

Accessible Sports Stadia Design Guidelines

2016 Edition



Disability
Sport NI

www.dsni.co.uk

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The views expressed in this guide are not intended to take away or diminish the responsibility of the user to comply with current or future legislation. The guidance and recommended standards are intended to complement requirements for Building Regulations, Town Planning Requirements or Licensing, not to replace or override them.

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**This document is available in
alternative formats on request**

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Overview

Overview

Introduction

Accessible provision for people with disabilities in the majority of stadia in Northern Ireland is limited and all too often the experience of disabled spectators attending sporting events is poor. It is perhaps no surprise then that disabled people are half as likely to attend a live sports event in Northern Ireland as non-disabled people, with only 17% attending an event compared to 33% of non-disabled people (DCAL Continuous Household Survey 2014/15).

This guide has been produced by Disability Sport NI to promote a greater understanding of the inclusive design of stadia and to encourage designers to move beyond the minimum requirements of Building Regulations and the Disability Discrimination Act (DDA) and to design stadia which meet optimum levels of best practice.

By applying these guidelines, stadia operators can ensure that people with disabilities will have a quality spectator experience, increasing over time the number of people with disabilities regularly attending sporting events.

Disability Sport NI Design and Management Guides

This guide is one of a series of four design and management guides produced by Disability Sport NI:

- Guide 1: Accessible Sports Facilities Design Guidelines (2016 Edition)
- Guide 2: Accessible Sports Facilities Management Guidelines (2016 Edition)
- Guide 3: Accessible Sports Stadia Design Guidelines (2016 Edition)
- Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition)

In addition, the following two Guidance Notes have been produced for smaller facilities:

- Disability Sport NI Sports Pavilions Guidance Notes
- Disability Sport NI Boxing Facilities Guidance Notes

The guides and guidance notes aim to promote a greater understanding of inclusive design and management and encourage designers and facility/stadia operators to embrace optimum levels of good practice in terms of access for people with disabilities.

By implementing the recommendations in these guides designers and sports facility/stadia operators can ensure that people with disabilities have a quality experience, increasing over time the number of people with disabilities regularly participating in sport and active recreation.

All guides and guidance notes are available from the Disability Sport NI website www.dsni.co.uk

About Disability Sport NI

Disability Sport NI is Northern Ireland's main disability sports charity working with people who would like to participate in sport and active recreation.

We work with people with physical, sensory and learning disabilities of all ages, and with schools, disability groups, sporting organisations and clubs to ensure that everyone can gain from the health, social and education benefits of sport and active recreation.

We believe that every person with a disability has the right to participate in all aspects of life and are committed to building a more inclusive society where people with disabilities have the same opportunity as non-disabled people to lead a full, active and healthy lifestyle through sport and active recreation.

We also work closely with Sport Northern Ireland and Governing Bodies of sport to ensure that talented disabled sports people have the same opportunity as their non-disabled peers to train, compete and excel in their chosen sport.

Find out more about the work of Disability Sport NI at www.dsni.co.uk

Inclusive Sports Facility Advisory Group (ISF Advisory Group)

This guide has been produced with the support of the ISF Advisory Group, which is a forum established by Disability Sport NI consisting of representatives of the following disability organisations in Northern Ireland who are committed to ensuring that sports facilities and stadia are inclusive of people with disabilities. The ISF Advisory Group is facilitated by All In Access Consultancy under contract to Disability Sport NI.

- Disability Sport NI
- IFA Inclusive Supporters Association NI
- Royal National Institute of Blind People (RNIB)
- Action on Hearing Loss
- Blind Sports Network NI
- Disability Action
- Inclusive Mobility and Transport Advisory Committee (IMTAC)
- Mencap
- Guide Dogs NI
- NI Deaf Sports

The advisory group was established on 20th April 2016 and includes the functions of the now dissolved Inclusive Stadia Advisory Group.

Endorsements

This guide has been developed by Disability Sport NI and endorsed by:



How To Use This Guide

This guide is an advisory document that should be referred to when designing any scale of stand or ground, including:

- New sports grounds.
- New stands built at existing sports grounds.
- Wherever possible, the extension and refurbishment of existing stands.

The guide is divided into eight sections each providing technical guidance in relation to a key area of stadia design:

- 1 Getting To and From the Stadium
- 2 Getting Into the Stadium
- 3 Getting Around the Stadium
- 4 Accessible Stadia Facilities and Use of Facilities
- 5 Accessible Community Use Sports Facilities in Stadia
- 6 Accessible Viewing and Vantage Points
- 7 Accessible Communication Systems
- 8 Getting Out of the Stadium



Guidance Signpost

Guidance Signposts are denoted throughout the document. The guidance signposts provide relevant cross-references to existing accessibility design standards.

It should be noted that the guide draws information from the following key reference documents:

- ▶ Access for All V.01 UEFA and CAFÉ Good practice guide to creating an Accessible Stadium and Matchday Experience.
- ▶ Accessible Stadia: A good practice guide to the design of facilities to meet the needs of disabled spectators and other users. Football Stadia Improvement Fund and the Football Licensing Authority. 2003. Sports Grounds and Stadia Guide No. 1.
- ▶ British Standards Institute. BS 8300:2009 +A1:2010. Design of buildings and their approaches to meet the needs of disabled people. Code of Practice.
- ▶ Inclusive Design Standards. Olympic Delivery Authority. 2008.
- ▶ Inclusive Design Standards. London Legacy Development Corporation. March 2013 <http://queenelizabetholympicpark.co.uk/~media/Ildc/policies/Ildcinclusivedesignstandardsmarch2013.pdf>
- ▶ RNIB Soccer Sight: A guide to providing a service for blind and partially sighted football supporters. RNIB January 2009.
- ▶ The Northern Ireland Guide to Safety at Sports Grounds (2007). Department of Culture, Arts and Leisure and Sport Northern Ireland, UK.

It is acknowledged that on many occasions there may be existing constraints when adapting and improving existing sports grounds. However, Disability Sport NI encourages designers and stadia operators to implement as many of the recommended standards contained in these guidelines as is reasonably practicable.

Sections

1-8

Stadia Facilities Design and Technical Guidelines

- 1 Getting To and From the Stadium
- 2 Getting Into the Stadium
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1 Getting To and From the Stadium

1.1 Transport

Overview

Means of getting to and from stadia grounds is critical to accessibility, in addition to the management of event days. Fundamental to good design is an entire journey approach that offers a barrier free route of travel. A well designed stadium is of little benefit to people with disabilities and older people if provision is not in place to facilitate getting to and from it, addressing the often challenging routes of travel that can be associated with the overall journey.

A proactive consultative approach to the transport issues associated with getting to and from stadia grounds, where practicable, should be a priority for designers and management, to ensure that people with disabilities and older people have the same opportunity to attend events as non-disabled spectators.

Recommended Standards

- Reference the current guidance on acceptable walking distances for older people and people with different types of disability when considering the overall means of getting to and from stadia grounds.
- Accessible routes of travel to and from the stadium and the connection with transport links should be considered as part of the planning application.
- Reference Strategic Planning Policy Statement principles as part of design development.
- Park and Ride will only be a limited solution if facilities are inadequate i.e. setting-down/pick-up points should be accessible and incorporate accessible design features. Accessible low floor vehicles are required.

Additional Considerations

- See Section 1 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Transport and Parking.



Guidance Signpost

- ▶ Inclusive Mobility: A guide to best practice on access to pedestrian and transport infrastructure. Department for Transport: **Section 2.4** Walking distances; **Section 3.12** Road crossings; **Section 4.1** Pedestrian crossing points; **Sections 6.1 - 6.2** Bus stop overall design; shelters; flags; seating; timetable information; **Sections 8.4.7 - 8.4.9** Platforms: rail services.

1.2 External Approach Routes and Pathways

Overview

To allow for easy, unrestricted movement on external routes by the public, including people with disabilities, accessible paths of a high standard should be provided between the following areas:

- From the public highway into stadia grounds.
- From bus stops or rail connections on/or near stadia grounds to stadia entrance points.
- From accessible car parking bays to stadia entrance points.
- From setting-down points to stadia entrance points.

Note: external routes in this guide refer to external pathway routes outside a stadium 'structure' i.e. routes leading to or routes within stadia grounds. Where external pathways are outside a stadium, design teams and stadia operators should influence this as far as practicable in discussion with the Department of Infrastructure and as part of any overall planning strategy.

Note: stadia entrance points can be located at a site boundary leading into the grounds, or into a stadium 'structure'.

1.2.1 Design of external routes and pathways

Recommended Standards

- Pathway surfaces should be firm, slip resistant and smooth. Cobbles, sand or loose gravel surfaces are not acceptable.
- Splay corners should be used on pathways to facilitate wheelchair manoeuvring.
- Where feasible, provide pedestrian routes clearly defined from vehicular routes within stadia grounds using a kerbline.
- Pedestrian routes should be separate from cycle paths where the latter are provided within stadia grounds. Cycle paths should have appropriate tactile paving at the start and end of the route to assist people who are blind or partially sighted. Alternatively, management policy should dictate that cyclists dismount on entering stadia grounds.
- Consult with relevant authorities in relation to off-site pedestrian and cycle path approach routes.
- Street furniture such as lamp posts, signposts, litter bins, seating and cycle racks should be located beyond the edge of pathways ensuring that there is a minimum 1800mm clear width throughout the length of the path.
- Where bollards are used, they should be minimum 1000mm high. Bollards should contrast visually against the background in which they are seen and have a minimum 150mm deep visually contrasting band to the top.
- Drainage gullies and grates should be located beyond the edge of pathways ensuring that there is a minimum 1800mm clear width throughout the length of the path. See Section 5 of this guide: Accessible Community Use Sports Facilities in Stadia.
- Tactile paving (buff-coloured and blister profile) should be used to provide warning and guidance to people who are blind or partially sighted when approaching a dropped kerb, or at a junction with a road or car park.
- Avoid windows, outwardly opening doors and other objects projecting into pathways. Where these are unavoidable, a minimum 1200mm unobstructed pedestrian route should be maintained (firm surface).
- Outwardly opening doors (other than for emergency use) should be protected e.g. using a barrier rail, or recessed.

Additional Considerations

- Pedestrian pathways should be differentiated from cycle paths e.g. using a painted/raised white line.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 5.2 & Figure 6** Width and height of an access route, p.17-18 & **Paragraphs 5.7.1.2 - 5.7.2** Free-standing posts and columns & Provision of hazard protection within an access route, p.20-21.
- ▶ Guidance on the use of tactile paving surfaces. **Chapters 1, 5 & 7.** Department for Transport.
- ▶ DD CEN/TS 15209:2008. Tactile paving surface indicators produced from concrete, clay and stone.
- ▶ Cafe Culture: Memorandum of Understanding. Belfast City Centre Management.

1.2.2 Gradient

Note: approach routes with a gradient steeper than 1:21 are not regarded as providing suitable access and are not acceptable in new stadia grounds. Gradient is also an important consideration in refurbished stadia projects.

Recommended Standards

- Pathways and external approach routes within stadia grounds should be level wherever possible or have the shallowest possible gradient. The steepest allowable gradient for pathways and external approach routes in new stadia is 1:21 and every effort should be made to meet this as part of the development and landscaping works undertaken in refurbishment stadia projects. Consider handrails to offer support on extended ramp gradients/lengths.
- Crossfall gradient on pathways and approach routes should not exceed 1:50.

1.2.3 External ramps and steps

Note: as external steps and ramps are normally only necessary to improve access on paths with a gradient steeper than 1:21 (and gradients steeper than 1:21 are not regarded as providing a good level of access), the use of steps and ramps is not recommended.

1.3 Parking and Setting-down Points

Overview

Many people with disabilities in Northern Ireland travel to sports stadia grounds by private car, taxi or coach, therefore in creating inclusive stadia, the provision of designated accessible parking bays and setting-down points for visitors with disabilities and for people with disabilities working there is essential. Existing stadia grounds may not easily accommodate ideal provision in terms of accessible parking bay numbers, therefore a flexible and entire journey approach should be supported by design teams and management.

1.3.1 Designated on-site accessible parking provision

Recommended Standards

- The recommended number of accessible parking bays for stadia should be 8% of total parking capacity for general stadia use.¹ On event days this capacity requirement may increase significantly and increased need should be addressed by stadia management. See Section 1 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Transport and Parking.
- One additional accessible bay should be provided for each employee regularly working in the facility who is a 'blue badge' holder, differentiated from bays designated for other users.
- Accessible bays should be located as close as possible to stadia entrance points and no more than 100m; and consideration should be given to the location of the bays as close as possible to accessible viewing areas e.g. wheelchair user spaces and ambulant accessible seats.
- If accessible parking bays are located more than 50m from stadia entrance points then pathways should be covered to offer weather protection.
- The design of approach routes and pathways between accessible parking bays and stadia entrance points should comply with the recommended standards specified in Section 1.2 of this guide: External Approach Routes and Pathways.

¹ Where car parks have more than 500+ spaces a minimum of 6% of accessible car parking spaces may be acceptable, depending on the anticipated use.

Additional Considerations

- Include additional provision for larger designated parking bays, 4800mm wide by 8000mm long, to cater for commercial vehicles converted for side or rear access using hoists or ramps.
- Accessible parking bay numbers allocated on-site on event days should as far as possible reflect disabled person ticketing numbers and the number of staff/stewards/volunteers with disabilities on duty.

1.3.2 Design of accessible parking bays

Recommended Standards

- Accessible parking bays should be in accordance with Figure 1 of this guide: Accessible Parking Bays. They should include a 1200mm safety zone to both sides of each bay (to accommodate a driver or a passenger with disabilities) and to the rear of each bay for boot access and cars with rear hoists.
- Vertical signs are required at the head of each bay as shown in Figure 1, clearly signed for use by 'Blue badge holders only'.
- A dropped kerblines should only be installed along the entire length of an accessible parking zone where it will be complemented by this signage and where it does not present a hazard to pedestrians.
- On a site specific basis, consult with Guide Dogs NI regarding necessity for tactile warning surface along dropped kerblines.

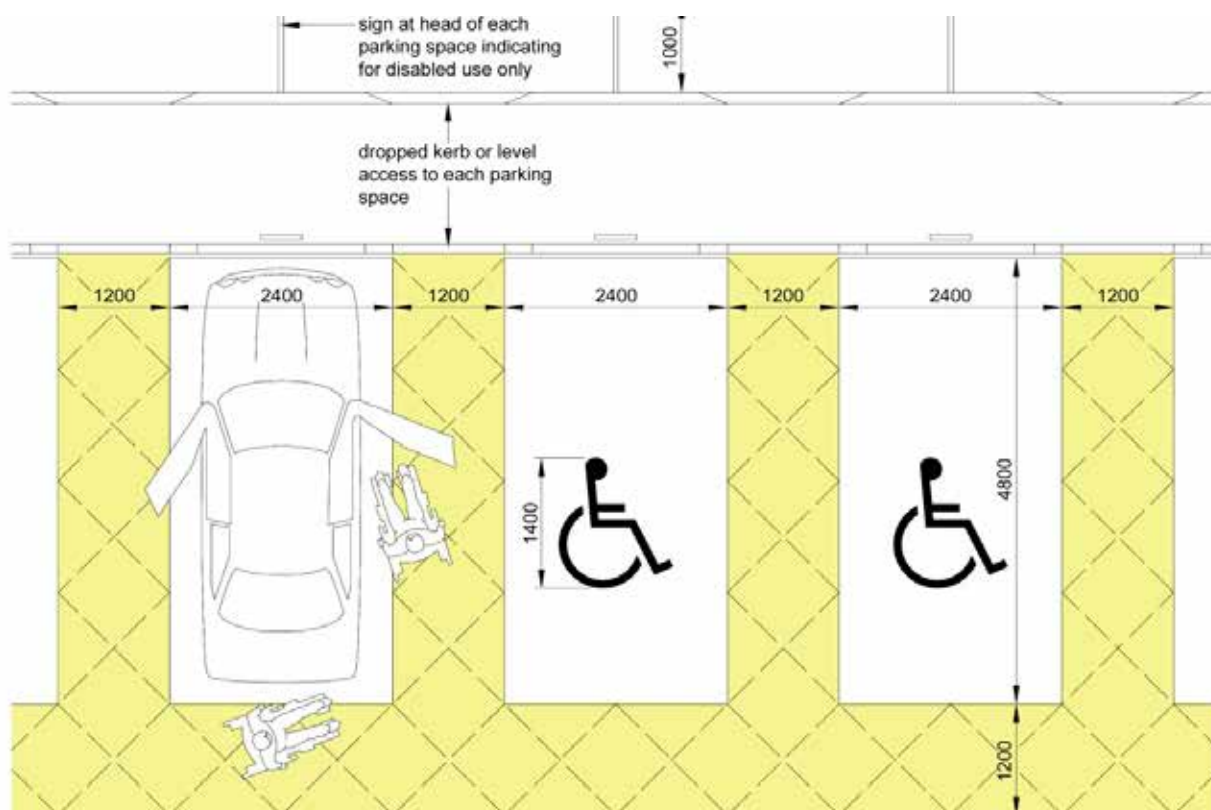


Figure 1 - Accessible Parking Bays

1.3.3 Choice, location and design of off-site parking

Recommended Standards

- Where provided, appropriately designed accessible parking bays on-street (in consultation with the relevant authorities).
- Where provided, appropriately designed accessible parking bays at temporary and permanent Park and Ride facilities (in consultation with the relevant authorities).
- See Section 1 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Transport and Parking.



