Building for Everyone:

A Universal Design Approach

Planning and policy

9

Centre for Excellence in Universal Design

Creating an environment that can be used by all people, regardless of their age, size, disability or ability.

The National Disability Authority's Centre for Excellence in Universal Design has a statutory role to promote the achievement of excellence in universal design in:

- the design of the built and external environment
- product/service design
- information and communications technologies (ICT)
- the development and promotion of standards
- education and professional development
- raising awareness of universal design

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Building for Everyone

Booklet 9 - Planning and policy

The other booklets from the
Building for Everyone series:

Booklet 1 - External environment and approach

Booklet 2 - Entrances and horizontal circulation

Booklet 3 - Vertical circulation

Booklet 4 - Internal environment and services

Booklet 5 - Sanitary facilities

Booklet 6 - Facilities in buildings

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9.0 Objectives

The guidance in this booklet promotes the concept and philosophy of universal design and encourages developers, designers, builders and building managers to be innovative and think creatively about solutions that meet the needs of all building users.

The objectives of the series of booklets are to:

- identify and promote best practice with regard to universal design of the built and external environment
- provide best practice guidelines while recognising existing regulations in Ireland
- provide guidelines that are usable by and accessible to the target audience
- promote the achievement of universal design in Ireland

This booklet aims to:

- clearly demonstrate how the concept of universal design can add value to the planning process in Ireland
- provide guidance, information and examples of good practice, signposting other relevant literature and useful contacts
- explain the role of planning authorities in delivering universally designed environments, and
- explain how the approach to consultation could be improved in support of these processes

9.1 Introduction

This booklet is part of the series "Building for Everyone – A universal design Approach," which aims to provide practical guidance on the universal design of buildings, places and facilities.

Universal design places human diversity at the heart of the design process so that buildings and environments can be designed to meet the needs of all users. It therefore covers all persons regardless of their age or size and those who have any particular physical, sensory, mental health or intellectual ability or disability. It is about achieving good design so that people can access, use, and understand the environment to the greatest extent and in the most independent and natural manner possible, without the need for adaptations or specialised solutions (see full definition in **Appendix A1**).

Why universal design?

People are diverse - some are left-handed and some right-handed - and vary in their age, size and functional capacities. Illness or disability (whether temporary or permanent) can also affect characteristics such as a person's mobility, dexterity, reach, balance, strength, stamina, sight, hearing, speech, touch, knowledge, understanding, memory, or sense of direction. A reference list with these booklets indicates some of the key differences in human abilities that should guide the design of buildings and of outdoor places. (See full description of Human Abilities in **Appendix A2**).

People of diverse abilities should be able to use buildings and places comfortably and safely, as far as possible without special assistance. People should be able to find their way easily, understand how to use building facilities such as intercoms or lifts, and know what is a pedestrian facility, and know where they may encounter traffic.

Given the wide diversity of the population, a universal design approach, which caters for the broadest range of users from the outset, can result in buildings and places that can be used and enjoyed by everyone. That approach eliminates or reduces the need for expensive changes or retro fits to meet the needs of particular groups at a later stage.

It is good practice to ascertain the needs of the range of expected users as early as possible, and to check the practicality and usability of emerging designs with a diverse user panel.

Designing for one group can result in solutions that address the needs of many others. For example:

- level entry (Step-free) entrances facilitate not just wheelchair users but also people with buggies; people with suitcases or shopping trolleys; people using walking or mobility aids; and people with visual difficulties
- larger toilet compartments provide easier access to wheelchair users; those with luggage or parcels; parents with pushchairs or accompanying small children; those using walking or mobility aids; and larger-sized people
- clear, well-placed signage that uses recognised symbols or pictograms helps people with reading or cognitive difficulties, and those whose first language is neither English nor Irish

Sometimes one solution will not suit all and a range of options will need to be provided. For example:

- providing both steps and a ramp where there is a change in level
- providing parking ticket machines that offer slots at different heights to facilitate use at standing height, sitting height, and by people of small stature

This series of booklets is for architects, engineers, planners, developers, designers, building contractors, building workers, building managers and others involved in designing, commissioning and managing buildings and their surroundings. It provides guidance on a universal design approach to all new buildings, and the use and adaptation of existing environments.

Those who commission, design, construct or manage any part of the built and made environment also have a duty of care to adhere to relevant legislation and regulations including equality legislation, building regulations and health and safety regulations.

The guidance is based on a best practice approach, drawing on up-to-date international best practice, guidelines and standards; previous guidance by the National Disability Authority; and extends beyond disability access matters to incorporate a universal design approach. The series is fully compatible with Part M (2010) of the Building Regulations and associated Technical Guidance Documents related to Part M.

A disability access certificate is required for new buildings other than dwellings (including apartment buildings) and certain other works (as set out in Article 20 D (1) of SI 351 of 2009) to which the Requirements of Part M of the Building Regulations apply, which commence or take place on or after 1 January 2012. Further details on these and other relevant standards, codes of practice, and professional codes of practice are listed in **Appendix A3** Further Reading.

The detailed guidance provided here does not represent the only possible solution. Designers may come up with other ways to meet a diversity of users. New materials and technologies that emerge may open up further possibilities of accommodating the diversity of the population.

Checklists are provided throughout the series and while they provide a summary of main considerations and technical criteria, they should not be regarded as a substitute for the main text or an exhaustive list.

A comprehensive **index** is also available for the suite of booklets.

The Building for Everyone series is available online at **www.nda.ie** and **www.universaldesign.ie**. Electronic links are provided to relevant sections in the different booklets. As standards and requirements develop, the electronic versions of these booklets will be updated.

The electronic version is produced in accessible PDF format, in accordance with the Web Content Access Guidelines 2.0. If you have any difficulties in this regard or require the document, or particular sections, in alternative formats, please contact the Centre for Excellence in universal design at the National Disability Authority, **info@ceud.ie** or (01) 6080400.

The purpose of this guidance booklet is twofold. Firstly, it aims to provide the planning profession in Ireland with greater awareness of the value of universal design in shaping of our built and natural environment. Secondly, it aims to provide guidance on how to deliver, promote and achieve universal design within the planning system. It demonstrates how universal design can be integrated into the planning process through careful consideration of the context and place, and well-drafted policies in conjunction with a collaborative approach to design.

Whilst this booklet features project examples, it does not provide technical guidance on design specifications. Technical guidance on design specifications can be obtained from other booklets in the Building for Everyone series, which are referred to throughout this document.

9.2 Terminology

Accessible – Facilities that are designed to be accessible and understandable to all users of a building or external environment.

Building – A permanent or temporary structure of any size that accommodates facilities to which people have access.

Building user – A person regardless of age, size, ability or disability using facilities in a building or associated external environment.

Settlement hierarchy –A way of arranging settlements into a hierarchy based upon their population or some other criteria

Speed Tables – Traffic calming feature normally installed as part of a traffic calming scheme that helps to reduce vehicle speeds by introducing modest up-and-down changes in the level of the street, thereby requiring drivers to decelerate. They are the same width as the road and rise to meet the grade of the pavement, providing safe and comfortable crossings. One benefit of speed tables is that people cross at the point where drivers decrease speed.

9.3 Why is Universal Design Important for Planning

9.3.1 The importance of universal design

Universal Design is a philosophy as much as a design code. It is a way of thinking, a mindset that is fully inclusive of all aspects of what the Planning and Development Act 2000 refers to as 'proper planning and sustainable development'. It involves a considered approach to place making based on an integrated assessment and understanding of the context and user needs. Universal Design permeates the principles that underpin our national and regional planning priorities and can therefore add value at all levels in our planning system creating responsive, functional, inclusive and sustainable cities and towns.

9.3.2 Universal design in Ireland

Estimates of the proportion of people with a disability in Ireland range from 9.3% (Census 2006) to 17-20% (National Disability Survey 2006). The proportion of the population in older age groups is rising, and the incidence of disability rises with age. Maintaining functional capacity over the life course in increasingly important. While there are no statistics covering size at the moment there is evidence of a significant increase in the levels of obesity.

In Ireland, sustained economic growth and development has expanded the urban capacity of our towns and cities. Whilst there have been some well-considered development plans and strategies delivered, the majority have resulted in environments that are difficult for someone who is not able-bodied or not a car driver. The implications of poor design are the creation of extensive suburbs with little or no access to public transport, inadequate supporting community facilities. The result is a built environment that is frequently characterless and designed in a way that fails to recognise or meet the needs of all of its users and their changing needs over time. The intention of this booklet is to guide on all considerations and to improve all aspects of planning.

9.3.3 Universal design is important for planning for the following reasons

- It helps us avoid bad development and help us to deliver genuinely sustainable solutions for communities
- It helps us to create better places - for all abilities and all age groups - equitable, inclusive, participative and accessible
- It avoids the need for wasteful and inefficient retro-fitting of solutions, as a these matters should be considered at the outset of the design process
- It informs genuinely integrated strategies for land-use, transportation and urban design
- It creates greater efficiencies for public infrastructure investment and produces better economic development models
- It widens the audience and market for well considered development projects enhancing commercial viability
- It helps provide an environment in which people can age and retain their independence

Image 9.1. Example of crossing point.

9.4 Development Plans

9.4.1 Introduction

The principles of universal design should be considered at every level of planning, from macro-level strategic planning and the National Spatial Strategy (NSS), to Regional Planning Guidelines (RPG), to Development Plans, Area Plans and development control. Departmental officials and Ministers develop overall strategy, regional planning bodies develop regional guidance, local authority officials, and councillors prepare development plans and area plans, and local planners apply development control.

Incorporating these universal design principles at each level of planning can make for a hierarchy of settlements that accommodate a range of services and facilities that are accessible to all.

It is also important to incorporate universal design principles into service planning, for example for housing, shopping or transport. An integrated approach can deliver more sustainable solutions.

The focus of this booklet is at the operational level of the planning system, which consists of:

- making development plans and local plans
- implementing the plan through planning permission (unless exempted)
- planning enforcement

In addition, the regional authorities have responsibility for drawing up and implementing Regional Planning Guidelines (RPGs) to support strategies for regional development.

The implementation of the physical planning system in Ireland is the responsibility of the local planning authorities, in other words, local councils. At this level, the planning system primarily consists of the preparation of a development plan, development control (i.e. the planning application process) and enforcement.

Table 9.1 Roles of planning authority and public in Irish planning		
Aspect	**Planning Authority - (Primary Role)**	**Role of Public**
Development Plan	Elected members	Consultation - public must be consulted before the plan is adopted
Development Control (planning application / permission process)	Manager	Comments and objections: individuals are entitled to comment on / disagree with development proposals at planning application stage. Individuals may also appeal decisions to An Bord Pleanála
Enforcement	Manager	Objections - individuals can notify the local authority about, or take action through the courts against, unauthorised development

9.4.1.1 Development plans and local plans

The Development Plan contains the objectives and plans for land use and management in the Council's functional area. It consists of a Written Statement and maps which set out the zoning for different areas. The Development Plan guides decisions on planning applications. Local Plans may set out detailed objectives for a smaller area, such as a particular town or city district, or a developing area.

9.4.1.2 Development control

All development, unless specifically exempted, needs planning permission before the development proceeds. Dealing with planning applications is called Development Control. This requires all development proposals (such as proposals to build on or change the use of land) to be checked against the policies and objectives specified in the Development Plan to ensure that the proposal conforms to the aims and intentions set out in the plan.

9.4.1.3 Enforcement

Planning Enforcement is in effect this is the policing aspect of planning, and may cover new building, extensions or alterations, and changes of use. Enforcement involves checking that all development actions, have obtained planning permission and are therefore legal or authorised, and taking appropriate action where there are breaches.

9.4.2 Consultation on the content and scope of plans

Development plans should reflect the needs and issues of an area and help to initiate the design process from the bottom up. Primarily, the objective of the plan should be to ensure that places function appropriately in the context of the needs of all members of that community.

In producing plans in a transparent and inclusive manner, consultation should span the diversity of the community to which the plan applies, both at the start of the plan making process and at the various stages of the review. Good practice community involvement embraces a wide range of activities guided by the purpose for which the consultation is being undertaken and who is being consulted. Different methods and techniques should therefore be considered according to different sections of the population.

The approach to consultation within the planning process should focus on information and participation.

Information – providing information in a timely and accessible way

Participation – listening to and helping people to express their views at the proper time and in the proper forum at a point where these views can be taken on board.

Effective consultation with representative groups, their advocates and local access officers (see **Section 9.5.4**) is important so the plan or proposal is centred on user needs. Existing networks that represent the interests and concerns of groups within the community provide a means of obtaining a range of perspectives and can provide guidance on the most appropriate consultation methods in addition to providing access to existing guidance on a particular aspect of the built environment.

