

Part C

Internal areas

Accessible and inclusive sports facilities (AISF)

(formerly known as
Accessible Sports Facilities)



Think of the environment. Please avoid
printing this A4 document unnecessarily.

Sport England's design guidance aims to:

- Increase awareness of good design;
- Help built environment professionals, volunteers, clients, operators, user representatives and stakeholders follow best practice;
- Encourage well-designed facilities that meet the needs of sport and physical activity and are a pleasure to use.

Document accessibility

This document has been designed for comfortable reading at A4 and on a laptop screen, but can also be printed at A3 for large print versions. The pdf is accessible and has been tested to work with text readers.

The AISF guidance has a new format with separately downloadable parts and appendices – see page 4. They have been developed to enable the information to be digested and processed easily, with illustrations and tables for quick reference.

User guide

Before using this design guidance for any specific projects, all users should refer to the on-line user guide which explains when and how to use the guidance as well as understanding the limitations of use.

Click here for **User guide** and other
Design and cost guidance

Foreword

Accessible and inclusive facilities for all

Sport England believes that good facilities are fundamental to developing opportunities for sport and physical activity for everyone, from the youngest beginners to late starters and elite athletes. Sports and leisure facilities, from the smallest to largest, should be designed to be accessible and inclusive with flexibility to provide equitable sport and activity for everyone.

Good design should be based upon:

- Stakeholder engagement putting people at the heart of the whole design process;
- A sound understanding of current trends and practices within individual sports;
- Research and developments in the sport and leisure industry;
- Accounting for a diverse spectrum of user needs;
- Experience gained from previously-built schemes.

These considerations should be embraced within the earliest vision statement and enshrined in the briefing stages through to the final detailed specifications and operational arrangements.

Sport England's design guidance notes aim to promote a greater understanding of inclusive design principles, technical and other important considerations to arrive at appropriate solutions that meet a wide spectrum of user needs. The guidance also signposts to further information, advice and expertise as well as good practice examples.

The built environments where movement and physical activity take place can sometimes be a person's biggest barrier to being more active.

This guidance provides the technical information needed to ensure that facilities are not just functionally accessible but intuitive, inviting, and capable of both attracting and meeting the needs of our increasingly diverse communities.

Good design is about putting people first and AISF is a vital tool in creating and maintaining places and spaces that support us all, without exception, to move more."

Viveen Taylor, **Director of Equality, Diversity and Inclusion in Sport**

How this document relates to other guidance

The Accessible and Inclusive Sports Facilities (AISF) guidance documents should be read alongside the latest version of related Sport England guidance and other key statutory and national governing body of sport (NGB) requirements and the links highlighted below:

Sport England AISF documents

Part A	Essential reading 1: Introduction 2: Key considerations 3: Project delivery
Part B	External areas
 Part C	Internal areas
Part D	Changing and toilet provision
Part E	Wayfinding and signage
Part F	Emergency evacuation
Part G	Consultation and engagement
Part H	Operation and management
Appendices	Further information and checklists
To download AISF documents Click here	

Other sports guidance

Strategic Outcomes Planning Guidance (SOPG)	Click here
Demographic knowledge	Click here
Dementia-friendly sport and physical activity guide	Click here
Safeguarding	Click here
NGB sport-specific and wheelchair sports requirements (see also Appendices overview)	Click here

Other key references

Equality Act 2010	Click here
Building Regulations / Approved Documents (AD)	Click here
British Standard (BS) 8300 "Design of an accessible and inclusive built environment"	Click here
BSI PAS 6463: 2022 "Design for the Mind - Neurodiversity and the Built Environment"	Click here
Inclusive Design Overlay to the RIBA Plan of Work	Click here

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1 Internal principles

This section highlights the importance of incorporating good wayfinding and other important design considerations from the earliest development stages and provides references to more detailed guidance.

1.1 Wayfinding

Wayfinding may be defined as “the process or activity of finding your position, orientating correctly, and planning and following a route”.

For most people, wayfinding is a multi-sensory activity, allowing us to form a mental picture of where we are and where we need to go. This is informed by a combination of advance and on-the-spot information, and helped through the use of distinctive features and signage.

See Part E for more detailed information on wayfinding and signage.

Providing information in more than one way is beneficial to everyone, as the ability to find and navigate spaces can be significantly affected, for example, by:

- Sight and/or hearing loss;
- Proprioception, balance and spatial awareness;
- Information/sensory processing differences;
- Language/communication barriers.

People with a range of impairments or differences may particularly rely on wayfinding cues in addition to signage in order to orientate and easily navigate an environment.

Wayfinding and signage principles therefore require careful consideration to ensure that multi-sensory information is provided before and during a visit to the facility.



IB Leisure, Ingleby Barwick
Image credit: Ellis Williams
Architects / Paul McMullin

A logical building layout and wayfinding strategy enables easy navigation of a facility

1.1.1 Wayfinding principles

Wayfinding principles should be considered from the early design stages of a project. Easy navigation together with good, clear information is essential in all facilities:

- The layout of the building and the use of appropriate floor and wall finishes and lighting can be used to convey navigational information;
- Logical layouts with clear sightlines should be considered at the design stage;
- Large numbers of signs cannot overcome wayfinding problems created by poor design of the facility. However, signage is essential in reinforcing wayfinding within well designed environments;
- Visual contrast between adjacent finishes will support ease of navigation for people with sensory impairments or differences.

For further guidance on inclusive information before and during a visit, the design of signage systems (including fonts, symbols, contrast and tactile information), and the use of technology, see Part E Wayfinding and signage.

For further guidance on inclusive information before and during a visit, the design of signage systems, and the use of technology, see Part E Wayfinding and signage.



Double-height 'internal street' spaces can provide clear sightlines and aid navigation around a facility

The Sands Centre, Carlisle, Cumbria
Image credit: Stuart Walker Photography

1.2 Spatial considerations

People using sport and leisure facilities are often using equipment, such as large kit bags, pushing buggies or using a wheelchair etc. To enable them to safely move and manoeuvre in and around the building, they require adequate space. As well as making movement easier for everyone, this also helps protect the facility from accidental damage. It is, therefore, important to understand what equipment potential users will be using, as well as where it will be used and how. This information and understanding should be established as early as possible and embedded in the project brief and management plans.

1.2.1 Meeting wheelchair user needs

This guidance follows the manoeuvring and circulation principles set out in BS 8300 and Building Regulations AD M, where in most cases the spatial requirements are based on the needs of wheelchair users. For example, providing a manoeuvring space of 1500 x 1500 mm or a door closing manoeuvring space of 1400 x 800¹ mm. These spatial standards are also suitable for meeting the needs of people with large kit bags, using buggies etc., and therefore should be taken account of when designing the facility.

Some projects will require increased space etc. where potential users will be using larger wheelchairs. Table C1 compares some examples of different types of wheelchairs and typical dimensions².

Sections 1.2.2 and 1.2.3 give further information on dance wheelchairs and sports wheelchairs.

¹ Note this dimension increases in sports wheelchair zones – see section 1.2.3.

² Dimensions indicated are for unoccupied typical adult wheelchairs. See BS 8300 Annex G for further examples and information on occupied wheelchairs.

Table C1 Some wheelchair types and typical dimensions²

Wheelchair type	Approximate length (L)	Approximate width (W)
Manual wheelchair	1124 mm	697 mm
Electric wheelchair	1190 mm	715 mm
Mobility scooter	1170–1500 mm	620–640 mm
Dance wheelchair	See section 1.2.2	
Sports wheelchair	See section 1.2.3 and Table C2	

1.2.2 Dance wheelchairs

Whilst everyday manual or power wheelchairs may be suitable for basic dance, more advanced moves are easier to perform using a specialist dance wheelchair that reacts to the occupant's body leaning to change direction.

The size of a specialist dance wheelchair is often tailored to the individual, sometimes through contour mapping. Like a sports wheelchair, a dance wheelchair is very agile with the ability to turn 360 degrees on the spot.

The degree of wheel camber and size can vary significantly. While some can have modest cambers, dance chairs can be specified with significant cambers approximating that of some sports wheelchairs and be fitted with large wheel sizes, e.g., in excess of 600 mm diameter. Therefore, door clearance widths remain an important consideration – following sports wheelchair zone criteria will suffice – see section 1.2.3.

For further information on wheelchair dance, see:

<https://strictlywheels.co.uk/about-us/>



In facilities such as sports centres and tennis centres where sports wheelchairs are a key piece of sports equipment for some people and some sports, it is essential that the design of the building and external works ensures that sports wheelchair users have unhindered access where required.

1.2.3 Sports wheelchair zones

It is essential that designers and operators consider the optimum routes and experience for users of sports wheelchairs early in the design process. Over recent years the design of sports wheelchairs has developed and these can require a clearance width up to 1200 mm. The external areas and building(s) will need to comfortably allow sports wheelchairs to be used, manoeuvred and stored easily and safely. A “sports wheelchair zone” should be established from concept stage to ensure this can be achieved.

As a minimum, the sports wheelchair zone should include:

- The route from the site entrance, car park, setting down point through to the entrance and reception area;
- The route from the entrance/reception to a safe, convenient and secure storage point for the sports wheelchair, ideally as close as possible to the changing and activity areas;
- The route from the storage point to the activity area, e.g., sports hall or outdoor/indoor tennis court;
- Lifts suitable for sports wheelchair users if the zone is on more than one level;
- Means of escape route(s) from activity area(s) to place(s) of safety;
- Enlarged toilet(s) suitable for sports wheelchair access;
- Adjacent changing rooms, and where possible/required, with circulation and door widths suitable for team sports wheelchair users.

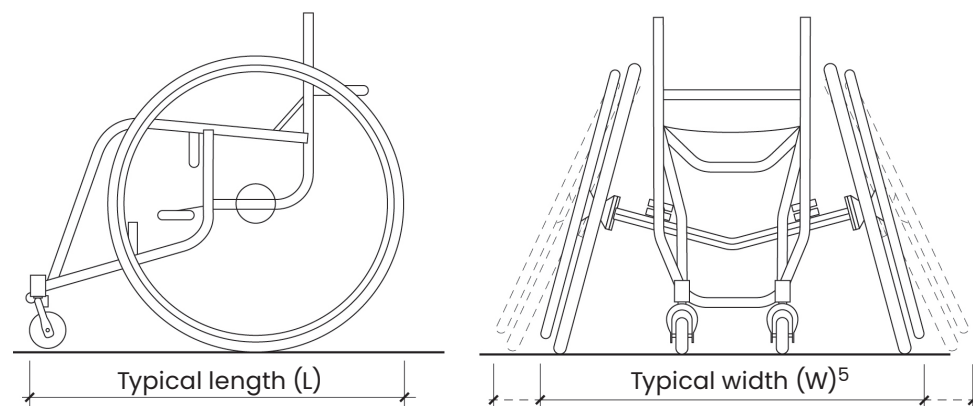
This should allow a sports wheelchair user to undertake the following:

1. Arrive at the facility, usually seated in their standard/everyday wheelchair with their sports wheelchair in front, and be able to progress through the entrance and into the lobby/reception area;
2. From reception they will continue to push their sports wheelchair to the secure storage point which should be conveniently located close to the changing and activity areas;
3. Having safely secured their sports wheelchair in the store area, they will then move to the changing and toilet facilities in their wheelchair after which they will return to the store area and transfer to their sports wheelchair and move to the activity space for their sport;
4. After their sports activity, return to the secure area to transfer back into their standard/everyday wheelchair and then either secure their sports wheelchair in the storage area and move into the other parts of the sports facility, or return to reception and exit the facility;
5. In addition, any evacuation routes from any area where someone may be using their sports wheelchair should offer sufficient clearance widths for safe escape.

See Parts C and D for general sports wheelchair zone considerations and the Appendices for links to sport-specific requirements.

Table C2 Sports wheelchair typical dimensions³

Sports wheelchair type	Approximate length (L)	Approximate width (W)
Generally	800 mm	800–1200 mm ⁴
Tennis	850 mm	1000 mm
Racing	1800 mm	750 mm

**Notes:**

³ Dimensions indicated are for unoccupied typical adult sports wheelchairs.

⁴ Note that the majority of sports wheelchairs are less than 1000 mm wide and can turn within a standard 1500 mm turning circle.

⁵ Note that wheel camber varies, typically ranging from 14° to 25° as shown dotted.

The modern sports wheelchair is purpose-built for the individual and the sport. Sports wheelchairs are as highly engineered as other modern sports equipment.



Image credit: Motivation

2 Entrance and reception

This section covers the general principles for the key characteristics and elements of an accessible and inclusive entrance space.

2.1 Primary entrance

The building should be designed to make the primary entrance(s) obvious and the facility inviting to everyone. Ensure that the entrance doors:

- Can be easily distinguishable from the facade;
- Are sited logically and conveniently;
- Have a level area immediately in front of them;
- Have adequate wheelchair manoeuvring space provided – see also section 3.7.5 Door closer and opening devices;
- Are accessible to everyone. There should not be a separate/ segregated entrance for different groups of people.

See BS 8300-2 Section 8 Entering a building and Section 9 Horizontal movement.

The building should be designed to make the primary entrance(s) obvious and the facility inviting to everyone.



Primary entrance with hard and soft landscaping to create an attractive and welcoming approach

Sandwell Aquatics Centre, West Midlands
Image credit: Beccy Lane @ Positive Image
Photography / Roberts Limbrick

2.2 External doors

For main entrances, the following should be considered:

- Overhead weather protection such as an entrance canopy or protected walkway should be provided;
- All facilities should consider fitting power-operated doors (this is highly likely to be necessary as manual external doors⁶ rarely meet the Building Regulation opening force requirements);
- A doorbell or intercom should be provided to attract the attention of the staff for assistance in event of the door not operating correctly or the door being locked out of operational hours (note that intercoms should meet BS 8300-2 requirements);
- Revolving doors **should not be provided** as these cannot be used by many people;
- Examples of inclusive solutions that also meet the requirements for reducing heat loss or gain include:
 1. An entrance lobby incorporating two sets of power-operated doors with a weather lobby between. The preference is for automatic sliding doors (see Figure C1). Power-operated swing doors can also be considered for smaller facilities (see Figure C2);
 2. A circular drum door where the inner set opens once someone has entered the first door.

⁶ Any manually-operated doors should have a light opening force. However, in exposed positions on a windy day, this can result in the door slamming or blowing open, therefore an automated door is the best solution. In existing smaller facilities where automatic doors are not provided, a power-assisted door should be considered where the power mechanism is activated by the initial push or pull on the door and reduces the opening force.



All external doors should:

- Have matt finishes to avoid reflection;
- Be a suitable width for the scale and type of facility (see Table C3);
- Have level thresholds;
- Be visually contrasting from adjacent surfaces (the door design should provide strong visual contrast and articulation to adjacent glazing or construction);
- Have appropriate vision panels;
- Have handles that limit the risk of injury on impact and are no lower than 700 mm above finished floor level (AFFL). Full-height projecting pull handles should not be used, as they can cause injury to young children, assistance dogs and wheelchair users or their wheelchair, should impact occur.

Power-operated doors for pedestrians are either fully automated and activated with sensors or manually controlled with a push pad. The following should be considered:

- Power-operated automatic sliding doors are the preferred solution for accessibility;
- Provision of adjustable delay and appropriate sensor detection to safeguard all users and a suitable stop mechanism;
- Swing doors that are power operated should be designed to minimise the risk of injury during activation and use, with an audible warning;
- The leading edge of the swing door should be highlighted to contrast with the rest of the door so that it is more easily detected on approach when in the open position.
- Where full automation is not practicable, the entrance doors could be power operated with a push-pad control. The push-pad control should be positioned clear of the door swing, and have a height between 750–1000 mm. It should be clearly visible and visually contrasting from surfaces it will be seen against;
- Capability of being manually operated in the event of power failure;
- Meeting the standards set out in BS EN 16005:2012 and BS 7036-0.

All glazing to an entrance facade should meet BS 6262-4. It should have manifestation to all full-height glazing at a minimum of two bands in accordance with AD K. Where no upstand is provided, a third band of manifestation at 100–300 mm AFFL enhances visibility by small children. The manifestation should be visually contrasting and readily apparent on approach from outside and inside the building.

A glazed entrance door should:

- Have a frame to the door;
- Be clearly distinguishable from any immediately-adjacent fixed glazing in all lighting and weather conditions (this can be achieved through the application of additional manifestation to define both the edges of the door and centrally – such as logos or notices at eye level).

Final fire exit doors to the outside should be easy to open and meet BS 9999 and AD B recommendations. When specifying the clearance width of final fire exit doors, consideration should be given to whether some people may be in their sports wheelchairs (which are wider than any other types of wheelchair) at the time of an evacuation.

For further information on evacuating sports facilities, see Part F Emergency evacuation.

Power-operated automatic sliding doors are the preferred solution.

Table C3 Main / principal entrance door requirements⁷ – minimum provision

Notes		Clubhouse / outdoor								Indoor								Pools		
● = Required ○ = Recommended All door sizes and specifications ⁸ are subject to meeting Building Regulations AD B and AD M, and British Standards BS 9999 and BS 8300. All allocations indicated are subject to project-specific requirements, e.g., facility size, court numbers, NGB sports wheelchairs sizes etc.		Clubhouse/hub (small)	Clubhouse/hub (large)	Artificial pitch (full-size)	Athletics outdoor	Bowls outdoor	Cycle/track facility	Multi-use games area (MUGA)	Tennis outdoor	Athletics indoor	Bowls indoor	Cricket indoor	Fitness suite / Gymnastics hall	Sports hall (≤4 courts)	Sports hall (≥5 courts)	Table tennis centre	Tennis indoor	Swimming pool (≤20 m)	Swimming pool (25 m)	Swimming pool (50 m)
Smaller-scale facilities: 1200 mm minimum / 1500 mm preferred clear width	See Figures C1 and C2	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	
Larger-scale facilities: 1500 mm minimum / 2000 mm preferred clear width	See Figures C1 and C3	○	○	○	○	○	○	○	●	○	○	○	○	○	●	○	●	○	○	●
Automatic power-operated doors	See Figures C1 to C3	○	○	○	○	○	○	○	●	○	○	○	○	●	●	○	●	●	●	●

⁷ Applicable to main entrance and exits and associated lobbies, including those serving outdoor facilities. For other external doors, generally a 1 m clear width is required (see BR/BS requirements) and equal to or greater than Table C6 minimum requirements.

⁸ For requirements of doors on escape routes, see AD B.

