Access and Facilities for Disabled People: Creating an Inclusive Built Environment

Supplementary Planning Document

2009
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Access and Facilities for Disabled People:
Creating an inclusive built environment

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2009

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This Supplementary Planning Document is written in two parts.
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**Front Cover**

Wolverhampton Library, Snow Hill.
Wolverhampton Art Gallery, Lichfield Street.
Wolverhampton Shopmobility, Cleveland Street.
The information in this document has been collected from a number of sources. The Council accepts no liability for loss or damage caused by errors or omissions in the information.

Any guidance on the Building Regulations or Planning Legislation is not intended as a full and authoritative statement of the law.

Any specific queries should be referred to the Access Team, Development Control or Building Consultancy in Regeneration and Environment Department.

Access Team: 01902 555611/ 01902 555411

Development Control/ Building Consultancy: 01902 551155
PART A

Supplementary Planning Document
1. Introduction

Wolverhampton City Council is committed to maintaining and improving the quality of life of disabled people and working towards an inclusive society for all its citizens.

An important part of delivering this commitment is the removal of physical barriers impacting upon access for disabled people due to the impairment through poor design of buildings and places. Sometimes the needs of disabled people are considered too late in the design process.

This Supplementary Planning Document (SPD) is aimed at assisting and informing those individuals and organisations involved in the design and creation of the built environment to consider the needs of disabled people as an integral part of the development and to enable disabled people to participate in and contribute to the life of the City. The document provides further detail to supplement the policies & proposals of the Wolverhampton Unitary Development Plan (UDP), in particular policies D2 and D11. The SPD also explains other statutory requirements including Part M of the Building Regulations 2004 and the Disability Discrimination Act 1995 AND 2005 (DDA). The contents of this document will be used by the Council in the determination of planning applications and building regulations applications. The document supersedes the contents of the previous Supplementary Planning Guidance ‘Access & Facilities for People with Disabilities’ adopted by the Council in 1995.

The SPD is divided into two parts – Part A and Part B.
Part A of this document provides the following information:-

- A summary of the barriers that disabled people face
- Social model
- Current legislation
- The Council’s Equality Duty
- National government and policies
- The Council’s UDP policies
- Access Statements
- The Council’s Access and Shopmobility Services
- Monitoring

Part B of this document provides a technical guide providing more detailed information and diagrams covering the following;-

- Access to the development
- Access within the building
- Use of the building
- Lighting, controls, telephones, seating etc
- Housing
2. Barriers that disabled people face

Approximately 60 million people live in the UK and around 10 million people have some form of disability. Easy, unencumbered movement through the whole environment should be available to everyone.

Source of data: Commission for Equality and Human Rights (CEHR)

Wheelchair users

Some of the barriers wheelchair users face are:-

- high kerbs,
- stairs,
- loose gravel and cobbled surfaces,
- narrow doorways and corridors,
- not enough manoeuvring space
- no toilet facilities for disabled people.

Blind and visually impaired people

Some of the barriers visually impaired people face are:-

- lack of signage,
- confusing layouts,
- steps that have no contrast to highlight risers and treads.
- obstructions and hazards on route, (BCB) e.g street furniture, a-boards, cars parked on pavements, roadworks.
- poor lighting.
- (BCB) changing layouts
- (BCB & CCC) shared surfaces with vehicles

Hearing impaired people

Some of the barriers hearing impaired people face are:-

- noisy environments,
- poor acoustics and lighting,
- the lack of induction loops, minicom or type talk facilities,
- Lack of visual information.

Ambulant disabled people

Some of the barriers ambulant disabled people face are lack of handrails at both sides of a ramp or stairs, steep gradients, lack of stepped access, long distances and no resting places, lack of seating, ungraspable and not easy to use door handles.
3. **Social model**

Wolverhampton City Council recognises that there are institutional and environmental barriers constraining opportunities for disabled people and has adopted a social model approach to disability in relation to how it provides its services. The Social Model basic view is that we all have impairments, but we are disabled by social barriers, i.e. badly designed buildings, physical obstacles or other people's attitudes. Therefore, this document aims to assist in removing those barriers that prevents all people, including disabled people, having independent access and opportunities to access the built environment and services to the public.

4. **Current legislation**

When considering the “Access and Inclusion” requirements of a planning application, applicants should also consider the requirements of Part M of the Building Regulations 2004 and BS8300:2009, as meeting these requirements may change the internal layout and usability of the proposed building and occasionally force a change in the footprint or external appearance of the proposed building, which would in turn, require an amendment to any planning consent which may have been previously obtained for the works and this may result in the need for a new planning application.

**Part M Building Regulations 2004**

**Access to and use of buildings**

Part M will be met by making reasonable provision to ensure that buildings are accessible and usable.

People, regardless of disability, age or gender, should be able to:

- a) gain access to buildings and to gain access within buildings and use their facilities, both as visitors and as people who live or work in them;
- b) use sanitary conveniences in the principal storey of a new building

**British Standard 8300**

**Design of buildings and their approaches to meet the needs of disabled people – code of practice**

This British Standard explains how the built environment can be designed to anticipate and overcome restrictions that prevent disabled people making full use of premises and their surroundings.
Disability Discrimination Act 1995 and 2005

The DDA gives disabled people rights in certain areas and is aimed to prevent discrimination that they face.

Part 2 of the Act aims to prevent discrimination against employees by ensuring that a disabled employee can carry out their job without “substantial disadvantage”. Employers have a duty to make reasonable adjustments for disabled people.

Part 3 of the Act gives disabled people a right of access to goods, facilities and services, disposal or management of premises or land and private clubs.

It requires service providers to make “reasonable adjustments” for disabled people. A service provider is required to take reasonable steps to:

- change a practice, policy or procedure which makes it impossible or unreasonably difficult for disabled people to make use of its services,
- provide an auxiliary aid or service if it would enable (or make it easier for) disabled people to make use of its services

In addition, where a physical feature makes it impossible or unreasonably difficult for disabled people to make use of services, a service provider has to take reasonable steps to:

- remove the feature; or
- alter it so that it no longer has that effect; or
- provide a reasonable means of avoiding it; or
- provide a reasonable alternative method of making the service available

Whilst this code does not impose legal obligations, it can be used in evidence in legal proceedings under the Act. Therefore, it is strongly recommended that applicants read the DDA document prior to submitting a planning application to ensure that they have considered what is reasonable from the examples in the Code.

5. The council’s equality duty

Equality duty

In January 2005, the Prime Minister’s Strategy Unit published a joint report on behalf of four Government Departments, called “Improving Life Chances of Disabled People”. This set out the Government's vision for disability equality. It stated that “by 2025, disabled people in Britain should have full opportunities and choices to improve their quality of life and be respected and included as equal members of society”. In response to this, in December 2006 Wolverhampton City Council published its Disability Equality Scheme (2006-2009). In this document the Council recognises that its duty to promote disability equality will be enhanced by using the social model approach. This means adopting the principles of inclusive design wherever possible in terms of designing and monitoring the built environment.
It should be noted that in view of this commitment, consultation with disability groups in Wolverhampton will take place regarding relevant planning applications. As part of the planning process, applicants will be expected to respond to any comments from these groups and consultation in Planning Policy and plans.

6. National government and policies

In July 2002, the Government document “Sustainable Communities: Delivering through Planning” made clear, the land use planning system has a key role to play in creating and sustaining mixed and inclusive communities.

7. Relevant UDP strategic policy context.

The Wolverhampton Unitary development Plan was adopted in June 2006. The key UDP policies relevant to this SPD are S3, D2, D11, C1, R1, H11 and AM1. These are discussed below.

Policy S3: Local area and neighbourhood renewal

Point 3 provides opportunities for new mixed tenure and special needs housing.

Point 5 ensures meeting, where practicable, the cultural, leisure and recreational needs of the local community.

Point 9 ensures improving accessibility and providing a choice of transport modes for all the community, especially disabled people.

Point 11 seeks to improve district and local centre to provide a range of services and facilities, particularly for food and shopping.

Policy D2: Design statements.

This Policy requires that all development proposals should demonstrate a high standard of design and requires the submission of a Design Statement and in May 2006, the Government introduced changes to the planning application process to encourage inclusive, practical and interesting places to be built having regard for best practice and guidance. The Circular; “Guidance on changes to the development control system “, became effective on 10th August 2006 and sets out the formal requirements. All planning applications should now be accompanied by a “Design and Access Statement”. This statement should, through text, photographs and illustrations, demonstrate, amongst other criteria, how inclusive disability access is to be achieved throughout the whole site. Guidance on writing Design and Access Statements have been published by CABE and (CCC) The Commission for Equality and Human Rights.
Policy D11: Access for disabled people

This policy is the main disability access policy as it cuts through every type of development. It states that all highway and development proposals should be designed to provide safe and convenient access for disabled people.

Policy C1: Health, education and other community services.

This policy states that, subject to other UDP policies, the Council will seek to meet existing and future needs for community services by protecting land and buildings in community use and encourage improvements in access to existing community service facilities.

Policy R1: Local standards for open space, sport and recreation facilities.

In particular, this policy seeks to assess current and future provision of the above mentioned resources and set local standards in terms of quality, quantity and accessibility.

Policy H11: Housing

This policy specifically requires that new housing is developed to a high standard of design that includes disability accessibility standards, not only in house design but in the design and layout of the development as a whole.

Policy AM1: Access, mobility and new developments.

This policy establishes the requirement for the Council to work in partnership with others to improve access and mobility for all. Contributions to transport access and mobility improvements will be sought in accordance with UDP Policy IMR2: Planning Obligations and Agreements.

8. Access statements

In May 2006, the government introduced changes to the planning applications process. 01/06 Circular introduced the requirement for the production of Design & Access Statements. Access Statements are documents that are also required by Government regulation and UDP Policy D2 and in the submission of Planning and Building Regulation Applications that explain the design thinking behind a development proposal. They show that the applicant has thought carefully about how everyone, including disabled people, older people and very young children, will be able to use the places they want to build.
The amount of detail in the statement should reflect how complex the application is. Therefore, a statement for a major development is likely to be much longer than one for a single building.