In providing opportunities for participation, specific types of consultation methods, such as focus groups or work shops, should be considered for smaller numbers of people. These approaches can deliver a more effective means of providing information and enabling feedback. More generally, for all consultation exercises, information and documents should be provided in accessible locations, at convenient times and in formats that allow scalability to larger print. **Table 9.2** sets out key questions applicable to consultation on development plans.

Table 9.2 Key questions for consultation on development plans
Has consideration been given to all sections of the community during the development plan consultation?
Have adequate measures been used to engage with 'hard to reach groups'?
Has contact been made with representative organisations?
Have public consultation events been organised at accessible locations?
Is plan documentation available at accessible locations and in accessible formats?

9.4.3 Consultation events

The format of consultation events should reflect the needs of all potential key stakeholders. The level of preparation will depend on the type of meeting or event being catered for, and in the case of open meetings, early consideration of participants' needs, which can allow for effective adjustments to be made, will be required. Specific considerations relating to appropriate venue attributes are set out in the Venue Checklist included in **Appendix 7**.

It is important also to ensure awareness of participants' needs. For example the National Disability Authority's (NDA) *Ask Me: Guidelines for Effective Consultation with People with Disabilities* contains advice on consultation with people with disabilities in addition to dealing with the traditional barriers to effective consultation.

9.4.4 Content of development plan

Appropriate universal design policies and objectives tailored to meet the particular needs of an area should be included at all levels of the development plan. Both the written statement and zoning objectives map provide opportunities to incorporate universal design principles within the development plan.

In preparing the written statement, an understanding of the needs of the community will also emerge from analysis of relevant studies and evidence. Planners should be aware of the role that these studies, such as social infrastructure audits, can play in creating more supportive and universally designed environments. Social infrastructure audits identify the provision of social, community and recreational infrastructure in a defined area. Through an assessment of the current and future infrastructure needs which the policies in the written statement can address.

Within the planning policy framework there is an increasing emphasis on design and the role that good design guidance can play in creating successful places. A range of urban design principles are already established as part of the *Urban Design Manual, A Best Practice Guide*. A successful place depends on the consideration of a diverse range of human needs as well as the established range of urban design concerns. Principles of universal design should underpin and be integrated with urban design policies and guidance incorporated into development plans.

Design as a process is just as integral to the qualities of the finished product as the policy framework. Policies and objectives should therefore introduce procedural considerations that promote familiarisation with and implementation of universal design practice. These considerations can include

- Policies that demonstrate universal design considerations with respect to a particular site or area
- Requirements for the planning applicant to have regard to appraisal of universal design issues or other information as is contained within site development briefs
- Requirements for the applicant to produce Access Statements (See **Appendix 6**)

Guidance on incorporating universal design principles into the following thematic sections of the written statement are given detailed consideration in the remaining sections of this chapter:

- Creating universally designed neighbourhoods, the importance of mixed use
- Drafting housing policies
- Drafting transport and movement policies
- Drafting economic development policies
- Drafting retail policies
- Drafting public realm and amenity policies
- Improving wayfinding and signage
- Drafting heritage policies

9.4.5 Creating universally designed neighbourhoods; the importance of mixed use

Mixed-use developments tend to deliver better integrated neighbourhood planning solutions than single-use developments. They can make a positive contribution to the vitality and attractiveness of neighbourhoods, play a role in extending housing choice and promote sustainable modes of transport.

The pattern and density of urban development also has a major influence on travel patterns and Plans should encourage high movement activities and mixed use areas at locations of maximum accessibility to public transport. The concept of

mixed use is closely related to that of transport and movement, which is discussed in **Section 9.4.11**.

Development plan zoning objectives can enable a mix of uses and activities on an area basis. One example of this approach is demonstrated by the Adamstown Strategic Development Zone (SDZ), South County Dublin highlighted in **Image 9.2**. The Adamstown Planning Scheme, 2003 (as amended by variation), sets out a policy framework that has delivered an integrated mix of uses at neighbourhood scale. Please see www.adamstown.ie for further information.

The *Adamstown Access for All Strategy* was also developed as a design guide supporting implementation of the SDZ. The Strategy promotes the provision of adequate pedestrian facilities to provide ease of movement for people including those with disabilities, children, families, older persons, people with mobility difficulties and the design and provision of accessible car parking facilities and associated infrastructure. It was developed through consultation with representative groups and provides a useful mechanism for delivering inclusive access and universal design objectives.

9.4.6 Neighbourhood planning

Image 9.2 Adamstown strategic development zone.

Demonstrates universal design by:

- providing amenities, employment and services that meet design requirements to allow people of all ages, sizes, abilities and disabilities to work, shop and enjoy recreation locally or to travel with ease.
- facilitating a mix of house types, sizes and tenures that will allow all sections of society to remain part of the community and use its facilities throughout the lifecycles.
- providing alternatives to the private car through the provision of infrastructure to include transport interchange, dedicated bus routes, a network of pedestrian and cycle links and the provision of seating for people to rest at appropriate intervals.
- being close to public transport and local services.
- including grade densities.
- incorporating permeable pedestrian and cycling environment.
- providing accessible open space for all kinds of activity.
- overcoming the issue in many housing estates of the design and provision of cul-de-sacs making distances to bus stops / shops very long for older people and people with mobility difficulties.

Given the advantages of mixed use neighbourhoods in terms of the proximity of facilities and services that can meet people's day to day needs, managing the overall quality of these areas should focus on maintaining viability, enhancing permeability and improving the quality of pedestrian routes and spaces.

Incorporating community facilities within neighbourhood centres and mixed use areas is also an essential part of neighbourhood planning. Delivering these facilities can provide the opportunity to address universal design principles. This is demonstrated by the Primary Care Centre shown in **Image 9.3**, which among other features, incorporates level access and provides necessary pictorial, verbal, tactile information to enable safe and comfortable use for all.

9.4.7 Community facilities

Image 9.3 An example of community facilities at a primary care centre

Demonstrates universal design by:

- incorporating setting down points.
- ensuring level access from the street that is suitable for wheelchairs and buggies.
- installing a series of counters at different heights.
- using an automatic door.
- locating fixtures and fittings at suitable heights.
- using colour contrast.
- providing signage for orientation and guidance and includes Braille notation.
- fitting a number of hearing loops.

9.4.8 Policy statements on housing

The aim for all new housing and, wherever possible, housing conversions and refurbishments should be to deliver homes that are universally designed and easily adapted to meet the changing needs of occupants over time. This will provide greater choice in terms of where they live, and will enable people to remain in their own homes as their needs change. By incorporating features into dwellings that enable adaptation, and with careful consideration as to the layout and provision of adequate space for people to manoeuvre, dwellings will be convenient for as broad a range of households and visitors as possible.

The *Sustainable Residential Development in Urban Areas Guidelines*, refer to the importance of universal design and state that the development of sustainable neighbourhoods should be guided by 'considering people's diverse needs and abilities throughout the design process, which reflects the life cycle approach, and environments that meet the needs of all can be achieved.'

With regard to access to and within buildings, the Guidelines advocate adaptability, stating that 'Circulation within housing layouts, including access to individual buildings, should have regard to the varying needs of occupants over their lifetimes, including needs associated with mobility difficulties and the normal frailty associated with old age.'

The *Urban Design Manual* accompanying the Guidelines (DoEHLG, 2009), refers to 'inclusivity' and 'adaptability' among a number of criteria that are designed to be used at pre-application meetings, in the assessment of planning applications and at appeals. **Tables 9.3** and **9.4** list relevant indicators with respect to these criteria which can assist in evaluating residential proposals in these terms.

Table 9.3 Indicators of inclusivity
Inclusivity - How easily can people use and access the development?
New homes meet the needs of a range of people and households.
Design and layout enable easy access and use by all.
There is a range of public, communal and / or private amenity spaces and facilities for children of different ages, parents, people with disabilities and older people.
Areas defined as public open space that have either been taken in charge or privately managed will be clearly defined, accessible, useable and open to all.
New buildings present a positive aspect by avoiding unnecessary barriers.

Table 9.4 Indicators of adaptability
Inclusivity - How easily can people use, and access the development now and in the future?
Designs demonstrate good practice lessons, such as the knowledge that certain house types are proven to be ideal for adaptation.
The homes are energy-efficient and equipped for challenges anticipated from a changing climate.
Homes can be extended without ruining the character of the types, layout and outdoor space.
The structure of the home and its loose fit design allows for adaptation and subdivision, such as the creation of an annex or small office.
Space in the roof or garage can be easily converted into living accommodation.

9.4.9 Promoting lifetime homes

The concept of lifetime homes was developed by the Joseph Rowntree Foundation (**See Appendix A5**). It proposed 16 design criteria ranging from car parking

width, approaching gradients, entrances, bathroom layouts etc., which have been successfully incorporated into a number of new homes, particularly in the UK.

Examples of Irish guidance and policy documents where the concept of "Lifetime Homes" is increasingly being acknowledged includes *Variation No. 21 of the Dublin City Development Plan 2005 – 2011* which refers to the need for universal design techniques to be implemented as a pre-requisite to an inclusive society. The Variation acknowledges international best practice regarding adaptable and lifetime homes and states the Council will attempt to encourage and implement such standards with regard to access.

The *Wexford County Development Plan 2007 – 2013* also incorporates an approach to addressing accessibility and housing for all and highlights the importance of providing 'lifetime homes'. Standards within the plan require at least 20% of dwellings in new housing estates of 10 dwellings or more to be adaptable to providing accommodation for people with disabilities. The plan also sets out technical standards for the design of such dwellings.

9.4.9.1 New draft Lifetime Homes standard under development in the UK

'Lifetime Home, Code of Practice - DD 266: 2007 Design of Accessible Housing' is a 'Draft for Development' that is based on work by the British Standards Institution (BSI). It extends the thinking behind Lifetime Homes by providing a regulatory framework that can be applied to all new housing development in the same manner as Part M of the Building Regulations does in Ireland. It is important to note that the publication of DD 266 does not render the applicability of the concept of lifetime homes redundant as the illustrative nature of the sixteen point criteria is the first step in embracing the concept of adaptable homes.

The publication of DD266 extends the work on lifetime homes initiated by the Joseph Rowntree Foundation with its 16 key design elements (See **Appendix A.5**).

9.4.10 Sample housing policy text

The following model text is suggested for inclusion in the housing chapter of the written statement of development plans. Housing development should be delivered as part of a neighbourhood planning approach that integrates land use and movement. Proposed housing should be located within walking distance of

public transport facilities and essential local services. All new housing, housing conversions and refurbishments where possible should be Universally Designed for all regardless of age, size, ability or disability and designed to meet the changing needs of occupants. For applications for more than five units, proposals should be required to demonstrate:

- a mix of tenures
- useable and accessible play for all
- safe and direct links to nearby schools and neighbourhood centres
- units that are designed to lifetime homes standards
- legibility and sense of place
- integrated local services, where required
- consideration of Home Zones, where appropriate and safe for vulnerable road users. See **Section 9.4.25** Residential streets – home zones

Where duplex housing is included within the unit mix, provision should be made for people with mobility difficulties through the provision of accessible and adaptable habitable rooms at ground level.

