

Great outdoors

A guide for accessibility



ciste na
gcuntas díomhaoin
the dormant
accounts fund

Great rs

A guide for accessibility

Great Outdoors - A guide for accessibility.

Designed, produced and published, October 2018 by IWA-Sport in partnership with Sport Ireland and the Dormant Accounts Fund.

Disclaimer.

Products referenced within "Great Outdoors - A guide for accessibility" are for information purposes only and are not intended as recommendations, an endorsement for the products listed or for promotional purposes. The websites and hyperlinks listed in this guide are provided for information purposes only at time of print. IWA-Sport are not responsible for websites and hyperlinks that may change or cease to function.

Image credits.

Photo of Picnic Table courtesy of Irish Recycled Products Birr, Co. Offaly. Pgs 57 & 74.

<https://www.irishrecycledproducts.ie/>

Photo of Pedestal Sand Pit courtesy of Hand Made Places. Pgs. 61, 77.

<https://www.handmadeplaces.co.uk/>

Photo of FreeWheel Wheelchair Attachment courtesy of Invictus Active Lifestyle Solutions. Pg 55.

<https://www.invictusactive.com/>

Photo of Chiltern/Milton Keynes Gate courtesy of Centrewire Products. Pg. 54, 88.

<https://centrewire.com/products/milton-keynes-gate-2-way/>

Photo of Wheely Boat courtesy of The Wheely Boat Trust. Pg. 95.

<https://www.wheelyboats.org/wheelyboat-models/>

Photo of Touchmapper custom 3D outdoor tactile map courtesy of Samuli Kärkkäinen. Pg. 40.

<http://touch-mapper.org/en/>

Foreword

Rosemary Keogh, Irish Wheelchair Association	9
--	---

John Treacy, Sport Ireland	10
----------------------------------	----

Section 1 Introduction

1.1 Background and Context	13
----------------------------------	----

1.2 Purpose of the <i>Great Outdoors - A guide for accessibility</i>	13
--	----

1.3 Focus of the Guide	14
------------------------------	----

1.4 Overview of Universal Design Approach and Planning for Access	14
---	----

1.5 Legislative and Policy Context	16
--	----

1.6 Key Themes from the Review of Literature	17
--	----

1.7 Methodology	18
-----------------------	----

1.8 Acknowledgements	20
----------------------------	----

Section 2 Training, Consultation and Collaboration

2.1 Training	23
--------------------	----

2.2 Developing an Access Improvement Plan	24
---	----

2.3 Consultation and Collaboration	26
--	----

Section 3 Information & Communication

3.1 Website – Online Information	30
--	----

3.2 Recommended written text for websites, information leaflets and brochures	31
--	----

3.3 Use of Symbols	32
--------------------------	----

3.4 Face-to-face Interaction/Communication	34
--	----

3.5 Information Display Boards	36
--------------------------------------	----

3.6 Waymarking	39
----------------------	----

Section 4 Trails, Greenways & Public Parks 45

4.1	Classification and Grading of Trails	46
4.2	Use of Symbols	48
4.3	Design Criteria for Accessibility on Trails, Greenways and in Public Parks	49
4.4	Surfacing.....	51
4.5	Information Display Boards	51
4.6	Route Information	52
4.7	Entrance and Exit Points	53
4.8	Obstacles and Barriers	53
4.9	On-Site Equipment and Support	53
4.10	Accessible Picnic Areas on Greenways and in Public Parks	57
4.11	Accessible Playground Areas on Greenways and in Public Parks.....	58

Section 5 Beaches 65

5.1	Use of Symbols	66
5.2	Information Display Boards	67
5.3	Design Criteria for Beach Accessibility.....	68
5.4	Additional Information on Surface Materials	70
5.5	On-Site Beach Equipment and Support	71
5.6	Site Obstacles and Barriers.....	74
5.7	Accessible Picnic Areas	74
5.8	Accessible Playground Areas.....	75

Section 6 Waterways	81
6.1 Use of Symbols	82
6.2 Information Display Boards	84
6.3 Design Criteria for Multi-Access and Challenging Access Routes Adjacent to Waterways	85
6.4 Obstacles and Barriers	87
6.5 Entrance and Exit Points	87
6.6 Access Routes to Riverbanks, Jetties and Walkways	89
6.7 Accessible Fishing Stands	90
6.8 Access to Water-Based Activities	91
6.9 On-site Equipment and Supports	92
6.10 Safety Risk Management – Water-Based Activities	95
 Section 7 The Built Environment	 101
7.1 The External Environment and Building Approach	102
- Accessible Parking	102
- Pavements, Crossings and Approach Routes	104
- External Ramps	104
- External Steps	105
7.2 Access to and Circulation within a Building	107
- Entrance/Doors	107
- Foyers/Lobbies	110
- Reception Areas/Fixtures & Fittings	111
- Corridors/Hallways	112
- Internal Signage	112
- Lifts	113

7.3	Access to & Use of Facilities within the Built Environment	114
	- Interior Design	114
	- Public Service Facilities	114
	- Restaurant/Coffee Shops.....	116
7.4	Public Toilet/WC Provision.....	117
	- Public Toilet/WC Accessible Independent Use Provision	117
	- Public Toilet/WC Accessible Assisted Use Provision	117
	- WC Fixtures and Fittings.....	118
	- Changing Places WC	122
	- Modular Changing Places WC	123
	- Mobiloo WC.....	124

Appendices

Appendix 1: Self-Assessment Site Specific Checklists.....	127
Appendix 2: List of Engaged Organisations	145
Appendix 3: Reference Documents.....	146
Appendix 4: NCBI Recommendations for signage	150
Appendix 5: Publication Team.....	154

Foreword

Ireland is known for its outstanding natural beauty, from medieval stone castles to unique botanical gardens. Unfortunately, scenic mountains, woodland areas and beaches cannot always be fully enjoyed or experienced by people with disabilities, due to the poor level of access associated with the great outdoors.

Irish Wheelchair Association (IWA) has a vision of an Ireland where people with disabilities enjoy equal rights, choices and opportunities in how they live their lives, and where our country is a model worldwide for a truly inclusive society.

Together with Sport Ireland, IWA was delighted to undertake this project and produce a valuable document which provides practical information, advice and guidance to organisations and individuals responsible for outdoor recreation. IWA would like to thank the many organisations, representative groups and individuals who contributed to the development of this Guide. In particular, IWA would like to acknowledge the support from Sport Ireland and the Dormant Accounts Fund (DAF).

The details provided within this document will ensure that people with disabilities can participate in a range of outdoor activities, sporting pursuits and family trips in the same manner as their peers.

IWA promotes best practice in accessibility for people with physical disabilities. We work with companies, outdoor venues, sports facilities and public sector bodies advising and developing accessibility guidelines for public spaces. We are actively involved in improving accessibility for our members and their families and hope that each agency responsible for outdoor recreation will incorporate the necessary tools and introduce the necessary resources to ensure the Great Outdoors guide can be Accessible to All.

Sincerely,

Rosemary Keogh
CEO, Irish Wheelchair Association



Everybody, no matter what their background or circumstances, should have the opportunity to participate in sport and physical activity at a level of their choosing. I very much welcome the new Great Outdoors - A Guide for Accessibility developed by Irish Wheelchair Association (IWA) in conjunction with Sport Ireland.

This important guide provides up-to-date guidance to all agencies involved in the provision of outdoor recreation amenities and facilities in Ireland on how to provide for the participation of people with disabilities. The guide also promotes the principle of universal design in the planning and development of all outdoor recreation areas.

Sport Ireland is committed to the equal participation of people with disabilities when it comes to participation in sport and physical activity by:

- Working collaboratively with organisations and individuals seeking to enhance the participation of people with disabilities in sport and physical activity and promote a collaborative approach throughout the sport and physical activity system;
- Promoting good governance throughout the organisations to ensure provision for the participation of people with disabilities;
- Working to ensure that all sports facilities directly managed or State-funded are fully accessible in terms of physical and programme access; and
- Fully engaging with the disability sector in developing policies, practices and programmes.

In Ireland, we are fortunate to have many scenic national and public parks, beaches, forests, canals, trails and areas where people can connect with nature and be active in the outdoors. It is my hope that this document will serve as a guide to enhance and develop facilities, information and support services in all outdoor recreation areas over the coming years. This in turn will see more people with any disability visiting and being active in the great Irish outdoors.

Sincerely,

John Treacy

CEO, Sport Ireland



SECTION 1

Introduction



Contents for Section 1 Introduction

1.1 Background and Context 13

1.2 Purpose of the *Great Outdoors - A guide for accessibility* 13

1.3 Focus of the Guide 14

1.4 Overview of Universal Design Approach and Planning for Access 14

1.5 Legislative and Policy Context 16

1.6 Key Themes from the Review of Literature 17

1.7 Methodology 18

1.8 Acknowledgements 20

1 Introduction

1.1 Background and Context

Census 2016 ^[1] recorded 643,131 Irish people, or 13.5% of the Irish population, as having a disability. In considering how disability is understood within the Irish context, guidance is provided by The UN Convention on the Rights of Persons with Disabilities ^[2], also called the CRPD, which was adopted by the United Nations in 2006 and ratified by the Irish Government in March 2018. The CRPD considers that “disability is an evolving concept” and that “disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinder their full and effective participation in society on an equal basis with others”. The CRPD provides the framework to promote, protect and ensure the rights of all people with disabilities.

Article 30 of the CRPD focuses on the rights of people with a disability to participate in cultural, recreational and sporting activities. Article 30 (5) of the CRPD describes how Governments and Service Providers (The Parties) should take appropriate measures to enable persons with disabilities to participate on an equal basis with others in recreational, leisure and sporting activities by encouraging and promoting participation, encouraging the provision of appropriate instruction, training and resources, as well as ensuring access to venues, activities and services. Additionally the CRPD defines how ‘reasonable accommodations and modifications’ will need to be considered to ensure that people with disabilities exercise their human rights on an equal basis with others.

The significant number of people with a disability that are living in Ireland and Ireland’s commitment to the equality agenda of the CRPD, creates an urgency to review the outdoor environment and to strategically plan how adaptations can be incorporated into nature’s design to accommodate people with disabilities and their right to exercise, socialise and enjoy the many benefits that being in the outdoors has to offer. These rights are general for everyone, but too often people with disabilities are excluded from participating in activities in the outdoor environment because of the lack of accessible amenities or the absence of disability awareness amongst service providers.

1.2 Purpose of Great Outdoors - A guide for accessibility

Ireland is renowned for its natural beauty, incredible landscapes, and breathtaking coastlines. Given the nature and locations of the Irish landscape, which is often rugged and remote, accessing the great outdoors and engaging in outdoor pursuits can present many challenges, particularly for people who may have a range of disabilities.

1 Central Statistics Office 2016 census

2 <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

Irish Wheelchair Association's Sports Department in conjunction with Sport Ireland developed the concept of designing and delivering outdoor access guidelines that could be used by various organisations, that provide and manage facilities within the *Great Outdoors*. The Guidelines are funded by the Dormant Accounts funding stream 2017.

The *Great Outdoors - A guide for accessibility* aims to provide organisations and land managers with relevant guidance and information relating to accessible design, including, in some instances, the provision of on-site supports that can be provided in order to make their specific environments more available and accessible for people with a disability. The guide can also act as a support for future service planning and in many instances can combine with an annual service plan on improving accessibility within the outdoor environment. By following these guidelines it is anticipated that there will be a significant increase in the opportunities for people with disabilities who wish to become involved and active in outdoor locations and activities. It is important to consider the needs and preferences of people who have a disability and consultation is required where change is being proposed.

1.3 Focus of the Guide

Following extensive consultation and research with a population of people who have a disability and their representative organisations, the guidelines as set out in this document apply to Trails including Greenways and Public Parks, Beaches and Waterways. Each of these three locations is dealt with in individual sections in this guide and can be identified by the name of the location.

It is not intended that this guide offers a complete or in-depth specification that will be suitable for every situation. In some instances, designs may need to be adapted to suit a particular set of circumstances or to solve a specific access problem. It is therefore recommended that consultation and advice is sought from people who have a disability and from experienced and skilled contractors as to the suitability of a particular design and to seek agreement on any modifications that may be required.

1.4 Overview of Universal Design Approach and Planning for Access

Providing access for people who have a disability is generally recognised as requiring a Universal Design approach. Universal Design, as defined by the Irish Disability Act 2005 ^[3], is "an inclusive approach to design and construction aimed at making the built environment and its facilities accessible and usable for everyone."

Universal Design focuses on 7 Principles that guide the design of environments, products and communications.

3 Irish Disability Act, 2005: <http://www.irishstatutebook.ie/eli/2005/act/14/enacted/en/html>

The seven design principles of a Universal Design approach are:

1. Equitable Use
2. Flexibility in Use
3. Simple and Intuitive Use
4. Perceptible Information
5. Tolerance for Error
6. Low Physical Effort
7. Size and Space for Approach and Use.

These seven principles “may be applied to evaluate existing designs, guide the design process and educate both designers and consumers about the characteristics of more usable products and environments”.^[4] Under the Irish Disability Act 2005 the National Disability Authority, Centre of Excellence in Universal Design, holds the Irish brief for Universal Design.

These guidelines are underpinned by a Universal Design approach. In some instances, a Universal Design approach may require that a specific facility be planned to particularly meet the requirements of people who have a disability and thereby be generally accessible to everyone e.g. fishing stands, access to boating/canoe activities. This guide aims to support the development of accessible design solutions that are more inclusive to everyone. Designers are encouraged to push the boundaries of their design process as far as possible without compromising the integrity or quality of the environment. If more than one option is available for a design feature then the recommendation is always to choose the more inclusive/accessible one.

Within this guide, a Universal Design approach is typically understood as addressing specific access considerations within the named environments under a number of headings including;

- 1) Physical access to any designed and built environment including within natural outdoor locations. Considerations include access to entrance points, car parks, on-site transport shuttles, adventure centre activities, accessible WC's, access to tracks and trails and to facilities that connect environments and activities.
- 2) Access to facilities and activities provided, including day-to-day location and equipment management and maintenance.
- 3) Access to information including information displayed in both hard and soft copy text, on display boards, on waymarking/wayfinding signage and including face-to-face and remotely spoken communications.
- 4) Access to any supports required to participate in an on-site activity.
- 5) Disability Awareness whereby staff have the opportunity to regularly upskill in order to improve their awareness of practical ways to accommodate and promote the participation of people with a disability.
- 6) Consultation with the end user/s and their representative groups.

4 <http://universaldesign.ie>

1.5 Legislative and Policy Context

There is significant legislation and public policy relevant to access and Universal Design in Ireland. Key legislative and policy areas include Human Rights and Equality, Disability Rights, Social Inclusion, and Sustainable Development. These acts, policies and resultant strategies require that service providers accommodate the needs of people with disabilities. The following legislation is notable in promoting and supporting the development of accessible environments:

The Irish Disability Act 2005 is a positive action measure designed to advance and underpin the participation of people with disabilities in everyday life. The Act establishes a statutory basis for providing access to mainstream public services and details actions to support the provision of improved access to public buildings, services and information and including the establishment of a Centre for Excellence in Universal Design in the National Disability Authority.

Under The Planning and Development Act 2000 each Local Authority has a responsibility to determine policy in its own area. Each Authority creates its own 'Local Authority Development Plan', the plan, in turn, provides the blueprint for planning and developing the local area, including local natural and outdoor environments.

The Equal Status Acts 2000 to 2004 aims to promote equality by forbidding discrimination. These Acts refer to various forms of discrimination on 9 named grounds, including discrimination on the basis of a person having a disability. Under the Act, anyone providing services to the public (including recreational services) must "do all that is reasonable to accommodate" the needs of a person with a disability. Accommodating the needs of people with a disability involves providing an acceptable standard of facilities in circumstances where, without these, it would be impossible or difficult to avail of the service provided.

Convention on the Rights of Persons with Disabilities (CRPD) the UN Convention on the Rights of Persons with Disabilities provides the framework to promote, protect and ensure the rights of all people with disabilities and promotes equal rights in all areas of life. The Convention was adopted by the UN General Assembly in 2006 in an effort to ensure that persons with disabilities enjoy the same human rights as everyone else. The Convention outlines no new rights, instead it brings together in one document all of the existing rights outlined in other conventions and international human rights treaties. Ireland signed up to the UNCRPD in March 2007. On the 7th March 2018, prior to these Guidelines going to print, the motion to ratify the Convention on the Rights of Persons with Disabilities was passed in Dail Eireann.

National Disability Inclusion Strategy 2017-2021 this Strategy takes a Whole-of-Government approach to improving the lives of people with disabilities, both in a practical sense and also in creating the best possible opportunities for people with disabilities to fulfil their potential.

Building Regulations, Part M Access and Use (2010) and Part B Fire Safety (2006) with accompanying Technical Guidance Documents apply to the built environment and as such are applicable within the *Great Outdoors* guide to visitor centres including on-site parking provided at the visitor centre and routes leading to and around the centre. The Building Regulations set out the minimum design features required in making provision for access to and egress

from a building. When building works are being planned a Disability Access Certificate (DAC) is required to show compliance with Part M Access and Use (2010).

Health and Welfare at Work Acts 2005 & 2010 and Safety, Health & Welfare at Work Regulations (General Application) 2007 contain provisions that apply to almost all workplaces. Included are regulations dealing with the physical environment at the place of work, welfare facilities and the suitability of the workplace. Regulations requiring that employers consider specific risk groups when assessing certain tasks are also included.

Sport Ireland Policy on Participation in Sport by People with Disabilities 2017 commits to ensuring that persons with disabilities have access to sporting, recreational, leisure and tourism venues and activities.

1.6 Key Themes from the Review of Literature

This section of the guide acknowledges and references the overview of literature that has been used to support and develop this document, specifically focusing on improved accessibility for people with disabilities when accessing the great outdoors. The *Irish Wheelchair Association Best Practice Access Guidelines 3, 2014* ^[5] informs the guidance provided in relation to creating access to and within the built environment and to some extent this same guidance transfers into the natural and outdoor environments.

Much of the research literature referenced in relation to outdoor environments draws on the barriers experienced by people with disabilities when accessing Trails, Greenways, Public Parks, Beaches and Waterways. The guidelines highlight specific and practical accommodations that need to be provided to improve accessibility within these outdoor environments.

The research and policy documents, as well as guidelines that have been reviewed, emphasise the importance of reasonable accommodation and the promotion of the dignity and rights of people with disabilities to participate in activities within the great outdoors.

A full list of referenced documents and websites is listed in Appendix 4. Notable references used include:

- *BT Countryside for All: Standards and Guidelines: A Good Practice Guide to Disabled People's Access in the Countryside* by Fieldfare Trust, UK (1997).
- *Access to the Forest for Disabled People Manual* produced by The National Board of Forestry, Sweden (2005)
- *Irish Wheelchair Association Best Practice Access Guidelines 3, 2014*.
- *Outdoor Access Design Guide: Paths for all & Scottish Natural Heritage* (2016).

5 See *Irish Wheelchair Association Best Practice Access Guidelines 3, 2014* at <https://www.iwa.ie/access/>

As previously stated, the Section headings for these guidelines, which in many ways mirror the findings from the literature review, have been largely identified following research and consultation with people who have a disability and their representative organisations. The section headings are as follows:

Section 2:	Training, Consultation and Collaboration (Pages 23 - 26)
Section 3:	Information and Communication within and relevant to the Great Outdoors (Pages 30 - 41)
Section 4:	Trails/Greenways and Public Parks (Pages 45 - 61)
Section 5:	Beaches (Pages 65 - 77)
Section 6:	Waterways (Pages 81 - 97)
Section 7:	The Built Environment including: Parking, Entrance points, Reception areas, Fixtures & Fittings and Toilet Facilities (Pages 101 - 124)
Appendices:	Appendices 1 - 5 (Pages 127 - 154).

Within each section, taking a Universal Design approach, access is addressed under the headings of physical access; access to facilities & activities; access to information & communication; access to any supports required; availability of disability awareness training and consultation with the end user group/s.

1.7 Methodology

In 2017, a National Online Research Consultation was carried out by IWA-Sport, it was completed by 170 participants in order to obtain the information that is set out in Tables 1, 2 and 3. These tables demonstrate the opinions and outdoor activity preferences of people with a range of disabilities who participated in the online consultation which was circulated throughout 30 disability groups and organisations. The participants that responded to the online research consultation included 100 people with a disability, 40 family members of people with disabilities, and 30 representatives from disability organisations.

A total number of 27 participants attended a workshop that IWA-Sport conducted with representatives from disability groups and from various organisations that provide and manage facilities within the *Great Outdoors*. The purpose of the workshop was to raise awareness of access issues among stakeholders while also allowing stakeholders to define their need for support and to identify the areas/locations they would like to see included in these guidelines.

The results of the online research and the workshop consultation informed the development of the content as set out within this guide.

The following tables highlight the findings which were identified through the national online survey consultation with people who have a disability and their representative organisations, carried out by IWA-Sport:

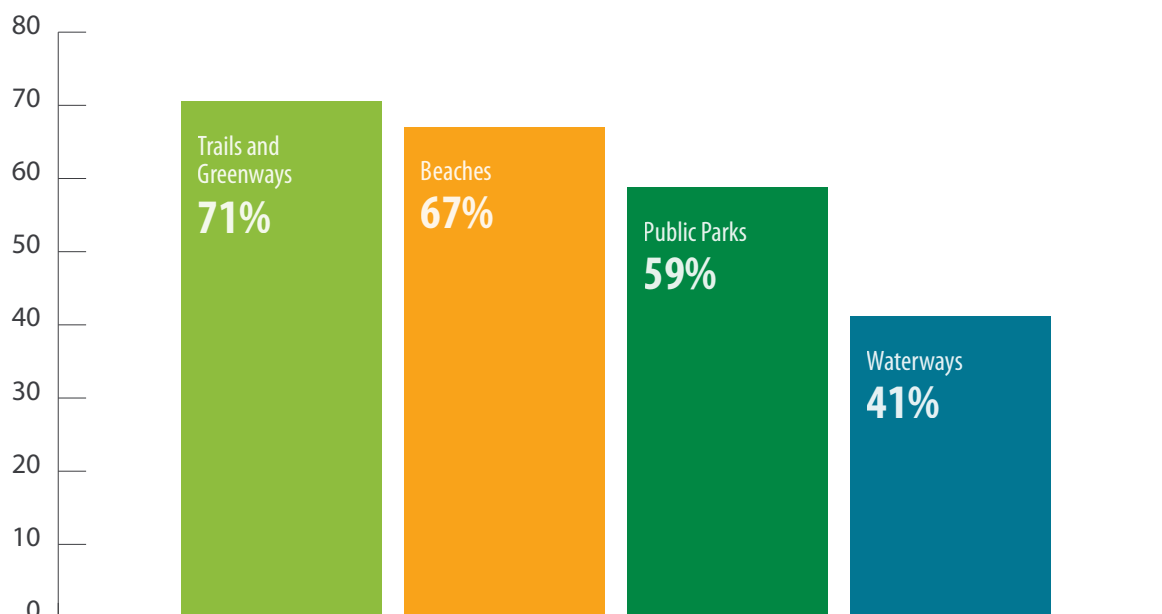


Figure 1: Preference of outdoor environments

Figure 2: Anticipated participation given the opportunities

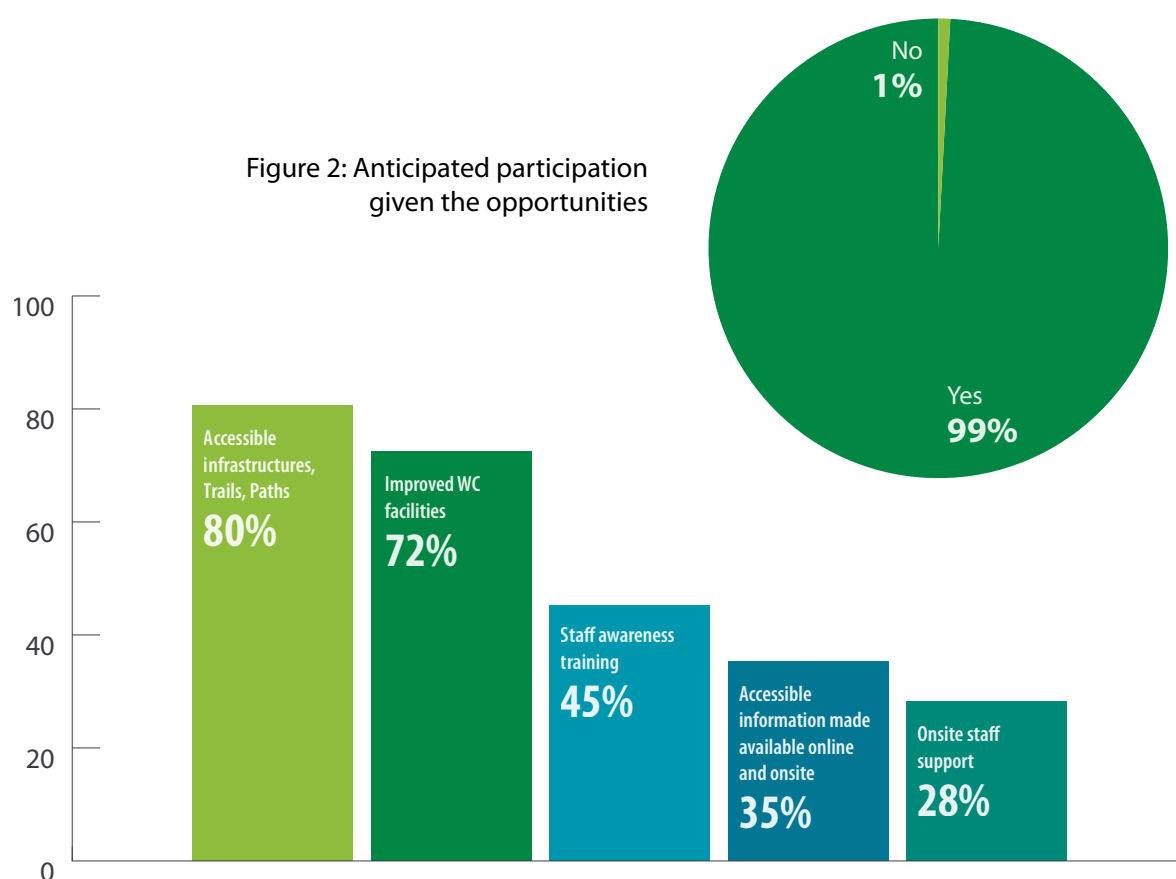


Figure 3: Supports required by people with disabilities to engage in outdoor activities and pursuits

1.8 Acknowledgements

IWA-Sport and Sport Ireland would like to thank everyone who has given their time to provide advice and support to this project.