Guidance Signpost

- BS 8300:2009 +A1:2010. **Paragraph 4.2.3** Design and layout of designated off-street parking spaces, p.11-12.

1.3.4 Setting-down and pick-up points

Overview

In addition to accessible car parking bay provision, setting-down and pick-up points suitable for use by cars, taxis and accessible buses should be provided as close as practicable to stadia entrance points; and consideration should be given to locations as close as possible to accessible viewing areas e.g. wheelchair user spaces and ambulant accessible seats.

Recommended Standards

- Setting-down and pick-up points should be in accordance with Figure 2 of this guide: Typical Layout of Setting-down and Pick-up Point.
- Clearly identified by signage, in accordance with sign design standards, to assist sighted and partially sighted people.
- Long enough to accommodate at least one coach with a tail lift where possible; whereby 8000mm length will be required.
- Level with the surrounding pathway to allow for the convenient transfer of wheelchair users to and from vehicles.
- Accessible Park and Ride facilities, where associated with stadia.

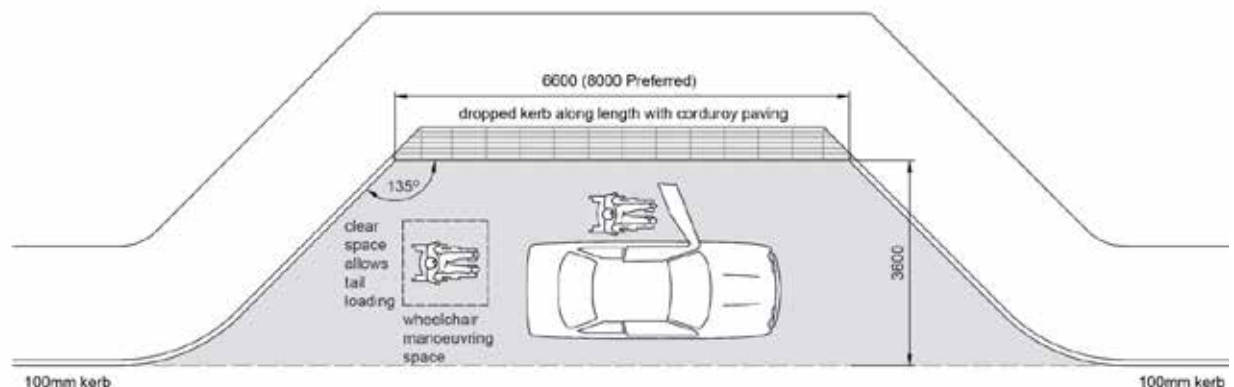


Figure 2 - Typical Layout of Setting-down and Pick-up Point

Additional Considerations

- Setting-down and pick-up points should be within 50m of entrance points and in a covered area.



Guidance Signpost

- ▶ Inclusive Mobility: A guide to best practice on access to pedestrian and transport infrastructure. Department for Transport: **Section 4.7** Information surface; **Sections 6.1 - 6.2** Bus stop overall design; shelters; flags; seating; timetable information.
- ▶ Guidance on the use of tactile paving surfaces. **Chapter 7** Information surface, p.70-72. Department for Transport.
- ▶ DD CEN/TS 15209:2008. Tactile paving surface indicators produced from concrete, clay and stone.

1.3.5 Car park entry and payment

Note: where these facilities are applicable to on-site or off-site parking, barrier control systems, parking meters, controls and ticket dispensers which can be operated by wheelchair users should be provided.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 4.4 - 4.4.4.3** Entrance to car parks, and parking controls, p.14-16.

1.3.6 Other parking facilities (mobility scooters, bicycles and buggies)

Design teams should consider the provision, location and design of:

- External and internal scooter parking i.e. outside the stadium structure and inside the stadium structure.
- External bicycle parking areas.
- Internal buggy parking zones for child pushchairs (See Section 1 of Guide 4: Accessible Sports Stadia Management Guidelines 2016 Edition. Sports Stadia Management Policies and Procedures - Transport and Parking.).

Overview

Mobility scooters are increasingly used by people with disabilities and older people as a viable method of moving around e.g. research has shown that 300,000 mobility scooters were used in Britain in 2012 compared to 70,000 five years ago.² A range of scooter size and speed is available. Scooters have various positive attributes e.g. they can address the difficulties people with disabilities often face getting to and from stadia by enabling them to travel greater distances. In order to assist stadia management to fulfil their duties under the DDA, designers are advised to accommodate this design element within stadia. Use of scooters in this environment may therefore increase potential access to some spectators with disabilities who would otherwise not have the same opportunity to attend events as other people.

The location and design of cycle parking facilities should not impact negatively on people with disabilities using stadia grounds.

Use and storage provision for buggies (child pushchairs) should be considered.

Recommended Standards

- Provision for external scooter parking (with potential to increase future capacity) should be made in a secure and covered area close to stadia entrance points. A site specific solution should be agreed. See Section 1 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Transport and Parking.
- The design of accessible viewing platforms/areas within stands should be flexible to facilitate use by mobility scooters.

- Inclusive stadia should accommodate scooter users where it may not be feasible for larger scooters to access viewing areas by providing a means by which a scooter user can get to their seat with a minimum requirement to walk any distance. This can be done by facilitating the potential requirement for internal scooter parking in areas where scooters can be stored.
- Cycle racks should be located where they will not cause obstruction on external routes and pathways.
- Cycle racks should be located in a secure area and covered by a form of weather protection where possible.
- Cycle racks should be clearly visible through visual contrast with their surroundings e.g. bands of contrast.
- Provide clear signage to identify cycle parking.
- Provide clear signage, security information and instructions for use at internal buggy parking zones.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Annex C** (informative) **Table C.5** Space required for a sample of electric scooters when stationary, p.188.
- ▶ BS 8300:2009 +A1:2010. **Annex C** (informative) **Table C.10** Space required for users of electric scooters to turn through 90°, p.190.
- ▶ BS 8300:2009 +A1:2010. **Annex C** (informative) **Table C.15** Space required for a user to turn an electric scooter through 180°, p.192.

2 Getting Into the Stadium

2.1 Ticket Points

Overview

Accessible design features associated with ticket points should take account of the following:

- Clear visibility to assist people who have a hearing loss or who rely on lip-reading (e.g. design of security partitions if they are required, lighting, positioning of windows, hearing enhancement systems).
- Heights for standing and seated persons.
- People who are blind or partially sighted (e.g. lighting levels).

Recommended Standards

- Ticket points, including those designated for use by spectators with disabilities, should be clearly visible on entering stadia grounds where external provision is available and on entering the stadium where internal provision is available.
- Provide large contrasting signage at each ticket point.
- Throughout stadia where ticketing points are provided, a range of heights should be made available to accommodate a range of need i.e. suitable for standing persons, seated persons and people of small stature. See Figure 3 of this guide: Visitor Reception and Information Points.
- Where a counter/booth is provided at ticket points, kneespace is recommended however, where this is unachievable make allowance for wheelchair footplate projection. See Figure 3 of this guide: Visitor Reception and Information Points.
- Stewards should be positioned on approach and at ticket points to assist people with disabilities who may have difficulty locating the ticket point.
- See Section 7.4 of this guide: Accessible Communication Systems - Hearing Enhancement Systems.

Additional Considerations

- In consultation with relevant disability groups, include 'information surface' at ticket points, to assist people who are blind or partially sighted.

Note: information surface indicates an amenity and is not blister or corduroy paving. It should be level with the surrounding surface, feel slightly softer underfoot than conventional paving materials and have a contrasting, matt and slip resistant finish.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 13.1.3** Ticket sales and information points, p.163-164.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 11.1.3** Counter and reception desk heights for visitors/customers, p.89-90.
- ▶ BS 8300:2009 +A1:2010. **Paragraphs 9.3.2 & 9.3.3** Hearing Enhancement Systems & Induction Loop Systems, p.70.
- ▶ Inclusive Mobility: A guide to best practice on access to pedestrian and transport infrastructure. Department for Transport: **Section 4.7** Information surface.
- ▶ Guidance on the use of tactile paving surfaces. **Chapter 7** Information surface, p.70-72. Department for Transport.
- ▶ DD CEN/TS 15209:2008. Tactile paving surface indicators produced from concrete, clay and stone.

2.2 Turnstiles, Pass-through Gates and Designated Accessible Entrance Points

Overview

Entrance turnstiles are not suitable for people with disabilities. Designated entry points specifically allocated, designed and managed to facilitate the needs of people with disabilities are recommended adjacent to general provision. These will also assist older people who find it difficult to stand for lengthy periods of time and people with autism who can find standing in queues stressful or difficult.

Recommended Standards

- Where turnstiles are unavoidable to access stadia grounds or stadia, complementary pass-through side-hung gates for use by people with disabilities should be used.
- Accessible side-hung gates should have an effective clear opening width of minimum 1000mm.
- The design, location and management of accessible control barriers, turnstile systems or entry points should enable efficient entry by people with disabilities.

- Stewards positioned on approach and at accessible entrance points to provide assistance in opening manual doors/gates, to facilitate ticketing processes and to assist people with disabilities from unintentionally entering standard turnstiles.
- If provided, access control devices associated with turnstiles, pass-through gates or designated accessible entrance points should be accessible to people with disabilities e.g. height, control buttons, visual and audible display etc.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 6.6.4** Access control systems, Turnstiles, p.46 & **Paragraph 7.1.2** Reception area (re: control barriers), p.47.

2.3 Entrance and Entrance Doors

Overview

Stadia will have different stands, different arrival points and therefore different points of entrance. All points of entrance should be designed to be accessible for all people and accounting for a broad range of need and ability. **Note:** it is important to consider that stadia entrance points can be located at a site boundary leading into the grounds, or into a stadium 'structure'.

Recommended Standards

- On approach, stadia entrances should be clearly identifiable through the use of large clear signage.
- Stadia entrances should be easily distinguishable and should contrast visually with the immediate surroundings.
- Stadia entrance doors should have a form of weather protection.
- The area immediately in front of entrance doors should be level and spacious to enable easy and unrestricted pre and post event movement, or during an emergency.
- Entrance thresholds should be level.
- Amenity lighting should be provided adjacent to stadia entrance points.

- Effective clear opening width of minimum 1000mm to at least one leaf of entrance doors.
- Revolving doors should not be used.
- Where provided, automatic doors should be fitted with safety sensors i.e. controlled by a passive infrared system located in an appropriate position, which is sensitive to children and to people who are seated and can sense someone who is standing.
- Where provided, automatic entrance doors should be capable of manual operation in the event of a power failure.
- Vision panels to doors should provide a minimum zone of visibility between 500mm and 1500mm above floor level, large enough to enable a standing or seated person to see and be seen from either side of the door.
- Glazed doors and associated side panels should not be frameless. They should be distinguishable from their surroundings, with permanent safety markings such as signs and logos located in the zones 850mm to 1000mm from ground level and 1400mm to 1600mm from ground level.
- Ensure safety markings are visible from both sides of doors.
- Control air ingress by providing a draught lobby, or where this is not feasible, an air curtain can assist.
- Outwardly opening doors (other than for emergency use) should be protected e.g. using a barrier rail, or recessed.



Guidance Signpost

- ▶ Automatic Door Systems. Specifiers' Handbooks for Inclusive Design. Centre for Accessible Environments.
- ▶ CSN EN 16005. Power operated pedestrian doorsets - Safety in use - Requirements and test methods. 2012.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 6.4.3** Vision Panels, p.38-39 & **Paragraph 6.4.4** Glass Doors, p.40.
- ▶ Glazing. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet V. **Paragraphs 3.1 - 3.3 & Diagram 3.1**, p.14.

2.4 Lobbies

Overview

Lobbies may be required in certain areas of stadia e.g. within hospitality areas, commercial facilities, community use sports facilities and toilets. Where lobbies are required, they should be sizeable, to permit a wheelchair user and a companion to rest clear of door swings. This will also assist parents with pushchairs, persons accompanied by assistance dogs and people using mobility aids/scooters.



Guidance Signpost

- ▶ Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraph 3.24 & Diagram 3.4**, p.25-26.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 7.1.1** Entrance flooring systems, p.47.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 9.1.3** Floor surfaces, p.62-63.

2.5 Visitor Reception and Information Points

Overview

Visitor information areas should be designed to provide good access for all. Reception counters and visitor information points should be in sight of entrance into the stadium and on approach from concourse areas. Each facility should be identifiable by people who are partially sighted. The layout of each facility should be clear and logical.

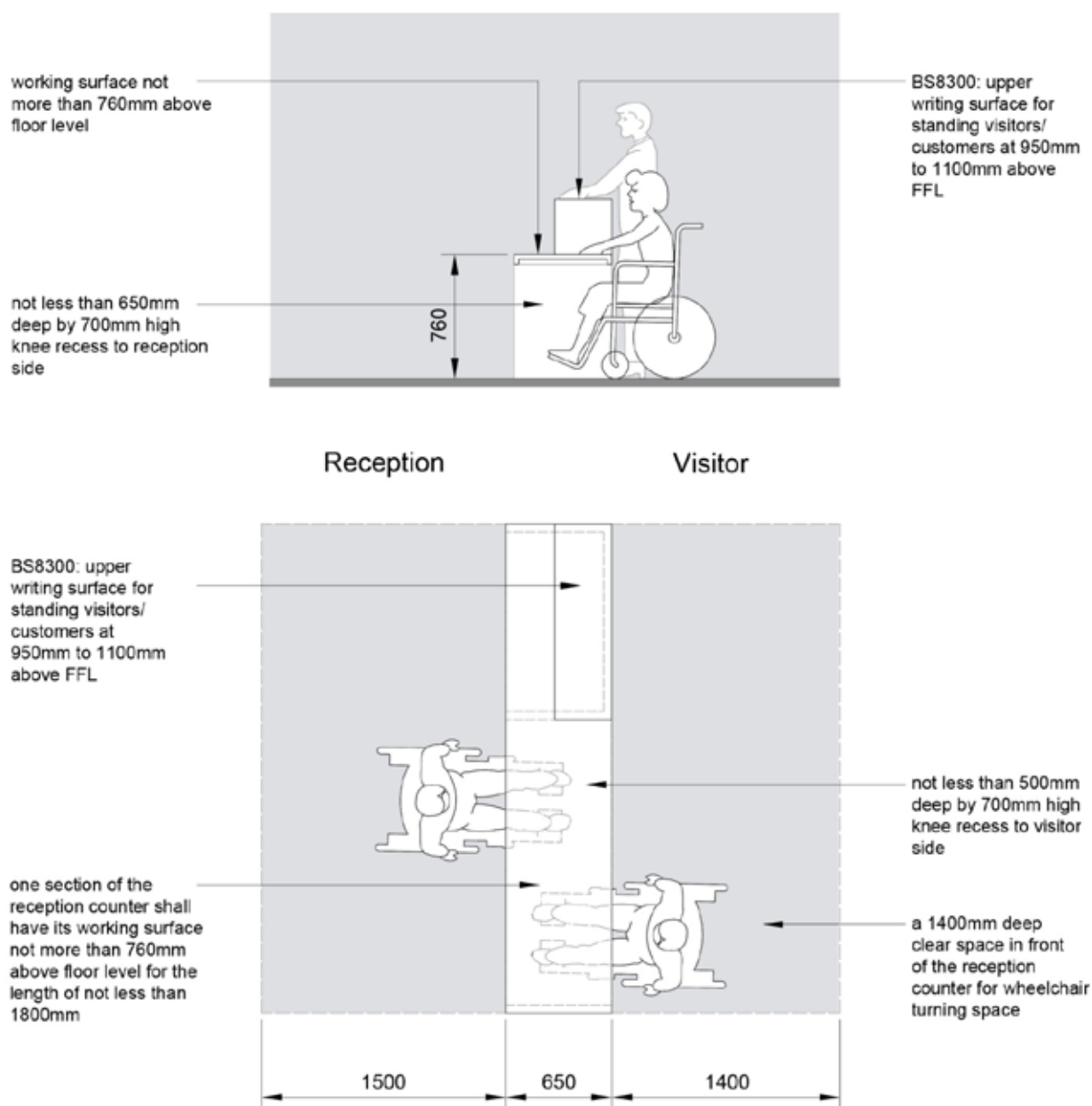


Figure 3 - Visitor Reception and Information Points

Recommended Standards

- The approach to visitor reception areas and information points from entrances into the stadium and in concourse areas should be direct, free from obstacles and be minimum 2000mm wide.
- A counter with an upper and lower section should be provided to facilitate visitors and staff who wish to stand or sit, including wheelchair users and people who are small in stature. See Figure 3 of this guide: Visitor Reception and Information Points.
- The lower counter section should be located in a prominent position.
- Provide a hearing enhancement system. See Section 7.4 of this guide: Hearing Enhancement Systems.

