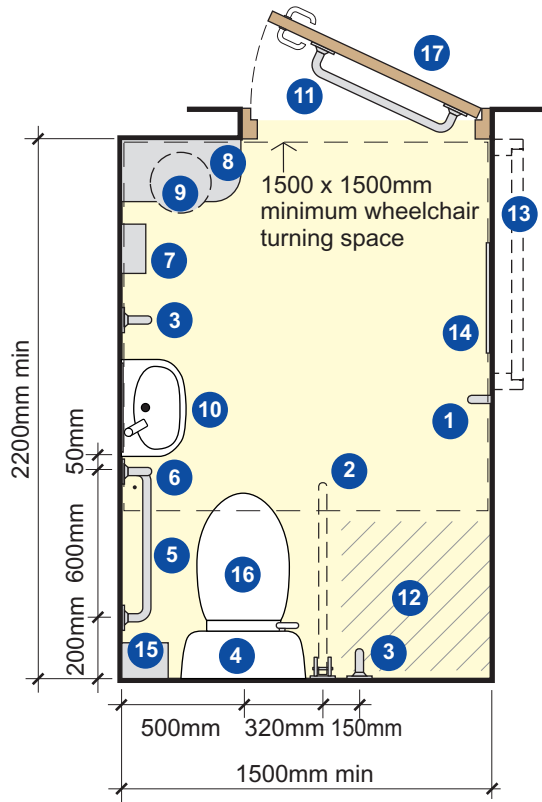
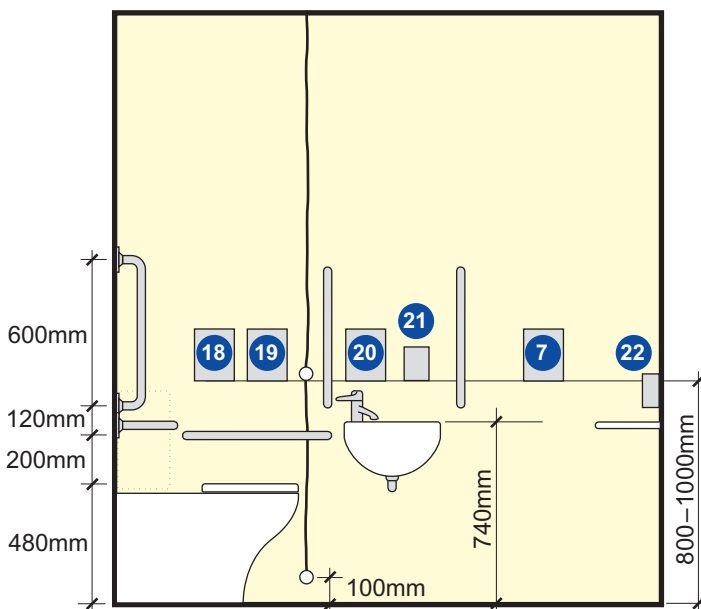


Figure 24 Standard unisex accessible WC (left hand transfer)



All fittings to contrast with their backgrounds

Figure 25 Key vertical dimensions and fittings to accessible WC and changing area

Key

- 1 Two clothes hooks set at 1400mm and 1050mm above floor level
- 2 Drop-down rail
- 3 Fixed vertical rail
- 4 Provide 'secure' low level cistern or concealed cistern with duct fitted with horizontal grabrail. Note: flush to be located on transfer side
- 5 Fixed horizontal grabrail
- 6 Fixed vertical rail and adjacent alarm pull-chord with two red triangles
- 7 Automatic hand dryer
- 8 Low shelf with rounded arris
- 9 Disposal bin for miscellaneous items with sanitary dispenser above (750–1000mm above floor level)
- 10 Hand basin
- 11 Horizontal door pull to enable door to be closed when entering
- 12 It is essential to keep the area adjacent to the WC clear to allow transfer onto the WC
- 13 Alternative door position
- 14 Mirror 1000mm high, located 600mm above floor level
- 15 Colostomy changing shelf for ambulant users 950mm above floor level
- 16 Transferring from a wheelchair to a WC imposes significant forces, therefore all fittings should be robust. Wing nut fixings should not be used to secure the toilet seat
- 17 1000mm door set giving a minimum clearance of 875mm. (Note: for large tennis facilities increase to 1100mm door set with 975mm min clearance)
- 18 Toilet paper dispenser
- 19 Alarm reset button
- 20 Paper towel dispenser
- 21 Soap dispenser
- 22 Shelf and sanitary dispenser with controls located between 800–1000mm above floor level

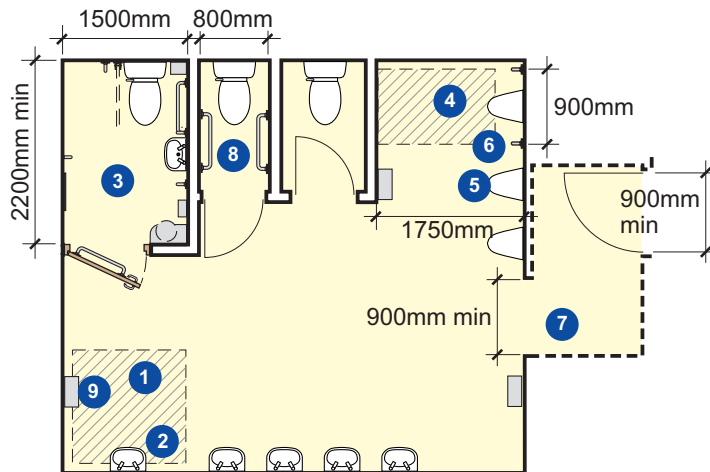


Figure 26 General toilet provision incorporating wheelchair accessible toilet facilities

Key

- 1 1500 x 1500mm wheelchair space to hand basin
- 2 Hand basin set at 720–740mm high to be suitable for wheelchair and ambulant disabled users
- 3 Accessible WC cubicle
- 4 1400 deep by 900mm wide wheelchair space
- 5 Urinals set at 500mm maximum height, except urinal installation for wheelchair users, which should be set at 400mm max height
- 6 Vertical grabrails (set at 1100mm centre line height above floor level) for wheelchair users – keep space clear of pipework
- 7 Suitably designed access lobby giving privacy with ease of access
- 8 Cubicle for ambulant disabled people
- 9 Hand dryers set at 1000mm above floor level

- The standard layout will allow most users to wash and dry their hands while seated on the WC before transferring back to their chair.
- Where it is necessary to incorporate fittings such as radiators, vending machines, sanitary disposal units and wastepaper bins, these must be recessed or located so that they do not obstruct the defined manoeuvring space.
- Ensure that pipe boxing is carefully designed so that it does not restrict movement or create a hazard.
- Where more than one accessible toilet is provided a layout with the opposite orientation to the standard layout should be incorporated to give access from both sides.
- The appearance of an accessible toilet is important – it must not appear to be 'medical'. There is no reason why it should not have the same standard of finish and appearance as the rest of the facility.

- Ensure that the door opening is located so that there is a degree of screening from the main circulation areas. This will mean that the WC cannot be seen if the door is ajar when the cubicle is not in use. More importantly, it will prevent a user being seen while their helper is exiting or entering the cubicle.
- Use plastic-coated handrails and grabrails.

Religious and cultural considerations

It is important that designers consider carefully the religious and cultural implications of their proposals and consult closely with local users. For example, a scheme serving a Moslem community will have aspects of toiletry and hygiene that require careful design. Communal shower/changing facilities and urinal troughs would be unacceptable given the requirement for complete visual privacy and there might be a need for ancillary facilities, such as a bidet or other sluice arrangements. Additionally, the orientation of facilities could be critical.

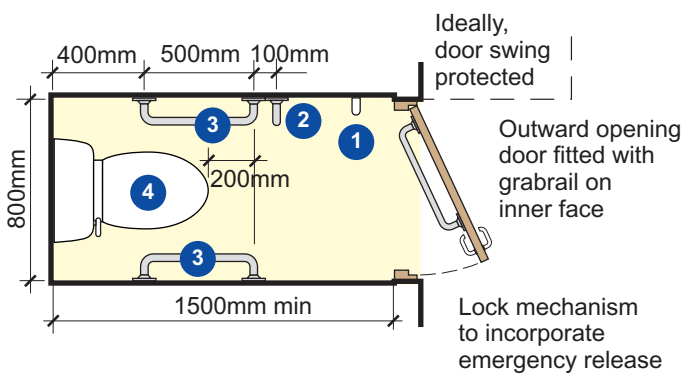


General provision

Except in small facilities a larger cubicle should be incorporated within each general male and female toilet area for use by people who are not in wheelchairs but have particular requirements including:

- elderly people
- carers accompanying small children
- people of limited ambulatory with a need for equipment such as walkers, crutches, higher seat levels.

Within each general male toilet area one of the urinals should be fitted with a short grabrail.