We particularly want to thank all those who participated in the online consultation, the workshop and those who participated throughout the development of the guide.

Both IWA-Sport and Sport Ireland hope that this document will be a valuable reference tool for future planning and development surrounding access to the great outdoor environment. ^[6]

SECTION 2

Training, Consultation & Collaboration



Contents for Section 2 Training, Consultation and Collaboration

2.1 Training 23

2.2 Developing an Access Improvement Plan..... 24

2.3 Consultation and Collaboration..... 26

2 Training, Consultation & Collaboration



Training, Consultation and Collaboration provides a sound base for shared decision making. Face-to-face consultation is recommended at regular intervals throughout any adaptation or new build. Outcomes that have been informed by ongoing consultation with the end user(s) working alongside people who have relevant expertise will most likely generate creative solutions that are acceptable to all parties. Developing a consensus approach is recommended through the following means:

2.1 Training

Training for staff and volunteers is very important when it comes to breaking down stereotypes, overcoming preconceptions and developing confidence in working with people who have a disability. Understanding and awareness give people the knowledge and confidence required to carry out a job or task while always demonstrating good practice in working with, communicating with and assisting people who have a disability.

There are different types and approaches to training depending on the circumstances and training requirements.

- **Disability Awareness Training** provides information on different disabilities and raises awareness of issues and barriers faced by people who have a disability.
- **Disability Equality Training**, which is underpinned by a rights based and social model of disability, explores the role of society and of participants in creating a more inclusive environment.

While a combination of both disability awareness and disability equality training approaches can be a useful style, disability equality training is potentially more effective as it strives to achieve attitudinal change at an organisational level so that disability equality is embedded in very practical ways within all policies, procedures and practices of an organisation.

- **Inclusive Adventure Activities Training** which is aimed at the outdoor/adventure sectors, can be tailored to be site specific.

The opportunity for staff to avail of relevant and activity specific workshops on a regular basis should be available.

Relevant training can be sourced from the organisations listed below that develop and deliver training and education workshops across Access, Sports, Fitness, Adventure and Education sectors.

- Irish Wheelchair Association - Sport. IWA-Sport advises and consults on inclusive leisure and sporting activities. <https://www.iwasport.com> | info@iwasport.com
- CARA - Sport Inclusion Ireland, delivers Inclusive Adventure Activities Training. <http://www.caracentre.ie> | training@caracentre.ie
- Irish Wheelchair Association - Access Advisory Team advises and consults regarding best practice accessible design in the built environment. <http://www.iwa.ie> | access@iwa.ie

2.2 Developing an Access Improvement Plan

As a first step and using one of the site specific Self-assessment Access Checklists given in Appendix 1 of this Guide, carry out an on-site review of the site location and facilities provided. The completion of the site specific checklist will begin to identify locations and facilities that may require access improvements or complete renewal. By completing the checklist relevant to each location it will be possible to begin to develop a draft outline of potential upgrades for discussion and ongoing consultation with relevant local stakeholders.

Following the completion of the site specific self-assessment checklist:

- Identify local stakeholders across each disability group and include people who may have specific knowledge and experience within the great outdoors.
- Invite the participation of local stakeholders in the development and delivery of an access improvement plan including the identification of any additional access improvement works not identified through the completion of the checklist.
- Agree the means of consultation, the likely timing and extent of participation with stakeholders. The completed self-assessment checklist gives a starting point for discussion. Consultation should continue throughout any access upgrade or new build project until completion.
- Begin to agree and develop a site specific plan that outlines the detail of the access upgrades/complete renewal to be carried out along with time lines for completion.



Ask

Consult with individuals, advocates, disability organisations and staff working closely with individuals to identify visitor needs in your area.

- Ask simple questions to find out if individuals have any specific requirements that must be accommodated for example; “what can we do to assist you in using the outdoor environment?”
- Become aware. Examine the environment/amenity you manage and the service you provide with a view to potential obstacles and difficulties that may exist for people with disabilities using the environment/service.
- Develop programmes and activities in collaboration with local disability groups and organisations.



Plan

While it will not always be possible to meet all requirements of people with disabilities a positive approach can work towards understanding and incrementally meeting people's needs and requirements.

- Develop a plan in consultation with local relevant disability organisations/groups that will support and guide in making the services provided more accessible.
- Set out a service plan of action to address identified issues.
- Set out clear protocols and guidance for staff awareness workshops etc.
- Set out roles and responsibilities.
- Create a Disability Liaison/Access Officer post within your organisation.



Listen

Recognise that people with disabilities, family members, advocates and disability organisations working closely with individuals are the experts on their accessibility requirements;

- Listen attentively to feedback.
- Listen to any suggestions made for addressing requirements.
- Regularly review progress and plan for any further requirements.



Learn

Work collaboratively to plan change and adaptations. Ensure that there is sufficient and clear information gathered to inform the design of any proposed changes to make the great outdoors more accessible to people with a disability.

- Complete any additional research/consultation to learn about individuals' requirements prior to carrying out any work.



Do

Adopt policies and protocols that:

- Set out the standard steps to follow in order to achieve accessible environments.
- Implement the adopted policies and protocols.
- Provide clear leadership.
- Provide training and mentoring.
- Establish systems to monitor and review areas of development.
- Offer a feedback and complaints system.
- Ensure feedback informs the regular review of service and development plans.
- Consult and collaborate with disability organisations/groups with regard to planned upgrades, Development of Programmes and necessary equipment that may need to be provided

2.3 Consultation and Collaboration

With target audiences, it is vital to ensure that the correct information is obtained and managed effectively. Consultation requires site and land managers to focus attention on any issues or concerns identified in consultation with people who have a disability. In addition to focussing on issues and concerns that may need to be addressed, site and land managers should also discuss what is working well for people with disabilities within the relevant outdoor environment.

Additional Resources available

Provide Disability Equality Training to Staff Guidelines (National Disability Authority)

<http://nda.ie/Resources/Accessibility-toolkit/Provide-disability-equality-training-to-staff/>

“

"Ensuring an accessible environment is the key to inclusiveness: remove the barriers and we can all enjoy the outdoors, in the same way as our peers"

- Quote from National Online Survey 2017

SECTION 3

Information & Communication



Contents for Section 3 Information & Communication

3.1 Website – Online Information 30

3.2 Recommended written text for websites, information
leaflets and brochures 31

3.3 Use of Symbols 32

3.4 Face-to-face Interaction/Communication 34

3.5 Information Display Boards 36

3.6 Waymarking 39

3 Information & Communication



This section of the *Great Outdoors - A guide for accessibility* considers how information and communication can be made more accessible to everyone regardless of ability or disability.

Well-designed, detailed and accurate information about the accessibility of any site and its facilities and available amenities should be presented in various formats in order to be accessible to everyone including people with disabilities. Consider developing an accessible information policy within your organisation along with procedures to highlight the organisation's commitment to communicating effectively with everyone. Promotional literature should make it clear that people with disabilities are welcome and can participate in the on-site activities. The use of photographs can be most helpful in highlighting a welcoming approach.

The various formats through which information should be presented include:

- The internet, including websites, e-mail and social media where appropriate. Relevant forms and documents should be accessible on-line and in downloadable format. Clearly signpost the availability of these documents on literature and on websites.
- Brochures and information leaflets that are available in Easy to Read, Plain English versions and Braille on request. Clearly display all available options. Keep written communications brief and to the point.
- Face-to-Face interaction using clear, simple user-focused language.

- **An Induction Loop System** which aids people who have a hearing loss should be provided at communication points. The appropriate symbol indicating the presence of a Loop System to be displayed.
- **Audio Packs** where appropriate. The availability of Audio Packs should be clearly displayed on-site and in any written material.
- **By phone including the use of text messaging** where appropriate. The availability of a text messaging option should be clearly displayed on-site and in any written material.
- **Information Display Boards** that are easy to read will orientate the visitor to on-site facilities.
- **Waymarking** for all routes should incorporate a wayfinding system that is clearly sign-posted and visible.

Ensure relevant staff know how to source information in alternative formats e.g. Braille versions on request (enquire with National Council for the Blind <http://www.ncbi.ie>), the availability of Irish Sign Language interpreters should a customer require this service (contact DeafHear Ireland <http://www.deafhear.ie>) and the translation of documents/brochures into Easy to Read and Plain English (contact NALA <http://www.nala.ie> and Inclusion Ireland <http://www.inclusionireland.ie>).



Hearing loss communication points.

3.1 Website – Online Information

Websites and mobile apps offer a valuable opportunity for service providers to showcase their facilities and to offer clients and service users essential information to pre-plan their visit. It is essential that the website design and online format used by a service provider is easily accessible to everyone. A well planned and managed website can support people with a disability to actively plan and participate in activities and programmes within the great outdoors.

The following design criteria need to be considered in order to make online information easily accessible to everyone;

- Ensure the text on the website can be increased in size and that the colour contrast on the site can be altered to suit the user's requirement. In the case of mobile apps, ensure that the app is compatible with phone accessibility integrations that allow text size increase and other features such as colour contrast and element focus.
- Ensure that the website is compatible with screen reader technology.
- Ensure the website/app is easy to navigate.

- Provide a clearly identifiable section on the website or app that hosts all accessibility related information regarding the site location, the facilities and amenities available as well as information on travel options to reach the site location.
- Use clear, simple, user-focused language that is commonly used in face-to-face conversation.
- Promote the various alternative formats through which information is available, e.g. information leaflets and brochures that are available in easy to read and simple english versions, Braille and audio, and the opportunity to use text and e-mail.
- In order to ensure effective communication and information delivery, publicise various ways your clients/service users/customers can give feedback.
- Consult with clients/service users/customers/visitors to ensure that information provision is suitable to their requirements.
- Provide contact details for your dedicated Access or Disability Liaison Officer.



Website accessibility

3.2 Recommended written text for websites, information leaflets and brochures

The following design criteria should apply:

Use:

- **A mixture** of capital (as appropriate) and lower case letters. BLOCK CAPITALS should not be used.
- **Text aligned to the left** (except for languages that read from right to left).
- **Clear fonts**, set at size 12 or larger for online text (with the ability for the user to increase text size) and size 14-20 for hardcopy brochures/information leaflets.
- **Sans-serif** typefaces e.g. Ariel, Verdana, Gills Sans MT, Calibri etc.
- **Bold text** for emphasis, not capitals.
- **Backgrounds** that give a clear colour contrast from the text.
- **Correct punctuation**.
- **Clear line-spacing**, clear paragraph-spacing, and clear column-spacing.
- **Text** to explain images and charts.

- **Do not print text** over photographs or patterns.
- **Pictures/photos** to explain text.
- **Matte finish** for brochures/information leaflets.

Avoid:

- Hyphenation and justification.
- Writing words in uppercase letters.
- Vertical text.
- Outlined text.
- Stretched or squashed text.
- Glossy paper.

See also Appendix 4 - NCBI Recommendations for Signage.

3.3 Use of Symbols

International symbols of accessibility

Various internationally recognised symbols can be used to promote and publicise the accessibility features of sites, programmes and activities. These symbols can demonstrate the removal of environmental barriers or the provision of specific accessible features to indicate that an environment is easily accessible and usable by a wide variety of people regardless of age or ability. These guidelines propose the use of the following symbols shown on pages 33 and 34 and also on page 47 to identify accessible routes/trails, amenities and accessible on-site facilities.

The symbols should only be used where routes/trails, amenities and on-site facilities provide access to people with disabilities.

“

"Accurate and honest access information on websites is very necessary".

- Quote from National Online Survey 2017

International Symbol of Accessibility

Recommended Symbol for Access.

This symbol should be used to indicate and direct people to the following facilities;



- › Accessible car parking bays.
- › Accessible pick up and set down points.
- › Accessible sites and facilities.
- › Accessible entrances that are not primary entrances.
- › Accessible toilets/WCs.

International Symbol of Access for Impaired Hearing

This symbol should be used to highlight specific facilities or services that are available for people with a hearing loss:



- › Presence of an Induction Loop System (fixed or portable types).
- › Presence of audio facility in an information display board.
- › Sign language interpreter available on request.
- › Lip speak service and/or sign language provided or available on request.

International Symbols of Access for Visual Impairment and for Guide Dogs permitted

This symbol should be used to highlight specific facilities or services that are available for people with vision impairments:



- › Braille information available on request.
- › Audio information available on request.



- › Guide dogs permitted.

3.4 Face-to-Face Interaction/Communication

Be aware of the following considerations when speaking with a person who has a disability: ^[7]

- Relax and take time - people with disabilities are just people.
- Make and maintain eye contact.
- Always speak directly to the person with a disability. If the person is accompanied by another individual always direct your conversation to the person who has a disability, including when the accompanying person speaks on behalf of the person who has a disability.
- Do not make assumptions about a person's abilities, preferences, expectations or wishes.
- Ask if the person requires assistance and in what way.
- Respect and comply, where possible, with the person's expressed wishes and expectations.

7 <https://www.hse.ie/eng/services/yourhealthservice/access/NatGuideAccessibleServices/part1.htm>

- Do not make assumptions about a person's disability or what a person can or can't do.
- Ask before you offer assistance and respect a person's right to refuse your help.
- Take the time to listen to people with a disability.
- If you can't understand what a person is saying don't pretend that you can – just listen carefully and try to understand. Politely ask the person to repeat him/herself if required.



Interaction and Communication

Additional Resources available

National Guidelines on Accessible Health and Social Care Services (HSE)

<https://www.hse.ie/eng/services/yourhealthservice/access/NatGuideAccessibleServices/part1.html>

Provide Disability Equality Training to Staff Guidelines (National Disability Authority)

<http://nda.ie/Resources/Accessibility-toolkit/Provide-disability-equality-training-to-staff/>

Customer Communications Toolkit for the Public Service - A Universal Design Approach (National Disability Authority Centre for Excellence in Universal Design)

http://publicservice.universaldesign.ie/media/NDA_Universal_Design_Public_Service_Toolkit.pdf

Making Communication Accessible for All – A Guide for Health and Social Care Staff (Inclusion Ireland)

<http://www.inclusionireland.ie/sites/default/files/attach/event-notice/1527/making-communication-accessible-all.pdf>

3.5 Information Display Boards

Information Display Boards are essential elements in providing adequate information to direct people towards and along trails and routes. Information Display Boards provide a visitor with information on facilities available, the use of any waymarking system, features of interest or to give warnings about hazards along routes. The readability of the information displayed is of the utmost importance and this can often be determined by text font size, text spacing and colour contrast.

The following design criteria should apply:

- Provide optional **audio link** via headphones, consider providing pre-recorded audio tours and guided group tours on request.
- **Text size** used on Information Display Boards needs to be sufficiently large to be easily read and positioned correctly to be clearly legible.
- **Choose standard** sans-serif typeface e.g. Times New Roman, Ariel, Verdana.
- **Characters** on all signs should be raised by 1.5mm.
- **Avoid** use of capitals in continuous text. A mixture of both capital and lower case letters that are aligned to the left is recommended.
- **Text and symbols** should be consistent in design.
- **Average line of text** should be of 40 – 65 characters.
- **Layout of text** should be clear and simple, leaving space between paragraphs.
- **Use text colour** that will provide a strong contrast with the background colour, white lettering on a dark background gives good legibility.
- Do not print text over **photographs or patterns**.
- Locate the most relevant information within the mid-section of the **Information Display Board**.
- **Information Display Boards** that are to be read from a relatively short distance should be sited with the centreline of the sign located at 1400-1600mm from the ground level to suit people with a range of eye levels.
- **Ensure** there is space beneath the Information Display Board, minimum 400mm high from ground level, whereby the footplates on a wheelchair user's chair can go beneath the board to facilitate a person to get closer in order to read the text on the Information Display Board.
- **Provide a tipping/guard rail** on the ground beneath the Information Display Board to alert people with a vision impairment, who are using a mobility cane, of the presence of the display board.

- **Signs** that are projected or suspended must be positioned at a height to allow for a 2300mm clearance from ground level.

The larger the size of the font, the further away people can read it. See table below which indicates the size of font that is recommended for specific viewing distances:

Size 20 Font	Can be read from 1.2 metres distance
Size 48 Font	Can be read from 1.5 metres distance
Size 60 Font	Can be read from 1.8 metres distance
Size 200 Font	Can be read from 9 metres distance
Size 320 Font	Can be read from 18 metres distance

Colour Choice

The colouring and contrast of printed material and backgrounds on Information Display Boards and on Information Leaflets/Brochures is a significant factor in making signs and brochures visible and legible.

- When using colour it is better to have a dark text on a light background for increased visibility.
- For external signs, the colour of the sign should contrast with the landscape while the text should contrast with the board.
- White as a background colour for outdoor signs may cause a shine in the bright light. A sign having a matte finish can help to eliminate this problem.
- Where colours are not high contrasting, the larger the letters and spacing of words the more readable and user-friendly the information.
- Any text displayed over a background containing several different colours/tones will be difficult to read and therefore not recommended.
- If colour coding is used on trails to guide visitors all colours should contrast strongly with each other to support those who are colour blind.
- The most common colours that people with colour blindness can confuse are red/yellow/green, red/black and blue/green/purple.

The table below gives information on appropriate colour schemes to use when displaying information via brochures and Information Display Boards. Poor colour combinations are also identified;

Recommended colour combinations: **Poor colour combinations:**

Black on White	.....	Yellow on Orange
Dark Blue on White	.....	Yellow on Grey
Black on Yellow	.....	Yellow on White
Dark Green on White	.....	Blue on Green
White on Red	.....	Black on Violet

Location of Information Display Boards

For the location of Information Display Boards to be fully accessible the following criteria need to be considered:

- **Position.** Where possible ensure that the Information Display Board is reachable and readable from a sitting or standing position. Information Display Board needs to be set back from the main trail and should not compromise the trail width. Physical accessibility is essential for people who use a wheelchair as well as for people with vision impairments who may need to get up close to read or touch the sign. Signs that are to be read from a short distance should be sited with the centreline of the sign located at 1400mm from ground level. Safety Instruction Signage, which requires reading detailed instructions, should be duplicated at 1000mm -1100mm and 1600mm-1700mm to suit people at a range of eye levels.
- **Ground Surface.** The ground surface around the sign should be level and well maintained to allow access to wheelchair users. Where possible, incorporate signs with shelter and resting points at the side of all main tracks and trails.
- **Lighting.** Signs should be well lit and the surface materials should be non-reflective.

Place signs and information points within the accessible cone of vision. See recommendations in the following table:

Viewing Distance	Lowest point	Highest point
1000mm (1m)	800mm	1850mm
2000mm (2m)	700mm	2150mm
3000mm (3m)	650mm	2400mm

Other considerations

- Avoid placing signs where they might obstruct features of interest.
- Keep the number of signs to a minimum, i.e. at car parking areas, at the beginning of routes and trails, to indicate route options along trails and where any hazards may be located.
- Signs must be clear and should be consistent in placement, with contrast and colour so that visitors can easily recognise them in all situations.
- Provide a tipping/guard rail on the ground beneath the Information Display Board to alert people with a vision impairment, who are using a mobility cane, of the presence of the Information Display Board.
- Test any proposed product with real users. During development, test the prototype in a realistic situation with real people, particularly people who routinely use wheelchairs, walking frames and canes and people with hearing loss or a visual impairment.

3.6 Waymarking

Provide concise and important information for people following routes and trails. These guidelines recommend the use of Information Display Boards and internationally recognised accessibility symbols^[8] as part of the waymarking design systems to make people aware of accessible routes at the start of and along the route/trail.

The following design criteria should apply:

- **Keep waymarking** as simple as possible.
- **Include pictorial signage** where possible.
- **At the start of each route** include, on a post/sign that is clearly visible, information regarding the destination: distance; the access level of the route indicated by the appropriate access symbol(s); route duration and resting & viewing points etc. This information allows people to make an informed choice regarding the route to follow.
- Along routes **avoid using multiple arrows** on one post, as this can lead to confusion for people.
- **All junctions** should be waymarked.
- **All routes should be waymarked** from both directions so that people can retrace their steps. Arrows indicating straight ahead should be placed pointing in the direction of travel on the side of the post facing the approaching trail user.



Example of Accessible Waymarking

⁸ The use of symbols to highlight accessible trails & routes is set out in this Guide within the Sections on Trails, Greenways, Public Parks, Beaches and Waterways.



Waymarking clearly visible

Additional Resources to Support Waymarking

Touchmapper was created in Finland. The idea behind this mapping system is that people who require a tactile map can create custom 3D outdoor tactile maps of the address or area of their choice based on freely available map data.

People can then either order an affordable 3D printed version of the map or download the files to 3D print for themselves. <http://touch-mapper.org/en/>



Touch Mapper

These tactile maps are created with the user in mind and are optimised to be as easy to use as possible, regardless of the person's experience or skill-level with Braille. For further details please see the following link: <https://touch-mapper.org/en/>

Audio and Guided Tours. Consider providing pre-recorded audio tours and guided group tours on request.



Audio and Guided Tours

SECTION 4

Trails, Greenways & Public Parks



Contents for Section 4 Trails, Greenways & Public Parks

4.1 Classification and Grading of Trails 46

4.2 Use of Symbols 48

4.3 Design Criteria for Accessibility on Trails,
Greenways and in Public Parks 49

4.4 Surfacing 51

4.5 Information Display Boards 51

4.6 Route Information 52

4.7 Entrance and Exit Points 53

4.8 Obstacles and Barriers 53

4.9 On-Site Equipment and Support 53

4.10 Accessible Picnic Areas on Greenways and in Public Parks 57

4.11 Accessible Playground Areas on Greenways and in Public Parks 58

4 Trails, Greenways & Public Parks



Trails can range from smooth pathways in public parks to rugged routes across open countryside, in mountainous areas or through forests. Some environments can be welcoming and easy to traverse while others can present challenges for the visitor, particularly for people who have a disability.

Greenways are traffic-free routes for use by pedestrians and cyclists. They are often established along an existing corridor such as a canal bank or disused railway line. They generally have low gradients and a smooth surface and provide an amenity suitable for people of all abilities.

Public Parks are environments that are designed and laid out for recreation purposes often including amenities such as pathways, playgrounds, picnic areas and coffee shops.

This section considers how accessibility can be built into the design and management of trails, greenways and public parks including any facilities such as picnic areas and playgrounds that are provided on-site. Given that Greenways are a type of trail and a large part of the attraction of Public Parks are the trails they contain, trails are a major focus in this section.

Accessible Trails. Where trails are appropriately designed and managed they may be shared-use and capable of facilitating a range of users including walkers, cyclists, buggy users and, in many instances, people who have disabilities. Such trails are sometimes known as Multi-Access or Challenging Access Trails.

4.1 Classification and Grading of Trails

Typically the sections of a walking trail are 'classified' based on the surface, width and gradient of the trail. The Sport Ireland document 'Classification and Grading for Recreational Trails' provides further details on the classification of trails from Class 1 to 5. The 'Grade' of a trail is then determined based on the length of the trail that is made up of each Class.

Multi-Access Trail.

A Multi-Access Trail is defined as one which is Class 1 throughout its length and has no obstacles such as gates, steps or stiles. A Class 1 Trail has a firm surface and is flat and wide. (See 'Classification and Grading for Recreational Trails'). The goal of a trail designer providing an accessible trail should be to comply with the requirements of a Class 1 trail.

Challenging Access Trail.

It is recognised that due to the surrounding terrain or other environmental factors it may not be physically possible to comply with all of the guidelines related to surface, gradient or width as required for a Multi-Access Trail. For example, a trail which has some sections of Class 2 trail may also be considered accessible but slightly more challenging for some users. A Class 2 section of trail can be narrower, may not be quite as smooth and may have slightly steeper gradients. To deal with this situation these guidelines are recommending a trail called a Challenging Access Trail.

So, in summary, the following descriptions would be used;

- **Multi-Access:**

Will include only Class 1 trails

These are flat, smooth trails with no obstacles such as gates, steps, stiles. Regular outdoor footwear can be worn when accessing these routes.

- **Challenging Access:**

Can include a mixture of Class 1 and Class 2 Trails

These are generally, flat smooth trails but may have a rougher surface and some gentle gradients. These trails are suitable to most users with a good level of fitness. Regular outdoor footwear can be worn when accessing these routes.



Multi-Access Trail

Accessible Trails can be described as Multi-Access and Challenging Access Trails or routes and the guidance within this section outlines design criteria for both.

The guidance within this section outlines design criteria for Multi-Access and Challenging Access trails.

The design criteria and guidance includes;

- ✓ Use of Symbols
- ✓ Trail design
- ✓ Surfacing
- ✓ Route Information
- ✓ Entrance and Exit Points
- ✓ Obstacles and Barriers
- ✓ On-site Support and Accessible Equipment ^[9]
- ✓ Picnic Areas
- ✓ Playgrounds

The symbols below represent Multi-Access and Challenging Access routes which are proposed to identify two levels of accessibility.

Multi-Access Symbol



Challenging Access Symbol



⁹ On some outdoor sites there may be equipment e.g. bicycles/other, available for public use and consideration should be given to also having dual use accessible equipment such as hand cycles or disability specific equipment, available at all such sites.

4.2 Use of Symbols

These guidelines propose the use of the internationally recognised wheelchair symbols to identify the two levels of accessibility on trails/routes as follows;

Multi-Access

When displaying this symbol the following criteria should apply:



- › Accessible route from parking to the trail.
- › Fully accessible trail.
- › Little or no gradient.
- › Flat /smooth surfacing i.e.concrete, tarmac, bitumen macadam.
- › No steps.
- › No obstacles.

Challenging Access

When displaying this symbol the following criteria should apply:



- › Accessible but more challenging trail.
- › More significant gradients at some locations.
- › Surface may not be as firm e.g. use of gravel/quarry dust.
- › May be narrower.
- › No steps.
- › No obstacles.

These symbols should be located at the beginning of a trail and at all access points. They should also be used in conjunction with directional arrows at trail junctions when used for waymarking the trail. The use of these symbols will ensure that the accessible trail and designated route can be clearly determined and followed. This information allows people with disabilities to make an informed choice to follow a specific trail.