- Security barriers should have non-reflective glass, to assist people who rely on lip reading.
- The design of access control systems e.g. control/queue barriers within visitor information areas should accommodate the needs of people with disabilities.
- Signage to indicate that staff/steward assistance is available if required e.g. to assist older people.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 6.6.4** Access control systems, Turnstiles, p.46 & **Paragraph 7.1.2** Reception area, p.47.

3 Getting Around the Stadium

3.1 Corridors and Passageways

Overview

Corridors and passageways within stadia facilities should be wide enough to accommodate people with disabilities and large groups of people using the facilities at the same time.

Recommended Standards

- Corridors and passageways should be clutter free circulation routes. Fire extinguishers and hoses, radiators and other objects should not project into the clear corridor width, as they present a potential hazard to people who are blind or partially sighted. It is recommended that such objects be recessed, however if unavoidable, hazard protection is necessary.
- Glazing at the end of corridors and passageways should be avoided.
- Where long circulation routes are sub-divided by a series of fire doors the provision of electro-magnetic hold backs should be provided.

3.2 Concourse and Vomitories

Overview

Concourses commonly serve as the main thoroughfare for spectators accessing seats and amenities such as refreshment points and toilets and can be subject to significant footfall, particularly pre and post event, during intervals or in the event of emergency. Vomitories are access routes built into the gradient of a stand which directly link spectator seating to concourses, and/or routes for ingress, egress or emergency evacuation. Upper tier vomitories can cause sight obstructions and can be subject to congestion around openings.

Recommended Standards

- Heavy footfall in stadia dictates a significantly wider route of passage than general corridors and passageways in some areas e.g. in concourses. Where this is the case, free circulation and movement even during periods of heavy footfall should be possible to access services and in the event of emergency.
- Exposed structural elements e.g. soffits and support columns should be clearly distinguishable through visual contrast and, where feasible, have a form of contrasting protection.
- Where vomitories are used in stadia they should not be positioned where they will obstruct wheelchair accessible viewing or circulation.
- Vomitories should be clutter free circulation routes.
- Maximise natural lighting in concourses where design allows.
- Provide a slip resistant floor finish.



Guidance Signpost

- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 8.4** Size of concourses, (new build and existing), p.77.
- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 8.8** Vomitories, p.79-80.

3.3 Internal Doors

Overview

Internal doors should be designed to facilitate free and easy movement by large groups of people.

Recommended Standards

- To aid unrestricted pedestrian flow and movement, the number of internal doors used should, wherever possible, be kept to a minimum.
- Internal doors should have an effective clear opening width of minimum 875mm.
- Doors to self-contained wheelchair accessible toilets and cubicles should have a clear opening width of minimum 1000mm, outwardly opening doors and be fitted with contrasting horizontal closing bars (set within the range 800mm to 1050mm above floor level; 900mm preferred).
- To make them easier to negotiate, double doors should incorporate a double swing action rather than an interlocking arrangement, unless power activated e.g. using push pad device.
- Except where privacy is required, all doors should be designed to include visibility glazing. Vision panels should provide a minimum zone of visibility between 500mm and 1500mm above floor level.
- For safety reasons, doors should not swing out directly into corridors and passageways. Where outward swing is required or unavoidable e.g. on fire escape routes, doors should be recessed where possible. Provide associated signage to warn of outward door swing.
- Direction of door swing along circulation routes should be consistent.
- Design and installation of doors should ensure that the maximum force required to open doors is as illustrated in Figure 4 of this guide: Door Swing Opening Force Requirements.

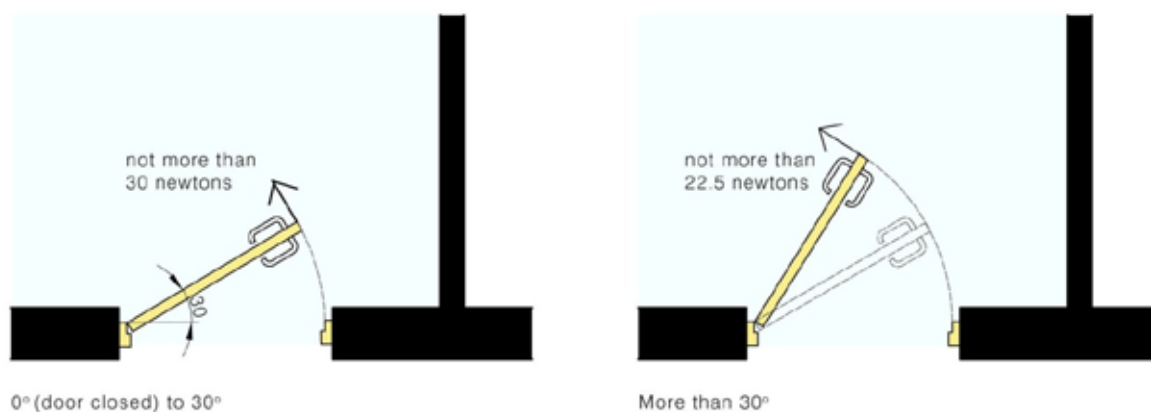


Figure 4 - Door Swing Opening Force Requirements

- A space of at least 300mm should be provided between the leading edge of the door and a return wall on the pull side (unless the door is opened by automatic controls).
- Where provided, automatic doors should be fitted with safety sensors i.e. controlled by a passive infrared system located in an appropriate position, which is sensitive to children and to people who are seated and can sense someone who is standing.
- Door opening furniture with a lever action and closed end, at a comfortable height for wheelchair and ambulant users, should be used to enable doors to be opened one handed.
- The use of locks/latches comprising a lever action, or extended grip thumb-turn, to assist people with reduced dexterity should be provided.
- Do not fit 'Pull' handles on the 'Push' side of non-latch bolt doors that are only capable of swinging in one direction, as this may cause confusion and result in congestion.
- To assist people who are partially sighted, door furniture should contrast visually with the surface of the door.
- Wherever possible, electro-magnetic hold back controls to fire doors, which only close when the fire alarm is activated, should be provided.
- Doors that are power operated/automatic opening assist a broad range of people, including wheelchair users, assistance dog owners and older people. Provide where practicable in stadia i.e. application will be specific to internal location.
- See Section 4.13 of this guide: Visual Contrast.



Guidance Signpost

- ▶ Stairs, ramps, guarding and protection from impact. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet H. **Paragraphs 7.1 - 7.5**, p.43.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 6.4.3** Vision Panels, p.38-39 & **Paragraph 6.4.4** Glass Doors, p.40.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 6.5 - 6.5.5** Door fittings, p.40-45.
- ▶ Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraph 3.12**, p.22.
- ▶ Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraphs 4.13 & 4.14 & Table 4.1**, p.29.
- ▶ Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraph 5.44(g)**, p.47 & **Diagram 5.8**, p.48.
- ▶ Automatic Door Systems. Specifiers' Handbooks for Inclusive Design. Centre for Accessible Environments.
- ▶ Architectural Ironmongery. Specifiers' Handbooks for Inclusive Design. Centre for Accessible Environments.
- ▶ CSN EN 16005. Power operated pedestrian doorsets - Safety in use - Requirements and test methods. 2012.

3.4 Passenger Lifts

Overview

To ensure free and unrestricted access to all levels of stadia, passenger lifts should be provided.

Recommended Standards

- Locate lifts in convenient positions near to entrance points, to enable quick and easy access to stand levels and seats, and close to visitor arrival/reception areas and main circulation concourses.
- Floor plan layout may dictate that lifts have opposite or perpendicular door configurations on exit. If so, clear audible warning in advance of opening is required to inform passengers that doors will be opening behind or to the side.

- Lift car size should be based on anticipated footfall in public spaces, stadia size and locations served within stadia. A minimum lift car size of 2000mm wide by 1400mm deep (16 persons) is recommended. Lifts of this size should have a minimum clear opening door width of 1000mm. A lower specification for lift car size and door width may be acceptable in site specific areas of stadia, in agreement with Disability Sport NI.
- Where proximity dictates, lift car size should accommodate first aid stretchers and mobility scooters.
- Lifts in a bank of lifts to have audible indication at each floor to denote arrival, to help people who are blind or partially sighted to identify which lift to use.
- At each floor level there should be:
 - A clear space of at least 1500mm by 1500mm to ensure adequate manoeuvring space for wheelchair users. Where feasible 2000mm by 2000mm should be provided.
 - Audible announcements to indicate arrival of lift and direction of travel should be provided to aid people who are blind or partially sighted.
 - A clear visual display indicating the level reached by the lift should be provided inside and outside the lift car, including signage opposite the lift doors visible on exit, to aid people who are deaf, have a hearing loss or tinnitus.
 - A clearly visible sign opposite and adjacent to the lift with raised embossed numbers/letters indicating the floor level should be provided.
- Landing 'call' buttons should:
 - Be positioned between 900mm and 1100mm above the floor level of the landing and not less than 500mm from any return wall.
 - Have suitable raised tactile numbers/symbols and Braille to indicate function.
 - Be clearly distinguishable through suitable visual contrast.

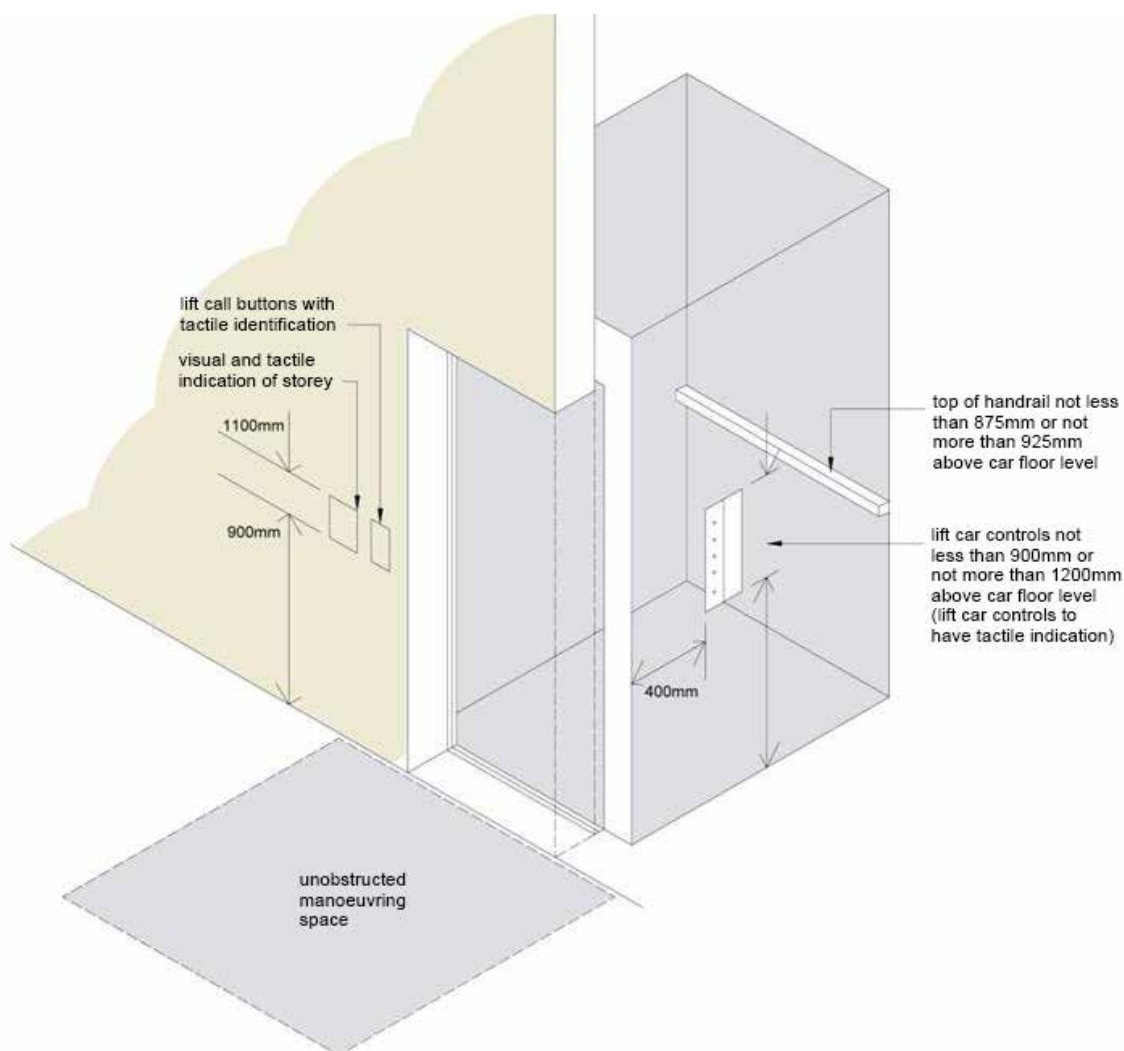


Figure 5 - Passenger Lift Car Fit-out

3.4.1 Lift car specification

Recommended Standards

- 'Fire protected' lifts i.e. evacuation lifts, suitable for the evacuation of people with disabilities should be provided.
- Lift doors should contrast visually from the adjacent landing, and internal car, wall surfaces.
- Internal control buttons should:
 - Be positioned between 900mm and 1200mm above floor level and not less than 400mm from any return wall.
 - Have suitable raised tactile numbers/symbols and Braille to indicate function.
 - Be clearly distinguishable through suitable visual contrast.

- The lift car should have clear visual and audio indication of its level/arrival at each floor.
- There should be a minimum nine second time delay to the lift door closing mechanism. This will assist older people, people who are blind or partially sighted including assistance dog owners and people with mobility difficulties when approaching and entering/exiting the lift.
- The lift should have an emergency communication system which gives audible and visual indication that the alarm has been raised and received.
- Ensure accurate 'levelling' between the floor of the lift and landing level at each storey as some wheelchair users will find even a small difference in level difficult to negotiate.
- The provision of a duplicate set of controls on the opposite side of the lift car should be provided in larger stadia lifts i.e. 2000mm by 1400mm or larger.
- The floor of the lift should be slip resistant and should not be dark in colour.
- A handrail should be provided along at least one side of the lift car. The top surface of the handrail should be not less than 875mm or not more than 925mm above the floor of the lift.
- Where a lift has only one door, the provision of a mirror on the wall of the car opposite the door is required to aid navigation by wheelchair users. The mirror should not be lower than 900mm from the lift floor.
- Areas of glass in lifts, including mirrors, should be identifiable to people who are blind or partially sighted.

3.4.2 Platform lifts, stair lifts and enclosed vertical lifting platforms

Overview

Although the provision of vertical access using short-rise platform lifts and stair lifts may meet the requirements of Part R of the Building Regulations, these lifting devices are not regarded as providing a reasonable or acceptable means of vertical access to new, refurbished or existing stadia facilities for people with disabilities. Stair lifts are not acceptable within stadia seating tiers. Enclosed vertical lifting platforms may be acceptable in exceptional site specific areas of refurbished or existing stadia, but are not acceptable in new stadia.

Recommended Standards

- Where it can be demonstrated that full passenger lift standard cannot be achieved in exceptional site specific areas of refurbished or existing stadia, enclosed vertical lifting platform provision used to provide vertical access should have:
 - A fully enclosed car.
 - Dimensions capable of accommodating a minimum of one wheelchair user and companion.
 - No restrictions in terms of access or management e.g. assisted or restricted key access is not acceptable.
 - Accessibility features such as visual and audible alert, tactile call and internal buttons, including Braille.



Guidance Signpost

- ▶ BS EN 81-70:2003. Safety rules for the construction and installation of lifts. Particular applications for passenger and goods passenger lifts. Accessibility to lifts for persons including persons with disability.
- ▶ BS EN 81-2:1998 +A3:2009. Safety rules for the construction and installation of lifts. Hydraulic lifts.
- ▶ BS EN 81-1:1998 +A3:2009. Safety rules for the construction and installation of lifts. Electric lifts.

3.5 Escalators

Note: where escalators are provided in stadia an alternative accessible route is required.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 8.4** Escalators and moving walks (passenger conveyors), p.60-61.
- ▶ Inclusive Mobility: A guide to best practice on access to pedestrian and transport infrastructure. **Section 8.4.4** Escalators.
- ▶ Stairs, ramps and escalators: Inclusive design guidance. Centre for Accessible Environments and RIBA Publishing. Ann Alderson. 2010.

3.6 Stairs and Radial Gangways

3.6.1 Stairs

Overview

Stairs should be designed to make them easier and safer to use by ambulant disabled people and people who are blind or partially sighted.