2.3 Entrance lobby

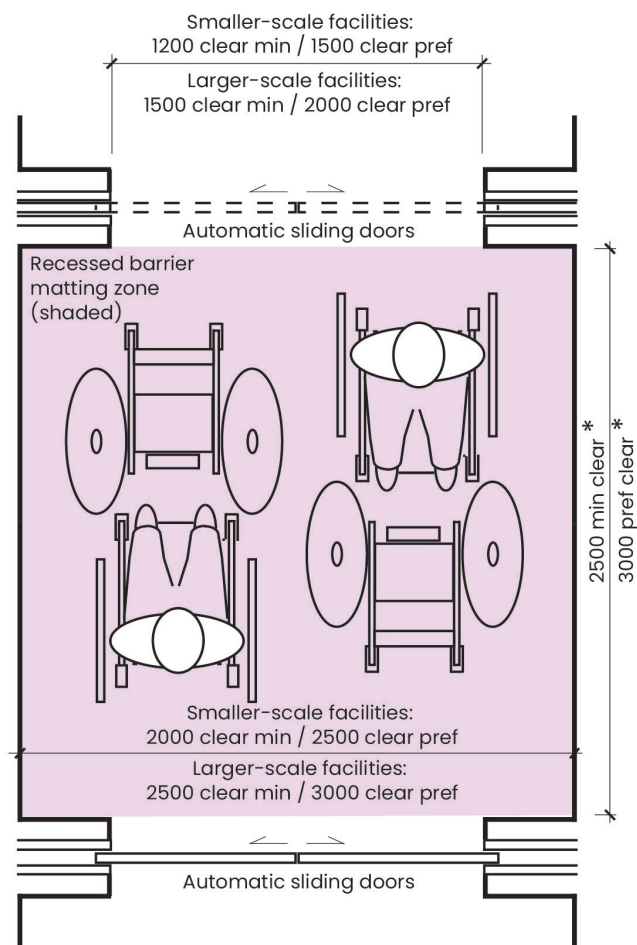
The following should be noted:

- External doors should meet Table C3 requirements (see page 19). Internal doors should meet Table C6 requirements (see page 38);
- To allow for power failure scenarios, one door leaf should be sized to achieve minimum clear width for escape. All door sizes and specifications are subject to meeting AD B, AD M, BS 8300 and BS 9999;
- Entrance lobbies should meet AD M / BS 8300 recommendations except where sports wheelchair zones require enhanced provision – see Figures C1 and C2. For internal lobbies see section 3.3;
- The entrance lobby should be designed to create a welcoming and inclusive ambience – see Part A 2.2 Exploring user needs;
- The layout and dimensions of the entrance lobby need to be appropriate to the facility's size and type. Where inner and outer (lobby) doors are provided, the dimensions are critical for wheelchair users as they will need to be able to move clear of the first set of doors before encountering the second;
- The entrance lobby size and design is likely to vary for different building types and sizes;
- For facilities with sports wheelchair zones, the entrance lobby should allow for a sports wheelchair user pushing either their sports wheelchair or street wheelchair in front of them as they enter and exit. To accommodate this, a preferred minimum 2.5 m manoeuvring length clear between walls and door swings is recommended⁹ – see Figures C1 and C2;
- The effective clear width of inner lobby doors should be equal or greater than the main entrance doors;
- Barrier matting should be provided within the entrance lobby to prevent moisture being brought into the building on people's shoes/wheelchair and buggy wheels. The matting should be recessed to provide a flush transition to avoid creating a trip hazard. Coir matting and similar materials should not be used. In order to ensure any barrier matting is effective for wheelchairs, a minimum 2.5 m depth is required;
- Entrance matting colour should be as similar as possible to adjacent floor finishes to avoid creating a sharp contrast. Striped finishes can create a strobe effect and should be avoided by incorporating mats that have less-contrasting material combinations;
- In situations where a second set of doors to create an entrance lobby is unfeasible due to spatial limitations i.e. in smaller refurbishment projects, consideration should be given to providing an effective overhead warm air curtain and adjusting the design of heating to the entrance area to minimise heat loss. However, where an existing entrance faces the prevailing wind, additional measures to avoid unnecessary draughts should also be considered;
- The level of lighting in the lobby should be sensor controlled to provide a transitional area between outside and inside light levels.

⁹ For smaller-scale or existing facilities where space may be limited, 2.0 m min may be acceptable subject to user and specific sports wheelchair requirements.

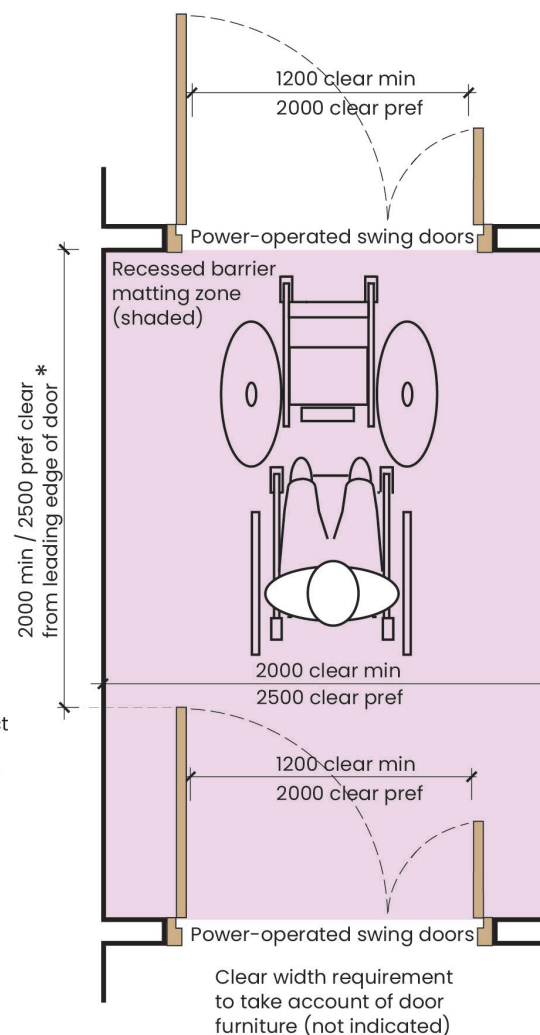


Figure C1 Entrance lobby with automatic sliding doors¹⁰ (preferred option) for facilities with sports wheelchair zones¹¹ – minimum dimensions (mm)



Note:
* Lobby length subject to specific sports wheelchair sizes to be accommodated, e.g., racing chairs can be up to 2 m long

Figure C2 Entrance lobby with power-operated swing doors¹⁰ for smaller-scale facilities with sports wheelchair zones¹¹ – minimum dimensions (mm)



¹⁰ For requirements of doors on escape routes, see Part F 2.7, AD B and BS 9999.

¹¹ Lobbies for all other facilities in accordance with AD M.



Foyer with clear view of reception and main stair

The Sands Centre, Carlisle, Cumbria
Image credit: Stuart Walker Photography

2.4 Foyer / reception area

The layout of the reception area should be clear and logical and minimise the need for signs to guide people through it. Close attention to detail is critical to the success of this space. See Figure C3.

The following should be considered:

- People passing through the entrance door should have a clear view of the reception desk. This includes considering the location of the desk and the use of colour and lighting to highlight its presence;
- People working in the reception area should have a clear view of the entrance;
- If turnstiles are provided, ensure there is at least one pass gate (depending on anticipated demand) that can accommodate people with pushchairs, wheelchairs or sports wheelchairs as appropriate. The gate should be electrically operated. If the turnstiles can be self operated via a membership card or similar, then any pass gate should also be capable of being self operated;
- The lift, staircase, public telephone and accessible toilet should be visible and close to the reception desk. Clear directional signage should also be provided from the reception area;

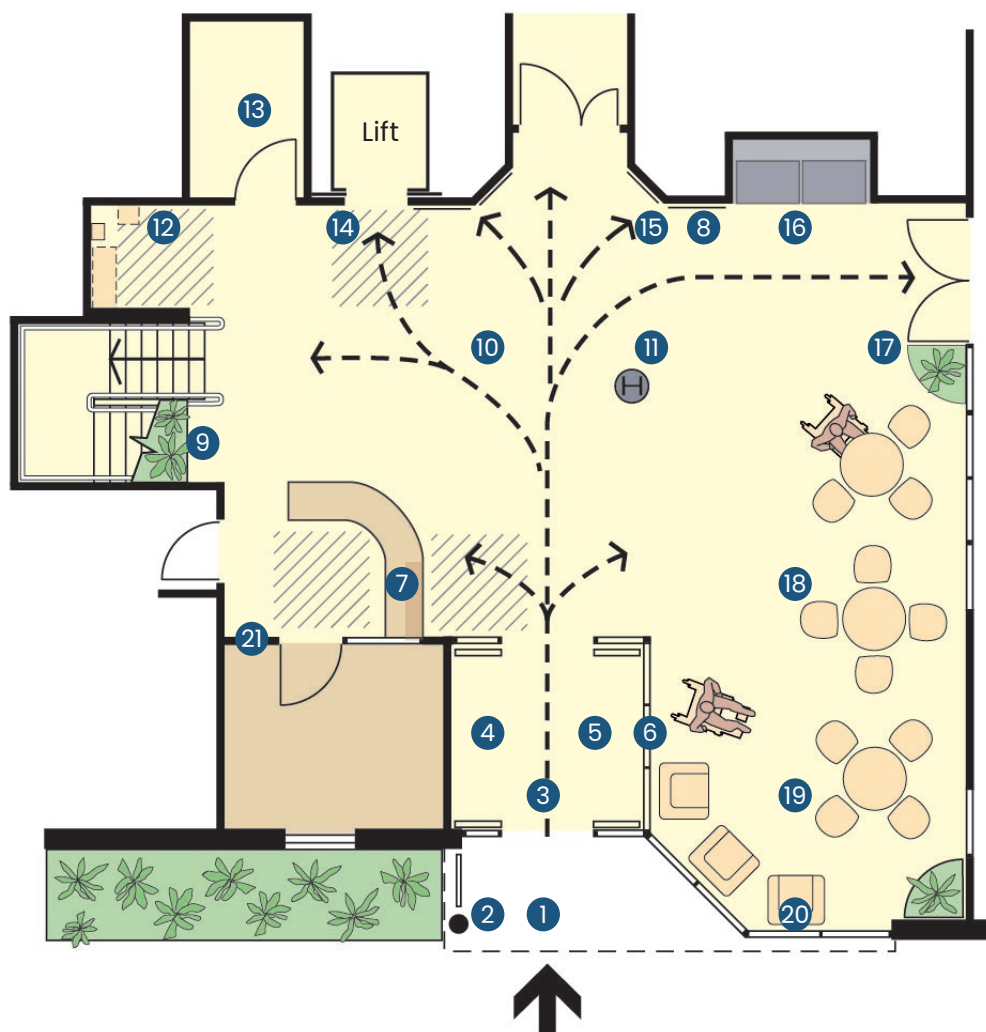
- A mix of seating styles should be provided for early arrivals, people who may be meeting friends before or after using the facilities, or people awaiting transport home. See BS 8300-2. Many people benefit from having a space that is a little quieter, so creating clusters of seating with high backs can be helpful;
- The acoustics within the reception area should enable clear speech intelligibility, particularly for communication at the reception desk. For some sports activities, for example swimming, it is not possible for the participants to take their assistance dogs with them. Where this may occur, a safe and secure rest space should be provided for the dogs; this could be within the reception area;
- Where the design approach includes an open reception with roving staff to assist, the staff should wear a distinct uniform to be clearly identifiable upon entry. There should also be clear notices and/or key communication points or stations across the floor together with the provision of induction loop technology – see section 6.5;
- The need for publicly-accessible wifi and charging points could also be considered during user consultation and engagement.



Excel Leisure Centre
Image credit: ELC

Reception area

Figure C3 Reception area

**Key:**

1. Obvious entrance with clear views in helps orientation
2. Brackets or columns to canopies or lights kept clear of circulation routes
3. Lobby dimensioned to allow access for wheelchair users with carer or companion
4. Flush and firm matting to entire lobby
5. Lighting levels in lobby should transition between inside and outside
6. Glazing to lobby not to cause disturbing reflections. Manifestation on glazing may be required
7. Low counter reception – adequate space in front and behind with induction loop for staff and visitors and connection to accessible alarm pull chords
8. Areas for displays, leaflets, shop etc. not indicated
9. Safeguard low headroom
10. Logical unobstructed routes and clear views to signage
11. Where obstacles are unavoidable, they should be highlighted using colour and lighting to assist wayfinding and minimise risk of accidental collision
12. Where provided, telephone recess located away from noisy areas – see section 2.8
13. Accessible toilet should be visible and close to the reception desk
14. Defined space 1500 x 1500 mm minimum in front of lift(s) for waiting and manoeuvring
15. Visual and tactile information in obvious and convenient locations
16. Features such as vending machines and radiators to be recessed
17. Door swings to be protected
18. Seating within defined area located off main circulation route to avoid blind and partially-sighted people colliding with furniture. In addition provide integrated spaces for wheelchair users and space for assistance dogs
19. Well-lit waiting area with a 'quiet' environment and good acoustic qualities
20. Seating areas should incorporate a mix of freestanding seating, with and without arm rests
21. Consider potential area for assistance dog rest area under staff supervision

2.5 Primary reception desk

Where some form of reception/ booking desk is provided, it is essential that the desk or counter is accessible and inclusive:

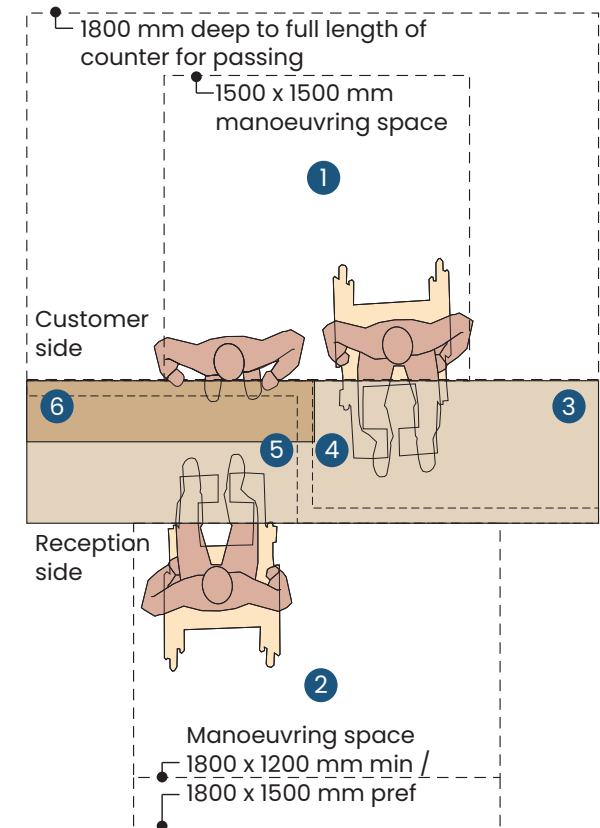
- The reception design should be positioned to reduce distractions such as reflective surfaces and patterned backgrounds;
- The desk should include both seated and standing height surfaces – see BS 8300 section on counters and reception desks;
- The front of the counter should visually contrast from the surfaces it is seen against, such as the wall behind and the floor in front.

To enable communication and lipreading, reception points should be carefully positioned. The background to the desk should not have windows, mirrors, or be highly patterned or cluttered. This includes not having digital screens, or very bright lights or signs behind the reception desk (facing customers):

- Provide adequate lighting for lip reading and writing that is free from glare and shadow, particularly on the receptionist's face;
- The counter top and front should contrast visually in order to assist the location of the counter edge by blind and partially sighted people;
- An induction loop should be provided at the reception counter to assist users with hearing impairment, and this should be clearly indicated using the standard symbol. The lowered part of the counter should be covered by the range of the induction loop;
- Where a glazed screen needs to be provided at a reception counter, this should be designed to accommodate an induction loop system. Glazed screens should always be non-reflective so that clarity of lip-reading is not affected.

Roving reception points could be considered where a fixed desk may not be appropriate – see section 2.7. For smaller transactional counters, see BS 8300.

Figure C4 Reception desk key dimensions



Key:

1. 1500 x 1500 mm manoeuvring space in front of counter to allow convenient access (extended to 1800 mm depth to full length of counter to allow for passing)
2. 1800 x 1200 mm min / 1800 x 1500 mm pref manoeuvring space behind counter to allow convenient access
3. Reception countertop 700 mm minimum depth at 760–860 mm AFFL
4. Knee recess on customer side 500 mm minimum depth maintained for a minimum of 800 mm width x 700 mm under-counter clearance
5. Knee recess on reception side 650 mm minimum depth x 700 mm under-counter clearance
6. Upper writing surface 300 x 300 mm minimum for standing customers (950–1100 mm high)

2.6 Self-service areas

Any self-service areas for registration or signing in and out should be designed to maximise independent use. The terminal, kiosk or pods should offer heights accessible to everyone, seated or standing, alongside audio and visual feedback information for the benefit of people with sight or hearing loss. Where self service is provided, it is important to provide comprehensive, up-to-date information as well as how to obtain help and support.

2.7 Roving, temporary and secondary reception points

All key communication points, including temporary registration arrangements for special events, should offer an induction loop or other suitable assistive listening system.

All points should be established in locations that are easy to locate and to communicate – considering the lighting, acoustics and finishes in the area. Such points should be physically accessible to everyone, from a seated and standing position.

See also Part H Operation and management.



2.8 Public telephone

For larger facilities with significant footfall, a public telephone with an induction coupler should be located in the reception area to allow people to call taxis, organise lifts, and so on. This should be at a height suitable for a wheelchair user. See BS 8300-2 Section 15.6 for further guidance.

A public telephone may not be regarded as reasonable provision for some smaller facilities and should be subject to the consultation and engagement process and user needs. Operational strategies can be flexible to allow visitors to use the receptionist's telephones if required – see Part H 3.8.10 Telephone access.

Table C4 Reception area requirements – minimum provision

Notes		Clubhouse / outdoor								Indoor								Pools		
● = Required ○ = Recommended All provision subject to project-specific facility mix, user requirements / consultation and programme of use.		Clubhouse/hub (small)	Clubhouse/hub (large)	Artificial pitch	Athletics outdoor	Bowls outdoor	Cycle/track facility	Multi-use games area (MUGA)	Tennis outdoor	Athletics indoor	Bowls indoor	Cricket indoor	Fitness suite / Gymnastics hall	Sports hall (≤6 courts)	Sports hall (≥6 courts)	Table tennis centre	Tennis indoor	Swimming pool (≤20 m)	Swimming pool (25 m)	Swimming pool (50 m)
Reception desk	See Section 2.5 and Figure C4		○		○	○			○	●	●	●	●	●	●	○	●	●	●	●
Public telephone	See Section 2.8 and Figure C3	○	○	○	○	○	○	○	○	○	●	○	●	●	●	○	○	●	●	●
Seating / resting area	See Section 2.4 and Figure C3	○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●
Assistance dog rest	See Section 2.4 and Figure C3		○		●	●	○	○		●	●	●	●	●	●	●	●	●	●	●

3 Circulation and features

This section covers the internal circulation principles to provide clear, logical routes throughout the building. Diagrams are provided to illustrate features that facilitate independent use.

3.1 General principles

All areas should provide step-free access.

Design the building to minimise the number of doors and the length of corridors that users have to negotiate.

The location of internal columns and pillars should be carefully considered. Within the constraints of the design, they should not be located in circulation areas where they may become obstructions. When this is not possible, the column or obstruction needs to be visually apparent from the surfaces it will be seen against, through either visual contrast and/or appropriate detailing or decoration.

In facilities where sports wheelchairs could potentially be used, the design of the internal circulation should take account of the requirements for a 'sports wheelchair zone' – see section 1.2.3, Part A 3.5.2 wheelchair considerations, and page 4 link to NGB sport-specific and wheelchair sports requirements.