Please note: Warning should be given where the accessibility along a trail disimproves so that the trail is no longer accessible.

4.3 Design Criteria for Accessibility on Trails, Greenways and in Public Parks

The design of an accessible trail should allow good access and facilitate everyone. The trail should be designed and set out in a manner to avoid hazards and allow all users a safe opportunity to enjoy variable terrain while visiting various outdoor environments.

The following design criteria should apply:

- **Parking.** Accessible parking bays and set down areas should be provided at the trailhead/access point.
- **Level Access** from the parking area to the route/s adjacent to the trail and leading to any on-site facility.
- **Public Accessible WCs/ WC Changing Place Facility.** Locate adjacent to the trailhead/access point.
- **Multi-Access and Challenging Access route surfacing.** The surface should be firm, compact, stable, non-slip, and obstacle-free. Additional details are provided within the specific section on surfacing that follows this section.
- **Level and sloping surfaces on Multi-Access Routes.**



The ideal situation for all sections of a multi-access trail is that it is completely flat - 0% gradient. Always choose the option of providing the least slope. The surface on Multi-Access Routes should be level. A surface gradient of 1:40 - 1:50 is considered level while allowing for drainage of surface water. Where slopes are unavoidable the gradient should always be as smooth as possible and no steeper than 1:21 (5%) for short distances i.e. no more than 10m in any one section and no more than 2 consecutive sections at any location. Ensure a 1500mm length landing is available between sections and provide handrails on both sides of the sloped ground.

Slopes that have a gradient steeper than 1:21 are considered ramps and require specific design elements including the provision of adjacent steps which are favoured by some people who have a mobility impairment. Section 7, page 104 of this guide gives design guidance for ramp design.

- **Surface gradients on Challenging-Access Routes.**



These routes may be a bit undulating but should not have gradients any steeper than 1:15 (7%) for short distances i.e. a maximum length of 5m between landings with a maximum rise of 333mm in any one section. Ensure the availability of 1500mm length landings between sections and no more than 2 consecutive sections at any location.

A slope gradient of 1:15 (7%) is considered a ramp and therefore should include handrails/ adjacent steps etc. as described in Section 7 page 104. Some people may like to challenge themselves on more difficult routes and /or to use off-road mobility equipment.

A steeper slope gradient of 1:12 (8%) is not recommended and is only acceptable in very exceptional circumstances when no other options are available or possible and only for a very short distance i.e. a maximum length of 2m with a maximum rise of 166mm.

A slope gradient of 1:12 is still considered a ramp and therefore should include handrails/ adjacent steps etc. as described in Section 7, page 104 of this guide.

Many people using manual wheelchairs will require assistance on a 1:15 (7%) or a 1:12 (8%) slope gradient and also on a 1:21 or 1:20 (5%) slope gradient if the route has more than 1 section.

- **Width.** The width of the trail should be 2000mm to allow two wheelchair users to pass each other safely. A path width of 1500mm accommodates a wheelchair user and another person walking alongside. A minimum path width for a wheelchair user to traverse without another person walking alongside is 1200mm and is only suitable for very short distances.
- **Upstand.** Edge protection such as a raised kerb of at least 150mm in height should be provided on both sides of the route which also acts as a “tipping rail” to assist a person with a visual impairment who is using a cane, with waymarking. Alternatively providing a different surface type along the sides of any trail to create a divergence in colour and texture can also act as a guiding strip for people with a visual impairment.
- **Passing Spaces.** That allow two wheelchair users to pass each other should be provided on routes that are less than 2000mm in width and where the overall route length is greater than 25m. Passing spaces in the external environment should be 2000mm in depth and 2000mm in width and located within direct sight of another passing space.
- **Headroom.** Clear headroom height of 2300mm should be maintained along the trail/track route, free from overhanging branches and vegetation.
- **Railings.** Should be positioned at all steep parts of a route, in places where the path is higher than the adjoining ground, along cliff edging and other hazardous sections where there may be a risk of a person falling and being injured.
- **Rest Areas/Seating /Shelters.** Rest/seating areas should be placed at regular intervals i.e. distances of 100m apart. Where possible combine shelters and rest areas and also position seating at scenic locations. Provide a tactile cue, possibly a consistent change of surfacing/colour on the approach to each seating location in order to alert people who have a visual impairment.
- **Seating Type.** Seating should be placed back from the main route by at least 600mm to allow others to move freely past the seating area. Seating provided should be no lower than 450mm from ground level with a minimum of 450mm seat depth and with a heel space of 100mm to allow for easier rising from the seat. Armrests should be provided as they assist a person to sit into and to rise from the seat. Avoid sharp edges. A clear space of 1400mm in depth and 900mm in width is recommended adjacent to the seating to allow a person using a wheelchair to position alongside.
- **Viewing points.** Where a barrier is required at a viewing point for reasons of safety provide a perspex barrier at a height of 800-900mm from ground level. Ensure there are no bins or overgrown shrubbery blocking the view from a sitting height. Perspex should be maintained regularly and green algae should be removed as this will obstruct the view.
- **Maintenance.** Regular upkeep and maintenance will ensure that tracks and trails remain accessible for all users. To help ensure trails are well managed and maintained, trail management standards have been published by Sport Ireland.^[10]

4.4 Surfacing

The surface of a trail should be firm, compact, stable, non-slip and obstacle free. The surface should also be free from severe erosion and drainage problems. On an accessible trail, it should be suitably drained so that it is not waterlogged or muddy at any point along the route.

- **Suitable surfacing materials for Multi-Access trails.** The surface should be firm, compact, stable, nonslip and obstacle free. It should also be free from severe erosion and drainage problems. Under normal conditions, it should not be waterlogged, have extended sections which are boggy or have deep mud along the route. Suitable materials include: concrete, tarmac, bitumen macadam, dust binding, timber and brick/paving. Timber requires treatment with a slip-resistant surfacing. When wood is used it should be un-planed and placed at right angles to the direction of travel while ensuring there are no gaps between the timber boards. The surface should not be slippery in either dry or wet conditions.
- **Unsuitable surfacing materials for Multi-Access trails** include: sand, loose gravel, woodchips, and cobbles. Loose material is very unsuitable and there should be very little or no loose material on the trail. Even very small loose particles can make a path slippery for people with poor balance. Loose particles should not exceed 5mm in size.
- **Surfacing materials for Challenging-Access trails.** Include a surface that is textured with slight inclines. Materials may include loose gravel, woodchips, and grass.
- **Surface Colour.** Light coloured surfacing is preferable as it diverges in colour from the surrounding landscape and can aid in wayfinding for people who have a visual impairment.
- **Drainage.** Standing water can be hazardous for some users. Ensure good drainage to prevent surface materials being dislodged. Regular rolling and infilling are required to prevent loose materials gathering or potholes developing.
- **Maintenance.** Regular review and maintenance will ensure that trails and routes remain accessible for all users.

4.5 Information Display Boards

Information Display Boards are essential elements in providing adequate information to direct visitors towards and along trails and routes. Information Display Boards provide a visitor with information on facilities available, the use of any waymarking system, features of interest or give warnings about hazards along routes.

Revert to section 3 for complete guidance on the design of Information Display Boards.

“

"Seating made available at regular intervals during walking trails".

- Quote from National Online Survey 2017

4.6 Route Information

Information should be presented in a variety of ways i.e. both online and on-site, to provide users with information regarding accessibility levels so that people planning a visit to the site can know what facilities are provided in advance of their visit.

Route information and waymarking should be clearly provided on an Information Display Board at the beginning of a trail, at junction points and at regular intervals along the trail. This will ensure the preferred route direction is always clear, that direction is given on accessibility as well as notification of any route change or change of accessibility.

Consider also providing an audio guide alongside the Information Display Board that can be activated by a push button device or alternatively by using headphones.

To Note: *Warning should always be given where the accessibility along a trail disimproves so that the trail is no longer accessible.*

Route information presented on the Information Display Board at the start of a trail should detail the following:

- **Supports.** Any on-site supports that are available i.e. audio/guided tour, and if guide/assistance dogs are permitted.
- **Access Level.** Is it a Multi-Access or Challenging Access trail.
- **Grade and length** of the trail/route and estimated completion time including whether the route is a linear or circular route and any viewpoint or places of interest along the route.
- **Seating.** Location of rest areas and where seating is provided.
- **Notifications** of any obstacles and barriers where a trail traverses open/exposed terrain or where there are stepped/steep slopes and whether there are alternative routes available.
- **Waymarking.** Information on the Waymarking System that is used along the trail including the use of the wheelchair symbols.
- **Waymarking** provided on the trail, particularly at junctions, indicates the route direction, level of access and distance. Where there are multiple trails in the same area, markers must be coloured or numbered differently for each trail so that each route can be clearly identified. The use of the wheelchair symbols indicates that the route is accessible as a Multi-Access or Challenging Access trail. All routes should be waymarked from both directions so that people can retrace their steps.
- **Emergency and other contacts.** Contact phone number/email for users to contact emergency services, to provide feedback and/or report incidents or concerns about the trail.

For futher reference please see: https://www.irishtrails.ie/Sport_Ireland_Trails/Publications/Management_Standards_Access.pdf

4.7 Entrance and Exit Points

The guiding principle of access for all is to choose the least restrictive option so that access through entrance and exit points is as easy as possible for everyone including people with limited strength and restricted manual dexterity. All gates/gaps should be sufficiently wide to allow a person using a wheelchair/mobility scooter to easily gain entry to a trail. Consider quick fix options of replacing an inappropriate gate or stile with a more suitable gate type or create an open entrance. Always provide an alternate entrance where vehicle barrier poles are located.

The following design criteria should apply:

- **Gate/Gap width.** A clear opening width of 1000mm for a gate or gap is required to allow entrance to a person using a wheelchair/scooter. Provide 500mm clear space on the latch side of any gate.
- **Gate Opening Mechanism.** The self-closing two-way gate system on a Milton Keynes Gate enables this gate to be simply opened in either direction by pedestrians or people using wheelchairs.^[11] Latches on gates should be visible and usable from both sides of the gates. A Crosbie Gate can also be a good alternative while a 'Kissing Gate' would not be recommended as its use is complicated for a person using a wheelchair. The design of a Kissing Gate suitable for use by a wheelchair user would allow entry to other vehicles where such gates are often intended to restrict access.
- **Latches** should be easily used requiring minimal strength and dexterity, twist, pinching or pulling to operate. Latches should be placed no higher than 1200mm to ensure that people seated in a wheelchair can reach them.
- **Bollards.** Where used should be a minimum of 1000mm in height, 250mm in width and contrast with the background in colour and tone. A High Vis Collar should be placed around the top end of the bollard to identify the bollard to a person with vision impairment. Adjacent bollards should not be linked with a chain or rope of any type. There should be a minimum gap of 900mm between adjacent bollards.

4.8 Obstacles and Barriers

Obstacles on trails/routes may occur. Where an obstacle occurs the preferred solution is to alter the route or to achieve a safely manageable alternate route. The following obstacles and barriers may occur and accessible solutions may have to be innovatively designed and creatively achieved wherever possible:

- **Natural blockages** may define routes. Such as heavy duty rocks, trees etc.
- **Narrow passages.** Shrubbery, gradients, rocks and logs may be present. Ensure a minimum track/trail width of 1200mm, preferably 1500mm, within such locations.

¹¹ <https://centrewire.com/product-category/pedestrian-and-mobility-access-gates/>

- **Erosion** may occur and resurfacing of sections of the track/trail may be regularly required. Consider if drainage is an option.
- **Protruding vegetation and obstacles** should be secured and should be maintained regularly so as not to encroach onto the track/trail.
- **Bridges.** Where the slope on the approach route to and over the bridge is very steep, consider if an alternative route is possible.
- **Prevent water ponding and flooding** by the installation of suitable drainage.



Chiltern/Milton Keynes self-closing two-way gate system

4.9 On-Site Equipment and Support

Many people with disabilities may have limited mobility and specific equipment can ensure increased participation in outdoor activities. On some outdoor sites, public parks and visitor centres there may be equipment e.g. bicycles/other, available for public use. Consideration should be given to also having dual use accessible equipment such as handcycles or disability-specific equipment, available at all such sites.

4 Trails, Greenways & Public Parks

The following equipment may assist in supporting individuals to access the outdoor environment more freely;



Manual Wheelchair

Manual wheelchairs are the type of wheelchair that a person propels themselves without the assistance of a battery. Options include a self-propel wheelchair, which requires the user to push themselves, and a companion propelled wheelchair, which means that the person seated in the wheelchair is assisted by another person.



FreeWheel wheelchair attachment

FreeWheel is a lightweight clamp-on attachment which quickly and easily attaches to the footrest of an existing wheelchair. The FreeWheel allows the person to easily and safely traverse any rough terrain by raising the existing (small) front wheels that might catch or slow down on difficult terrain.

“

"The forests have walks mapped out but the gateways into them are too narrow for my son's wheelchair".

- Quote from National Online Survey 2017



Powerpack

Powerpacks. The Powerpack is a two-wheeled power pack that converts a manual wheelchair into a powered chair. Manually wheeling over surfaces that are not smooth can be extremely effortful. Converting a manual chair to a powered chair can assist manual wheelchair users to access more trails for longer periods. The power pack is controlled with a handheld remote. Movement of the chair is operated by pressing the power button.



Dual Use Gym Equipment

Dual-use Gym Equipment is outdoor accessible exercise equipment that is predominately found in public parks, playgrounds, and greenways. This dual use exercise equipment offers all users equal opportunity to exercise at their own leisure in the outdoors. Many of the pieces of equipment are designed to be used by both people standing and by a person seated in a wheelchair.



Hand Cycles

Hand Cycles. A handcycle is a type of bicycle that is propelled by the arms rather than the legs. Most hand cycles are tricycle in form, with two coasting rear wheels and one steerable powered front wheel. Despite usually having three wheels, they are also known as hand bikes.



Audio and Guided Tours

Audio and Guided Tours. Consider providing pre-recorded audio tours and guided group tours on request.

4.10 Accessible Picnic areas on Greenways and Public Parks

Families and friends often venture to outdoor recreation areas with the specific intent to picnic. Accessible picnic elements facilitate the inclusion of park visitors. The provision of accessible picnic areas should be a consideration for all service providers. Providing accessible picnic elements such as tables can be an easy process especially since accessible picnic tables come in a variety of shapes and sizes.



Universal Design Picnic Table

The following design criteria should apply:

- **Provide information** on the route Information Display Board of the location of accessible picnic areas.
- **Provide route signage** to identify locations of accessible picnic tables.
- **Provide a firm and level surface** leading to and around the picnic area that is clear, smooth and non-slip with an 1800mm accessibility zone around all sides of the table and bench unit.
- **Avoid unsuitable surfaces** such as cobbles, grass and loose gravel.
- **The height** of a picnic table should be between 750mm-800mm with clear knee space of 700mm beneath.
- **Cantilevered ends** on picnic tables facilitate wheelchair users.
- **The seat height** should be within 460-480mm from the ground and minimum depth of the seat should be 450mm. Ensure there is a section of the table with no permanent seating attached.

- **The back support** of the seat should be a minimum 455mm in height.
- **The seating areas** should provide a mixture of seating options i.e. some with backrests, some with armrests and some with both.
- **Allow Space** for more than one wheelchair user to position at the table.
- **Place some accessible picnic sites** in the shade for people who may be photosensitive.

4.11 Accessible Playground Areas on Greenways and in Public Parks

The CRPD, Article 30 (5d) specifically makes provision for children with disabilities to have access to play facilities, states: "Parties shall take appropriate measure to ensure that children with disabilities have equal access with other children to participation in play, recreation and leisure and sporting activities".

A playground designed on the principles of Universal Design should be located on a level site with smooth, firm and non-slip surfacing. Play equipment should be carefully chosen to allow for social interaction and as many play items as possible should be usable by the broadest range of children. At least one play item within each of the main play activities – swinging, sliding, rocking and climbing – should be accessible to children with mobility, cognitive and sensory impairments. Ground level play items including sand and water play should be at a height that is easily accessible to all children. An accessible and inclusive design approach for playgrounds means it is easier for everyone to play, regardless of their abilities.

The following design criteria should apply:

Playground surface

- **Suitable playground surfacing** includes: synthetic surfacing such as pour-in-place, rubber tiles and turf specially designed for playgrounds
- **Unsuitable playground surfacing** includes loose fill surfacing such as sand, pea gravel, wood fibre or rubber shreds and grass.

Ground level activities

- **Consider including a variety of ground level activities.** There should be a balance of 'easier' more accessible play elements along with those that are more challenging. If there are not enough play elements that provide challenge, some children will go elsewhere to play, making the playground less inclusive or they will create their own challenge, making the playground more dangerous.

Quiet areas

- **Provide quiet spaces**, ideally with shade, to allow children to retreat from the noise and action of the playground.

Features to increase accessibility include:

- Ramps rather than or alongside steps/stairs.
- Rubber flooring rather than wood chips or gravel.
- Lowered play items that can be reached at sitting level.
- Elevated sand/water boxes with leg and knee space underneath.
- Roll-on swing sets.
- Sign language games (such as finger-spelling displays).
- Clear visibility throughout the playground with few solid walls or dividers.
- Sound Play elements.
- Distinct colours with high contrast.
- Shades of colour chosen to accommodate colour-blindness.
- Braille displays.
- No tripping hazards.

Other features to consider:

- Fences around the playground to prevent children wandering away and to help avoid dangerous areas.
- Swing sets with seats that incorporate seat belts and lateral supports: great for those with poor balance.
- Inclusive playground equipment that can be used by all children.

Accessible Playground Equipment



Roll-On swing set

Roll-On swing set



Roundabout

Roundabout



Sensory play

Sensory play - Sand and Water

4 Trails, Greenways & Public Parks

Accessible sandpit



Pedestal-style accessible sandpit

Accessible Merry-go-round



Accessible Merry-go-round

Play Swing



Play Swing

SECTION 5

Beaches



Contents for Section 5 Beaches

5.1 Use of Symbols 66

5.2 Information Display Boards 67

5.3 Design Criteria for Beach Accessibility..... 68

5.4 Additional Information on Surface Materials 70

5.5 On–Site Beach Equipment and Support 71

5.6 Site Obstacles and Barriers 74

5.7 Accessible Picnic Areas 74

5.8 Accessible Playground Areas 75

5 Beaches



This section of the guide considers how accessibility can be incorporated into the design and management of beach landscapes including any on-site facilities such as parking, pathways and boardwalks leading to and around the beach and its environs, accessible WCs and Changing Places WC Facilities, picnic and playground locations. These guidelines also consider the provision and use of accessible walkways onto the beach created with roll-out mats such as Mobi-Mats and the provision of Beach Access Buggies that can be provided on-site.

All beaches can present challenges for visitors. The accessibility of any beach can vary, particularly for visitors who have a disability. People who have sensory or cognitive impairments can experience difficulty with wayfinding and people who are wheelchair users or who have a mobility impairment find movement on sandy surfaces difficult or even impossible.

Many beaches are developed and include man-made infrastructure such as lifeguard posts, changing rooms, showers, parking etc. Wild or undiscovered beaches tend not to have such facilities and are valued for their untouched beauty and preserved nature.

“

Open outdoor pursuits for everyone. The main reason people with disabilities don't participate in outdoor pursuits is not their disability, it's the lack of access. Provide parking, Changing Places, and trained on-site staff. That's what's needed"

- Quote from National Online Survey 2017

The guidance within this section outlines design criteria for Multi-Access and Challenging Access pathways and routes. The design criteria and guidance includes;

- ✓ Use of Symbols
- ✓ Information Display Boards
- ✓ Design Criteria for Routes when accessing the beach - sand and water
- ✓ Surfacing
- ✓ Picnic Areas
- ✓ Playgrounds
- ✓ Obstacles and Barriers
- ✓ On-site Support and Accessible Equipment

The symbols below represent Multi-Access and Challenging Access routes which are proposed to identify two levels of accessibility.

Multi-Access Symbol



Challenging Access Symbol



5.1 Use of Symbols along Multi-Access & Challenging Access Routes

The symbols that indicate the different levels of route accessibility should be located at the entrance point of a route leading to/around the beach, at route junction points and at regular intervals along the beach route/s to highlight accessible routes. The use of these symbols will confirm location signage and route directions are accessible and can be easily determined and followed. People with disabilities can therefore make an informed choice to use a specific entrance to the beach, follow a particular route or boardwalk or go to a viewing point.

Please note: Warning should be given in advance where the accessibility along a route disimproves so that the route is no longer accessible.

Use of symbol on Multi-Access Routes to beaches

When displaying this symbol the following criteria should apply:



- Clear access route leading to the boardwalk/beach.
- Fully accessible boardwalk.
- Even surface with little or no gradient, 1:21 (5%) being max gradient on any sloping ground and only for a short distance.
- Flat/smooth surfacing.
- No steps.
- Access onto the beach/sand is provided, boardwalk/Mobi-Mats.
- No obstacles.

Use of Symbol on Challenging Access routes to beaches

When displaying this symbol the following criteria should apply:



- Clear access route leading to the boardwalk/beach
- Challenging but accessible route/boardwalk.
- Slight or more challenging incline/s at some locations, max slopes of 1:15 (7%) in some locations and only for a very short distance. Any steeper slope is considered unsuitable.
- Textured or uneven surfacing that may cause difficulty i.e. loose materials on the route to the beach/gravel surface on the beach.
- No steps.
- No obstacles.

5.2 Information Display Boards

Information Display Boards are essential elements in providing adequate information to direct people towards and along beach trails and routes. Information Display Boards provide a visitor with information on facilities available, the use of any waymarking system, features of interest or give warnings about hazards along routes.

Please Revert to Section 3 for complete guidance on the design of Information Display Boards.

5.3 Design Criteria for Beach Accessibility

Beach routes and boardwalks should allow good access to everyone. The constructed landscape should be designed and set out in a manner to avoid hazards and to allow everyone a safe opportunity to reach, experience and enjoy the beach surroundings.

Information on accessible routes to the beach, to any beach features and to any on-site equipment should be presented in a variety of ways i.e. both online and on-site to allow users anticipate access options and to view the on-site facilities provided.

The following design criteria should apply:

- **Accessible Parking.** Provide accessible parking bays adjacent to the main beach access routes and include a set down /pick-up area. ^[12]
- **Public accessible WCs/ Changing Places WC Facility** should be provided in the most convenient location/s adjacent to the parking, beach or accessible entrance points.
- **Level Access** from the parking area to the route/s adjacent to the beach and leading to on-site facilities. Level access is required at the start of any boardwalk. Avoid creating any lip.
- **Level and Sloping Surfaces on Multi-Access Routes.**



Always choose the option of providing the most gentle slope gradient possible. The surface on Multi-Access Routes should be level. A surface gradient of 1:40 - 1:50 is considered level while allowing for drainage of surface water. Where slopes are unavoidable the gradient should always be as gentle as possible and no steeper than 1:21 (5%) for short distances i.e. no more than 10m in any one section and no more than 2 consecutive sections at any location. Ensure a 1500mm length landing is available between sections and provide handrails on both sides of the sloped ground.

Slopes that have a gradient steeper than 1:21 are ramps and ramps require specific design elements, including the provision of adjacent steps which are favoured by some people who have a mobility impairment. See Section 7 on page 104.

- **Level and Sloping Surfaces on Challenging Access Routes.**



Challenging Access routes may be undulating but should not be any steeper than 1:15 (7%) for short distances i.e. a maximum length of 5m between landings with a maximum rise of 333mm in any one section. Ensure the availability of 1500mm length landings between sections and no more than 2 consecutive sections at any location.

A slope gradient of 1:15 (7%) is considered a ramp and therefore should include handrails/ adjacent steps etc. as described in Section 7, page 104. Some people may like to challenge themselves on more difficult routes and /or to use off-road mobility equipment.

A steeper slope gradient of 1:12 (8%) is not recommended and is only acceptable in very exceptional circumstances when no other options are available or possible and only for a very short distance i.e. a maximum length of 2m with a maximum rise of 166mm.

12 Please revert to Section 7, page 102 for information on the design of accessible parking bays, WC s etc.

A slope gradient of 1:12 is considered a ramp and therefore should include handrails/adjacent steps etc. as described in Section 7, page 104.

Many people using manual wheelchairs will require assistance on a 1:15 (7%) or a 1:12 (8%) slope gradient and also on 1:21 or 1:20 (5%) slope gradient if the route has more than 1 section.

- **Natural route surfacing materials.** Multi-Access and Challenging Access Route surfaces should be firm, compact, stable, non-slip, and obstacle-free. Suitable surfaces for multi-access and Challenging Access Routes include tarmac, concrete, timber and natural wood. Unsuitable surfacing materials include loose gravel, grass, dust binding, cobblestones and moss. There should be very little or no loose material on the route/boardwalk. Loose particles should not exceed 5mm in size. Providing an alternate surface type along the sides of any route to create a divergence in colour and texture can also act as a guiding strip for people with a visual impairment.^[13]
- **Boardwalk Route Surfacing.** Access to the beach can be difficult or impossible for a person using a wheelchair or other mobility aids. In these instances, beach route walkways are necessary to give people easy access from their vehicles along pathways and onto the sandy beach. A timber boardwalk can provide a suitable route. Access onto the route/boardwalk should be gently sloped, wooden boards should be laid at right angles to the direction of traffic flow (otherwise mobility canes or the front castors of wheelchairs may be caught between boards). It is good practice to lay down decking with very slight gaps between the individual boards. This may also give some extra grip if boards become wet and slippery. The gap should be no greater than 12mm.
- **Surface Colour.** Light coloured surfacing is preferable as it diverges in colour from the surrounding landscape and can aid in wayfinding for people who have a visual impairment.
- **Width.** The width of the boardwalk should be 2000mm to allow two wheelchair users to pass each other safely. A path width of 1500mm accommodates a wheelchair user and another person walking alongside. A minimum path width for a wheelchair user to traverse without another person walking alongside is 1200mm and is only suitable for very short distances.
- **Edging/Protection on Boardwalks.** Boardwalks should have some edge protection/upstand in place along the length of the boardwalk. Edge protection such as a raised kerb of at least 150mm in height should be provided on both sides of a boardwalk to stop the castors of a wheelchair from going over the edge and which also acts as a “tapping rail” to assist a person with a visual impairment with wayfinding.
- **Passing spaces** that allow two wheelchair users to pass each other should be provided on routes that are less than 2000mm in width and where the overall route length is greater than 25m. Passing spaces in the external environment should be 2000mm in depth and 2000mm in width and located within direct sight of another passing space.
- **Viewing points.** Where a barrier is required at a viewing point for reasons of safety provide a Perspex barrier at a height of 800-900mm from ground level. Ensure there are no bins or overgrown shrubbery blocking the view from a sitting height. Perspex should be maintained regularly and green algae should be removed, as this will obstruct the view.