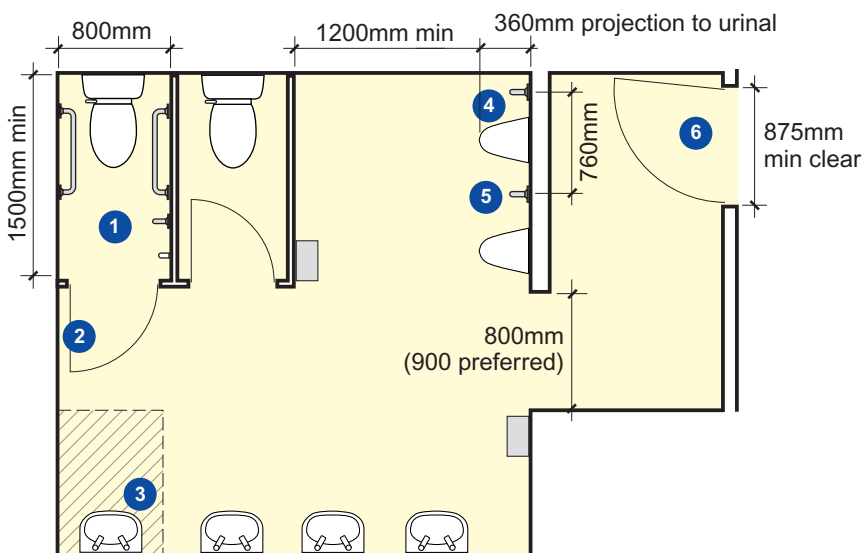


Key

- 1 Clothes hook set 1400mm above floor level
- 2 600mm long vertical grabrail located 800mm above floor level
- 3 600mm rail set horizontally 680mm above floor level
- 4 WC seat 480mm above floor level

Note: Whenever possible, incorporate one male and one female cubicle into the general provision

Figure 27 Accessible WC cubicle suitable for ambulant disabled people



Key

- 1 Cubicle for ambulant disabled people
- 2 Note outward opening door protected by wall
- 3 1100 x 800mm unobstructed space required around washbasin for use by ambulant disabled people (780–800mm above floor level)
- 4 Urinal set at 500mm above floor level with vertical grabrails (to both sides at 760mm centres) to accommodate ambulant disabled users
- 5 Grabrails set at 1100mm centre line height
- 6 Suitably designed entrance lobby giving privacy with ease of access

Figure 28 General toilet provision incorporating access for ambulant disabled people

Social areas

Social areas must give unhindered access to disabled people who should be able to use them independently or with companions. All corridors and doors leading to refreshment/social areas must comply with the minimum space standards for the facility.

Layout

- Gangways in areas between tables, and so on, should have at least 1200mm clear width.
- Tables and chairs should be placed in a regular layout rather than a random, difficult to understand arrangement.

Furniture

- Furniture should be stable but movable to allow maximum access within social areas.
- Tables must have a clear undertop height of at least 700–750mm to allow a wheelchair to be drawn in.

Seating

- Seating must be provided wherever people might need to wait.
- Where provided, seating should be stable and easy to rise from.
- Seats should be upholstered in absorbent material.
- They should incorporate fittings with and without armrests.



Appropriate colour schemes and furniture can create an accessible and inviting interior

- Seating must be arranged to allow people in wheelchairs to sit alongside others without obstructing the general circulation routes.
- Seating must contrast in colour and luminance with the surrounding surfaces.
- Seating areas should be acoustically 'quiet' to allow easy conversation.

Servery

- Bars and self-service counters must be accessible.
- Provide a section lowered to 750–800mm above the floor with a clear space of 700–750mm underneath.
- Induction loops must be fitted at counters in large facilities such as sports halls and swimming pools.
- Ensure that poor lighting does not reduce people's ability to lip-read by creating reflections off glass cabinets or by casting shadows across the speaker's face.
- Where tray slides are used, they should be continuous to the till.

Vending machines

- These must have clear display panels and instructions.
- The coin slot must be no higher than 1200mm above floor level.
- There must be adequate manoeuvring space in front of the vending machine.



Address access issues and integrate solutions into the design to create interesting facilities for everyone



Fixtures and fittings

Public telephones

Access to a telephone is particularly important to help disabled people maintain their independence. Except for small pavilions and clubhouses, all sports facilities should have a public telephone that can be used by everyone. This means that they:

- should be located where there is minimum background noise and be approachable from the front and the side
- must be fixed to allow access by children and people in wheelchairs
- must be fitted with an inductive coupler to help hearing aid users
- must have a raised tactile button on the central numeral
- must have a shelf to enable the use of a portable textphone
- must be clearly signposted and located where they will not create an obstruction or hazard
- must have an unobstructed space of 1200 x 1200mm in front of the telephone.

Public address systems

These should be clearly audible and, wherever practicable, supplemented by visual information.

Textphones

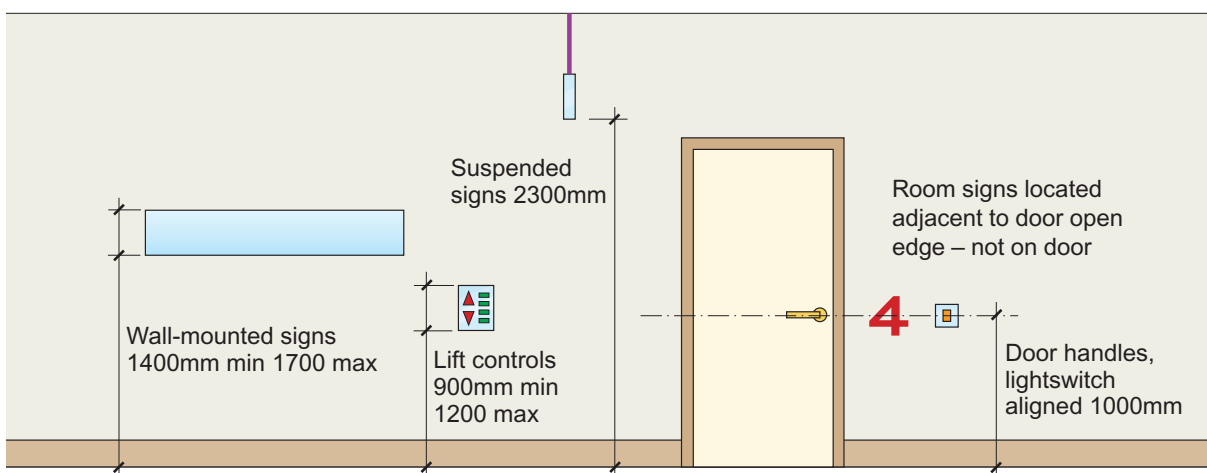
Deaf people use textphones to communicate over the telephone.

- Two-way textual messages can be communicated over the telephone line.
- All large sports facilities must be equipped with a textphone to facilitate telephone bookings and general communication by staff or users with a hearing impairment.

Induction loops and infrared systems

Induction loops help people obtain information, for example at a reception counter or from a speaker in a meeting room. Sound from the speaker is picked up by a microphone and re-broadcast via a loop aerial. Setting hearing aids to the 'T' position helps cut out background sound. Induction loops that comply with BS 7594 and BS EN 60118-4 must be fitted:

- at reception counters
- in meeting rooms
- in dance and exercise areas
- in other areas where information is given.



Use colour and tone to ensure the controls are distinguishable from their backgrounds

Figure 28 Signs and controls – consistent positioning is critical

There is a chance that people wearing hearing aids in adjacent rooms may experience 'overlap'. This may be a problem for committee rooms or rooms where confidentiality is important, and in these cases it may be more suitable to use an infrared system.

Infrared systems work by converting the sound into an infrared light signal and users wear a special headset to pick up the signal.

Controls

- All controls should be clearly visible against the background. This means good lighting and the use of contrasting colours.
- Controls must be located in a consistent and logical manner and should be accessible to someone in a wheelchair either as a user or as a member of staff.
- Wherever possible consider the use of embossed tactile buttons and controls for use by staff and users.

Signs

People with hearing and visual impairment make up the largest group of disabled people. Both these groups can be helped or hindered by signage. Good signage can mean that a person with a hearing disability can manage without having to ask questions, and it can help a person with a visual disability to navigate a facility more effectively.

- Signs inform and provide reassurance.
- Signs give people one of their first impressions of a facility and contribute significantly to the character and aesthetic of the building.

The following notes set out clear requirements for a good signage scheme. They are intended to provide the basic information around which an imaginative and effective scheme can be created. For detailed information on signage refer to the *Sign Design Guide: a guide to inclusive signage* published by the Sign Design Society and JMU Access Partnership (see contact addresses).

