We are guided and inspired by the words of His Highness Sheikh Mohammed bin Rashid Al Maktoum Vice President and Prime Minister of the UAE and Ruler of Dubai: “The fastest and most sustainable way to reinforce our competitiveness on a global level is to build a flexible and creative economy, based on a culture of innovation.”

Our Vision: Foster Dubai’s creative industries to establish Dubai as a global innovation hub.

Our Mission: Create an enabling environment for entrepreneurs, industry leaders and talented workers from across the globe.

As we strive towards realising Sheikh Mohammed’s vision, we encourage and support all organisations and individuals who join us in making Dubai the world’s most innovative city.

His Highness
Sheikh Maktoum bin Mohammed bin Rashid Al Maktoum
Deputy Ruler of Dubai and Chairman of Dubai Creative Clusters Authority
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For the purposes of this Code, the following terms are applicable to the public realm, buildings and facilities and are defined as:

Access – the means to enable all users to approach, enter and leave the building and to use the facilities therein without assistance or undue difficulty.

Accessible – with respect to the public realm and buildings or parts of buildings, means that all users are able to gain access equally and easily.

Accessibility – the degree to which a building or other structure is accessible.

Accessible entrance – an entrance that is accessible to all users.

Accessible route – an interior or exterior continuous unobstructed corridor or path connecting all accessible elements and spaces within a building, facility or the public realm, that can be negotiated safely by all users.

Ambulant disabled – a person who may be reliant on prosthesis, orthoses, sticks, crutches or other walking aids but is able to walk or negotiate suitably graded steps with handrails with or without personal assistance.

Assistive technology – applied technology designed to assist people with disabilities.

Barrier – an obstacle preventing a vulnerable person from living independently, working, travelling and / or gaining access to buildings, services and facilities.

Barrier-free design – is design which enables a vulnerable person to live independently, work, travel and / or gain access to the public realm, buildings, services and facilities.

Building – shall include part of a building.

Circulation path – an exterior or interior pedestrian route.

Comfort space – pedestrian-only areas.

Contrast visually – A difference in light reflectance value sufficient for a visual difference to be perceived between two or more fittings or elements of a building or in the public realm.

Disability – can be seen either as an impairment or (from the perspective of the social model of disability) as the oppression and inequality that people with impairments or health conditions experience as a result of discriminatory attitudes, inaccessible environments and lack of enabling support.

Disabled person – someone with physical or mental impairment which has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities.

Diversity – the recognition that each individual is unique and that these differences can make a positive contribution to society.

Egress – a continuous and unobstructed means of exit from any point in a building or facility to an external place of safety.

Environment – the surroundings or conditions in which a person lives. Includes the natural and the built environment.

Environmental barrier – an obstacle preventing a person from travelling to and / or gaining access to the public realm and / or building.

Facilities – something designed, built, installed etc, within the public realm, building or building complex to serve a specific function for the benefit of users.

Facility – includes not only the building and structures, but also the site on which they are located.

Flight – A continuous series of steps or a continuous slope (ramp) between landings.