Below is a checklist of what should be included in the statement:

- A brief explanation of the Project Sponsor’s policy and approach to access, with particular reference to the inclusion of disabled people;

- A description of how the sources of advice on accessibility and technical issues will be, or have been followed;

- Details of any consultations undertaken or planned, including the number of users, particular user need groups (for example, visually impaired, deaf or hard of hearing, ethnic groupings, learning disability and mental health) and the degree to which the process has been influenced by it;

- Details of any professional advice that has been followed, or will be sought, including recommendations from access audits or appraisals;

- An explanation of any specific issues affecting accessibility to, or within the particular environment, and/or the service provision, employment or educational opportunities. Details of access solutions adopted to overcome any issues, including those which deviate from recognised sources of good practice;

- Details of the management and maintenance management policies adopted, or to be adopted, to maintain features enhancing accessibility (for example, lighting, colour and luminance contrast, door closing forces etc), specialist equipment (for example, induction loops, audible and visual fire alarm systems etc), and staff training;

- A plan of sufficient detail and extent to illustrate features such as routes in, out and around the outside of the building, vertical and horizontal circulation routes, positions of accessible car parking bays, the location of public transport, and any other features relevant to the proposal.

- Where good practice cannot, or may not, be met, the Access Statement should say why, what are the implications for the users, and what other methods are being taken to lessen the impact?

- (IWA) In the historic environment potential conflicts between disability access and the need to conserve this historic fabric of the building/structure need to be included within Design and Access Statements when historic buildings are being converted for reuse.
9. The Council’s access and shopmobility services

Shopmobility service

Wolverhampton Shopmobility is a Council run scheme which offers a range of powered scooters, powered and manual wheelchairs and shopping trolleys to people with temporary or permanent disabilities, to enable independent access to City Centre shops and facilities. There are also manual wheelchairs available for holiday loans. Customers need to visit the Shopmobility premises to register. There is a charge for equipment.

For more information about this scheme contact:
Shopmobility
12, Cleveland Street
Wolverhampton
WV1 3HH
Telephone/Minicom: 01902 556021
Fax: 01902 556045
E-mail: vel.finney@btconnect.com

Access service

The Access Team are responsible for increasing the awareness to the needs of disabled people with regard to access to buildings and the spaces between them. They negotiate, advise and persuade people involved in the creation of the built environment to plan, develop and build an environment that is wholly inclusive. The team also consult with disabled groups on a regular basis for information and advice.

For more information contact:
The Access Team
Regeneration and Environment
Planning, Policy and Urban Design
Civic Centre
St Peter's Square
Wolverhampton
WV1 1RP
Telephone: 01902 555611/5411
Fax: 01902 555637
10. Performance monitors

To monitor the performance and impact of this SPD it is intended to:

- Monitor the use of the SPD in submitted Design & Access Statements in planning applications.
- Feedback from disabled people and disability groups who use schemes designed and built in accordance with the SPD
- Monitor the satisfaction of disabled people with accessibility in and around publicly accessible buildings (inc. shops) in the City Centre and local areas.
PART B

Technical Design Guide

Supplementary Planning Document
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Source of diagrams: Approved Documents M & N of the Building Regulations;
1. Access to development

Parking

See diagrams 1a - f

Designated parking bays are for the exclusive use of vehicles displaying the official disabled persons ‘s parking badge, providing the badge holder is accompanying the vehicle. People who use wheelchairs and those whose disability renders them unable to bend their leg/legs require additional space at the side and rear of the vehicle to allow them to manoeuvre without causing damage to their own or other people’s property. Flush dropped kerbs should always be provided next to parking bays. It is also important that other cars do not park in front of the dropped kerbs as this could prevent a wheelchair or scooter user from getting on a pavement safely.

Therefore:

- When more than one bay is provided, space can be saved by sharing a 1200mm transfer area between two 2400mm wide bays. Multiple spaces can then be designed from diagrams 1a – 1c.

- The spaces provided should be marked clearly with the international disability symbol, should be within 50m if uncovered of an accessible building entrance, and be signposted to identify the parking space when road markings are obscured due to snow or fallen leaves.

- Signposts for disabled parking bays should not be located where they could obstruct pathways.

- A covered way from the parking bays to the building entrance is welcomed.

- Within a countryside setting, the use of large areas of concrete, tarmac and yellow paint used in the general construction of car parks is to be avoided. Setts are preferred to define parking spaces, and the use of materials which give a firm, level and well drained surface such as well impacted crushed rock, or bricks are preferred for the construction of the car park, with a sustainable on-site facility for rain water disposal. Back-to-back parking provision in countryside/leisure car parks is to be encouraged to allow for “Blue Badge” parking with trailer. See diagram 1f. Screen landscaping can mitigate the impact of car parks in surrounding areas.

- Any on-street parking bays for disabled people should be provided in accordance with diagram 1e.

- The number of disabled persons car parking spaces associated with a building or area varies depending on whether the car park is intended for employee use or the general public, and the size of the car park.
• It is also important that car park entry and payment equipment is accessible and usable by disabled people.

• There should be adequate signage to direct people to the paying areas.

Diagram 1a. Parking Layout.

- The International disability symbol to be in each disabled person's parking bay.
- Transfer zone from wheelchair to car, shared between two standard width bays.
- 2400mm, 1200mm, 2400mm, 1200mm, 2400mm
- 1400mm
- 300mm
- 4800mm
- 1200mm
- flush dropped kerbs at intervals or level access
Diagram 1b. Alternative Parking Arrangement

Preferred access route avoiding travel behind parked cars

Diagram 1c. Parking Arrangement Preventing Vehicle Encroachment

Continuous flush dropped kerb with bollards at the centre of each bay to prevent cars driving through.
**Workplaces**
Where the number of employees who are disabled are known, the minimum number of designated spaces should be one space for each employee who is disabled, plus at least one space or 2% of the total capacity, whichever is the greater, for disabled visitors, with a minimum of one space.

Where the number of employees who are disabled is not known, at least one space or 5% of the total parking capacity should be designated (includes both employees and visitors) whichever is the greater.

**Shopping, recreation and leisure facilities**
The minimum number of designated spaces should be one space for each disabled employee plus 6% of the total capacity for disabled visitors.

*Numbers for hotels and sports stadia who specialize in accommodating groups of disabled people may need to be greater.*

**Railway car parks**
The minimum number of designated spaces should be one space for each employee who is disabled, plus 5% of the total capacity for disabled visitors.
Churches
A minimum of two spaces should be designated.

Crematoria and cemetery chapels
A minimum of two parking spaces should be designated.

Source: BS8300: 2009

Diagram 1e: On-street parking

Diagram 1f. Countryside Parking
to allow for trailers/caravans.
**Entrances to car parks**
A sign should be provided at the entrance to each car park and at each change of direction to direct disabled people to designated parking spaces.

**Parking meters, controls and ticket dispensers**
Information and payment terms should be provided at the entrance to a car park to inform disabled people if free parking is available.

**Ticket dispensers**
Slots for coins or cards in ticket dispensers should be at least 750mm and not more than 1200mm above the ground. For people who cannot use coin machines, there should be a button to press at an accessible height to call a parking attendant to assist. There should be a 2100mm x 1850mm clear space in front of the machine to approach & manoeuvre.
Footpaths, trails, dropped kerbs, cycleways and footways.

See diagrams 2a – l

- Footways should be as level as possible without camber and constructed of stable, firm, non-slip material. Cobbles, bare earth, sand & loose gravel should not be used.

- Ground surfaces should not deaden sounds and echoes which blind people depend on to gain direction. Suitable surfaces are tarmac, gravel properly compacted, concrete or brick.

- Footways and footpaths should have a minimum width of 2000mm. This allows two wheelchairs to pass one another comfortably. This should be regarded as the minimum under normal circumstances. Where this is not possible because of physical constraints 1500mm could be regarded as the minimum acceptable under most circumstances, giving sufficient space for a wheelchair user and a walker to pass one another. The absolute minimum, where there is an obstacle, should be 1000mm clear space. The maximum length of restricted width should be 6 metres. To assist blind and partially sighted people, footpath edges should be defined using a low rail, kerb or surface texture change. See diagram 2a.

- Where a pathway exceeds a gradient of 1:20, handrails on both sides are required.

- Where forecourts or landscaped areas are part of the approach to the building there should be a clearly defined route through the space. This can be achieved by contrasting colour, differences in texture or by tactile guide path material. The route should be as level as possible, unobstructed and well lit.

- Trails in the countryside should be constructed using well compacted crushed rock, bricks, flush laid setts or timber boardwalks instead of concrete or tarmac, but must ensure a firm, level and well drained surface. A choice of routes, including short cuts, should be encouraged, incorporating resting places with good views where possible. Handrails are required at critical points, as are indicators of change in route and direction and change of gradient. Steep gradients should be avoided wherever possible.

- Where building projections are unavoidable pedestrians should be guarded from them by use of kerbing, deterrent paving or guard rails. See diagram 2b.

- Tapping rails and tactile or taped information is particularly helpful for blind and partially sighted people. See diagram 2c.
- Planting (BCB) (no thorny plants) should be kept low (BCB) and not overgrown alongside trails to ensure good visibility. (BCB) Regular maintenance is required. Landscaping along trails should be designed to provide interest and way finding assistance, i.e. colour, texture and fragrance.

- Pictorial information signs are an excellent way of imparting information to people who are partially sighted or have learning difficulties. e.g. See diagram 2d.

- Flush dropped kerbs should be provided where appropriate, to enable easy passage from road to footpath, and should be sited at right angles to the road, avoiding gratings and at the pedestrian desire line. See diagram 2e.

Diagram 2a. Footpath design

[Diagram showing footpath design with labels for building, extra congregating space, A firm anti-slip surface, define path edge with kerb or low rail, total width of footpath 2000mm (1800mm min) to allow prams and wheelchairs to pass, 1500mm (1000mm min) clear width between obstacles, and tree roots]
Diagram 2b: Avoiding hazards on access routes such as open windows, building projections and telephone booths.

Diagram 2c. Trail Design for People who are Blind or Partially Sighted.

No fishing

Diagram 2e. Flush Dropped Kerb.
Uncontrolled crossings

Where a kerb is dropped at pedestrian crossing points there should be no vertical upstand between the road surface and the kerb. A tactile surface has been developed in order to provide warning and guidance for visually impaired people where there is no kerb upstand. Tactile paving must be laid to enable visually impaired people to enter the carriageway and pick up the tactile paving on the opposite side.

In the construction of an UNCONTROLLED pedestrian footway crossing, blister paving in a contrasting colour OTHER THAN RED, USUALLY BUFF, should be incorporated.

(DTp Disability Unit circular 1/91 gives specific examples).

See diagrams 2f – L.
Diagram 2g. Layout with Refuge greater than 2m.

Diagram 2h. Uncontrolled In-line crossing.
Controlled crossings

Red blister paving should be incorporated in the construction of CONTROLLED crossings. Zebras, Pelicans, Puffins & Toucans ONLY. See diagrams 2j – k.
For pelican crossings use the “L” pattern tactile surface arrangement.

Diagram 2j. Pelican Crossing.