General requirements

- To avoid confusion keep the number of signs to a minimum, but ensure that there are sufficient to create an easily understood chain of information.
- Location is critical to allow visually impaired people to get as close as possible to the sign to see it or read it by touch.
- Signage must be consistent in location and style throughout the building.
- Signs must be obvious, identifiable, clear and legible.
- Wherever possible, signs should incorporate words and symbols. Only use standard symbols that are easy to understand.
- Signs should be within easy reach and have embossed letters, raised pictograms and direction arrows.
- Signs must be suitably illuminated and located so they are free from glare.
- The use of suspended signs should be avoided wherever possible. Where they are required the size of the text and sign should be adequate to allow it to be read from a distance.
- Signs must not have sharp edges and must not cause an obstruction.



Clear simple signs with strong contrast between lettering and background, and between the sign and the adjacent space are essential



- Wall-mounted information boards should be provided at lift landings, floor landings on staircases and at other major decision points in main circulation routes.
- Signs to rooms, with the exception of toilets, should be placed on the wall of the leading edge side of the door so that the sign is visible even when the door is open.

Design

- The sign layout should be clear and logical.
- Text must always be left justified except where directional arrows are incorporated. Where arrows are used the text should be justified on the side of the direction indicated. For example, on right-pointing arrows text should be justified on the right.
- Where text and arrows indicate 'straight ahead' they should be placed at the top of the sign with arrows on both sides of the text.
- Text signs must be a mixture of upper and lower case letters – this is because words are recognised by shape rather than by individual letters.
- The font style should be Helvetica-type sans serif or a similar uncomplicated style. Serif-type fonts can be used but only where detailed guidance has been sought.
- The spacing between characters should be increased by 20–30% to suit the font chosen.
- The spacing between words should be increased by around 25%.
- The size of text on a sign must be consistent.
- Assuming an internal viewing distance of 5m, text on directional signs should be at least 40mm (capital height). On signs showing orientation, general information and identification, including door signs, it should be at least 25mm (capital height). At a 2m viewing distance this can be reduced to 25mm and 20mm respectively.
- Lettering for external directional signs should be at least 75mm (capital height).



There should be 25mm of lettering for every 7.5m of viewing distance. For example, a 30m viewing distance will require lettering of at least 100mm.

- Tactile characters must be embossed or raised to an approximate thickness of 1–1.5mm and must not be engraved.
- All signs must be in colours that contrast with the background, 75% being the optimum contrast.
- Similarly, the sign characters must contrast with the sign background.
- Sign borders will enable a sign to be located on both light and dark backgrounds.
- Signs must be non-reflective with a gloss factor no greater than 15%.

Braille

Braille comprises sequences of fine dots, proud of the surface, read by passing the fingers across them. It is the method of reading used by people with a visual impairment or total blindness.

- If possible, Braille should be used wherever embossed characters are used.
- Braille must be English Standard Braille.
- Grade 1 Braille should be used for single words and short descriptions.
- Grade 2 Braille should be used where it is necessary to reduce the length of multi-word signs.
- Braille signs must incorporate a marker such as a notch at the left hand side to help locate the Braille message.

Finishes

The correct selection of finish is very important, particularly to assist people with a disability. Unsuitable finishes can make the building difficult to use and can lead to confusion and, possibly, danger.

Acoustic requirements

Spaces enclosed exclusively with hard surfaces are not acceptable. They produce noisy reverberations that confuse people with hearing impairment, and sometimes those with visual impairment who may use their hearing to obtain navigational clues.

- All rooms and spaces should have some soft, sound-absorbent surfaces to provide a suitably quiet acoustic environment.
- Where possible, separate quiet and noisy areas by buffer zones.
- Electrical/heating and ventilation equipment should be specified to minimise background noise. High levels of background noise can be distracting and tiring for people with hearing impairment.

Visual requirements

Colour and tone

Colour must be carefully considered to enhance the facility's aesthetic qualities and to optimise the practical use of the building, particularly the ability of visually impaired people to move around without difficulty.

Of people registered blind or partially sighted, 96% have some degree of vision that can be significantly enhanced by good use of colour, luminance and textured surfaces.

When moving through a building, a visually impaired person tries to find contrast between large areas of colour, such as the junction between a wall and ceiling. This technique gives them clues to where they are and the size of the space they are in.

Research has shown that colour and tonal differentiation between ceilings, walls, doors and floors makes a significant difference to visually impaired people as they navigate a building. Tonal contrast is as important as colour contrast. Some sight conditions can lead to confusion between similar colours and tones.





- Colour schemes should not be monotonous or bland.
- Ceiling colours must be sufficiently different from wall colours.
- Wall colours must be sufficiently different from ceiling and floor colours.
- Door colours must be sufficiently different from wall colours.
- Floor and stair colours should be sufficiently different from adjoining wall colours.

These contrasts should be incorporated into the overall colour scheme and not imposed upon it.

- Do not use extreme contrasts in colour in irregular, busy, geometric or striped patterns.
- The colour used for a trim feature, such as a skirting or architrave, must not be an intermediate of the colours of two adjoining critical surfaces. This colour should maintain or improve the impact of the different colours used.
- Paint manufacturers can supply tables that define the minimum colour contrast thresholds required to assist visually impaired people, and so help to create an interior that is acceptable to everyone.

Surface

- Walls and floors with a glossy appearance confuse visually impaired people.
- Shiny surfaces must be avoided. Glare and reflection make it difficult for people to lip-read.
- Use matt or mid-sheen finishes to obtain the maximum benefit from colour differentiation.

Tactile requirements

Variation in surface texture provides important information, particularly to visually impaired people. It can:

- warn of hazards
- give information that helps identify location.

Walls

- Avoid large repeating patterns with bold contrasting colours that might distract people when they are lip-reading – at a reception counter or in a meeting room, for example.
- Tiling, like all wall surface colour, should be used to provide a pleasing contrast to fittings, rails and so on. For example, the 'all white' appearance of sanitary fittings and white wall tiling is not an acceptable combination.
- Consider carefully the texture of walls as some users depend upon contact to gain support and orientation.

Floors

The look, texture and acoustic quality of flooring can affect the way a building is used. If chosen correctly it can give directions, suggest the type of activity space and help to create the appropriate atmosphere. All flooring must be:

- firmly fixed to ensure safety and ease of movement by wheelchair users and ambulant disabled people
- free of tripping hazards, particularly at the junction between materials



Contrasting colours facilitate court markings and contribute to a bright environment

- able to withstand marks left by wheelchairs and other mobility aids so that users are not restricted by over-protective management regimes
- slip-resistant.

Carpeting must have a shallow, dense, non-directional pile.

In areas that may become wet, such as the building entrance, changing and shower areas or poolside, it is especially important to use specifically anti-slip surfaces or safety flooring.

- In wet areas adequate heating is essential and falls must be provided to keep the floor as dry as possible.
- Highly polished floors are unacceptable as they are slippery and may look wet, which may affect the way a person moves across them.
- Glossy floors will reflect overhead lights, causing confusion and discomfort for some visually impaired people.

Tactile floors

For the visually impaired person, changes in the texture of the floor surface can warn of potential hazards and give directional information. The Royal National Institute for the Blind recommends that suitably detailed and specified corduroy tactile flooring be provided as a hazard warning at the top and bottom of stairs.

It is critical to use recognised tactile floor patterns in the appropriate location as incorrect use will cause confusion and could be dangerous.



A 'prohibitive' tactile surface must be used to protect visually impaired users from high-level protruding features. However, this should be a last resort. Wherever possible, the design should exclude such hazards.

Glass walls

- should conform to BS 6262
- should be highlighted with coloured warnings (not treated glass) at least 150mm square that contrast with the surface and are located at 1050mm to be visible to wheelchair users, and at 1500mm to be at eye level for ambulant people
- should be constructed with non-reflective glass
- freestanding edges of the glazed screen should be highlighted with a strip of contrasting colour and luminance to its surroundings.

Ceilings

Ceilings usually provide the best opportunity for the provision of acoustic absorbency. However, traditional tiled suspended ceilings have a very limited life in public buildings and should be avoided.

Services

- All services must be carefully located to avoid creating hazards or obstacles to people moving through the facility.
- There should be no exposed angles.
- Carefully consider the effects of background noise or magnetic fields from service equipment that may affect people's ability to communicate.

Electrical services

- In large sports facilities the main power supply cable to the building may generate a hum in hearing aids, so must be routed away from public and staff areas.

Heating

- Locate the pipework and emitter so that there is no risk of accidental burning.
- Avoid uncomfortable variations in temperature.
- Ensure all areas are well heated.
- Locate and detail windows and exit doors to avoid the creation of draughts and cold areas.
- Heating, ventilation and air-conditioning systems must be quiet.

Lighting

Lighting must create a confusion-free environment that avoids excessive reflection, glare, deep shadows and wide variations in lighting levels. The lighting design should aim to achieve this by controlling the location, quantity and quality of both natural and artificial light.

- Careful lighting design can accentuate changes in texture and colour and provide additional information to visually impaired people.
- Changes in lighting levels must be gradual throughout the facility.
- Do not locate reception desks in front of large areas of glazing where bright

sunshine could put a receptionist's face in shadow and make lip-reading difficult.