Going – the depth from front to back of a tread (less any overlap with the tread above) forming part of a stair.
Grab bar – a bar used to provide stability assistance and / or support.
Guarding – A barrier that protects users from falling, e.g. from a landing or balcony.
Handrail – A shaped rail provided at hand height for the purpose of providing stability and support.
Hazard warning surface – a built in or applied surface feature of contrasting colour, tone and texture, designed to alert persons with a visual impairment of hazards on a circulation route.
Impairment – injury, disability, functional loss, weakened state or reduced mental capacity.
Inclusive – not excluding any section or party involved in something
Inclusive design – the design of buildings products and environments that are accessible and usable by everyone.
Inclusive environment- an environment that is supportive of easy, safe and comfortable access.
Integration – the inclusion of people with disabilities within mainstream society.
Kerb ramp – a short ramp cutting through a kerb or built up to it.
Level – with respect to surfaces means a maximum gradient of 1:60
Light reflectance value – The total quantum of visible light, at all wavelengths and directions, reflected by a surface when illuminated by a light source.
Nosing – the leading edge of a stair tread.
Pitch – The angle between the horizontal and a line connecting the nosings of a stair.
Placemaking – is a multi-faceted approach to the planning, design and management of the public realm to maximise local communities’ assets and create public spaces that are distinctive, functional and enjoyable. It is an art and a science, a process and a philosophy whose purpose is to create distinctive, functional, safe and memorable places.
Principal entrance – the main entrance to a building which a visitor unfamiliar with the building would recognise as such.
Private realm – any building or space where public access is restricted / controlled by the owner or operator.
Prosthesis – an artificial replacement of a body part.
Public realm – any publicly owned streets, pathways, right of ways, parks, publicly accessible open spaces and any public and civic building and facilities.
Ramp – a walking surface with a slope of greater than 1:20.
Rise – the height between consecutive stair treads or for ramps the vertical distance between each end of a ramp flight.
Soft scape – Flora and loose groundcover materials such as gravel and mulches used as part of a landscape scheme.
Stair width – the clear width between the walls or balustrades.
Stakeholders – a party that has an interest in an organisation and / or project.
Sustainability – the ability to carry out activities without depletion of natural resources.
Tactile – describes an object that can be perceived using the sense of touch.
The Authority – Dubai Creative Clusters Authority (DCCA)
Universal Design – the concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life.
User Journey – is a specific or typical journey by a user or typical user group (e.g. the elderly) from a starting point (e.g. home) to an end point (e.g. office desk, retail counter, dentist’s chair etc) via various modes of movement and with various ‘touch points’ throughout the public and private realms along the journey.

User Journey Mapping – creates a mental model of users’ experience of a typical journey from a starting point to an end point via various modes of movement along the journey. This information enables designers to document and visualize existing paths, user experiences and responses and to analyse them to identify improvements.
Visitor journey – the route from place of origin to the accessible building entrance.
Visual impairment – a medical term for conditions resulting in low levels of vision.
Vulnerable users – a section of the population including the disabled and those who are not disabled but by reason of age, activity or unprotected mode of transport are subject to greater danger or limitations of use.
Width – the clear distance between finished surfaces.
In 2013 Dubai Crown Prince and Chairman of the Dubai Executive Council, H.H. Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, launched “My community... a city for everyone” and Dubai was selected to host the 2020 World Expo. These landmark events are driving the goal for Dubai to become “the world’s most sustainable and accessible city by 2020”. In the short term Design District D3 has been identified as an opportunity to develop a zone which will set the benchmark for accessibility and placemaking in Dubai.

It is important to note that whilst the focus of “My community... a city for everyone” is on the disabled it is in the context of promoting inclusivity and the recognition that the disabled are members of a much larger grouping - the ‘vulnerable’ members of the travelling public. The recognition that accessibility affects a much larger proportion of the population is game-changing. It is no longer a minority requirement but a majority benefit.

Accessible placemaking starts with the recognition that a poorly designed environment can restrict users’ ability to access services and facilities. Accessibility issues have historically been inextricably linked with the ‘disabled minority’ whose demand for equal rights has driven the implementation of world-wide legislation mandating equal access for the disabled. However, throughout the world a demographic shift towards an ageing population and an increasing reliance on support services is highlighting the cost and impact of accessibility issues as a wider social issue.

The reality is that we live in a world where a large proportion of the population can be classed as ‘vulnerable’ at some point in the travelling day. Insensitive non-inclusive design will impact to an increasing extent on the quality of life of vulnerable users as they get older. There is a growing need to ensure that people are not unnecessarily ‘disabled’ by poor design and management of the built environment.

Increasingly designers are now recognising that although many of the solutions adopted in accessible environments were originally designed for the ‘disabled’ they are equally applicable to vulnerable users and the community as a whole. This recognition that an accessible environment is also an inclusive environment is the key to adopting a ‘design for all’ approach (Universal Design) that has both economic and social benefits.