Line of tactile surfacing always located to the side of the crossing having the push button. Where there are two buttons the tactile surface should lead to the right hand button.

For zebra crossings use the “T” pattern tactile surface arrangement.

Diagram 2k. Zebra Crossing.
Shared cycleways

Where a cycle track runs alongside a footway/footpath, it is not always possible to physically segregate the two as advocated in Local Transport Note 2/86 “Shared Use by Cyclists and Pedestrians” (HMSO). Tactile surfaces have been developed to enable blind and partially sighted people to position themselves on the correct side of such a shared route. A blind or partially sighted person is then helped to stay on the correct side of the segregated shared route by a raised dividing line. See diagram 2L.

Traffic advisory leaflet 4/90 (Dept. of Transport) is one of a series aimed to draw your attention to ideas for improving traffic engineering techniques to assist cyclists and pedestrians.

Textured paving slabs orientated to form a "ladder" pattern on the footway or footpath.

Textured paving slabs orientated to form a "tramline" pattern on the cycle track.

400 x 400 x 50mm Textured paving slabs, 6mm high ribs project above existing surface.

Longitudinal raised line 160mm wide, 12-20mm high

20mm gap to allow for drainage where necessary.

WMB 1049.1

WMB 1049.2

32.5mm
30mm
70mm
70mm
70mm
70mm
30mm
32.5mm

400mm

WMB 1049.2

12-20mm
50mm

150mm

Section A-A
WMB 1049.1
Street furniture

See diagrams 3a – c.

Flower tubs, raised flower beds, lamp posts, litter bins, telephone boxes and seating can all cause obstructions for disabled people.

Therefore:

- In designing street furniture, sharp edges and corners should be avoided.

- Obstructions like litter bins must be floor mounted so that a person with a white cane can detect it, instead of the cane going underneath a raised bin and the person walking into it. Litter bins should be approximately 1300mm in height with the bin opening at about 1000mm above ground level.

- Obstructions must be in line to provide one obstruction rather than several scattered ones.

- Free standing posts and columns should incorporate a band, 150mm high, whose bottom edge is 1000mm above ground level and which contrasts visually with the remainder of the column or post.

- Bollards should be at least 1000mm high, should not be linked with chains and should contrast visually with the background against which they will be seen.

- Seating is particularly important for people with mobility difficulties and for the elderly. Because people don’t come in standard sizes, a choice of seating heights and designs with and without armrests should be provided.

- Seating in countryside parks etc. is important and must allow spaces for wheelchair access. Perches are particularly useful as resting places along trails and covered shelters should be considered at appropriate locations. See diagram 3c.

- Good lighting near hazards and along routes should be provided.

- Deterrent paving should be used to warn people of hazards such as restricted head heights. Deterrent paving is a surface that discourages people away from danger.
Diagram 3a. Street furniture.

- Locate street furniture towards edge of pavement
- 800mm preferred height
- Flush covers, manholes etc.
- Gap between grids 20mm max.
- 2000mm preferred (1000mm minimum)
- Keep clear of displays, obstacles
- 2300mm min headroom
Diagram 3b. Street Scene Hazards.

Free standing posts and columns should incorporate a bend which contrasts in colour.

Use 1000mm high bollards with good colour contrast. Avoid chains between.

Detriment paving to indicate hazard with restricted head height.

Avoid dish channels or raised grates, covers should be flush.

Corduroy tactile warning surface at top and bottom of steps.

Plants with aromas, soft leaves, no spikes or thorns.

Good lighting near hazards and along routes.
Diagram 3c. Perch Seating.

Low walls make useful seats: when designed they should be 450 - 500mm high, and 300 - 450mm wide. Copings should be pitched at 1:100 to allow water to drain off.

Higher walls, 500 - 750mm high with copings sloped towards the path, make good perches.
Building approach, ramps and external steps including handrails

See diagrams 4a – f

Ramped approach

A level approach, i.e. an approach which is less steep than 1:20, should be used whenever possible.

If, however, this cannot be achieved, the following criteria should be followed.

- Ramps should wherever possible be no steeper than 1:20, and in no circumstances steeper than 1:12.

<table>
<thead>
<tr>
<th>Going of a flight</th>
<th>Maximum gradient</th>
<th>Maximum rise</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 m</td>
<td>1:20</td>
<td>500mm</td>
</tr>
<tr>
<td>5 m</td>
<td>1:15</td>
<td>333mm</td>
</tr>
<tr>
<td>2 m</td>
<td>1:12</td>
<td>166mm</td>
</tr>
</tbody>
</table>

**Notes:**

For goings between 2m and 10m, it is acceptable to interpolate between the maximum gradients, i.e. 1:14 for a 4m going or 1:19 for a 9m going.

- The going of a flight must not be greater than 10m or have a rise of more than 500mm.
- Steps should be provided in addition when the rise of the ramp is greater than 300mm.
  
  See diagram 4c.
- Ensure that handrails on ramps and steps are grippable and well supported to ensure the safety of people who need to use them.
- Handrails for both ramps and steps should offer a colour contrast to their surroundings and should be either plastic/acrylic coated or made of wood to alleviate thermal transfer occurring through the combination of frosty weather and bare steel.
- Handrails which in their design incorporate the needs of both disabled people and children are welcomed.
- The ramp surface should be of a durable non-slip material and must contrast in colour with landings.
• If a ramped access is requested on the public highway then it is preferred that designers firstly look at adjusting their own premises internally. If for whatever reasons this cannot be achieved than an application would have to be submitted for permission to the Council’s Highway Section.
Diagram 4b. Handrails.

Source: Part M. Building Regulations

Diagram 4c. Combination of Ramp and Steps to Building Entrance.

easy go steps to have going of between 280mm and 425mm, risers of between 150mm and 170mm and steps edges to be identified in contrasting colour.

Corduroy tactile surfaces 800mm x 1500mm
External steps

An external stepped approach is used to compliment a ramped approach, especially where the rise of the ramp is greater than 300mm. Steep ramp gradients are often difficult for people with ambulant disabilities to negotiate and easy-go steps provide a welcome alternative.

- Handrails to be both sides of steps between 900mm and 1000mm above nosing line and between 900mm and 1100mm at landings and have an outside diameter of 45/50mm.

- Return handrails to the wall or floor

- Handrails which in their design incorporate the needs of both disabled people and children are welcomed.

- In exposed conditions consider a solid balustrade.

- Nosings should be identified by colour contrast to enable people with visual impairment to identify each step, 55mm wide on both the tread and the riser. (BCB) Tactile colour contrasted nosings are also available.
• Lightings should be located at the side of the flight so that people do not negotiate the stairs in their own shadow.

• Open risers must not be used as these pose a safety hazard for elderly people and those with ambulant disabilities.

Diagram 4e. External Steps.

Diagram 4f. Corduroy hazard warning surface (available in all types of material)
Entrances and entrance doors

See diagram 5a - f

Entrances

Entrance arrangements should be designed with care and provide a welcome to the building for everyone.

- The route to an accessible entrance should be clearly signed and easily recognisable

- Any door entry systems should be accessible to deaf and hard of hearing people, people who cannot speak and wheelchair users

- Thresholds should be wheelchair accessible

- Avoid sunken mat wells. If mat wells must be used then the surface of the mat should be level with the surface of the adjacent floor

- The floor surface in entrance doorways should always be anti-slip

- If turnstiles have to be provided (e.g. football grounds) a clearly signposted alternative accessible entrance must be provided

- Automatic doors are always preferable and should remain open long enough for a slow moving person to pass through.
Entrance doors

Doors to the principal or alternative accessible entrance should be accessible to all.

- Lever handles are most definitely preferred to knob handles. All door opening furniture should contrast visually with the surface of the door and should not be cold to the touch
- The clear effective widths of doors can vary. See table below

<table>
<thead>
<tr>
<th>Direction and width of approach</th>
<th>New buildings (mm)</th>
<th>Existing buildings (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight-on (without a turn or oblique approach)</td>
<td>800</td>
<td>750</td>
</tr>
<tr>
<td>At right angles to an access route at least 1500mm wide</td>
<td>800</td>
<td>750</td>
</tr>
<tr>
<td>At right angles to an access route at least 1200mm wide</td>
<td>825</td>
<td>775</td>
</tr>
<tr>
<td>External doors to buildings used by the general public</td>
<td>1000</td>
<td>775</td>
</tr>
</tbody>
</table>

Diagram 5b. Entrance door
Diagram 5c. A Suitable Entrance arrangement.

Canopy providing shelter and suitable illumination at entrance

400mm high kick plates

Unobstructed space on leading edge side of door.

eexternal level platform in front of door allowing 1200mm clear of door swing

ramp

1200mm clear of door swing

1500mm

300mm

1000mm

400mm high kickplate

Sign at push point if no handles on door

Please see diagram 8b for glazing requirements.

Contrast colour of door surround and door handle eg. white door green surround and handle

Delayed action hinge with minimum opening pressure not exceeding 20N at the leading edge
Diagram 5d. Double leaf entrance door.

Diagram 5e. Visibility requirements.
Diagram 5f. Door handles
Return of lever towards door ensures safety and helps grip.

Lever diameter 19mm min

95mm min

Leaver handle

Minimum 54mm backset from door edge

Vertical push/pull handel or horizontal pull rail diameter 19 to 35

45mm min
Access to the countryside

See diagrams 5g – j.

- Entrances to the countryside need to be designed in order to allow wheelchair access whilst preventing unauthorised and undesirable uses. i.e. motorcycles, livestock etc.

- Gates are easier to negotiate than stiles.

- Fastenings should be at a height and location which are easy to use when seated in a wheelchair or on a battery operated scooter. They should also be colour contrasting.

- It may be useful to note that RADAR, the people who operate the National Key Scheme for disabled person’s toilets, also provide a RADAR pad lock and a rim lock which can be used on countryside gates and opened with the same key that opens the toilet facilities. Therefore a conventional style can be used alongside a gate fitted with the RADAR pad lock.

Diagram 5g. Countryside gate.
Diagram 5h. Countryside gate.

Diagram 5i. Countryside gate.

Diagram 5j. Motorcycle barrier.
Thresholds and cills

See diagram 6a – 6b

Thresholds and cills should be avoided where possible. If they really are necessary, they should not exceed 15mm high and should contrast in colour from the floor finish. A threshold that exceeds 5mm in height should be chamfered or pencil rounded.

Elements of a solution include:-

**Orientation**
Entry on sheltered aspect provided by other building, screening, carport etc…

**Protection**
From simple canopy through to full porch with outer door. A porch also has accompanying advantages – floor space to clean off wheelchair, space to take off and hang outdoor clothes etc.