9.4.11 Policy statements on transport and movement

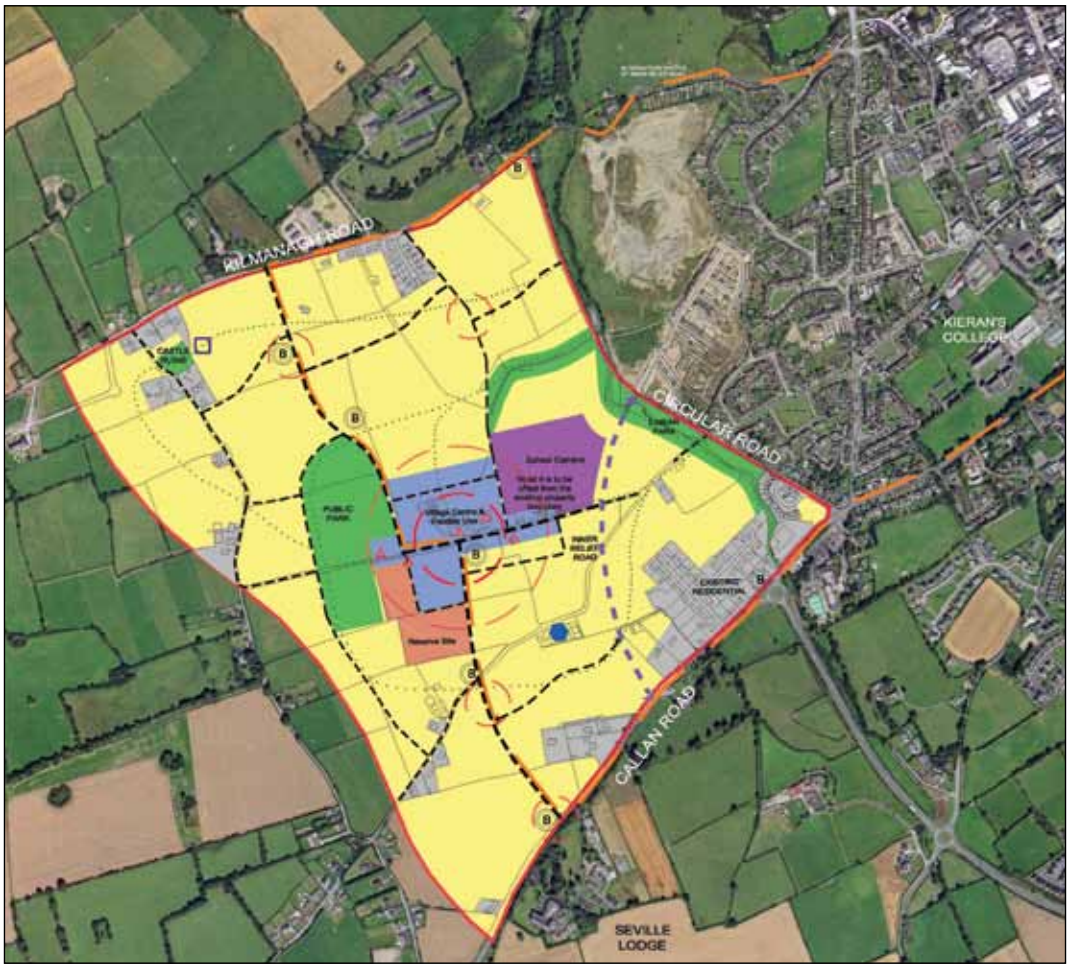
Well-planned environments should have easy access to public and private transport systems, and transport points such as bus stops should be within easy distance for people. Universal design is not just about access to individual buildings, it is about how easily people can get around and to where they want to go. Key factors in creating an accessible environment are the location of services and of good transport links. Safe routes between key places that are designed to be easy to use by all individuals are another essential feature.

Inadequacies in transport provision (either in terms of access to the system itself or the level of service provided by the system) may create barriers that limit individuals and groups from fully participating in a range of activities, such as employment, education, health care and shopping. The loss or lack of mobility can also cause isolation and reduce an individual's independence, which can lead to poor health.

There are also sections within the community that may not have access to a car, so local services and a public transport system that is appropriately designed, needs to be provided in close proximity to homes. Universal design planning can play an important role at the strategic scale in assessing systematically the distances from neighbourhoods to places of work, healthcare facilities, education, convenience retailing and social facilities.

A good example of the integration of public transport infrastructure in layout and design is demonstrated by the *Kilkenny Western Environs Local Area Plan 2004* (**Image 9.4**), which considers access to public transport infrastructure and walking distances. *The Craughwell Local Area Plan 2009 -2015* (Galway County Council) also considers walking distances and identifies three walkbands in the village; a 200m and a 400m Village Core Walkband and a 200m Train Station Walkband. Policies within the plan seek to promote development and community facilities within these walkbands to ensure that these developments are accessible.

Image 9.4 Sustainable neighbourhood planning Kilkenny Western Environs local area plan.



9.4.12 Travel chain analysis

In assessing whether an urban environment is universally designed or accessible, the complete travel chain should be considered. At the macro level this would include:

- an individual's house
- the street
- access to the public transportation network
- provision within the vehicle itself
- the drop off point
- the destination building
- the interior of the destination building
- infrastructure - paths and the distance to transport points
- the room within which the intended function would take place.

At the micro level or in considering the universal design of the destination building within this network, this would include the:

- drop-off point
- approach
- entrance
- reception information
- lift or escalator or staircase
- upper lift lobby
- corridor
- internal door
- room
- Iitended function
- toilet
- return route
- exit

It is important that all elements of the travel chain are consistently accessible and easy to plan and follow for a journey to be possible. Route assessments, including consideration of the quality of the routes and distances between points in the travel chain, can be useful in establishing whether elements of the chain are inconsistent or poor. In assessing appropriate locations for seating, rest areas and designated parking areas, reference should be made to the recommended maximum distances without a rest included in **Table 9.5**.

Table 9.5 Recommended maximum distances without a rest

Mobility difficulties	**Distance (Metres)**
People with visual difficulties	150
Wheelchair users	150
People with ambulatory difficulties without walking aid	100
People using walking aid, e.g. Walking stick	50

9.4.13 Street design (road and footpath layout)

Road and footpath layout makes an important contribution to the creation of universally designed environments. In considering the approach to their design, reference should be made to the *Manual for Streets* (Department of Transport, UK, 2007), which recommends the consideration of:

- a user hierarchy which focuses on the needs of pedestrians
- the needs of people of all ages and abilities
- desire lines within movement networks
- the use of quality audits systems which demonstrate how designs meet objectives for the area

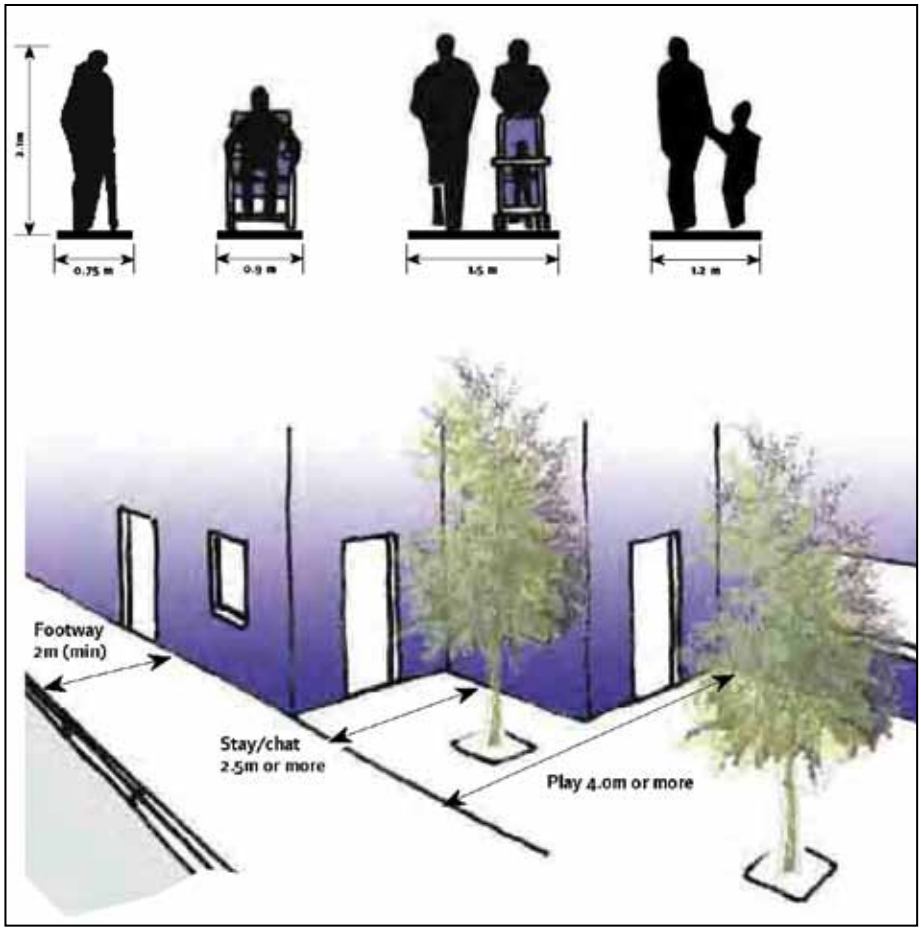
During the analysis of movement patterns within existing urban areas, provision for pedestrian users as part of this hierarchy should include:

- reducing traffic volumes
- traffic speed reduction

- re-allocation of road space to pedestrians
- provision of direct access at grade crossings (e.g. Dished footpaths)
- improved pedestrian routes on existing desire lines
- new pedestrian alignment or grade separation

The provision of appropriate footpath widths is particularly important in meeting needs of pedestrian users. **Figure 9.1** illustrates the recommended design parameters for footpaths and the provision of a minimum unobstructed width of two metres, from *Manual for streets* (UK) (MfS). Additional space should be considered where there is heavily trafficked streets, adjacent uses such as schools and shops and areas of high pedestrian flow.

Figure 9.1 Footpaths and Pedestrian Areas (MfS, 2007).

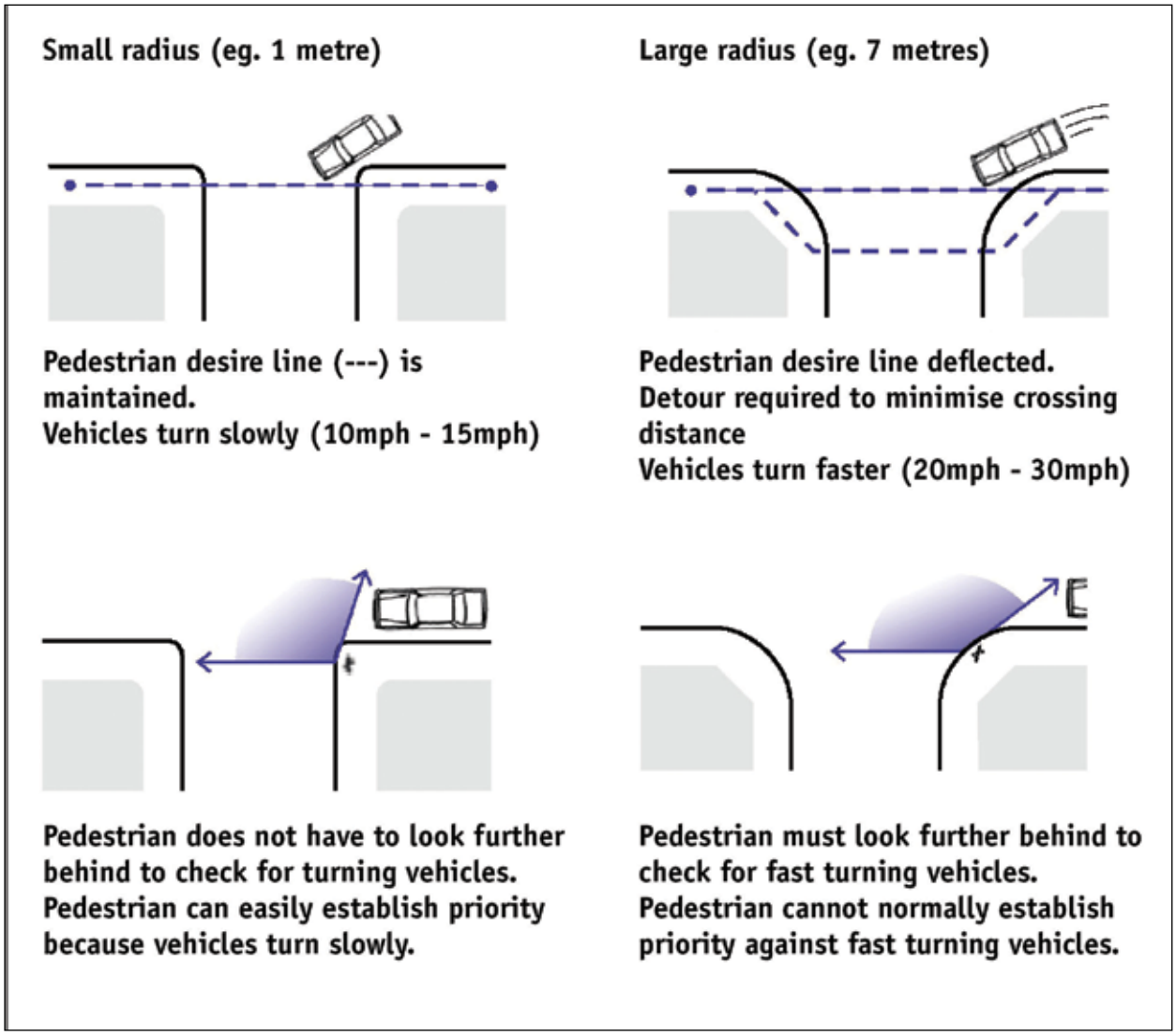


The quality of pedestrian routes can also be improved by maintaining pedestrian desire lines at side-road junctions. The size of corner radii as shown in **Figure 9.2** can either help or hinder pedestrian movement in this regard. In the case

of smaller corner radii, these can help to minimise the need for pedestrians to deviate from their desire line and shorten the journey to cross the road. For crossings, designers should avoid curved sections of kerbing as this can make it difficult for people with visual difficulties to orientate themselves before crossing. Matched dished kerbs at crossing points should be located at the opposite side of the road to enable users to cross the road efficiently and safely. The timing of pedestrian lights are important as some lights change immediately making it impossible for older people or people with mobility difficulties to cross the road safely.