Recommended Standards

- Stairs should where possible be designed so that they are not directly in line with an access route.
- Where stairs are unavoidably in line with an access route, hazard warning should be provided at the top and bottom of stairways to assist people who are blind or partially sighted throughout stadia. The warning should contrast visually with the surrounding floor surface and be tactile.³
- The maximum number of risers in a flight should be twelve.
- The provision of flights of less than three risers should be avoided.
- A landing should be provided at the bottom and top of each flight of stairs.
- Landing width should be at least that of the stair width.
- The unobstructed landing length of each landing should be not less than 1200mm clear of any door swing onto it.
- There should be clear unobstructed stair width of at least 1200mm.
- The rise of stairs should be in the range 150mm to 170mm.

³ Refer directly to: <http://www.queenelizabetholympicpark.co.uk/-/media/lldc/policies/lldcinclusiveDesignStandardsmarch2013.ashx?a=en> (IDS 06. Tactile Paving, p.24-26 & IDS 37. Steps, p85-86).

- The going of stairs should be in the range 250mm to 300mm.
- Stair risers within a flight or series of flights should be uniform, as irregular risers can be confusing for people who are blind or partially sighted.
- Surface finish should be slip resistant.
- A stair nosing should extend the full width of the flight and be made of slip resistant material. A stair nosing should wrap around the step so that it extends 55mm on the tread and 55mm on the riser.
- Stair nosings should be distinguishable from the remainder of the step e.g. through suitable permanent visual contrast.

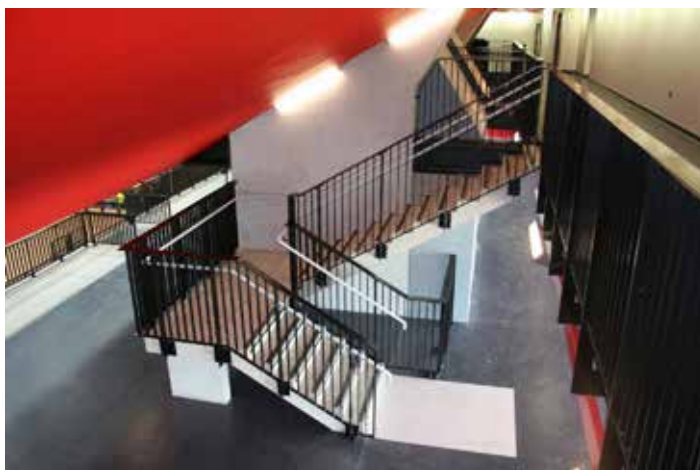


Image 1 - Staircase in London 2012 Handball Arena® - (image courtesy of Populous)

Additional Considerations

- Hazard warning at the top and bottom of all stairways throughout stadia to assist people who are blind or partially sighted. Where provided, warning should contrast visually with the surrounding floor surface and be tactile.



Guidance Signpost

- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 7.9 a-e** Controlling the flow of people at the head of stairways, p.70.
- ▶ Stairs, ramps, guarding and protection from impact. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet H. **Paragraphs 3.4 - 3.11**, p.21-24 and **Paragraphs 3.30 - 3.43**, p.30-32.

3.6.2 Radial gangways

Overview

Radial gangways comprise steps through viewing areas in stadia fixed seating tiers and standing terraces.

Recommended Standards

- Radial gangways should have risers within a flight, or a series of flights, that are uniform and maximum 190mm. Irregular risers can be confusing for people who are blind or partially sighted. Slight variations may be acceptable throughout the gangway length, where unavoidable e.g. in parabolic bowl design.
- Radial gangways to have goings minimum 280mm.
- A landing should be provided at the bottom and top of each radial gangway.
- Landing length should be at least that of the gangway width and there should be a clear unobstructed step width of at least 1200mm. Variations may be acceptable in specific design circumstances e.g. where landings at short rise radial gangways provide access to vomitories (as an example, Wembley Stadium).
- Surface finish should be slip resistant.
- Highlight steps in radial gangways to the left, right and front edge through visual contrast. A step nosing should wrap around the step so that it extends 55mm on the tread and 55mm on the riser.

Additional Considerations

- Hazard warning at the top and bottom of all stairways throughout stadia to assist people who are blind or partially sighted. Where provided, warning should contrast visually with the surrounding floor surface and be tactile.⁴
- Radial gangway steps that can potentially be dark during night time events should be fitted with a recessed LED light at tread level to assist all people, including people who are partially sighted.

⁴ Refer directly to: <http://www.queenelizabetholympicpark.co.uk/-/media/ldc/policies/ldcinclusivedesignstandardsmarch2013.ashx?la=en> (IDS 06. Tactile Paving, p.24-26 & IDS 37. Steps, p85-86).



Guidance Signpost

- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 11.9** Radial gangways in seated areas, p.122.

3.6.3 Helical and spiral stairs

Note: flights of stairs of a helical or spiral design are not regarded as providing a reasonable means of access. This is because many people with disabilities find stairs of this design difficult or impossible to use. They are particularly hazardous for assistance dog owners, given that either the dog or the owner has to descend on the narrow side. They are not acceptable in new or refurbished stadia.

3.7 Internal Ramps

Overview

It is not envisaged that internal ramps will be appropriate in new stadia or that those undergoing redevelopment will include internal ramps. Where circulation ramps are unavoidable they should be designed in accordance with good practice guidance and accounting for anticipated footfall.

Recommended Standards

- Avoid using 'split-level' areas in stadia.
- Even a gentle slope or a slight change in level can be disconcerting or present a tripping hazard, therefore should be clearly signed and identified at floor level to warn all users, including people who are partially sighted.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 8.2 - 8.2.4** Internal ramps, p.54-55.
- ▶ BS 8300:2009 +A1:2010. **Paragraphs 5.8.2 - 5.8.4** Gradient, Ramp widths, Landings, p.23-24.
- ▶ Stairs, ramps, guarding and protection from impact. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet H. **Paragraphs 4.14 - 4.22, p.36-38.**

3.8 Handrails and Handholds

Overview

The majority of people with disabilities are ambulant disabled people. The provision of well designed handrails and handholds in stadia will assist all users, to ascend and descend stairs and radial gangways, including ambulant disabled people. People with a range of disabilities will benefit too e.g. people who are blind or partially sighted and people with hidden disabilities, such as epilepsy and heart conditions. Handholds will assist all spectators on steep tiers.



Image 2 - Handholds to Gangways in London 2012 Handball Arena®
(image courtesy of Populous)

3.8.1 Handrails

Recommended Standards

- Handrails should be provided on each side of steps, stairways and ramps, including intermittent central handrails on radial gangways wherever feasible.
- The surface of handrails should be distinguishable from the background against which they are seen e.g. through suitable visual contrast.
- A handrail should be at a height of between 900mm and 1000mm from the pitch line and between 900mm and 1100mm from the surface of the landing.
- A handrail should extend not less than 300mm horizontally beyond the top and bottom landings of a stair flight and should be terminated in a way that will reduce the risk of clothing being caught e.g. by terminating the handrail at floor or ground level. Similarly, on ramps.
- Handrails are required in addition to safety guardrails, therefore provision of both may be required on some steps and stairways.
- If steps and stairways consist of more than two flights connected by a landing the handrail should run continuously across the landing area.
- Handrails should be oval or circular in shape:
 - A circular handrail should have a diameter in the range 32mm to 50mm.
 - An oval handrail should have dimensions of 50mm wide and 39mm deep with a radius of at least 15mm.
- Handrails should be easy and comfortable to grip.
- There should be a clearance of between 50mm and 75mm between a handrail and any adjacent wall or obstacle.
- Handrails should be clearly distinguishable from safety barriers/guardrails e.g. using visual contrast.
- To assist people who are blind or partially sighted tactile markers/cues should be incorporated to the underside of handrails at the top and bottom of steps and stairways. This can be achieved by placing tactile markers/cues on the underside of each handrail, as described below:
 - Three steps from top/bottom of stairs: three tactile markers placed on underside of handrail;
 - Two steps from top/bottom: two tactile markers placed on underside of handrail;
 - One step from top/bottom: one tactile marker placed on underside of handrail. **Note:** it is essential that tactile markers are regularly inspected and maintained.

Additional Considerations

- Handrails should not be excessively cold to the touch.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 5.10.1 - 5.10.5** Handrail Provision, p.28-30.

3.8.2 Handholds

Recommended Standards

- Handhold support should be installed to facilitate ascent and descent on tiers with gradients of 34° or steeper; or use of a central handrail where width allows.
- Handholds required on steep tiers should be fitted at row ends on gangways, fixed to barriers behind seating rows and where feasible in front of seats for additional safety (integrated in the design of safety guardrails where required in front of seats). A site specific solution is required.
- Handhold assistance should be provided to offer support leading to and at ambulant accessible seating rows.
- The surface of handholds should be distinguishable from the background against which they are seen e.g. through suitable visual contrast.
- Handholds should be robust and securely fixed.
- Handholds should be easy and comfortable to grip.

Additional Considerations

- The provision of handholds dispersed at the end of rows in lower gradient tiers should offer support to people with mobility disabilities whilst retaining flexibility in terms of seating options and offering increased capacity beyond designated ambulant accessible seating.
- Handholds should not be excessively cold to the touch.



Guidance Signpost

- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 11.9** Radial gangways in seated areas, p.122.

4 Accessible Stadia Facilities and Use of Facilities

4.1 Sanitary Provision

Overview

Suitable and sufficient toilet provision should be provided for people with disabilities throughout stadia and to serve stadia associated facilities. This should include provision for independent use and provision for assisted use.

Many people with disabilities do not require all of the facilities provided by a wheelchair accessible WC. The recommendations below focus on the development of toilet amenities of a more inclusive design, which can benefit people with a wide range of disabilities, combined with the provision of additional standalone accessible units.

Stadia are different from general public buildings and the variation of activities that can take place will put different pressures on toilet facilities. Half-time can vary between 5 and 15 minutes depending on the sport, therefore spectators with disabilities who can require a longer time to reach and use toilet facilities should be able to access them quickly and easily. There should be adequate accessible provision to comfortably accommodate anticipated need, even on the busiest days.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.6.3.2** Unisex accessible peninsular WC for assisted use, p.143-144.
- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Matchday Experience. **Section K:1** Accessible toilets (paras 2, 5 & 8), p.82 & **Section K:2** Wheelchair accessible toilets (paras 6 & 10), p.83 & **Section K:3** Accessible toilets for non-wheelchair users (para 1), p.84.
- ▶ Toilet Facilities at Sports Stadia: Planning, design and types of application. Sport England. **Section 9**, p.24.

4.1.1 Numbers and design of accessible toilets

Overview

Numbers of accessible toilets should account for anticipated numbers of spectators with disabilities attending events, to reflect accessible viewing capacity in the stadium bowl. Accessible toilet provision is also required to serve general accommodation areas of stadia.

4.1.1.1 Unisex wheelchair accessible WCs

Self-contained unisex wheelchair accessible WCs for independent use are required throughout stadia, located outside of but as close as possible to each general male/female block of toilets. See Figure 6 of this guide: Unisex Wheelchair Accessible WC.

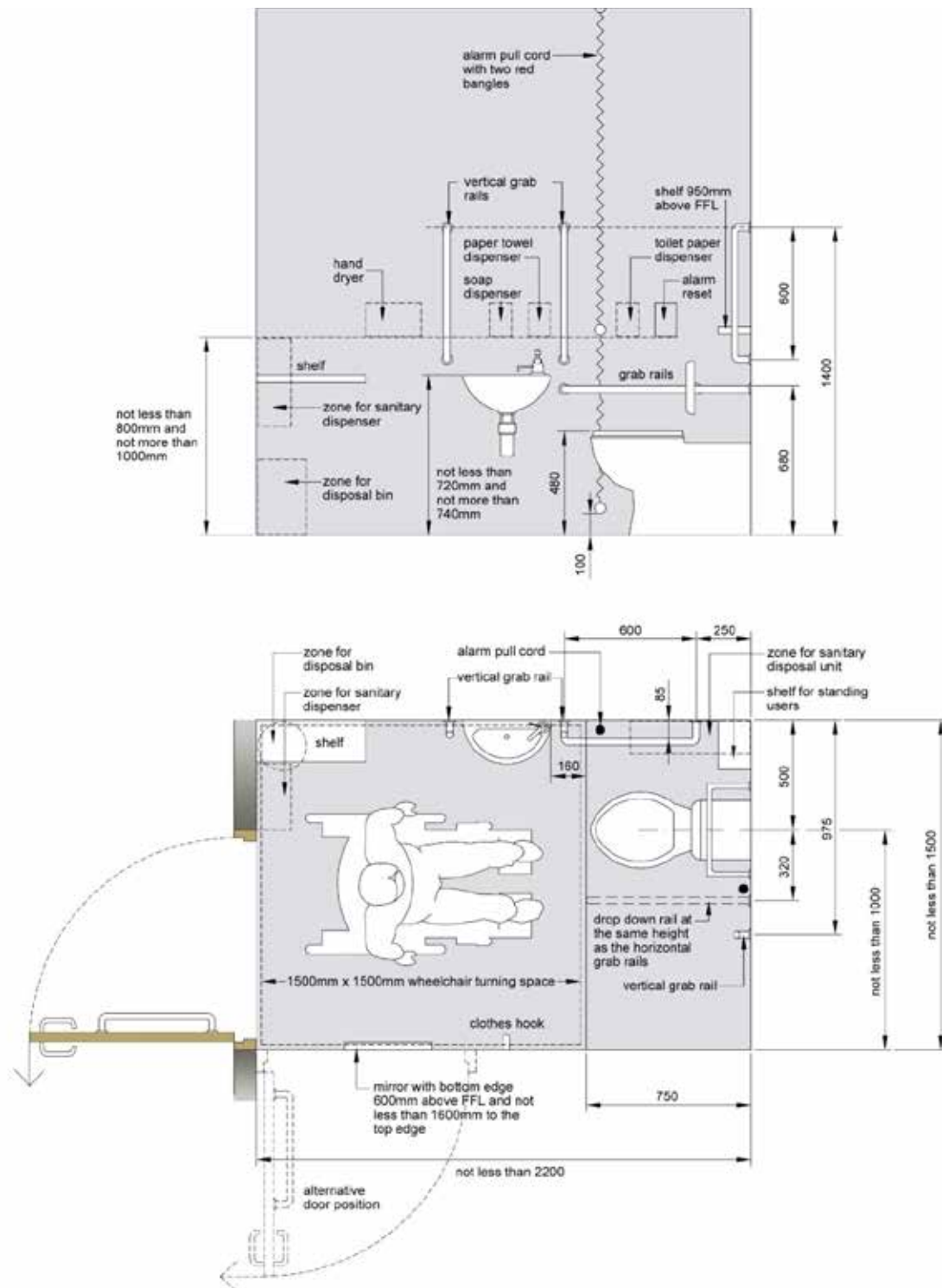


Figure 6 - Unisex Wheelchair Accessible WC

Recommended Standards

- One wheelchair accessible toilet for independent use per 12 no. spectators with disabilities.
- Where there are wheelchair accessible viewing spaces, provide a wheelchair accessible toilet zone within the associated concourse, comprising unisex wheelchair accessible units. Each zone should be steward managed. See Section 8 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Management of Accessible Toilet Facilities and Changing Places Toilet Facilities.
- Minimum dimensions 1500mm wide by 2200mm long.
- Minimum clear opening door width of 1000mm.
- Provide choice of left and right hand transfer in corner layout wheelchair accessible WCs and signage to indicate same.
- Horizontal travel distance from wheelchair user viewing spaces should be maximum 40m.
- Provide a wheelchair accessible toilet within 40m maximum horizontal travel distance from pitch side for use by participants with disabilities and visitors partaking in stadium tours.
- Contrasting grabrails fitted in accordance with standards, including horizontal and drop-down rails set at 680mm above floor level.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.6.3.1** Wheelchair accessible corner WC, p.138-143.

4.1.1.2 Inclusive toilet blocks

Wherever a general block of male/female toilets is provided they should be designed to be inclusive of non-disabled people and people with disabilities.

Note: enlarged cubicles assist some wheelchair users, people carrying bags, long cane users, assistance dog owners, parents with pushchairs etc. Enlarged cubicle provision can increase overall inclusive capacity whilst deterring misuse of wheelchair accessible units.

Note: lowered wash hand basins and urinals will also be beneficial for children and people of small stature.

Recommended Standards

- At least one ambulant accessible toilet cubicle, with outward opening door swing in each male and female toilet block.
- At least one ambulant accessible urinal in each male toilet block.
- At least one ambulant accessible wash hand basin in each male and female toilet block.
- At least one enlarged cubicle, with outward opening door swing where a male/female block contains more than four cubicles. See Figure 8 of this guide: Enlarged WC Compartment.
- Contrasting grabrails fitted within all accessible cubicles in accordance with standards, including horizontal rails set at 680mm above floor level.
- Potentially toilet blocks with enlarged cubicles will be accessible to some wheelchair users, therefore:
 - In male toilet blocks with an enlarged cubicle at least one accessible urinal should be at a height suitable for wheelchair users.
 - In male/female toilet blocks with an enlarged cubicle at least one accessible wash hand basin should be at a height suitable for both ambulant disabled people and wheelchair users.
- See Figure 7 of this guide: Ambulant WC Cubicle; Urinals and Wash hand basins accessible to wheelchair users and ambulant disabled people.