3.2 Corridors

The following should be considered:

- Corridors should be wide enough to allow wheelchair users to approach and gain easy access through doors off the corridor;
- Corridors should be unobstructed; for instance, 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 to walls at changes in direction or adjoining corridors wherever possible;
- Corridors should ideally maintain an unobstructed width of 1.8 m to allow wheelchair users to pass each other. As a minimum, the unobstructed width can be reduced to 1.5 m with passing places at least 1.8 m long by 1.8 m wide at reasonable intervals. If large numbers of wheelchair users are expected, the corridor width should be increased to at least 2.0 m;
- In sports wheelchair zones, the unobstructed width of corridors, lobbies or ramps (see sections 3.2–3.4) should preferably be 2.5 m to allow users in large sports wheelchairs to pass each other. However, the unobstructed width can be reduced to a minimum of 2.0 m with the incorporation of passing places at least 2.5 m long and with an unobstructed width of at least 2.5 m – see Figure C6. Passing places should be at reasonable intervals, ideally 5 m or so apart, to minimise potential user inconvenience. For doors and lifts within sports wheelchairs zones, see sections 3.7–3.8;
- Doors should be recessed when opening out into a corridor, to avoid a significant hazard – see examples illustrated on Figures C5 and C6 and Part D 2.8 Door arrangements;
- Before providing windows at corridor ends, an assessment should be undertaken of the likelihood of strong sunlight or glare at certain times of the day. Where this is an issue, diffusion through frosting may be acceptable, or the use of high-level clerestory or rooflight windows may be preferable;
- Where multiple manually-operated doors are required along a corridor or route, automation or electromagnetic hold-open devices linked to the fire alarm system should be considered;
- Where more than one set of double door arrangements exist along a corridor, the wider leaf should be on a consistent side;
- As a rule-of-thumb, doors on escape routes should open in the direction of escape – see AD B;
- For guidance on hold-open devices and automatic release mechanisms, see AD B Annex C.

Figure C5 Internal circulation for facilities without sports wheelchair zones¹²

Note: All dimensions are in millimetres

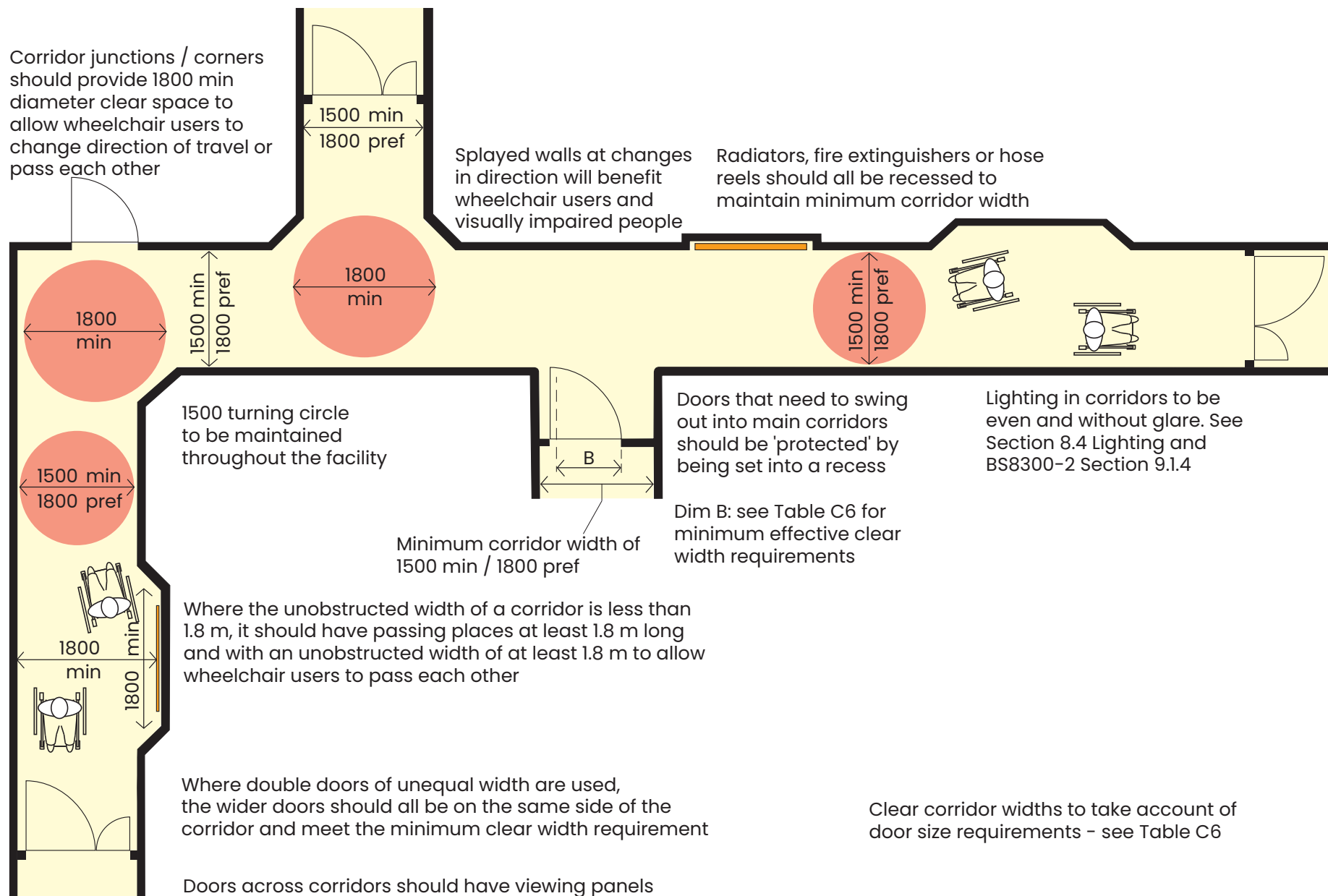
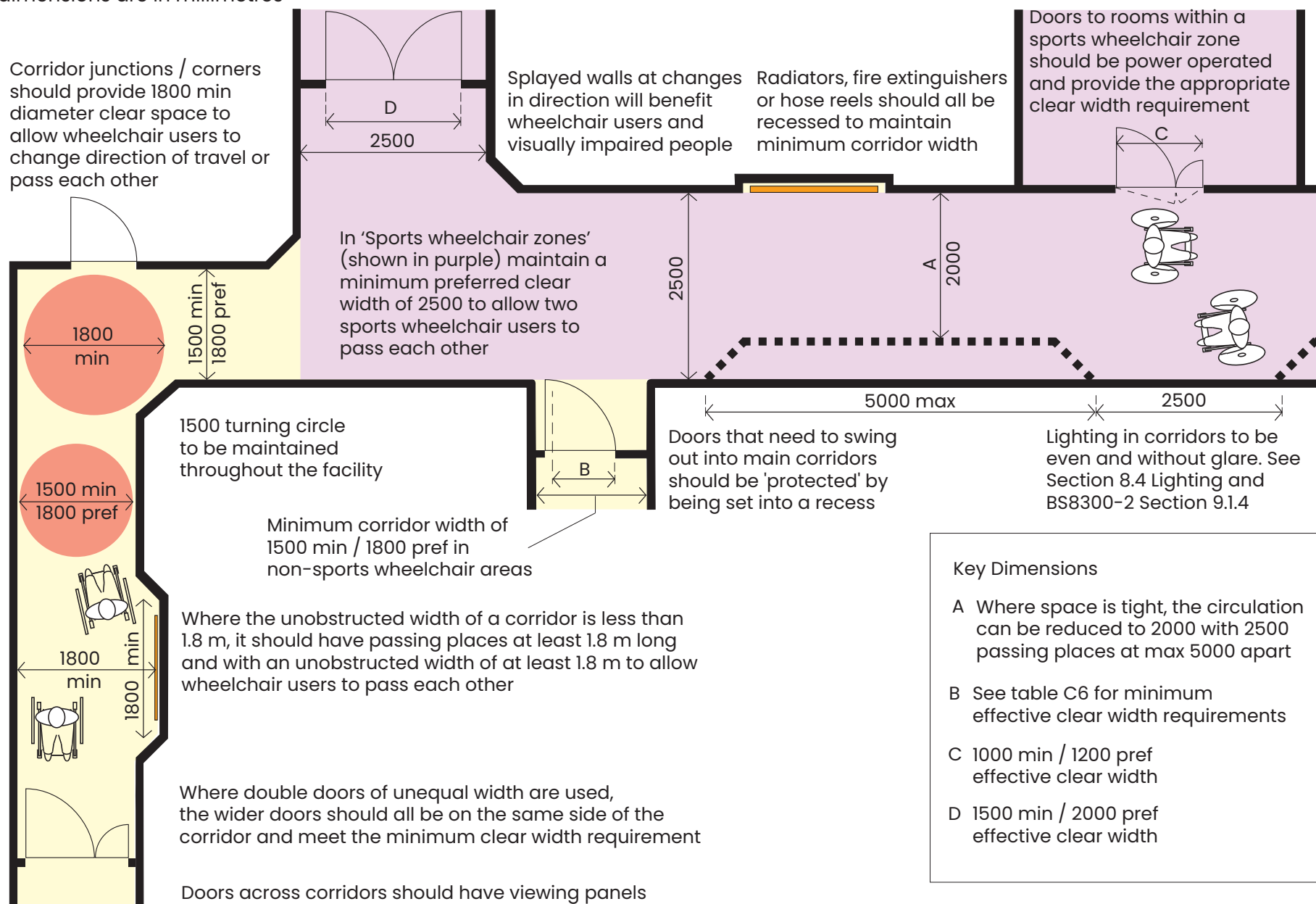
¹² For requirements of doors on escape routes, see AD B.

Figure C6 Internal circulation for facilities with sports wheelchair zones¹³

Note: All dimensions are in millimetres



¹³ For requirements of doors on escape routes, see AD B.

3.3 Internal lobbies

The following should be taken into account:

- Minimise the number of internal lobbies as they can impact upon efficient use of the facilities. Where unavoidable, internal lobbies should be of the appropriate size and layout to accommodate user requirements;
- Door sizes should meet section 3.7.2 and Table C6 minimum provision;
- To allow for power failure scenarios, one door leaf should be sized to achieve minimum clear width for escape. All door sizes and specifications are subject to meeting Building Regulations Approved Documents (AD), BS 9999 and BS 8300;
- Internal lobbies should meet AD M / BS 8300 except where sports wheelchair zones require enhanced provision – see Figures C7 and C8.

¹⁴ Internal lobbies for all other facilities (without sports wheelchair zones) to meet BS 8300. For entrance lobbies see section 2.3.

Figure C7 Internal lobby for smaller-scale facilities with sports wheelchair zones¹⁴ – minimum dimensions (mm)

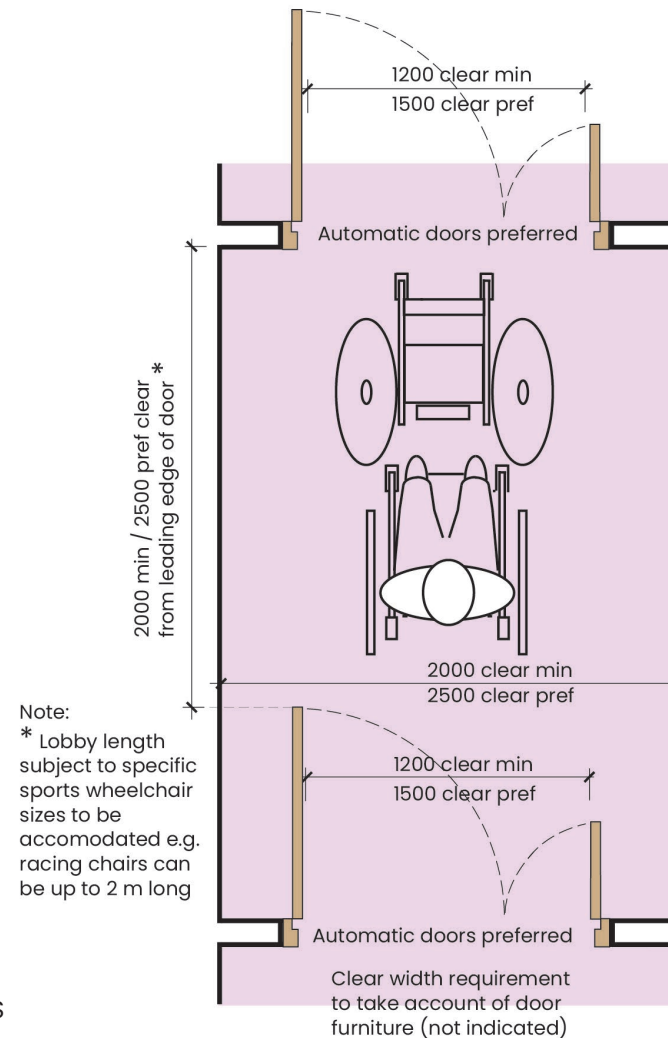
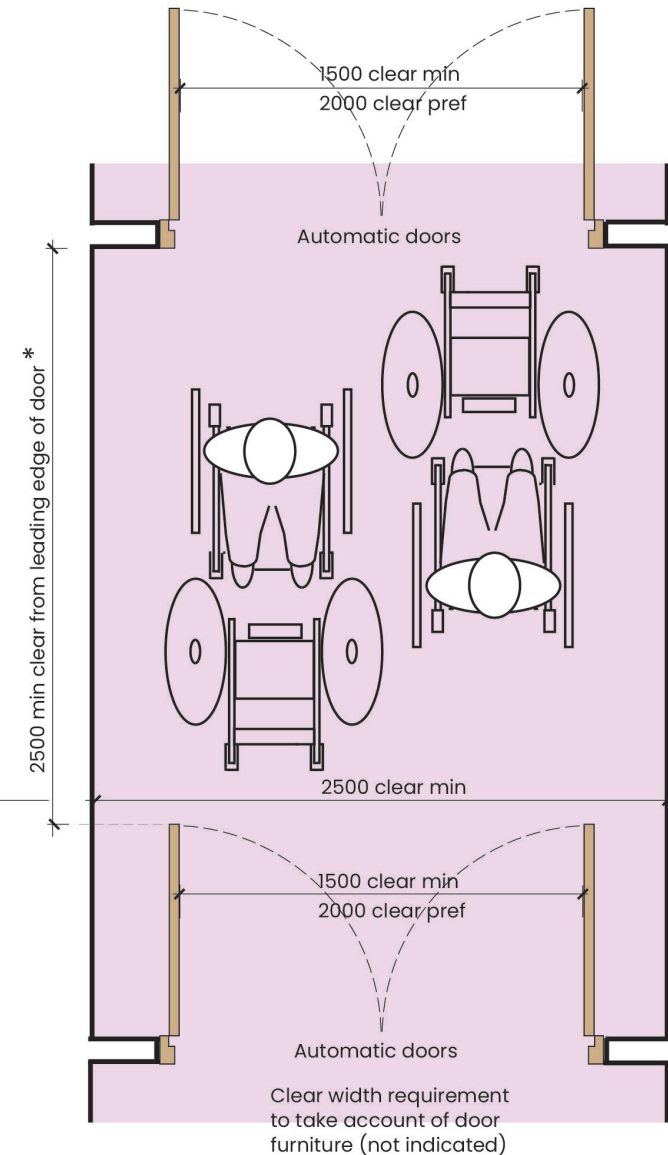


Figure C8 Internal lobby for larger-scale facilities with sports wheelchair zones¹⁴ – minimum dimensions (mm)



3.4 Level changes and ramps

See Part B 5.4 and Figure B7, BS 8300-2 and AD M.

- Avoid any level changes within a single storey whenever possible;
- Single steps are not acceptable. Small level changes where they cannot be avoided, should be addressed with a gradient which is visually contrasting from adjacent floor surfaces;
- A ramp is usually the most convenient way to address level change(s) within a single floor. A passenger lift may be considered as a suitable alternative where the level change is significant (note that the maximum rise of any series of ramps should be 2.0 m). See also section 3.8.2 for vertical lifting platform considerations;
- The gradient should be as gentle as space allows, with a maximum recommended steepness of 1:15 (in exceptional existing circumstances only, 1:12 may be acceptable);



Internal ramp and adjacent stepped access

- Depending on the location and length of a ramp, the ability for two wheelchair users or sports wheelchair users to pass one another on the ramp may be appropriate, see the recommended widths in Table C5;
- Level landings/ rest points should be provided. Their location is dependent on the gradient of the ramp, e.g., for every 500 mm rise max for a 1:20 gradient, or every 333 mm rise for a 1:15 gradient. For maximum permissible relationship between going, gradient and rise of ramps, see Table 3 of BS 8300-2;
- Intermediate landings between ramps should be at least 1.5 m long; Where visibility to both the start and end of a series of flights cannot be provided, landings should be extended to provide the clear width requirement (between handrails) to allow passing wheelchair users (1800 mm) or sports wheelchair users (2500 mm) as applicable;
- Landings to the top and bottom should be at least the width of the ramp and not less than 1.5 m;
- Ramps should be surfaced with firmly-fixed, slip-resistant and easy-to-maintain materials;
- Where the overall or total rise is 300 mm or more, a nearby/ adjacent stepped alternative should also be provided for people who find ramps difficult.

Table C5 Ramp widths

Level change	Ramp length	Direction of use	Ramp widths	
			Generally	Sports wheelchair zones
<333 mm	<5 m	Single	≥1500 mm	≥2000 mm
<500 mm	5-10 m	Dual	≥1800 mm	≥2500 mm
>300 mm	Supplementary steps should be provided			

3.5 Stairs

See BS 8300-2: 2018 section 10 Vertical Movement and AD B, AD K and AD M for more detailed advice.

(for external stairs, see AISF Part B 5.5)

- Staircases and landings should meet AD B, AD K and AD M requirements for the anticipated density of use. A width of 1000 mm between handrails (or 1200 mm surface width) is the minimum and 1400 mm is preferred, and for larger facilities 1600–1700 mm surface width is the recommended minimum. Stairs that form part of a fire escape route should meet or surpass AD B and BS 9999 recommendations;
- Risers should be consistent and between 150 mm (preferred) and 170 mm. Risers should not be tapered;
- Treads should be between 300 mm (minimum) and 350 mm (preferred);
- The maximum for each flight is 12 risers for treads < 350 mm and 16 risers for treads ≥ 350 mm;
- Tapered treads and winders (e.g. spiral stairs) should not be used;
- All steps should be fitted with a suitable handrail on both sides;
- All landings should be level, clear of door swings and obstructions;
- For landings between in-line flights, the length should be not less than 1200 mm (as per AD M) and preferably at least the surface width of the flight of stairs or 1500 mm min;
- For landings providing a change in direction, e.g., 90 or 180 degrees, the clear width between handrails should be at least the same as that for the main stair flight;
- All changes in level, including landings, are to be fitted with a continuous handrail where practicable;
- The step edge should not project over the tread below. (Where required in existing buildings this should be a maximum of 25 mm);



- All stair edges need to be clearly visible and made of contrasting slip-resistant material. The step edges should wrap around the riser so that it extends 55 mm on the tread and 55 mm down the riser (Note that for each flight, it can be helpful to highlight the top and bottom step edges in a different colour to the other step edges);
- The contrast between the step edge nosing detail and the stair tread and riser is recommended to be 70 LRV points (Note for unpainted concrete steps, it is unlikely that more than 45 LRV points can be achieved);
- All staircases should be illuminated to at least 100 lux at tread level and 200 lux at landings and be designed to ensure that people do not have to negotiate stairs in their own shadow;
- Avoid using glossy, polished materials that can cause glare or reflections that may impact on safe use of the stair;
- Ensure open areas under stairs are protected up to 2100 mm with suitable guarding;
- Wherever possible, stairs and lifts should be located in close proximity to encourage people to use the stairs where they are able.

Note: Single steps should not be provided – small level changes should be addressed with a suitable gradient.

3.6 Handrails, balustrades and guarding

Balustrades and guarding should meet AD K as a minimum. See also BS 8300.