Further information on universally designed pedestrian environments and transport infrastructure can be found within **Booklet 1: External environment and approach, Section 1.5**.

Figure 9.2 The effects of corner radii on pedestrians (MFS, 2007).



9.4.14 Car parking and set-down spaces

Provision of adequate and nearby car parking and set-down spaces is essential to ensuring accessibility to residential developments, town centres, recreational areas and other visitor locations. Within schemes, dedicated accessible car parking should ideally be located within 50 metres (*Inclusive Design*, Department of Transport (UK), 2005) of the facilities served by the car park or with reference to distance standards in **Table 9.5**. For designated accessible car parking spaces arranged either in a perpendicular or parallel layout to the path or pavement, sufficient space for a person to alight from a car and move safely around parked vehicles to an accessible pedestrian route should also be included.

Booklet 1: External environment and approach, Section 1.4.1 provides guidance on standards for the provision of accessible car parking. The guidance advocates the provision of four spaces in every 100, and one space for every 100 after for buildings not normally visited by the public. For buildings that the public are likely to visit the following standards should apply:

- 1 space within 5 – 25 spaces
- 3 spaces within 25 – 50 spaces
- 4 spaces within 50- 75 spaces
- 5 spaces within 75 – 100 spaces
- 3 spaces per 100 thereafter

A review of car parking standards in a sample of development plans spanning 2010 was undertaken to illustrate the application of standards in development plans. The survey found that the requirement for the provision of accessible car parking spaces ranged from 2% to 10% (**See Table 9.6**). A majority of the surveyed plans calculated the requirement as a percentage of the total car parking provision with additional policies relating to the location of spaces for people with disabilities. The Galway County Development Plan, as highlighted in **Table 9.6**, has incorporated the NDA recommended standard for accessible car parking.

Table 9.6 A sample review of car parking standards within development plans	
Development plans	**Requirements**
Roscommon County Development Plan 2008 – 2014.	2 – 5% of total car parking provision.
Dublin City Development Plan 2005 – 2011.	4% of total car parking provision.
Dun Laoghaire Rathdown Development Plan 2009 – 2015.	4% of total car parking provision.
Cork City Development Plan 2009 – 2015.	5% of total car parking provision.
Louth County Development 2009 – 2016.	10% of total car parking provision.
Galway County Development Plan 2009 – 2015.	1 space within 5 – 25 spaces.
	3 spaces within 25 – 50 spaces.
	4 spaces within 50 – 75 spaces.
	5 spaces within 75 – 100 spaces.
	3 spaces per 100 thereafter.

In cities and areas of high public transport accessible car parking facilities should be provided at a minimum standard of 5% or 6% of the overall provision. The number of spaces may need to be greater at facilities that specialise in accommodating people with disabilities.

9.4.15 Sample transport policy text

Planning has a significant role in promoting universal design as it seeks to influence the broad patterns of settlement and travel movement, and ensures that key services are sited in the most accessible and useable areas. Density, distance from facilities, and viability of public transport are all related. Proposals for new development are required to:

- ensure a reasonable choice of access by all modes of transport to new development
- provide opportunities for people to walk or cycle for work or leisure purposes
- consider and improve road safety with priority given for vulnerable road users including people with disabilities, children, older people and all other pedestrians and cyclists
- minimise the level of traffic growth and congestion on the strategic and local road network

9.4.16 Policy statement on economic development

Universally designed business environments will benefit both employees and employers by creating better work environments. A universal design approach can also help to satisfy legal requirements under the Equality Acts, by meeting the needs of customers and employees with disabilities. These acts have legal requirements preventing discrimination in the provision of goods and services to customers with disabilities, and preventing discrimination against employment of people with disabilities. Businesses are required to reasonably accommodate staff or customers with disabilities.

Detailed design considerations with respect to employment related development should ensure that there are accessible routes of travel, particularly from arrival points to the building entrance. The design of the internal environment should have regard to **Booklets 2** to **7** in addressing visual and auditory information, lighting, storage, seating and work space layout.

Waterford Institute of Technology, Health Science Building (**Image 9.5** incorporates a number of universal design features including automatic doors, wheelchair and stroller accessible entrances, designated parking areas and suitable routes for horizontal and vertical circulation. As an example of best practice, Waterford Institute of Technology also received the Environmental Accessibility Award for demonstrating commitment to employing people with disabilities.

Image 9.5 Example of access routes within a health science building. Note: No tactile strip at base of steps, the lack of contrasting nosings on the stairs and the general lack of colour contrast within this area.

9.4.17 Sample economic development policy text

The council will facilitate economic development that provides employment opportunities to all members of society including those of any age, size, ability or disability. To achieve this, it is the policy of the planning authority to:

- facilitate the provision of employment opportunities at strategic locations, working in partnership with development and employment agencies
- promote sustainable economic development within the administrative area along strategic public transport corridors
- support the re-use of brownfield sites that can demonstrate existing high levels of accessibility and connectivity and promote these locations for office based employment as part of mixed use development
- ensure consideration of needs for accessible and useable building and facilities is built-in from the outset through a universal design approach

- encourage the preparation of mobility management plans for employees' home to work transportation. The Design should take account of transport arrangements for the diversity of users
- in association with other agencies, community and voluntary groups encourage the development of community based enterprises, cooperatives, enterprise centres and starter units of a range of sizes for new and expanding businesses and firms and
- encourage the development of live-work units as part of mixed use developments where such accommodation can be provided without detriment to the amenities of adjoining residents

Image 9.6 Example of a sports centre.

9.4.18 Retail policy statements

Retail environments have a role to play in allowing people to meet their daily shopping needs and food requirements independent of access to private transport. *The Retail Planning Guidelines* (DoEHLG, 2005) acknowledge the role local convenience retail has in meeting the needs of older people, people with disabilities, and those who are poorly served by public transport and have no access to a car. Retail strategies and subsequent development plan policies provide a framework for ensuring that the vitality and viability of towns is maintained.

Beyond identifying settlements and accessible locations that will be the focus of additional retail provision, in most cases it will also be necessary to improve existing town centre environments. All retail premises and associated areas of the public realm should be universally designed to facilitate equitable access for customers and employees. **Image 9.7** provides a good example of accessible retail environments by providing level access from other areas of the centre, locating in close proximity to public transport facilities and delivering high quality and appropriately used materials.

An audit assessment to examine areas or weakness, and consider the opportunity to improve universal access, can be useful. Examples of such improvements could be:

- the quality and range of public transport facilities
- improving linkages between car parks, public transport facilities and the main shopping area
- the quality and availability of street furniture e.g. seating
- pavement width and removal of clutter
- sufficient and safe provision of pedestrian links and controlled and uncontrolled crossing points
- the provision of pictorial, verbal and tactile wayfinding information
- the setting up of a town centre management initiative whose remit may include the consideration of licensing, discouraging the proliferation of signage and street clutter in addition to managing the quality of paving materials.

Image 9.7 Universally designed retail environments

Demonstrates universal design by:

- using clear and consistent paving.
- incorporating wide pathways.
- ensuring minimal street clutter.
- using blister surfacing for pedestrian crossing points.
- using corduroy hazard warning surfacing.

9.4.19 Universally designed retail environments

In planning retail development, applicants should demonstrate that they are accessible by public transport; promote safety and improved pedestrian movement. They should demonstrate how proposals will improve the town centre's overall attractiveness. A development levy may seek contributions towards resolving transport or access issues, or towards specific improvements as listed in **Section 9.4.11**.

Further guidance on access to the external environment, including pedestrian areas, car parking facilities, setting-down points, and public transport links is provided in **Building for Everyone Booklet 1: External environment and approach**.

9.4.20 Sample retail policy text

The continued promotion of the town centre as the location for new commercial and retail development is consistent with universal design principles in providing facilities at a central easily-reached location. The retail strategy should:

- provide clear guidance on where major new retail floor space would be acceptable, particularly where this can be integrated with public transport provision
- ensure an equitable, efficient and sustainable spatial distribution of main centres across the plan area
- sustain and enhance the vitality and viability of the potential of the district and local centres to provide for daily convenience shopping needs
- encourage and facilitate the preservation and enhancement of the convenience retail role of smaller villages and centres

9.4.21 Public realm and amenity policy statements

The 'public realm' is a collective term for the spaces between buildings where the general public have access. It includes streets, squares, parks and other open spaces and should be designed to be attractive, accessible, understandable and usable for all.

The quality of the public realm in our cities, towns and villages can be a significant factor in the quality of the lives of all people who live and work in them. Public spaces designed with care and implemented with skill engender a sense of pride in a place, enable all persons to use them with ease, may discourage crime, promote healthy living and increase land values. Conversely, poorly conceived public spaces often reinforce negative perceptions of a place, and all too often public realm is overlooked as the left over spaces between buildings.

Achieving the highest standards of design and use of the public realm is an important consideration in the planning and design of urban environments and presents a number of challenges and opportunities relative to universal design.

Image 9.8 Example of a riverfront amenity park and boardwalk that provides equitable access to a high quality and well-designed amenity area.

Image 9.8 Riverfront amenity park and boardwalk

Demonstrates universal design by:

- incorporating clearly defined pathways.
- using minimal visual or physical clutter.
- ensuring level gradient on main pathways.
- ensuring close proximity to and good quality linkages with the town centre.

The provision of safe, legible and well lit routes and spaces adds value to our urban environment, and there is considerable scope to ensure that the public realm continues to evolve in a manner that is genuinely inclusive. While the detailed design and construction of spaces and places will determine their success, planners have a key role in ensuring that the principles of universal design become a material consideration in developments affecting the public realm. Adamstown (See **Image 9.12**) provides a good example of clear and consistent approach to the public realm.

Street furniture and seating that provides resting areas, should be provided at intervals of no more than 50 metres with reference to distances set out in **Table**

9.5. Seating should also be required in commonly used pedestrian areas, bus stops and at transport interchanges. **Building for Everyone Booklet 7: Building Types** provides further guidance regarding the design of public realm including parks and play spaces.

A good example of amenity space incorporating play facilities, seating and rest areas is provided by Chimney Park, Dublin Docklands (**Image 9.9**), which was designed in response to extensive consultation with stakeholders and local groups and includes creative features for all ages.

Image 9.9 Chimney Park.

9.4.22 Improving wayfinding and signage

Legibility is a design concept which makes it easier for people to work out where they are and where they are going. Not only does it minimise the length of journeys by avoiding wrong turns, for some it may make journeys possible to accomplish in the first place. It should considered as part of public realm design and in its simplest form is based on movement relative to fixed points within the environment. Elements such as landmark buildings, natural features, clear sightlines and vistas in conjunction with signage and information contribute towards legibility and perform important functions for wayfinding, particularly for people with cognitive difficulties.

In addition to natural and existing features within the streetscape or landscape, clear and coherent signage should be provided in a way that is accessible and easily understood by all. The appropriate provision of signage in the public realm requires planning control. Planning control is important to ensure the appropriate provision of signage in the public realm from a universal design perspective. Town centre management initiatives may be better positioned to control signage and ensure that their design communicates necessary information effectively to the user, regardless of the user's abilities.

Signage should be easily identifiable, clearly legible, distinguishable from its background and consistent in their design. An example of a specific wayfinding system that provides clear and consistent directional information and maps is demonstrated below (See **Image 9.10**).

Image 9.10 Example of wayfinding system.

For vulnerable road users, such as people with mobility or sensory difficulties, audible devices and tactile paving should be used at controlled pedestrian crossings, and tactile paving used at dropped kerbs and to warn of other hazards.

Booklet 4: Internal environment and services provides guidance on the design of effective signage that will help people to navigate both internal and external

spaces. For additional information on signage and information provision, please refer to the Sign Design Guide "Sign Design Guide and Inclusive mobility" Oxley, P. (2003) Inclusive Mobility. Department for Transport, UK. www.mobility-unit.dft.gov.uk and Inclusive Mobility.

Booklet 1: External environment and approach and the Traffic Management Guidelines (DOT, 2005) provide detailed information on pedestrian environments and facilities for people with mobility difficulties. Good Practice Guidelines on Accessibility of Streetscapes (LGMSB, March 2009) also includes guidance on the use of tactile paving and the design of crossing points.

Image 9.11 Example of well-designed signage.

This signage is designed to be easy to follow with:
• clear print.
• pictorial signs.
• arrows to signal direction.

9.4.23 Shared spaces

Shared space is an urban design concept aimed at integrated use of public spaces. It encourages traffic engineers, urban planners and experts from other

fields to consult with users of public space when planning and designing streets and squares in both built and non-built environments. The concept shares some characteristics with living streets.

Image 9.12 Example of shared space in an urban setting.

Shared space removes the traditional segregation of motor vehicles, pedestrians and other road users. Conventional road priority management systems and devices such as kerbs, lines, signs and signals are replaced with an integrated, people-oriented understanding of public space, such that walking, cycling, shopping, and driving cars become integrated activities.