**External barrier**
The provision of a drainage channel with grating nominally flush with threshold.

**Internal stop**
Any seal fixed to an inward opening door to clear internal finishes.

**Products**
Many options are available from one-piece seals fixed to the door or threshold, two or three piece interlocking products of varying complexity. Additionally, there exists a spring-loaded, door-mounted seal which retracts automatically on opening.
Diagram 6a. The Visibility Threshold.

hinged this side

interior trim and support

trigger pin

rubber blade

spring loaded hinged weather bar with rubber blade to seal against floor when trigger pin rides up ramp.

door frame

ramp

exterior trim and weather bar hinge plate

door

Diagram 6b. Patio Doors.

purpose made or standard channel & grating flush with raised paving

gap when door is open

ensure drainage of door track section

internal timber fillet where necessary - ie. if door set position

cut back timber cill if necessary

Carpet
2. Access within the building

Entrance and internal lobbies

See diagram 7a

A lobby arrangement at the entrance should ideally be avoided, as additional sets of doors can create problems for disabled people.

- If a lobby has to be created, adequate space (CCC) should be provided for:
  a) Independent wheelchair passage, allowing one door to close before opening the other.
  b) Someone assisting a wheelchair user through the lobby.
  c) Someone passing in the opposite direction.
  d) Someone with an assistance dog.
  e) A mobility scooter.

- The minimum clear effective width applies to the inner entrance door as well as the outer.

- Consideration should be given to lighting levels to reduce the contrast between outside and inside the building.

- Floor surface materials must not impede the movement of wheelchairs/scooters or pushchairs.

- The floor surface must help to remove rainwater from shoes and wheelchairs/scooters and pushchairs

- Columns, ducts etc that could protrude into the lobby must not project more than 100mm and must contrast visually or be protected by a colour contrasting guard rail.

- Glazing incorporated in a lobby should not create distracting reflections. It must be designed in accordance with BS 626-4.
DL1 and DL2 = door leaf dimensions of the doors to the lobby
DP1 and DP2 = door projection into the lobby (normally door leaf size)
L = minimum length of lobby, or length up to door leaf for side entry lobby
"a" = at least 300mm wheelchair access space (can be increased to reduce L)
1570 = length of occupied wheelchair with a companion pushing (or a large scooter)

NB: For every 100mm increase above 300mm in the dimension "a" (which gives a greater overlap of the wheelchair footprint over the door swing), there can be a corresponding reduction of 100mm in the dimension L, up to a maximum of 600mm reduction.

Source: Part M. Building Regulations
Glazed doors

See diagrams 8a & b.

Glazed entrance and internal doors and glazed screens should be clearly defined with manifestation.

- Manifestation on the glass must be at two levels, 850mm to 1000mm and 1400mm to 1600mm. They must contrast visually with the background and should be seen from the inside and outside.

- Manifestation could be a company logo or sign at least 150mm high or a decorative feature.

- Glazed doors should be clearly differentiated from glazed screens by providing a high contrast strip at the top and at both sides.

- Where glazed entrance doors are held open, they should be protected by guarding to avoid the leading edge constituting a hazard.

Source: Part N. Building Regulations
Internal doors

Doors are potential barriers, therefore they should be avoided whenever appropriate. If doors are required, self closing devices should be minimised especially where they will be used by the general public. Where closing devices are required for fire control, electrically powered hold open devices or swing-free closing devices should be used as appropriate. Doors should always be apparent to visually impaired people.

- When a door is to be opened manually, the opening force at the leading edge of the door should not exceed 20N.

- Clear effective widths of a single door or one leaf of a double door should be in accordance with the table below and see diagram 5a.

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- There should be an unobstructed width of 300mm on the pull side of the door, between the leading edge of the door and any return wall.
• Door opening furniture should be able to be operated with one hand using a closed fist and should contrast visually with the surface of the door.

• Door frames should also contrast visually with the surrounding walls.

• For zones of visibility and glazing see diagrams 5h and 8a and 8b.

Corridors and passageways

See diagram 9.

In locations that are accessible to wheelchair users, both in the entrance storey, and any storey accessible by lift, the following criteria should be observed.

• Before designing corridors in buildings, think carefully about their use. Consider the potential users. Wheelchair users, people walking with sticks/crutches/walking frames/guide dogs; people pushing a variety of trolleys, for cleaning materials/shopping/deliveries/pushchairs.

• In situations such as nursing homes, it would be more appropriate for the corridor width to be 1800mm to allow two wheelchairs to pass.

• Possible obstructions in corridors e.g. radiators, fire extinguishers should be recessed so that the clear width of the corridor is retained. This also assists clear passage for people with visual impairment.

• Doors should not open outwards onto corridors.

• If Internal ramps are used to accommodate level changes, and the gradient is steeper than 1:60 but less than 1:20, it should rise no more than 500mm without a level landing (at least 1500mm long.)

• For people with visual impairments and those with disorientating disorders, long featureless corridors are confusing and unhelpful. Much can be done to make corridors more user friendly by the use of contrasting colour, different textures, and degrees of lighting. Because there are many applications of these principles, each potential scheme is best judged on its own merits.

• Floor finishes must be slip resistant.
Diagram 9
Corridor/Passageway

1600mm

1200mm

1700mm

rounded or spayed edges
avoid sharp edges

radiator recessed in wall

fire extinguisher set in from corridor wall

see table in "entrance doors"
for clear effective width

1200mm minimum
1800mm preferred

Where a corridor has an unobstructed width of less
than 1800mm, passing places of at least 1800mm
wide should be provided at reasonable intervals,
e.g. at corridor junctions to allow wheelchair users
to pass.

avoid doors opening
into corridors e.g.
where access to
wheelchair accessible
toilet is off corridor -
use sliding door

900mm

good anti-slip
surfaces

entrance area

avoid unexpected
obstacles like security
"A" board signs

unobstructed space for
approaching doors,
all dimensions are
minimum clearance
Internal stairs

See diagrams 10 & 4b.

The design of all internal staircases, whether or not the building has a lift, should follow the criteria given in this section. This is considered necessary because:

- Many people do not actually like lifts;
- Lifts are mechanical equipment and are therefore liable to breakdown;
- In general circumstances, lifts cannot be used in an emergency; therefore easy-go stairs should be available.

The design principles of internal staircases are similar to those for external situations. However, because of space constraints within the building, less onerous step details are permitted.

- Stair nosings should be distinguishable for the benefit of visually impaired people.
- Landings should not be less than 1200mm.
- Open risers must not be used as these pose a safety hazard for elderly people and those with ambulant disabilities.
Diagram 10. Internal staircase.

- Minimum width of stairs between handrails is 1000mm.
- Handrails smooth and continuous where more than one flight.
- Handrail both sides and continuous across landings 45/50 mm diameter and contrasting in colour from the background.
- Return handrail to wall in a way that it reduces the risk of clothing being caught.
- 300mm min.
- 900mm - 1100mm.
- 300mm - 1000mm.
- 280 - 425mm treads.
- 12 risers max per flight in new build.
- No open risers.
- All nosings distinguished 55mm wide on both tread and riser.

Source: Part M. Building Regulations
Passenger lifts

See diagram 11

A passenger lift is the most suitable form of access for moving people from one floor to another.

For existing buildings where a passenger lift cannot be provided, a vertical lifting platform can be considered as an alternative option.

In exceptional circumstances, in an existing building, a wheelchair platform lift can also be considered.

The case for providing the above alternative lifts must be argued in an Access Statement. Please see Part A for more information on Access Statements.

- The minimum dimensions of the car size of a passenger lift should be 1100mm x 1400mm (8 persons) and the clear effective width of the door should be 800mm. This sized lift will not take a large mobility scooter. These types of scooters are fast becoming very popular for people with mobility impairments. Wolverhampton Shopmobility has over 4000 registered users (figure from Nov 2007) and the majority of customers do use scooters. This is important to note and will obviously depend on the size and nature of the scheme/development. The dimension of a lift that would take any scooter easily is 1800 x 1100mm.

- The design of the lift controls is important for both wheelchair users, elderly persons and blind and partially sighted.

- A mirror should be provided when the size of a lift does not allow a wheelchair user to turn around within the lift car.

- The lift controls and emergency information should be large, clear, illuminated and a contrasting colour. Car controls should be located between 900 and 1200mm from the car floor and at least 400mm from any return wall. Landing call buttons should be located between 900 and 1100mm from the floor of the landing and at least 500mm from any return wall.

- Embossed or indented letters/numbers adjacent to or integral with, the call buttons on both the landing and the lift car should be provided. Braille information can also be used but not on its own as currently only about 5% of blind and partially sighted people read Braille.

- Lift doors should be fitted with timing devices and re-opening activators to allow time for people and any assistance dogs to enter or leave.

- Visual and audible indication of lift arrival be provided in the lift car and the lift lobby.
• When the lift is used to evacuate disabled people in the event of an emergency it should conform to the relevant recommendation of BS 5588 – 8.

Source: Part M. Building Regulations
Vertical lifting platforms

A vertical platform lift can be used as an alternative to a passenger lift, in certain circumstances. This must be explained in an Access Statement, see Part A for more information.

- The lifting platform should conform to the requirements of the Supply of Machinery (Safety) Regulations 1992, S.I. 1992/3073 and BS 6440.

- The vertical travel distance should be:-
  a) not more than 2m, where there is no liftway enclosure and no floor penetration;
  b) more than 2m, where there is a liftway enclosure.

- The speed of the platform should not exceed 0.15m/s.

- The platform controls should be located between 800mm and 1100mm from the floor of the lifting platform and at least 400mm from any return wall.

- There should be continuous pressure controls provided.

- Landing call buttons should be located between 900mm and 1100mm from the floor of the landing and at least 500mm from any return wall.

- There are several minimum clear dimensions for the platform. They are:-
  a) 800mm wide and 1250mm deep, where the lifting platform is not enclosed and when providing for an unaccompanied wheelchair user
  b) 900mm wide and 1400mm deep, where the lifting platform is enclosed and when providing for an unaccompanied wheelchair user
  c) 1100mm wide and 1400mm deep where two doors located at 90° relative to each other and where the lifting platform is enclosed or when providing for an accompanied wheelchair user.

- Doors should have an effective clear width of at least 900mm for an 1100mm wide and 1400mm deep lifting platform and at least 800mm in other cases.

- Clear instructions should be fitted.

- Doors should be visually distinguishable from the adjoining walls.

- Audible and visual announcement of platform arrival and level reached should be provided.

- Glass areas should be identifiable by people with impaired vision.
Standard models of platform lifts are available, but it is advisable to speak to the manufacturers before purchase as there is considerable scope for made to measure installations, especially when catering for their use by mobility scooters.