All handrails should be:

- Designed to be safe and easy to use;
- Robustly fixed to provide support on both sides of all steps and ramps;
- Visually contrasting against the background they are seen against;
- Circular or oval in shape, meeting the range of dimensions set out in BS 8300. The bottom and top of all handrails should terminate in a closed profile, typically turning towards the wall, or where this is not possible, downwards or in a closed loop, to prevent items of clothing and bags becoming caught.

All sports and community buildings should be able to safely accommodate young children and therefore suitable protective guarding and balustrading design should be in place. The location and design of clear glass balustrading should take into account the potential for upskirting and difficulties for people with vestibular/balance conditions.

The bottom and top of all handrails should terminate in a closed profile



Tarka Leisure Centre, Barnstaple, North Devon
Image credit: Seth Conway



Flitwick Leisure Centre, Central Bedfordshire
Image credit: Darnton B3 and Abacus Cost Management (with modifications by SE)

Glass balustrade with manifestation to first floor circulation

Balustrades or guarding should be:

- Appropriate for the anticipated loading – see BS EN 6180;
- A minimum height of 1100 mm AFFL (higher is strongly recommended for terraces and balconies, and 1600 mm AFFL where located 10 m or more above ground level);
- Designed to exclude horizontal detailing that could be climbed or enable items to be placed that could accidentally fall off and cause injury to others below;
- Designed with sufficiently small spacing of vertical uprights to prevent head entrapment (see AD K);
- Designed to prevent or obscure views through below 400 mm AFFL where needed, e.g., stairs or at first floor level within double-height spaces.

Offering opportunities to view through balustrading from 400 mm AFFL and above is recommended, e.g., through railings or clear glazing. Solid balustrading should ideally provide views above 800 mm AFFL. Where a balustrade can be topped or combined with a grippable handrail, this is helpful in providing support for people standing or moving along.

3.7 Internal doors

See BS 8300 and AD M.

3.7.1 Design

(See also section 2.2 External doors)

The number of internal doors should be kept to a minimum, since doors obstruct movement through a building for many disabled people as well as people with large sports bags, people pushing buggies etc. Doors may be heavy or awkward to operate if not properly designed and specified. Where they are unavoidable, they should meet the following guidance:

- All doors should have a level threshold designed to avoid a trip hazard, with no more than 5 mm height recommended for any threshold strip or changes in flooring type;
- All doors need to be designed to provide at least the minimum effective clear width opening for general access appropriate to the type and scale of the facility – see Table C6. See section 3.7.2 for information on minimum effective clear widths and other considerations, e.g., doors on escape routes that may exceed minimum access requirements stated;
- Double door sets should have at least one leaf that achieves the minimum effective clear opening width for fire escape requirements without having to use the second leaf;
- Doors should be single swing to mitigate the risk of impact with users. The exception is where doors are required to open in a different direction for emergency only, such as for toilet or changing cubicles/rooms – see Part D 2.8 Door arrangements;
- Double door sets with rebated stiles should be avoided as one leaf needs to be opened first and this can make use more difficult;
- The opening force of a door is a critical consideration for many people – see section 3.7.5.



Performance Archery Centre Lilleshall, Shropshire
Image credit: Speller Metcalfe

Glazed doors and door swing protection

All power-operated doors should have the following features:

- Adjustable delay and appropriate sensor detection to safeguard all users, and a suitable stop mechanism;
- Capable of being manually operated in the event of power failure;
- Where full automation is not practicable or desirable, the doors could be power operated with a push pad control. The 'push-pad control' should be positioned clear of the door swing and have a height between 750 mm and 1000 mm AFFL. It should, be clearly visible and visually contrasting from surfaces it will be seen against;
- Compliance with the standards set out in BS EN 16005:2012 and BS 7036-0.

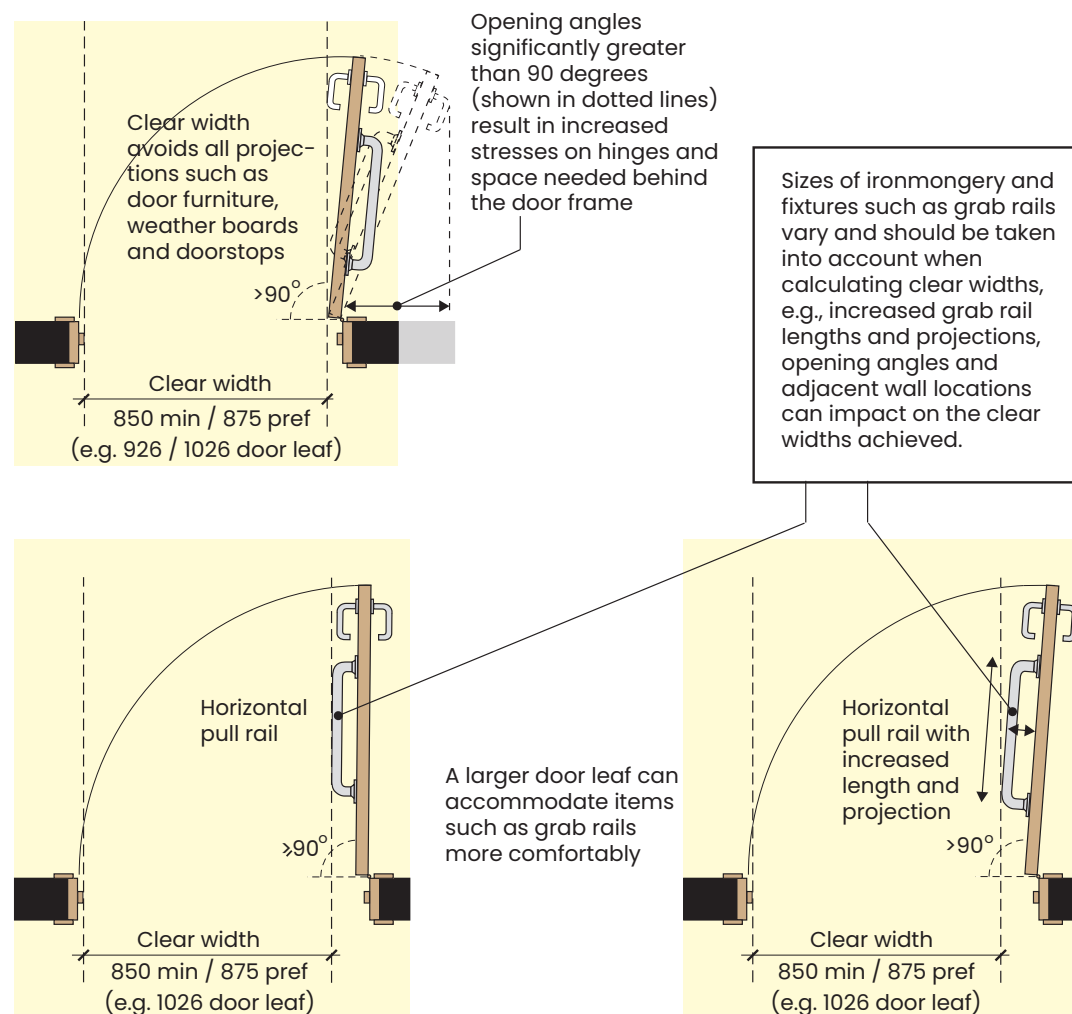
All door sizes and specifications are subject to meeting or exceeding AD B, AD M, BS 9999 and BS 8300-2. Note that inward opening single- and double-leaf doors that also require to open outwards for emergencies will typically require pivot hinges – see Part D 2.8.

3.7.2 Minimum effective clear widths

Doors generally (except in sports wheelchair zones)¹⁵

- Clear widths to achieve 850 mm minimum / 875 mm preferred^{16 17};
- Door clearances should be measured after allowing for all features that impact on the clear opening width such as projecting door ironmongery, door seals or door stop/jamb details;
- Door leaf sizes required to achieve clear width requirements are subject to spatial parameters such as the degree of opening angle past 90 degrees and specification, e.g., sizes and projection of handles and grab rails, door leaf thickness etc.

Figure C9 Minimum clear width examples for doors generally



¹⁵ Doors to cleaners store cupboards or small single-user spaces such as shower or changing cubicles follow separate criteria – see Part D 2.1 and 2.2, and AD T.

¹⁶ Doors to Changing Places toilets follow separate criteria – see Part D 3.8 for further information.

¹⁷ All door sizes and specifications are subject to meeting AD B and AD M, and BS 9999 and BS 8300.

Note: all dimensions are in millimetres

Doors serving a sports wheelchair zone

- Clear widths for entry and exit doors to sports wheelchair zones¹⁸ should achieve 1500 mm minimum / 2000 mm preferred (depending upon detailed consideration of need / sports equipment sizes) using power-operated double doors¹⁹;
- Doors to rooms within a sports wheelchair zone should provide 1000 mm minimum / 1200 mm preferred clear opening using power-operated specifications for larger / oversized doors and double doors²⁰. For information on the location of activation points for power-operated doors, see section 3.7.1 and Part D 2.8.2;
- Door clearances should be measured after allowing for all features that impact on the clear opening width such as projecting door ironmongery, door seals or door stop/jamb details;
- Example settings include sports halls, indoor cricket facilities and indoor or outdoor tennis facilities.

¹⁸ Examples of entry and exit doors include main routes from reception, fire escape, access to sports hall and route to Changing Places toilet.

¹⁹ All door sizes and specifications are subject to meeting AD B and AD M, and BS 9999 and BS 8300.

²⁰ Door leaf sizes shown are indicative only.

²¹ Applicable to, e.g., sports wheelchair accessible toilet – see Figure D19. Changing room doors subject to project-specific requirements.

Figure C10 Minimum clear width requirements for doors to rooms included within sports wheelchair zones²¹

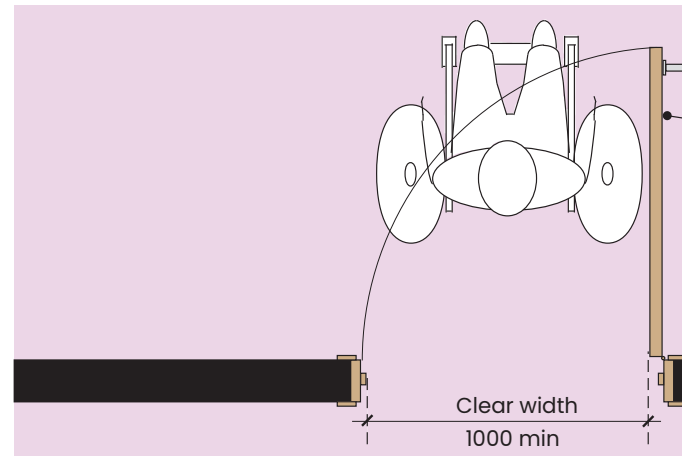
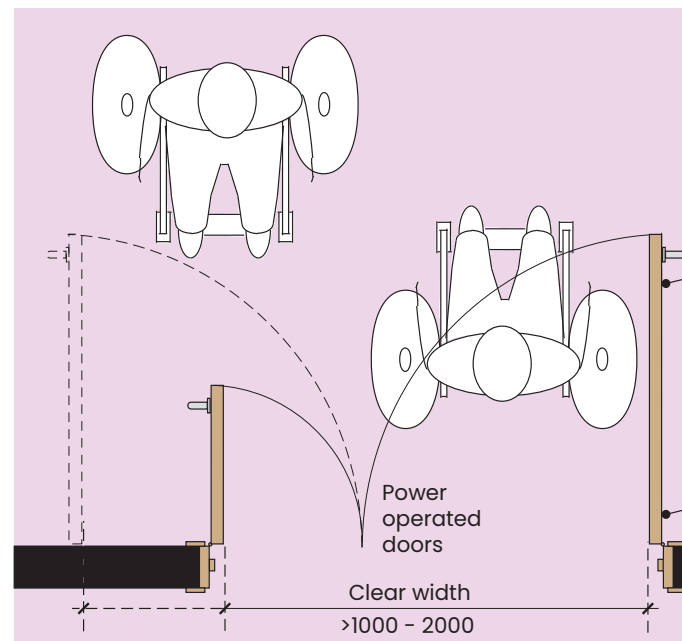


Figure C11 Minimum clear width requirements for power-operated double doors to rooms and circulation areas included within sports wheelchair zones



Doors can act as barriers if great force is required to open and close them – see BS 8300-2 Section 8.2.2. In large facilities and in places where significant numbers of disabled users are anticipated, consider installing automatic internal doors, either linked to a sensor or to suitably-located push pads or on electromagnetic hold-open devices linked to the fire alarm system. Larger/ oversized doors will generally require power operated automatic specifications.

Note: To allow for power failure scenarios, one door leaf should be sized to achieve minimum clear width for escape¹⁹.

Note: All dimensions are in millimetres

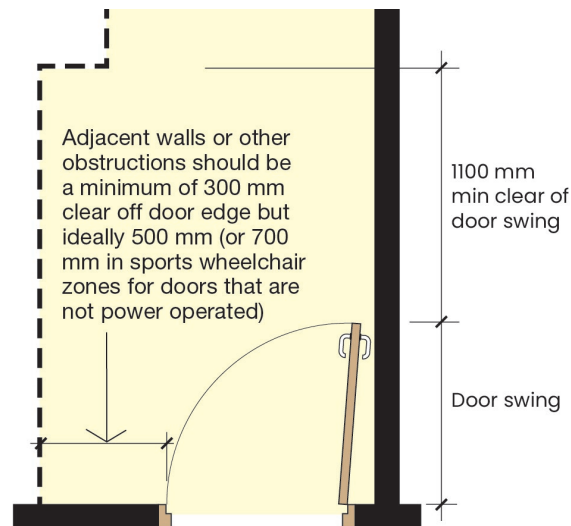
Table C6 Internal door requirements – minimum provision

Notes		Clubhouse / outdoor							Indoor							Pools				
● = Required ○ = Recommended All door sizes and specifications are subject to meeting Building Regulations AD B and AD M, and British Standards BS 9999 and BS 8300.		Clubhouse/hub (small)	Clubhouse/hub (large)	Artificial pitch	Athletics outdoor	Bowls outdoor	Cycle/track facility	Multi-use games area (MUGA)	Tennis outdoor	Athletics indoor	Bowls indoor	Cricket indoor	Fitness suite / Gymnastics hall	Sports hall (4 / ≤8 courts)	Sports hall (≥9 courts)	Table tennis centre	Tennis indoor	Swimming pool (≤20 m)	Swimming pool (25 m)	Swimming pool (50 m)
Provision																				
Doors except in sports wheelchair zones: 850 mm minimum / 875 mm preferred clear width	See Figure C9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rooms that are part of a sports wheelchair zone generally: 1000 mm minimum / 1200 mm preferred clear width	See Figure C10				●		●		●	●		●		●	●	●	●			
Circulation areas within sports wheelchair zones in smaller-scale facilities: 1200 mm minimum / 1500 mm preferred clear width	See Figures C7 and C11	○	○	○	●		●	○		●		●				●	●	●	●	●
Circulation areas within sports wheelchair zones in larger-scale or sport-specific facilities: 1500 mm minimum / 2000 mm preferred clear width	See Figures C8 and C11				○		○		●	○		○		●	●	○	○	○	○	○
Automatic power-operated doors	See sections 3.7.1, 3.7.2 and 3.7.5	○	○	○	○	○	○	○	●	●	●	○	○	●	●	○	●	●	●	●

3.7.3 Location

- Locate all doors so that there is clear wall space of at least 300 mm to the leading edge for all buildings, ideally 500 mm increasing to 700 mm within sports wheelchair zones;
- All doors should be designed so that they can swing open to at least 90 degrees;
- Doors should not open out onto busy circulation areas, unless the door can be fully recessed or is protected by guardrails. Any guardrail should not restrict the minimum clear width of the space or create a hazard to users, and should be detectable by a long cane;
- Consideration should be given to the choice of door swing direction. Some accessible rooms with inward opening doors may require increased internal dimensions to achieve clear manoeuvring space requirements. Equally, doors that open out will require a recess to the side of a corridor to protect the door swing, unless they are located in a dead-end location. See Part D 2.8 Door arrangements.

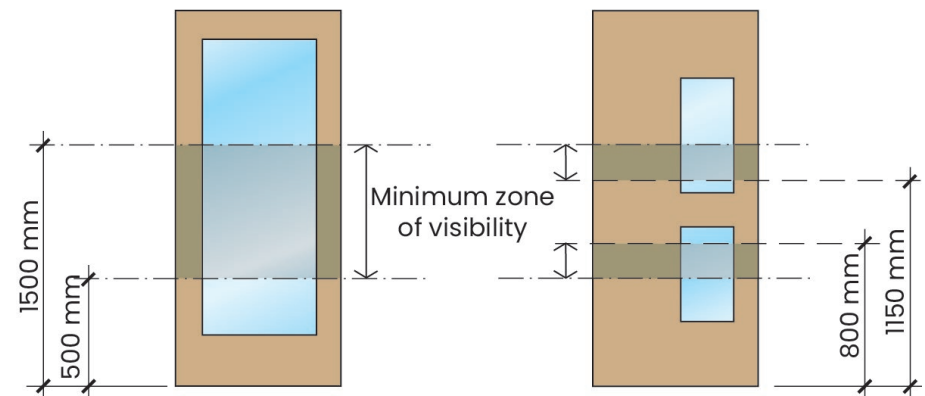
Figure C12 Doors – side clearances



3.7.4 Appearance

- It is important that visually impaired people can identify the door. The most effective way of achieving this is usually for the door to visually contrast with that of the wall. However, for doors that are held open, a visually-contrasting architrave is a helpful feature;
- The leading edge of all doors that are held open or are not self closing should be highlighted to contrast with the rest of the door so that it is more easily detected when the door is open;
- Vision panels should be provided in all doors (other than where there are security or privacy issues) to provide a viewing area at least 500–1500 mm AFFL, in accordance with AD M;
- Fully-glazed doors should be clearly identified by the frame and have visually-contrasting bands of manifestation or colour logos, ensuring they are also clearly distinguishable from any adjacent glazing;
- Glazing edges that can project into a space should achieve a minimum of 60 LRV points contrast with their backgrounds;
- BS 8300-2 contains further examples.

Figure C13 Doors – location of vision panels



3.7.5 Door closer and opening devices

A door that is heavy to open presents a significant accessibility barrier so all manually-operated doors should meet the opening force requirements set out in BS 8300 Section 8.2.2 and AD M:

- Doors that are easy to open benefit everyone and are less likely to be damaged;
- Wherever possible, use electromagnetic catches linked to the fire alarm to hold the door open during normal use;
- Ensure doors are regularly checked and maintained to ensure that a higher opening force is not required due to poorly fitting hinges or smoke seals.

It is helpful for doors on circulation routes to be:

- Held open during day-to-day use, linked to the fire alarm system if fire doors;
- Fitted with power-assisted opening (a door with a power mechanism that is activated when pushing or pulling on the door to reduce the opening force);
- Designed with push pad or sensor power-operated door opening devices.

All manually-operated doors that require a self-closing device are likely to exceed the maximum 30N opening force unless they are fitted with a cam-action closer.

Wherever there are power-operated doors, manual override should be catered for in the event of power or door failure – see Part D, Part F, and BS standards.