- Daylight must be carefully controlled to reduce glare.
- Avoid shadows that could conceal potential hazards. This can be achieved by increasing the level of ambient lighting.
- Do not use spotlights in isolation.
- Downlighters should be carefully located so that they do not create shadows across people's faces making lip-reading difficult – at the reception desk for example.
- Staircases must be well illuminated – minimum 100 lux at tread level.
- Lighting should be bright and relatively even, giving good differentiation of surfaces and levels without glare.
- Indirect rather than direct lighting is the most comfortable form of lighting.
- Light sensors can be used to control lighting levels by the introduction or reduction of artificial light.
- Particular care must be taken with the design of lighting in areas with shiny surfaces.
- Glazing at the end of corridors should be avoided; side lighting is preferable.
- Fluorescent lights create a hum that can be heard in hearing aids. Minimise this by careful placement of lights and by using high frequency fittings.



Management issues

The design measures included in this guidance will help make facilities more accessible to disabled people and more user-friendly for everyone – but only if they are managed efficiently and effectively.

Research has shown that the way a sports facility is managed has a significant impact on how accessible it is to disabled people, and how likely they are to return. For example, an accessible toilet that is used as a store is useless, as is the installation of an induction loop at the reception desk if the staff have not been trained to use it. Similarly, that carefully designed lobby into the changing room will be rendered inaccessible by the careless positioning of a large litterbin.

- Pathways, ramps, steps, corridors, lobbies must not be obstructed by bicycles, discarded boxes, loose bricks, new deliveries, and so on.
- All walking surfaces, particularly ramps and steps, must be maintained to ensure slip-resistant surfaces.
- Ensure that doors are maintained to open and close with the minimum possible force.
- Ensure that slip-resistant floors are not made dangerous by use of cleaning fluid or polish.
- Signs and maps, both audible and visible, should be checked regularly to make sure routes are clearly indicated, especially escape routes. The accidental removal or obliteration of one or two signs can create great confusion, as can the addition of temporary signs by staff who have not considered the clarity of the whole route.
- Lifts and hoists must be checked and maintained regularly, for example to ensure that the lift stops exactly level at each floor.
- Induction loops and other electrical aids should be regularly checked – deterioration and failure are not always obvious.



Sports facilities must be designed and managed to be accessible to people with guide dogs

- Ensure that non-disabled users do not use the dedicated accessible car parking bays.
- Ensure that broken lamp bulbs are replaced as soon as possible.
- Ensure that flooring does not become worn or loose to form a trip hazard.
- When carrying out maintenance and redecoration ensure that existing accessible provision is not compromised, for example by using an inappropriate fitting or an unsuitable colour scheme.

Well-managed buildings require a building management/maintenance manual. All the above issues should be addressed, with explanations to emphasise the importance of good management in maintaining quality access to the facility.

All staff should be trained in the specifics of working with disabled customers and the issues involved in ensuring the delivery of good customer service to people with disabilities.

Provide information in various formats so that visually impaired people can use it. This does not necessarily mean that such materials should be immediately to hand, but that mechanisms are in place for providing different formats and getting them to customers quickly.

It should be possible to provide information in tape, Braille, large print or web-based formats.



The information should include:

- opening times/booking conditions
- travel details such as bus routes, train stations and community transport. Note that many disabled people rely on public transport.

At large sites:

- Consider separating the tasks of answering the telephone and staffing the main reception so that callers' queries can be answered in a quiet environment at busy times.
- Adopt a strategy of directing textphone calls to a central point where the most frequently asked questions, for example about opening times, can be dealt with on behalf of a number of different sites.
- Establish and maintain emergency procedures for people with various disabilities who are likely to use the facility.

Spectator/viewing provision

Wherever possible, people with a disability must be able to spectate like other members of the public. This provision includes access to executive boxes.

- At very large venues where crowd control and safety are factors, it is acceptable to provide separately designated points of access into spectator areas for people with a disability. These should provide a clear opening of 900mm.
- A minimum clear width of 650mm must be provided between rows.
- Without blocking circulation routes, consider making space for guide dogs to sit next to their owners.
- Provide at least six designated wheelchair spaces, or 1% of the spectator capacity, whichever is the greater.
- Wheelchair spaces must be distributed throughout the seating area so that users can sit next to seated companions.



- Wheelchair spaces must be located so that users do not feel cut off from the rest of the crowd.
- Sight lines must enable the disabled spectator to have a clear view of the action – at least up to the edge of the area of play, and unobstructed by persons in front or by structural features.
- The seating arrangements should ensure that good sight lines are achieved even if the crowd stands up at moments of excitement.
- Wheelchair spaces must be a minimum 900 x 1400mm.
- Barriers, balustrades, handrails and columns must not obstruct sight lines.
- Where spectator provision includes a public address system, this must be supplemented with an auditory loop or infrared system and visual text display for people with a hearing impairment.
- Consider providing match commentaries to assist people with visual impairment. This can be achieved by placing headphone sockets at specific locations or by using an infrared communications system.

Swimming pools

Detailed guidance on the design of swimming pools can be found in another title in this series. The guidance below aims to ensure that full access is provided in all swimming pool facilities.

Swimming is an important activity for many disabled people, at competition level or purely for recreation. Swimming provides independence and freedom for the physically impaired person who can move independently in water, outside the confines of a wheelchair and without a walking aid or prosthesis. Most of the guidance in the earlier sections of this document is applicable to swimming pools. However, swimming pools do pose particular problems for the designer and manager and these are often overlooked.

- All pools must be designed to allow full integration of disabled swimmers in all activities. Management must also provide integrated swimming sessions with additional support, as well as 'specialist' sessions for those who require specialised help or prefer segregated activities.
- The route through a swimming pool complex should be the same for a swimmer with a disability as for other swimmers.
- Bare feet on wet floor surfaces make movement more difficult and more dangerous for the ambulant disabled person.

- A disabled person can often be self-conscious in a pool setting because they may be without their aids, are physically exposed, and may require assistance to enter the pool.
- Disabled swimmers are often most vulnerable when making their way to the pool or back to the changing room. Once in the water they can be relatively safe.
- The pool environment can be visually and acoustically confusing if not properly controlled.

Changing areas

Changing provision is often inadequate and poorly designed – particularly for disabled users. It is very important that all changing areas are of a good standard and provide a pleasant environment. The design will affect users' perception of the facility and, if done badly, can restrict or stop people using part or all of the facility. Modern pools have a mixture of single- and mixed-sex changing provision comprising:

- changing villages
- large, open-plan areas with benches
- enclosed rooms for families or small groups of users.

All of these arrangements, with the addition of some unisex accessible changing provision, can

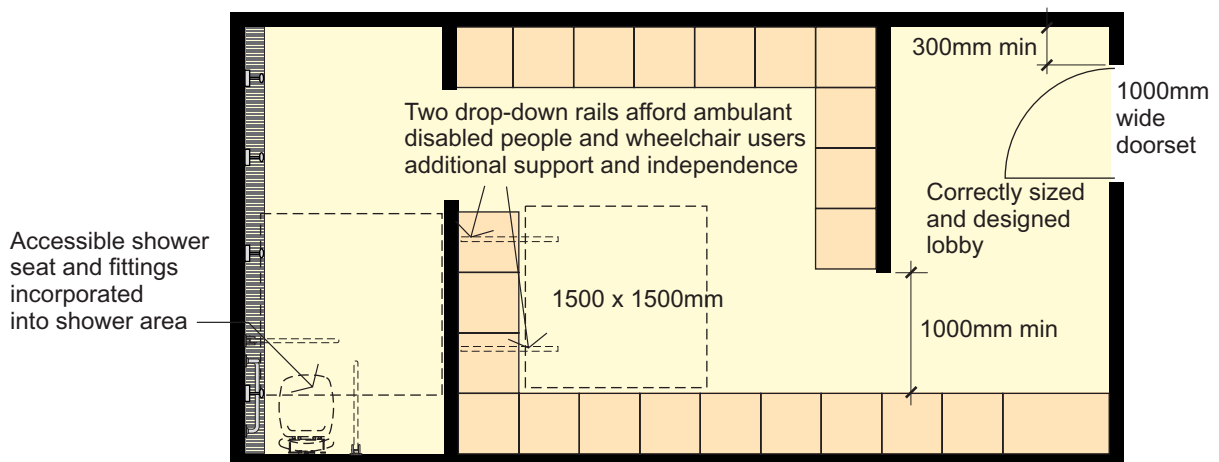


Figure 29 Group changing room incorporating showers

be designed and detailed to provide fully integrated and accessible changing for disabled swimmers.

To encourage maximum use of the facility, ensure that disabled users' needs are incorporated at the very early stages of design.