13 See Section 4.4 on page 51 for more information of surface types.

- **Seating Type.** Any seating provided adjacent to a boardwalk or at any beach location should be placed back from the main route by at least 600mm to allow others to move freely past the seating area. Seating provided should be no lower than 450mm from ground level with a minimum of 450mm seat depth and with a heel space of 100mm to allow for easier rising from the seat. Armrests should be provided as they assist a person to sit into and to rise from the seat. Avoid sharp edges. A clear space of 1400mm in depth and 900mm in width is recommended adjacent to the seating to allow a person using a wheelchair to position their wheelchair alongside.
- **Onsite facilities** should include beach buggies, picnic & playground facilities.
- **Maintenance.** Regular upkeep and maintenance will ensure that boardwalks and adjacent facilities remain accessible for all users.

5.4 Additional Information on Surface Materials

Boardwalk/Beach Access Route Surfacing material can include traditional pressure treated wood, composite decking, pre-cast concrete forms and modified wood. All such materials should be treated with a slip-resistant surface. The following information applies;

- **Pressure-treated Wood** is the most common type of material for use on a boardwalk. It is not expensive and is easy to work with, as well as readily available. However, pressure treated wood can have a negative effect when it comes to environmental concerns. It can leak chemicals into the ground where it is laid, which can compromise wetlands, bodies of water and the groundwater table. It can also become slippery overtime with the accumulation of moss and algae, it requires regular maintenance and may require repair or replacement more regularly than some other materials.
- **Composite Decking** is considered a more environmentally friendly product compared to pressure treated wood and comes in a variety of colours. It can be slippery when wet because of its plastic coating and also heats up significantly in the sun, making it unsuitable for areas where people will commonly walk barefoot, like a beach. It can also become compromised by moss and algae, and if the upper surface is ever breached, the inner material can absorb water, causing the planks to swell.
- **Non-toxic Wood.** With environmental concerns in mind, it is a recommendation to use modified, non-toxic wood. Over time the wood will naturally weather, enhancing its beauty, while maintaining its structural integrity despite the harsh weather conditions that beach access elements endure. The surface materials most commonly used include traditional, pressure treated wood, composite decking, pre-cast concrete forms and modified wood. Any wood or composite wood material must be treated with non-slip properties as these materials tend towards being slippery in wet/moist weather.
- **Pre-cast Concrete** is one of the more expensive options for boardwalk construction. It is also one of the least attractive options with most people preferring the appearance of real wood and the different styles and options that wood can bring. Concrete is durable, however, and does not promote mould or algae growth in wet areas. It can be more difficult to work with, though, and requires more precise definition of the edges of the boardwalk prior to construction. Few to no changes can be made to the design once work begins.

- **Modified Wood** is the newest technological advancement among these materials. Modified wood is sustainable and eco-friendly, so it will not leak chemicals into the ground. It is extremely dense and durable, which limits the repair needed, and lowers the overall lifecycle cost of the boardwalk. Modified wood is easy to work with as well as incredibly low maintenance – it will not require stains or sealants like pressure treated wood and is not affected by moisture. Modified wood can be a good solution for virtually any area, including environmentally sensitive places, as well as in wet areas and high traffic locations that will see many visitors over time. ^[14]



Modified Wood Boardwalk



Accessible wheelchair boardwalk & shaded area

5.5 On-Site Beach Equipment and Support

Many people with disabilities may have limited mobility and provision of specific equipment, in addition to permanent on-site facilities, can support increased participation in outdoor beach activities. On some outdoor locations, including beaches, there may be equipment available for public use such as bicycles, on-site outdoor gym equipment, surfboards etc.

14 <https://kebony.com/en/blog/boardwalk-decking-construction-and-design-ideas/>

Consideration should be given to providing accessible equipment at all such locations including, for example, handcycles, dual-use outdoor gym equipment ^[15], accessible beach buggies and boardwalk/mat access onto the beach.

Portable Removable Mats and Beach Wheelchairs/Buggies are two key pieces of equipment that may assist in supporting individuals access the beach environment more freely.

While a permanent structure such as a Wooden Boardwalk should provide access as far as possible onto the beach, movement over the sand and to the water can be difficult or impossible for a person with mobility issues or for a person who uses a wheelchair. Mobility aids, such as Portable/Removable Mats or Beach Wheelchairs/Buggies can provide further access onto the beach from the connecting beach access route/boardwalk.

The Environmental Protection Agency (EPA) includes information on the availability of on-site beach equipment on its website: <http://www.beaches.ie>

Portable/Removable Mats

- **A Portable/Removable Mat** walkway can be used to link with the boardwalk and bring the person further onto the sand and as close as possible to the water's edge. Ideally, there would also be a mat surfaced area of the beach beside the end of the portable/removable mats that allows a person/s using a wheelchair to come off the mat walkway and position within a group of friends without obstructing others who are using the mat walkway to reach the water.
- **Access-Mats and Mobi-Mats** are beach accessibility mats that have been specifically developed for use in permanent or temporary recreation access points. An Access-Mat or Mobi-Mat is a portable and removable rollout access route that can be used in a multitude of settings so that everyone can access their chosen environments i.e. the beach and seawater ^[16].

Please note that, while beach buggies are provided and in use on several Irish beach locations, the use of portable/removable mats linked to beach boardwalks has not been trialled within the Irish context and as such requires a feasibility trial within beach locations of varying types and locations.



Removeable Beach Mats

15 See Section 4 trail design where there is additional information on dual use gym and other on-site leisure equipment.

16 <http://accessrec.com/beach-access-mat>

Beach Wheelchairs/Buggies

- **A Beach Wheelchair/Buggy** is a low-wheeled vehicle for recreational use on sand, and sometimes in water. Unlike standard manual wheelchairs, they have large, rubber wheels which move easily over the sand. There are different types on the market and each has its own properties.
- **De-Bug Beach Wheelchairs** are all-terrain surf chairs that glide with ease over sand, gravel, grass, and other uneven terrains. All De-Bugs are made of stainless steel. The elevating leg rest provides additional comfort and support. The De-Bug is more suited to flat or compacted sand.
- **Hippocampe Beach and All-Terrain Chairs** are comfortable and versatile. These Buggies are suited more to soft sand. The Hippocampe Buggy can be used on both the beach and within any surrounding sand dunes where the ground tends to be slightly uneven and hilly.
- **Information, Management and Assistance.** Information on the availability and use of on-site beach accessibility equipment should be made available through a variety of formats including online, social media, local media etc. A system for on-site management of beach buggies requires the facility to store the equipment when it is not in use, to pre-book the equipment and to safely store any wheelchair or other mobility aid while the beach buggy is being used. Some people who have a mobility impairment may require assistance to sit into/transfer to the beach buggy from their own wheelchair and the provision of a hoist, possibly shared with a Changing Places WC facility could be considered.



Beach Wheelchairs/Buggies



Water Wheels Buggies



Hippocampe Beach & All-Terrain Wheelchair

5.6 Site Obstacles and Barriers

The following obstacles and barriers may occur when accessing boardwalks and beaches. Accessible solutions may have to be innovatively designed and creatively achieved wherever possible:

- **Natural environmental features** may define access. (Sand dunes etc.)
- **Erosion** may occur and maintenance/resurfacing of sections of routes/boardwalk may be regularly required. Consider if drainage or relocation is an option.
- **Protruding vegetation** and obstacles should be secured and should be maintained regularly so as not to encroach onto the boardwalk.
- **Boardwalks.** Where the slope on the approach route is very steep, consider if an alternative route is possible.
- Due to the natural **movement of sand on beaches**, boardwalks will need to be continually cleared of sand/pebbles etc. in order to maintain a clear surface on the boardwalk.
- Due to **natural steep inclines**, rock formations and pebble/gravel surfaces on some beaches it can be challenging to make such beaches accessible to people with limited mobility.

5.7 Accessible Picnic Areas beside the beach

Families and friends often venture to the beach with the specific intent to spend the day and to picnic meal times. Playgrounds for children are often provided adjacent to picnic/beach locations. Providing accessible picnic and playground facilities allows the inclusion of all visitors to the beach.



Universal Design Picnic Table

The following guidance should apply:

- **Site Information and Signage.** Provide information on the Information Display Board of the location of accessible picnic/play areas. Provide appropriate signage to identify locations of accessible picnic/play areas.
- **Surfacing.** Provide a firm and level surface leading to and around the picnic/play area that is clear, smooth and non-slip with an 1800mm accessibility zone around all sides of the table and bench unit. Avoid the use of unsuitable ground surfaces such as sand grass and loose gravel.
- **Picnic Tables.** The height of a picnic table should be between 750mm-800mm with clear knee space of 700mm beneath. Cantilevered ends on picnic tables facilitate wheelchair users. The seat height should

be within 460-480mm from the ground and minimum depth of the seat should be 450mm. The back support of the seat should be a minimum 455mm in height. Ensure there is a section of the table with no permanent seating attached.

- **Seating areas.** Where seating is provided at picnic/play locations, provide a mixture of seating options i.e. some with backrests, some with armrests and some with both.
- **Location of Picnic Tables & Seating.** Place some accessible picnic/seating locations in the shade for people who may be photosensitive.

5.8 Accessible Playground Areas

A playground designed on the principles of Universal Design should be located on a level site with smooth, firm and non-slip surfacing. Play equipment should be carefully chosen to allow for social interaction and as many play items as possible should be usable by the broadest range of children. At least one play item within each of the main play activities – swinging, sliding, rocking and climbing – should be accessible to children with mobility, cognitive and sensory impairments. Ground level play items, including sand and water play, should be at a height that is easily accessible to all children. An accessible and inclusive design approach for playgrounds means it easier for everyone to play, regardless of their abilities.

The following guidance should apply:

- **Playground surface.** Suitable playground surfacing includes synthetic surfacing such as pour-in-place, rubber tiles and turf specially designed for playgrounds. Unsuitable playground surfacing includes loose fill surfacing such as sand, pea gravel, wood, fibre or rubber shreds and grass.
- **Ground level activities.** Consider including a variety of ground level activities. There should be a balance of 'easier' more accessible play elements along with those that are more challenging. If there are not enough play elements that provide a challenge, some children will go elsewhere to play, making the playground less inclusive or they will create their own challenge, making the playground more dangerous.
- **Quiet areas.** Provide quiet areas, ideally with shade, to allow children to retreat from the noise and action of the playground.

Features to increase accessibility include

- Ramps rather than or alongside steps/stairs.
- Rubber flooring rather than wood chips or gravel.
- Lowered play items that can be reached at sitting level.
- Elevated sand/water boxes with leg and knee space underneath.
- Roll-on swing sets.
- Sign language games (such as finger-spelling displays).

- Clear visibility throughout the playground with few solid walls or dividers.
- Sound play elements.
- Distinct colours with high contrast.
- Colours should be chosen to accommodate colour-blindness and children with limited vision.
- Braille displays.
- No tripping hazards.

Other features to consider

- Fences around the playground to prevent children wandering away and to help avoid dangerous areas.
- Swing sets with seats that incorporate seat belts and lateral supports: great for those with poor balance.
- Inclusive playground equipment that can be used by all children.

Examples of playground equipment



Roll-on Swing Set



Play Swing



Sensory Play



Accessible Merry-go-round



Roundabout



Pedestal-style Accessible sandpit

“

"Beach wheelchairs and accessible toilets are badly needed along with trained staff"

- Quote from National Online Survey 2017

SECTION 6

Waterways



Contents for Section 6 Waterways

- 6.1 Use of Symbols 82
- 6.2 Information Display Boards 84
- 6.3 Design Criteria for Multi-Access and Challenging Access Routes
adjacent to Waterways 85
- 6.4 Obstacles and Barriers 87
- 6.5 Entrance and Exit Points 87
- 6.6 Access Routes to Riverbanks, Jetties and Walkways 89
- 6.7 Accessible Fishing Stands 90
- 6.8 Access to Water-Based Activities 91
- 6.9 On-site Equipment and Supports 92
- 6.10 Safety Risk Management – Water-Based Activities 95

6 Waterways

The term "inland waterway" refers to navigable rivers, canals and their surrounding infrastructures designed to be used by inland waterway craft only, such as canoes, cruising boats, barges, sailing boats, power boats and for land-based activities such as angling.

Waterways Ireland manages, maintains, develops and promotes over 1000km of inland navigable waterways, principally for recreational purposes. The waterways under the remit of Waterways Ireland are the Barrow Navigation, the Erne System, the Grand Canal, the Lower Bann, the Royal Canal, the Shannon-Erne Waterway and the Shannon Navigation.

Waterways can present many challenges for visitors and particularly for visitors who have a disability. People with a range of disabilities experience difficulty in accessing waterway crafts, movement on grass, loose surfaced pathways and uneven ground.

This guide considers the accessibility features of any on-site facilities ^[17] such as parking, WC facilities, and routes leading to and around the waterway. Consideration is also given to access to jetties, piers, fishing stands, floating pontoons and to various waterside locations from which boating activities take place.

It is not intended that these guidelines offer a complete or in-depth specification that will be suitable for every situation. However where waterways and their associated amenities are appropriately designed and managed, they may be shared-use locations capable of facilitating a range of users including people with disabilities.

Within this section, this guide includes design criteria for Multi-Access and Challenging Access routes as well as guidance regarding;

- ✓ Use of Symbols
- ✓ Information Display Boards
- ✓ Fishing Stands, Boating and Canoeing amenities
- ✓ Entrance and Exit Points
- ✓ Access to Riverbanks/Fishing Stands/Jetties and Walkways
- ✓ Accessible Fishing Stands
- ✓ Access to water-based activities
- ✓ Obstacles and Barriers
- ✓ On-site Support and Accessible Equipment

17 Refer to Section 7 for guidance on the built environment i.e. parking, WC facilities, buildings.

The symbols below represent Multi-Access and Challenging Access routes which are proposed to identify two levels of accessibility.

Multi-Access Symbol



Challenging Access Symbol



6.1 Use of Symbols

The symbols as described below should be located at the entrance point of a trail/route leading to/ around the waterway, at route junction points and at regular intervals along the waterway where the route meets a specific level of accessibility.

The use of these symbols will ensure the location of signage and route direction can be easily determined and followed. People with disabilities can then make an informed choice to follow a specific riverbank, go to a designated viewing point or fishing pier.

Please Note: Warning should be given in advance where the accessibility along a route disimproves so that the route is no longer accessible to the same level.

Use of Symbol on Multi-Access trails and Routes to Waterway Sites

When displaying this symbol the following criteria should apply:



- › Accessible route to and along the river/canal/waterway.
- › Even surface with little or no gradient, 1:21(5%) or preferably gentler being maximum gradient on any sloping ground and only for a short distance. See guidance on route design for additional information.
- › Flat/smooth surfacing.
- › No steps.
- › Access to the river/canal bank.
- › No obstacles.

Use of Symbol on Challenging Access Trails and Routes to Waterway Sites

When displaying this symbol the following criteria should apply:



- › A moderately accessible route to and along river/canal/waterway.
- › Slight or more challenging incline/s at some locations, max slopes of 1:15 (7%) in some locations and only for a very short distance. Any steeper slope is considered unsuitable. See guidance on route design for additional information.
- › Textured or uneven surfacing that may cause difficulty i.e. loose materials on the route to the waterway, gravel/vegetation surface on the river bank and encroaching tree branches.
- › No steps.
- › No obstacles.

6.2 Information Display Boards

Information Display Boards are essential elements in providing adequate information to direct visitors towards and along trails and routes, Information Display Boards provide people with information on facilities available, the use of any waymarking system, features of interest or give warnings about hazards and obstacles along routes.

Please revert to Section 3 on page 36 for complete guidance on the design of Information Display Boards.



information Display Board

6.3 Design Criteria for Multi-Access and Challenging Access Routes Adjacent to Waterways

The design of an accessible route should allow good access to all users. The route should be designed and set out in a manner to avoid hazards and allow all users a safe opportunity to enjoy the waterway surroundings.

Information on the features and levels of accessibility for routes leading to and adjacent to waterways should be presented in a variety of ways i.e. both online and on-site, to allow users to consider access options and to be able to view onsite facilities provided.

The following design criteria should apply:

- **Accessible Parking.** Provide accessible parking bays adjacent to waterway routes and include a set down area ^[18].
- **Level Access** from the parking area to the route/s adjacent to the waterway and leading to on-site facilities.
- **Public accessible WCs/ Changing Places WC Facility** should be situated adjacent to the parking area or pier walkway/routes to the waterways that are serviced by accessible entrance points.
- **Multi-Access Route Surfacing.** Suitable surface materials for route/pathways include concrete, tarmac, bitumen macadam, timber and metal. For Multi-Access Routes there should be very little or no loose material on the route/pathway. Even very small loose particles can make a pathway challenging for people with poor balance. Loose particles should not exceed 5mm in size.
- **Challenging Access Surface.** Surface materials that are challenging include: dust blinding, timber, loose gravel and grass.
- **Surface Colour for Multi-Access and Challenging Access Routes.** Light coloured surfacing is preferable as it diverges in colour from the surrounding landscape and can aid in wayfinding for people who have a visual impairment. Providing an alternate surface type along the sides of any route to create a separation in colour and texture can act as a guiding strip for people who have a visual impairment.
- **Level and Sloping Surfaces for Multi-Access Waterway Trails and Routes.**



Always choose the option of providing the most gentle slope gradient possible. The surface on Multi-Access Routes should be level. A surface gradient of 1:40 - 1:50 is considered level while allowing for drainage of surface water. Where slopes are unavoidable the gradient should always be as smooth as possible and no steeper than 1:21 (5%) for short distances i.e. no more than 10m in any one section and no more than 2 consecutive sections at any location. Ensure a 1500mm length landing is available between sections and provide handrails on both sides of the sloped ground. Slopes that have a gradient steeper than 1:21 are ramps and ramps have specific design elements required, including the provision of adjacent steps which are favoured by some people who have a mobility impairment. Section 7 page 104 gives design guidance for ramp design.

18 Please revert to Section 7 for information on the design of accessible parking bays, WC s etc.

→ **Surface Gradients on Challenging Access Routes.**



These may be undulating but should not be any steeper than 1:15 (7%) for short distances i.e. a maximum length of 5m between landings with a maximum rise of 333mm in any one section. Ensure the availability of 1500mm length landings between sections and no more than 2 consecutive sections at any location. A slope gradient of 1:15 (7%) is considered a ramp and therefore should include handrails/adjacent steps etc. as described in Section 7 on page 104. Some people may like to challenge themselves on more difficult routes and /or to use off-road mobility equipment.

A steeper slope gradient of 1:12 (8%) is not recommended and is only acceptable in very exceptional circumstances when no other options are available or possible and only for a very short distance i.e. a maximum length of 2m with a maximum rise of 166mm. A slope gradient of 1:12 is considered a ramp and therefore should include handrails/adjacent steps etc. as described in Section 7 on page 104.

Many people using manual wheelchairs will require assistance on a 1:15 (7%) or a 1:12 (8%) slope gradient and also on 1:21 or 1:20 (5%) slope gradient if the route has more than 1 section.

- **Route Width.** The width of any route should be 2000mm to allow two wheelchair users to pass each other safely. A path width of 1500mm accommodates a wheelchair user and another person walking alongside. A minimum path width for a wheelchair user to traverse without another person walking alongside is 1200mm and is only suitable for very short distances.
- **Passing Spaces** that allow two wheelchair users to pass each other should be provided on routes that are less than 2000mm in width and where the overall route length is greater than 25m. Passing spaces in the external environment should be 2000mm in depth and 2000mm in width and located within direct sight of another passing space.
- **Railings.** Routes should have some railing protection in places where the route is higher than the adjoining ground.
- **Upstand.** Edge protection such as a raised kerb of at least 150mm in height should be provided on both sides of the route which also acts as a “tipping rail” to assist a person with visual impairment, who is using a cane, with wayfinding.
- **Viewing points.** Where a barrier is required at a viewing point for reasons of safety provide a perspex barrier at a height of 800-900mm from ground level. Ensure there are no bins or overgrown shrubbery blocking the view from a sitting height. Perspex should be maintained regularly and green algae should be removed as this will obstruct the view.
- **Seating Type** Seating should be placed back from the main route by at least 600mm to allow others to move freely past the seating area. Seating provided should be no lower than 450mm from ground level with a minimum of 450mm seat depth and with a heel space of 100mm to allow for easier rising from the seat. Armrests should be provided as they assist a person to sit into and to rise from the seat. Avoid sharp edges. A clear space of 1400mm in depth and 900mm in width is recommended adjacent to the seating to allow a person using a wheelchair to position themselves alongside.
- **Maintenance.** Regular upkeep and maintenance will ensure that waterway routes and canal/river banks remain accessible for all users.

6.4 Obstacles and Barriers

The following obstacles and barriers may occur when accessing waterways, accessible solutions may have to be innovatively designed and creatively achieved wherever possible:

- **Natural environmental** obstructions may define access (rocks, banks etc.).
- **Pathways** can be naturally rough and difficult to travel for a person using a wheelchair or other mobility aids.
- **Erosion** may occur and resurfacing of sections of the pier may be regularly required. Consider if drainage is an option.
- Sites along **waterways** may be prone to flooding.
- **Constraints on accessibility** can be caused by the surrounding natural topography.
- **Piers and walkways**, due to weather conditions, can become slippery. Algae can also be present which could make the surface unsafe underfoot. These areas should be maintained to minimize the impact of this.
- **Protruding vegetation and obstacles** should be secured and should be maintained regularly so as not to encroach onto the pier and accessible fishing stands.
- **Piers/accessible fishing stands**. Where the slope on the approach route is very steep, consider whether an alternative route is possible.
- **Exposed embankments** nearby to the water edge can be a potential hazard for people with disabilities but can be reduced by providing appropriate fencing/rails.

6.5 Entrance and Exit Points

The guiding principle of access for all is to choose the least restrictive option so that access through the entrance and exit points is as easy as possible for everyone including people with limited strength and restricted manual dexterity. All gates/gaps should be sufficiently wide to allow a person using a wheelchair/mobility scooter to easily gain entry to a route adjacent to the waterway. Consider quick fix options of replacing an inappropriate gate or stile with a more suitable gate type or create an open entrance. Always provide an alternate entrance where vehicle barrier poles are located.

The following design criteria should apply:

- ➔ **Gate/Gap width.** A clear opening width of 1000mm for a gate or gap is required to allow entrance to a person using a wheelchair/scooter. Provide 500mm clear space to the latch side of any gate.
- ➔ **Gate opening mechanism.** The self-closing two-way system on a Chiltern/Milton Keynes enables this gate to be simply opened in either direction by pedestrians or people using wheelchairs.^[19] Latches on gates should be visible and usable from both sides of the gates. A Crosbie Gate can also be a good

19 <https://centrewire.com/product-category/pedestrian-and-mobility-access-gates/>

alternative while a Kissing Gate would not be recommended as its use is complicated for a person using a wheelchair. The design of a Kissing Gate suitable for use by a wheelchair user would allow entry to other vehicles where such gates are often intended to restrict access.

- **Latches.** Should be easily used requiring minimal strength and dexterity, twist, pinching or pulling to operate. Latches should be placed no higher than 1200mm to ensure that people seated in a wheelchair can reach them.
- **Bollards.** Where used, should be a minimum of 1000mm in height, 250mm in width and contrast with the background in colour and tone. A High Visibility Collar should be placed around the top end of the bollard to identify the bollard to a person with vision impairment. Adjacent bollards should not be linked with a chain or rope of any type. There should be a minimum gap of 900mm between adjacent bollards.



Chiltern/Milton Keynes self-closing two-way gate system

6.6 Access to Riverbanks/Fishing Stands, Jetties and Walkways

Access to the river or canal bank including fishing stands/jetties and pier walkways, can be difficult or impossible for a person using a wheelchair or other mobility aid. In these instances, accessible pathways/boardwalks are necessary to enable easy access from adjacent routes onto the river bank or pier where fishing stands are located and from which other water-based activities take place. A timber boardwalk can be part of an access route that connects the land with water-based activities.

The following design criteria should apply:

- **Materials to be used.** With environmental concerns in mind the use of modified non-toxic wood is recommended. Over time the wood will naturally weather, enhancing its beauty, while maintaining its structural integrity even with facing the harsher weather conditions that structures adjacent to waterways endure. The surface material most commonly used include traditional, pressure treated wood, composite decking, pre-cast concrete forms and modified wood ^[20]. Any wood or composite wood material must be treated with non-slip properties as these materials tend towards being slippery in wet/moist weather.
- **Access to the Boardwalk.** Level access from the adjoining route onto a boardwalk is required, avoid creating any lip or upstand. Access from the adjacent route onto a boardwalk should be gently sloped. Wooden boards should be laid at right angles to the direction of traffic flow, otherwise mobility canes or the front castors of wheelchairs may be caught between boards. It is good practice to lay down decking with very slight gaps between the individual boards. This may also give some extra grip if boards become wet and slippery. The gap should be no greater than 12mm.
- **Slope/ gradient of route.** The same design criteria apply as for Multi-Access and Challenging Access Routes.
- **Width of route.** The same design criteria apply as for Multi-Access and Challenging Access Routes.
- **Edge Protection.** Boardwalks are recommended to have edge protection/upstand in place along the length of the boardwalk/pier to prevent the front castors of a wheelchair from going over the edge. Edge protection such as a raised kerb of at least 150mm in height should be provided on both sides of a boardwalk or on any open side of a pier that is not in use to give access to the water. This upstand also acts as a "tapping rail" to assist a person with a visual impairment with wayfinding.

Please note this may interfere with a person being able to easily self-transfer on and off watercrafts. Consultation is advised.