3.7.6 Door furniture

- All door handles, pull handles, push plates and lock apertures should visually contrast by a minimum 15 LRV points from the surface finish of the door;
- Lever handles should be fitted at 900–1100 mm AFFL, preferably 900 mm;
- Manual single-swing doors should have a kick plate on the push side to prevent damage to the base;
- On the push side of manual single-swing doors, there should be a push plate, not a pull handle;
- On the pull side of manual single-swing doors, there should be a horizontal grab rail and lever handle at 800–1050 mm AFFL (typically 900mm) in conjunction with a vertical “D” handle that should span from 1000 mm AFFL minimum to 1300 mm AFFL minimum to accommodate different reach requirements;
- Where it is necessary to install a door catch or lock rather than a latch mechanism to hold the door closed, an easy to grip lever handle should be fitted; with visually-contrasting escutcheons that contrast with the face of the door;
- Door knobs should not be provided as they are difficult to grasp;
- Provide a pull handle at an accessible height on outward opening doors with locks or where no external handle is fitted so that it is not necessary to use the door key to pull open the door;
- Final exits should have easy-to-use opening mechanisms, such as panic exit horizontal push mechanism in accordance with BS EN 1125 that enables a single operation to open the doors even when there are two door leaves;
- All door and ironmongery specifications should take into account the clear width requirements – see Figures C9 and C10.

3.8 Lifts

See BS 8300 Section 10.5 Lifting Appliances, AD M and AISF Part F Emergency evacuation.

The design and specification of any lift should take into account the likely spatial requirements, density of use, and functionality. For facilities with sports activities (e.g. basketball courts) above or below entrance level, a minimum of two large lifts will be required. For new buildings, passenger lifts designed to fire evacuation standards are expected in addition to any fire fighting lifts. See Part F 2.8 Evacuation by lift for further information.

3.8.1 Passenger lift

Passenger lifts for day-to-day access to other levels should be located close to the reception, main stairs and circulation routes. In new buildings, the lift specification should meet the following criteria:

- Any lift should conform to the requirements of relevant British Standards, such as BS EN 81-20 and BS EN 81-70. For evacuation lifts, see also AISF Part F and BS 9999 Annex G;
- In all but the smallest multi-storey facilities, at least two passenger lifts should be provided to ensure that users are not inconvenienced / stopped from using the facility if one lift breaks down or is being serviced;
- Where practicable, all passenger lifts should be designed to fire evacuation standard unless there is a suitable step-free alternative to facilitate independent escape from the building without carry down arrangements. See section 4 Emergency escape, Part F Emergency evacuation, and BS 9999;
- See Table C7 for minimum lift sizes and Table C8 for lift door clear width sizes appropriate for the size and scale of facility;
- There should be a clear landing space of at least 1500 x 1500 mm in front of the lift. Where sports wheelchairs are to be used, this should be increased to 1500 x 2000 mm;
- Opposite and adjacent to the lift there should be large embossed numerals/letters indicating the floor level that are clearly visible from within the lift car and on the landing;
- Accurate levelling at landings is critical. This is dependent on regular maintenance;
- There should be a minimum five-second delay to the lift door closing mechanism;
- Where the lift is part of the 'sports wheelchair zone', the lift doors will need to provide a clear opening of 1100 mm minimum (or 1200 mm minimum depending on sport-specific requirements) and the internal space be at least 2000 mm wide to accommodate a large sports wheelchair;
- Within the car and at each landing, there should be audible announcements and a clear visual display of the level reached;
- The lift controls should be clearly distinguishable, easy to operate and be within reach for wheelchair users. The buttons should have suitably-sized embossed numerals or symbols. Within the lift car, the controls should be located on a side wall. Larger lifts should have a control panel on each side;
- An alarm button should be provided, with a repeater light to show that the alarm bell has sounded. An additional button that can be reached from floor level within the lift car should be provided;
- The emergency communication system in the lift should incorporate inductive couplers to assist hearing aid users;
- Light fittings within the lift car should be designed and located so that they do not cause glare; there should be a minimum light level of 100 lux at floor level;
- The floor of the lift car should not be a dark finish as this can appear to be a void. (Note as many lifts have a dark or black floor finish as standard, a light shade should be specified at the time of procurement). It should be slip-resistant and have similar frictional qualities to the floor finish on the lift landings;
- Consider providing a fold-down seat in larger lifts.

Table C7 Accessible passenger lift sizes²² – minimum requirements

Passenger capacity	Load (kg)	Car width (mm)	Car depth (mm)	Door ²³ clear width (mm)
13 ²⁴	1000	1400	1600	900
17 ²⁵	1275	2000 ²⁶	1400 ²⁶	1100 (or 1200 ²⁵)

Notes

²² The lift size should reflect the scale of the facility and type of use. Through lifts (with doors at both ends of the lift car) are available from most passenger lift manufacturers. These allow wheelchair users to enter and leave without reversing, but will impact upon the building layout. In all but the smallest multi-storey facilities, at least two lifts should be provided, one of which as a minimum should be an evacuation lift – see section 4.2.

²³ Lift doors should be easily distinguishable from the adjoining wall. The doors should remain open for a minimum of five seconds to allow adequate time for entry.

²⁴ A 13-person passenger lift is the recommended minimum size. For the very smallest facilities such as a clubhouse, an 8-person lift (1100 x 1400 mm) may be suitable to meet minimum requirements for an accessible lift (not serving a sports wheelchair zone), but can only carry one wheelchair user at a time. See BS EN 81-70 standards.

²⁵ Where the lift is part of the 'sports wheelchair zone' (see Figure C6), the lift door may need to provide a clear opening of up to 1200 mm to accommodate large sports wheelchairs and an appropriate increase in car size depending on sport-specific requirements.

²⁶ For some locations, e.g., with through lifts, the 17-person car width and depth minimum dimensions can be interchangeable to suit building configurations and user requirements.

Figure C14 Lifts – critical details

Note: All dimensions are in millimetres

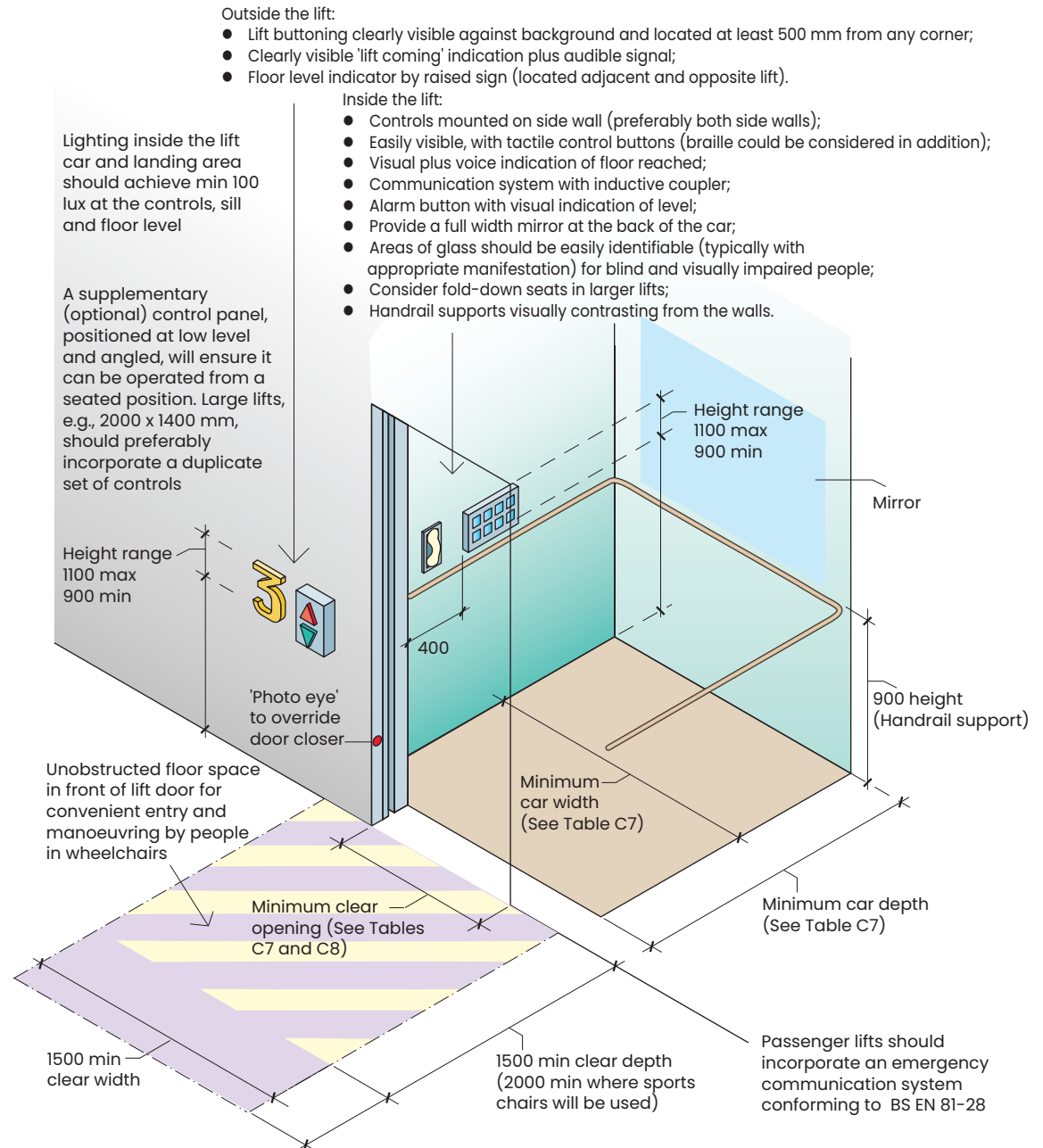


Table C8 Lift door requirements – minimum provision

Notes		Clubhouse / outdoor								Indoor								Pools		
● = Required ○ = Recommended All door sizes and specifications are subject to meeting Building Regulations AD B and AD M, and British Standards BS 9999 and BS 8300.		Clubhouse/hub (small)	Clubhouse/hub (large)	Artificial pitch	Athletics outdoor	Bowls outdoor	Cycle/track facility	Multi-use games area (MUGA)	Tennis outdoor	Athletics indoor	Bowls indoor	Cricket indoor	Fitness suite / Gymnastics hall	Sports hall (4 / ≤8 courts)	Sports hall (≥9 courts)	Table tennis centre	Tennis indoor	Swimming pool (≤20 m)	Swimming pool (25 m)	Swimming pool (50 m)
Provision																				
Smaller-scale facilities ²⁷ : 900 mm minimum clear width	See section 3.8.1 and Figure C14	●	●	●	●	●	●	●		●	●		●			●		●	●	●
Larger-scale facilities ²⁸ : 1100 mm minimum clear width	See section 3.8.1 and Figure C14								●	○		●	○	●	●		●			○

Notes

²⁷ Where the lift is part of a 'sports wheelchair zone', the lift doors should have an effective clear opening width of 1100 mm or 1200 mm to accommodate large sports wheelchairs and an appropriate increase in car size depending on sport-specific requirements – see Table C7 for minimum lift car sizes recommended.

²⁸ Where, e.g., a sports hall is located above ground level, the 'sports wheelchair' zone will extend from ground floor level up to the floor level where the sports hall is located and therefore any lift doors etc. may need to provide 1200 mm minimum clear effective width depending on sport-specific requirements.

3.8.2 Vertical lifting platform

For all facilities, a passenger lift is the most suitable form of vertical access. However, in very exceptional circumstances, where a passenger lift is not practicable or a suitable ramp cannot be accommodated, a vertical lifting platform may be considered where the travel distance is no greater than 3.5 m. Vertical lifting platforms are much slower than passenger lifts and do not provide an equivalent quality of service. For example, they require continuous pressure on the control button and many disabled people are unable to operate them independently. Lifting platforms are therefore not encouraged for use in sport and leisure facilities.

The following should be noted:

- The installation should meet BS EN 81-41, AD M, and BS 8300;
- The minimum clear internal platform size should be at least 1100 mm wide x 1400 mm long²⁹, but it should be noted that this will not meet the space requirements of many motorised wheelchairs which can be 1500–1600 mm long. The orientation of the dimensions is also critical; an 1100 mm deep platform cannot accommodate the typical length of an occupied wheelchair;
- The lifting platform should be rated to carry at least 385Kg. Note that a greater load rating will be required where the lift needs to accommodate larger or power chairs;
- A through lifting platform (i.e. with two door openings opposite one another) can be helpful in eliminating manoeuvring when entering or leaving the lift;

- The platform should run in a lift enclosure, which may need to be fire protected. In some situations, and where the travel distance is less than 1.5 m, it may be considered suitable not to have a full-height lift enclosure. However, an enclosure is required at lower levels to protect users and the public coming into contact with a moving lift car;
- The lift speed should be as close as possible to the maximum allowed speed of 0.15 m/s;
- A 1500 x 1500 mm unobstructed manoeuvring space should be provided adjacent to the lift entrance at each level;
- Emergency alarm and intercom, with stand by power and fitted with an induction loop;
- Emergency lighting with at least 1-hour duration;
- Provide suitable signage etc. as required for passenger lifts – see section 3.8.1;
- For further guidance on lifting platforms, see CIBSE Guide D Transportation systems in buildings.

To ensure that users can evacuate the platform in an emergency, it should be fitted with a battery back-up to operate the lifting platform in the event of power failure, and a suitable plan and associated training developed.

Vertical lifting platforms are much slower than passenger lifts and do not provide an equivalent quality of service ... and are therefore not encouraged for use in sport and leisure facilities.

²⁹ The Department for Education's Building Bulletin 102 has a minimum lift size requirement for secondary schools of 2000 x 1400 mm.

3.8.3 Wheelchair stair lift

A wheelchair stair lift is a stair-climbing platform fitted on a staircase. It is not an acceptable means of access for any type of sports or community facility as it compromises amenity and safe use of the staircase and does not provide a safe and dignified access solution for a public building.

A wheelchair stair lift is a stair-climbing platform fitted on a staircase. It is not an acceptable means of access for any type of sports or community facility.

3.8.4 Lift standards

Designers should ensure that any lift conforms with relevant British Standards, including the latest edition of the following where appropriate:

- BS 9999 Fire safety in the design, management and use of buildings – Code of practice (Note: for lifts that are designed as an evacuation lift, see Annex G);
- BS EN 81-20:2020 Safety rules for the construction and installation of lifts – lifts for the transport of persons and goods. Passenger and goods passenger lifts (Incorporating corrigendum April 2021);
- BS EN 81-21:2022 Safety rules for the construction and installation of lifts – lifts for the transport of persons and goods. New passenger and goods passenger lifts in existing building;
- BS EN 81-70:2021+A1:2022 Safety rules for the construction and installation of lifts – Particular applications for passenger and goods passenger lift Part 70: Accessibility to lifts for persons including persons with disability;
- BS EN 81-71:2022 Safety rules for the construction and installation of lifts – particular applications to passenger lifts and goods passenger lifts. Vandal resistant lifts;
- BS EN 81-72:2020 Safety rules for the construction and installation of lifts – Particular applications for passenger and goods passenger lifts Part 72: Firefighters lift;
- BS EN 81-73 Safety Rules for the construction and installation of lifts – Particular applications for passenger and goods passenger lifts Part 73 Behaviour of lifts in the event of fire.

See AISF Part F for further information on emergency evacuation.

4 Means of escape

This section highlights the importance of inclusive emergency egress design and evacuation planning and provides references to more detailed guidance.

An inclusive sports or community facility is dependent on good access throughout the building and equally robust egress arrangements.

Independent and dignified evacuation for everyone is a primary aim and a well-designed facility should minimise the amount of support and management required. Some key considerations are given below but AISF Part F should be referred to for more information on design and management for this important area. Part H covers everyday management actions relevant for people with additional evacuation requirements.

4.1 Evacuation planning

From an early stage in the project, detailed consideration should be given to how people requiring assisted or supported escape due to a physical or sensory impairment or difference, or medical condition, will be evacuated from the building. Safe and successful evacuation planning may be dependent upon:

- Design of the building, for example, the inclusion of fire evacuation lifts, appropriate refuges, layouts and routes, in particular the sports wheelchair zone where users could be evacuating the building using their sports wheelchairs and where higher numbers of wheelchair users may be present;
- Management arrangements should maximise independence wherever practicable. Policies and procedures for evacuation should be considered from the outset;
- The establishment of robust Personal and Generic Emergency Evacuation Plans (PEEPs and GEEPs) for both regular users and anticipated plans for unknown requirements should be thought about early.

Independent and dignified evacuation for everyone is a primary aim and a well-designed facility should minimise the amount of support and management required.

In most cases, a combination of design and management considerations will be needed for a successful and robust evacuation plan. Early consultation should take place, initially between the design team and the building manager, to establish:

- The physical features that should be included to support means of escape for everyone including people with support or assistance requirements;
- The numbers of staff that might be available and suitable to provide support or assistance;
- The communication systems that can be put in place to ensure that this information is conveyed to everyone using the building including people with sight or hearing loss, sensory processing or learning difference;
- Suitable assembly points.

This information should then feed into the fire evacuation strategy and plan for the building, and be added to the A&I file. In all but the smallest projects, the design team should then consult with the Registered Building Control approver and the fire specialist to obtain advice and guidance on the proposed building, including the building management system (BMS), and evacuation strategy. In complex or larger projects, a fire consultant may be required in order to prepare the fire strategy.

Further details can also be found in BS 9999 Fire safety in the design, management and use of buildings – Code of Practice.

4.2 Inclusive evacuation arrangements

It is not possible to accurately determine the numbers of people using the building who may require assistance or support to evacuate. The following are examples of potential users with a wide range of additional needs:

- Wheelchair users and people who find stairs difficult;
- People with a range of physical or sensory disabilities;
- People who are deaf or hard of hearing, blind or partially sighted;
- People with sensory processing or learning differences;
- People with respiratory, heart and other hidden health conditions;
- People with temporary health circumstances such as pregnancy, sports injury, during rehabilitation;
- People with anxiety, phobias and other mental health conditions affecting the ability to evacuate safely in a timely fashion;
- Children of all ages, with and without parents or guardians.

People will therefore require appropriate information and support, and some will require facilitated or assisted evacuation processes.

In order to anticipate and predict the level of intervention required, an assessment should be made, informed by consultation and engagement and the type of facilities and activities offered. For example, a sports or community facility with an older demographic or with rehabilitation classes is likely to have more people who find stairs difficult, or one used for training for events such as the Paralympics will also attract and expect a higher number of disabled people (not just as competitors but also as spectators).

The capacity of the building in terms of supporting independent evacuation is a critical component when developing designs. A building that provides step-free egress is much easier to manage. Where one or more fire fighting or fire evacuation lifts exist, this will form a significant part of the evacuation plan and make evacuation faster, safer and ultimately more cost effective than other methods. An evacuation plan still needs to be prepared to document the process for people reaching the lift and who will operate it, but thereafter the complexities of assisted evacuation via stairways is largely avoided.

It is important to fully assess and recognise the risks and hidden costs of providing staff to assist escape and the ongoing expense of providing and maintaining evacuation devices suitable for a wide range of requirements when evacuation lifts are not provided.

Key considerations for safety include:

- Step-free routes, e.g., level or with ramp(s) and/or evacuation lift(s);
- The position and number of evacuation lifts;
- Stairs that are safe to use;
- The location, size and design of safe waiting areas (refuges) whilst awaiting the lift or assistance;
- The building's passive and active systems in event of a fire;
- The type of warning and alarm system;
- Communication systems informing people before, during and after the event;
- Availability and training of staff to direct, support or assist with evacuation.

Further information can be found in section 3.8.4 and Part F Emergency evacuation.

5 Social and amenity spaces

This section provides an overview of key elements and criteria to consider for social and amenity spaces.

Social areas and amenity spaces should give unhindered access to disabled people either independently or with companions. All corridors and doors leading to refreshment/social areas should meet minimum standards for the facility.