**Wheelchair platform stairlifts**

A wheelchair stairlift can be used in exceptional circumstances as an alternative to a passenger lift and should be able to be used independently and not rely on assistance. Stairlifts also take up a side where a handrail cannot be used and therefore is not a preferred option. This must be explained in an Access Statement, see Part A for more information.

- A wheelchair stairlift should conform to the requirements of the Supply of Machinery (Safety) Regulations 1992, S.I. 1992/3073 and BS 6440.

- The required width for means of escape should be maintained in a building with a single stairway when the wheelchair platform is in the parked position.

- The speed of the platform should not exceed 0.15m/s.

- Continuous pressure controls should be provided.

- Clear instructions should be fitted.

- Access with an effective clear width of at least 800mm should be provided.

- Controls should be provided to prevent unauthorised use.

Should a stairlift need to carry mobility scooters as well as wheelchairs, speak to the manufacturer before specifying.
3. Use of the building

Wheelchair accessible toilets

See diagram 12.

Well designed wheelchair accessible toilet facilities are extremely important to disabled people whether they are visitors, customers or members of staff. Their location and availability can mean the difference between independence or embarrassment.

For customers and visitors to the building the facilities should be “unisex” to allow for assistance by a companion. e.g. husband and wife. For members of staff, provision can be either unisex, or integral with the traditional separate male/female toilets. This is based on the probability that disabled people in employment either do not require assistance, or if they do, it will be provided by someone of the same sex. Toilet provision for wheelchair users, of both sexes, may be provided on alternate floors of a multi-storey building provided that the cumulative horizontal travel distances from their workstation to the W.C. is not more than 40m.

In the design process the following points should be remembered.

- The W.C. seat should be the circular type without gap at the front. People’s legs that don’t work properly often get caught in the gap when transferring from wheelchair to toilet causing injury and discomfort.

- The lever toilet handle should always be on the transfer side of the cistern to enable the user to reach it, once back in the wheelchair. The “spatula” type of handle is preferable so that the force required to flush the toilet can be exerted either by the hand or the elbow depending on the person’s best capabilities.

- The W.C. pan should be projected forward from the rear wall to allow for the optimum sideways transfer from the seat of the wheelchair to the toilet seat. Therefore do not “Box In” along the back wall on the transfer side of the WC pan.

- (BCB) Contrast tiling should be used to identify white sanityware. Matt tiles should be used to reduce reflective glare.

- The soil vent pipe from the toilet should either go straight out through the rear wall or return towards the wall with the washbasin on, so as not to obstruct the wheelchair transfer area.

- The position of the washbasin is crucial. A person seated on the toilet should be able to use the washbasin and be able to dry their hands from there without transferring back into their wheelchair.
• (BCB) Hot and cold taps should be consistently positioned.

• If more than one wheelchair accessible W.C. is provided, the opportunity should be taken of providing a choice of left-hand and right-hand transfer layouts.

• The grabrails should be provided in a colour which contrasts from the background. This assists people with low vision to locate them and helps to introduce a non-clinical appearance. They should also have a cross hatch on them to make them more grippable.

• The door should be outward opening and should be fitted with an emergency release mechanism operated from the outside. If an inward opening door is the only solution, a clear minimum space of 700mm by 1100mm should be provided between the door swing and any sanitary fittings. Avoid doors opening into corridors e.g. where access to wheelchair accessible toilet is off corridor - use sliding door.

• The emergency pull cords should colour contrast so that they are easily seen.

For better understanding of the design requirements, the book entitled “The Good Loo Guide” published by the centre for accessible environments gives excellent insight into the exacting nature of the design criteria given in this section.

Adult changing tables

Changing tables provide a surface on which a person can be changed. Wall mounted shower stretchers are available which can also be used as changing tables and which fold up against the wall when not in use. Some have an adjustable angle backrest, while the height of the others can be adjusted electrically so that they can be positioned at a comfortable height for the carer and therefore reduce the risk of back injury. Adjustable height tables may be operated electrically, mechanically or hydraulically so that the table can be positioned at a comfortable height for the carer. There are a variety of sizes available.

Providing adult changing tables is beyond the minimum requirement of Part M of the Building Regulations and BS8300 but should be considered being provided in shopping centres, railway and bus stations, sports grounds etc.
Diagram 12. Wheelchair Accessible Toilet.

Elevation

Sanitary dispenser with coin slot between 750mm and 1000mm above the floor

Alarm pull cord with two red bangles one at 100mm, the other at 600mm to 1000mm above floor level

Location of shelf at 960mm above floor level

Grab rails

HD

SD

PT

TP AR

Dispenser bin

100mm

Height subject to manufacturing tolerance of WC pan

HD: Possible position for automatic hand dryer (see also Diag 21)
SD: Soap dispenser
PT: Paper towel dispenser
AR: Alarm reset button
TP: Toilet paper dispenser

Height of drop down rails to be the same as the other horizontal grab rails

Plan

Dispenser bin

Vertical grab rails

Sanitary dispenser

Finger rinse basin

Wall A

1500mm x 1500mm Wheelchair turning space

140 - 160mm

Zone for shelf for standing users

1600mm min (excluding and projecting head enrichment)

320mm

250mm

1000mm min

Alternative grab rail

Alternative position for alarm pull cord

Mirror

Clothes hooks

750mm

2200mm min

Note

Layout for right hand transfer to WC

Source: Part M. Building Regulations
Cistern

The cistern can be low level but clear of rail, or high level or concealed. In all cases ensure flushing lever/pull is on transfer side and reachable from a wheelchair.

Grab rails

The height of all horizontal, fixed or drop-down rails must be set at 680mm above the floor.

The lateral position of horizontal rails must be as follows:-
   a) A hinged drop-down rail located on the open side or on both sides should be fixed with its centre line 320mm from the centre line of the wc and extending 100 to 150mm beyond the front of the wc
   b) A fixed rail should be located on the side wall with a 50mm to 60mm clearance between the rail and the wall.
   c) A fixed rail should be located behind, and centred on, the wc pan when the cistern is in a duct, when there is sufficient space below a low level cistern or when the cistern is at high level, provided the rail’s projection allows the seat to stay in a raised position, when required.

Vertical rails, at least 600mm in length, should be fixed where possible with their centre line set at 1100mm above the floor.

The lateral position of vertical rails should be set 470mm from the centre line of the wc.

Rails should be 32mm to 35mm diameter with a good grip when wet.

Horizontal and vertical fixed rails should be securely fixed to the wall taking in account the nature of the wall construction.

Rails should contrast visually with their surroundings.

Equipment/fittings

Soap, toilet paper and paper towel dispensers should be suitable for single-handed use and for use by people with weak arm movements and should be readily accessible to a person in a wheelchair or seated on the wc and a person when standing.

Automatic hand dryers should be additional to a paper towel dispenser and should be installed on the door side of the wash basin.

Two coat hooks should be provided, one located at 1400mm and the other at 1050mm above the floor.

A shaver point, if provided, should be located at the side of the mirror, between 800mm and 1000mm above the floor.

Sanitary towel and incontinence pad dispensers, and sealed containers for their disposal should be incorporated in the design but should not be placed within the manoeuvring area for wheelchairs.

A shelf should be provided between the wc and the wash basin at 950mm above the floor, for use by ambulant disabled when changing colostomy bags.

Vending machines should not reduce the clear width of door openings.
Another shelf should be considered 400mm wide and 200mm deep at 700mm above the floor, adjacent to the wash basin. This would be useful for equipment or bags.

**WC pan**

The top surface of the wc seat should be at 480mm from finished floor level. This is the same as the seat height of the majority of wheelchairs and is easier to transfer to/from a wheelchair.

The wc seat should be designed for heavy duty use and be securely fixed with metal fittings from the top into the rim of the wc.

A support rail and back rest behind the wc should allow the seat to tilt beyond the vertical when fully raised so that the wc can be used as a urinal.

Gap-front seats should not be used.

Installing automatic cleansing and drying facilities to avoid the need for hand rinsing when seated on the wc should be considered.

**Hand rinse basin**

The basin should be wall mounted to allow closer access for wheelchair users and to be usable from seated position on the wc pan.

The basin should be fitted with a mixer tap with an up and down action to control water flow.

Where appropriate, an automatic water supply activated by placing hands under the tap should be provided.

The basin should contrast visually with the wall and surface.

Hot water should not exceed 41°C.

**Door**

The door should be solid core construction or blocked to receive a pull rail.

The horizontal pull rail should be fixed to the closing face of the outward opening door.

“Vacant” or “occupied” should be provided to show when the wc is in use and should be clearly visible with a change in colour of the indicator.

The lever handle should be grippable with return and combined with large inner turn button/locking handle and outside release facility in an emergency.

A 400mm kickplate will reduce damage from wheelchairs passing through.

**Toilets for people with ambulant disabilities**

See diagram 13.

The term “ambulant disability” refers to people who are not wheelchair users but experience difficulty in walking and supporting themselves and who may use aids e.g. walking sticks and crutches. It includes people with heart and/or breathing disorders; arthritis; rheumatism; problems with balance; and people awaiting or recovering from knee and hip replacement operations.

Ambulant disabled people should have the opportunity to use a WC compartment within any separate-sex toilet washroom.
Doors should preferably open outwards but if this is not possible there should be 450mm diameter manoeuvring space between the swing of any inward opening door, the WC pan and the side wall of the compartment.
Diagram 13. Toilet for People with Ambulant Disabilities.

- 600mm long additional grab rail
- 600mm rail set at 15° or horizontal as required
- Clothes hook set at 1400mm above floor level
- Outward opening door
- Inward opening door
- Door swing clear of Ø450 space on plan
Restaurants and bars

Disabled people should be able to enter restaurants and bars and use the facilities within them, either independently or with companions.

If an establishment has waiter and self service facilities, wheelchair users should be able to use both. Self service counters should be constructed at a height of 850mm above finished floor level. All bars and counters should be accessible to wheelchair users.

At least half of the total seating area should be available for use by wheelchair users.

Raised seating areas should be constructed with easy-go steps to accommodate people with ambulant disabilities.

There should also be a unisex wheelchair accessible toilet available within the building.

Hotel and motel bedrooms

See diagram 14a and 14b

Wheelchair users require hotel and motel bedrooms with en-suite facilities that afford them circulation space. Additionally, people who are deaf and hearing impaired and those who are blind and sight impaired should be considered.