- **Railings.** Boardwalks and pier walks should have protection in places where the boardwalk or pier is higher than the adjoining ground and where open space is not required to give access to watercrafts or other water-based activities.
- **Maintenance.** Regular upkeep and maintenance will ensure that piers, fishing stands and banks remain accessible for all users.

20 See Section 4 page 51 for more information of surface types.

6.7 Accessible Fishing Stands

Accessible Fishing Stands are designed to meet the needs of people with disabilities, who wish to engage in angling activities. Accessible fishing stands can be provided on a river/canal/lake bank or on a floating pontoon anchored adjacent to the waterside. Both can be accessed by a combination of linking an access route to a boardwalk and/or gangway.

- **Integration.** Fully accessible fishing stands should be integrated with other angling points.
- **Width of Linking Gangway.** The linking gangway or route leading to the fishing stand or pontoon should have a minimum width of 1500mm which accommodates a wheelchair user and person walking alongside. A width of 1200mm accommodates a person using a wheelchair.
- **Size of Fishing Stand.** A river/canal/lakeshore bank fishing stand should be 2400x1800mm. Where more than one angler is to be accommodated a distance of 3m should be maintained between anglers e.g. a stand sized 4200x1800mm will accommodate three anglers.
- **Floating pontoon.** Should always be anchored to give stability and to prevent lateral movement.
- **Connectivity.** Ensure that accessible fishing points are connected to an accessible route leading to a car park area. Provide at least one accessible fishing point for each accessible parking space.
- **Edge Protection.** Fishing Stands are recommended to have an edge protection/upstand in place along the length of the stand to prevent the front castors of a wheelchair from going over the edge. Edge protection such as a raised kerb of at least 150mm in height should be provided on all sides of any fishing stand. This upstand also acts as a “tapping rail” to assist a person with a visual impairment with wayfinding.
- **Railings.** Fishing Stands and particularly floating pontoons should have rail protection in place. Portions of the railings that are lowered should provide fishing opportunities for persons with disabilities. They should be positioned in a variety of locations on the fishing stand or pontoon to give people a variety of locations to fish. Different fishing locations may provide better fishing opportunities with varying water depths, shade, vegetation and proximity to the shoreline or bank.
- **Surfacing.** Permanent fishing points should be level with a firm, stable and slip resistant surface such as timber or galvanised metals. Each fishing point should be at least 1500mm long by 1500mm wide.
- **Space for casting.** Clear space behind anglers should be provided for safe casting. Any overhanging trees or vegetation should be cut back.
- **Seating.** Where possible, seating with some armrests should be provided at accessible fishing points.
- **Holder for Fishing Rods.** Where armrests and rod holders are provided on the top of the fishing stand they should be inclined at 30 degrees. Armrests should be 800-850mm high for seated anglers and 1050-1170mm high for standing anglers. Some anglers who are wheelchair users may have attachments on their wheelchair to support a fishing rod. ^{[21] [22]}.

21 BT Countryside for All: A good practice guide to disabled people access in the countryside (1997)

22 Reference VENTURE OUTDOORS Creating Healthy Communities: <http://www.outdoorrecreationni.com/wp-content/uploads/2012/04/Community-Toolkit-to-Success-Writing-Successful-Funding-Applications> ORNI-2012.pdf

6.8 Access to Water-Based Activities

Canoeing and other watercraft activities become more inclusive to a wide range of people when the correct facilities and equipment are available. A gangway is often needed to enable people with disabilities to participate in water-based activities. Having on-site equipment such as a hoist, transfer boards and a transfer box that will enable a person with a disability transfer into or onto a boat is essential. If required some simple adaptations can be made to a canoe or other watercraft. Supporting staff and volunteers to gain knowledge and competence in assisting people who have a disability to experience and enjoy water-based activities should be a prerequisite for any such activity.



Accessible Water Activities

The following design criteria should apply:

- **Accessible Gangways.** For accessing watercraft, a gangway is a variable-sloped pedestrian walkway linking a fixed structure or land with a floating structure. Gangways are often provided as part of access routes to connect accessible boat slips on floating piers with watercraft of varying types. To ensure a gangway is accessible, gangways should always be designed for the least possible slope which will provide more independent access for people with disabilities. As a minimum, however, gangways must be designed to provide for a maximum slope of 1:12 (8.33%) wherever possible. Gangways are not required to be longer than 25m in length. For example, if the vertical distance between where the gangway departs the landside connection and the elevation of the pier surface at the lowest water level is 3m, the gangway would have to be at least 25m. As water levels rise and fall, gangway slopes also rise and fall.
- **Transition Plates** are sloping pedestrian walking surfaces located at the end of a gangway. Gangways are not required to have landings at the end if transition plates are provided. If the slope of a transition plate is greater than 1:20(5%), the transition plate must have a landing at the non-gangway end of the transition plate. Handrails should be provided on both sides of gangways at a height between 900 – 1000mm extending 300mm beyond the gangway and the closed end.

6.9 On-site Equipment and Support

Many people with disabilities may have limited mobility and specific equipment can ensure increased participation in waterway activities. At some waterway sites there may be equipment available for public use. Different types of equipment may be relevant depending on individual ability. Always consult with the person and their advisors if available, as to which means of transfer and which type of equipment is most suited to their requirements.

Adaptations and Transfer Methods

Supportive Seating.

Various seating types and seating supports that are designed specifically for people who require assistance with seated balance, can aid a person with limited balance in using watercraft. It is important that such products give a high degree of security, support and padding during an activity. One such product is the 'Aquabac Adult Support System'. The Aquabac Adult Support System is designed specifically for people who require assistance with seated balance. The Aquabac is ideally suited to watersports as it offers a high degree of security and support.

Reduced Hand Function.

A person with reduced hand function/grip strength can benefit from using paddles with small diameter shafts and/or paddles covered with gripping material which will support a tighter grip. Active Hands gripping aids are also a useful tool to enable people with weak grip or reduced hand function to tightly hold onto objects from gym equipment to ski-outriggers, to kayak paddles, adaptive hand bikes and many more. Consider also other paddle adaptations e.g. wrist and hand adaptations, light weight paddles etc. <https://www.activehands.com>

Reduced Upper Limb Function.

A person with reduced Upper Limb Function or strength who has limited physical ability to use paddles may find using junior paddles a solution. Alternatively more lightweight and or single arm reciprocating paddle support can be useful. Attach one end of the paddle to the buoyancy aid for stability and use floats on the side of the boat.

Crewlift.

A 'Davit Lifting System' makes boating accessible for people who use wheelchairs and provides a means for sailing clubs, marine centres and marine service providers to achieve a level of access.

Features:

- Telescopic, extendable arm.
- Lifts up to 160kg.
- Marine grade hydraulic ram.
- Heavy duty stainless steel construction.
- Rotates 360 degrees.

- Hydraulic control system at accessible heights.
- Fail-safe design.
- Two security levels.

Transfer Box or Sliding Board.

Individuals who have good upper body strength might use a transfer box/sliding board. This is a box with a hinged board attached that when opened up, provides a ramp to slide from the box top to the boat. Position the transfer box/board so that they can transfer from their wheelchair onto the box, then slide onto the boat/kayak/canoe and manoeuvre into a comfortable position. A transfer board allows the person to transfer directly from their chair to the boat by sliding from one to the other.



Transfer Board

Transfer Board



Foam Transfer Benches

Foam Transfer Benches



Transfer Bench

Transfer bench

Hoists. There are many different types of hoist that can be used to assist people with a disability to transfer into or onto a boat. Hoists used must be approved to hold significant body weight capacity. Advice can be sought from an experienced health care professional such as an Occupational Therapist when choosing a hoist. See www.aoti.ie for details of private practitioners. A 'Hydraulic Hoyer Hoist' is used at many sailing sites. These are very easy to use as long as they are mounted securely in a convenient position on the dock that allows easy access to the boat being used. Although the mount will be permanently placed on the dock, the hoist itself can be removed and stored indoors when not in use. Staff/volunteer training should be provided by an Occupational Therapist or experienced supplier in the use of specific hoists and slings.



Transfer Hoist

Please Note: Do not exceed the recommended weight capacity recommendations for the hoists in use at your facility.

Slings or Hoist Harnesses. Slings or a lifting harness are needed for both the Hoyer and Electronic Hoists. Some people will have their own personal slings/harnesses that they prefer to use. However, centres should meet the requirements of international standards when selecting types of slings for the facility. Slings that cradle the person around the back and buttocks and that cross between the legs are highly recommended because they offer the extra safety of keeping a person from sliding out of the sling during the transfer. Some people prefer to use climbing or mountaineering harnesses typically used by big boat bowmen.

Wheelyboats are boats that have been specially designed with a bow door that is hinged and lowers to form a ramp which enables roll-on, roll-off access. The largest aluminium boat in the Wheelyboat range, the 'Mk III', was designed and developed in 2006. It is larger and has more passenger capacity than its two predecessors and is perfectly suited for pleasure boating, nature watching, as well as angling. It can also be used as a trip boat or a small ferry.



Wheelyboat Mk 111

The deck is non-slip aluminium treadplate. In normal conditions, the manufacturer says wheelchair brakes are sufficient to hold people who use wheelchairs in place, however a clamping system to ensure security for the person using the wheelchair is by far preferable. To be discussed with the boat supplier. <http://www.wheelyboats.org>

The Strong Arm is a versatile hands-free fishing rod holder that gives the user total control without the use of grip. This is an excellent product for anyone with reduced or no grip. With this rod holder some lower level quadriplegics can cast by themselves.

The Strong-Arm enables the user with limited or no finger strength to hold a fishing rod in a good position and to cast off without the need to grip the rod at all.

Made of 6 oz. oil-treated leather, it can be worn over or under most clothing. One size fits all. The strong arm is available for left and right-handed users.

6.10 Safety Risk Management – Water Based Activities

Boating is a safe sport as long as policies and procedures that have safety in mind are implemented and followed. Generally, the same policies that any programme has with all mainstream participants should be the same for participants who have a disability. However, there are a few considerations that are particularly important when participants have a disability.

Transferring into/onto a boat. When specific tasks are being carried out such as transferring into the boat or securing the person in a seat on the boat, it is important to examine how the task is being handled. Is the way the task is being handled safe for you and for the person? Is there a safer way of doing it? It can be very helpful to brainstorm with instructors, the person with a disability themselves and any advisors to determine what works best and most safely for everyone.



Accessible Kayak

PFD Personal Flotation Devices ^[23] is a generic term used to describe lifejackets and buoyancy aids. It is important to consider the person's level of physical ability when deciding which PDF to use. The main difference between lifejackets and buoyancy aids is that a lifejacket is designed to turn an unconscious person face up upon entering the water. A buoyancy aid is not guaranteed to do this and is as the name describes an aid to keeping the person afloat.

Lifejackets are designed to prevent drowning. They must be capable of returning to the surface as quickly as possible without danger to the health of the user, who may be exhausted or unconscious after falling into water, and of keeping them afloat in a position which permits breathing while awaiting help.



Life Jacket

“

"Hoist to get in and out of boats"

- Quote from National Online Survey 2017

23 <http://www.iws.ie/boating/personal-flotation-devices.327.html>

Buoyancy Aids are a specialist form of personal flotation device (PFD) used most commonly by kayakers, canoeists and dinghy sailors. They are designed as a flotation aid, rather than a life-saving device and have several key differences to other PFD's and lifejackets. Canoeing and kayaking buoyancy aids, for example, are designed with mobility and arm movement in mind so that the paddler can paddle properly. They typically have front and back foam buoyancy, with none or very little around the sides. Regardless of the specification of buoyancy aids, it is important to remember that they do not provide (nor are they intended to) the same high level of protection as lifejackets.



Buoyancy Aid

Hypothermia, Heat Exhaustion & Dehydration clothing is an important consideration when out on the water as body heat can cool quickly. Attention should be given to any person who may have a disability and not be personally aware of the dangers of hypothermia and heat exhaustion. Some participants may have no sensory feeling of “cold” or “hot”, or be unaware of the meaning of that feeling. Similarly, some participants may find it difficult to judge their stamina accurately. (Sunscreen and hats are extremely important and should be worn by these individuals.) Some individuals with spinal cord injuries do not sweat below their injury level – so for those with high levels of injury (especially cervical injuries) cooling through sweat evaporation may not be possible.

Participants in water-based sports need to take water with them while engaged in activities and need to be encouraged to drink fluids while they are out on the water to avoid dehydration.

SECTION 7

Access to the Built Environment



Contents for Section 7 The Built Environment

7.1	The External Environment and Building Approach	102
	- Accessible Parking	102
	- Pavements, Crossings and Approach Routes.....	104
	- External Ramps	104
	- External Steps	105
7.2	Access to and Circulation within a Building.....	107
	- Entrance/Doors	107
	- Foyers/Lobbies	110
	- Reception Areas/Fixtures & Fittings	111
	- Corridors/Hallways	112
	- Internal Signage	112
	- Lifts	113
7.3	Access to & Use of Facilities within the Built Environment.....	114
	- Interior Design	114
	- Public Service Facilities	114
	- Restaurant/Coffee Shops.....	116
7.4	Public Toilet/WC Provision.....	117
	- Public Toilet/WC Accessible Independent Use Provision	117
	- Public Toilet/WC Accessible Assisted Use Provision	117
	- WC Fixtures and Fittings	118
	- Changing Places WC	122
	- Modular Changing Places WC	123
	- Mobiloo WC.....	124

7 Access to the Built Environment



This section of the *Great Outdoors - A guide for accessibility* is applicable to the built environment within the great outdoors, including access to and within visitor/activity centres together with on-site parking provided at the visitor/activity centres and routes leading to and around these centres. The design guidance presented within this Section is taken directly from *Irish Wheelchair Association Best Practice Access Guidelines 3, 2014* at: <https://www.iwa.ie/access/>.

The Building Regulations Part M Access and Use 2010 and Part B Fire Safety 2006 give guidance within their accompanying Technical Guidance Documents on minimum design requirements ^[24]. The *Irish Wheelchair Association's Best Practice Access Guidelines* reference best practice in accessible design to ensure that all built environments that follow Irish Wheelchair Association's guidance are accessible to all people including people using powered wheelchairs and people requiring personal assistance.

Design guidance that is relevant to the requirements of people who have a sensory impairment is also given throughout these guidelines. Where additional or technical information is required in relation to the specific requirements of people who have a sensory impairment contact should be made with the following organisations: National Council for the Blind in Ireland (NCBI), Ireland's national sight loss agency (<http://www.ncbi.ie>), Vision Sports Ireland (<http://www.visionsports.ie>), DeafHear (<https://www.deafhear.ie>) and Deaf Sports Ireland (<http://www.deafsportsireland.com>).

This section of the guide includes summary information from *Irish Wheelchair Association Best Practice Access Guidelines 3, 2014* on;

- The External Environment and Building Approach

24 Department of Environment Building Regulations: <http://www.housing.gov.ie/housing/building-standards/building-regulations/building-regulations>

- Access to and Circulation within a Building
- Access to and the Use of Facilities within the Built Environment

7.1 The External Environment and Building Approach

Accessible Parking:

- Locate accessible parking bays as close as possible to main entrance, maximum distance 25m.
- A variation of accessible parking bays for cars, multi-purpose vehicles, and accessible buses must be provided.
- Minimum of one accessible parking bay, then one accessible bay for every 15 parking bays provided. Of these accessible parking bays, one in four should be designed to accommodate large multi-purpose vehicles.
- Accessible parking bays should be located on firm, non-slip level ground.
- The surface of the accessible parking bay should have white markings on a blue background. The surrounding access zone should be hatched in yellow.
- There should be dished kerbs or level approach routes leading from the accessible car park area.
- Where kerbs are dished on a direct line of pedestrian travel, tactile paving should be installed. If a footpath/access route does not lead directly to a dished kerb then there is no need to install tactile paving in the dished area. If in doubt, please contact an NCBI Access Officer, who will advise.
- Adequate lighting should be provided from the accessible car park area to the access route.
- A standard accessible parking bay should be 4800mm x 6000mm, this includes a 1200mm wide access zone on both sides and to the rear.
- An accessible parking bay for a multi-purpose vehicle should be 5400mm x 7800mm which includes a 3000mm access zone to one side and the rear.
- Minimum height clearance of 2600mm should be maintained at entrances to an accessible car park.
- Set down/pick up points should be positioned near the main entrance.
- Upright signage located out of the circulation space indicating accessible parking bays, should be provided.



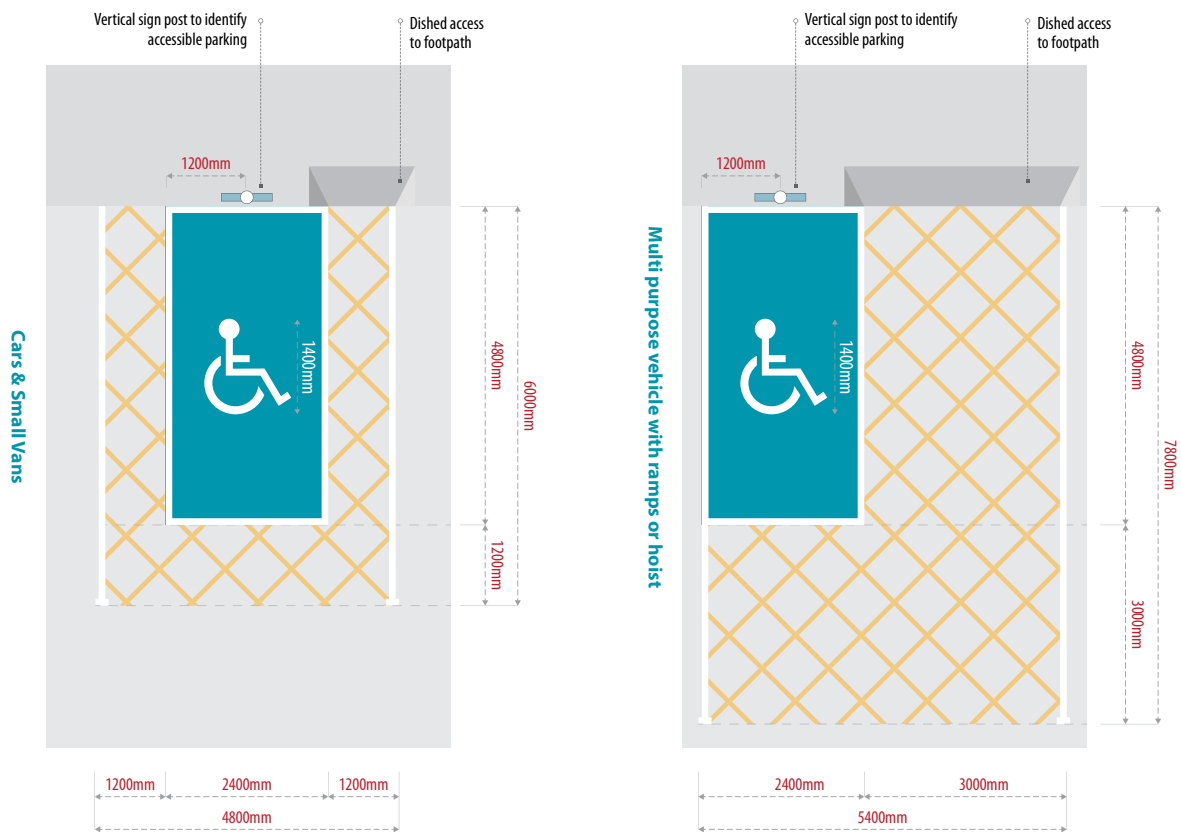
"Parking spaces for wheelchair users and accessible transport would be a bonus as well"

- Quote from National Online Survey 2017



Wheelchair accessible parking

Diagram 1: Accessible parking showing different size bays



Pavements, Crossings and Approach Routes

- A 2000mm pavement/pathway will allow two wheelchair users to pass each other safely.
- A minimum clear width of pavements, pathways or approach routes of 1500mm is acceptable when passing places are provided at intervals.
- Pavements, pathways and approach routes should have a firm and level surface.
- Provide appropriate seating at intervals along routes.
- Ensure there are no items blocking the circulation routes.
- Bollards, when used, should be a minimum of 1000mm in height, 250mm in width and should be 1200mm apart. Ensure that bollards, seating and other necessary articles installed beside circulation paths are rounded, not sharp-edged, in case of accidental collisions. Also ensure that they contrast in colour/tone with the background against which they are seen, from both directions and in all lighting conditions.
- Tactile paving at crossings should be placed as follows: red blister-type for controlled crossings, laid in an L-shape with the shorter leg of the L in the dished area of the kerb, and the long leg of the L stretching back across the path to the boundary wall/grass/other. Use buff, yellow, black or grey reserved for blister paving for uncontrolled crossings - whichever colour provides the best contrast against the surrounding paving. Corduroy type paving is used to warn of steps or stairs, also in the most visible colour available, but not red. The red colour is reserved for controlled road crossings. It may be necessary to install guidance type tactile paving to enable people with impaired vision to cross wide open spaces safely and independently. Please consult with one of NCBI's Access Officers, before installing tactile paving of any kind. Incorrect installation, or excessive use of tactile paving, can cause problems instead of solving them.

External Ramps

- Gradients should be as shallow as possible. The preferred gradient should be 1:20 with the length of individual sections no more than 10m with a maximum rise of 500mm. Intermediate landings should be provided after each 10m slope.
- Flights and landings should have a clear unobstructed minimum width of 1500mm, 1800mm width where a ramp is in frequent use.
- Intermediate landings should have a minimum length of 1800mm.
- A clear unobstructed turning circle of 1800mm diameter is required at the top and bottom of landings of a ramp.
- Provide non-slip surface with 1:50 cross-fall to ensure drainage and 150mm high edge protection.
- Provide a continuous handrail on both sides at a height between 900 -1000mm, extending 300mm beyond the ramp and terminating in a closed end.
- Tactile paving is not required for a ramp as this is properly used to indicate the start and end of a flight of steps or stairs.



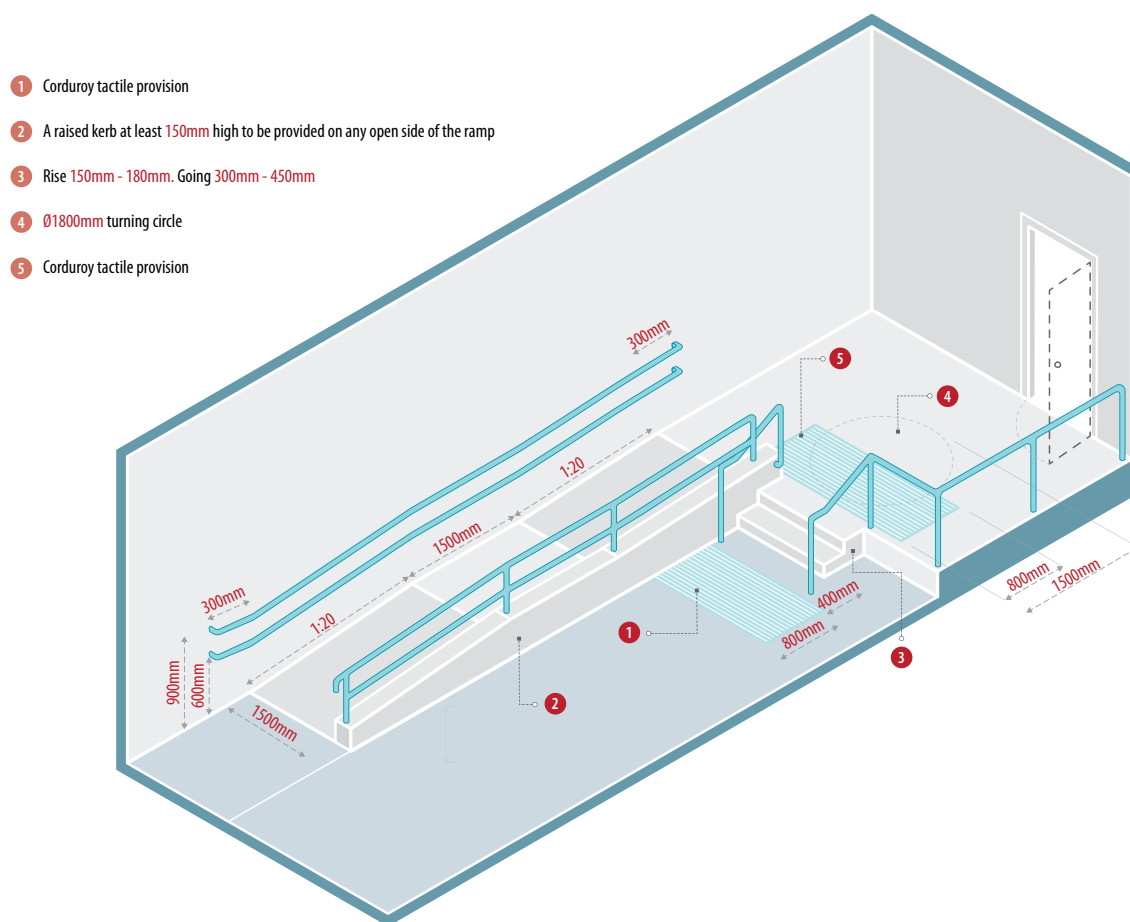
External steps and ramp

External Steps

- Steps should be provided in conjunction with a ramp.
- Avoid single steps.
- A 1500mm stairway width is recommended, a central handrail should be provided when the width of stairs exceeds 2000mm.
- Tapered treads and open risers should be avoided, risers to be between 150mm – 180mm and goings between 300mm – 450mm.
- Outer edges of all steps in each flight must provide a permanent visual contrast with the rest of the steps known as “step edge marking”. This marking should be a minimum of 50mm in depth and should run along the full width of the step edge, on both the tread and the riser, to improve the visibility of the individual steps.
- Level landings with at least 1500mm length, free from any door swing, should be provided at the top and bottom of each flight of steps.
- Provide a continuous handrail on both sides at a height between 900 -1000mm, extending 300mm beyond the steps and continuing all the way down to the ground, or if that would cause a problem, turning back in to finish at the wall. Protruding handrail ends are hazardous for people with impaired vision, as a cane can swing underneath them, and then the person can walk into them, causing a painful collision at stomach or chest height. Handrails should be matte finished, not shiny, and should contrast with the background against which they will be seen.