Many refreshment and social areas have hard finishes and can become very noisy at busy times. Absorptive finishes such as acoustic ceiling tiles and other acoustic treatments should be considered. Adjustable lighting that offers different lux levels and colour temperatures will be helpful in using the space differently throughout the day or evening for different types of activity.

The design of furniture and fittings, such as seating, tables, benches and counters, should be designed and specified to be safe for everyone. For example, by avoiding sharp corners that create hazards for young children as well as elderly people who are more susceptible to injuries such as bruising.

5.1 Layout considerations

- Tables and chairs should generally be placed in a regular layout rather than a random or complex arrangement. However, this does not preclude non-rectilinear layouts. BS 8300-2 Figure 28 provides guidance for spaces between tables;
- A consistent layout for day-to-day use is helpful in enabling people to become familiar with the space over time and aids ease of navigation for people with visual impairments;
- Gangways in primary routes between tables and other furniture and fittings should have at least 1200 mm clearance, after allowing for when the chairs are in use;



- Definition of seating and activity areas by different colours of floor finishes is helpful for permanent features but may limit the flexibility to have different layouts for alternative uses, such as special events. Changes in floor contrast over 10 LRV points can also cause difficulties for some people when moving from one surface to another.

5.2 Tables and counters

- Tables should be stable but movable to allow maximum access within social areas and allow reconfiguration for different events or circumstances (modular and stackable tables may be helpful);
- Consider the use of tables with legs rather than a central pedestal. This will help with stability if the table is used to support a person rising from their seat and will be detectable by a long cane user;

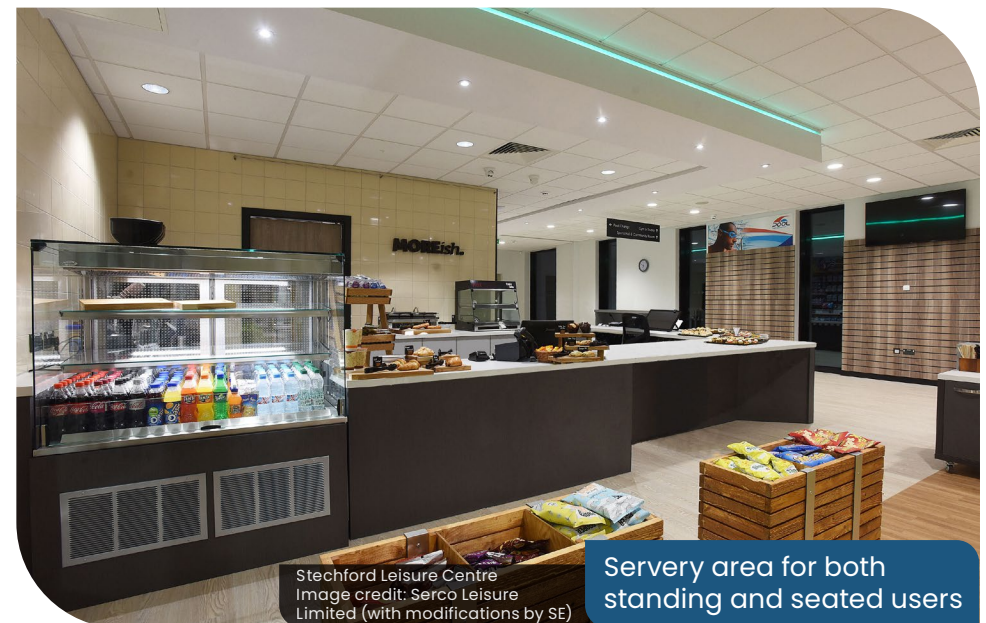
- Tables should have a minimum 800 mm clearance between legs and a knee recess not less than 700 mm AFFL to allow for comfortable wheelchair access;
- Avoid the use of glass tables which are unsuitable for young children and may not be seen by older people or people with a range of visual impairments;
- Where perimeter counters are included with stool or bench type seating – high stools should be avoided.

5.3 Seating

- A mix of seating should be provided in social areas, with and without arm rests. See BS 8300-2;
- Seating should be stable and easy to rise from, the majority of which should have backrests;
- A seat height of 450–480 mm AFFL is preferred for use at tables; 480 mm AFFL is the preferred height of seating for wheelchair transfer;
- Highchairs should be available on request. Seats should be easy to clean;
- Seating should be arranged to allow wheelchair users to sit alongside others without obstructing the general circulation routes. See Figure C3 and Part B 5.7.1;
- Seating should contrast visually with surfaces it will be seen against, in particular floor finishes;
- Acoustics should be considered so that conversation remains intelligible. Acoustic panelling or other measures to absorb some of the sound reflection from hard surfaces may be required.

5.4 Servery

- Bars and self-service counters should be accessible. A continuous self-service tray counter height of 850 mm AFFL should accommodate standing and seated users. Ensure that any support brackets for any projecting shelf or tray slides do not impede wheelchair access;
- Where tray slides are used, they should be continuous to the till. It is helpful to incorporate a leaning rail for walking sticks at the till and during self service;
- Clean tray collection stands should be positioned such that they do not impair movement of customers;
- Regular tray collection and waste disposal systems should be in place;



Stechford Leisure Centre
Image credit: Serco Leisure
Limited (with modifications by SE)

Servery area for both
standing and seated users

- Ensure glass display cabinets are apparent to all users and are not highly reflective;
- Menu boards should be located in a prominent position at an accessible height and with sufficiently large text for easy reading;
- Induction loops should be fitted at serving counters and pay points, with clear symbol signage;
- Glare caused by natural light, artificial lighting and shiny surfaces can cause disorientation and discomfort to blind and partially-sighted people and are not conducive to lip reading;
- Glare can be minimised by controlling natural light entering the space and through the careful design of artificial lighting;
- Avoid specifying large areas of polished stainless steel and other shiny surfaces. Brushed stainless steel and other mat finishes will help to avoid reflective glare;
- The design of the preparation area(s) should consider separate zones for different food types or dietary requirements.

See also Part H for management recommendations for social, amenity and refreshment areas.

5.5 Vending machines

- Vending machines should have clear display panels and instructions with raised tactile controls rather than touchscreen controls. Pictorial identification of products next to the controls is also helpful as is Braille and audio description;
- The coin slot should be between 750 mm and 1000 mm AFFL;



- There should be adequate manoeuvring space of 1500 x 1500 mm minimum in front of the vending machine for wheelchair users. As there can sometimes be queues for use of vending machines, this should be factored into the layout and positioning, so that it is possible to easily manoeuvre around the queue to pass through the area without obstruction;
- Vending machines should not restrict clear width requirements and should ideally be located outside circulation routes and within a recess;
- Appropriate signage will aid navigation to the vending machines location along main circulation routes.

5.6 Quiet / restorative spaces

The creation or adjustment of a space to provide a quiet, reflective, restorative area or room can be very beneficial for many people and especially people with sensory hypersensitivity which can be present with many neurodivergent traits, such as Autism, experienced as part of a neurodegenerative condition such as Dementia, or at certain times due to hormonal changes. The presence of such a space is also beneficial for people experiencing stress or poor mental health and such spaces are used for unexpected episodes in order to reset and find calm during sensory overload or distress.

The creation of such spaces can be informed by design guidance contained in PAS 6463 Design for the Mind, Neurodiversity and the Built Environment (see page 4 link). They also rely on appropriate management to ensure they are left in good condition, not used for other purposes, and are readily available for most people when needed at short notice – see Part H 3.8.6.

A quiet/restorative space is usually quite small and intended for 2–3 people only. Such spaces benefit from having features that can be adjusted to suit individual requirements that may include:

- Lighting and blinds or curtains that are adjustable to create a suitable light levels and ambience to suit user needs. Lamps should not flicker, cause glare, or be too bright. Visually impaired people, people with photosensitive epilepsy, and people with visual hypersensitivity, are particularly affected by bright lighting, glare and flicker;
- The presence of biophilic features, such as any living/green walls or plants, can be beneficial to some users but require careful management and maintenance. Alternatively, outside views, images of greenspace, or even good-quality imitation plants can be also be appreciated;

- Layouts that are predictable, matt finish with minimal reflection or glare, and offer good sightlines will benefit people with differences in vestibular and/or proprioception;
- Clarity of layouts that provide sufficient clear manoeuvring space for wheelchair users and people with child buggies or carrying sports equipment;
- Storage provision close by for any sensory stimulating items that need to be brought out before and put away after a visit;
- A space that creates a calm environment and avoids patterns that may adversely affect people with conditions affecting balance, gait or movement, such as Meniere's, Parkinson's, or dyspraxia;
- Avoiding adjacent flooring transitions between light to dark that visually impaired people can sometimes perceive as a step, drop or obstruction. Also, people with certain neurodivergent conditions and Dementia can perceive sudden, high contrast changes in finishes as a barrier that they cannot cross.

All of the above are particularly critical in quiet/restorative spaces, but they also make a significant difference elsewhere in the facility and should be taken into account wherever possible.

Wherever practicable, quiet rooms / restorative spaces should be dedicated for that purpose only. Where these spaces are shared use, e.g., doubling as multi-faith spaces, see considerations set out in section 5.7 and Part H 3.8.7

Wherever practicable, quiet rooms / restorative spaces should be dedicated for that purpose only.

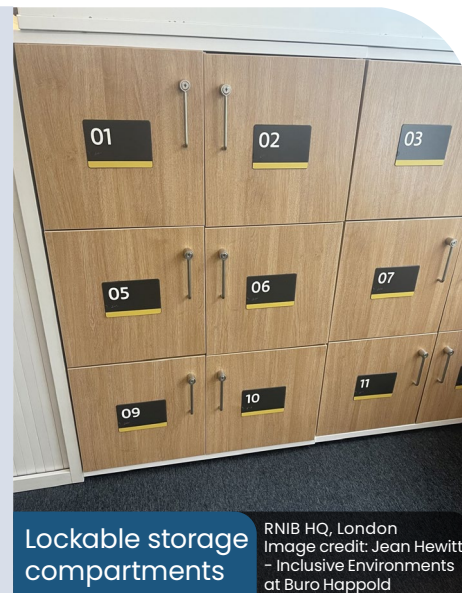
5.7 Multi-faith facilities

As part of the community consultation, it is important to identify through stakeholder engagement any specific requirements that need to be addressed. For example, consideration should be given to the location, size, layout, faith and/or gender separation, plus regard for whether a single private space is required or a larger facility is preferred.

Provision of storage is very important to ensure users of multi-faith facilities have sufficiently-sized, compartmented and sometimes lockable storage for religious items to be carefully stored away at the end of each use. Lockers may be one way of making this provision. This provides a neutral setting for the next user/s rather than being perceived as dominated by any particular group.

See Part H 3.8.7 for further information on the management of multi-faith facilities.

Provision of storage is very important for religious items to be carefully stored away at the end of each use ... Lockers may be one way of making this provision.



Lockable storage compartments
RNIB HQ, London
Image credit: Jean Hewitt
– Inclusive Environments
at Buro Happold

Facilities should generally be designated as faith spaces rather than multi-purpose where uses may be incompatible. However, whether the spaces are multi-faith or shared use, e.g., doubling as a quiet/restorative space for people experiencing sensory overload or anxiety, potential conflicts might be successfully overcome by the following provision:

- Adequate storage space, set up to segregate items for different uses – this includes religious texts that need to be kept separate for each faith, as well as separation of items for other uses, such as blankets and stimming devices for quiet room use.
- Engaged sign and latch (openable from the outside in an emergency) to indicate when in use;
- Reminder notices about protocol and use;
- Allowing access for people who remove shoes, but this is optional in both multi-faith and shared-use spaces;
- Suitable seating – at least one upright chair with armrests (stacking chairs will allow more seats to be provided for some use, such as bible reading), softer seating for quiet space use, and adequate room for prayer mats (these are not a set size);
- Indication of direction of Qibla for prayer should be permanent and out of reach – a discreet location on the ceiling for a small arrow indicator should suffice.

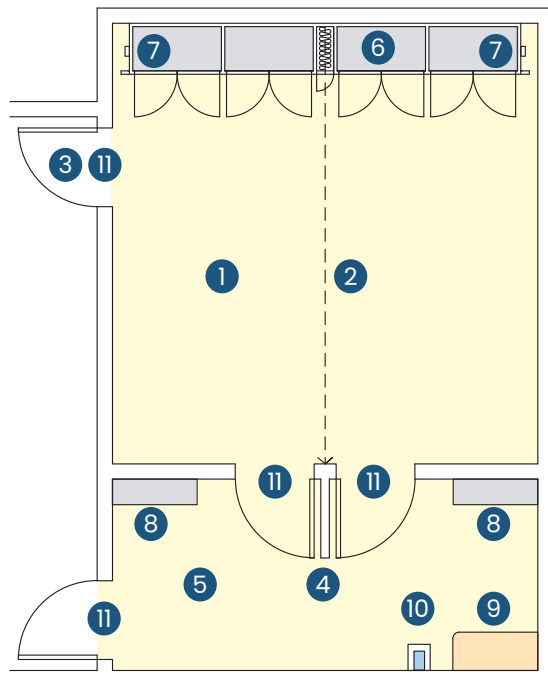
5.7.1 Location

The location of the multi-faith and associated facilities can be critical in terms of proximity to suitable amenities, such as wudu facilities where provided, as well as ideally being positioned away from noisy areas or where alcohol may be served. There is no specific orientation required for a prayer room; the direction of prayer is important for some faiths, but this can be indicated within the room and there are mobile apps which will confirm the right direction (see Part H 3.8.7).

5.7.2 Layout

The size and design of a multi-faith facility should be influenced by anticipated use identified during stakeholder engagement. However, as an example, an individual clear floor space for Salat for one individual is typically 750 mm wide by 1300 mm deep. A modestly-sized multi-faith facility might be approximately 25 m² – an indicative arrangement with the flexibility to separate the space for gender or faith is shown below:

Figure C15 Example multi-faith facility layout



Key:

1. Multi-faith room with approx 25 m² total floor area
2. Curtain divider (or retractable partition) for flexibility of use
3. Staff access and emergency exit
4. Two entrance doors to allow independent access
5. Lobby dimensioned to allow access for wheelchair users with carer or companion, with circulation to achieve 1500 mm minimum clear width with 1800 mm passing places
6. Storage units
7. Concealed ambient lighting feature
8. Shoe rack
9. Bench seat (smooth) at 480 mm AFFL with rounded corner
10. Water fountain
11. All doors to achieve minimum clear width requirement

5.7.3 Lighting

Providing adjustable lighting is helpful, with both dimming and colour temperature control, as some faiths prefer to achieve an ambient effect similar to candlelight (which is not allowed due to the fire risk). Concealed ambient lighting can help provide a contemplative atmosphere.

5.7.4 Finishes

Finishes should not include patterns that may cause visual disturbance such as bold stripes or blocks of highly-contrasting colours. Finishes should be neutral of any faith suggestion, and easy to clean. To manage water transfer and bacteria control, consider using carpet tiles at the entry points to the prayer space.

5.7.5 Fixtures, furniture and fittings

A shoe rack for footwear just inside the door is essential. Storage for prayer mats should also be provided, so that these are not walked upon by people wearing shoes or left out when not in use. Suitable storage should also be provided to ensure religious items of any type can be stored away within the room, with a storage space for each faith. This will enable the space to be easily tidied by each group to maintain a neutral setting for the next use.

If any other furniture is placed within the space, it should ideally be movable to provide a clear area for prayer. An upright chair with arms (not leather) is helpful for anyone who prefers to sit or has difficulty kneeling.

5.7.6 Further reference

Further guidance on multi-faith facilities can be found within the latest version of the Inclusive Design Standards publication by the London Legacy Development Corporation (LLDC).

6 Communication technologies

This section covers technological features and communication systems such as assistive listening and smartphone applications.

6.1 Public telephones

Access to a telephone is particularly important to help many people maintain their independence. Most people now use mobile phones, which reduces dependency on public landline phones. However, except for small pavilions and clubhouses, all sports and leisure facilities should consider having a public telephone that can be used by everyone in the event of a mobile phone not being available or no service available. Where provided, these should:

- Be located where there is minimum background noise and be approachable from the front and the side;
- Be fixed at a height which allows access by children and people of short stature and wheelchair users;
- Be fitted with an inductive coupler and volume control to assist hearing aid and cochlear implant users;
- Have a raised tactile button on the five numeral;
- Have a shelf to enable the use of a portable technology;
- Be clearly signposted and located so that the phone and user do not create an obstruction or hazard;
- Have an unobstructed space of 1500 x 1500 mm in front of the telephone.

See Part H 3.8.10 Telephone access for further considerations.

6.2 Public address systems

These should be clearly audible and wherever practicable, supplemented by visual information. Details of systems designed to assist people who are deaf or hard of hearing can be obtained through the Royal National Institute for Deaf People (RNID) website (see Appendices for useful organisations).

6.3 Text and video relay

In addition to email, mobile phone SMS messaging and social media, people with hearing loss may use relay (BT NGT Next Generation Text Relay) and video relay (VRS) services to communicate over the telephone via a third party relay operator. Sports facilities should be capable of communicating with users with hearing loss via email, SMS text messaging, text relay and video relay services to facilitate bookings and general enquiries, with staff trained in use of these systems and provided with the appropriate technology.

6.4 Digital apps

Some widely available apps allow group or team set ups for information sharing and these are becoming a common way to communicate dates and times etc. Bespoke apps used on an individual's smartphone can provide support and information in a wide variety of ways, allowing live or recorded information to be received and sometimes shared, from the current score to wayfinding and evacuation information. Some apps have the flexibility to be more tailored to specific individual requirements, with layers of information in different formats, for example providing audio commentary with added description to someone who is visually impaired, or text that can be increased in size or in a different colour or with a screen overlay. See Part E 3.3.

It is critical that both websites and apps are accessible for all users³⁰. Alternatives that do not rely on having technology such as smartphones, should always be provided.

³⁰ The UK digital accessibility regulations require public bodies to adhere to a European standard EN 301 549, which is aligned to WCAG 2.1 Level AA standards. An accessible website or mobile app under these regulations must be "perceivable, operable, understandable, and robust. See: <https://www.gov.uk/guidance/accessibility-requirements-for-public-sector-websites-and-apps> .

6.5 Assistive listening systems

Assistive listening systems assist people who are deaf or hard of hearing and there are four traditional types to consider: induction loop, infrared, radio and soundfield systems, all developing use of wifi and Bluetooth.

It should be noted that not all people with hearing loss are able to benefit from an assistive listening system and that visual communication using sign language interpreters, lip speakers, speech-to-text palantypists and notetakers may also need to be considered.

Assistive listening systems can also be helpful to some people with hypersensitivity to noise, sometimes associated with a neurodivergent condition affecting sensory processing.

6.5.1 Induction loops

Induction loops can help many hearing aid and cochlear implant users to communicate. Sound from a microphone or sound system is converted into an electrical field and fed into a loop producing a magnetic field. Prompted by the display of clear symbol signage to indicate the presence of an induction loop, hearing aids are set to the 'T' position to pick up the information generated. Induction loops that meet BS 7594 and BS EN 60118-4 should be fitted:

- At reception and refreshment points;
- In meeting rooms;
- In dance and exercise areas;
- In other areas where aural information is given, such as spectator areas in order to hear commentary and at refreshment counters.

Counter loops enhance two-way communication at reception desks, service counters, and tills. They are usually a mains powered fixed installation with two microphones, one either side of the counter. Ensure that electromagnetic interference from cash tills and other equipment is avoided.