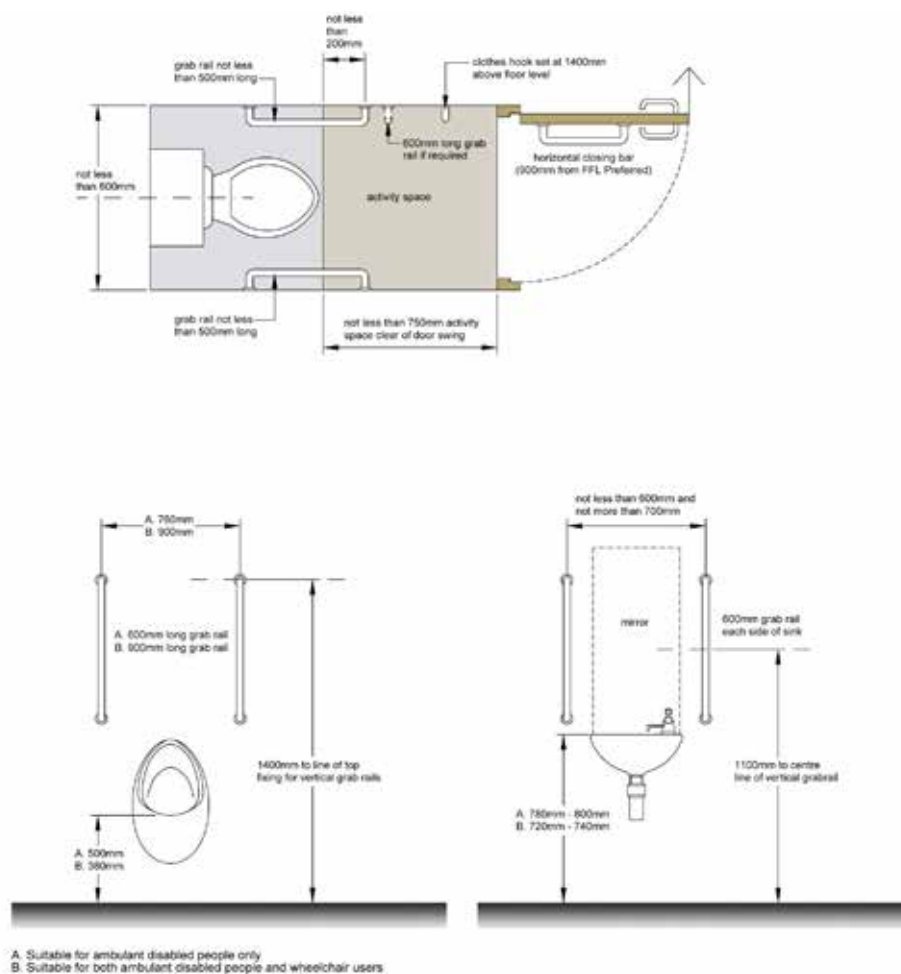


Figure 7 - Ambulant WC Cubicle; Urinals and Wash hand basins accessible to wheelchair users and ambulant disabled people

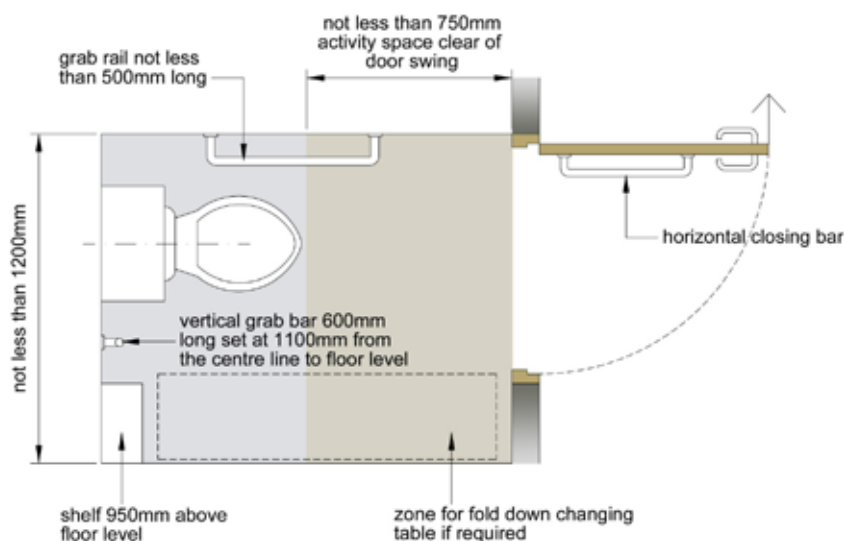


Figure 8 - Enlarged WC Compartment



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.6.3.3** WC compartment accessible by ambulant disabled people, p.145.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.6.4** Urinals accessible to wheelchair users and ambulant disabled people, p.147-148.

4.1.1.3 Unisex accessible peninsular WCs for assisted use

In addition to the requirement for corner layout wheelchair accessible WCs for independent use, peninsular WC units for assisted use provided in stadia will benefit spectators with disabilities who require carer or companion assistance in order to use toilet facilities. See Figure 9 of this guide: Unisex Accessible Peninsular WC for Assisted Use.

Recommended Standards

- At least one peninsular WC for assisted use in a stand where wheelchair user viewing spaces are provided.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.6.3.2** Unisex accessible peninsular WC for assisted use, p.143-144.

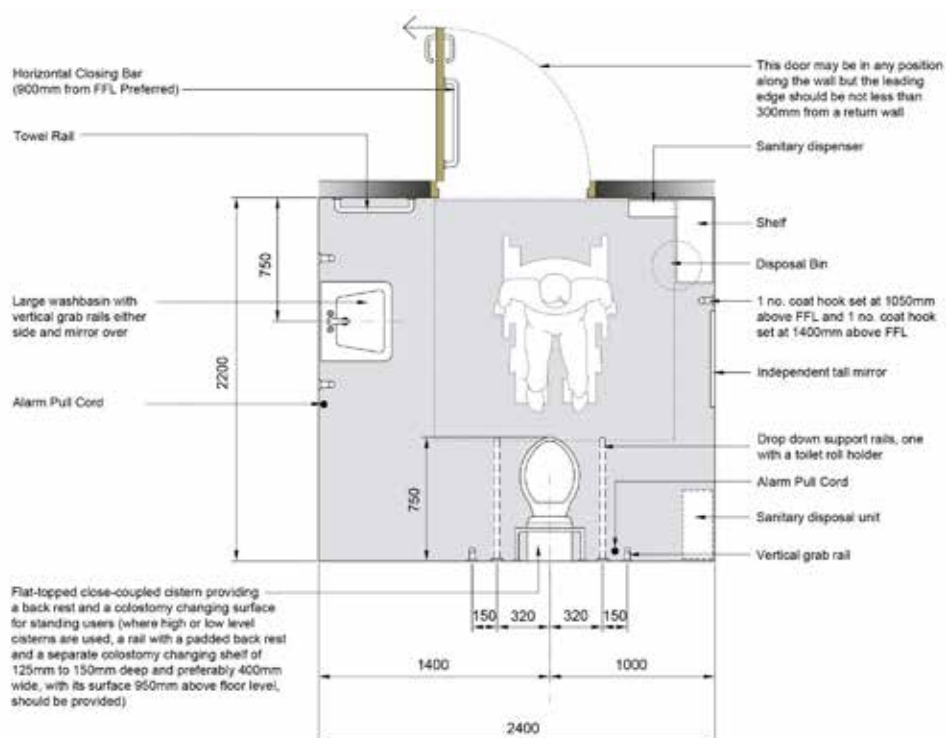


Figure 9 - Unisex Accessible Peninsular WC for Assisted Use

Additional Considerations

- Hand dryers positioned adjacent to basins, not on the opposite wall.
- Tactile surface surround to sensor operated taps/soap dispensers.
- 1 no. lowered WC pan for use by children should be considered within male/female blocks of toilets. Height should be 380mm.
- To offer flexibility and capacity e.g. during demonstrations and other events where the pitch is used by participants with disabilities, provision should be made in, or within close proximity to players changing. This approach is adopted in Wembley Stadium.
- Provide an ambulant standard toilet provision in team facilities.
Note: inclusive toilet, changing bench and shower provision in team facilities can be used by all players and participants.
- WC pans wall-mounted, as opposed to pedestal style.
- Ensure contrast is provided to mirrors and avoid excessive glare.



Guidance Signpost

- ▶ Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraphs 6.16 - 6.25**, p.53-58.

4.2 Changing Places Toilet Facilities

Overview

A Changing Places toilet facility is a room for use by people with complex and multiple disabilities which includes an adult sized changing bench and hoist, in addition to a shower and toilet.

Recommended Standards

- A Changing Places toilet facility should be provided in stadia, located in close proximity to accessible seating areas.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.7** Changing Places sanitary accommodation, p.151-153.
- ▶ Changing Places: the practical guide. Changing Places Consortium. www.theaccessofficer.files.wordpress.com/2013/11/changing-places-a-practical-guide.pdf
- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Matchday Experience. **Section K:5** Changing Places toilets, p.85.

4.2.1 Baby changing facilities

Overview

People with disabilities require quick and easy access to designated toilet facilities. This is not always possible if facilities are designed as dual purpose i.e. used also for baby changing/feeding. Baby changing can require additional time than general toileting. Toilet facilities, therefore may not be available when people with disabilities require to use them and the problem can be magnified when large numbers of people are using facilities within a short period of time, such as the half-time interval. **Note:** the child or the parent may have a disability.

Recommended Standards

- Baby and child changing should be accessible and separate to any Changing Places toilet or accessible toilet facilities.
- A height adjustable bench suitable for babies and children should be installed; to solid blockwork walls only.

Additional Considerations

- Lowered WC pan for use by children in accessible baby changing units (additional space allowance should be considered to accommodate the extra WC provision). Height should be maximum 380mm.

4.3 Corporate Areas

Overview

Corporate areas of stadia can include VIP areas, committee, director and executive facilities. In addition, stadia often provide premium level boxes and hospitality suites where committee members, directors, executives and visitors can avail of dining packages and private viewing directly in front of the facility. People with disabilities should be accommodated in all corporate facilities, including the provision of wheelchair user viewing spaces and ambulant accessible seating.

Recommended Standards

- A wheelchair user viewing space should be included in seats allocated to each premium level box.
- To ensure an unobstructed view from wheelchair user viewing spaces within premium level boxes e.g. in the event that persons in front stand up, sightlines in accordance with standards should be provided. See Section 6.3 of this guide: Sightlines.
- A reasonable proportion of wheelchair user viewing spaces should be accessible from other corporate areas e.g. hospitality suites.
- An ambulant accessible seat with fold-down arms should be included in seats allocated to each premium level box.
- A reasonable proportion of ambulant accessible seats should be accessible from other corporate areas e.g. hospitality suites.
- Flexible viewing area/seating design should accommodate non-wheelchair users in the event that the designated wheelchair user spaces are not required in corporate areas and premium level boxes.

- Accessible toilets should be provided within 40m of accessible viewing spaces in premium level boxes and corporate areas. Toilet numbers should reflect the capacity of viewing spaces within these areas. See Section 4.1 of this guide: Sanitary Provision.



Guidance Signpost

- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Matchday Experience. **Section K:8** Directors' boxes and hospitality suites p.87.
- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Matchday Experience. **Section I:4** Inclusive Viewing Standards, p.64-65 & Figures 21, 22 & 23, p.66-68.
- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 12.11**, p.138 & **Paragraph 13.6**, p.157.

4.4 Conference Facilities

Overview

Conference areas in stadia may include facilities such as meeting rooms, committee rooms and lecture theatres. Conference areas should be accessible to people with disabilities.

Recommended Standards

- Wheelchair user viewing in lecture theatres, offering a minimum of two vantage points.
- Flexible seating design should accommodate non-wheelchair users in the event that designated wheelchair user spaces are not required.
- A range of seating style should be considered, including the provision for ambulant accessible seats with fold-down arms in lecture theatres.
- Accessible toilets should be provided within 40m of conference facilities.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 11.3 - 11.3.3** Audience seating, p.96-97.
- ▶ BS 8300:2009 +A1:2010. **Paragraphs 11.4 - 11.4.6** Lecture and conference facilities, p.97-103.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.8.5** Balconies (general information), p.159-160.

4.5 Press and Media

Overview

Stadia will provide designated areas, vantage points and facilities for press and media. Designers should consider that press and media teams may include people with disabilities, therefore their needs should be accommodated in stadia design.



Guidance Signpost

- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Matchday Experience. **Section K:10** Media p.87.

4.6 Commercial Activities

Overview

A wide range of commercial activities and facilities can be available as part of the overall stadia proposal. For example, retail, refreshment/concession points, catering areas, restaurants and bars. This can also include associated sport specific museum/education facilities.

Recommended Standards

- Refreshment facilities e.g. concession outlets should be accessible for all.
- Sport specific museums/education centres should have interactive technology e.g. touch display with integrated options for zoom.
- The use of text in sport specific museums/education centres should be complemented by audio transcript, and where text is used it should be clear and sizeable. Such features will assist people who are blind or partially sighted, people with learning disabilities and children.
- Interactive and audio content should have subtitles/captions.
- Provide headphones to offer an audible guided tour. These should be compatible with hearing aids.

Additional Considerations

- Refreshment facilities e.g. water coolers/concession outlets should be located in close proximity to wheelchair user viewing spaces and ambulant accessible seating e.g. to avoid lengthy travel distances.



Guidance Signpost

- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Match Day Experience. **Section K:7** Refreshment facilities, p.86 & Section K:9 Retail outlets and other commercial areas, p.87.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 12.1.3.3** Single height work surface for a kitchenette or refreshment area shared by wheelchair users and people standing, p.109.
- ▶ BS 8300:2009 +A1:2010. **Paragraphs 13.5 - 13.5.3** Refreshment buildings, including public houses, restaurants and cafes, p.169.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 13.9.2** Accessible routes and spaces, p.177.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 13.9.3** Display cases, p.177.
- ▶ Museums and Art Galleries. Making existing buildings accessible. Centre for Accessible Environments.
- ▶ Talking Images Guide Museums, Galleries and Heritage sites: Improving access for blind and partially sighted people. RNIB.
- ▶ www.discoveryPEN.co.uk and <http://www.rnib.org.uk/information-everyday-living-home-and-leisure-adapting-your-home/labelling>

4.7 First Aid

Overview

The design of first aid facilities should consider the needs of spectators with disabilities, and where relevant within a stadium, the needs of players/ participants with disabilities.

Recommended Standards

- Include height adjustable bench.
- First aid rooms to be sizeable to allow adequate space for clear turning and transfer area.
- Accessible toilet and wash hand basin facility in close proximity to the first aid room.



Guidance Signpost

- ▶ Inclusive Design Standards. Olympic Delivery Authority. **Section 32** First aid facilities (public), p.78.
- ▶ BS 8300:2009 + A1:2010. **Annex G** (informative) Guidance on the choice of hoists, associated slings and showering/changing benches, p.203-204.

4.8 Physio Room

Overview

Where a physio room is provided it should be accessible.

Recommended Standards

- Level access.
- Height adjustable examination bench.
- Table and chairs.
- Wash hand basin.

4.9 Public Telephones

Overview

In stadia where public telephones are provided, they should be located close to visitor information areas and at least one should be located at an accessible height for people with disabilities, fitted with an induction coupler that is identified using signage.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 10.4 - 10.4.3** Public telephones, p.83-85.

4.10 ATMs

Overview

Where visitors and staff have access to cash machines within stadia, accessible provision should be made. In locations where a single machine is provided, it should be an accessible facility to assist wheelchair users and people of small stature, and where one or more machines are provided at least one machine should be accessible. All accessible machines should be clearly signed and adopt features that assist all users, including people who are partially sighted, people who have a hearing loss and people with learning disabilities.

Additional Considerations

- In consultation with relevant disability groups, include information surface to assist people who are blind or partially sighted. **Note:** information surface indicates an amenity and is not blister or corduroy paving. It should be level with the surrounding surface, feel slightly softer underfoot than conventional paving materials and have a contrasting, matt and slip resistant finish.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 10.2 - 10.2.4** ATMs and other coin and card operated devices, p.78-79.
- ▶ Access to ATMs. UK design guidelines. Centre for Accessible Environments. Robert Feeney. 2002.
- ▶ Inclusive Mobility: A guide to best practice on access to pedestrian and transport infrastructure. Department for Transport. **Section 4.7** Information surface.
- ▶ Guidance on the use of tactile paving surfaces. **Chapter 7** Information surface, p.70-72. Department for Transport.
- ▶ DD CEN/TS 15209:2008. Tactile paving surface indicators produced from concrete, clay and stone.