General considerations

- high quality, accessible showers and WCs in close proximity to the changing areas
- benches at least 450mm deep (500mm preferred) from front to back
- mats to place over benches for people with sensitive skin and for those who are susceptible to injury
- lockers within reach of children and disabled swimmers, that is 400–1300mm high
- at least four full-height lockers for storing crutches, callipers, artificial limbs, and so on
- adequate space in all changing areas/rooms for wheelchair users and others with restricted mobility to transfer to self-propelling skeleton waterproof chairs
- minimum of two self-propelling skeleton waterproof chairs, not only for wheelchair users but for some ambulant disabled people who lose mobility without their aids
- safe and secure storage for wheelchairs.

Changing villages

A properly designed changing village will meet the requirements of many disabled swimmers. It will provide privacy and at the same time allow users to be accompanied by a member of the opposite sex if required. Provide at least four large cubicles suitable for use by disabled swimmers.

Open-plan changing

A number of large cubicles and/or changing rooms are required to give additional privacy and accommodate the support rails that are required by some disabled swimmers.

Changing rooms

These are often dedicated family or group rooms. However, they can be used to great

advantage by the individual disabled swimmer or small disabled group that requires more privacy or space when changing.

Unisex changing provision

To allow helpers of the opposite sex to assist swimmers with disabilities all pools must have at least one unisex, fully equipped accessible changing room. Fifty-metre pools should be provided with at least two rooms. The changing area should be self-contained and include:

- facilities for hanging clothes and towels and access to suitable lockers for clothes storage
- hair and body drying facilities (consider wall-mounted dryers with flexible outlets)
- full-length mirror
- shelf for personal items
- shower
- WC
- appropriate support rails.
- emergency pull-cord with two red triangles
- visual and audible fire alarm.

	20m swimming pool	25m swimming pool	50m swimming pool	Learner pool	Diving tank
Self-propelling waterproof chairs (min)	1	2	3	*	*
Poolside hoist (single position)	●	●			○
Poolside hoist (multiple position)	○	○	●	●	●
Portable steps	○	●	●	●	
Minimum number of full-height lockers	4	4	8	*	*
Changing mats	●	●	●	*	*
Key: ● Recommended ○ Desirable * As main pool provision					

Table 10 Pool equipment – requirements

Showers

- All showers must be fully accessible with some semi-enclosed cubicles of appropriate size for use by someone on a shower chair or transferring from a wheelchair.
- Avoid excessive gradients, particularly in more than one direction.

Within each shower area some showers must be fitted with:

- robust, proprietary drop-down seats that are easy to operate, easily cleaned and maintained, and fold away when not in use
- horizontal and vertical grabrails
- safe places for soap and shampoo
- thermostatic mixing valves with an anti-scald setting that are easy to manipulate by people with a weak grip
- separate levers on the controls for temperature and volume adjustment
- control valve no higher than 1.3m above floor level
- slide bar with a flexible hose and an adjustable spray head.

In addition, a shower chair should be provided as it has some advantages over a permanent seat:

- equipped with sides, so giving extra support
- the user can vary the orientation.

There must be a clear space of at least 1.2m² outside shower areas to allow a wheelchair to approach.

Route to the pool

This requires as much attention to detail as the changing areas or the pool itself. En route to the pool disabled people are often in an unfamiliar environment without the benefit of normal aids.

- The route to the pool must not be confusing or lead directly through a shower area.
- It must be free of hazards, particularly standing water and obstacles.
- Handrails should be provided between the changing rooms and the poolside to assist



ambulant disabled people and those with a visual impairment.

- Provide tactile information at critical points on circulation routes.

Pool design

In the majority of modern pools water is at the same level as the pool surround. This arrangement makes getting in and out of the water easier as less upper body effort is required and fewer steps are needed between the pool floor and pool surround. The disadvantage is that there is less clear definition between the surround and the pool, therefore clear demarcation of the pool edge is vital.

- Design and detailing of the pool edge must warn swimmers that they are approaching the pool. This is achieved by using colour and tactile information.
- Minimum water depth to provide sufficient buoyancy for adult disabled swimmers is 1200mm. Anything less will lead to people scraping their limbs along the pool bottom. Additionally, shallow depths of water make it difficult for people whose balance is poor to stand upright.
- Learner pools should, however, be accessible to disabled children and other groups who may prefer a shallower depth of water.

Movable floors

These can be particularly useful in learner pools as they provide the deeper water necessary for adult swimmers with a lower limb disability.



Pool surround benching

Benches against the wall on the pool perimeter – especially if they are heated – can be of great benefit to some disabled swimmers. They provide a secure place to rest before entering or after leaving the pool.

Access to the water

Whatever the type and scale of pool, there should be a variety of means of access to the water to accommodate all users. It is very important that the architect and the pool management team give careful consideration to this at an early design stage. Various options are:

- pool access ladder
- ramped entry
- steps (fixed and portable)
- portable slide or chute
- hoist.

Pool access ladder

- The ladder must be recessed into the pool tank walls, with treads not less than 180mm deep from front to back.
- Feet can easily slip down between the steps and the wall so gaps between the back edge of the steps and the face of the poolside must be minimal.
- The steps must be slip-resistant.
- There should be no sharp edges.
- The ladder must be fitted with continuous handrails on both sides.



Ramped access can be integrated into the pool layout



Ramped entry

A fully integrated ramp and steps provides the best access to the water. This arrangement can be used and enjoyed by all swimmers, especially if it is incorporated into the pool design with imagination. However, a common misconception is that a shelving 'beach', often incorporated in leisure pools, is the best solution. This arrangement means that the swimmer has to wade into the pool for a considerable distance without the support of the water. This means that some users will require assistance, although for others a handrail will suffice.

- The Amateur Swimming Association recommends that the gradient of the ramp be no more than 1 in 15.
- Where a ramp or beach has been incorporated into the pool design, 'safe steps' giving access to the full depth of the pool should also be considered.

Steps (fixed and portable)

As a minimum requirement, every pool must be provided with fixed or portable steps that comply with the following criteria. They must:

- be fitted with handrails that have good grip and contrast on both sides
- have handrails with an adequate extension at the top and bottom of the steps
- have maximum risers of 140mm
- have minimum treads of 300mm

- be fitted with a guardrail where they are recessed into the pool tank
- be located at the shallow end (1.2m).

Lightweight portable step units are available for pools where a fixed flight cannot be incorporated.

- Ensure there is adequate storage provision immediately adjacent to the pool.
- The steps should be secured by housings in the pool surround.

Portable slides and chutes

- These must be lightweight and easy to move.
- Ensure there is adequate storage provision immediately adjacent to the pool.

Hoists

Mechanical assistance must be available to help disabled swimmers into the pool. Some swimmers prefer to be assisted into and out of the water by helpers rather than risk embarrassment by using a slow-moving aid such as a hoist. However, this would be a serious risk to any untrained helper and is not recommended.



Hoists come in a variety of styles and the design and management implications should be considered at a very early stage in the development of the project. Hoists can be:

- permanently fixed to the floor in one place
- mounted in the floor in a socket(s) and removable
- overhead electric
- overhead non-electric
- mobile.



Todmorden Sports Centre – permanent ‘easygoing’ access incorporated into the pool



After discussion with pool users and management the selected hoist should be fitted with a chair that can be used as a wheelchair to avoid double handling at the poolside. Hoists are also available with additional fittings such as slings and stretcher attachments and the need for these should be agreed with the pool management.

- Hoists must be available to provide access into the learner pool and the main pool at various depths and into the Jacuzzi or whirlpool.
- Hoists must be stored safely and conveniently for use at any time.

Equipment and environment

Transport to the pool

- A minimum of two skeleton-type waterproof wheelchairs should be provided as standard equipment. Storage space should be safe, convenient and easy to access.
- The chairs must be suitable for pre- and post-swim showering.
- Some chairs can be used as toilet chairs.

Mats

- Adequate storage must be provided for mats and other minor aids to assist disabled swimmers get changed or enter the pool.

Other facilities

- If a sauna, whirlpool or Jacuzzi is included in the pool complex it must be designed to accommodate users with disabilities.
- The showers associated with these facilities must be located close by.

Surfaces

- Floor finishes must be reliably slip-resistant with a non-abrasive surface. Some disabled swimmers are particularly susceptible to skin damage, especially after being in the pool for a long time.
- The floor finish must be easy to clean in order that slip-resistance can be maintained.

- Wall surfaces should be free from projections and sharp corners and be non-abrasive, particularly where naked bodies may be present.

Thermal comfort

Some disabled people are particularly susceptible to the cold in a pool environment because they may have poor circulation and also because the process of drying and changing can take much longer than for non-disabled people. It is therefore important that particular attention is given to this aspect of the design.

- Avoid uncomfortable variations in temperature.
- Windows and doors should be detailed and located to avoid the creation of draughts and cold areas.
- Ventilation supply grilles must not create draughty conditions – even warm air can feel cold to a wet body.

If increased water and air temperatures are required for specific sessions with disabled swimmers, this should be taken into account at an early stage in the design process as it will have a significant effect on the design of the pool fabric and services.



Sport-specific requirements

Boccia

Boccia is played indoors by throwing, kicking or using an assisting device to propel leather balls as close as possible to a small white ball that serves as a jack. Players may compete individually or as a team.