A room loop system comprises a microphone, amplifier and loop of wire which is laid round the perimeter of the space. Although they are designed to amplify sound within the loop, there is always some overspill, because walls, ceilings and floors do not block magnetic fields. This means hearing aid users outside of the looped area may be able to overhear conversations. For this reason, it is not generally advisable to install induction loops in adjacent rooms, including rooms directly above or below if confidentiality is likely to be an issue. This may be a problem for committee rooms or private consultation rooms where confidentiality is important, and in these cases it may be more suitable to use an infrared system.

Portable table-top loops are suitable for one-to-one discussions – placed on a table, they relay sound to a hearing aid user up to one metre away and may be suitable for consultation rooms.

6.5.2 Infrared systems

Infrared systems work by converting the sound into an infrared light signal and users wear a receiver headset or neck loop to pick up the signal. Infrared systems can transmit a higher quality of sound to the user than induction loop systems. One or more infrared radiators may be needed, depending on the size of the space.

Infrared systems are based on light and operate at different frequencies, therefore sound cannot be picked up outside the room in which the infrared signals are generated thereby, maintaining confidentiality. Infrared light is absorbed by sunlight and therefore these systems are not suitable in some contexts, for example within the seating bowl of an outdoor stadium.

The head sets are expensive and need to be issued and retrieved, charged, cleaned and stored whereas induction loops utilise the users own hearing aid as the receiving equipment. However, the infrared receiver can be linked to a person's own hearing aid by means of a small induction loop worn around the neck.

The management responsibility for issuing and retrieving the receivers and neckloops and their sanitisation after use will need to be considered.

6.5.3 FM radio systems

FM systems are wireless assistive hearing devices that enable hearing aid and cochlear implant users and people with hearing loss who do not wear hearing technology to hear sound over distance and in noisy environments, utilising free frequency bands that do not require a licence. They can be used in conjunction with radio microphones, such as in aerobics classes. The trainer wears a transmitter and is able to move around. The radio signal can usually be received up to a distance of 60 m. The management responsibility for issuing and retrieving the receivers and neck loops and their sanitisation after use will need to be considered.

6.5.4 Soundfield systems

Soundfield systems consist of a series of speakers positioned at intervals within a space, which enable a person at the rear of the space to hear as clearly as someone at the front. All soundfield systems raise the level of the speaker's voice and allow complete freedom of movement as there is no need to wear a transmitter/microphone. Where a soundfield reinforcement system is fitted, it should be linked to the assistive listening device (induction loop, infrared or radio system so that the same microphones can be used with both systems in operation simultaneously).

Soundfield systems tend to be used in education and assembly spaces.

6.6 Wifi and Bluetooth

Sound can be transmitted from a source connected to a wifi network to reach a personal device such as tablet or smartphone and from there to a Bluetooth-enabled hearing aid or cochlear T-coil or alternative receiver.

Venue users need to be informed to bring their own device and that secure access is provided via an app. This is a developing area, and has shown some good use in sports and fitness venues but is not currently widely available. There can be a time delay between voice and ear.

Currently, such systems may be beneficial to people with digital hearing aids able to link via Bluetooth, but many people do not have this option or would not be able to easily set them up without guidance. Therefore, such systems should operate in conjunction with, rather than instead of, the more established technologies.

A web search for 'Available Assistive Listening Technologies' can be helpful to identify appropriate systems for user devices.

6.7 Visual display screens

The use of technology, such as visual displays, can play an important part in providing information to visitors, such as current waiting times for pool access, activity timetables, or court bookings. Sometimes smaller screens such as tablets can be used to supplement fixed signage by providing an updatable display of information, including last minute changes, emergency evacuation, or directions to special events. Screens can also be used to show sensory information, such as pool temperature, air quality, parking spaces available – the opportunities are endless.

It is very important that where technology is used, it does not become the only way to access information. Not everyone is able to use technology; people with visual impairments will require audio information, people with hearing loss will need subtitles or information in a written format (or perhaps BSL interpretation), and people with epilepsy may need reassurance that the content has been tested and does not have any flashing images or potential triggers.

In general, information should always be available in as many modes as possible that may include visual, audio, tactile, and non-digital (such as fixed signs and notices).

Visual displays, including display screens in reception used to convey film footage promoting services or showcasing sports and activities offered, should never be positioned behind the reception counter unless very high and outside the usual peripheral field when communicating, as this will be distracting and may create sensory overload for users. Ideally, such screens would be displayed in areas that can potentially be avoided or fleetingly passed.

Some further considerations are:

- Positioning of the screen to avoid glare or reflectance. Interactive screen displays should be shielded from direct sunlight or bright light to prevent glare;
- Scrolling images or text should not be used, as this can create difficulties for people with some sight and vestibular conditions;
- The volume of audio output should be considered – it may make communications in the vicinity difficult, particularly for people with hearing loss or with sound hypersensitivity, such as often experienced with many neurodivergent conditions;
- The controls for visitors (if any) should be within reach for everyone and intuitive to use and visually contrasting.

7 Finishes

This section covers a range of acoustic, visual and tactile requirements for finishes to promote an inclusive sensory-friendly environment for all users.

The suitable selection of finishes is very important for all users, including disabled people. Unsuitable finishes can make the building difficult to use and can lead to confusion and possibly hazards.

7.1 Acoustic requirements

7.1.1 Background noise levels

High levels of background noise can make it difficult for deaf or hard of hearing people to communicate with facility staff or other customers/ colleagues, and can cause anxiety and stress in many other people.

7.1.2 Hard and reflective surfaces

Spaces designed exclusively with hard surfaces should be avoided. They are likely to be noisy and reverberant spaces that are confusing and/or uncomfortable for some people, such as someone with a sensory processing difference or hearing loss.

- All rooms and spaces should have some sound-absorbent surfaces to provide a suitable acoustic environment, such as acoustic ceiling tiles, carpets and other soft furnishings;
- Acoustic treatments are available that are purposefully-designed for areas like sports halls³¹ and courts where walls need to be impact resistant;
- Avoid invasive noise through window and door openings, or transmitted through structure generated by services, equipment or other users;
- Where possible, separate quieter areas away from noisy areas by incorporating buffer zones.

³¹ For sports, a reverberation time of 1.5 to 2.0 seconds should be achieved.

For examples of more detailed considerations, see Sports Halls Design and Layouts design guidance note section 6.0 and Affordable Sports Halls Appendix 5 Acoustics available at:

<https://www.sportengland.org/guidance-and-support/facilities-and-planning/design-and-cost-guidance/sports-halls>

7.2 Visual requirements

7.2.1 Visual contrast

Colour should be carefully considered to enhance the facility's aesthetic qualities and to optimise the practical use of the building, particularly for visually impaired people to move around without difficulty. Vibrant or vivid colours should be used sparingly as they can cause sensory overload for some people.

80% of people with sight conditions benefit from good visual contrast, which can maximise independence when navigating spaces. Visual contrast is most important to detect adjacent finishes such as floor, wall and ceiling surfaces to interpret the size and shape of the space, and identify doors, barriers and other features. Visual contrast is measured in light reflectance value (LRV) points with a scale from 0 (pure black) to 100 (pure white).

For large adjacent surfaces, a visual contrast of at least 30 LRV should be achieved. For small details such as sign content or switch surrounds, a minimum of 70 LRV is recommended.

For large adjacent surfaces, a visual contrast of at least 30 light reflectance (LRV) points should be achieved.

Guidance on assessing suitable visual contrast is provided in BS 8300-2 Annex B.

- Good colour contrast is generally required throughout interiors to assist visually-impaired people, and in turn help to create an interior that is acceptable to everyone;
- The leading edge of doors should contrast with the main body of the door;
- Floor and stair colours should be sufficiently different from adjacent wall finishes;
- Any internal surfaces with a gradient (ramp or slope) should have a visual contrast from adjacent level surfaces;
- The edges of steps should have strong contrast on both the riser and the tread in accordance with BS 8300 and AD M. For step nosings, a minimum of 60 LRV points difference is recommended wherever practicable;
- All furniture and fixtures should contrast visually with the surfaces they are seen against so that they can be identified and navigated around, for example a reception counter or table and chairs should contrast from the flooring on which they are placed, and any nearby walls. Fittings such as grab rails and sanitaryware should visually contrast against wall and floor finishes. For example, the 'all white' appearance of white wall tiling as a background to white sanitary fittings should be avoided – see Part D;
- Where a wall and floor colour do not provide the required level of visual contrast, the skirting can be used to introduce a visually defined border which is helpful;
- Product and paint manufacturers often provide the LRV value of a colour or product upon request. Alternatively, a colorimeter can be used, or colours matched against a colour swatch from paint manufacturers.

7.2.2 Reflective finishes

- Walls and floors with a glossy appearance can confuse or disorientate visually impaired people, as well as creating sensory overload for some people – see Part A section 2.2.8 Neurodiversity and cognition;
- Glossy surfaces should be avoided – use matt or low-sheen finishes.

7.2.3 Use of patterns

- Highly-patterned floor and wall finishes should be avoided as they can cause difficulties for people with sensory processing differences;
- Avoid large repeating linear and block patterns with bold contrasting colours that can distract people when they are lip-reading – at a reception counter or in a meeting room, for example;
- Avoid using vivid and bold geometric or striped patterns;
- A highly-contrasting tile grout colour, or a chequered (chessboard) pattern on tiles, can create difficulties for people with vestibular or sight conditions, as well as people who are hypersensitive to patterns;
- For further guidance on avoiding sensory overload, refer to PAS 6463 Design for the Mind – Neurodiversity and the Built Environment (see page 4 link).

7.3 Floors

The appearance, texture and acoustic quality of flooring can affect how a building is used. It can give directions, suggest the type of activity space, improve acoustics by reducing echo, and help create an appropriate atmosphere. All flooring should be:

- Firmly fixed to ensure safety and ease of movement by wheelchair users and people with ambulant disabilities;
- Free of trip hazards, particularly at the junction between different flooring materials;
- Robust enough to withstand marks left by wheelchairs and other mobility aids so that users are not restricted by over-protective management regimes;
- Specified with appropriate slip resistance for the intended use, taking into consideration how they perform when wet if applicable;
- Matt or low sheen. Glossy, highly-polished finishes may look or feel slippery and affect user confidence, sometimes looking wet when they are not. Reflective floors also reflect lighting, potentially causing glare, confusion and discomfort for users;
- Where carpet is used, it should 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 vitally important to specify high slip resistance values (SRV). Consideration should be given to where people may be barefooted, in direct contact with the sports surface, and particularly where humidity and temperatures are higher or lower than comfortable:

- In wet areas, the floor should be kept as dry as possible;
- Adequate heating is essential (underfloor heating can be particularly beneficial);
- Floors should be laid to ensure adequate drainage, with falls at a preferred gradient of between 1:35 and 1:50.

Careful consideration should be given to the floor surface for any physical activity or sports space, e.g., sitting volleyball, and sport-specific surface performance requirements. The surface should be safe, comfortable, and where appropriate, offer minimal resistance to movement and manoeuvring, e.g., for wheelchair basketball.

See Part H Operation and management for further considerations.

7.4 Tactile surfaces

There are no UK established tactile surface recommendations for internal use provided in guidance or standards, or for surfaces used consistently so that visually impaired users can recognise their texture underfoot and use them to orientate or wayfind.

A variation in floor textures may provide some indication of different areas that is helpful to identify a location but specific instruction or induction training should be provided.

Changes in floor finishes that have different frictional characteristics can cause a person to stumble or fall. Care should be taken when specifying abutting floor finishes and transition strips etc. to ensure similar characteristics in materials are provided.

Where a staircase exists in an open space (rather than within an enclosed stairway), it can be helpful to provide visually-contrasting surfaces to give a warning to visually-impaired users of the presence of stairs. However, great care should be taken to ensure there is not a significant frictional difference — see BS 8300-2 Annex C and the following:

- Consider carefully the texture of walls, as some users depend upon touch to gain support and orientation;
- Designs should exclude protruding features that project into circulation routes.

See also Part E 2.8.1 Tactile properties and the Appendices for links to NGB sport-specific requirements, e.g., for areas with significant sports wheelchair usage.

7.5 Glazed walls and windows

Glazing, if properly considered and detailed correctly, can significantly improve the overall design quality and ambience of a building as well as improving the user's experience. For example, by providing controlled views internally into a swimming pool that creates a point of interest and may encourage viewers to think about taking part themselves. Alternative views out from an activity space into appropriate areas can give a link to the adjacent landscape and nature.

Glazing, if properly considered and detailed correctly, can significantly improve the overall design quality and ambience of a building as well as improving the user's experience.

Sport England facilities
Image credit: Activity Alliance

Glazed wall with logo and graphical applications applied

7.5.1 Privacy and glazing

The benefits of using glazing, set out above, should never be at the expense of users who feel uncomfortable and/or vulnerable if being viewed when they are doing certain activities either from inside or outside the facility. It is therefore very important that appropriate screening is provided to safeguard and make comfortable those users. Creating the right ambience and providing visual links to activity are important. Some points to consider are:

- Identify from the user consultation and planned activity programme what levels of privacy are required and for what activities;
- Some situations may require an 'adaptable' privacy solution where a higher level of privacy needs to be provided for specific user groups and activities, but also allows some of the benefits of views into and out of a space to be achieved;
- To be effective, adaptable privacy solutions should be simple to put in place and take account of any management or storage implications. For example, using integral blinds are preferable to movable screens, which take time to move and require a safe/secure and convenient storage space. Solutions that are not simple and are time consuming are very unlikely to be used. This will discourage the management from putting on activities for certain groups, acting as a barrier to these potential users.

See also Part A 2.2.4 Safeguarding and Part D 1.4.3 Protection and safeguarding.

7.5.2 Glazing safety

Full-height glazed walls and screens should:

- Meet BS 6262 for safety;
- Have manifestation to all full-height glazing at a minimum of two bands in accordance with AD K. The manifestation should be visually contrasting in all light and weather conditions and readily apparent on approach from all directions (graphical applications can also act as measures to increase safety). Where no upstand is provided, a third band of manifestation at 100–300 mm AFFL enhances visibility by small children;
- Avoid potential mirror-like reflections that can create confusion – this is particularly important in sports and activity areas.

Glazing manifestation is covered in more detail in BS 8300 and AD K.



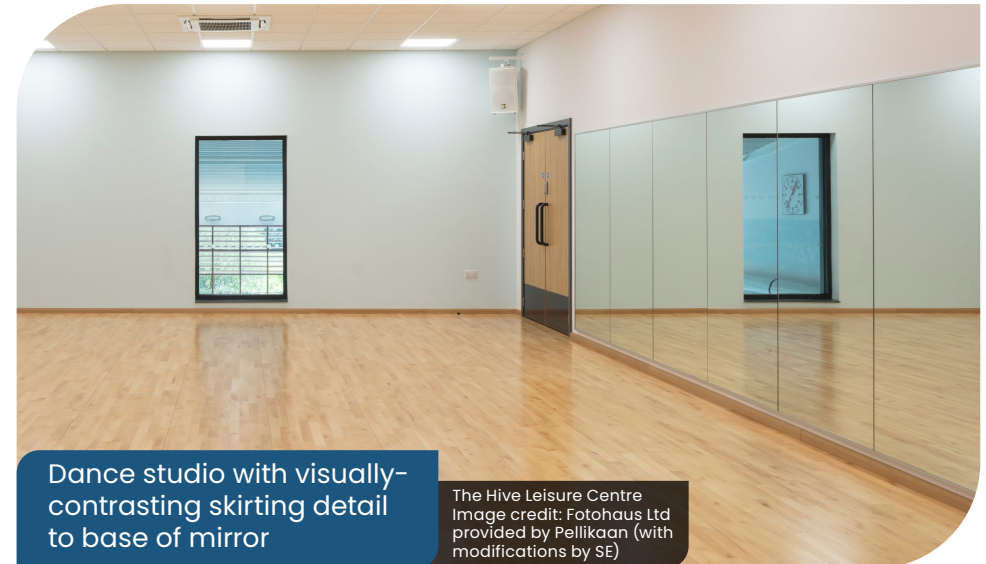
Glazed wall with upstand and two bands of manifestation

The Hive Leisure Centre
Image credit: Fotohaus Ltd
provided by Pellikaan (with
modifications by SE)

Manifestation should be visually contrasting in all light and weather conditions and readily apparent on approach from all directions

7.5.3 Mirrors

Full-height mirrors should be used sparingly. Where a mirror is helpful to an activity, such as in a dance studio, there should be a visually-contrasting skirting detail from the floor to reduce confusion. Full-height mirrors in changing and toilet areas should not extend below 600 mm AFFL.



Dance studio with visually-contrasting skirting detail to base of mirror

The Hive Leisure Centre
Image credit: Fotohaus Ltd
provided by Pellikaan (with
modifications by SE)

7.5.4 Glazed doors

Fully-glazed doors should:

- Have a frame to the door, or;
- Be clearly distinguishable from any immediately adjacent fixed glazing (this can be achieved through the application of additional manifestation to define both the edges of the door and centrally – such as logos or notices in a prominent viewing position). See sections 2.2 External doors and 3.7 Internal doors.

8 Building services

This section summarises key considerations of building services in relation to air quality, electrical services, heating and lighting that are fundamental to access and inclusion principles to use and enjoy a space.

8.1 Air quality

Following the pandemic, the importance of well-managed air quality within facilities has been brought into increased focus.

Indoor air quality is very dependent on outdoor pollution, but can also be made worse due to poor design and management. To maintain good indoor air quality, the following measures should be considered:

- Provide appropriate ventilation rates and filtration to maintain oxygen levels;
- Manage temperature and humidity levels;
- Avoid draughts, particularly in pool halls and changing areas;
- Remove pollutants created by the activities / use, e.g., dust, or from a pool water surface, or from volatile organic compounds (VOCs) from materials used in construction or everyday cleaning materials etc.;
- Indoor air quality matters to everyone, particularly when being active, but has a more profound effect on people with underlying or intermittent respiratory or lung conditions such as asthma and chronic obstructive pulmonary disease (COPD);
- In many facilities, openable windows can be considered (especially where outside air quality is good and noise levels are low) but may require a restrainer for safety reasons. Where used for ventilation, this should be linked to the ventilation system to avoid energy losses;
- For further guidance, see CIBSE Guide B 2.3.21 and CIBSE – Building Services News and Policy.

In many facilities, openable windows can be considered (especially where outside air quality is good and noise levels are low) but may require a restrainer for safety reasons. Where used for ventilation, this should be linked to the ventilation system to avoid energy losses.

8.2 Electrical services

In large sports facilities, the main power supply cable to the building may induce interference in hearing aids and cochlear implants and should be routed away from public and staff areas or be suitably shielded.

A secondary power supply or back-up services for operation of lifts to evacuate should be an early consideration.

Consideration should always be given to a range of reach requirements for power sockets and light switches, so that everyone has access to essential charging and power for equipment when appropriate.

Any electric wheelchair charging points should be in line with the fire strategy.