9.4.24 Shared spaces and stakeholder engagement

Planners should be mindful of these challenges presented by shared spaces and should engage with representative organisations in considering such schemes. Further information is available from the Department for Transport (UK) Shared Space Project Stage 1: Appraisal of Shared Space Report for Department for Transport November 2009 and research reports commissioned by the Guide Dogs for the Blind Association. http://www.guidedogs.org.uk/sharedstreets.

Image 9.12 Public realm

Demonstrates universal design by:

- incorporating clear and consistent paving.
- incorporating wide pathway.
- ensuring minimal street clutter.
- using blister surfacing for pedestrian crossing points.
- using corduroy hazard warning surfacing.

9.4.25 Residential streets – home zones

Universal design for residential streets is about providing clear accessible streets that support walking and encourage social interaction between the whole community.

Home zones are residential streets in which the road space is shared between drivers of motor vehicles and other road users, with the wider needs of residents in mind. The aim is to change the way that streets are used and to improve quality of life, by making them places for people, not just for traffic.

One of the objectives of home zones is to benefit the less mobile, such as children, older people and people with mobility difficulties who can reclaim their local territories from exclusively car-oriented activities.

9.4.26 Sample public realm / amenities policy text

It is important that the public realm and amenity spaces are planned, designed and managed to be accessed used and enjoyed by everyone, regardless of age, size ability or disability.

Development plan policies should:

- promote greater connectivity and permeability throughout the settlement through the provision of a network of well connected public spaces and streets, with materials, and signage that is easily interpreted by all
- ensure public space is located close to public transport connections and interchanges
- ensure that masterplans and local area plans clearly identify a range of access options for all public spaces
- require accessibility audits where public realm strategies or individual schemes are being advanced
- require public amenities, such as public toilets and seating, to be provided at regular intervals, and clearly signposted with a consistent quality of design and access

Formal recreational facilities within a space should be located close to pathways, parking bays and set down points. Features within parks and spaces, such as fountains, landscaping and foliage, should be designed to maximise sensory stimulation. Where appropriate, vehicle speeds should be kept low to provide a safer place for all pedestrians and cyclists.

Crossing points and routes should be clearly identifiable, appropriately located with respect to facilities and follow pedestrian desire lines. Tight corner radii should be required, to make it easier for pedestrians at crossing points. See **Figure 9.2**.

9.4.27 Drafting heritage policies

Development plans articulate a range of policies in relation to the preservation and enhancement of protected structures, architectural conservation areas, scenic routes, landscape and habitat designations. Planning policy will highlight the sensitivity of these locations to new development and the steps to be taken to ensure their protection, but may not fully address the concept of universal design.

Booklet 7: Building Types provides comprehensive coverage of how the principles of universal design can be achieved relative to historic buildings and sites, natural environments and landscapes, mountains, beaches, conservation areas, country parks, woodlands and arboreta, picnic areas, campsites, waterways, temporary events, parks, cemeteries, playgrounds, gardens and courtyards. Also see DoEHLG Advice guide: Access- improving the accessibility of historic buildings and places.

While **Booklet 7: Building Types** explores the implications of universal design for heritage, it must be acknowledged that planners need to develop and apply a robust policy framework within which universal design can be realised and implemented alongside existing heritage and conservation policy. Where appropriate, measures should also reflect objectives of the *Code of Practice on Heritage Sites*, which requires public bodies to ensure that, as far as practicable, the whole or part of a heritage site in its ownership, management or control and to which the public has access, is accessible to people with disabilities and can be visited by them with ease and dignity.

It can often be difficult to adapt built heritage without compromising the character that informs its heritage status. Best practice heritage planning can only be achieved if planners and designers acknowledge the importance of universal design through appropriate policy provisions, considered design responses and balanced determination of planning applications.

By their nature, features of built or natural heritage significance will often be particularly difficult to adapt to access for all people. Landscapes such as beaches, forests, or rugged mountainous terrain will be inherently difficult to access due to the characteristics that make them attractive in the first place.

In this context, while the principles of universal design warrant careful consideration by planners where heritage is concerned, there will be inherent limitations to the degree of conformity that can be achieved. The inevitable challenge for planners is to strike an appropriate balance between the need to preserve, protect and enhance, and the need to ensure equitable opportunities for access to, and understanding of, heritage features. (**Image 9.13**) and (**Image 9.14**) illustrate accessible features that do not detract from the natural character of the area.

Image 9.13 Regional park

Demonstrates universal design by:

- incorporating clearly defined pathways.
- including minimal visual or physical clutter.
- laying predominantly level routes.
- ensuring edge of each path is delineated with colour-contrasting paint.
- providing accessible parking, picnic areas, and frequent seating / rest areas.

Image 9.14 Example of wheelchair accessible tóchar.

While accessibility audits should be carried out for all heritage sites and buildings, there will inevitably be more opportunities to improve existing sites where extensions or the development of ancillary facilities and infrastructure, such as visitor centres, are proposed. In such instances, any new buildings or associated open space and infrastructure should be fully compliant with universal design principles. Where there are opportunities to upgrade existing pathways, address gradients, re-consider parking provision, improve public transport access then these should be factored in to proposals.

The general objective should be to make as much of the built and natural heritage as accessible as possible by prioritising and balancing conservation and access requirements.

9.4.28 Sample heritage policy text

Planners and designers should ensure universal design principles are considered and met as appropriate on sites of natural or built heritage significance through effective development planning and management. Sample development plan policies could include the following:

- The Council will expect proposals to make provision for safe and easy access by all people regardless of size, age, disability or ability, as may

be deemed practicable in the particular circumstances and in the light of other design and conservation considerations that may apply

- As appropriate to the type, location and scale of development proposed, features of built or natural heritage significance should accommodate universal design measures whenever possible, without causing injury to, or undermining the integrity of those characteristics that make the feature special in the first place
- An access statement should be submitted as part of the planning application document demonstrating how access for all has been considered within the proposed development
- In relation to specific constraints to accessibility to which the alteration would affect the character of the designated site / structure, the applicant will be required to submit a management plan that will establish mitigation measures, in the interest of ensuring universal access for all people regardless of age, size, ability or disability.

9.4.29 Local area plans

Much of the advice in preceding sections will apply to drafting local area plan (LAPs) policies and objectives. LAPs by their nature can be prepared at a more detailed scale and address specific objectives for incorporating universal design features. As a targeted response to delivering change at the local level, planning authorities should engage early on with stakeholders and developers in order to identify the delivery and phasing of infrastructure. The approach to be considered should vary according to context, and whether the LAP is being prepared for areas designated for growth, with a view to delivering urban extensions or areas requiring regeneration, where the implications of major brownfield sites will be considered. In either case, site specific responses should be tailored to the area and to views gathered during community consultation.

9.4.30 Existing town and villages

In relation to the LAPs that are required to be produced as directed by statute, the primary focus should be on retaining existing positive features and subsequently improving accessibility and useability within the existing built environment. Policies should ensure that existing features that aid personal mobility for all

people within the built environment are retained and protected. The LAP should establish a regulatory framework that is consistent with the approach set out in the development plan whereby universal design features will be incorporated within all new development proposals.

9.4.31 Regeneration areas

Brownfield sites in many cases represent the most appropriate development opportunities to consolidate growth and facilitate sustainable communities. LAPs can provide frameworks for the development of such sites in addition to masterplans detailing aspects of delivery. Guidance contained within LAPs should retain the existing features that currently assist mobility and to exploit opportunities to augment permeability and to integrate development with the wider area. Plans of this nature should focus on:

- consultation with the existing community
- strategic and local links with the surrounding area

Useful examples include the North Lotts Planning Scheme (Dublin Docklands, 2006) and draft Poolbeg planning scheme (Dublin Docklands, 2008).

9.4.32 Urban extensions

It is essential that LAPs created to manage the future growth of designated areas incorporate the principles of universal design to ensure equitable access to facilities. Given the nature of urban extensions and greenfield sites, ease of access and use of existing services and convenience retailing will be of primary importance. LAPs should avoid proposals that are based on the assumption of access to private transport and either provide facilities that meet an identified need or enhance linkages to existing facilities having regarding to acceptable walking distances. An example of a LAP produced for a large greenfield site at the edge of an existing urban area is provided by the South Lissywollen, Athlone Town - Local Area Plan (Athlone Town and Westmeath County Council).

9.5 Development Management

9.5.1 Development management

This chapter outlines how the principles of universal design can be incorporated within the planning application process. The approach here is consistent with the aims of the Department of the Environment, Heritage and Local Government, June 2007 - *Development Management Guidelines* that promote positive, responsive and high standards of planning.

Development management is a collaborative effort between the applicant's design team and the planning authority staff where principles of universal design can be considered in order to deliver successful places for all in terms of function, amenity, access, safety and maintenance.

Experience has shown that if needs of all users are not fully incorporated from the beginning of the design process, Design solutions will be subsequently provided in a segregated and non-inclusive manner. Retro fitting if required, will prove to be costly. The planning application process should therefore integrate the needs of all users from the outset by referring to the principles of universal design and including the requirements of people of any age, size, ability or disability.

- Site development briefs
- Pre-application consultation
- Access statements
- Accessibility and quality audits of the completed development

9.5.2 Site development briefs

Design briefs should be produced for particularly important, sensitive or large scale development sites. In providing guidance on the location, quantum and phasing of the proposed development, briefs can specify particular universal design issues that are relevant at the project level.

Design briefs are typically structured according to stages within the design

process and should be made available as part of a Local Area Plan or at the outset of a pre-application consultation. Should a person requiring assistance to review the plans etc a member of the local authority staff with suitable training should be on hand to help the person review the application.

9.5.2.1 Stage 1: Appreciating the context

- Describe the site and its context
- Summarise relevant Development Plan policies and objectives relevant to the subject site including universal design objectives
- Identify the constraints
- Establish development aims

9.5.2.2 Stage 2: Creating the urban structure and making the connections

- Establish existing links through the site from the surrounding area, including those with the immediate local surroundings or wider settlement; the most direct and safe links are likely to attract more users
- Assess need for type, quantum and design of uses in conjunction with stakeholder consultation

9.5.2.3 Stage 3: Detailing the place

- Detail the universal design issues, standards and criteria that evidence gathered during Stage 1 and 2
- Refer the applicant to relevant planning guidance and universal design support materials

9.5.2.4 Stage 4: Following up

- Undertake an access audit that reviews relevant universal design conditions attached to the site

9.5.3 Pre-application consultations

Pre-application consultations provide opportunities to advise prospective applicants of universal design principles that are relevant to the proposal, and of other procedural requirements, such as:

- the implications of Building Control legislation, including provisions in relation to fire safety, access and evacuation for all people regardless of age, size, ability or disability
- application for a Disability Access Certificate as a requirement by the Building Control Authority
- the necessity to ensure that the design implications of accessibility for all are addressed in the approach routes to buildings, including the location of car parking and other related issues
- the NDA's suite of booklets *Building for Everyone: A Universal Design Approach*
- organisations representing groups in society including people with disabilities, older people and those with mobility difficulties for whom consultation may be arranged

Universal design principles should provide a means of informing pre-application discussions. It is also good practice to encourage Access Officers (See **Section 9.6.4**) to attend at least one meeting, particularly with respect to larger schemes. In addition to highlighting important considerations at the pre-application consultation, local planning authorities may, within their planning application form, request the submission of specified additional information (Dublin City Council (2007) Variation (No. 21) of the Dublin City Development Plan 2005 – 2011. Requesting universal design principles to be considered in this context will ensure applicants think proactively about universal design early in the design process

The checklist in **Table 9.7** can help inform pre-application discussions by highlighting information that Planning Officers and / or the applicants may wish to consider. It can be made available on the Planning Authority's website so that applicant may have a chance to take it into consideration when preparing for pre-application consultations. In advance of pre-application consultations,

applicants should also be required to submit information on how universal design will be addressed within the proposed development in the format of a draft Access Statement (See **Appendix A6**).

Table 9.7 Universal design pre-application checklist
Would the design benefit from consultation with representative organisations (See **Section 9.6.4**)?
Would the proposal benefit from the submission of an Access Statement?
Has the applicant been advised of the concept and principles of universal design, and guidance contained in Buildings for Everyone Booklets?
Does the proposal require specialist advice from an Access Officer? Could Access Officers be included as part of the universal design pre-application process?
Has the applicant been advised of the procedural requirements such as the implications of Building Control legislation, including provisions in relation to access for people with disabilities (including Disability Access Certificates)?
Has the applicant been advised of key design issues that will need to be considered within the proposal, such as: • access routes and road layout • convenient and safe location of car parks and access routes • pedestrian environments that are logical and easy to follow • level pedestrian routes with sufficient path width • designated parking for people with disabilities and parents with children • clear signage • appropriate materials and design of the public realm.