- Provide corduroy “Hazard Warning” type tactile paving at the top and bottom of stairs, running across the full width of the steps, leaving a gap of 400mm between the beginning of the tactile paving surface and the edge of the first and last steps. If the stairs are in the direct line of pedestrian travel, hazard warning paving should be laid to a depth of 800mm, but if people must make a conscious turn to find the stairs, the tactile paving need only be laid to a depth of 400mm.
- Lighting for steps should be provided in such a way that the lights do not shine directly into the eyes of people who are either looking down to see the steps or looking at the side walls to find a handrail. Lights for stairs should provide non-glare minimum illumination of 200 lux.

Diagram 2: Ramps and steps



For more detailed guidance on the external environment and building approach please see Chapter 4 *Irish Wheelchair Association Best Practice Access Guidelines 3*, at: <https://www.iwa.ie/access/>

7.2 Access to and Circulation within a Building

Entrance/Doors

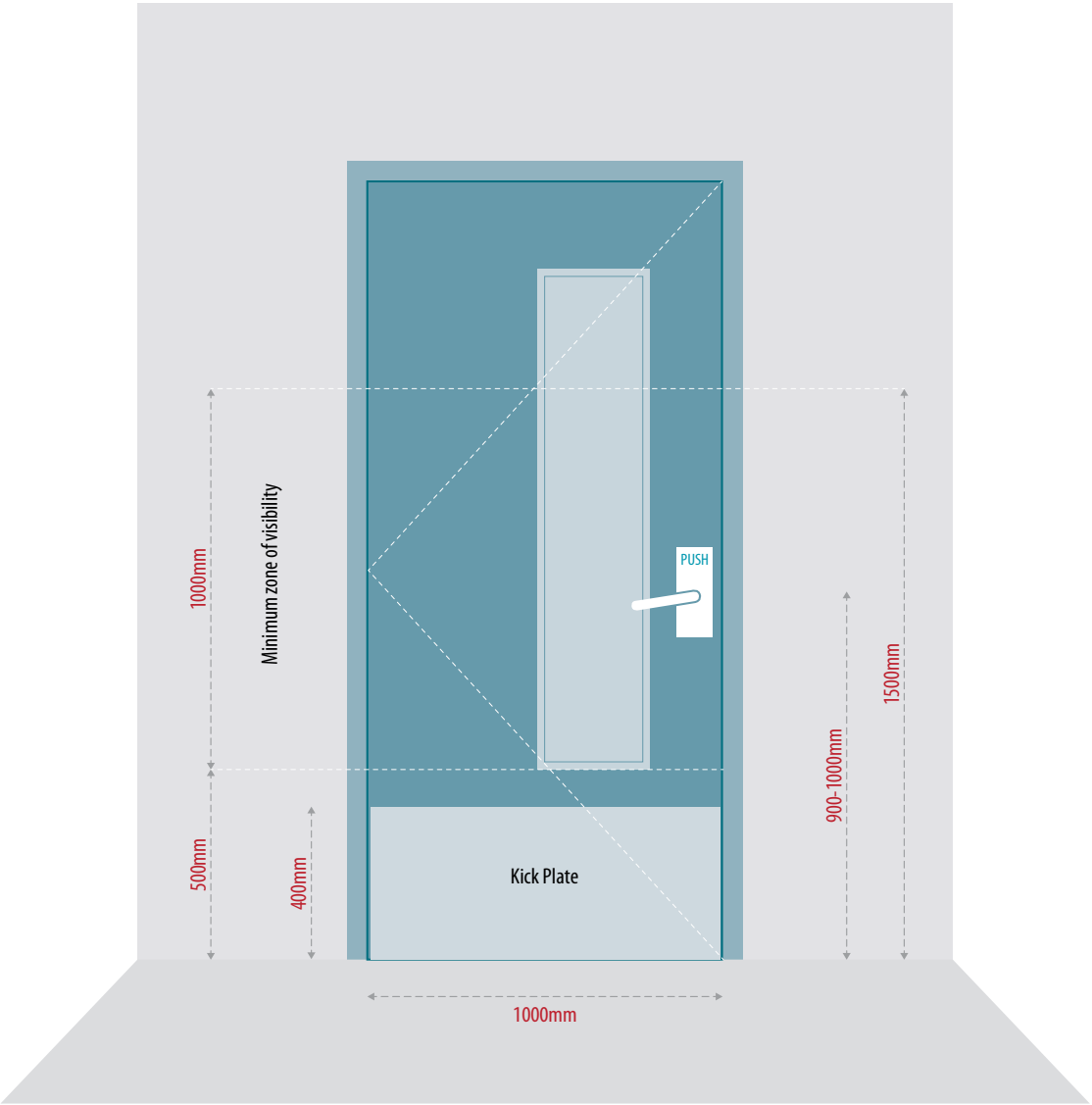
- Main entrances should be easily identifiable and well signposted. Revolving doors are not suitable.
- Automated door systems are generally recommended for ease of use rather than manually operated doors. Entrance devices, e.g. push pads and swipe cards, for automatic doors, should be located 900-1050mm from floor level.
- Provide 1800mm x 1800mm level manoeuvring space outside the main entrance, with weather protection. Lighting level 150 lux.
- Entrance threshold should be level. Door saddles lips or raised thresholds are not acceptable.
- Minimum clear door width 1000mm for main entrance. Clear door width 900mm for all other doors.
- Provide 500mm clear space on leading edge of single leaf door.
- Heavy door springs are not recommended. Opening force of the door should be no greater than 20 newtons.
- Vision panels should extend between 500-1500mm. Door handles between 900-1000mm from floor level.
- Door handle/door lock should be easy to use and manipulated by all including someone with restricted hand movement/or limited strength.
- Doors and frames should be clearly identified by colour and tonal contrast from the adjacent walls.
- Any single pane fully glazed door leaf or fixed panel should have a permanent marking as a means of identifying the glass at heights of 850-1000mm and 1400-1600mm. These permanent markings must visually contrast with the background in all lighting conditions. Small "smoked glass" circles or squares, although commonly used, are not suitable, as most people with impaired vision can't see them.



"I am the mother of a 2 year old boy and I am wheelchair user, being able to do activities with him is so important to both of us. Consultation is so important with all users with parents who are wheelchair users and with parents of children who have a disability".

- Quote from National Online Survey 2017

Diagram 3: Entrance door with single vision panel





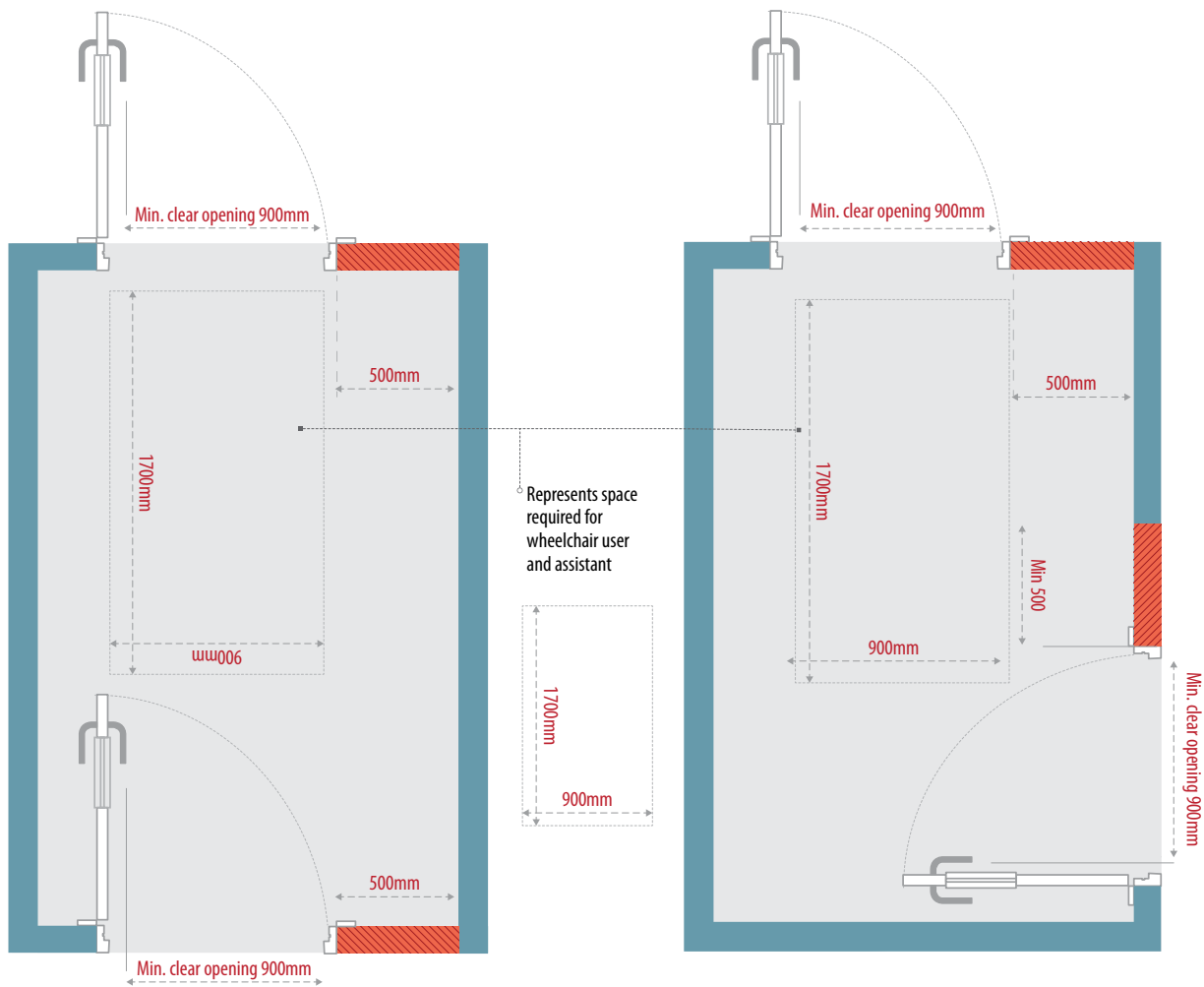
Wheelchair accessible entrance

“

"Trying to push through heavy doors is so difficult and annoying. I always have to ask to have the door opened for me as it is so heavy to push open".

- Quote from National Online Survey 2017

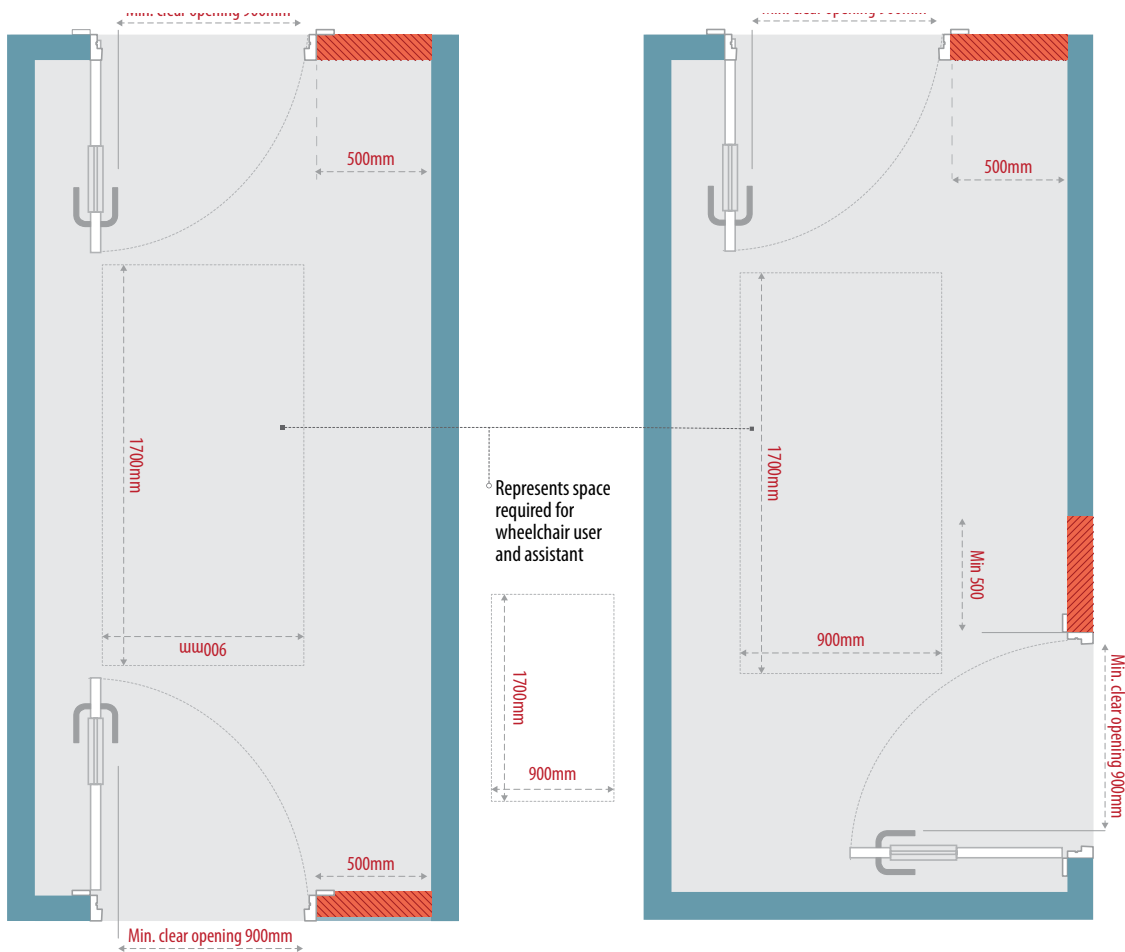
Diagram 4: Internal lobbies with doors opening in the same direction



Foyers/Lobbies

- Entrance foyers/lobbies should be designed in such a way that there is sufficient space to enable all people, including a wheelchair user and an assistant, to move clear of one door before using the next door.
- Overall size of lobby should be determined by location and opening direction of the lobby doors.
- Lobby size should allow 1700 x 900mm clear space within a lobby free from any door swing.
- Door widths to be minimum 900mm, with 500mm clear space on leading edge side of the door.
- Recommended lobby width is 1800mm. Minimum acceptable width is 1500mm.

Diagram 5: Internal lobbies with doors opening in the opposite direction



Reception Areas/Fixtures & Fittings

- The reception area should be easily identifiable from the main building entrance, with a direct and unobstructed approach.
- Provide 1800mm diameter turning space on both sides of Reception desk.
- Provide 50:50 dual height desk at Reception. The lower section of the reception desk to be 760mm high with 700mm high clear space underneath, the higher section 1050mm.
- The lower section of the reception desk should be kept free from any obstruction or clutter which would prevent face-to-face interaction.
- Reception desk and other furniture to be round-edged to prevent injury in the event of accidental collision.
- Lighting levels to be evenly dispersed with minimum recommended illumination of 150 lux. Lighting level 250mm lux at Reception desktop.
- Install an Induction Loop System along with signage to indicate its presence to people who have a hearing loss. Have a portable induction loop system available where meeting facilities are provided.

- Seating at Reception should allow spaces for wheelchair users to position alongside fixed seating.
- Information should be available in alternative formats including large print, audio, accessible website and on request Braille.
- Light switches and commonly used sockets to be positioned between 750-1000mm. Shared sockets to have on/off switch to the outside.

Corridors/Hallways

- Recommended corridor width is 1800mm. Wall mounted objects should not cause an obstruction. Lighting level 150 lux.
- Any corridors less than 1800mm in width should have a turning space of 1800mm x 1800mm at the end of the corridor and at corridor junctions. The turning space should be repeated at 25 metres as the length of the corridor continues.
- Doors opening into a corridor should be recessed.
- Design and colour scheme should aid wayfinding.
- Magnetic catches should be used to hold the doors in the open position to facilitate accessibility.

Internal Signage

- Signage should be easily detectable, consistent and readily understandable.
- Suspended signs to allow minimum 2300mm height clearance.
- Close distance signs should be mounted with centreline at 1400mm height from floor level. Safety instruction signage to be duplicated at height between 1000-1100mm and between 1600-1700mm. A matt finish should be used.
- Use sans serif typefaces, white lettering on dark background, recognised symbols and icons.
- Suitable letter height is a minimum of 150mm for long distance signs, 50-100mm for medium distance signs, and 15-25mm for short distance signs.
- Signage which can be reached to read by touch should have tactile lettering, as well as Braille. For details on how to provide accessible signage, ^[25] please see Appendix 4

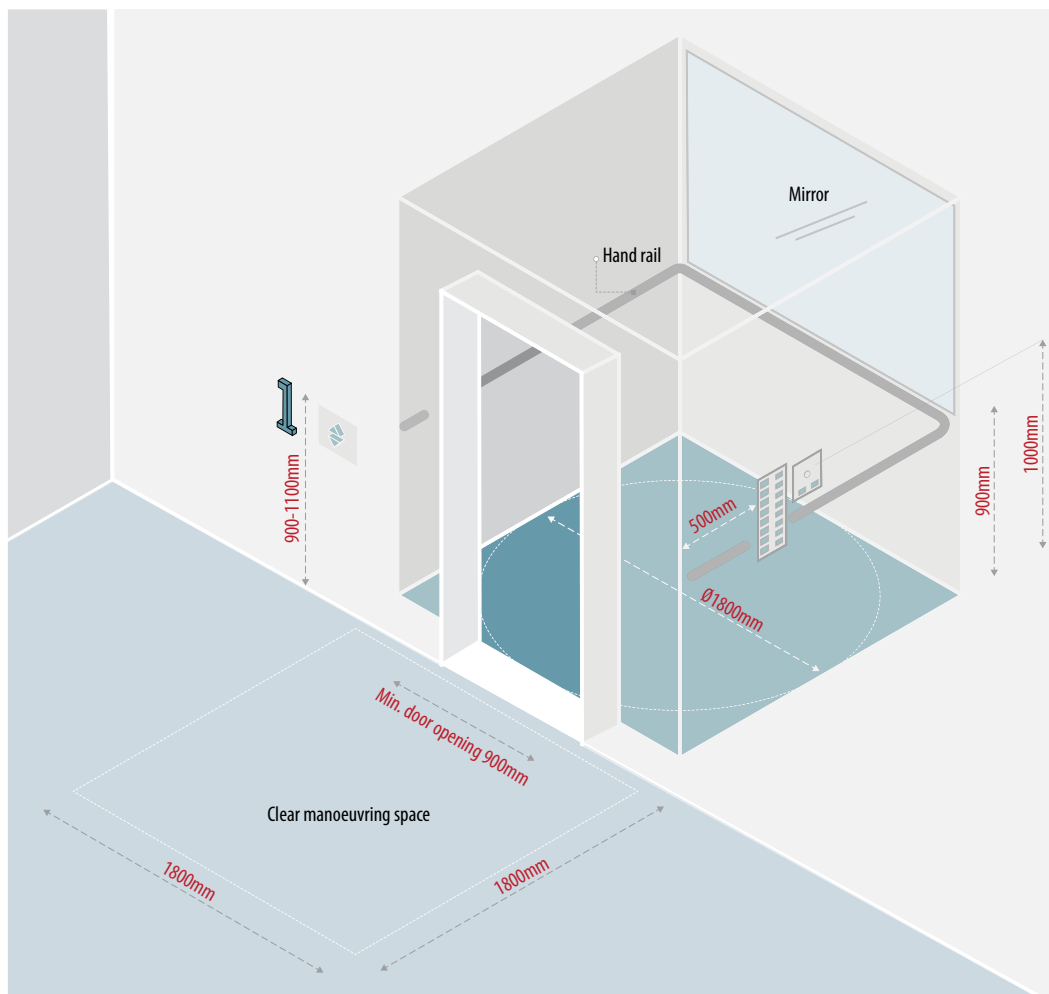
For further information on signage please refer to Section 3 on page 29.

25 NCBI accessible signage see Appendix 4

Lifts

- Ideally, new buildings should have fire protected lifts that can be used for emergency evacuation.
- Lift car to preferably accommodate 1800mm turning diameter. For smaller buildings, 2000mm depth x 1400mm width is acceptable.
- Lift door clear opening width should be 900mm. Door should stay open for at least 8 seconds.
- Provide 1800mm x 1800mm clear space in front of lift on each landing. Lift call button height should be between 900-1100mm from floor level and should be detectable by sight and touch.
- In the lift car, centre-line of lift control panel to be at 1000mm height. Lighting level 150 lux. Braille and tactile numbers & letters should be provided beside each control button, which should also be detectable by sight and touch.
- Provide audio and visual notification of the floor level and notice of door opening/closing.

Diagram 6: Passenger Lift



For more detailed guidance on Access to and Circulation within a Building please see chapter 5 *Irish Wheelchair Association Best Practice Access Guidelines 3* at: <https://www.iwa.ie/access/>

7.3 Access to and the Use of Facilities within the Built Environment

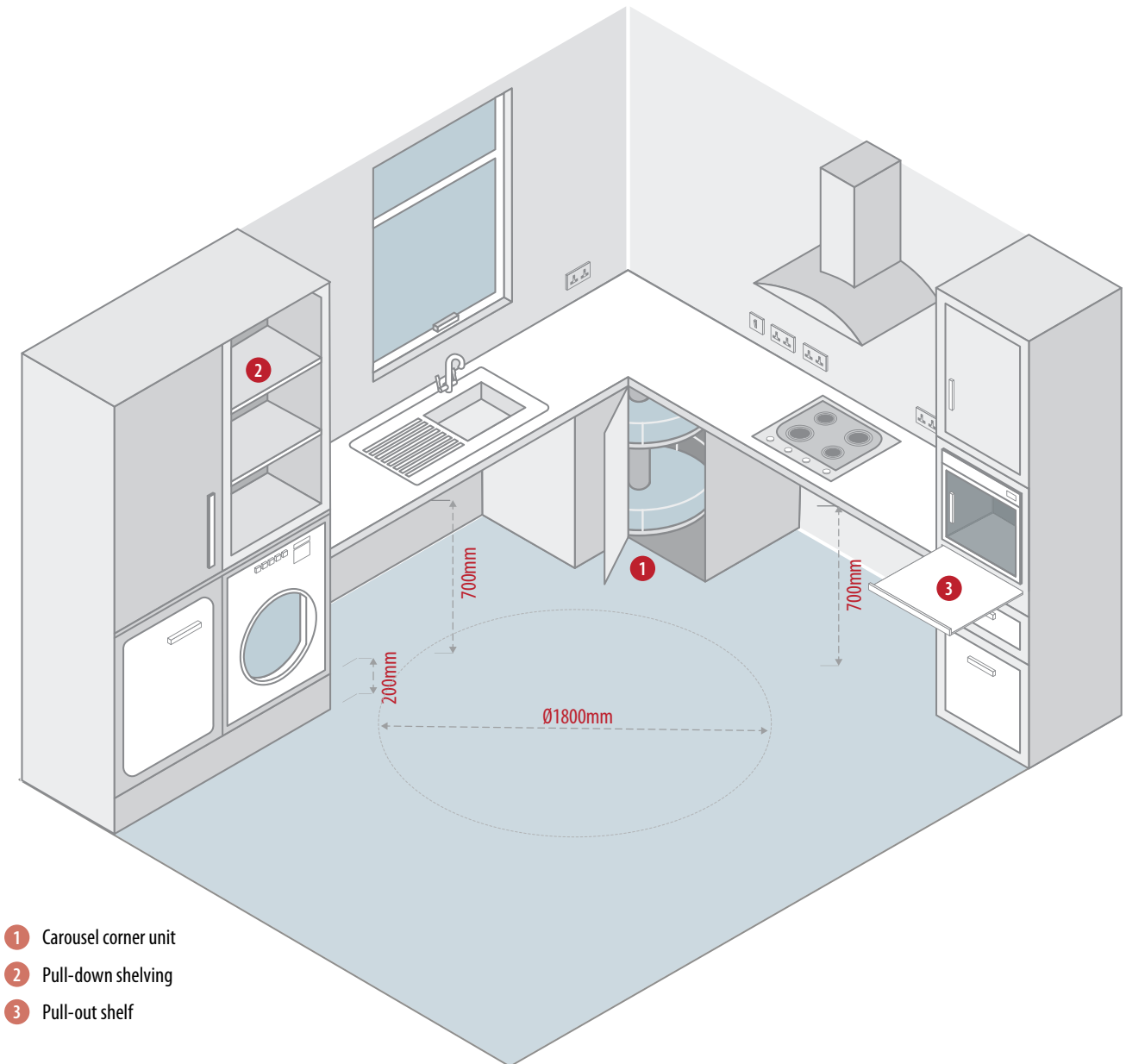
Interior Design

- Create colour, tonal and textural contrast between surfaces and entry points – flooring, doorways, light switches etc.
- Avoid shiny surfaces to minimise glare and reflection. Surfaces to preferably have a matte finish. Create good lighting levels and avoid shadows.
- Provide permanent clearly visible markings on any glazed doors as a means of identifying the glass at two heights i.e. between 850-1000mm and between 1400-1600mm.
- Floor surfaces should be non-slip. Avoid deep pile carpet. No door saddles or upstands at thresholds.
- Window sills to be no higher than 850mm. No transoms between 850-1200mm. Window opening mechanisms to be located between 750-1000mm.
- Seek advice on acoustics when choosing floor covering, wall panelling and soft furnishings.

Public Service Facilities

- ATM/Public Access Terminal controls to be located between 900 - 1200mm with an 1800x1800mm clear space in front.
- Accessible public telephone controls to be located between 750mm - 1000mm. Ensure presence of induction coupler and text display.
- Storage lockers to be provided within a 750 - 1250mm height range with a 900x1400mm clear area in front.
- Worktops within a communal kitchen to be 850mm high as a compromise height for both people standing and for people seated in a wheelchair. Provide 700mm clear knee space beneath the sink, the hob and an area of the work top. Induction hob is recommended. Provide accessible storage options.

Diagram 7: Shared Use Accessible Kitchen



Restaurant/Coffee Shops

- Provide a choice of wheelchair accessible seating on all levels and vantage points.
- A table height of 760-780mm is suitable for a wheelchair user with knee clearance of 700mm beneath the table. Choose a table style that affords accessibility. A table with a centrally located pod style support or a square/rectangular table with legs located at each corner is preferred.
- Maintain a clear access route of 900mm width throughout the restaurant with clear space for a wheelchair user to turn at either end of the route.
- Provide access to a self-service “tray slide” counter at 850mm in height from ground level with 700mm knee clearance. Keep the tray slide area free from display products.
- Maintain a 1200mm width queuing line throughout the self service area/s.
- Crockery, cutlery, and goods for sale at counter areas should be displayed at dual heights in order to facilitate both persons standing and those using a wheelchair.