8.3 Heating

The following should be considered:

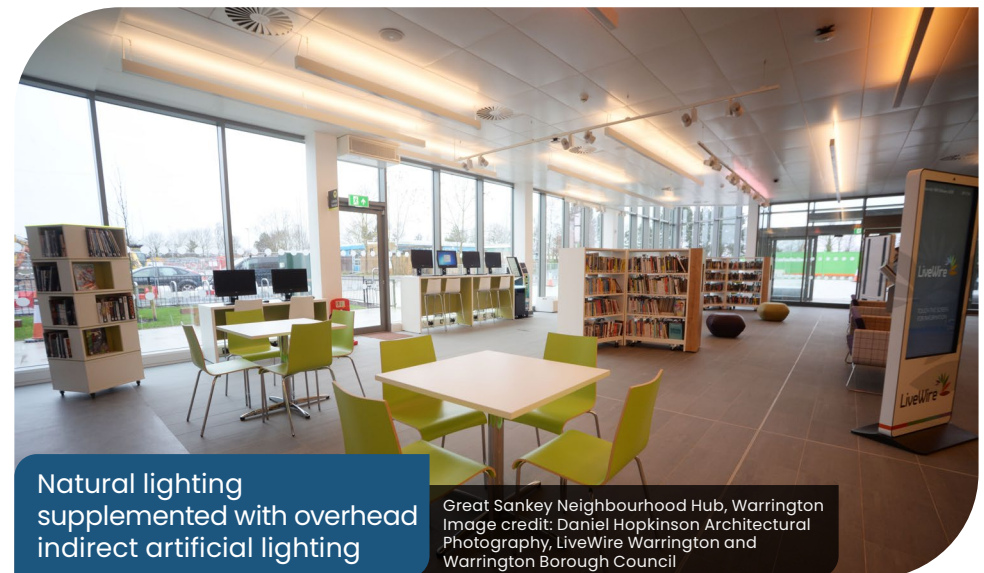
- Ensure all areas are appropriately heated according to their use. Uncomfortable variations in temperature between adjacent spaces, particularly in changing and showering areas, should be avoided;
- Locate, design and detail windows and entry and exit doors to avoid the creation of draughts and cold areas, for example, including lobbies;
- Position pipework and any other heat sources such as radiators, mechanical and electrical equipment to avoid hazards to users or restrict minimum manoeuvring space requirements;
- Where radiators are used, they should be of the low surface temperature type or be covered with a suitable low temperature casing, particularly when located in any changing, shower or toilet areas.

Ensure all areas are appropriately heated according to their use. Uncomfortable variations in temperature between adjacent spaces, particularly in changing and showering areas, should be avoided.

8.4 Lighting

Daylight is the preferred means of illumination, supplemented where necessary by artificial diffused lighting. Daylight and particularly direct sunlight should be carefully controlled to reduce glare. This may be a particular problem during winter months when sun angles are low.

- Artificial lighting systems should 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 through the appropriate positioning, quantity and quality of artificial light to supplement daylighting. Light sensors can be used to control light levels by the introduction or reduction of artificial light to supplement daylight throughout operational hours;
- General illumination should mainly be from light distributed from above. Indirect rather than direct lighting is the most comfortable form of light.



Natural lighting supplemented with overhead indirect artificial lighting

Great Sankey Neighbourhood Hub, Warrington
Image credit: Daniel Hopkinson Architectural Photography, LiveWire Warrington and Warrington Borough Council

Lighting should be designed for the purpose of each type of space in terms of lux level, illuminance gradient / uniformity, colour rendering index and colour temperature. The following general recommendations are made:

- A colour rendering index (CRI) > 80 should always be provided;
- A colour temperature of 4000 kelvins may be suitable for many sport areas, with a minimum of 3600 kelvins in court areas;
- A warmer colour temperature (2700–3000 kelvins) should be considered in quiet rooms or restorative spaces and can make a reception/entry area look more welcoming;
- Changes in lighting levels should be gradual throughout the facility, with no sudden changes from light to dark and vice versa. A gradual increase in light levels allows time for eyes to adjust. Therefore, extending the fade in/out timings to 10 seconds will be helpful. People with sight conditions or with hypersensitivity to light can be particularly affected;
- Avoid shadows that could conceal potential hazards. This can be achieved by ensuring there are enough light fittings to provide an adequate coverage of light;
- Where possible, minimise the use of spotlights, since this type of light fitting tends to create pools of light and shadow;
- Recessed downlights can also lead to strong contrast and shadowing so should be avoided. A good distribution of both vertical and horizontal lighting should help avoid shadows. (Angling a light fitting 20–45 degrees should avoid long shadows);
- Avoid the use of uplighters set in floors (or paved areas) where people are likely to walk, since anyone walking over these fittings is likely to experience painful glare;
- Downlighters should be carefully located so that they do not create shadows across people's faces making lip-reading difficult at communication points, such as at a reception desk;

- Staircases and landings should be consistently illuminated to provide a minimum 100 lux at tread level;
- Lighting should aim to be consistent across circulation areas – see BS 8300-2 Section 14;
- Particular care should be taken with the design of lighting insert systems in areas with shiny surfaces in order to avoid reflections and glare;
- Some fluorescent fittings can cause interference in hearing aids. Minimise this by careful placement of light fittings and by using high frequency fittings;
- The avoidance of flicker from lighting systems should be considered. This can occur when:
 - fluorescent battens are installed;
 - drivers and luminaires / dimmable LEDs are incompatible;
- Where lighting is provided on sensors to save energy, care should be taken that these are based on thermal rather than movement detection within toilet and changing areas.

For further information on quiet / restorative spaces, see section 5.6 and PAS 6463 Design for the Mind – Neurodiversity and the Built Environment Section 14.1 (see page 4 link).

For information on lighting for sports and physical activities, see Sport England's Artificial Sports Lighting design guidance note available at:

<https://www.sportengland.org/guidance-and-support/facilities-and-planning/design-and-cost-guidance/artificial-lighting>

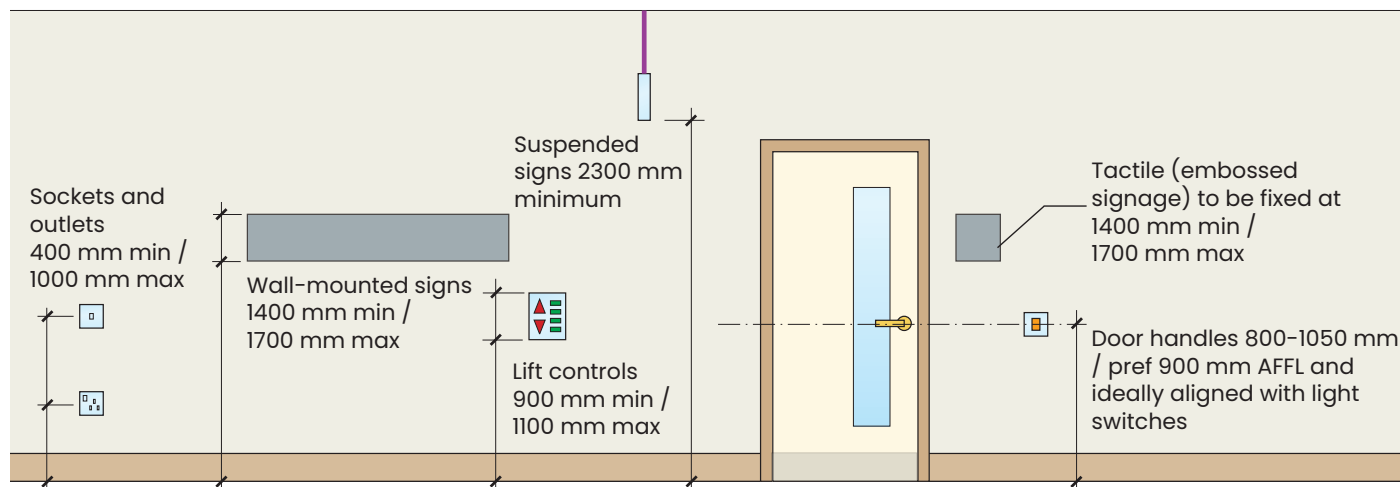
8.5 Switches and controls

- All controls should be visually contrasted against their background and appropriately lit. This means good lighting and the use of contrasting colours;
- Controls should be simple to understand and easy for users with reduced dexterity or grip to operate, e.g., twin power sockets should have the rocker switches to the outside rather than grouped in the centre;
- Wherever possible, consider the use of embossed tactile buttons and controls with embossed numerals or text and Braille (see also Part E Wayfinding and signage);
- Controls should be located in a consistent and logical manner and mounted at a height accessible to everyone – see Table C9 and Figure 16. However, where controls may pose a safety risk to children or people with learning disabilities, then protection (e.g. lockable covers) should be provided;
- See AD M and BS 8300-2.

Table C9 General reach ranges for switches and controls

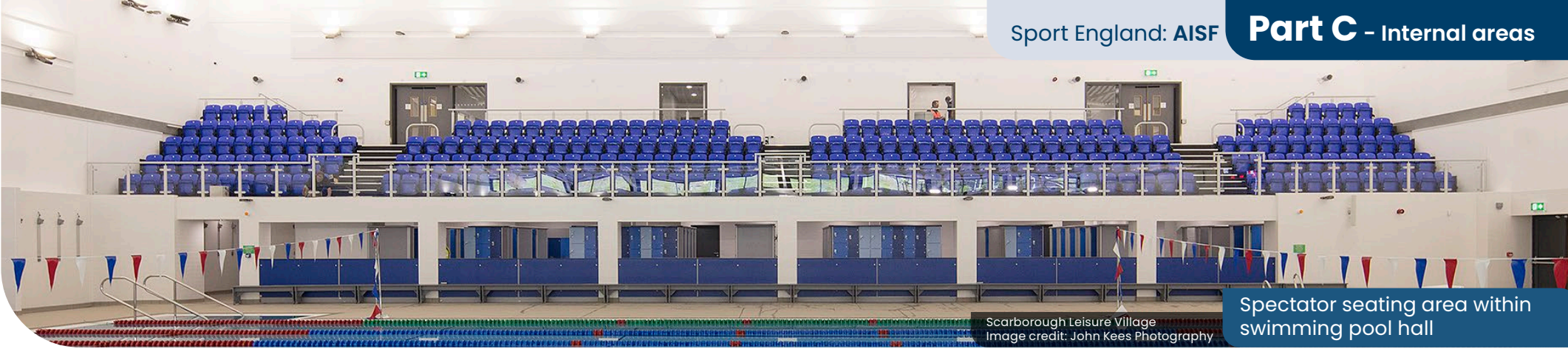
Item	Height AFFL / other criteria
Power sockets and outlets	400–1000 mm
Light switch	900–1100 mm / preferably aligning with door handle
Switches/controls needing precision	750–1000 mm
Window controls and switches (including appliances)	800–1100 mm
Lift controls / buttons	900–1100 mm / 500 mm min from corner
Vending and turnstile card slots	800–1100 mm, ideally 800–900 mm
Touch screens (e.g. self service)	850–1100 mm / inclined towards users
Push button (simple)	1200 mm maximum
Drinking fountain	800–1100 mm
Fire call point / break glass	1100–1200 mm
Refuse bins /waste containers	1100 mm maximum for insertion point
All of the above should be 400 mm min / 600–700 mm pref from any corner or greater depending on user needs and sports wheelchair sizes	

Figure C16 Switches and controls – positioning



9 Spectator viewing

This section covers the general requirements for seating and accessible spectator viewing provision.



Spectator seating area within swimming pool hall

9.1 General requirements

Wherever possible, spectator seating, media seating and executive boxes should be designed to be accessible to everyone. When designing spectator/viewing provision, consider the following:

- At very large venues where crowd control and safety are particularly important factors, it is acceptable to provide separately designated points of access into spectator areas for disabled people. These entrances should provide a clear opening of 1000 mm minimum;
- Seat heights should be a minimum of 400 mm AFFL and ideally 450–480 mm;
- Seat depths should be a minimum of 350 mm, recommended 400 mm;
- A seating row depth of 800 mm minimum should be provided to achieve 400 mm minimum clear between the front edge of the seat and the back of the seat in front (305 mm is the minimum for up to 7 seats served by a single gangway or 14 seats served by gangways at either end) subject to the fire evacuation strategy and plan – see section 4 and Part F;
- Consider providing some seating with 900 mm minimum in front of the row of seats (1200 mm where practical), to allow easier access for ambulant disabled people or people using mobility aids, or accompanied by an assistance dog. Seating with additional leg room is also of benefit for people of larger stature or people with restricted leg movement;
- Seat widths should be set at a minimum of 460 mm centres. Some wider seats should also be considered to accommodate a variety of requirements, including:
 - Parent with baby or young child;
 - Adult supporting an adult with learning disabilities;
 - Larger people;
- Without blocking circulation routes, consider making space for guide or assistance dogs to sit next to their owners;
- Identify and reserve seating appropriate for booking by ambulant-disabled people or people with temporary mobility restrictions (e.g. a broken leg). This seating may be on the aisle, have level access or be accessed by minimal steps, and be close to toilet facilities;
- Some seating should be provided with arm rests to both sides of the seat in order to provide additional support when seated or to rise or lower to seats;
- Where practicable, handrails should be provided to stepped access routes, central handrails are the preferred option on aisles;
- For narrow aisles where a central handrail cannot be provided, aisle seats should have integral 'P-rail' grips to give some support;

- Barriers, balustrades, handrails and columns should not obstruct sightlines;
- Provide a separate viewing room, for people who experience sensory hypersensitivity such as many neurodivergent people, to watch the sporting event from a calm and quiet environment;
- The design of informal viewing areas in sports facilities should consider the needs of all users. For example, viewing from the reception area, balcony or a circulation space should have areas of suitable height to allow wheelchair users or children adequate sightlines. A range of lux levels should be available in multi-sport areas to accommodate different requirements;
- Consider providing privacy and separation between social and formal spectator viewing areas when required. Arrangements should be robust, simple to operate, and have low maintenance implications;
- The design of bleacher seating and rebound screens should also be considered when temporary spectator seating is created. For example, a raised platform and ramp section might be integrated into the lower sections of a retractable bleacher seating unit to allow wheelchair access.

9.2 Easy access seats

Easy access seats are helpful to ambulant disabled people and others who find lots of steps difficult, or who need good access to toilets and exits.

- The location of such seats can be in rows where only a few steps are provided, and seats at the end of rows may also be helpful;
- A minimum seat width of 500 mm is recommended, and a seat row depth of at least 800 mm.

For informal seating and viewing areas, refer to section 5 Social and amenity spaces.

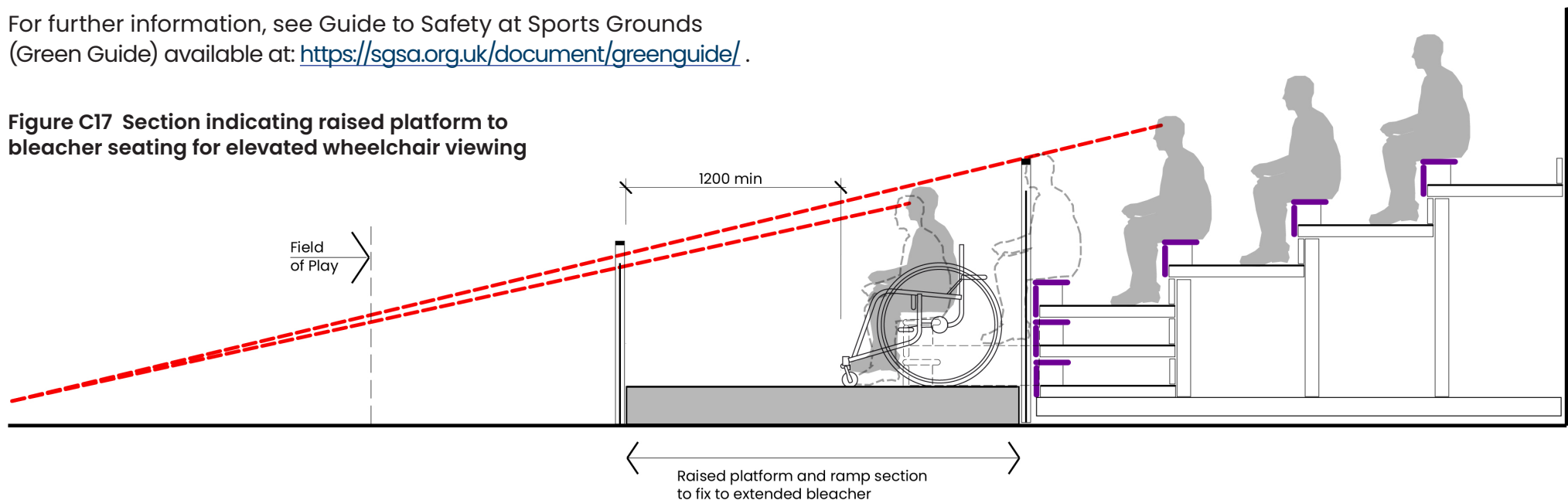
9.3 Wheelchair accessible spaces

- Provide at least six designated wheelchair spaces, or 1% of the spectator capacity, whichever is the greater;
- Wheelchair user spaces should be located so that users do not feel cut off from the rest of the spectators, including family, friends or team supporters;
- Wheelchair accessible spaces should be designed with flexibility to sit as a group or with companions who may require a standard seat;
- Wheelchair users should also have the option of transferring to a standard seat, with space nearby to park their wheelchair or mobility aid without obstructing others and where they can be retrieved easily in event of an emergency;
- The position of wheelchair accessible spaces within the seating area should allow the wheelchair user a choice of viewing locations;
- Seating with wider access at rear and/or front of the spectator area can give flexibility for more leg space for people of tall stature, or anyone with restricted leg movements (see BS 8300-2 Figure 26);
- For outside viewing, provide some wheelchair accessible spaces under cover or with a reasonable degree of weather protection;
- Provide some of the wheelchair-user spaces with a power supply, which may be required by wheelchair users with specific medical needs or equipment;
- In order to provide for greater demand during special events or over time, flexibility should be considered for increasing the number of wheelchair user spaces by the provision of removable seats;

- Sightlines should enable all wheelchair users to have a clear view of the action at least up to the edge of the area of play and unobstructed by people in front or by structural features. See also BS 8300-2 Section 17;
- The seating arrangements should ensure that good sight lines are achieved even if the crowd stands up at moments of excitement. It may be necessary to provide wheelchair-user spaces on a raised platform so that the wheelchair user has a good line of sight over anyone standing in the rows in front;
- Wheelchair spaces should be a minimum 900 mm wide x 1400 mm deep;
- If the wheelchair-user space is accessed from right angles, rather than the front or back, allow a wheelchair user space 1050 mm wide x 2300 mm deep;
- Ensure wheelchair-user spaces are in close proximity to accessible toilets. The location of the Changing Places toilet should also be considered.

For further information, see Guide to Safety at Sports Grounds (Green Guide) available at: <https://sgsa.org.uk/document/greenguide/>.

Figure C17 Section indicating raised platform to bleacher seating for elevated wheelchair viewing



9.4 Audio visual

- Where spectator provision includes a public address system, this must be supplemented with appropriate assistive listening devices, such as induction loops and visual text displays for people with hearing impairment;
- Consider providing an audio-described commentary for people who are blind or partially sighted. This can be delivered via headphone sockets at specific locations or by using an infrared or FM communications system;
- Wifi and Bluetooth technology should be considered in addition of the above to support smartphone or tablet users, e.g., with apps to provide spectator information and/or communication options which may be tailored on their own devices. See section 6.5 Assistive listening systems.

Document accessibility

This document has been designed for comfortable reading at A4 and on a laptop screen, but can also be printed at A3 for large print versions. The pdf is accessible and has been tested to work with text readers.

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User guide

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Click here for **User guide** and other
Design and cost guidance

Issue tracker

001-003 – Former publications: Access for Disabled People November 2002 amended to Accessible Sports Facilities (ASF) 2010
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