9.5.4 User-centred design: Stakeholder assessment and involvement

Consultation is an important aspect of any scheme but larger proposals should formalise efforts to engage with stakeholders and the local community. The starting point should be establishing the relevant stakeholders and the nature of the local community with respect to a proposal. Determining how and to what extent they should become involved, should reflect the nature and scale of the project.

For large scale projects, developers should be encouraged to involve communities and enable them to participate in the process. The concept of user involvement is important to the implementation of universal design and involving the community, disability and user groups as part of access audits and / or site appraisal can provide important input into the design brief.

Standard appraisal methodologies, such as the World Health Organisation's (WHO) Health Impact Assessment, recognise the importance of qualitative information, including the opinions, experience and expectation of those likely to be most directly affected

9.5.5 Assessing the planning application

Table 9.8 provides a checklist for assessing a planning application in Universal Design terms.

Table 9.8 Universal design planning application / access statement checklist
Has the applicant submitted an Access Statement?
If yes, does it • explain how universal design principles have been addressed in the design of the development? • demonstrate what groups the applicant has consulted with and how consultation with potential users has influenced access arrangements? • demonstrate how the context appraisal and policy review has shaped the design of the scheme? • explain and justify the way the buildings, routes and open spaces are set out and why entrances have been placed where they are?
Has a plan been submitted that shows how people gain access to, through and from the development with respect to surrounding roads, footpaths and sight lines?
Will the place be easy to understand, maintain and adapt?
Is the layout accessible, understandable and easy for everyone to use?
Will all potential users including persons of any age or size or having any particular physical, sensory, mental health, or intellectual ability or disability be able to access and evacuate the site, move around the area, and enter the buildings?
Will the movement network support convenient, safe and appropriate travel?

Under Article 28 of the Planning Regulations 2001 planning authorities give notice of planning applications to prescribed bodies where, in the opinion of the authority, the development would be relevant to the functions of that body. In addition to the prescribed bodies referred to in Article 28, the applicant may also wish to consult with representative organisations and stakeholder bodies, particularly where major applications are concerned.

Consideration of universal design can also be required by introducing formal procedures for public consultation at site and area level and pre-application discussions. In depth discussions can influence a better design.

Formal procedures such as the requirement for access statements as detailed in **Appendix 6** are also important components of a successful design outcome and should be addressed within plan policies.

9.5.6 Sample conditions

Suggested planning conditions that may be attached to permissions with respect to different thematic areas are set out below.

9.5.6.1 Housing

It is advised that in addition to covering construction standards that text be included to ensure sufficient quantum and choice of dwellings for people with mobility difficulties e.g. people with disabilities and older persons: For housing estates of 5 dwellings or more, a minimum of 20% of dwellings shall be adaptable to provide accommodation for people with disabilities. Details of such proposals shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

Reason: To provide sufficient quantum and choice of dwellings for the provision of accommodation for people with mobility difficulties

The development hereby permitted shall be carried out and completed at least to the construction standards set out in the planning authority's Residential Site Development Standards document and the planning authority's Taking in Charge Policy as appropriate. Prior to commencement of development, the developer shall agree with the authority, in writing, the procedures for inspection and monitoring of the development by the authority to ensure compliance with these standards, and shall thereafter comply with the agreed procedures during the construction of the overall development. Following completion, the development shall be maintained by the developer, in compliance with these standards, until taken in charge by the planning authority.

Reason: To ensure that the development is carried out and completed to an acceptable construction standard including universal design

9.5.6.2 Retail - shop front design

Prior to the commencement of development, a Shop Front Design Scheme for the development shall be submitted for the written agreement of the Planning Authority. The scheme shall provide guidance on the following items:

a) High standard of design and materials that relate to the architectural composition of the building on which they are fitted and the surrounding townscape

b) Identification of zones on the building frontages that can be used for signage

c) Guidance on lighting fixtures and lux levels

d) Identification of zones for shop window display

e) Safe and convenient access for people regardless of age, size, ability or disability

When the Shop Front Design Scheme has been approved by the Planning Authority, details of any shop fronts and / or signage for individual retail units shall take account of the guidance in the approved scheme.

Reason: In the interest of visual amenity and a proper standard of development

Prior to the commencement of development, details of shop fronts and signage (including lettering size, general style, materials and colours) that accord with the Shop Front Design Scheme agreed under the terms of the above condition, shall be submitted for the written agreement of the Planning Authority. Details shall be implemented in accordance with the details agreed.

9.5.6.3 Car parking

Accessible car parking spaces are set out in **Section 9.4.14**. These spaces shall be located adjacent to building entrances and suitably signposted. Further information on car parking, drop off areas and seating see **Booklet 1: External environment and approach**.

Reason: In the interests of road and pedestrian safety and mobility

The developer shall provide designated car parking spaces for accessible parking in accordance with the standards set out in the Development Plan. Such spaces shall be located close to, and accessible from, the proposed development. Details of the places allocated and accessibility measures to be put in place, shall be submitted to, and agreed in writing with, the planning authority prior to the commencement of development.

Reason: To provide for sufficient accessible car parking spaces, and for appropriate access to such spaces, in accordance with standards set out in the Development Plan in the interests of sustainable transportation and universal design

Prior to occupation of the development, a Mobility Management Plan shall be submitted for the written agreement of the Planning Authority. The plan shall limit reliance on private transport to access the site and should seek to maximise use of public transport, walking and cycling for all users. Procedures for monitoring and review of the plan and for regular reporting to the planning authority shall be included.

Reason: In the interests of Sustainable Transportation and Accessibility

9.5.6.4 Heritage

The applicant will be required to submit a management plan that will establish mitigation measures in relation to specific constraints to accessibility where alteration would affect the character of the designated site / structure.

Reason: In the interest of providing universal design for the development that the integrity of the protected structure is maintained and that the proposed repair works are carried out in accordance with good conservation practice with no unauthorised or unnecessary damage or loss of historic building fabric

Conservation and universal design experts should be employed to manage, monitor and implement the works on site and to ensure adequate protection of the historic fabric, the accessibility and useability of during the works.

Further information is available from the National Disability Authority's 'Heritage guidance document

9.5.6.5 Public realm / amenities

All facilities and amenities open to the public or staff should be fully accessible to all people regardless of age, size, ability or disability, in accordance with the agreed plans. Details of paving design (including tactile and blister paving), surface gradients [etc] shall be submitted to, and agreed in writing with, the planning authority.

Reason: In the interest of public safety and mobility

An accessibility audit will be submitted on completion of the works demonstrating compliance with proposals set out in planning documentation and conditions standards and materials.

Reason: In the interest of public safety and mobility

Prior to the commencement of construction on each plot, samples of all proposed external finishing materials (including roof, wall, window, door and balcony treatments) shall be submitted to and approved in writing by the Planning Authority. Balcony surrounds should generally be opaque. Sample panels of 2000mm x 2000mm of the materials shall be erected on site and once approved, retained for the duration of the development for quality control purposes. Development shall be carried out in accordance with the approved samples.

Reason: In order to achieve a high standard of design and finish

Details of proposed street furniture and public lighting, including bus stops, seating, lighting standards and litter bins shall be submitted to the Planning Authority for written agreement prior to commencement of construction on site.

Reason: In the interests of visual amenity and pedestrian access

Notwithstanding the submitted plans, the following details shall be submitted to and approved in writing by the planning authority prior to the commencement of development on site. The details shall be implemented in accordance with the approved submission:

a) Traffic calming details

b) Design, construction and materials details for proposed raised tables, crossing points and other traffic calming features to be provided on all street within the development

c) Details of shared surface treatments

Reason: In the interest of pedestrian and traffic safety

Notwithstanding the submitted details, prior to the commencement of construction of any of the road, pavement, raised junction, entrance treatments, crossings, cycleways, on-street parking bays or other street finishing details, construction details and material samples shall be submitted for the written agreement of the Planning Authority that includes details on the accessibility and useability of the environment. Sample panels of 3000mm x 3000mm of the material shall also be erected on site and once approved, retained for the duration of development for quality control purposes. Development shall be carried out in accordance with the approved samples.

Reason: In the interest of visual amenity, environmental quality and development control

Prior to the commencement of development on site, a detailed landscape plan with full works specification shall be submitted for the written agreement of the Planning Authority. The full works plan should deal with all open spaces and paved areas (including in-curtilage parking) within the site. The plan should include hard and soft landscaping proposals, boundary treatments, details of tree and shrub planting etc. The following shall be included:

- Details of seating and street furniture within public spaces and semi private spaces. See **Table 9.5** Distances without rest
- Details and specifications for play facilities for a range of ages, sizes, abilities and disabilities to be provided within the development.
- Details of the surface treatments for walkways linking housing and ancillary public and semi private open space.
- Details of semi private open space in order to establish direct or improved access from all units.
- Detailed proposals for the future maintenance / management of all landscaped areas

Reason: In the interests of amenity

9.6 Implementation

Development Plan or Local Area Plan policies and objectives are implemented through development management decisions and the completion of developments in accordance with these decisions.

Assessing whether a policy is having the desired effect can be undertaken once the development process is completed to the appropriate standard and specification, data is collected and appropriate indicators, that measure changes in the environment, are developed.

9.6.1 Enforcement

Development that has taken place without consent or where the terms of permission have not been met comes under the remit of planning enforcement. Enforcement is critical to developing a culture of high quality development outcomes.

Monitoring compliance with planning conditions and approved plans will enable local authorities to carry out effective enforcement under Part VIII of the Planning and Development Act 2000. It is particularly important to establish whether developments have been completed according to the specified design standards, prior to the taking in charge of housing estates.

9.6.2 Taking in charge of estates

As per Circular Letter PD 1/08, certain core facilities and infrastructure within housing estates are required to be taken in charge on request including public roads and footpaths, unallocated surface parking areas, public lighting, and public open spaces.

In accordance with this Circular, Planning authorities must specify their construction or design standards for public roads, footpaths, services and open spaces in residential development in their taking in charge policy. These policies should specify standards that are consistent with universal design principles and the Building for Everyone guidance series. Materials should be good quality and durable in order to minimise future maintenance costs. It should be also be noted

that the Department's Recommendations for Site Development Works for Housing Areas (1998) is currently being updated to reflect the requirements for sustainable communities, such as more pedestrian friendly layouts.

Once standards have been introduced, it is essential that planning authorities monitor compliance to ensure that these are effectively delivered. In addition to ensuring that effective procedures are in place to monitor and inspect construction, effective delivery requires:

- early identification of the areas to be taken in charge
- appropriate planning conditions (See **Section 9.4.8**)
- the provision of adequate financial security

9.6.3 Monitoring

Monitoring and review of developments is essential to understanding the effectiveness of universal design policies set out in the Development Plan. The identification of indicators such as those suggested below, and analysis of data will enable benchmarks to be set in the future and corrective action to be taken where targets are not met.

Suggested indicators include the:

- number of lifetime homes completed (enabling compliance with development plans standards for lifetime homes to be measured)
- number of applicants submitting Access Statements

9.6.4 Role of access officers

Section 26 (2) of the Disability Act 2005 requires that public bodies appoint an officer (Access Officer) to provide or arrange for and co-ordinate the provision of assistance and guidance to persons with disabilities in accessing its services. The involvement of Access Officers in the planning process can help to ensure that universal design principles are incorporated into the design of a development from the earliest stage. It is suggested that planning staff should receive some specific training in relation to disability access and universal design. In particular,

it may be valuable to identify a lead within the planning team who develops specific expertise in this area. The Access Officer may be able to play a role in training planning staff on issues of disability accessibility. Planning staff may consult the Access Officer where more in-depth expertise is required, and may find it useful to include the Access Officer or another access expert in pre-application consultation, in guiding on decision-making, and in advising on enforcement, in relation to significant developments

The Access Officer should have an integrated role within the Planning Department of the local authority and throughout the planning process. Depending on the availability of resources, key areas for involvement of Access Officers in the planning process include:

- pre-application consultation: Access Officers should attend at least one pre-application meeting, depending on the complexity of the development and its proposed use (e.g. public building, transport interchange, town centre retail development etc)
- decision making: The Access Officer should be consulted throughout the decision making process. The Planner's Report accompanying the decision should include a section on accessibility. In addition, the Access Officer should review and assess the Access Statement and assist in preparing relevant conditions for grants of permission
- enforcement: Access Officers could assist with enforcing planning permissions for larger developments (e.g. retail developments, public open space etc). This could include attending a site inspection with the planner which may help to identify detailed elements of the project that are inconsistent with the plans or non compliant with conditions leading to substandard development

Access Officers clearly have an existing role in promoting accessibility, however the extent of their commitments within the local authority may mean that identifying a lead within the planning team, who develops expertise in relation to universal design, may offer a more practical solution.