- A smooth, flat surface, such as a typical sports hall floor is required to a size of 12.5 x 6m.
- Good lighting is required.
- The space should not be located next to a noisy activity. Ideally a microphone should be available for use by the tutor.
- The court markings are normally temporary tape markings. Ideally, in special schools, the court markings should be permanent to reduce the set up time.
- Men and women compete together in all events.

Canoeing

This section should be read in conjunction with the section on sailing where generic issues of access to water sports facilities are covered. The specific requirements for canoeing are:

- Docking bays that give access from both sides of the canoe. These can be incorporated into the design of the landing stage.
- Docking bays must incorporate hoists and frames to assist people to get in and out of a canoe.
- The seat or sling used with the hoist should be comfortable – often the canoeist will remain in it while canoeing. Consider providing more than one sling or seat.
- The hoist must have enough reach to extend out over the craft from the landing stage.
- Transfer or sliding boards must be provided and adequate provision made for their secure and convenient storage.



Fitness equipment rooms

Previously it was the exception rather than the rule for equipment in fitness gyms to be usable by disabled people. In many cases equipment was located in a 'special' room away from the main fitness area and/or staff were not adequately trained to supervise use by disabled people. It is now accepted that all fitness equipment rooms must be accessible to everyone and that the equipment and its layout must reflect this inclusive approach.

A complete range of equipment must be available and accessible to people with a disability so that they can participate in an all-round fitness programme. As a minimum requirement, fitness equipment rooms must offer the following range of accessible equipment:

- one upper body ergometer
- one treadmill
- one recumbent bike
- one upper body multi-station, accessible to wheelchair users
- one leg-raise with cams
- one leg-curl with cams

- two sets Velcro straps
- two sets adaptable handgrips
- one bag small equipment
- one set mobility aids.

Note: Consider providing uppertone and versatrainer machines. In larger fitness facilities consider extending the range of equipment.

- Equipment must be easy to use. Wherever practicable it must be accessible – without major adjustments – from a wheelchair, and able to be safely operated by people with visual impairment and people with learning disability.
- Equipment must only be obtained from manufacturers who will provide the appropriate staff training for the induction and supervision of disabled users.
- Suppliers accredited by the Inclusive Fitness Initiative, which is run by the English Federation of Disability Sport, can provide the appropriate equipment and training; this may not be the case with non-accredited suppliers.
- The layout of the equipment must allow adequate space for the fitness activity and for safe circulation between pieces of equipment.
- Equipment plinths must not be used unless properly designed ramped access is provided.



Goalball

Goalball is played by blind or visually impaired athletes. Each team has three players on the court at any one time and the object is to throw the ball into the opponents' goal. Bells inside the ball help to orient the players and indicate the direction of the oncoming ball. Therefore, while play is in progress the hall must be completely silent to allow the players to concentrate and react. All competitors wear masks while they are on the playing court. This allows athletes with varying degrees of vision to participate together.

The court markings are normally of a temporary nature. For competitions all the court markings must be tactile but for less formal play only the orientation lines and the lines defining the team areas need to be tactile. The other lines must be visibly marked.

- The acoustic properties of the hall are critical to play. The hall should have a reverberation time not exceeding two seconds at mid-frequency, and should be designed and specified to avoid unnecessary background noise, for example from adjacent activities or equipment, or from nearby traffic.
- Tactile lines are formed by covering the builder's line or cord with 'Sportsline' or similar high-quality tape.
- The goals are 9m wide x 1.3m high and are usually made of sectional steel.
- The minimum space is 21 x 30m with a clear height of 5m.
- The floor must have a smooth surface that allows the body to slide easily without jarring.
- All wall surfaces must be flush.



Power-lifting

The only additional requirement is the provision of additional space and/or convenient storage space for the specialist power-lifting bench.

Sailing

People with a wide range of disabilities enjoy sailing. The Royal Yachting Association's (RYA) Sailability programme has promoted sailing as an ideal sport for people with disabilities. The key issues for sailing other than accommodation and management, which are common to all sports, are as follows:

Entrance gate

Sailing clubs often use security barriers or gates at the entrance to the facility. The design and management of the gate needs careful consideration so that it does not become a barrier to people who need to operate it. There is no easy solution but the problem can be reduced by thoughtful management and by careful design including:

- providing clear signs and contact numbers
- ensuring that the gate swings easily
- positioning controls and locks in easily accessible positions.

Car parking

Land is at a premium at marinas, particularly land close to the water. Wherever possible, however, dedicated accessible car parking spaces must be provided close to the clubhouse



and moorings. Only where this is not possible is a drop-off point an acceptable alternative. A better solution, and one that has been used effectively, is to use a golf buggy to convey disabled people from the 'remote' car park to the clubhouse and water. Additionally, the buggies can be used to move the dinghies around – an example of improved access that brings added value.

Pontoons

- The main walkways must be at least 2m wide so that two wheelchairs can pass.
- Berthing pontoons must be rigid to avoid whiplash and a minimum of 1m wide between the cleats.
- At least one berthing pontoon, serving 5% of berths, must be fitted with a hoist and multiple sockets to allow full use of the pontoon.
- Pontoons must be finished with a non-slip surface.
- The junctions between sections of the pontoon must be flush.
- The edge of the pontoon must be in a contrasting colour and cleats, service points, and so on must be maintained within this margin.

Ramps

Except where linking to a pontoon the gradient of slopes should comply with the guidance provided earlier in this document. Pushing people up or down ramps that exceed the maximum gradient is not recommended, so safe access to the pontoons will have to be restricted to times that suit the tide.

- All ramps must be fitted with a slip-resistant surface. If slats are used across the ramp they must not be used for the whole width, as this will be a hazard for a wheelchair user.
- All ramps must be fitted with handrails on both sides.

- Where it is not possible to gain access to the water using a suitable ramp, a proprietary lifting platform must be installed. Further details are available from RYA Sailability. It is important that such installations comply with all safety regulations and are properly maintained.

Slipways

- All slipways must be fitted with a winch system for the launch and recovery of boats.
- Slipways should not exceed a 1 in 15 gradient.

Race hut

- The race hut must be accessible to everyone.

Shooting

The only additional requirement is provision of convenient and secure storage for the shooting stands that are used as aids by some participants.



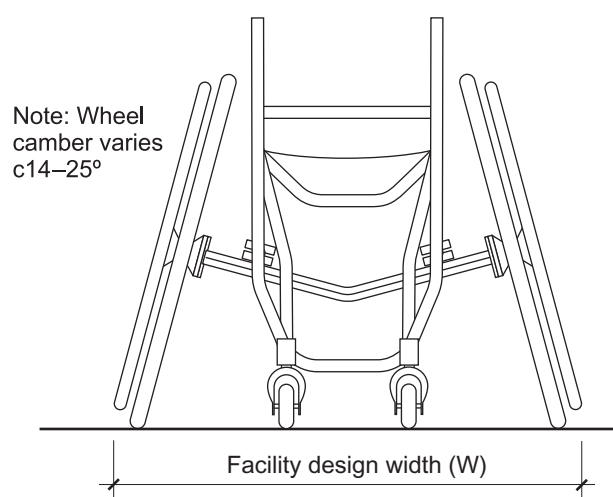
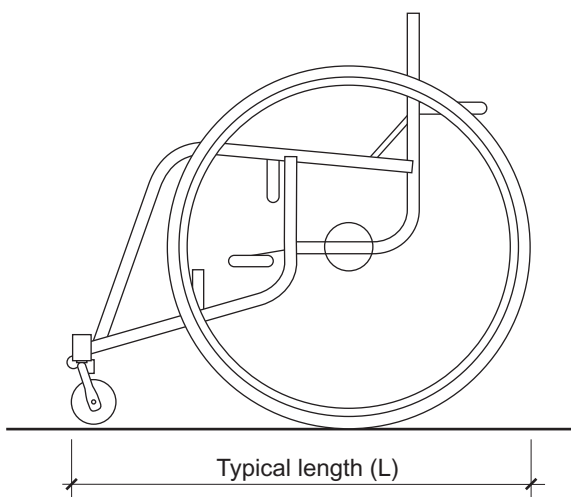
Wheelchair sports

Wheelchair sports include athletics, badminton, basketball, bowls, fencing, rugby, table tennis and tennis. All the wheelchair sports are developing very quickly and many of them are fast moving and have developed specialist ‘sportschairs’. These sports share many common facility issues:

- Some athletes find sitting in a sportschair for long periods uncomfortable and often only use them during the actual sporting activity. It is therefore necessary to make provision for the secure storage of chairs while they are not in use.
- Without adequate storage sportschairs can become a hazard.
- To accommodate specialist sportschairs, all doors and gates must have at least 1100mm clear opening.
- Barriers, fencing and balustrades must be designed so that they do not obscure play for spectators in wheelchairs.