The following points should be included:-

For all bedrooms

- Doors should give the appropriate clear effective widths. (see Diagram 5a)
- Wardrobes should be easily accessible. Swing doors for built in wardrobes should open through 180°.
- Window controls should be located between 800mm and 1000mm and should be easy to operate without using both hands simultaneously.
- Bedrooms should have visual fire alarm signals (Part B of Building Regulations)

For wheelchair accessible bedrooms

- At least one wheelchair accessible bedroom should be provided for every 20 bedrooms.'
• They should be located on accessible routes that lead to all other facilities.

• There should be a choice of location.

• All doors should comply with diagram 5a.

• The size of the bedrooms should allow for a wheelchair user to manoeuvre at the side of the bed, and then transfer independently to it.

• An emergency assistance alarm (with a reset button) should be located in a bedroom and activated by a pull cord and sited so that it can be operated from a bed and from an adjacent floor area.

• An emergency assistance call signal should be located outside an accessible bedroom so that it can be easily seen and heard by those able to give assistance.

For deaf and hearing impaired people

• Fire/evacuation procedures should be considered.

• Discs should be available which are placed underneath the pillow and vibrate to wake the person when the evacuation alarm is raised.

• Visual and audible alarm systems should be provided.

• Welcome assistance dogs.

For blind and visually impaired people

• Contrasting colours on door frames, and should have contrasting colour variation between wall and floor. Doors and door handles should be provided.

• A minimum colour contrast of 30 luminars is between adjacent surfaces. Colour contrasts should not institutionalise a room/building.
• Tactile door numbers are helpful, provided that they are located in line with the door handle, e.g. 1000mm above floor level.

• Welcome assistance dogs.

• Space should be provided in the room layout for assistance dogs.

1600mm min

700mm min

1600mm x 1600mm wheelchair turning space

300mm min

Wheelchair accessible shower room or bathroom - See section 6 for details

Effective clear width

Source: Part M. Building Regulations
Diagram 14b. Bathroom for Independent use.

Door position allowing transfer through doorway

Reduced room depth if independent transfer to bath can be through doorway (see 12.2.9)

Towel rail

Sanitary dispenser

Disposal bin

Shelf

See Fig 57 for details of fittings on this wall

Vertical grab bars

Alarm pull cord

Sanitary disposal unit

Horizontal grab bar mounted on cranked wall

Colostomy shelf for standing users

Two clothes hooks, one at 1050mm and the other at 1400mm above the floor

Pull down rail

Rear support rail

2700mm

500mm

200mm

Source: Part M. Building Regulations
Changing and shower facilities

See Diagrams 15a - e

To enable wheelchair users to take part in recreational facilities independently or by being assisted, then accessible changing and showering facilities should be provided.

For changing and shower facilities

- Wall mounted drop-down support rails and wall mounted slip-resistant tip-up seats (not spring loaded) should be provided. All fixtures should contrast with their surrounds.

- Communal facilities should be subdivided to the same configuration of space and equipment for self-contained separate sex facilities.

- In sports facilities, individual self-contained shower and changing facilities should be available in addition to communal separate sex facilities.

- An emergency assistance pull cord should be provided that is easily identifiable and reachable from the wall mounted tip-up seat.

- Facilities for limb storage should be included for amputees.

For changing facilities

- The floor of a changing area should be level and slip resistant when associated with shower facilities.

- There should be a 1500mm deep manoeuvring space in front of lockers in self contained or communal areas.

For shower facilities

- A shower curtain should be able to be operated from the shower seat.

- A shelf should be provided that can be reached from the shower seat.

- The floor of the shower and shower area should be slip resistant and self draining.

• Shower controls in wheelchair accessible shower facilities in communal areas should be between 750mm and 1000mm above the floor.

For shower facilities incorporating a WC

• When more than one shower area incorporating a WC is provided there should be a choice of left-hand and right hand transfer layouts available

Note
Guidance on the slip resistance of floor surfaces is given by the Health and Safety Executive in Annex C of BS 8300.

Source: Part M. Building Regulations
Diagram 15c. An Elevation of a Self Contained Shower Room for Individual use.

Source: Part M. Building Regulations

Source: Part M. Building Regulations
Diagram 16e. An Plan of a Shower Room incorporating a WC for individual use.

The arrangement of shower controls and ancillary fittings is as Diag 23

The arrangement of corner WC and ancillary fittings is as Diag 16

The larger basin is set back 200mm to maintain the correct relationship of its leading edge with the WC

Note
Layout shown for right hand transfer to shower seat and WC

Source: Part M. Building Regulations
Access to communication

British sign language (BSL)

British Sign Language (BSL) is a language that is conveyed by means of hand shapes, the movement of the hands and body, and the use of facial expressions and lip patterns.

On 18th March 2003 the UK Government recognised BSL as a language in its own right. The estimated number of deaf people whose first or preferred language is BSL ranges from 50,000 to 70,000.

An employer, service provider or trade organisation should take all reasonable steps to ensure that a BSL/English Interpreter is provided when necessary however some deaf and hard of hearing people may prefer a different communication service or communication aid. Communication preferences should always be discussed with deaf people.

Human aids for communication (HAC)

A human aid for communication (HAC) is a person who provides a service to overcome communication barriers between deaf and hearing people. Most agencies who provide BSL/English interpreters also provide HACs.

Communicator guides

Communicator guides work with deafblind people and provide high level support to meet a variety of communication and mobility needs.

Communication support workers (CSW)

Communication Support Workers support deaf people with their English Language and help with basic communication between deaf people and hearing people who do not sign.

Cued speech transliterators (CST)

Cues Speech is a sound-based system which uses eight hand shapes in four different positions (cues) in combination with the natural mouth movements of speech. A Cued Speech Transliterator (CST) is someone who has attained a high standard of “cueing” ability and can cue at the sound of speech.

Deafblind interpreters (manual)

Deafblind interpreters (manual) are trained to use the Deafblind Manual Alphabet. This is where words are spelt out onto the fingers and hands of a deafblind person.
Electronic notetaking

Electronic notetakers type a summary of what is said, on a computer which then appears on a screen for the deaf person to read.

Lipspeakers

Lipspeakers work with deaf people who prefer to communicate through lip-reading and speech. Lipspeakers repeat what is said, without using their voice.

Note – taking

Notetakers are trained to take notes for deaf people in meetings, on courses or at other events. If a deaf person is watching a BSL/English interpreter or a lipspeaker, it is impossible to take notes and follow what is being said at the same time.

Speech – to- text- reporters (STTR)

This is a process of computer aided transcription when a trained reporter takes down the spoken word on a special palantype or stenograph keyboard.

Equipment

Fax machines

Fax machines are used regularly by many deaf and hard of hearing people.

Textphone

Textphones have a small display screen and a keyboard and offer the opportunity for real-time conversation in English.

Mobile telephones

Mobile telephones are used by many deaf people to send and receive short messages.

RNID typetalk

This is a national relay service for people using a textphone who want to call someone with a voice telephone or vice versa. BT Textdirect enables callers using textphones and voice telephones to dial each other directly. People calling from a textphone dial the prefix 18001 to the telephone number they wish to call and people calling from a voice telephone dial the prefix 18002.
Subtitles

These are a printed transcription of the dialogue and sound effects of a programme or film shown at the bottom of the screen.

Videophone

These can be stand-alone or through the internet, using a webcam and allow people to see and talk or sign to each other at the same time.

Room design

Floor, wall and ceiling materials and finishes can help visually impaired people appreciate the boundaries of rooms or spaces, identify access routes and receive information.

Glare and reflections and large repeating patterns should be avoided.

Lighting should illuminate the face of a person speaking, to make lip reading easier.

Artificial lighting should be designed to give good colour rendering of all surfaces.

Public or visitor payphones, entry phones and emergency telephones in lifts should all be fitted with an inductive coupler and additional volume control to adjust amplification to assist people with hearing impairments.

Flashing beacons and vibrating devices should be installed in conjunction with conventional alarm systems to assist people with impaired hearing.

Hearing aids and loop systems

Hearing aids

Presently many people with hearing impairment have difficulty in contributing to meetings, lectures etc... and in enjoying the pleasures of theatre and cinema.

Problems arise because hearing aids are primarily microphones and people who wear them pick up background noise as well as the main source of speech. This does not matter in one-to-one conversation when the hearing aid wearer can focus on the speaker, but when the speaker is some distance away intrusions like people coughing, rustling sweet papers and talking amongst themselves can become very frustrating, diminishing the level and quality of sound, to the extent that intense concentration is needed to understand the proceedings.

A hearing aid wearer needs to receive a signal some 20dB above that received by a person with “normal” hearing. The three systems most commonly used to achieve this are the Induction Loop System, the Infra-red System and Radio System. The three systems operate quite differently.

Induction loop system

The Induction Loop depends on a signal from a microphone being passed to an amplifier which directs a current through a loop around the relevant space. A magnetic field which is generated is picked up by a listener’s hearing aid and is converted into familiar sound. The signal can be received when the induction pick –
up facility has been selected generally by moving a switch on the hearing aid to a position marked “T”. Induction loop systems should conform to BS7594 and BS EN6011-4. This system may allow sound to spill over outside the loop area, therefore confidentiality is more difficult to achieve. Other sources of magnetic noise like lift motors and theatre lighting systems may interfere with the operation of the loop, as will metal in the building structure or within the loop coverage area, including aluminium lined insulation panels in walls. If the building is of steel-frame construction the loop should be installed inside and separate from the frame. If seating is fitted into a steel framework, the loop should be installed with the listener between the loop and the seat. If the ceiling is made from perforated metal tiles on a metal grid, the loop should be fitted at floor level. BS6083 Part 4 1981 gives values for the strength of the magnetic field inside the loop coverage area 0.1 amps per metre average and 0.4 amps per metre maximum (to reflect the natural peaks of human speech). The basic design is however straightforward for a simple room, but will be more complex for larger facilities like large theatres or a heavily raked auditorium where people will be listening at many different levels. In these instances several loops will need to be installed so as to create several different listening planes.

**Radio system**

Radio receiver hearing enhancement systems should be used in rooms or spaces where confidentiality is not in use, users carry personal receivers for use in different locations, when more than one channel is required for audio description or translation on a second channel or on several channels or when the number of people requiring the service can be matched by the number of receivers available. Large lecture rooms, classrooms and training rooms that are fitted with sound amplifying or sound reinforcement loudspeakers should have microphones that provide output to radio sound aid transmitters.