9.6.5 Licensing

Section 254 of the Planning and Development Act 2000 refers to licensing of appliances, apparatus and structures on public roads. A licence is required under Section 254 for the erection, construction, placement or maintenance of a number of appliances, apparatus and structures, including: vending machines, town or landscape map for indicating directions or places, hoarding, fence or scaffold, advertisement structure, cable, wire or pipeline, telephone kiosk or pedestal.

The placing of such appliances, apparatus and structures on public roads and pavements can be of particular concern in terms of enabling access and ease of movement for everyone. There are numerous examples of cluttered streetscapes around Ireland which can be difficult for many people to navigate. Excessive signage, ill-placed street furniture (seating, bins, bollards etc) and barriers can create discontinuities and obstacles in movement thus presenting hazards, in particular to people with disabilities and people with visual difficulties.

When assessing licence applications, local authorities should ensure that accessibility for all users is maintained. This will involve considering the usability of the area by all members of the community and the impact that the structure will have on accessibility. The environs of the site and existing appliances, apparatus and structures should also be assessed in conjunction with the impacts that the proposed structure may have. Any granting of a licence should be monitored for compliance with conditions of the permission or should be coordinated using a system for town centre management.

A1 Definition of Universal Design

Universal Design

‘Universal design refers to the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of their age, size, ability or disability.’

Synopsis of the Disability Act, 2005.

A2 Human Abilities and Design

The following piece of text is an extract from European Ref: CEN/CENELEC Guide 6 ‘Guidelines for standards developers to address the needs of older persons & persons with disabilities’.

It states that: Physical, sensory and mental abilities vary from person to person and for individuals as they get older. Diversity is normal. Designers need to be aware of difference across the range of human abilities, and of associated design considerations.

(a) Physical abilities

This includes walking, balance, handling, pulling, pushing, lifting and reaching. Many activities involve simultaneous use of more than one of these skills. Physical strength and stamina may also affect people’s abilities to perform these actions.

Walking

For some people walking on the level or up gradients is difficult. Some people may have a limited walking range, may have difficulty with turning movements or may use mobility devices such as crutches or a walker. They may need to stop frequently, to regain strength or catch breath. Design considerations include provision of handrails, seats at regular intervals, convenient set-down parking and adequate time for slower pedestrians at road crossings. Designers should also consider the needs of people walking and engaging in sign language when designing access to and from buildings plus within the buildings themselves.

Balance

Balance limitations can affect someone's gait or control of hand movements. Design considerations include handrails, regular seating, and providing controls within easy reach. A surface against which a person may stumble against or walk into should be designed to limit abrasion.

Handling

A significant minority of people are left-handed. Some people may have restricted use or no use of one or both hands, or may have limits on strength or precision. Facilities and components should be designed to be suitable for use with either hand or with one hand only. Handling includes gripping, grasping and manipulation. Each of these has a different purpose with specific design considerations. For instance, components should be designed to be easily held. The circumference of the supporting structure and stability are critical. Manipulation involves the moving, turning and twisting of components with a hand or hands. For those who have limited manipulation abilities, size and shape and ease of movement are critical. Another option to consider is to design for manipulation by using a pushing, pulling or pressing action using a clenched fist, or by using the wrist or the elbow.

Strength and endurance

Strength and endurance may be required on sloping paths and floors, stairways and long travel distances, when sustained effort may be needed.

For those with limited endurance, frequent resting-places are essential.

People generally find it easier to push a component, than to pull it. This is particularly so if the individual uses a wheelchair. Self-closing devices on manual doors can be difficult for some people to operate, particularly if the doors are required to resist wind forces. For these reasons, doors that open and close automatically are preferred.

Lifting

Activities such as opening a vertically sliding sash window and an upward opening access gate, should be designed to be easily operated with minimal force.

Reaching

Design has a role to play in ensuring that key components in a building or environment are in easy reach, bearing in mind the range of people's sizes and abilities. Having components within easy reach is particularly important for those with more severe limitations in mobility. The reach range is dependant on the height and arm length of the person, use of the arms, and the balance and mobility of the upper body. A 'comfortable reach range' has been defined as one that is appropriate to an activity that is likely to be frequent and in need of precise execution and that does not involve stretching or bending from the waist. Putting things within comfortable reach can ensure use by a greater number of people. An 'extended reach range' has been defined as one that is appropriate to an activity that is likely, neither to need precision nor to be frequent and that can involve stretching or bending from the waist.

(b) Sensory abilities

Speech

Some conditions affect the capacity for or quality of speech. Two-way communication can be facilitated by environments designed to minimise barriers to hearing low or indistinct speech.

Hearing

People differ in their capacity to hear sound, to determine its direction, its source, to discern pitch, frequency, volume and variation and to separate out different sounds. Hearing quality is important for communication, for information, and for detection of hazards such as traffic. Many people with hearing difficulties

use a hearing aid which amplifies all sounds caught by the microphone, making communications very difficult in noisy environments. Keeping background noise level low is essential. The selection of structural and surface materials can make a substantial difference in audibility. Auditoriums, meeting rooms and reception areas can benefit from additional sound enhancement such as a loop system. The careful design of illumination can assist in communication such as lip reading and sign language. Provision of visual information and visual alarm systems can communicate information to those who have hearing difficulties or who cannot hear. Designers should also consider the colour and size of rooms and even the furnishing arrangement as this is very important for visually based communication. Also the use of vibration as means of sensing others should be considered.

Sight

Vision allows an individual to be aware of the luminance of surfaces, objects, form, size and colour. For people who are blind or who have visual difficulties, the provision of suitable tactile walking surface indicators and tactile or acoustic warnings at hazardous locations, should provide information on using the built environment and should limit the risk of injury. The built environment can be designed for orientation by providing sound cues and tactile cues. An easily discernible system of 'way finding' should also be considered. For people with limited, but low vision, effective visual contrast between surfaces or objects helps to identify critical locations. Warning markings on glass surfaces, and markings on the edges of stair treads, help minimise hazards.

Differences in friction between one floor surface, or one stair tread surface, and the next should be avoided. Therefore, adjacent surfaces that display different standards of slip-resistance, or that depend on raised surfaces, should be carefully considered

Touch

In selecting surfaces in the built environment that people will need to touch (such as handrails, handles, knobs and controls, tactile information), it is important to select materials that avoid distress, injury or allergies. Surfaces should be free of abrasions. Metals that may cause adverse reactions when touched should be avoided.

(c) Mental abilities

Mental abilities include cognition, intellect, interpretation, learning and memory. People differ in their knowledge, their capacity to understand, reason, or interpret information. Designing for differences in these capacities helps provide a usable environment for the population at large, from the very young to the old, and people of diverse abilities. Means of communication in the environment should be designed to be immediately and easily understood, and correctly interpreted. As people age, some experience loss of memory or find it increasingly difficult to absorb new information, so changes in the environment should be carefully considered before implementation.

Design considerations that take account of mental abilities

Aural and visual messages should be simple, clear and have immediate impact. Figures, symbols and simple words are likely to be the most effective. Symbols should be instantly recognisable as representing images seen and activities undertaken in everyday life.

Way finding should be simple, such as tactile, graphic, audible or architectural cues that are easy to follow. Signage should be large and clear. Way-finding maps should be clear, indicate the person's whereabouts in the building or facility, and be free from extraneous information.

(d) Age and size

Accommodating the developing child

It is important to create environments that are safe, accessible and useable for children. Individual components should be safe and useable as age-appropriate. Learning to manage risk is an essential part of a child's development.

Accommodating ageing adults

Life span within the human population is increasing. More and more we expect to maintain an economic and social life within both the public and private domains as we age. However, many human faculties are in decline as we age, such as mobility, dexterity, stamina, strength, hearing, sight, or memory. Familiarity with a particular environment is important.

Diversity of size

The population contains a diversity of sizes and heights, from children, to the diversity in the height of fully-grown adults. The positioning of components and the heights of building elements such as steps should recognise the diversity of height. Increased weight and girth is now also a feature of the population.

Ref: CEN/CENELEC Guide 6 'Guidelines for standards developers to address the needs of older persons & persons with disabilities'.
http://www.cen.eu/cen/Sectors/Sectors/ISSS/About_ISSS/Documents/cclcgd006.pdf

A3 Further Reading

National and international standards and codes of practice

AS 1428.1-2001 Design for access and mobility. General requirements for access – New building work.

AS 1428.2-1992 Design for access and mobility. Enhanced and additional requirements – Buildings and facilities.

AS 1428.3-1992 Design for access and mobility. Requirements for children and adolescents with physical disabilities.

AS 1428.4-2002 Design for access and mobility. Tactile indicators.

BS 4800: 1989 Paint colours for building purposes (whilst the colours in this standard cannot be seen on CD-ROM or online the text can still be used).

BS 5395-1:2000 Stairs, ladders and walkways – Part 1: Code of practice for the design, construction and maintenance of straight stairs and winders.

BS 5588-8:1999 Fire precautions in the design, construction and use of buildings – Part 8: Code of practice for means of escape for disabled people.

BS 5776:1996 (incorporating amendment No.1) Specification for Powered stairlifts

BS 6440:1999 (Incorporating amendment No.1) Powered lifting platforms for useby disabled persons – Code of practice.

BS 6440:1999 Powered lifting platforms for use by disabled persons – Code of practice (partially superseded by BS EN 81-40:2008. The remainder of BS 6440:1999 will eventually be superseded by EN 81-41: 2009 Safety rules for the construction and installation of lifts – Special lifts for the transport of persons and goods – Part 41: Vertical lifting platforms intended for use by persons with impaired mobility).

BS 6465-1:2006+A1:2009 Sanitary installations. Code of practice for the design of sanitary facilities and scales of provision of sanitary and associated appliances.

BS 6571-4: 1989 Vehicle parking control equipment – Part 4: Specification for barrier type parking control equipment.

BS 7036-1:1996 Code of practice for Safety at powered doors for pedestrian use – Part 1. General.

BS 7036-4:1996 Code of practice for Safety at powered doors for pedestrian use – Part 4. Low energy swing doors.

BS 7997:2003 Products for tactile paving surface indicators – Specification.

BS 8300:2009 (Incorporating amendment No.1) Design of buildings and their approaches to meet the needs of disabled people – Code of practice.

BS 8493:2008 (+A1:2010): Light reflectance value (LRV) of a surface – Method of test.

BS 8501:2002 Graphic symbols and signs – Public information symbols (AMD 16897).

BS EN 115:1995 Safety rules for the construction and installation of escalators and moving walkways.

BS EN 15838:2009 Customer contact centres, Requirements for service provision.

BS EN81-70:2003 Safety rules for the construction and installation of lifts – Particular applications for passenger and good passengers lifts – Part 70: Accessibility to lifts for persons including persons with disability.

Building Regulations (Part M Amendment) Regulations 2010 (S.I. No. 513 of 2010).

Citizens Information Board – Accessible information for all (2009).

DD 266:2007 (Draft for Development) Design of accessible housing – Lifetime home – Code of practice.

I.S. EN 1991-1-1:2002 – Eurocode 1: Actions on structures Part 1-1: General actions – densities, self weight, imposed loads for buildings (including Irish National Annex: 2005).

I.S. EN 81-1: 1999 Safety rules for the construction and installation of lifts – electric lifts (Amd 1) (+A3:2009).

I.S. EN 81-2:1999 Safety rules for the construction and installation of lifts – hydraulic lifts (Amd 1) (+A3:2009).

I.S. EN 81-70:2003 Safety rules for the construction and installation of lifts – Particular applications for passenger and good passenger lifts. Accessibility to lifts for persons including persons with disability (Amd A1:2005).

I.S. EN 997:2003 (+A1:2006) WC pans and WC suites with integral trap (AMD Corrigendum 14805) (AMD 16965).

IEC 60118-4:2006 Electroacoustics. Hearing aids. Induction loop systems for hearing aid purposes. Magnetic field strength (ISBN 978 0 580 50047 3).

International standard for Induction loops. IEC 60118-4.

Irish Code of Practice on Accessibility of Public Services and Information Provided by Public Bodies www.nda.ie/website/nda/cntmgmtnew.nsf/0/3DB134DF72E1846A8025710F0040BF3D/$File/finaldrcode_nda.htm

Key cards should conform to EN 1332. For further information on key cards please see: http://www.universaldesign.ie/useandapply/ict/itaccessibilityguidelines/smartcards/guidelines/smartcardguidelines/cards

Lifetime Homes Standard: http://www.lifetimehomes.org.uk

Norwegian Universal design of building standard, 2009.

Passenger Lift Design: The Machinery Directive 2006/42/EC; Lifts should conform to BS 6440.

National and international reference documents

2020 Vision – Sustainable Travel and Transport: Public Consultation Document. Department of Transport.

Bus Based Park and Ride – A Pilot Scheme. A Report to: Dublin Transportation Office. The TAS Partnership Limited, 2002.