Coffee Shop Access Ramp

7.4 Public Toilet/WC Provision

When considering provision of a WC/Toilet, it is imperative to consider access to, size, layout and fixtures and fittings. It is important to understand that some people with disabilities have different levels of ability. While some people can use an adapted WC independently, others require assistance.

Public Toilet/WC Accessible Independent Use Provision

- In each male and female WC block, provide at least one ambulant WC cubicle, size 1500x900mm.
- In male and female WC blocks with four or more cubicles provide at least one enlarged WC cubicle size, 1500x1200mm.
- In the male WC block, provide a low urinal at 380mm height with clear space in front and grab rails on the wall.
- Provide at least one unisex accessible WC, size 1800x2500mm with door opening out. 1800 x 2800mm if the door opens inwards.

Public Toilet/WC Accessible Assisted Use Provision

- In large public facilities, provide at least one Changing Places WC ^[26] with hoist and adult changing bench. For guidance see: <http://www.changingplaces.ie>
- Alternatively, consider provision of a Mobiloo vehicle ^[27] or modular WC facility suitable within the outdoor environment.

“

"Due to non-existence of changing facilities we can't bring our son anywhere further than half an hour away from home and that means his twin brother loses out too".

- Quote from National Online Survey 2017

26 See page 122 for full description of Changing Places WC

27 <http://mobiloo.org.uk/>

WC Fixtures and Fittings

- Toilet seat height between 460-480mm with 900mm clear transfer space beside the toilet bowl. Spatula-shaped flush handle on the transfer side of the WC bowl.
- Wash hand basin height 800mm. Tiny finger rinse basin type is not recommended. Provide instead a small basin with internal basin size of 400mm in length and 300mm in depth with no surplus area on the basin surround. Basin to be 250mm from the leading edge of the WC bowl. Provide sensor operated or level type mixer tap.
- Anti-slip flooring – Grading R11 (DIN) recommended.
- Install mirror at least 400mm wide, extending between 600-1800mm height range. Provide dual height clothes hooks.
- Emergency alarm system to be installed and connected to the security desk or information point.

Diagram 8: Ambulant WC cubicle

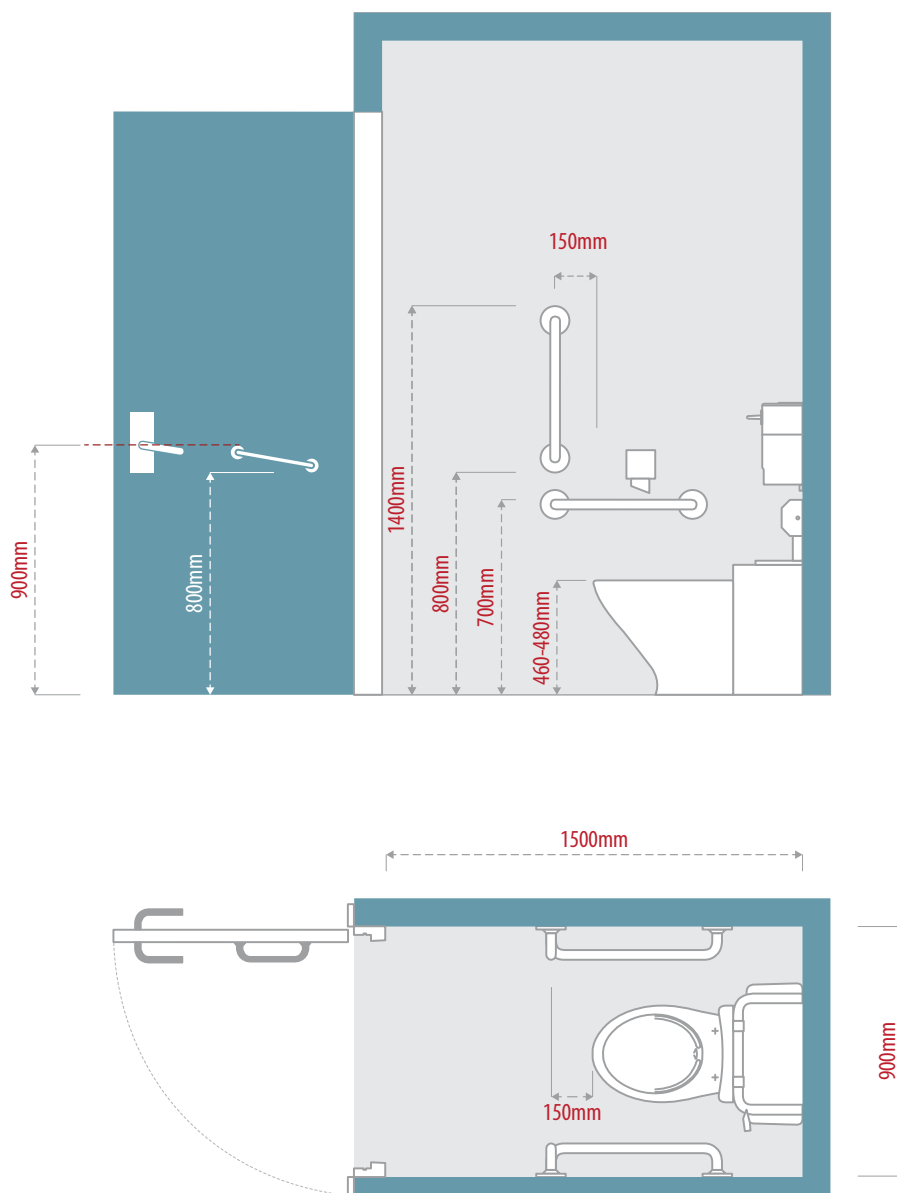


Diagram 9: Enlarged Ambulant WC cubicle

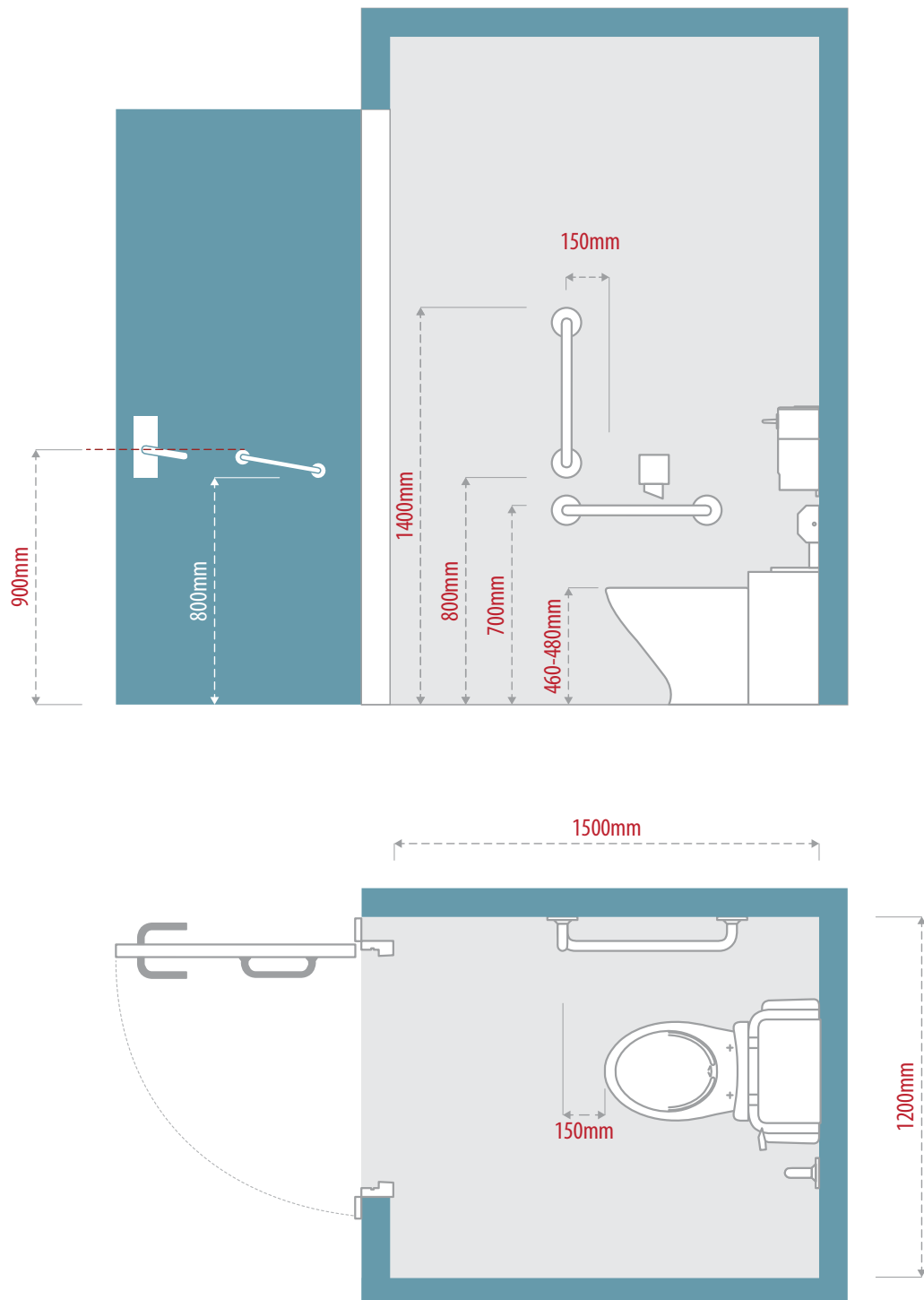
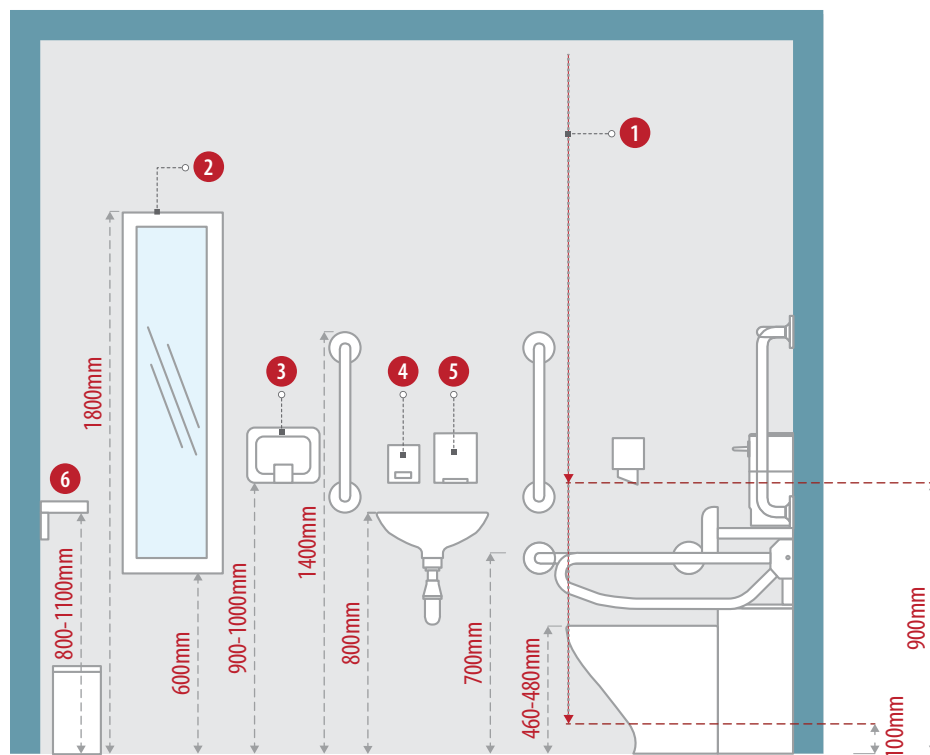


Diagram 10: Unisex Accessible WC



- | | |
|---------------------|--------------------------------|
| 1 Alarm cord | 4 Soap dispenser |
| 2 Mirror | 5 Paper towel dispenser |
| 3 Hand dryer | 6 Shelf |

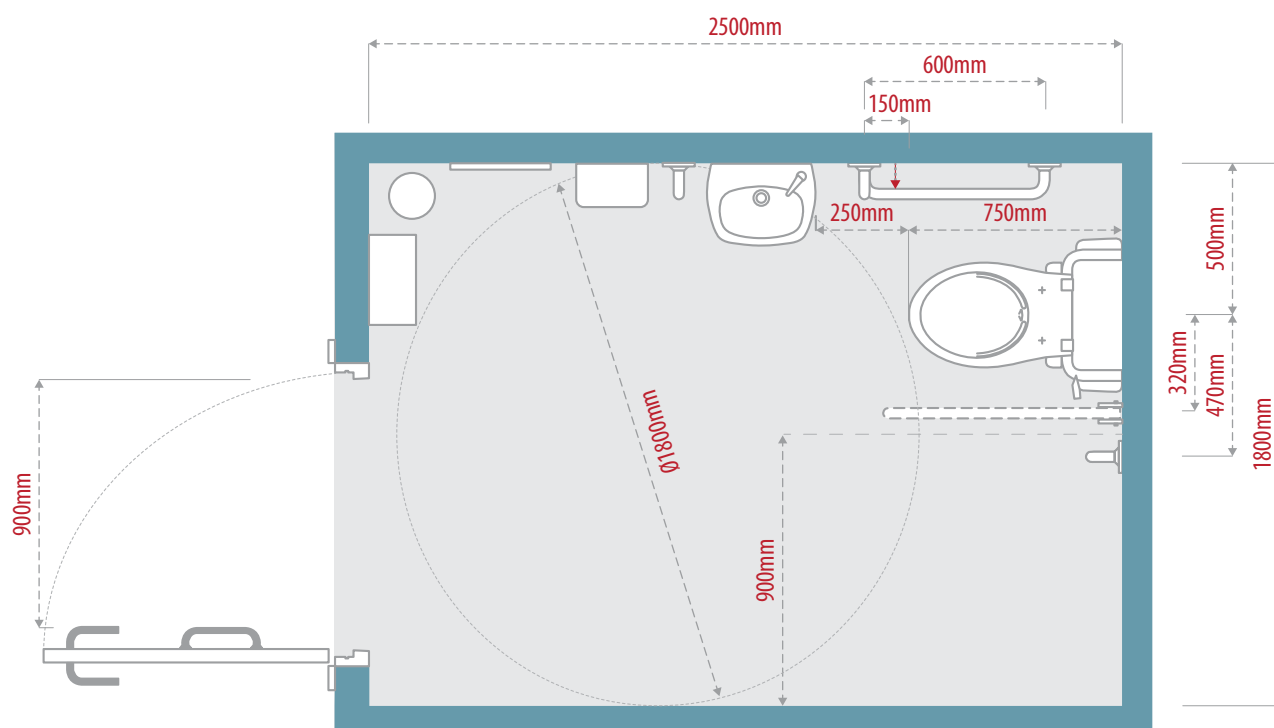
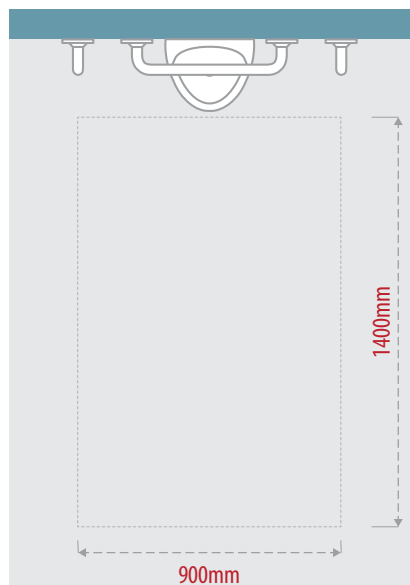
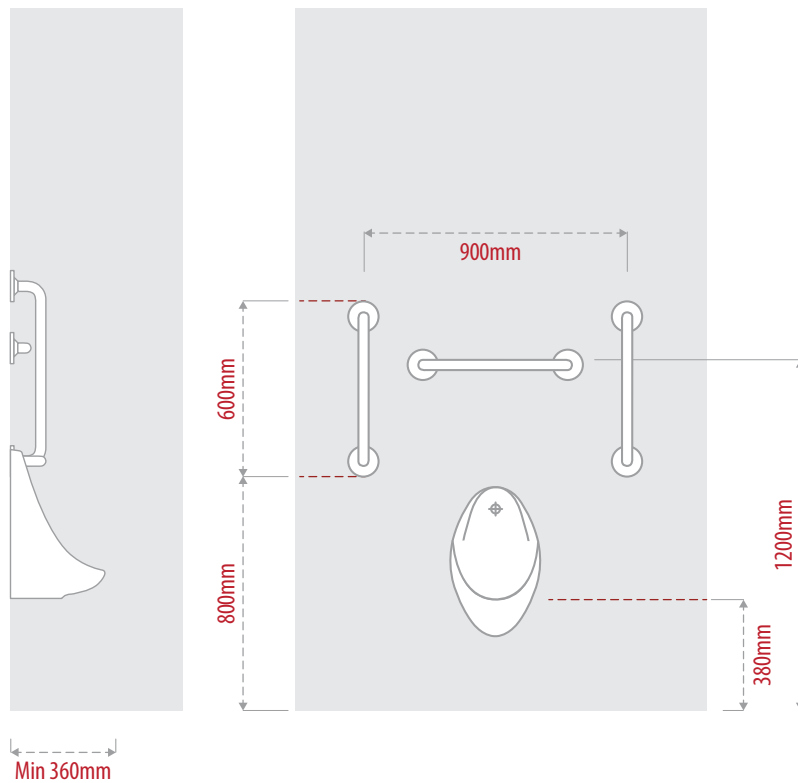


Diagram 11: Urinal



Changing Places WC

Standard accessible WCs do not meet the needs of all people with a disability as some people require extra facilities and personal assistance. Changing Places WCs are different to standard accessible WCs in that they provide more space and extra equipment for people with disabilities and their assistants. Changing Places WCs are provided in addition to the standard accessible WCs. Changing Places WCs should include among other things the following:

- Centrally located toilet with space both sides for transfers/carers
- Adequate place for a wheelchair user and at least two carers (min. 12m² floor area)
- A height-adjustable adult size changing bench
- Wash-hand basin (preferably height-adjustable)
- A full room coverage ceiling track hoist system
- Shower (optional)

Changing Places WC facilities are available in a growing number of locations in Ireland including Aras an Uachtaráin, Dublin Airport, Trinity College Dublin, Cabinteely Park Dublin, the National Gallery Dublin, Irish National Heritage Park, Ferrycarraig, Wexford, Irish Human Rights & Equality Commission (IHREC), IKEA Ballymun and the Lime Tree Theatre in Limerick. Changing Places WC facilities need to meet the correct design standard to ensure that they meet the needs and expectations of the people who use them. Further details on Changing Places design criteria may be found on the following link: <http://www.changingplaces.ie>

Changing Places WC facility



Modular Changing Places WC

Modular Changing Places

A pre-fabricated Changing Places unit may be an appropriate solution particularly for outdoor environments such as beaches or where an existing building does not have sufficient floor space for a Changing Places WC installation. Modular changing places contain the recommended 12m² of internal floor space and all of the required equipment that is found in a Changing Places WC facility such as;

- Height adjustable adult sized changing bench
- Ceiling track hoist
- Toilet bowl with grab rails on both sides
- Wash hand basin

Aesthetics can be tailored both inside and out. The external shell can be clad in materials to complement the existing building or environment. The unit comes in a wide range of internal colours and finishes. Further details on the modular Changing Places units may be found on the following link: <https://www.ihuschangingplaces.com/>.

Modular Changing Places WC unit



Details for the Irish provider are as follows: <https://www.bailieborosupplies.ie>

“

"Please make changing facilities and toilets larger as most are just the bare minimum size, so it is hard to move a wheelchair and have assistants in at the same time".

- Quote from National Online Survey 2017

Mobiloo WC

A Mobiloo ^[28] vehicle may be an alternative solution to providing a Changing Places WC facility in an outdoor location particularly on a short term basis. A Mobiloo contains all of the equipment that is found in a Changing Places WC facility such as:

- Height adjustable adult sized changing bench
- Ceiling track hoist
- Toilet bowl with grab rails on both sides
- Wash hand basin

A driver/attendant delivers and remains with the Mobiloo unit during operation to ensure it is kept clean, available and hygienic and to ensure that carers are comfortable with the equipment. Mobiloo makes an event or venue accessible to many people with disabilities who would otherwise be unable to attend simply because of a lack of adequate toilet and changing facilities. Mobiloo is available for rental throughout Ireland and the UK for outdoor events/locations such as concerts, beaches, fun days out, and many other outdoor events. Further details on Mobiloo may be found on the following link: <https://www.mobiloo.org.uk/> For more detailed guidance on 'Access to and the Use of Facilities' within the Built Environment please see chapter 6 *Irish Wheelchair Association Best Practice Access Guidelines 3* at: <https://www.iwa.ie/access/>



28 <https://www.mobiloo.org.uk>

Appendices



Contents for Appendices

Appendix 1: Self-Assessment Site Specific Checklists 127

Appendix 2: List of Engaged Organisations 145

Appendix 3: Reference Documents 146

Appendix 4: NCBI Recommendations for signage 150

Appendix 5: Publication Team 154

Appendix 1 Self-Assessment Site Specific Checklists

Checking the accessibility of your environment - Self-Assessment Checklist

This Self-Assessment Checklist offers guidance on reviewing the accessibility of outdoor environments. By using this checklist in conjunction with the *"Access to the Great Outdoor Guidelines"* you can review the level of accessibility presently available and plan for what may be achieved through incrementally upgrading the accessibility of the outdoor environment.

Completing a Self – Assessment Accessibility Checklist for your outdoors environment/site

The *Self – Assessment Accessibility Checklists* focus on accessibility of outdoor environments. Consideration of the accessibility of any on-site visitor/interpretative buildings is not included within the checklists and requires separate assessment referencing Section 7 The Built Environment of the *Great Outdoors - A guide for accessibility*.

Checklists provided are designed for use within the following environments

Accessibility Checklist 1: Trails, Greenways & Public Parks. Section 4
"Great Outdoors - A guide for accessibility"

Accessibility Checklist 2: Beaches. Section 5
"Great Outdoors - A guide for accessibility"

Accessibility Checklist 3: Waterways. Section 6
"Great Outdoors - A guide for accessibility"

Self – Assessment Accessibility Checklists consider access under the following headings

- Accessible parking bays
- Entrance points including the accessibility of trails/paths/surfacing/gradients
- Accessible toilet facilities
- Information & Signage i.e. online information, brochures, display boards, waymarking etc.
- Equipment available onsite

Collecting information

The checklists on the following pages will assist in carrying out a self-assessment of the accessibility features of your outdoor environment/site. These checklists are intended as a concise and focused on-site means of identifying the areas, locations and facilities that require access upgrades. The checklists are a first step in reviewing the accessibility of any location and can be used as a means of opening a consultation/conversation on what steps are required to agree priorities and to plan strategic actions. Please choose and complete the checklist appropriate to your environment. *The Great Outdoors - A guide for accessibility* gives detailed recommendations on how to improve the accessibility of your existing outdoor environment/site.

The findings of your completed self-assessment checklist, along with the Guidelines document should enable you to determine:

1. What accessible features already exist within the environment/site?
2. What is achievable to enhance the environment in terms of improved accessibility?

Self-assessment Checklist 1 Trails, Greenways & Public Parks;

Revert to Section 4 within the guidelines for full specification on design criteria.

Level of Access:			
Description:	Yes:	No:	Notes
1. Trail/pathway access What level of trail/pathway accessibility is available to a visitor who has a disability? 1a. Multi-Access trail/pathway <ul style="list-style-type: none"> ■ Accessible route from parking to the trail ■ Fully accessible trail ■ Little or no gradient ■ Flat /smooth surfacing i.e. concrete, tarmac, bitumen macadam. ■ No steps ■ Information & waymarking 			Revert to Section 4, Trails, Greenways & Public Parks. 4.2 Use of Symbols.
1b. Challenging Access trail/pathway <ul style="list-style-type: none"> ■ Accessible but somewhat more challenging trail/pathway ■ More significant gradients at some locations, max 1:15 ■ Surface may not be as firm e.g. use of gravel/quarry dust ■ Trail may be narrower ■ No steps 			Revert to Section 4, Trails, Greenways & Public Parks. 4.2 Use of Symbols.

Level of Access:			
Description:	Yes:	No:	Notes
<p>2. Parking</p> <p>Is accessible parking available onsite?</p> <p>A standard accessible parking bay should be 4800mm x 6000mm, this includes a 1200mm wide access zone on both sides and to the rear.</p>			<p>Revert to Section 7, the Built Environment.</p> <p>7.1 The External Environment and Building Approach.</p>
<p>2a Is there a set-down area available, close to the entrance?</p>			
<p>3. WC facilities</p> <p>3a. Are there accessible WC facilities on-site?</p> <p>3b. Is there a Changing Place WC facility on-site?</p>			<p>Revert to Section 7, the Built Environment.</p> <p>7.4 Public Toilet/WC Provision.</p>
<p>4. Access to trail/pathways</p> <p>Is there level access from the parking area to the route/s leading to the trail/pathways and to any on-site facility?</p>			<p>Revert to Section 4, Trails, Greenways & Public Parks.</p> <p>4.3 Design Criteria for Accessibility on Trails, Greenways and Public Parks.</p>
<p>5. Information</p> <p>Is information on the site and the accessibility of the site/trail provided: online brochures, display boards, waymarking etc.?</p>			<p>Revert to Section 3 Information and Communication.</p> <p>3.5 Information Display Boards.</p>

Level of Access:			
Description:	Yes:	No:	Notes
6. Entrances to trail/pathways Are there accessible entrance and exit points, gates, stiles etc.?			Revert to Section 4, Trails, Greenways & Public Parks. 4.7 Entrance and Exit Points
7. Trail Width 7a. Is the width of the trail/pathway 2000mm to allow two people using wheelchairs to pass each other safely? 7b. If the trail/pathway is narrower than 2000mm are there passing places to enable two people using wheelchairs to pass each other?			Revert to Section 4, Trails, Greenways & Public Parks. 4.3 Design Criteria for Accessibility on Trails, Greenways and Public Parks.
8. Guarding Are railings or guarding positioned at all steep parts of a route, in places where the path is higher than the adjoining ground, along cliff edging and other hazards?			Revert to Section 4, Trails, Greenways & Public Parks. 4.3 Design Criteria for Accessibility on Trails, Greenways and Public Parks.
9. Tactile surfacing Are tactile ground surface indicators provided where appropriate i.e. at route crossings within the built environment?			Revert to Section 4, Trails, Greenways & Public Parks. 4.3 Design Criteria for Accessibility on Trails, Greenways and Public Parks.