**Infra-red system**

The Infra-red system makes use of simple technology depending on light waves instead of magnetic fields so there are none of the problems of metal structures, overspill, and interference from other electromagnetic sources. However, other difficulties can be experienced. Dark walls will absorb the infra-red signal, lots of daylight will interfere with the signal, and shadows and overhangs caused by alcoves and balconies will create areas which the infra-red light cannot reach. A simple example of how the infra-red system works might be in a meeting room where a microphone receiving a sound signal such as speech sends the corresponding audio-frequency current to a modulator which modulates it and then transmits it to a radiator comprising of many infra-red light waves. An individual receiver worn by the hearing aid wearer picks up the infra-red light waves and converts it back into an electric current which is fed to the earphone. The simplest modulation would be to change the light intensity in sympathy with the sound signal, but low frequencies in sound would mean the corresponding light would be interfered with by fluorescent light. To avoid this, the modulator alters the current by adding a constant “subcarrier” which boosts the infra-red light uniformly without affecting the
final sound output. When considering this system please remember that some people with hearing impairments may not like to be identified by having to wear the earphones necessary for receipt of an infra-red signal.

**Induction loop uses**

Induction loops are to be used in:-

- Locations where there is a glazed screen between the vendor and the customer e.g. cash offices, booking halls and ticket offices.
- Large reception areas.
- In auditoria and meeting rooms.

It is also an advantage to have a portable induction loop system available for:-

- Employees who visit the homes of people with hearing impairment.
- Use within interview rooms within the building.

**Audience and spectator facilities**

*See diagram 16a – e.*

There are three categories for audience and spectator facilities:-

Lecture/conference facilities
Sports facilities (stadia)
Entertainment facilities (theatres/cinemas)

**Audience facilities in general**

People with mobility and sensory impairment and people who use wheelchairs may need to view or listen from a particular side, or sit in the front for lip reading or to read sign interpreters.

They should not be segregated into special areas.

There should be a choice of sitting next to a conventionally seated person for wheelchair users, people who have difficulty in using seats with fixed arms and those with assistance dogs.

Consider providing an area next to certain seats for assistance dogs to rest.

Removable seating at the front and back blocks of seats should be available as greater flexibility can be achieved in locating a greater number of wheelchair users than the minimum provision.

- Routes to wheelchair spaces should be accessible. The minimum clear space provided for access to wheelchair spaces is 900mm.
• Stepped access routes leading to audience seating should be provided with fixed handrails.

• The minimum number of permanent and removable spaces provided for wheelchair users should be in accordance with the table 16a.

• Some wheelchair spaces should be provided in pairs see diagram 16b.

• When providing more than two wheelchair spaces they should be located to give a choice of different views of the event at each side as well as the at the front and back.

• A wheelchair space measures 1400mm deep and 900mm wide.

• The floor to the wheelchair space should be horizontal.

• Standard seats at the ends of rows that are next to wheelchair spaces should have detachable or lift-up arms.

**Lecture/conference facilities**

All people should be able to participate in conferences and committee meetings etc. and be able to use presentation facilities.

• A podium or stage should be ramped or a lifting platform provided to allow wheelchair users access

• To assist hearing impaired people a hearing enhancement system should be provided

**Entertainment, leisure and social facilities**

In theatres and cinemas it is normal for seating to be more compact, therefore, care is required in designing and locating wheelchair spaces. Also refer to “Technical Standard for Places of Entertainment”.

**Sports facilities**

Reference can be made to “Accessible stadia: a good practice guide to the design of facilities to meet the needs of disabled spectators and other users”, “Guide to Safety at Sports Grounds”.


Diagram 16a: Provision of wheelchair spaces in audience seating

<table>
<thead>
<tr>
<th>Seating Capacity</th>
<th>Provision of spaces for wheelchairs</th>
<th>Permanent</th>
<th>Removable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 200</td>
<td>2</td>
<td></td>
<td>2 (if permanent seating not practicable)</td>
</tr>
<tr>
<td>201 to 600</td>
<td>1% of seating capacity</td>
<td></td>
<td>2 (if practicable)</td>
</tr>
<tr>
<td>601 to 1000</td>
<td>1% of seating capacity</td>
<td></td>
<td>1 (if practicable)</td>
</tr>
<tr>
<td>1001 to 10000</td>
<td>1% of seating capacity</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Part M. Building Regulations
Diagram 16c. Guarding to wheelchair spaces at change of level on a raked floor

Wheelchair spaces
1350 x 900

Wall or balustrading

900 min.

Handrail and crash bar at change of level

Steps

Handrail

Crash bar at 150mm above wheelchair floor level

Source: Part M. Building Regulations
Diagram 16d. Maintaining Sight Lines with Seating on a Raked Floor

Source: Part M. Building Regulations
Information, signs and symbols

See diagram 17.

Signs:

- Any sans serif font is preferred.
- A type size between 12 and 14 point is preferred.
- The better the contrast between the background and the text the more legible the text will be. Black text on a white background or white text on a blue background provide the best contrast.
- Underlining text or setting it in italics should always be avoided.

Source: Part M. Building Regulations
The space between one line of type and the next (known as the leading) should be 1.5 to 2 times the space between words on a line.

Keep to the same amount of space between each word. Do not condense or stretch lines of type. Aligning text to the left margin is recommended.

Headings and page numbers should always be in the same place. A contents list and rules to separate different sections are useful. Leaving a space between paragraphs makes reading easier.

When printing, avoid glossy paper as glare will make it difficult to read. Choose uncoated paper that weighs over 90gsm. If the text can be seen through from the reverse side, then the paper is too thin.

Pictorially designed signs are encouraged.

Use words that are readily understood.

Avoid abbreviations.

Be consistent with terminology.

Only give as much information as is needed.

Arrows are always useful but ensure that they are the correct type. Arrows whose ends are parallel with the main stem are recommended. Avoid arrows that have a short tail. Make sure there is not too much space between words and arrows.

Numerals are better to recognise than using words.

Sentences or single word messages should begin with an upper case letter and continue with lower case letters.

Within the countryside, information should be provided along paths and trails, by use of notice boards and display panels that observe the needs of people with disabilities. I.e. height, use of symbols, Braille, contrasting colours, lower case relief lettering etc.. Portable information should be considered, such as pamphlets, relief maps, tape recordings and listening posts.

Cars should be kept clear of areas in front of signs and tactile surfaces. Signs should be sheltered from the elements and seating should be provided near by.

**Tactile signs and symbols**

- Directional signs and signs identifying functions or activities within a building should incorporate embossed letters.

- Where Braille is provided the following should apply.
Grade 1 Braille should be used for single word signs

Grade 2 contracted Braille should be used to reduce the length of multi-word signs.

- A marker (e.g. a notch) should be located at the left hand edge of the sign when Braille forms part of a sign.

Diagram 17. Symbols.

- International Symbol of Access, indicating roles and facilities with full accessibility
- Facilities for Blind or Partially Sighted people.
- World Federation of the Deaf sign to indicate facilities for deaf people.
- HAPPY TO HELP
- Assistance Offered
- Equipment to enhance microphone sound for people whose hearing aid is fitted with a “T” switch.
- Equipment to enhance microphone sound through an infrared receiver.
4. Miscellaneous

Lighting

Good lighting is essential for everyone to make the most of the information they receive via the eyes. People with sight impairments generally require greater levels of light than people with good sight – people over 60 need three times as much light as the average 20-year old to achieve the same level of illumination – but some conditions make the eyes very sensitive to light. People with impaired hearing need to see and understand the movement of lips for lip reading, and hands, when signing.

- Lighting should be controllable and adjustable to meet the needs of the individual and the task they are working on.
- Lighting can be used to accentuate texture and highlight colour thereby enhancing visual clues for people with sight impairments.
- Lights should be positioned where they do not cause glare, reflection, confusing shadows or pools of light and dark.
- Avoid positioning desks in front of windows where bright sunshine will cause the user's face to be in shadow and hence difficult to lip-read.
- Passive infrared sensors can be used to detect dim light and activate booster lighting.
- Keeping windows, blinds and lamps clean maximises the amount of light available.
- Positioning lighting in unusual or unexpected places can create shadows and misleading visual effects.
- Uplighters placed above a standing person's eye level can deliver a comfortable, glare-free illumination.
- Fluorescent lights create a magnetic field which causes a hum in hearing aids. Lighting of this type should be specified with care where it cannot inconvenience people with hearing impairments.
Switches, outlets and controls

See diagram 18

Switches, outlets and controls should be easy to operate, be well contrasted, be at the appropriate heights and free from obstructions.

- Wall mounted socket outlets, telephone points and TV sockets should be located between 400mm and 1000mm above the floor.

- Switches and controls that require precise hand movements should be located between 750mm and 1200mm above the floor.

- Simple push button controls should not be more than 1200mm above the floor.

- Pull cords for emergency alarm systems should be coloured red, located as near to a wall as possible, and have two red 50mm diameter bangles, one set at 100mm and other between 800mm and 1000mm above the floor.

- Controls that require close vision should be located between 1200mm and 1400mm above the floor.

- Socket outlets should be located no nearer than 350mm from room corners

- Light switches for use by the general public should have large push pads and align horizontally with door handles within the range 900mm to 1100mm.

- Switched socket outlets should indicate they are on and mains and circuit isolator switches should clearly indicate they are on or off.

Diagram 18. Height to the centre of outlets, switches and controls
Telephones

When telephones are to be used by the general public there must be at least one accessible telephone mounted at a height suitable for a wheelchair user and be provided in an accessible location. When several accessible telephones are provided, they should be positioned at different heights to suit ambulant people and wheelchair users.

- A fold down seat (450mm – 520mm) or perch (650mm – 800mm) should be provided for ambulant people.
- A wheelchair user should be able to approach a wall mounted telephone from a sideways approach.
- If it is only possible to approach a telephone from the front then a knee hole at least 500mm deep and 700mm high should be provided.
- Consideration should be given to the provision of text telephones at reception desks for the benefit of people with hearing impairment.
- Telephone instructions should be clear and be displayed in a large easy to read typeface.
- Acoustic hoods, if provided, should be mounted in such a way that they are not a hazard to disabled people.
- A shelf should be provided with all public telephones to enable a person with hearing impairment to use a portable text phone. The telephone should be centrally positioned on the shelf to be suitable for left and right handed people.
- Telephone controls on accessible telephones for wheelchair users should be angled so that they can be used by people when seated.
- Telephone controls should be located between 750mm and 1000mm above the floor.
- Telephones should have well lit keypads, large embossed or raised numerals that contrast visually with their background and a raised dot on the number 5 to assist visually impaired people.
- A telephone booth should have a clear space of at least 1350 x 1200mm with accessible phones. Support rails should be provided adjacent to any seating in accessible booths. The booth and fittings should contrast visually with the surrounding walls.
An embossed telephone symbol should be placed between 1400mm and 1700mm from the floor and within 150mm of the door or booth opening.

A doorway to a booth should have a minimum clear width of 800mm, preferably 900mm.