The modern sportschair is purpose-built for the individual and the sport. Sportschairs are as highly engineered as other modern sports equipment



	Approximate length (L)	Approximate width (W)
Sportschairs generally	800	870
Tennis chairs	850	1000
Racing chairs	1800	750

Note: These are approximate unoccupied sizes

Table 11 Typical dimensions for sportschairs (mm)



- Floodlight meters/controls must be located within reach at an accessible height.
- There must be no hazardous projections into the playing area.

Athletics (indoor and outdoor)

- All sports surfaces, including synthetic track and field surfaces, must be designed and installed to meet the needs of disabled athletes, particularly those in wheelchairs. This includes warm-up and warm-down areas. The sports surfaces must be well illuminated and have defined colours and textures to aid athletes with visual impairment.
- All athletics facilities, indoor and outdoor, should be fully accessible.
- Adequate, secure and convenient storage must be provided for sportschairs and wheelchairs.
- Where necessary provide removable kerbing for the track to allow access for wheelchairs and equipment.
- Ensure that sufficient space for access is provided around the track.



- The facility should include designated areas where technicians, competitors and coaches can repair and maintain sportschairs, other mechanical sports aids, equipment, prostheses and so on.
- Racing chairs can be up to 2m long, so ensure that there is adequate manoeuvring space.
- Provide anchorage points in throwing areas to secure throwing frames. Ensure that there is convenient storage for throwing frames.

Badminton

Wheelchair badminton is played in accordance with the rules of the parent game except for a modification to the overall playing area. This is based around the standard badminton court with modifications to suit the particular disability of the people playing.

Basketball

Wheelchair basketball is one of the oldest wheelchair sports and, like its parent sport, is very vigorous and fast moving. It is played on a full-size basketball court and it is essential that the minimum margins around the court are maintained for the safety of the players and, where appropriate, spectators.

- Wall-mounted baskets should not be used.
- Mobile supports must have a cantilevered arm that maintains the overrun distance.
- In large venues designed for major competitions provide four team-changing rooms, each with two fully equipped accessible toilets. These venues must also provide wider corridors to allow two wheelchairs to pass.
- Wooden floor surfaces give the fastest game. Cushioned floors do not provide a suitable surface for wheelchair basketball as they significantly reduce the mobility of the sportschair.

Bowls

Bowls can be played both indoors and outdoors with all players on equal terms. The two key issues are ensuring that access to the green is available for people in wheelchairs and ensuring that the playing surface is not damaged.

Access to the green

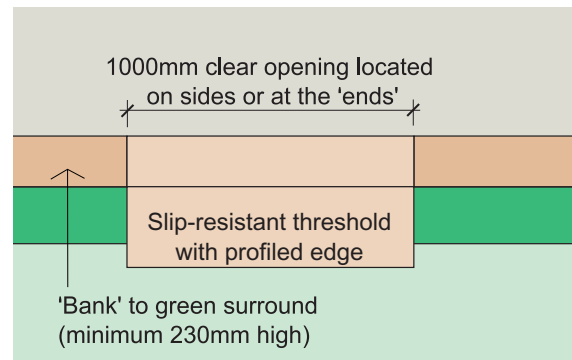
Safe and convenient access to the green must be provided. This can be achieved in two ways:

- The green should incorporate an edge detail that can be manually adjusted to bridge the ditch and provide a smooth transition onto the green for a player in a wheelchair or on crutches. This type of arrangement must always be used for indoor facilities.
- Outdoors, where it may not be practicable to provide an appropriate edge detail, a proprietary lightweight set of movable ramps must be provided to give direct access to the green. Provision must be made for the convenient and safe storage of these ramps when not in use.

Protecting the playing surface

To protect the playing surface special approved wheelchairs or buggies with much wider wheels than the standard are used. Some players will have their own buggy but many will not. Players can also purchase clip-on wheels for use with their personal wheelchair while on the green.

- Management should provide two sizes of buggy.
- Provision should be made for the secure and convenient storage of bowls buggies and players' wheelchairs. Note that these buggies require a clear width of 875mm, therefore door widths should be appropriately sized.



Plan

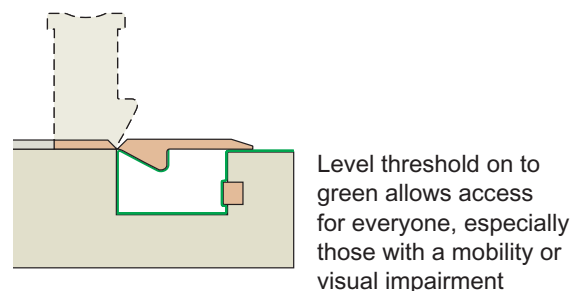
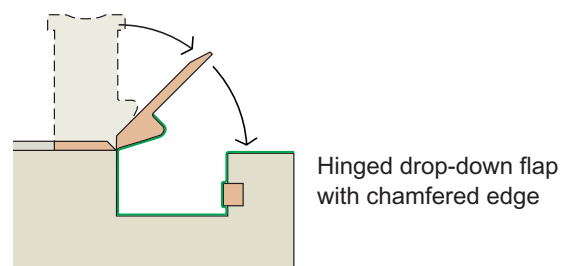
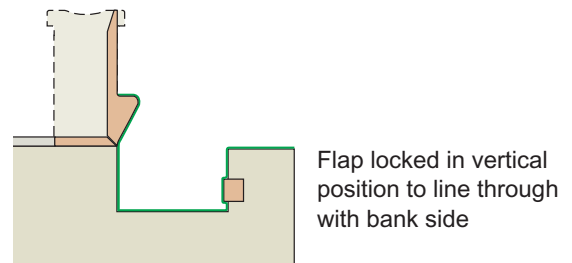


Figure 31 Typical sections through side or end ditch



Cricket

Wheelchair cricket is played indoors and outdoors. Teams of 6–11 players compete using the same rules as the parent sport. Indoors the game is played in a sports hall or cricket school. The minimum space required is a netted area of two lanes, although a larger space is preferred.

- All indoor cricket schools must make provision for wheelchair cricket.
- Always ensure that the minimum circulation widths are maintained. Particular care should be taken to ensure that net supports and fixings do not impinge on the circulation areas.
- Always ensure that wheelchairs can gain access to the cricket net areas.



Fencing

There are no special requirements for wheelchair fencing apart from special frames that are used to secure the chairs in the correct relationship. The building design should ensure that:

- there is adequate secure storage provision immediately adjacent
- appropriately placed power supply points are available (minimum four double sockets).

Rugby

Wheelchair rugby – played in 20 countries – is a team sport for tetraplegics and people with upper limb impairment.

The sport is played with a volleyball on a standard basketball court with goals and key areas marked out at both ends. The object of the game is to score by carrying the ball over your opponent's line. Most chair-to-chair contact is allowed, but not body contact.

Table tennis

Table tennis is one of the sports that wheelchair players can play competitively against non-disabled opponents and many wheelchair players are members of table tennis clubs.

- Only tables that are free from obstructing cross-members must be used.
- Ensure that the proposed layout of tables/screens and netting does not hinder access between tables.
- To compensate for being seated while playing some wheelchair players use a higher than normal chair.

Tennis

Wheelchair tennis is one of the fastest growing sports for disabled people. It provides the opportunity for disabled people to enjoy tennis both recreationally and/or competitively against non-disabled and disabled people of all ages. It is played in over 70 countries throughout the world and is expanding rapidly.



Wheelchair tennis is played according to the rules of the parent sport except that the ball is allowed to bounce twice. Facility requirements (indoor and outdoor):

- standard tennis court – most surfaces are suitable
- tennis wheelchairs can require up to 1100mm clear width along route ways.

The following are appropriate surfaces for wheelchair use:

- acrylic – considered to be the best surface
- macadam
- clay – not new courts
- carpet
- some artificial grass surfaces – but these are generally unpopular with players because they are considered to be ‘hard work’.

As a minimum provision, a facility with more than five courts must have at least two acrylic or macadam courts. When setting out new courts, allow for the maximum run back recommended by the Lawn Tennis Association. It is essential that adequate access be provided. This includes:

- providing access around the court to change ends easily
- ensuring that the net posts are not too close together for sportschairs to pass
- ensuring that floodlighting columns do not restrict the minimum width required.





Access in the countryside

Projects aimed at making the countryside more accessible to disabled people must start with the general principles already outlined. The designer should try to make the facility as convenient and safe as possible for all users. The key requirements are:

- firm, even walking surfaces that do not become soft or slippery when wet
- easy ramps and steps
- handrails and grabrails at hazardous locations
- paths and gates that are wide enough for wheelchairs
- WCs within easy reach
- clear signposting
- tactile direction signs
- auditory aids (public address and induction loops).

Close attention must be paid to:

- alighting from and parking a bus
- finding and using a WC
- finding and approaching the entrance
- buying a ticket
- passing through/around a turnstile
- getting to the destination.

The designer must consider how all of these events will impact on a disabled user, and then make the necessary adjustments.