4.11 Outlets, Switches and Controls

Overview

In general, public areas within stadia will not require visitor access to outlets, switches and controls, as the building will be staffed and design features may be incorporated to eliminate any requirement to do so. The location, type and height of outlets, switches and controls should be in accordance with Building Regulations.

Recommended Standards

- In staff areas and areas where public use of outlets, switches and controls is unavoidable, they should be designed in accordance with Building Regulations. See Figure 10 of this guide: Outlets, Switches and Controls.
- Controls for power operated doors should be located between 750mm and 1000mm above floor level and not less than 1400mm from the leading edge of the door when in the fully open position.
- As a minimum, emergency assistance alarms should have a red-coloured pull cord with two red-coloured 50mm diameter bangles. The lower bangle should be set at a height of 100mm above floor level and the upper bangle should be located not less than 800mm and not more than 1000mm above floor level.
- Where possible, lighting in internal rooms to which the public has access should be motion sensor activated.



Guidance Signpost

- Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraph 3.20**, p.24 & **Paragraphs 5.38 - 5.46**, p.46-48.

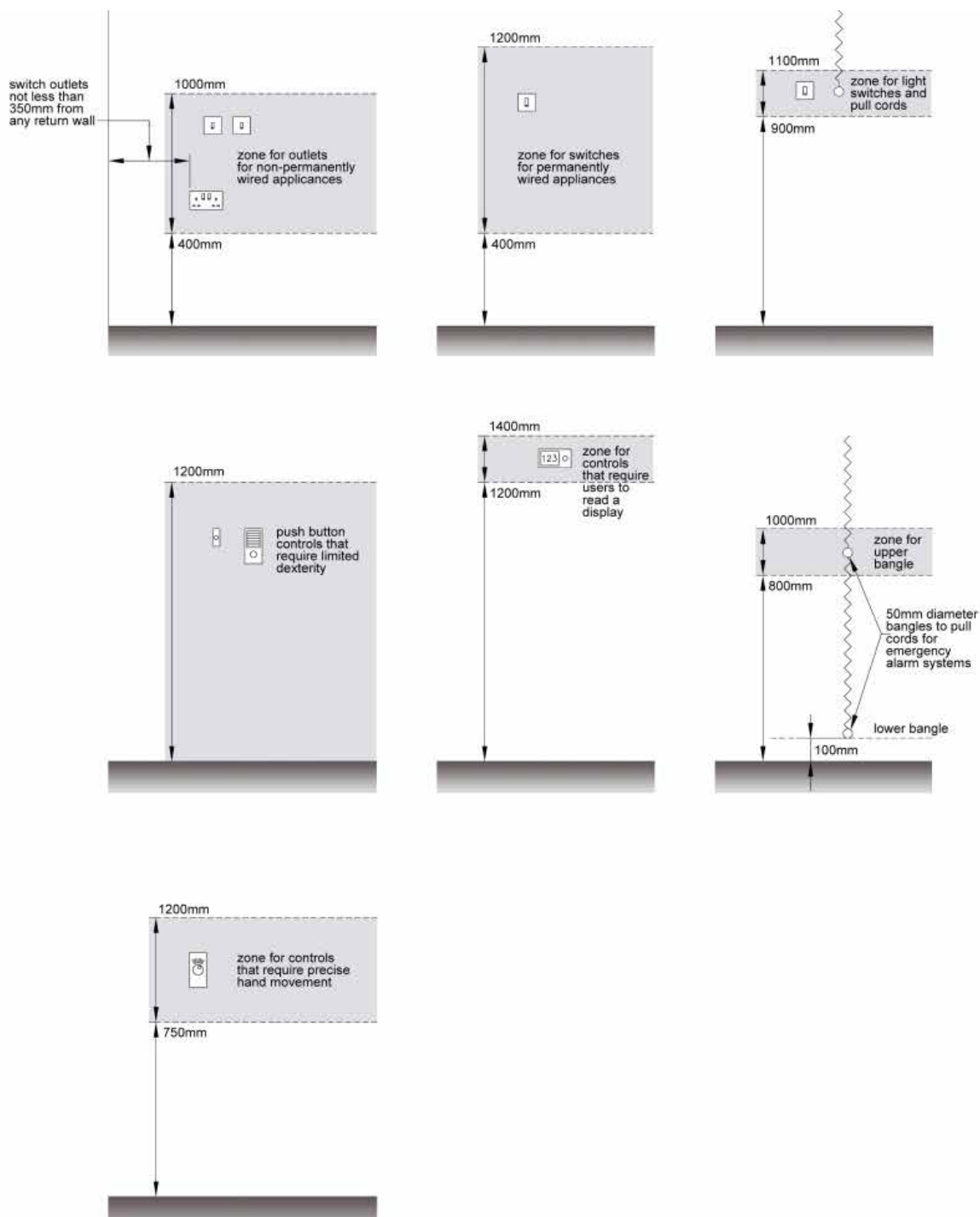


Figure 10 - Outlets, Switches and Controls

4.12 Lighting

Overview

Good lighting design is very important to assist people who are partially sighted to use stadia effectively and safely. Poor lighting design can cause poor visibility in a dull or dark environment, but also where there is excessive reflection or glare and where it creates shadows on floors or other surfaces, which may present a hazard. Good lighting design can be achieved by controlling the location, quality and quantity of natural and artificial light within stadia.

Recommended Standards

- Levels of lighting in accordance with standards should be provided on all circulation routes e.g. on corridors, passageways, concourses and in vomitories.
- Artificial lighting should be designed to produce adequate lux levels, including within specific areas such as stairways and lifts. Illuminance at tread level should be minimum 100 lux and the general lighting level in toilet accommodation should be minimum 100 lux at floor level (i.e. the amount of light illuminating the surface at tread level).
- Both natural and artificial lighting should be controlled to avoid glare, pools of bright light and strong shadows.
- Artificial lighting should be designed to provide good colour rendering on surfaces.
- Where possible, lighting in internal rooms to which the public have access should be activated by sensitivity to movement e.g. Microwave presence sensors will detect even small movements in the extremities of a space. Recommended equipment would have an off time of 60 minutes in areas where people with disabilities have access, to avoid people being left without light.
- Avoid light sources that produce glare, e.g. wall uplighters located at floor or low level should be avoided as they may produce glare on surfaces, which can obscure vision.
- Where used, downlighters should be carefully located so as not to produce strong shadows.
- The illumination of floor surfaces should be as uniform as possible minimising the potential for shadows, reflection or glare, including on steps and stairs.
- In areas where one-to-one communication is important e.g. at visitor information points and ticket points, to aid lip reading lighting should illuminate the face of the person speaking (e.g. visitor assistant).

- Fluorescent lights may cause a ‘humming’ noise that can be heard by hearing aid users. This should be minimised by using high frequency fittings.
- Floodlighting should be avoided in areas where direct customer engagement takes place.
- People can lose vision as a result of lighting positioned within direct line of sight, therefore careful siting is required.
- Designers should be aware that the use of glass and steel can distort lighting.
- Light bulbs that involve a time delay on start-up should not be used e.g. time delay can be problematic for assistance dog owners and people who are partially sighted.
- Designers and management should be aware that strobe lighting can be particularly problematic for people who are partially sighted and people who have photosensitive epilepsy. See Section 2 and Section 9 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Accessible Communications & Training Plans for Staff and Event Stewards.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 9.4 - 9.4.4** Lighting, p.74-75.
- ▶ Lighting Guide 04: Sports Lighting. Society of Light and Lighting SLL LG4. CIBSE.
- ▶ Code for Lighting. CIBSE. The Society of Light and Lighting.

4.13 Visual Contrast

Overview

Achieving visual contrast between surfaces in and around stadia e.g. floor, wall, door, ceiling surfaces and fixtures, will increase the ability of people who are partially sighted to navigate around stadia and use stadia facilities independently. Vision can be enhanced through appropriate use of colour, luminance (brightness) and surface texture.

Recommended Standards

- Finishes that contrast with each other in terms of colour and tone should be used to differentiate between floors, walls, doors and ceilings.
- The colour of walls should be different from that of the ceiling and the floor.
- Doors and their frames should contrast visually with the surrounding wall.
- Where doors are designed and installed to be capable of being held-open, or where self-closers are not installed, the leading edge of doors should contrast with the rest of the door.
- Skirting should contrast visually with the floor finish, but may match or be similar in colour and tone to the wall surface.
- Corridor ends should be finished with a contrasting colour to denote a change in direction.
- Outlets, switches and controls should be distinguishable from the surrounding wall.
- Grabrails e.g. in accessible toilet units, should contrast visually with the surrounding wall surface.
- In washroom and toilet areas, provide visual contrast between fixtures/ fittings and the background wall surface and between fittings and flooring.



Guidance Signpost

- ▶ Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraphs 1.9, 3.4a, 3.15a, 3.22a, 4.7b(i), 4.16 - 4.18, 4.27(c), 4.28(b), 4.36, 5.40, 5.45, 6.9.**
- ▶ The Colour, Light and Contrast Manual. Designing and Managing Inclusive Built Environments. Keith Bright and Geoffrey Cook.

4.14 Floor Finishes

Overview

The provision of floor finishes which facilitate the safe and easy use of stadia by people with disabilities, including wheelchair users, ambulant disabled people and people who are blind or partially sighted are very important.

Recommended Standards

- Hard unfinished surfaces should be sealed and slip resistant e.g. in concourses and stands.
- Floor finishes should be firmly fixed.
- Flooring should provide a firm foothold and good wheel grip. It is recommended that level dry floors should have a minimum Slip Resistance Value (SRV), also known as Pendulum Test Value (PTV), of 40. In areas that may become wet, such as entrances and toilets flooring should have a minimum value of 65.
- High gloss floor finishes should be avoided as they produce glare and may be perceived as being wet and slippery even if they have a slip resistant surface.
- Where used e.g. in hospitality and conference areas, carpets should have a shallow dense non-directional pile that will not restrict the movement of wheelchair users or present a tripping hazard to people using crutches, long canes or walking sticks/frames.
- Where matwells are provided the mat surface should be fixed and flush with the surrounding floor surface. Loose mats are not acceptable.
- Changes in floor colour should be used to identify a potential hazard, such as changes in level or glass screen partitions.
- Wherever possible, floor surface colour should be used to define spatial characteristics and, where appropriate, to warn of potential hazards or assist wayfinding by giving directional information.
- Floor patterning that could be mistaken for steps, e.g. stripe patterns, should not be used.



Guidance Signpost

- ▶ Internal Floor Finishes. Specifiers' Handbooks for Inclusive Design. Centre for Accessible Environments and RIBA Publishing. 2006.
- ▶ Safer surfaces to walk on - reducing the risk of slipping (C652). CIRIA. 2006 + supplemental update 2010.
- ▶ BS 5395-1:2010. Stairs. Code of practice for the design of stairs with straight flights and winders.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 7.1.1** Entrance flooring Systems, p.47.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 9.1.3** Floor surfaces, p.62-63.

4.15 Acoustics

Overview

Successful acoustic design can reduce confusion and discomfort for people with disabilities navigating around and using stadia facilities e.g. people who have a hearing loss, people with autism and people with dementia or learning difficulties. It is an important element that should be built into the stadia design process and extended to stadia associated facilities.



Guidance Signpost

- ▶ Inclusive Design Standards. Olympic Delivery Authority. **Section 33** Audio reinforcement: Acoustics, p.80.
- ▶ BS 8233:1999. Sound Insulation and Noise Reduction for Buildings. Code of practice.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 9.1.2** Materials and acoustic design, p.62.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 11.1.11** Acoustics, p.93.

4.16 Facilities for Assistance Dogs

Overview

While assistance dogs are commonly associated with a 'guide dog' for people who are blind or partially sighted, they can also be used by a wide range of individuals with other impairments such as 'hearing dogs' for people who are deaf or have a hearing loss and 'service dogs' for people with physical disabilities. An assistance dog provides a specific service to its owner and greatly enhances their owner's ability to lead a more independent lifestyle. Provision for the needs of assistance dogs should be made in stadia.

4.16.1 Outdoors

Overview

A spending facility is a designated sectioned area where assistance dogs can relieve themselves.

Recommended Standards

- It is recommended that a designated spending facility (sectioned area) should always be provided, as per Figure 11 of this guide: Assistance Dogs External Spending Area.
- Provide designated external dog spending facilities in reasonable proximity of stadia entrance points, but within a private/non-distracting area.
- A spending facility should be a secure area of minimum 3000mm by 4000mm with a boundary panel fencing/wall at a minimum height of 1200mm.
- Spending areas to be 50% grass surface and 50% hard standing (consult Guide Dogs on the use of alternative surface options on a site specific basis).
- A sign should be clearly displayed e.g. 'For Assistance Dogs Only'.
- Provide a slight gradient to assist drainage.
- Entrance gate should be accessible to wheelchair users and the area should have a minimum area of 1500mm by 1500mm to allow a wheelchair user to turn.
- Provide a water supply and hose.

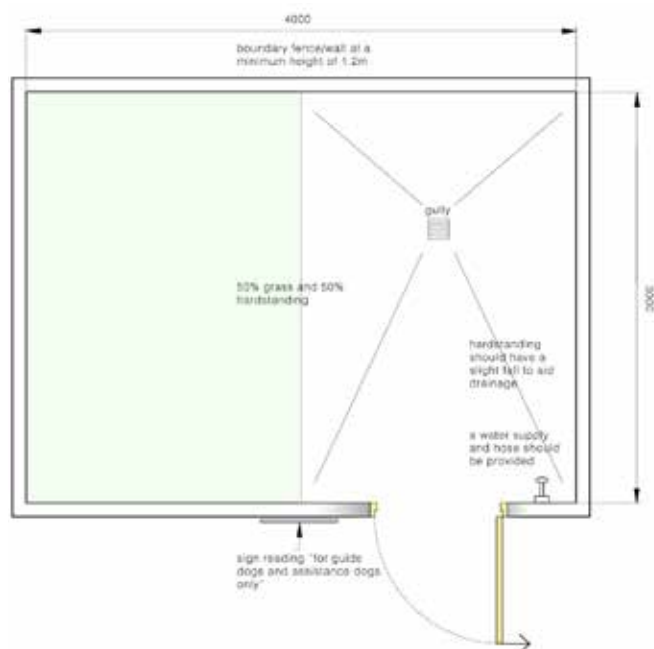


Image 3 - Spending Area Signage

Figure 11 - Assistance Dogs External Spending Area

4.16.2 In-stadia

Overview

Assistance dog owners should have choices within stadia of where to sit; whether accompanied by their assistance dog or not, whichever is their preference. Internal provision should be made available (**Note:** for event days, arrangements should be agreed with the assistance dog owner and stadia management. It is recommended that this is done as far in advance as possible e.g. during the booking process, if applicable).

Recommended Standards

- For requirements, see Section 6.2 of this guide: Specific Recommendations for Ambulant Accessible Seating (including the provisions for persons accompanied by assistance dogs).
- Provision should be made to enable an assistance dog owner to be accompanied within the stadium bowl, if that is their preference.



Guidance Signpost

- ▶ Guidance on the Provision of Seating Facilities for Guide Dogs and other Assistance Dogs. The Guide Dogs for the Blind Association (Guide Dogs).
- ▶ RNIB Soccer Sight. **Provision for guide dogs**, p.16.

5 Accessible Community Use Sports Facilities in Stadia

Overview

Where associated sports activities and facilities are provided for community use in stadia they should be accessible to people with disabilities and designed in accordance with Disability Sport NI's Design and Management Guides. Access to the associated sports facilities could potentially include people using sports wheelchairs with large cambered wheels.



Guidance Signpost

- ▶ Disability Sport NI Guide 1: Accessible Sports Facilities Design Guidelines (2016 Edition).
- ▶ Disability Sport NI Guide 2: Accessible Sports Facilities Management Guidelines (2016 Edition).



Image 4 - Accessible Viewing Area in London 2012 Handball Arena® with central vantage point at high level - (image courtesy of Populous)

6 Accessible Viewing and Vantage Points

Overview

Accessible viewing is fundamental within new and refurbished stadia design. Spectators with disabilities (across the range of disability types), should have a choice of accessible vantage points within stadia and within viewing areas, including options for half-way line and upper tier viewing. Where this is impracticable, for example in very small stands, it will be necessary to consult with supporters and local disability groups over compensatory provision elsewhere. Spectators with disabilities should have the opportunity to sit with a companion or within a larger group, and with their own fans, to avoid separation during events. Where standing terraces are provided in stadia the principle of choice should be extended to spectators with disabilities.

6.1 Accessible Viewing Capacity

Overview

Stadia design varies between sports and within individual stadia grounds of the same sport. Stadia may have fixed seating only, standing terraces only, or a combination of the two, therefore accessible viewing capacity should be based on the provision made at each stadium/sports ground.