City of London 2006 Facility Accessibility Design Standards. London, Canada, 2006 Promoting Safe Egress and Evacuation for people with Disabilities - National Disability Authority.

Gallaudet DeafSpace Design Guidelines 2010.

Department of Transport & the National Disability Authority Guidelines for Accessible Maritime Passenger Transport http://www.nda.ie/website/nda/cntmgmtnew.nsf/0/45AA46D1F77D7EF2802576DC005C5954?OpenDocument

Department of Transport, UK 'Traffic Signs Manual'.

Dublin City Council (2007) Variation (No. 21) of the Dublin City Development Plan 2005 – 2011. Available from: http://www.dublincity.ie/Planning/DublinCityDevelopmentPlan/VariationstotheDevelopmentPlan/Documents/AdoptedVariationNo21Spec.pdf.

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

Guidelines for an accessible public administration. Towards full participation and equality for people with disability. Office of the Disability Ombudsman, Sweden.

Inclusive Mobility. Department for Transport, UK.

International Best Practices in Universal Design. A Global review. Canadian Human Rights Commission, 2006.

Irish Wheelchair Association: Best Practice Access Guidelines 2010.

Joseph Rowntree Housing Trust.

Parking for disabled people. Department for Transport, UK.

Promoting Safe Egress and Evacuation for people with Disabilities - National Disability Authority.

Rail Park and Ride Strategy for the Greater Dublin Area. Dublin Transportation Office, 1994.

Regulation of Bus services outside the Greater Dublin Area. Department of Transport.

"Sign Design Guide and Inclusive mobility," Oxley, P. (2003), Inclusive Mobility. Department for Transport, UK. www.mobility-unit.dft.gov.uk

Smarter Travel 'A Sustainable Transport Future' – A New Transport Policy for Ireland 2009 – 2020. Department of Transport.

A4 People with Disabilities by Disability Type

Table 9.9 People with disabilities by disability type			
	Total	% of Population	
Seeing	**50,600**	**1.19**	
Moderate difficulty	27,600	0.65	
A lot of difficulty	20,700	0.49	
Cannot see	2,300	0.05	
Hearing	**57,600**	**1.36**	
Moderate difficulty	35,200	0.83	
A lot of difficulty	20,600	0.49	
Cannot hear	1,800	0.04	
Speech	**35,300**	**0.83**	
Moderate difficulty	16,800	0.40	
A lot of difficulty	12,200	0.29	
Cannot speak	6,400	0.15	
Mobility and dexterity	**184,000**	**4.34**	
Moderate difficulty	57,000	1.34	
A lot of difficulty	62,200	1.47	
Cannot do	64,900	1.53	
Moving around home	**101,200**	**2.39**	
Moderate difficulty	50,200	1.18	
A lot of difficulty	38,400	0.91	
Cannot do	12,700	0.30	
Going outside of home	**128,900**	**3.04**	
Moderate difficulty	53,700	1.27	
A lot of difficulty	49,900	1.18	
Cannot do	25,300	0.60	

Walking for about 15 minutes	**160,000**	**3.77**	**31,000 wheelchair users. 83,000 use walk aids**
Moderate difficulty	47,200	1.11	
A lot of difficulty	52,900	1.25	
Cannot do	60,000	1.42	
Using hands and fingers	**79,000**	**1.86**	
Moderate difficulty	33,900	0.80	
A lot of difficulty	30,900	0.73	
Cannot do	14,300	0.34	
Remembering and concentrating	**113,000**	**2.67**	
Moderate difficulty	54,900	1.29	
A lot of difficulty	43,800	1.03	
Cannot do	14,300	0.34	
Remembering important things	**77,600**	**1.83**	
Moderate difficulty	39,100	0.92	
A lot of difficulty	27,600	0.65	
Cannot do	10,900	0.26	
Forgetting where I put things	**85,800**	**2.02**	
Moderate difficulty	44,600	1.05	
A lot of difficulty	30,400	0.72	
Cannot do	10,800	0.25	
Concentrating for 10 minutes	**77,900**	**1.84**	
Moderate difficulty	35,000	0.83	
A lot of difficulty	29,800	0.70	
Cannot do	13,100	0.31	

Intellectual and learning	**71,600**	**1.69**	**18,900 have dyslexia / SLD**
A little difficulty	12,000	0.28	3,400 have ADD
Moderate difficulty	25,900	0.61	5,300 have autism
A lot of difficulty	24,800	0.58	50,400 ID
Cannot do	8,900	0.21	
Intellectual functions	**27,700**	**0.65**	
A little difficulty	4,000	0.09	
Moderate difficulty	9,100	0.21	
A lot of difficulty	10,300	0.24	
Cannot do	4,300	0.10	
Interpersonal skills	**22,300**	**0.53**	
A little difficulty	4,600	0.11	
Moderate difficulty	7,200	0.17	
A lot of difficulty	7,200	0.17	
Cannot do	3,400	0.08	
Learning everyday skills	**55,000**	**1.30**	
A little difficulty	10,200	0.24	
Moderate difficulty	19,500	0.46	
A lot of difficulty	18,700	0.44	
Cannot do	6,700	0.16	
Diagnosed with intellectual disability	**50,400**	**1.19**	
A little difficulty	14,000	0.33	
Moderate difficulty	24,200	0.57	
A lot of difficulty	9,000	0.21	
Cannot do	3,200	0.08	
Emotional, psychological and mental health	**110,600**	**2.61**	**31,200 depression**

A little difficulty	25,300	0.60	13,500 anxiety disorders
Moderate difficulty	46,300	1.09	5,300 schizophrenia
A lot of difficulty	35,100	0.83	3,100 bipolar disorder
Cannot do	4,000	0.09	
Pain	**152,800**	**3.60**	
Moderate difficulty	74,900	1.77	
A lot of difficulty	73,100	1.72	
Cannot do	4,700	0.11	
Breathing	**71,500**	**1.69**	
Moderate difficulty	45,000	1.06	
A lot of difficulty	25,200	0.59	
Cannot do	1,300	0.03	
Total persons with a disability*	**393,800**	**9.29**	

Note on method for deriving this table

These figures are based on the National Disability Survey 2006 – First Results with the exception of the last line of the table giving total number of people with disabilities which comes from Census 2006.

Based on census sample from national disability survey

The numbers of people recorded as having a disability is sensitive to the definition of disability used and to whether face to face or other survey methods are used. A higher recorded prevalence of disability generally means inclusion of more people at the milder end of the spectrum of difficulty.

The National Disability Survey suggested the total prevalence rate for disability could be between 17% and 20%, compared to a figure of around 9% recorded in the Census that year. The National Disability Survey was based on follow-up interviews with a sample of the people who had reported in the 2006 Census that they had a disability, plus a small sample of people who had said they did not

have a disability. While most of the "yes" sample and of the "no" sample offered consistent answers in both the Census and the National Disability Survey, there were some differences, partly due to covering a broader range of conditions in the National Disability Survey, i.e. pain and breathing difficulties, contributing to the higher estimate of disability prevalence recorded in the National Disability Survey.

The table is based on the detailed breakdown by disability type and by age of respondents to the National Disability Survey who were drawn from the Census "Yes" to disability sample. There is a greater level of detail available for this group, and it is statistically more reliable for subgroups, being based on a larger sample (some 14,500) compared with just 1,550 in the Census "no" sample. The table may underestimate to some extent the total number of people with different conditions, particularly among those experiencing lower levels of difficulty.

Not mutually exclusive

The numbers of people with different kinds of impairment are not mutually exclusive, and many people have more than one kind of impairment.

Broad order of magnitude for levels of difficulty by age-group

Tables 14.1 to 22.1 of the National Disability Survey 2006 – First Results gave a percentage breakdown by age-group within each level of difficulty for the different classes of impairment. These have been used to estimate the number of people in each age group with different levels of difficulty. The percentages were applied directly for the under 18 and 65+ age groups, and for the 18-64 age-group by subtraction. The resulting numbers, shown in italics, have been rounded to the nearest 100. However the figures are not accurate to this level of precision, they only give an indication of broad orders of magnitude, being based on percentages from small sub-sample data then applied to rounded numbers.

A5 Lifetime Homes Standards

Table 9.10 Lifetime Homes Standards	
Car Parking	Where car parking is adjacent to the home, it should be capable of enlargement to attain 3300mm width.
Access for Car Parking	The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping.
Approach	The approach to all entrances should be level or gently sloping.
External Entrances	All entrances should be illuminated, have level access over the threshold and have a covered main entrance.
Communal Areas	Communal stairs should provide easy access and, where homes are reached by a lift, it should be fully accessible.
Doors and Hallways	The width of internal doorways and hallways should conform to Part M, except that when the approach is not head on and the hallway width is 900mm, the clear opening width should be 900mm rather than 800mm. There should be 300mm nib or wall space to the side of the leading edge of the doors on entrance level.
Wheelchair Accessibility	There should be space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchairs elsewhere.
Living Room	The living room should be at entrance level.
Two or more storey requirements	In houses of two or more storeys, there should be space on the entrance level that could be used as a convenient bed space.
WC	In houses with three bedrooms or more there should be a wheelchair accessible toilet at entrance level with drainage provision enabling a shower to be fitted in the future. In houses with two bedrooms the downstairs toilet should conform at least to Part M.

Bathroom and WC Walls	Walls in the bathroom and WC should be capable of taking adaptations such as handrails.
Lift Capability	The design should incorporate provision for a future stair lift and a suitably identified space for a through the floor lift from the ground floor to the first floor, for example to a bedroom next to the bathroom.
Main Bedroom	The design and specification should provide a reasonable route for a potential hoist from a main bedroom to the bathroom.
Bathroom Layout	The bathroom should be designed for ease of access to the bath, WC and wash basin.
Window Specification	Living room window glazing should begin no higher than 800mm from the floor level and windows should be easy to open/operate.
Fixtures and Fittings	Switches, sockets, ventilation and service controls should be at a height usable by all (i.e. between 450 and 1200mm from the floor).

Source: Joseph Rowntree Foundation

A6 Access Statements

Access statements

An access statement is a development management mechanism, used to explain and justify the approach to access within the scheme that is being applied for and how the design of the scheme responds to the needs of all potential users. They are especially important for large-scale projects so that the applicant can demonstrate how accessibility has been taken into account.

Access statements are useful in that they:

- encourage the applicant to think carefully about the quality of their planning proposal (this should improve the general quality of applications)
- give applicants the opportunity to explain and justify their plans to officers, councillors and the people they consult
- help people to negotiate changes to plans, as they can set out ideas for discussion
- control the way buildings are built, used and managed

Whilst the requirement for an access statement has not formally been introduced in the Irish context, a number of planning authorities in Ireland have introduced the requirement for design statements within the statutory Development Plan. The statements usually consist of both text and graphics, but is not intended to duplicate planning application documents.

The wider use of design statements is promoted for all planning authorities within the Urban Design Manual, A Best Practice Guide. As a matter of best practice access statements should also be required as part of the development management process and submitted with the application.

In terms of content, these statements could:

- show how Development Plan, Local Area Plan policies are taken into account
- include any consultation carried out with community groups, access groups
- explain how surrounding roads, footpaths and sightlines will be linked
- illustrate access to and access within the building itself
- include diagrams showing how people can move to and through the place – including vehicles, bikes and pedestrians
- describe how levels change within public spaces, including pavement and dropped kerbs, bus stops, parking spaces, including blue badge holders, at train stations and parks
- include information on the visibility of entrances and access to the building through entrance areas or front doors, as well as access to facilities such as toilets
- show that people with disabilities will not be segregated but will be able to move around within a building at all levels and use the same entrances, corridors and rooms as everyone else without detour
- detail how access for the emergency services will be provided

A7 Venue Checklist for Consultation Events

Table 9.11 Venue checklist for consultation events
Venue Checklist
The organiser has visited the venue to establish whether the venue is suitable, the facilities and provision is made for people with disabilities and any potential access problems?
There is physical access to and inside the venue?
The venue has been subject to an accessibility audit?
Are toilets, lifts, refreshment areas accessible to the meeting or function rooms being used for the event?
Can delegates with mobility difficulties use the same entrance as other delegates?
Can wheelchair users use ramped access routes independently?
Have venue staff been trained in disability and accessibility awareness?
Accessible car parking is available, preferably on site and close to the entrances (within 50m) for people with mobility difficulties?
Routes and entrances from the car park are accessible with no major obstructions?
Language support professionals have been arranged?
The programme is structured to allow for breaks?
Speakers have been advised to talk clearly, not too fast and to face the audience?
Easily identified support staff are available to familiarise participants with their surroundings?
The event area is large enough and has been arranged to allow for movement?
The registration and event area is clearly indicated?
Event information is made available in alternative formats?

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