Conclusion

As stated in the introduction, this guidance is not about 'special provision' or what a disabled person cannot do because of a medical condition. This document is written from the view that it is the design or management of a facility that creates the barriers and limitations to use by disabled people. Disabled people are entitled to equal opportunities to participate in sport, and to do so in high quality facilities that are attractive, well designed and properly managed.

By following the minimum requirements set out in this guidance note and the others in the series, good access can be achieved that will benefit everyone. As well as being equitable, it makes financial sense to attract rather than discourage *all* potential customers, together with their friends and families, to use sports facilities. Sports facilities should be available for the use of everyone.

Contact addresses

All England Netball Association

Netball House, 9 Paynes Park, Hitchin SG5 1EH

Tel: 01462 442344. Fax: 01462 442343.

www.england-netball.co.uk

Amateur Rowing Association

The Priory, 6 Lower Mall, London W6 9DJ

Tel: 020 8237 6700. Fax: 020 8237 6749.

www.ara-rowing.org

Amateur Swimming Association,

Harold Fern House, Derby Square,
Loughborough LE11 5AL

Tel: 01509 618700. Fax: 01509 618701.

www.britishswimming.org

Badminton Association of England,

National Badminton Centre, Bradwell Road,
Loughton Lodge, Milton Keynes MK8 9LA

Tel: 01908 268400. Fax: 01908 268412.

www.baofe.co.uk



British Blind Sport
4–6 Victoria Terrace, Leamington Spa CV31 3AB
Tel: 01926 424247. Fax: 01926 427775.

British Canoe Union
John Dudderidge House, Adbolton Lane, West
Bridgford, Nottingham NG2 5AS
Tel: 0115 982 1100. Fax: 0115 982 1797
www.bcu.org.uk

British Cycling Federation
National Cycling Centre, Stuart Street,
Manchester M11 4DQ
Tel: 0161 230 2301. Fax: 0161 231 0591
www.bcf.uk.com

British Disabled Fencing Association
24 Orchard Avenue, New Malden, Surrey KT3 4JT
www.britishfencing.com

British Disabled Water Ski Association
The Tony Edge National Centre, Heron Lake,
Wraysbury, Nr Staines TW19 6HW
Tel: 01784 483664. Fax: 01784 482747.
www.bdsa.org.uk

British Gymnastics
Ford Hall, Lilleshall National Sports Centre,
Nr Newport TF10 9NB
Tel: 01952 820330. Fax: 01952 820326.
www.baga.co.uk

British Judo Association
7a Rutland Street, Leicester LE1 1RB
Tel: 0116 255 9662. Fax: 0116 255 9660.
www.britishjudo.org.uk

British Orienteering Federation
Riversdale, Dale Road North, Darley Dale,
Matlock DE4 2HX
Tel: 01629 734042. Fax: 01629 733769.
www.britishorienteering.org.uk

British Paralympic Association
Norwich Union Building, 9th Floor, 69 Park
Lane, Croydon CR9 1BG
Tel: 020 7662 8882. Fax: 020 7662 8310.
www.paralympics.org.uk

British Sub-Aqua Club
Telford's Quay, South Pier Road,
Ellesmere Port CH65 4FL
Tel: 0151 350 6200. Fax: 0151 350 6215.
www.bsac.com

British Triathlon Association
PO Box 25, Loughborough LE11 3WX
Tel: 01509 228321. Fax: 01509 223931.
www.britishtriathlon.org

British Wheelchair Sports Foundation
Guttman Road, Stoke Mandeville HP21 9PP
Tel: 01296 395995. Fax: 01296 424171.

Centre for Accessible Environments
Nutmeg House, 60 Gainsford Street, London
SE1 2NY

Tel/Minicom: 020 7357 8182.
Fax: 020 7357 8183. www.cae.org.uk

Disability Rights Commission
Freepost MID 02164, Stratford-upon-Avon
CV37 9BR

Tel: 08457 622 633. Textphone: 08457 622 644.
Fax: 08457 778 878. www.drc-gb.org

England and Wales Cricket Board
Lord's Cricket Ground, London NW8 8QZ

Tel: 020 7432 1200. Fax: 020 7286 5583.
www.ecb.co.uk

English Basketball Association
48 Bradford Road, Leeds LS28 6DF

Tel: 0113 236 1166. Fax: 0113 236 1022.
www.basketballengland.org.uk

English Boccia Federation
11 Churchill Park, Colwick, Nottingham NG4 2HF

Tel: 0115 940 2002. Fax: 0115 940 2084

English Federation of Disability Sport
Manchester University, Alsager Campus,
Hassall Road, Alsager, Stoke-on-Trent ST7 2HL

Tel: 0161 247 5294. Minicom: 0161 247 5644.
Fax: 0161 247 6895. www.efds.co.uk

English Hockey Association
The Stadium, Silbury Boulevard, Milton Keynes
MK9 1HA

Tel: 01908 544644. Fax: 01908 241106.
www.hockeyonline.co.uk

English Table Tennis Association
Queensbury House, Havelock Road,
Hastings TN34 1HF

Tel: 01424 722525. Fax: 01424 422103.
www.etta.co.uk

English Volleyball Association,
27 South Road, West Bridgford,
Nottingham NG2 7AG

Tel: 0115 981 6324. Fax: 0115 945 5429.
www.volleyballengland.org

Football Association
25 Soho Square, London W1D 4FA

Tel: 020 7402 7151. Fax: 020 7402 0486.
www.the-fa.org

Grand National Archery Society
Lilleshall National Sports Centre, Newport
TF10 9AT

Tel: 01952 677888. Fax: 01952 606019.
www.gnas.org.uk

Inclusive Fitness Initiative
The Estate Office, Thorncliffe Park Estate,
Chapelton, Sheffield S35 2PH

JMU Access Partnership
Joint Mobility Unit, 105 Judd Street,
London WC1H 9NE

Tel: 020 7391 2002. Fax: 020 7837 7109.
www.jmuaccess.org.uk

Lawn Tennis Association
The Queen's Club, Barons Court,
London W14 9EG

Tel: 020 7381 7000. Fax: 020 7381 5965.
www.lta.org.uk

National Federation of Anglers
Halliday House, Egginton Junction, Derby
DE65 6GU

Tel: 01283 734735. Fax 01283 734799.
www.the-nfa.org.uk

National Ice Skating Association of UK
National Ice Centre, Lower Parliament Street,
Nottingham NG1 1LA

Tel: 0115 853 3100. Fax: 0115 853 3101.
www.iceskating.org.uk

National Register of Access Consultants

Nutmeg House, 60 Gainsford Street,
London SE1 2NY

Tel: 020 7234 0434. Fax: 020 7357 8188.

National Small-Bore Rifle Association

Lord Robert's Centre, Bisley Camp,
Brookwood, Woking, GU24 0NP

Tel: 0845 130 6772. Fax: 01483 476392.
www.nsra.co.uk

RADAR – the Disability Network

12 City Forum, 250 City Road,
London EC1V 8AF

Tel: 020 7250 3222. Minicom: 020 7250 4119.
Fax: 020 7250 0212.

Riding for the Disabled Association

Lavinia Norfolk House, Avenue R, National
Agricultural Centre, Stoneleigh Park CV8 2LY

Tel: 02476 696510. Fax: 02476 696532.
www.riding-for-disabled.org.uk

Royal National Institute for the Blind

224 Great Portland Street, London W1N 6AA

Tel: 020 7388 1266. Fax: 020 7388 2034.
www.rnib.org.uk



Royal National Institute for Deaf People

19–23 Featherstone Street, London EC1Y 8SL

Tel: 020 7296 8000. Textphone: 020 7296 8001.
Fax: 020 7296 8199. www.rnid.org.uk

Royal Yachting Association

RYA House, Romsey Road, Eastleigh SO50 9YA

Tel: 023 8062 7400. Fax: 023 8062 9924.
www.rya.org.uk

Rugby Football League

Red Hall, Red Hall Lane, Leeds LS17 8NB

Tel: 0113 232 9111. Fax: 0113 232 3666.
www.rfl.uk.com

Rugby Football Union

Rugby House, Rugby Road,
Twickenham TW1 1DS

Tel: 020 8892 2000. Fax: 020 8892 4446.
www.rfu.com

Sign Design Society

66 Derwent Road, Kinsbourne Green,
Harpenden AL5 3NX

Tel/fax: 01582 713556.
www.signdesignsociety.co.uk

Squash Rackets Association

PO Box 52, Manchester M12 5FF

Tel: 0161 231 4499. Fax: 0161 231 4231.
www.squash.co.uk

UK Athletics

10 Harborne Road, Edgbaston,
Birmingham B15 3AA

Tel: 0121 456 5098. Fax: 0121 456 8752.
www.ukathletics.org

**United Kingdom Sports Association for
People with Learning Disability**

Ground Floor, Leroy House, 436 Essex Road,
London N1 3QP

Tel: 020 7354 1030. Fax: 020 7354 2593.

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