Accessible viewing provisions should include capacity for: wheelchair users; ambulant disabled people (i.e. people with a wide range of disabilities who are not regular wheelchair users, including people with reduced mobility, older people, assistance dog owners etc.); and their companions/carers.

Sections 6.1.1-6.1.3 below set out the capacity requirements for wheelchair user and ambulant accessible seating. Section 6.2 provides further specific location and design recommendations for ambulant accessible seating, including the provisions for persons accompanied by assistance dogs.

6.1.1 Stadia with fixed seating capacity only

Recommended Standards

- The minimum number of designated wheelchair user spaces and ambulant accessible seats in fixed seating should be as follows:

Fixed seating capacity	Minimum no. of permanent wheelchair user spaces to be provided	Minimum no. of permanent ambulant accessible seats to be provided
Under 10,000	6 spaces or 1% of seating capacity whichever is greatest	6 spaces or 1% of seating capacity whichever is greatest
10,001-20,000	100, plus 5 per 1000 (or part thereof) above 10,000	100, plus 5 per 1000 (or part thereof) above 10,000
20,001-40,000	150, plus 3 per 1000 (or part thereof) above 20,000	150, plus 3 per 1000 (or part thereof) above 20,000
More than 40,000	210, plus 2 per 1000 (or part thereof) above 40,000	210, plus 2 per 1000 (or part thereof) above 40,000
Minimum 2 no. companion seats per wheelchair user space. A flexible approach to the design, layout and management of viewing areas should be adopted to meet the accessible viewing capacity requirements above e.g. banks of standard seating to facilitate school/family groups adjacent to wheelchair user viewing could be designated as potential companion seating. A flexible approach to the design, layout and management of viewing areas will also enable increased availability of standard seating tickets in the event that wheelchair user or companion viewing spaces are not booked. Wheelchair users can also be accompanied by assistance dogs, in which case additional space should be provided for the dog to rest adjacent to wheelchair user spaces, not in aisles e.g. where more space can be made available by the use of flexible removable seating. Note: designers are encouraged to provide numbers beyond the minimum required standard for wheelchair user spaces shown above.		

Table 1 - Minimum Wheelchair User and Ambulant Accessible Viewing Requirements in Fixed Seating

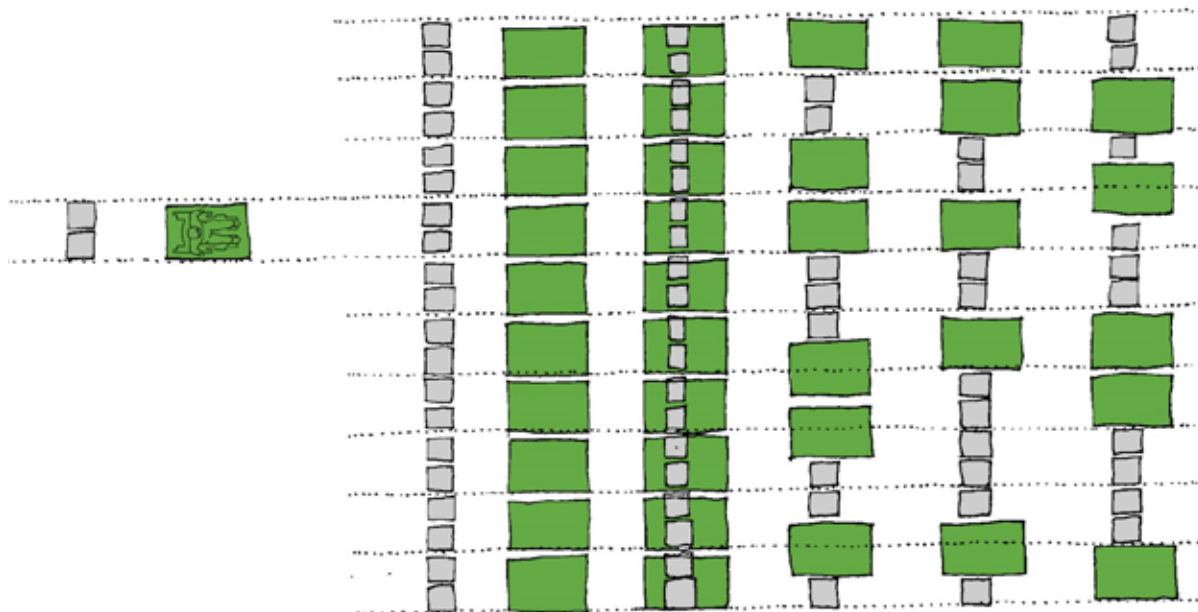


Figure 12 - Option for Flexible Seating

- Wheelchair user spaces and ambulant accessible seats should be included in seats allocated to premium level boxes.
- Wheelchair user spaces should be positioned in areas that provide shelter.
- Consideration should be given to the provision of wheelchair storage space within reasonable distance of spectator viewing for those who prefer to transfer from their wheelchair to a seat.

Note: wheelchair user spaces in fixed seating tiers should have sightlines in accordance with standards. See Section 6.3 of this guide: Sightlines.

Note: designated wheelchair user spaces should be flexible to facilitate use by manual wheelchairs, powered wheelchairs and mobility scooters.

6.1.2 Stadia with standing terrace capacity only

Recommended Standards

- The minimum number of wheelchair user spaces in standing terraces should be as follows:

Standing terraces	Minimum no. of wheelchair user spaces to be provided
Minimum 2 no. companion standing spaces per wheelchair user space. A flexible approach to the design, layout and management of viewing areas should be adopted to meet the accessible viewing capacity requirements above and to enable increased availability of standard standing terrace tickets in the event that wheelchair and companion spaces are not booked. Note: designers are encouraged to provide numbers beyond the minimum required standard for wheelchair user spaces shown above.	

Table 2 - Minimum Wheelchair User Viewing Requirements in Standing Terraces

Note: wheelchair user spaces in standing terraces should have sightlines in accordance with standards. See Section 6.3 of this guide: Sightlines.

Note: designated wheelchair user spaces should be flexible to facilitate use by manual wheelchairs, powered wheelchairs and mobility scooters.

6.1.3 Combination of fixed seating and standing terraces capacity in stadia

Recommended Standards

- The minimum number of designated wheelchair user viewing spaces and ambulant accessible seats should be as follows:

Fixed seating capacity	Minimum no. of permanent wheelchair user spaces to be provided	Minimum no. of permanent ambulant accessible seats to be provided
Under 10,000	6 spaces or 1% of seating capacity whichever is greatest	6 spaces or 1% of seating capacity whichever is greatest
10,001-20,000	100, plus 5 per 1000 (or part thereof) above 10,000	100, plus 5 per 1000 (or part thereof) above 10,000
20,001-40,000	150, plus 3 per 1000 (or part thereof) above 20,000	150, plus 3 per 1000 (or part thereof) above 20,000
More than 40,000	210, plus 2 per 1000 (or part thereof) above 40,000	210, plus 2 per 1000 (or part thereof) above 40,000
Minimum 2 no. companion seats per wheelchair user space. Note: designers are encouraged to provide numbers beyond the minimum required standard for wheelchair user spaces shown above. Wheelchair users can also be accompanied by assistance dogs, in which case additional space should be provided for the dog to rest adjacent to wheelchair user spaces, not in aisles e.g. where more space can be made available by the use of flexible removable seating.		

Table 3 - Minimum Wheelchair User and Ambulant User Viewing Requirements in Stadia with a Combination of Fixed Seating and Standing Terraces

Standing terraces	Minimum no. of wheelchair user spaces required
	1 space for every 250 capacity
Note: spectators with disabilities should have the same opportunity to view from the standing terraces, if that is their preference. However, in order to improve the quality of spectator experience it is recommended that where stadia provide a combination of fixed seating and standing terraces, a maximum of 75% of the requirement for wheelchair user spaces within standing terraces be allocated within fixed seating tiers. The remaining 25% should be located within at least one stand. It is recommended that they are positioned centrally and overlooking the half-way line. Minimum 2 no. companion seats per wheelchair user space. A flexible approach to the design, layout and management of viewing areas should be adopted to meet the accessible viewing capacity requirements above e.g. banks of standard seating to facilitate school/family groups adjacent to wheelchair user viewing could be designated as potential companion seating. A flexible approach to the design, layout and management of viewing areas will also enable increased availability of standard seating/standing terrace tickets in the event that wheelchair and companion spaces are not booked.	

Table 3 - Minimum Wheelchair User and Ambulant User Viewing Requirements in Stadia with a Combination of Fixed Seating and Standing Terraces

- Wheelchair user spaces and ambulant accessible seats should be included in seats allocated to premium level boxes.
- Wheelchair user spaces should be positioned in areas that provide shelter.
- Consideration should be given to the provision of wheelchair storage space within reasonable distance of spectator viewing for those who prefer to transfer from their wheelchair to a seat.

Note: designated wheelchair user spaces should be flexible to facilitate use by manual wheelchairs, powered wheelchairs and mobility scooters.

Note: wheelchair user spaces in standing terraces should have sightlines in accordance with standards. See Section 6.3 of this guide: Sightlines.



Guidance Signpost

- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Matchday Experience. **Section I:4** Inclusive Viewing Standards, p.64-65 & **Figures 21, 22 & 23**, p.66-68.
- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 12.11**, p.138 & **Paragraph 13.6**, p.157.

6.2 Specific Recommendations for Ambulant Accessible Seating (including the provisions for persons accompanied by assistance dogs)

Overview

Ambulant accessible seats will benefit people with a wide range of disabilities who are not regular wheelchair users and will also benefit older people, which is an important consideration given that the population is ageing. It is important to consider that ambulant disabled people may often prefer to sit within the general seating areas rather than in designated accessible viewing areas, therefore it is important to provide and identify areas in stadia which have level access and/or minimal steps, and are designed in accordance with the Recommended Standards below, including at the end of rows and/or close to exits. For matches this will include provisions for both home and away fans. Assistance dog owners may prefer to remain with their dog during an event. Assistance dog owners should have the opportunity to be accompanied by and seated with their dog within the stadium bowl during events, if that is their preference. Others may prefer for their dog to be accommodated elsewhere within the stadium under the care of staff.

Note: some assistance dog owners will have a degree of sight, therefore preferring to sit overlooking the halfway line where the view of the pitch is maximised.

Recommended Standards

Minimum viewing capacities are included within Table 1 and Table 3 of this guide under provisions for ambulant accessible seating, however there is potential to enhance this capacity to accommodate persons accompanied by assistance dogs. For example:

- The design of accessible viewing areas should be flexible to increase availability within them in the event that designated wheelchair user spaces are not booked; whereby the wheelchair space will accommodate an assistance dog resting adjacent to its owner seated on a companion seat.
- New and, where practicable, refurbished stands should be designed to enable assistance dog owners to be seated anywhere within stadia: whereby seat row depth is adequate to facilitate this (see below) and where the assistance dog will rest under the seat, not in aisles; and/or where removable seats are installed, or as a minimum dispersed throughout stadia generally, so that a seat can be removed that enables the dog to rest in a designated space e.g. at the end of a row.

In both instances above, adequate space allowance should be ensured so that an assistance dog can rest where it will not be trodden on, or significantly impacted by the continual movement of people in and out of seating rows.

- Seat size and seat row depth are important for comfort and accessibility. Seat row depth should be minimum 760mm and seat width 500mm wide in new build stands. Where this cannot be achieved throughout refurbished stands there are to be some rows in each stand that achieve it, including rows which offer a view of the half-way line.
- Designated ambulant accessible seats should be positioned in areas that provide shelter and assistance dog owners seated where their assistance dog can rest out of the sun.
- Accessible toilets should be within 40m maximum distance.
- Provide seats that contrast visually with the surroundings.
- Seats should fold up to maximise legroom on passage, providing minimum 400mm clearway and should have a flat, non-sloping surface when in the fold-down position.
- Contrasting row and seat numbering should be provided on seats and at ground level.
- Ambulant accessible seats dispersed throughout the most easily accessible parts of stands e.g. seats located close to exits where there are minimal steps and no steeper than 20°.
- Ambulant accessible seats should have additional legroom and fold-down armrests.

- Radial gangways on high, steeper gradient stands should have a suitable means of support. Radial gangways leading to and at ambulant seating rows should have a suitable means of support. See Section 3.8 of this guide: Handrails and Handholds.
- For persons who do not wish to take their assistance dog with them into the stadium bowl e.g. during an event where noise and continual people movement in seating rows may cause anxiety, provision should be made for the dog to rest in a safe and secure internal area outside the stadium bowl. This facility should be close to a staff area where supervision/monitoring can be provided and should contain a benching hook(s) and water bowl.
- See Section 3 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Ticketing and Pricing Policy.
- See Section 6 and Section 10 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Assistance Dogs Policy & Emergency Evacuation Strategy.

Additional Considerations

- Front and rear stadia entrance and exit is best to suit a broad range of spectator needs, and should be considered.



Guidance Signpost

- ▶ RNIB Soccer Sight. **Provision for guide dogs**, p.16.

6.3 Sightlines

Overview

Spectator viewing should have clear unrestricted lines of sight to the whole of the pitch playing area, score boards and plasma screens (where provided), accounting for spectators seated directly or diagonally in front who may stand up.



Guidance Signpost

- ▶ Access for All V.01. UEFA and CAFE Good Practice Guide to Creating an Accessible Stadium and Matchday Experience. **Section I:4** Inclusive Viewing Standards, p.64-65 & Figures 21, 22 & 23, p.66-68.
- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 12.11**, p.138 & **Paragraph 13.6**, p.157.

6.4 Quiet Areas

Overview

The inclusion of an indoor sensory viewing room(s) within stadia will benefit spectators with a wide range of disabilities, including children and adults with autism, epilepsy, Down Syndrome etc. This provision will enable them to enjoy the matchday experience or an event in a safe, quiet area away from the noise and crowds of the stadium bowl, accompanied by their family, friends or carers.

Recommended Standards

- Room(s) should be accessible, close to accessible toilet provisions and provide an unrestricted view of the pitch/action.
- Room(s) should include a range of seating and sensory equipment/toys.

Additional Considerations

- In certain circumstances where it proves impracticable to provide a sensory room(s) which offers a direct view of the pitch/action, live action streaming should be made available within the designated quiet area(s).

7 Accessible Communication Systems

7.1 Signage and Wayfinding

Overview

Good external and internal signage is essential to enable people with disabilities to successfully navigate around stadia unassisted. “There are four basic principles in sign design: signs should be used only when necessary; sign location should be part of the process of planning the building and the environment; messages should be short, simple and easily understood; and signs should be consistent, using prescribed typefaces, colours and contrast.”⁵ The use of technology can also be beneficial for wayfinding and should be considered.

Recommended Standards

Language

- Use simple wording in ‘plain English’ where practicable e.g. in areas where they can be readily seen and not impacted by heavy footfall.
- Wherever possible universally recognised symbols/pictograms should be used to complement wording, which will assist people with a range of abilities including people with dementia and people who do not use English. These should be large and contrasting, and embossed when within reach.
- Where text is used as opposed to, or to complement pictorial signage, toilets should be signed as accessible not disabled i.e. ‘Wheelchair Accessible Toilet’; ‘Ambulant Accessible Toilet’; ‘Wheelchair Accessible Baby Changing’ etc.

Text

- Sentences or single word messages should begin with an upper case letter and continue with lower case.
- Words consisting totally of upper case letters should be avoided. Exceptions to this guideline are traditional, customary or specific words required by legislation and written in capital letters e.g. EXIT.
- A simple sans serif font such as Arial or Helvetica should be used.
- Lettering and numbers should reflect the guidance specified in the table below:

Viewing Distance	Type of Sign	x-height (lower case letter)
Long distance	Signs seen when approaching a building (e.g. building entrances)	150mm min.
Medium distance	Directional signs (e.g. identification signs in reception areas or directional signs in corridors) *	50mm to 100mm
Short distance	Room signs*	15mm to 25mm
Note: the use of larger signboards and lettering than that specified above is required within areas of heavy footfall e.g. in concourses and facilities associated with the stadium bowl. This is also applicable to facilitate the identification of ticket points.		

Table 4 - Recommended Signage Font Heights

*Embossing required for signs within reach, to enable reading by touch.

Materials

- Signs should be made from non-reflective matt finished materials.

Colour and Contrast

- Signboards should be of a colour that contrasts with the background on which they are mounted.

- Text or pictograms should contrast with the signboard.
- Stadia designers should use tactile, coloured or tonal wayfinding tools to guide people to and around stadia wherever possible.
- Colours used on signs should be chosen to ensure they can be read by all people, including people with colour blindness.

Positioning

- Signs should be provided in prominent positions, located at key decision points e.g. at junctions of circulation routes. Designers should consider that signage may be less visible and obvious in circulation routes during periods of heavy footfall. Adequate signage, positioning and the use of complementary directional and identification signage is important.
- Room signs positioned adjacent to doors on walls will ensure that signs can be read when a door is in the open position (complementary symbols on toilet doors will assist people with dementia).
- In general accommodation areas, signs should be mounted at or just below eye level (in the range 1400mm to 1700mm above floor level). High level signage e.g. directional signage should also be provided along circulation routes and in large busy spaces.
- Repeat directional sign at regular intervals along access routes e.g. concourse areas, to provide reassurance.
- No-go areas to the public should be clearly signed as 'No Entry'.