Seating

Wherever seating is offered it is desirable for there to be a variety of seating heights, and designs with and without armrest, to cater for different needs. Seating should be stable and generously provided along travel routes, and wherever waiting is likely to occur. Fixed seating may exclude disabled people, and those with pushchairs.

Seating layouts should allow the option of two wheelchair users sitting next to each other, or a wheelchair user sitting next to a user of standard seating as a wheelchair user's companion may or may not be disabled. A space within a block of seating or at the end should be provided for an assistance dog to rest.

Counters and reception desks

Counters or reception desks should be located so that they are easily recognisable from the building entrance and should be designed for wheelchair users at customer side and receptionist side.

Signs should be large enough to read from a distance and at a convenient height. Induction loops should be provided and well signed if there is a glazed security screen and it should be clearly indicated with the standard symbol.

- The design of the approach to any reception point should allow space for wheelchair users to gain access to the reception point.

- The clear manoeuvring space in front of any reception desk or counter should be 1200mm deep and 1800 wide if there is a knee recess at least 500mm deep, or 1400mm deep and 2200mm wide if there is no knee recess.

- Any reception desk or counter should be designed to accommodate both standing and seated visitors such that at least one section of the counter is at least 1500mm wide, with its surface no higher than 760mm, and a knee recess not less than 700mm, above floor level.

- The floor surface should be anti slip.
Public access terminals

Cashpoints, Information kiosks, ticket vending machines, card door entry systems

When designing, consideration should be given to disabled people, elderly people, tall and short people, people with prams/pushchairs and people with luggage.

- Protect from the weather. Direct or reflected sunlight or other bright lighting should be avoided.

- If located in lobbies or entrances they should be easy to negotiate and be well lit.

- The route to the terminal should be free from obstructions.

- The floor surface should be stable, firm and non-slip.

- Provide a good acoustic environment to assist hearing impaired people.

- Location signs should be clear and easy to read and should contrast with their background.

- Good lighting should be provided. Shadows should be avoided and obstructions should be highlighted.

- Provide sufficient space to allow wheelchair users to approach from the front, side or at an angle.

- Queuing area should be designed so that they are distinguishable and also provide privacy for the user.
Tactile paving materials

Diagrams 19a - d

Diagram 19a. Modified blister paving – for use at carriageway crossing.

Diagram 19b. Corduroy paving – for use at steps.
Diagram 19c. Cycleway paving—
To establish pedestrian route in shared facility.

Diagram 19d. Directional guidance—
Paving for constructing guide paths..
Maintenance of access facilities

Developers, Building Owners and Managers should be aware that once provision for access for disabled people has been made, maintenance of such provision is essential.

Maintenance programmes for the following are strongly encouraged;-  

**Planned maintenance**

- Overhanging trees and shrubs
- Footways
- Ramps/steps
- Tactile surfaces/identification of step nosings
- Toilet/Changing facilities
- Seating
- Braille information and route indication
- Lifts/stairlifts/platform lifts
- Floor surfaces

**Reactive maintenance**

- Window Cleaning
- Replacement of flashing fluorescent lighting
- Immediate response to correct faulty lighting levels
- Frequent testing of induction loops
- Spillages cleaned immediately
- Toilets/changing facilities well stocked with toilet paper, paper towels and soap and be free from obstructions.
Means of escape

Under current fire safety legislation it is the responsibility of the person(s) having responsibility for the building to provide a fire safety risk assessment that includes an emergency evacuation plan for all people likely to be in the premises, including disabled people, and how that plan will be implemented.

Where an employer or a service provider does not make provision for the safe evacuation of disabled people from its premises, this may be viewed as discrimination.

It is important that both building managers and disabled people understand that planning for means of escape is about planning for exceptional circumstances.

Visual emergency/fire alarms should be fitted to alert deaf and hearing impaired people in the case of a fire or emergency.

Good housekeeping standards and management procedures will reduce the incidence of false alarms.

Other documents that may assist with planning for evacuation are:-

- BS 5588 Part 1 – Residential Buildings
- BS 9999: Fire Safety Management in the design, management & use of buildings code of practice

(IWA) Historic and Conservation Areas

In Wolverhampton there are many historic buildings and conservation areas that are by means of other policies, required to be conserved.

In these circumstances you should contact the Councils Conservation Team and Access Team for further advice. If access requirements cannot be met, this would have to be explained in the Design and Access Statement.

Useful documents are “Easy access to historic buildings” and “Easy access to landscapes” by English Heritage.

The design of new public access points onto the canal towpaths, should take into account the needs of disabled people. It is acknowledged that it will never be possible to provide perfect access everywhere along the waterway system as there are statutory constraints as well as other considerations such as the protection of the waterways heritage and environment. However, access for all should always be part of new schemes by implementing the maximum appropriate access at all times.
5. Accessible housing

See diagrams 23a – 23c

Essential criteria

- Footpaths within the housing development should incorporate pedestrian footway crossings wherever a road junction occurs. These should consist of flush dropped kerbs usually finished in BUFF coloured blister paving but should contrast (not red). The flush kerb is for ease of passage for wheelchairs, prams etc... and the blister paving is to indicate to people with sight impairment that they are leaving the footway and entering the highway.

- Car parking spaces should be designed with the requirements of mobility impaired people in mind. On developments which provide banks of parking spaces near to the dwellings, bays should be designed with shared transfer areas of 900mm (1200mm preferred) between 2.4m wide bays. Parking spaces that are within the curtilage of the dwelling, or are designated spaces should be a minimum of 3.3m wide. Parking should be provided as close to the dwellings as possible. Please ensure parking areas are well lit.

- Vehicular access may be used to get near to the dwelling entrance providing there is a level area of driveway to allow for a person leaving/entering the vehicle.

- Garden gates should give a clear opening width of 900mm to allow for passage of persons in wheelchairs, prams and buggies and those carrying shopping or luggage.

- Paths should ideally be 1200mm wide with kerbed edges providing 100mm upstands to assist people with impaired sight.

- It is preferable to have a level approach, however, sometimes the topography can prevent this and a maximum gradient of 1:12 is permissible on an individual slope of less than 5m or 1:15 if it is between 5 and 10m, and 1:20 where it is more than 10m (providing there are top, bottom and intermediate landings of not less than 1.2m excluding the swing of doors and gates).

- All entrances should be well lit and have accessible level access over the threshold level. The main entrance should also be covered if possible.

- Entrance doors should give a clear opening width of 775mm.

- Hallways and corridors should not contain steps, and should always be well lit. Please see the table below for unobstructed widths for corridors and passageways.
A WC should be provided within the entrance storey of the dwelling. The door to the WC should open outwards. There should be a clear space for wheelchair users to access the WC and the washbasin should be positioned so that it does not impede access. See diagrams 23a and 23b.

Controls, switches and handles should be easily accessible to all between 450mm and 1200mm. See diagram 23c.

Staircases should be designed to be either straight run or to have quarter landings so that, if needed, stairlifts can more easily be fitted. Winders should be avoided.

Where a lift is provided to give access to flats and maisonettes it should:-

- have an unobstructed landing space of 1500mm x 1500mm.
- have an entrance door which gives a clear opening width of 800mm.
- have a car width at least 900mm and length at least 1250mm.
- have landing and car controls situated not less than 900mm and not more than 1200mm above finished floor level, at a minimum distance of 400mm from the wall.
- have tactile information associated with the car and landing controls.
- have visual and audible indication of the floor reached if the lift serves more than 3 storeys.
- have a signalling system which gives visual notification that the lift is answering a landing call and a “dwell time” of 5 seconds before its doors begin to close after they are fully open.
Diagram 20a. Clear space for frontal access to WC.

Diagram 20b. Clear space for oblique access to WC
Desirable features

The following list does not constitute part of the structural shell but can render a dwelling more accessible at little or no extra cost. Many of these ideas have the added marketing advantage in that they are safety and energy saving features.

- Features such as heater controls, metres, fuse boxes and water stopcocks should ideally be within easy reach.

- Thermostatic controls on taps and radiators.

- Easy access to refuge bin.

- Easy access to clothing drying facilities.

- A maximum window cill height of 750mm, with window ironmongery which is easy and convenient to operate.

- An electrical socket positioned ready to power a stairlift should one be required.

- A space for a platform at the head of the bath to allow someone to transfer into the water easily.

- Enough space in the bathroom to allow for access to toilet, hand basin and bath.
• Bathrooms and toilet walls to be constructed of plaster and brick to enable grab rails to be placed where needed.

• Anti-slip kitchen and bathroom floor surface.

• Undercover access from carport or garage to dwelling.

• Letter boxes, door handles, bells and buzzers on entrance doors should be located between 1000mm and 1100mm above finished floor level.

Optional features

• Kitchen units that can be adapted to various heights.
6. Acknowledgements

Legislation

- Chronically Sick and Disabled Persons Act 1970 (as amended 1976)
- Town and Country Planning Act 1971 (as amended 1990)
- Disabled Persons Act 1981
- Building Act 1984
- Housing Act 1985
- New Road & Streetworks Act 1991
- DoE Circular 10/82
- MHLG Circular 65/70
- Highways Act 1980
- Disability Discrimination Act 1995/2005
Bibliography

Source of diagrams: Part M & N of Building Regulations;

The Building Regulations

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Improving Life Chances of Disabled People
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Technical Standard for Places of Entertainment
Accesible Stadia
Guide to Safety at Sports Grounds

(SBC) Housing for people with sight loss
(IWA) Easy access to landscapes
(IWA) Easy access to historic buildings

Sport England
CAE
Wolverhampton City Council
Primeinisters Strategy Unit
The Department for Business, Enterprise and Regulatory Reform (BERR)
The Association of British Theatre Technicians

The Football Licensing Authority and the Football Stadia improvement Fund
Department for Culture, Media & Sport

Commission for Equality and Human Rights (CEHR).

A Thomas Pocklington Guide
English Heritage
English Heritage
Local organisations

Age Concern
93/94 Darlington Street
Wolverhampton
WV1 4EX
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Church Association for the Deaf
38 Rupert Street
Wolverhampton
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Wolverhampton Association of the Disabled
61 St Giles Road
Off Willenhall Road
Wolverhampton
WV1 2LJ
Tel: (01902)

Arthritis Care,
70 Ringwood Road
Bushbury
Wolverhampton
WV10 9ER
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SCOPE
Fernwood Day Centre
187 Tettenhall Road
Wolverhampton
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WV4 6AZ
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Association for Hydrocephalus & Spina Bifida
14 Leveson Road
Ashmore Park
Wolverhampton
WV11 2HF
Tel: (01902) 738724

RNID
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Spinal Injuries Association
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Wolverhampton City Council
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National organisations

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Notes