Level of Access:			
Description:	Yes:	No:	Notes
10. Rest Areas/Seating / Shelters Are rest areas/seating/ shelters provided at regular intervals i.e. at distances of 25-50m apart?			Revert to Section 4, Trails, Greenways & Public Parks. 4.3 Design Criteria for Accessibility on Trails, Greenways and Public Parks.
11. Viewing points? Are viewing areas provided? Where a barrier is required at a viewing point for reasons of safety provide a Perspex barrier at a height of 800-900mm from ground level.			Revert to Section 4, Trails, Greenways & Public Parks. 4.3 Design Criteria for Accessibility on Trails, Greenways and Public Parks.
12. On-site equipment Is accessible equipment available onsite i.e. hand cycles etc?			Revert to Section 4, Trails, Greenways & Public Parks. 4.9 On-Site Equipment and Support.
Picnic Areas			
13. Route Information on/to Picnic Area/s Is on-site information provided on the route to picnic areas?			Revert to Section 4, Trails, Greenways & Public Parks. 4.10 Accessible Picnic areas on Greenways and Public Parks.

Level of Access:			
Description:	Yes:	No:	Notes
14. Picnic Areas 14a. Is there a firm and level surface leading to and around the picnic area i.e. a clear, smooth and non-slip area with an 1800mm accessibility zone around all sides of the table. 14b. Is there space for more than one wheelchair user to position at the table?			Revert to Section 4, Trails, Greenways & Public Parks. 4.10 Accessible Picnic areas on Greenways and Public Parks.

Playgrounds			
15. Route to playground Is there a continuous accessible path of travel to all play areas, to all play equipment and seating areas?			Revert to Section 4, Trails, Greenways & Public Parks. 4.11 Accessible Playground Areas on Greenways and in Public Parks.
16. Play equipment Is there a variety of accessible play equipment provided e.g. swings, rockers, sand/water play etc.?			Revert to Section 4, Trails, Greenways & Public Parks. 4.11 Accessible Play Equipment on Greenways and in Public Parks.

Self-assessment Checklist 2 Beaches:

Revert to section 5 within the guidelines for full specification on design criteria

Level of Access:			
Description:	Yes:	No:	Notes
<p>1. Pathways/Boardwalk access</p> <p>What level of pathway/ boardwalk accessibility is available to a visitor who has a disability?</p> <p>1a. Multi-Access pathway/ boardwalk</p> <ul style="list-style-type: none"> ■ Accessible route from parking to the pathway/boardwalk ■ Fully accessible boardwalk ■ Little or no gradient ■ Flat /smooth surfacing i.e. concrete, tarmac, bitumen macadam. ■ No steps ■ Information & waymarking 			<p>Revert to Section 5 Beaches.</p> <p>5.1 Use of Symbols.</p>

Level of Access:			
Description:	Yes:	No:	Notes
<p>1b. Challenging Access pathway/boardwalk</p> <ul style="list-style-type: none"> ■ Accessible but somewhat more challenging pathway/boardwalk ■ More significant gradients at some locations, max gradient 1:15 ■ Surface may not be as firm e.g. use of gravel/ loose sand ■ Boardwalk may be narrower ■ No steps 			<p>Revert to Section 5 Beaches.</p> <p>5.1 Use of Symbols.</p>
<p>2. Parking</p> <p>Is accessible parking available onsite?</p> <p>A standard accessible parking bay should be 4800mm x 6000mm, this includes a 1200mm wide access zone on both sides and to the rear.</p> <p>2a. Is there a set-down area available, close to the entrance?</p>			<p>Revert to Section 7, the Built Environment.</p> <p>7.1 The External Environment and Building Approach.</p>
<p>3. WC facilities</p> <p>3a. Are there accessible WC facilities on-site?</p> <p>3b. Is there a Changing Places WC facility on-site?</p>			<p>Revert to Section 7, the Built Environment.</p> <p>7.4 Public Toilet/WC Provision.</p>

Level of Access:			
Description:	Yes:	No:	Notes
<p>4. Access to pathways/ boardwalk</p> <p>Is there level access from the parking area to the route/s leading to the pathway/ boardwalk and to any on-site facility?</p>			<p>Revert to Section 5 Beaches.</p> <p>5.3 Design Criteria for Accessibility on Beach Routes and Boardwalks.</p>
<p>5. Information</p> <p>Is information on the site and the accessibility of the pathway/boardwalk provided, display boards, waymarking etc.</p>			<p>Revert to Section 3 Information and Communication.</p> <p>3.5 Information Display Boards .</p>
<p>6. Entrances to pathways/ boardwalk</p> <p>Are there accessible entrance and exit points, gates, stiles etc?</p>			<p>Revert to Section 5 Beaches.</p> <p>5.3 Design Criteria for Accessibility on Beach Routes and Boardwalks.</p>
<p>7. Boardwalk Width</p> <p>7a. Is the width of the pathway/ boardwalk 2000mm to allow two people using wheelchairs to pass each other safely?</p> <p>7b. If the pathway/boardwalk is narrower than 2000mm are there passing places to enable two people using wheelchairs to pass each other?</p>			<p>Revert to Section 5 Beaches.</p> <p>5.3 Design Criteria for Accessibility on Beach Routes and Boardwalks.</p>

Level of Access:			
Description:	Yes:	No:	Notes
8. Guarding Are railings or guarding positioned at all steep parts of a route, in places where the path/boardwalk is higher than the adjoining ground, along cliff edging and other hazards?			Revert to Section 5 Beaches. 5.3 Design Criteria for Accessibility on Beach Routes and Boardwalks
9. Tactile surfacing Are tactile ground surface indicators provided where appropriate i.e. at route crossings within the built environment?			Revert to Section 5 Beaches. 5.3 Design Criteria for Accessibility on Beach Routes and Boardwalks
10. Rest Areas/Seating / Shelters Are rest areas/seating/shelters provided at regular intervals i.e. at distances of 25-50m apart?			Revert to Section 5 Beaches. 5.3 Design Criteria for Accessibility on Beach Routes and Boardwalks
11. Viewing points? Are viewing areas provided? Where a barrier is required at a viewing point for reasons of safety provide a Perspex barrier at a height of 800-900mm from ground level.			Revert to Section 5 Beaches. 5.3 Design Criteria for Accessibility on Beach Routes and Boardwalks

Level of Access:			
Description:	Yes:	No:	Notes
12. On-site equipment Is accessible equipment available onsite i.e. Beach buggies etc.?			Revert to Section 5 Beaches. 5.5 On-Site Equipment and Support

Picnic Areas

13. Route Information on/to Picnic Area/s Is on-site information provided on the route to picnic areas?			Revert to Section 5 Beaches. 5.7 Accessible Picnic areas located beside the beach.
14. Picnic Areas 14a. Is there a firm and level surface leading to and around the picnic area i.e. a clear, smooth and non-slip area with an 1800mm accessibility zone around all sides of the table. 14b. Is there space for more than one wheelchair user to position at the table?			Revert to Section 5 Beaches. 5.7 Accessible Picnic areas located beside the beach.

Playgrounds

15. Route to playground Is there a continuous accessible path of travel to all play areas to all play equipment and seating areas?			Revert to Section 5 Beaches. 5.8 Playground Areas located beside the beach
--	--	--	---

16. Play equipment Is there a variety of accessible play equipment provided e.g. swings, rockers, sand/water play etc?			Revert to Section 5 Beaches.
--	--	--	------------------------------

Self-assessment Checklist 3 Waterways:
Revert to section 6 within the guidelines for full specification on design criteria

Level of Access:			
Description:	Yes:	No:	Notes
<p>1. Waterways access</p> <p>What level of accessibility is available to a visitor who has a disability?</p> <p>1a. Multi-Access to Waterway sites</p> <ul style="list-style-type: none"> ■ Accessible route from parking to the pathway/bank ■ Fully accessible pathway ■ Little or no gradient ■ Flat /smooth surfacing i.e. concrete, tarmac, bitumen macadam. ■ No steps ■ Information & waymarking 			<p>Revert to Section 6 Waterways.</p> <p>6.1 Use of Symbols .</p>

Level of Access:			
Description:	Yes:	No:	Notes
<p>1b. Challenging Access to Waterway sites.</p> <ul style="list-style-type: none"> ■ Accessible but somewhat more challenging pathway/bank ■ More significant gradients at some locations, max 1:15 ■ Surface may not be as firm e.g. use of gravel/grass ■ Pathway/bank may be narrower ■ No steps 			<p>Revert to Section 6 Waterways.</p> <p>6.1 Use of Symbols.</p>
<p>2. Parking</p> <p>Is accessible parking available onsite?</p> <p>A standard accessible parking bay should be 4800mm x 6000mm, this includes a 1200mm wide access zone on both sides and to the rear.</p>			<p>Revert to Section 7, the Built Environment.</p> <p>7.1 The External Environment and Building Approach.</p>
<p>2a. Is there a set-down area available close to the entrance?</p>			
<p>3. WC facilities</p> <p>3a. Are there accessible WC facilities on-site?</p> <p>3b. Is there accessible WC facilities on site?</p>			<p>Revert to Section 7, the Built Environment.</p> <p>7.4 Public Toilet/WC Provision.</p>

Level of Access:			
Description:	Yes:	No:	Notes
<p>4. Access to pathways/banks</p> <p>Is there level access from the parking area to the route/s leading to the pathway/ bank and to any on-site facility?</p>			<p>Revert to Section 6 Waterways.</p> <p>6.3 Design Criteria for Accessible routes adjacent to Waterways.</p>
<p>5. Information</p> <p>Is information on the site and the accessibility of the site pathway provided: display boards, waymarking etc.?</p>			<p>Revert to Section 3 Information and Communication.</p> <p>3.5 Information Display boards.</p>
<p>6. Entrances to pathways/ bank</p> <p>Are there accessible entrance and exit points, gates, stiles etc.?</p>			<p>Revert to Section 6 Waterways.</p> <p>6.5 Design Criteria for Entrance and Exit Points.</p>
<p>7. Path Width</p> <p>7a. Is the width of the pathway 2000mm to allow two people using wheelchairs to pass each other safely?</p> <p>7b. If the pathway is narrower than 2000mm are there passing spaces to enable two people using wheelchairs to pass each other?</p>			<p>Revert to Section 6 Waterways.</p> <p>6.3 Design Criteria for Accessible routes adjacent to Waterways.</p>

Level of Access:			
Description:	Yes:	No:	Notes
8. Guarding Are railings or guarding positioned at all steep parts of a route, in places where the path is higher than the adjoining ground, along cliff edging and other hazards?			Revert to Section 6 Waterways. 6.3 Design Criteria for Accessible routes adjacent to Waterways.
9. Tactile surfacing Are tactile ground surface indicators provided where appropriate i.e. at route crossings within the built environment?			Revert to Section 6 Waterways. 6.3 Design Criteria for Accessible routes adjacent to Waterways.
10. Rest Areas/Seating / Shelters Are rest areas/seating/shelters provided at regular intervals i.e. at distances of 25-50m apart?			Revert to Section 6 Waterways. 6.3 Design Criteria for Accessible routes adjacent to Waterways.
11. Viewing points Are viewing areas provided? Where a barrier is required at a viewing point for reasons of safety provide a Perspex barrier at a height of 800-900mm from ground level.			Revert to Section 6 Waterways. 6.3 Design Criteria for Accessible routes adjacent to Waterways.

Level of Access:			
Description:	Yes:	No:	Notes
<p>12. Accessible fishing stands</p> <p>Are there accessible fishing stands available on site? Stands can be provided on a river/canal/lake bank or on a floating pontoon anchored adjacent to the waterside. Both can be accessed by a combination of linking an access route to a boardwalk and/or gangway.</p>			<p>Revert to Section 6 Waterways.</p> <p>6.6 Accessible fishing stands.</p>
<p>13. On-site equipment</p> <p>Is accessible equipment available onsite i.e. transferring methods etc.?</p>			<p>Revert to Section 6 Waterways.</p> <p>6.9 On-Site Equipment and Support.</p>
<p>14. Safety Management Plan</p> <p>Is there a safety risk management plan in place to support people with disabilities?</p>			<p>Revert to Section 6 Waterways.</p> <p>6.10 Safety Risk Management – Water Based Activities.</p>

Appendix 2 List of Engaged Organisations

List of Organisations that contributed to the Great Outdoors - A guide for accessibility

Organisations represented at the Consultation Workshop, October 2017

1. Irish Wheelchair Association. Sport, Access and Advocacy Departments
2. Sport Ireland
3. CARA
4. National Council for the Blind in Ireland
5. Vision Sport
6. Spinal Injuries Ireland
7. Enable Ireland
8. Healthy Ireland (HI/HSE)
9. Eco Health Project – University College Dublin
10. Bord na Móna
11. Coillte
12. Waterways Ireland
13. Inland Fisheries Ireland
14. National Parks and Wild Life
15. Dún Laoghaire-Rathdown Sports and Tourism
16. Irish Sailing
17. Canoeing Ireland
18. Disability Federation of Ireland
19. Irish Sailing Association
20. Institute of Technology Tralee

Appendix 3 Reference Documents

1. Bureacht na hEireann / Constitution of Ireland, First Amendment of the Constitution Act (1939).
2. BT Countryside for All: Standards and Guidelines : A Good Practice Guide to Disabled People's Access in the Countryside by Fieldfare Trust, UK (1997).
3. Rapport I: 'Access to the Forest for Disabled People' manual produced by The National Board of Forestry, Sweden (2005).
4. ACCESSIBILITY AND DISABILITY: A Guide to the Application of Disabled Access Legislation to Scotland's Woodlands, ©The Forestry Commission Scotland (2007).
5. VENTURE OUTDOORS Creating Healthy Communities Toolkit to Success - Making Outdoor Activities Accessible by Venture Outdoors & Disability Sports Northern Ireland (DSNI) (2012).
6. Adaptive Sailing Resource Manual produced by US Sailing & Disabled Sailing Committee of International Sailing Federation (ISAF) (2014).
7. Irish Wheelchair Association Best Practice Access Guidelines 3, 2014.
8. Outdoor Access Design Guide: Paths for All & Scottish Natural Heritage (2016).
9. A Guide to the Design and Construction of Accessible Angling facilities, Inland Fisheries Ireland (2016).

Section 1 – Introduction 2 - Training Consultation 7 - The Built Environment

Central statistics office 2016 census: <http://www.cso.ie>

United Nations Convention on the Rights of Persons with Disabilities: <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

Irish Disability Act, 2005: <http://www.irishstatutebook.ie/eli/2005/act/14/enacted/en/html>

Association of Occupational Therapists of Ireland: <http://www.aoti.ie>

National Disability Authority: <http://universaldesign.ie>

Department of Justice National Disability Inclusion Strategy, 2017-2021: <http://www.justice.ie/en/JELR/Pages/WP17000244>

Irish Wheelchair Association Best Practice Access Guidelines 3, 2014: <https://www.iwa.ie/access/>

Department of Environment Building Regulations: <http://www.housing.gov.ie/housing/building-standards/building-regulations/building-regulations/>

NCBI, Ireland's national sight loss agency: <https://www.ncbi.ie/>

Vision Sports Ireland (VSI) the National Governing Body for sport and leisure activities for blind and visually impaired people in Ireland: <http://hww.visionsports.ie/>

DeafHear Advocacy & Service Provider for Deaf and Hard of Hearing People: <http://www.deafhear.ie>

Deaf Sports Ireland: <http://www.deafsportsireland.com>.

Inclusion Ireland Changing Places WC Information: <http://www.inclusionireland.ie/changing-places-ireland/>

Section 3 Information and Communication

National Guidelines on Accessible Health and Social Care Services: <https://www.hse.ie/eng/services/yourhealthservice/access/NatGuideAccessibleServices/part1.html>

Providing equality disability training to staff: <http://nda.ie/Resources/Accessibility-toolkit/Provide-disability-equality-training-to-staff/>

Customer Communications Toolkit for the Public Service - A Universal Design Approach National Disability Authority Centre for Excellence in Universal Design: http://publicservice.universaldesign.ie/media/NDA_Universal_Design_Public_Service_Toolkit.pdf

Making Communication Accessible for All: <http://www.inclusionireland.ie/sites/default/files/attach/event-notice/1527/making-communication-accessible-all.pdf>

Information for All - European standards for making information easy to read and understand: <http://www.inclusionireland.ie/sites/default/files/attach/book-page/1436/european-easy-read-standards.pdf>

Touch Mapper: <https://touch-mapper.org/en/>

DESSA, the Disability Equality Specialist Support Agency: <http://www.dessa.ie>

United Nations Convention on the Rights of Persons with Disabilities: <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

Section 4 Trails, Greenways & Public Parks

Sport Ireland Trails publications: http://www.irishtrails.ie/Sport_Ireland_Trails/Publications/Trail_Development/Classification_Grading_of_Recreational_Trails.pdf

Sport Ireland Trails publications, Management Standards Access: http://www.irishtrails.ie/Sport_Ireland_Trails/Publications/Management_Standards_Access.pdf

Gate Styles: <https://centrewire.com/product-category/pedestrian-and-mobility-access-gates/>

Playgrounds: <http://www.playireland.ie>

How does nature attack our wellbeing? <https://www.takingcharge.csh.umn.edu/enhance-your-wellbeing/environment/nature-and-us/how-does-nature-impact-our-wellbeing>

Section 5 Beaches

Boardwalk design/construction: <https://kebony.com/en/blog/boardwalk-decking-construction-and-design-ideas/>

Beach accessible equipment: <http://accessrec.com/beach-access-mat>

Playgrounds: <http://www.playireland.ie>

Section 6 Waterways

Gate Styles: <https://centrewire.com/product-category/pedestrian-and-mobility-access-gates/>

Guide to the Design of Accessible Angling Stands - Inland Fisheries Ireland: <https://www.fisheriesireland.ie/Angling-Information/accessible-angling-stands.html>

Venture Outdoors Creating Healthy Communities Toolkit to Success - Making Outdoor Activities Accessible (2012): http://www.outdoorrecreationni.com/wp-content/uploads/2012/04/Community-Toolkit-to-Success-Writing-Successful-Funding-Applications_ORNI-2012.pdf

The Wheelyboat Trust: <http://www.wheelyboats.org>

Irish Water Safety: <http://www.iws.ie/boating/personal-flotation-devices.327.html>

Fishing in Ireland: <http://www.fishinginireland.info/coarse/disabled.htm>

Canoeing Ireland: <https://canoe.ie/events-2/blueway-your-way/>

Therapy World – Swim safety equipment: <http://www.therapyworld.org.uk/buoyancy-aids-6-c.asp>

Appendix 4 NCBI Recommendations for signage

Summary: This section provides information on how to maximise the benefit of signage for people who are blind or vision impaired

1. Locate signs where they are clearly visible.
2. A person with low vision may be able to read a sign if they can approach the sign for close-up viewing. Wall-mounted signs are ideal. Signs should be placed at eye level. The optimum height for viewing at eye level is 1700mm above floor level.

N.B.: Compromise height range for signage, especially tactile signage, agreed with the Irish Wheelchair Association: centre line of sign to be situated at 1400 mm above floor level.

3. Position signs where the reader will not obstruct circulation paths.
4. Signs that are projecting or being suspended from the ceiling must be positioned above head height at 2200mm from floor level. Although it is important that the sign does not create a head height obstacle, it is equally important that the size of the lettering increases in proportion to the distance from the reader.

Letter Height for Direction Signs

The readability of a sign will be influenced by its position, size, viewing distance and colour and contrast between the lettering and background. As the distance between the sign and reader increases, the size of the lettering must increase proportionately.

Close-up reading

For wall-mounted information signs, where a reader can get up close to the sign, a minimum letter height of 25mm is recommended.

Medium range reading

For identification signs in reception areas or directional signage in a building, a minimum letter height of 100mm should be used. The greater the distance between the sign and the reader, the larger the letter height.

Reading distance of 5 metres

Best letter height 290mm

Reading distance of 4 metres

Best letter height 240mm

Reading distance of 3 metres

Best letter height 180mm

Reading distance of 2 metres

Best letter height 120mm

Reading distance of 1 metre

Best letter height 60mm

In general, a minimum letter height of 150mm is recommended at building entrances or for house numbers.

1. Colour and contrast: Black on white or white on black provide maximum contrast. When using colours, tones are more important than colours. Some people have difficulty differentiating between colours. Use very light tones against very dark tones.
2. For very large text, negative text is best. (Light colour on dark background)
3. Sign lettering should use upper and lower case letters, as words retain a shape for easy reading. Letters used should be plain (sans serif). Arial, Helvetica, Futura, Avant Garde, Sabon, Bembo, Century Schoolbook, Akzidenz Grotesque or Baskerville are good choices of lettering typefaces.
4. A sign must be visible in daylight and at night. When a sign is illuminated, the light source must be shielded from the viewer to prevent glare. The surface of the sign should have a matt finish to reduce reflection and glare.
5. If a wall-mounted sign is positioned within reach, Braille and tactile letters should be used, with the tactile letters positioned 1700mm above floor level. The letters should be embossed, not engraved. Letters should be raised 1.5mm and the edges of the raised characters should be slightly rounded. The stroke width of each character should be 1.5–2mm for a 15mm letter.
6. Braille should be positioned as near to the bottom left corner of the sign as possible, close to the edge of the sign, with a semi-circular nick (not sharp-edged) cut out of the edge of the sign to indicate where the Braille begins. A raised semi-circle may be used, instead of a cut-out semi-circle. Braille readers are taught to slide a finger down the left edge of a sign, to check if Braille is provided.

Room numbers

Position room number signs and names on the wall adjacent to the door handle and not on the door to avoid the door being opened whilst being read by touch. The top of room number signs should be at 1600mm from floor level.

Lifts

- Floor story numbers on signs in lifts need to be a minimum of 100mm in height and sited between 900 and 1200mm above the car floor.
- Colour and contrast are of the utmost importance. Use negative text for the lift buttons so that the controls can be easily distinguished from their background. The emergency button should be easily identifiable, using colour, Braille and tactile features.
- Lift control and call buttons should also have tactile raised characters that are repeated in Braille. The characters should be raised with a minimum of 1.5mm from the button face and be a minimum of 1.5mm high.
- Call and control buttons should require a light push down pressure so that the person knows that they have pressed the button.
- Call and control buttons should provide confirmation that the button has worked, for example, visual output where the button illuminates.

Conventions for colours and shapes help to communicate information effectively:

- Yellow triangles with the symbol in black indicate a potential hazard.
- Green rectangles indicate a safe condition, for example, EXIT. Text should be white on a green background or vice versa.
- Red circles indicate prohibition and blue circles indicate an action to be taken, for example, 'Keep Door Shut'. The symbol should be white on the blue background.

Tactile sign suppliers

- AD DESIGN: Unit A9, South City Business Park, Whitestown Way, Tallaght, Dublin 24.
<http://www.addesign.ie> | Tel: 01 4524152
- Applied Signs <http://www.appliedsigns.ie>
- Braille Signs <http://www.braillesigns.ie>
- Clark Signage, Blueberry Gallery, Main Street, Patrickswell, Co. Limerick. Tel: 061 215010
Email: hello@blueberrygallery.com
- CSI Manufacturing Limited, 5 Red Cow Interchange Estate, Turnpike Road, Ballymount, Dublin 22
<http://www.csionline.ie> | Tel: 01 464 1488 | Email: sales.csi@printnet.ie

- Cuspal Signs, Greenhills Centre, Greenhills Road, Dublin 24 www.cuspal.com | Tel: 01 463 4400
Email: sales@cuspal.com
- Eolas Signs, Unit A, 37/38 Academy Street, Navan, Co. Meath | Tel: 046 907 2840 | Mobile: 087 250 1041
Email: philip@eolassigns.com
- Management Graphics <http://www.managementgraphics.ie>
- Nameplate and Sign Services, Jamestown Road, Inchicore, Dublin 8 | Tel: 01 453 2659
- Solas Data, Kiemar House, Stranakill Road, Sunday's Well, Cork | Tel: 021 302511
- Wayfinding Signs Ireland: Unit A9, South City Business Park, Whitestown Way, Tallaght, Dublin 24.
<http://www.wayfindingsigns.ie>. | Tel: 01 4524152

Appendix 5 Publication Team

Project lead

Valene Ryan, *Great Outdoors - A guide for accessibility* Coordinator, Irish Wheelchair Association.

Editorial Team

Access Department, Irish Wheelchair Association.

Dolores Murphy, Access Advisory Service, Irish Wheelchair Association.

Bridget Boyle, Access Advisory Service Irish Wheelchair Association.

Rosarie Davy, Occupational Therapist, Irish Wheelchair Association.

Contributors

Nicky Hamill, Director of Sport, Irish Wheelchair Association.

Cormac MacDonnell, Trails Manager, Sport Ireland.

Paul Ryan, Sports Development Officer, Irish Wheelchair Association.

Doug Corrie, Trails Department, Sport Ireland.

Mary Corry, Inclusive Participation Coordinator, CARA.

Clodagh Duffy, Recreation Manager, DMP, Coillte Forest | Coillte.

Fiona Kelty, Access & Awareness Coordinator NCBI.

Editor

Susan Dennehy, Independent Editor.

Design

Garreth Greene, Senior Graphic and Web Designer, Irish Wheelchair Association.

Public Relations

Communications Department, Irish Wheelchair Association.

Anne McCarthy, Public Relations, Sport Ireland.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Handwriting practice lines consisting of 24 horizontal dotted lines.

Handwriting practice lines consisting of 24 horizontal dotted lines.

Handwriting practice lines consisting of 20 horizontal dotted lines.



Áras Chúchulainn, Blackheath Drive, Clontarf, Dublin 3, D03 AW62
T 01 818 6400 | F 01 833 3873 | E info@iwa.ie



www.iwa.ie



SPÓRT ÉIREANN
SPORT IRELAND