Text Ranging and Hierarchy

- For directional signs, where direction is to the left, the arrow should be on the left of the message and where direction is right, the arrow should be on the right of the message; and with message text ranged accordingly, to reduce the reading distance between the message and arrow.
- Generally, do not use centred messages for any signs.
- Use a hierarchy for directional signage listings i.e. left directional messages first, then straight ahead messages, then right directional messages etc.
- Straight ahead arrows should be to the left hand side on a directional sign and the message text left ranging.
- Where multi-lingual messages are required on signs, list like languages together on directional signboards or provide separate signboards, to avoid confusion and to reduce the appearance of clutter on signs.

Signage Lighting

- Signs should be well illuminated and care should be taken that there are no bright lights behind that may dazzle the viewer.

Embossed Signs, Braille and Audible Signs

- Signs of this type are available, but are not always practical in a stadia environment. People who are blind or partially sighted may or may not be accompanied to events and due to associated heavy footfall signs of this type may not be locatable and/or accessible.
- Large embossed pictorial signs should be provided on doors, including Braille where appropriate e.g. on all toilet doors. This will assist people who are blind or partially sighted, people with learning disabilities and people who do not use English as their first language.
- The availability of steward assistance is very important.

Note: the following recommended standards are applicable in areas of stadia where embossed, audible signs and Braille may prove more viable and practical e.g. on all toilet doors, in staff areas, commercial activities areas, conferencing etc.

- When signs are within reach of the user, embossed signs that can be read by touch are useful to many people who are partially sighted.
- The depth of embossing should be a minimum of 1mm and the edges should be rounded.
- Standard pictograms such as those used on toilets should also be embossed.
- Grade 1 Braille should be used for single word or short multiple word signs.
- Grade 2 contracted Braille should be used to reduce the length of signs incorporating a paragraph of text.
- Incorporate Braille locators along the left-hand edge of the signboard. Locators can either be raised or recessed (by 1 to 1.5mm).



Guidance Signpost

- ▶ Sign Design Guide. A guide to inclusive signage. JMU and the Sign Design Society. Parker, P & Fraser, J.
- ▶ BS 8300:2009 +A1:2010. **Paragraphs 9.2 - 9.25** Signs and Information, p.64-69.
- ▶ See It Right - Making Information Accessible to People with Sight Problems. RNIB.
- ▶ www.colourblindawareness.org

7.2 Alarm Systems

Overview

Emergency assistance alarms are essential in areas or facilities where people with disabilities may be alone e.g. in toilets. Fire alarm systems should be audible and visual throughout stadia, including areas where visitors and staff may be unaccompanied.

Recommended Standards

- Emergency assistance alarms in sanitary accommodation, changing and shower areas should be wired to the stadium control point, where this is available. This will ensure that alarms are acknowledged in the event that individual alarm beacons are not seen or heard.
- Emergency assistance alarm beacons should always be provided at individual locations.
- A fire alarm system incorporating flashing beacons should be installed, including areas where people who are deaf, have a hearing loss or tinnitus might find themselves alone and therefore potentially unaware that an emergency alarm has sounded e.g. beacons should be provided in main circulation routes, toilet areas, changing and shower areas, lone offices, areas with high noise levels - ambient noise levels exceeding 90dB (A).
- Flashing beacons should be designed not to stimulate photosensitive epilepsy.



Guidance Signpost

- ▶ Access to and use of buildings. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet R. **Paragraphs 6.4 - 6.7**, p.50-51.
- ▶ BS 8300:2009 +A1:2010. **Paragraph 9.3.7.2** Emergency assistance alarm systems, p.73-74.
- ▶ BS 9999:2008. Code of practice for fire safety in the design, management and use of buildings. **Paragraph 16.2** Fire detection and alarm systems, p.62.
- ▶ BS 5839-1:2002 +A2:2008. Fire detection and fire alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance. **Section 2, Clause 17 & 18.**

7.3 Match Commentary/Audio Description

Overview

Stadia match commentary/audio description and digital broadcast will assist spectators who are blind or partially sighted and enhance their overall visitor experience. An appropriate commentary system is important.

Recommended Standards

- Commentary and digital broadcast should be available throughout stadia viewing areas and available to home and away supporters i.e. not designated to specific areas e.g. do not use fixed plug-in devices assigned to particular seats.
- Incorporate RF radio wireless transmitter systems to enhance audible communications throughout a stadium, which will pick up a radio signal transmitted within the stadium.
- Facilitate the use of headsets usable within any area of stadia that can access digital broadcast to assist all spectators, including people who are blind or partially sighted and older people who may have difficulty seeing the pitch from distance etc.
- Radio frequency should be reliable and working in every area of stadia so that in-house and external commentary can be accessed.
- Systems should be accessible to people who are blind or partially sighted, people with learning disabilities and people with limited manual dexterity i.e. easy operation.

- Audio induction loops should be provided at headset collection points.
- Section 4 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Match Commentary/Audio Description.



Image 5 - Match Commentary



Guidance Signpost

- ▶ RNIB Soccer Sight. Providing a service for blind and partially sighted fans: The commentary service; Commentary equipment, p.14-15.
- ▶ Direct consultation with RNIB NI and IFA (Soccer Sight has been established at Windsor Park since 2006 and both organisations have experience of the technology and managing the service).

7.4 Hearing Enhancement Systems

Overview

People who have a hearing loss often find it more difficult to hear in stadia facilities, usually because of a combination of poor acoustics and the presence of extensive background noise. Problems can be alleviated through the provision of hearing enhancement systems such as induction loops and infrared systems, which reduce the effect of background noise so that people who have a hearing loss can hear sound more clearly.

Recommended Standards

- Locate hearing enhancement systems within the stadium bowl in close proximity to accessible viewing spaces/seating. **Note:** spectators who are deaf may wish to be seated in an area together, as opposed to being dispersed throughout the stadium.
- See Section 3 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Ticketing and Pricing Policy.
- An appropriate hearing enhancement system should be provided at each visitor reception/information point, at sales counters, in meeting rooms/conference facilities etc. to assist people who have a hearing loss. The availability of induction loops should be clearly indicated using the standard symbol.
- Where provided, large screens/electronic scoreboards in stadia will facilitate the display of sign interpreters on large screens to relate specific match-play action, or to supplement public address announcements e.g. in the event of emergency.
- See Section 2 and Section 7 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures - Accessible Communications & Provision for People who are Deaf, have a Hearing Loss or Tinnitus.



Guidance Signpost

- ▶ BS 8300:2009 +A1:2010. **Paragraphs 9.3 - 9.3.5** Audible communication systems, p.69-73.
- ▶ Loop and infrared systems for people managing public services. Action on Hearing Loss factsheet.
- ▶ Hearing Loops: A Guide for services. Action on Hearing Loss.
- ▶ The Northern Ireland Guide to Safety at Sports Grounds. DCAL. **Paragraph 13.5 a-e**, p.156-157.

7.5 Visual Aids

Overview

To assist people who are deaf, have a hearing loss or tinnitus it is important that stadia designers incorporate features that offer the presentation of clear, informative visual information on score boards, electronic boards, video boards and to complement audible public announcement systems. The use of large screens will assist people who may have difficulty viewing the pitch from a distance.

Recommended Standards

- Where provided, large format LED TV screens that offer close viewing of event action should be carefully positioned to ensure visibility is not obstructed e.g. accounting for stand roof covering overhangs.
- Where large screens are provided, subtitles/visual information are required to complement public address systems, to assist people who are deaf, have a hearing loss or tinnitus.
- Where provided, screens and boards should be specified to reduce the likelihood of glare, especially as visual information may be critical to some people with disabilities in the event of emergency.

Additional Considerations

- Provision of handheld Assistive Technology Version mobile captioning devices, to assist people who are deaf, have a hearing loss or tinnitus. These can be used to complement public announcements and if required can adopt an audio description and assistive listening service. As an example, 'Durateq Live' technology is used at the Dallas Cowboys stadium.
- Individual visual aid screens on the back of seats should be considered in areas of stadia e.g. this is used at Old Trafford, Manchester.

8 Getting Out of the Stadium

8.1 Exit Routes

Overview

The safe evacuation of all spectators and visitors from stadia is an essential element of stadia design and management, and plans/certification will be critical to event management requirements. Accessible exit routes and accessible final points of exit will assist people with disabilities to make their way safely out of a stadium, including external routes to Fire Assembly Points.

Recommended Standards

- Provide accessible exit routes and final points of exit.
- See also Section 2 of this guide: Getting Into the Stadium and Section 10 of Guide 4: Accessible Sports Stadia Management Guidelines (2016 Edition). Sports Stadia Management Policies and Procedures – Emergency Evacuation Strategy.

8.2 Egress

Overview

The safe evacuation of people with disabilities (who may have a broad range of need and abilities) is essential to successful stadia design and facility management. Egress design will include features such as: fire signage and lighting; refuges ('safe areas'); horizontal and vertical means of escape; circulation routes; final points of exit; Fire Assembly Points etc.

Recommended Standards

- Where a passenger lift is provided it should be a 'fire protected' lift i.e. evacuation lift (an evacuation lift will have separate electrical power supply).
- Clear signage is essential for identification and wayfinding in relation to egress and should be designed and considered as part of the overall schedule for a stadium, both internally and externally. Fire doors on exit routes should have embossed signage to assist people who are blind or partially sighted.
- Visual and audible communication is required internally and externally to assist people with disabilities e.g. within refuges and at Fire Assembly Points. Lift telecoms should be linked to the stadia control point.

- Risk assessment and ongoing review is required in relation to all aspects of fire safety design in stadia.

Additional Considerations

- Where possible, to assist ambulant disabled people including older people, escape stairs should meet the standards for general stairs. See Section 3.6 of this guide: Getting Around the Stadium - Stairs and Radial Gangways.



Guidance Signpost

- ▶ The Fire Safety Regulations (Northern Ireland) 2010. DHSSPSNI.
- ▶ Accessible Stadia: A good practice guide to the design of facilities to meet the needs of disabled spectators and other users. Leaving the Stadium, **Part 2.44** Fire and Emergency Warning Systems, p.65-66.
- ▶ Fire Safety Law: The Evacuation of Disabled People from Buildings. DHSSPSNI. 2011.
- ▶ BS 9999:2008. Code of practice for fire safety in the design, management and use of buildings. **Section 9, Paragraphs 46 - 46.12** Managing occupied buildings; Evacuation of disabled people, p.246-251.
- ▶ BS 9999:2008. **Annex D** (normative) Recommendations for theatres, cinemas and similar venues, p.320-332.
- ▶ BS 9999:2008. **Annex G** (normative) Recommendations for refuges and evacuation lifts, p.359-370.
- ▶ Safe Evacuation for All. National Disability Authority. **Section 5** Equipment, Facilities and Building Design.
- ▶ Fire safety. Building Regulations (Northern Ireland) 2012 Guidance: Technical Booklet E.

Appendices

Appendix A	Guidance Signpost Bibliography
Appendix B	Useful Websites
Appendix C	Useful Resources

Appendix A

Guidance Signpost Bibliography

Access for All V. 01 UEFA and CAFÉ Good Practice Guide to creating an Accessible Stadium and Matchday Experience.

Accessible Stadia: A good practice guide to the design of facilities to meet the needs of disabled spectators and other users. Football Stadia Improvement Fund and the Football Licensing Authority. 2003. Sports Grounds and Stadia Guide No.1.

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Automatic Door Systems. Specifiers' Handbooks for Inclusive Design. Centre for Accessible Environments and RIBA Publishing. Alison Grant. 2005.

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British Standards Institute. BS 5395-1:2010. Stairs. Code of practice for the design of stairs with straight flights and winders.

British Standards Institute. BS 8233:1999. Sound Insulation and Noise Reduction for Buildings. Code of practice.

British Standards Institute. BS 8300:2009 +A1:2010. Design of Buildings and their Approaches to meet the needs of Disabled People. Code of practice.

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Changing Places: the practical guide. Changing Places Consortium.

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CSN EN 16005. Power operated pedestrian doorsets - Safety in use - Requirements and test methods. 2012.

DD CEN/TS 15209:2008. Tactile paving surface indicators produced from concrete, clay and stone.

Disability Sport NI Guide 1: Accessible Sports Facilities Design Guidelines (2016 Edition). Disability Sport NI.

Disability Sport NI Guide 2: Accessible Sports Facilities Management Guidelines (2016 Edition). Disability Sport NI.

Fire safety. Building Regulations (Northern Ireland) 2012 Guidance: DFP Technical Booklet E: 2012.

Fire Safety Law: The Evacuation of Disabled People from Buildings. Department of Health, Social Services and Public Safety Northern Ireland. 2011.

Glazing. Building Regulations (Northern Ireland) 2012 Guidance: DFP Technical Booklet V: 2012.

Guidance on the Provision of Spending Facilities for Guide Dogs and other Assistance Dogs. The Guide Dogs for the Blind Association (Guide Dogs).

Guidance on the use of tactile paving surfaces. Department for Transport. 2007.

Hearing Loops: A guide for services. Action on Hearing Loss.

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<http://www.queenelizabetholympicpark.co.uk/-/media/Ildc/policies/Ildcinclusivedesignstandardsmarch2013.ashx?la=en>

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The Colour, Light and Contrast Manual. Designing and Managing Inclusive Built Environments. Keith Bright and Geoffrey Cook. 2010.

The Fire Safety Regulations (Northern Ireland) 2010. Department of Health, Social Services and Public Safety (NI).

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Appendix B

Useful Websites

www.actiononhearingloss.org.uk (formerly RNID)

Action on Hearing Loss. For product solutions: www.actiononhearingloss.org.uk/shop.aspx

www.ageuk.org.uk/northern-ireland

Age NI - charity combining Age Concern NI & Help the Aged in Northern Ireland

www.adni.org.uk

Assistance Dogs Northern Ireland

www.assistedogs.org.uk

Assistance Dogs UK - A voluntary coalition of assistance dog organisations

www.autismni.org

Northern Ireland's Autism Charity

www.bisfed.com

Boccia International Sports Federation

www.cae.org.uk

Centre for Accessible Environments

www.changing-places.org

Changing Places Consortium

www.colourblindawareness.org

Colour Blind Awareness

www.cyclingireland.ie

Cycling Ireland

www.dementiafriends.org.uk

Dementia Friends. An Alzheimer's Society initiative

www.disabilityaction.org

Disability Action

www.dsni.co.uk

Disability Sport NI

www.efds.co.uk

English Federation of Disability Sport

www.epilepsy.org.uk

Epilepsy Action Northern Ireland

www.fei.org

Federation Equestre Internationale

www.fig-gymnastics.com

International Gymnastics Federation

www.guidedogs.org.uk

Guide Dogs for the Blind Association

www.hearingdogs.org.uk

Hearing Dogs for Deaf People

www.ibsasport.org

International Blind Sports Federation

www.imtac.org.uk

Inclusive Mobility and Transport Advisory Committee

www.iwrf.com

International Wheelchair Rugby Federation

www.itftennis.com/wheelchair

International Tennis Federation (wheelchair)

www.ittfdream.com

International Table Tennis Federation's Social Responsibility Program

www.levelplayingfield.org.uk

Level Playing Field (Promoting Good Access For All Fans)

www.mencap.org/northernireland

Mencap Northern Ireland. The Voice of Learning Disability

www.niassistancedogs.btck.co.uk

Northern Ireland Assistance Dogs

www.nrac.org.uk

National Register of Access Consultants

www.nifrs.org

Northern Ireland Fire & Rescue Service

www.nrcpd.org.uk

The National Registers of Communication Professionals Working with Deaf and Deafblind People

www.rnib.org.uk/accessiblewebsites

Royal National Institute for Blind People

www.rnib-business.org.uk/training-overview

Royal National Institute for Blind People

www.sailing.org/disabled

Official Website of World Sailing (Para World Sailing)

www.sportscotland.org.uk

Sports Scotland

www.uci.ch/para-cycling

Union Cycliste Internationale (Para-cycling)

www.ukgymnastics.org

UK Gymnastics

www.worldparavolley.org

World ParaVolley

www.worldrowing.com/para-rowing

World Rowing (Para-rowing)

www.communities-ni.gov.uk

Department of Communities

www.finance-ni.gov.uk/topics/building-regulations-and-energy-efficiency-buildings

Department of Finance (Building Regulations)

www.planningni.gov.uk

Department for Infrastructure (Northern Ireland Planning Portal. Planning NI)

www.infrastructure-ni.gov.uk/topics/public-transport

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Appendix C

Useful Resources

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Platform Lifts. Specifiers' Handbooks for Inclusive Design. Centre for Accessible Environments and RIBA Publishing. Alison Grant. 2005

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