The recognition of ‘who’ we are designing for is therefore as important as ‘why’ we are designing. Associating the issue of accessibility only with the disabled minority fundamentally underestimates both the scale of the problem (because the majority of vulnerable people will not be registered as disabled) and the benefits of the solutions to the whole population.
DEFINING VULNERABILITY

Although not classified as disabled, or necessarily being impaired, there is a large section of the population who may have difficulties with normal day-to-day activities within a city environment that is not designed to be accessible.

Vulnerability within the terms of accessibility includes exposure to danger, accident and damage as a result of the use or engagement with motorized forms of transport, means of access to them and/or to the track upon which they operate. An accessible environment must be designed to favour non-motorized over motorized users throughout the built environment. Non-motorized users clearly include able bodied individuals examples of whom can be seen opposite. Disabled users tend to sit on the far end of vulnerability but this is not always the case. Those who are temporarily vulnerable can be more vulnerable as they have not developed the skills and techniques to navigate their way around in the same way as a permanently disabled person would.

ABLE-BODIED PEOPLE

- Children
- The elderly
- Pregnant women and/or parents with infants
- Parents with buggies
- Cyclists
- Powered two wheelers
- First aid and emergency service personnel
- People carrying heavy shopping bags
- Tourists or visitors with heavy luggage
- People unfamiliar with country’s language or norms (see figure 2)

DISABLED PEOPLE

- Disabled people with a range of impairments, both temporary and permanent
- People with temporary injuries that limit their mobility
- Wheelchair users – manual & powered chairs & scooters
- People who need to travel with a companion (see figure 1)

If we look in more detail at these groups we find:

PEOPLE WHO USE A WHEELCHAIR:

Although this is a relatively small user group there is a wide range of users some of whom may have more than one form of impairment.

Short-term users: typically people who have damaged a lower limb or due to other illness lack the physical strength to be fully mobile. This group may not develop the skills of long term wheelchair users and almost certainly do not perceive themselves as being disabled. In terms of legislation they may not even be classed as disabled unless their impairment lasts longer than a given period of say 6 or 12 months. People with sports injuries often fall into this category.

Long-term users: typically people who have suffered permanent loss of limbs or ability to use limbs and/or who lack the physical strength to be fully mobile. Physical mobility may also be accompanied by various degrees of mental impairment. As well as people with recognised forms of impairment there will also be the elderly and infirm and increasingly those people whose weight restricts their mobility.

Wheelchair design continues to develop both for standard and powered versions. Some users may be accompanied by a helper / helpers whose needs should also be recognised.

PEOPLE WHO HAVE MOBILITY IMPAIRMENT:

This group is made up of those people who can walk but require walking aids and for whom walking long distances may be difficult and/or uncomfortable e.g. the elderly. They will benefit from designs that reduce travel distances and/or the need to stand for long periods. This group will also include those people who use a prosthetic device.

PEOPLE WHO HAVE A VISUAL IMPAIRMENT:

This group includes those who are totally blind as well as people with visual impairments who may have some degree of vision. For the completely blind the lack of obstructions and the provision of tactile and audible guidance are going to be important. For the partially sighted clear pathways, signage, colour contrasts and non-reflective surfaces are going to be important.

PEOPLE WHO ARE HARD OF HEARING:

This group includes those who are totally deaf and often rely on sign language or require interpreters and TTY (text telephone) services. However, the majority in this group are people who have some level of hearing and benefit from assistive hearing devices and systems.
It is important to consider how space is categorised as this will often determine how it is used and for how people believe it should be used. All spaces are either public or private, they can be categorized as internal or external and there are transition zones between each of them. Each ‘realm’ has specific ownership, management and liability profiles which accessibility requirements must address. Most importantly it is the coordination of these interfaces to ensure that transition zones do not become barriers that is critical to improving accessibility.

Accessibility in its broadest sense is not just a technical problem but one of changing perceptions and attitudes. It is moving from a position of dealing with vulnerability to recognising ability, breaking down both mental and physical barriers to make Dubai truly accessible to all users. Designing places so that they are accessible by everyone and creating an environment where the vulnerable can feel safe will make for a more vibrant public realm. Road space will need to become more subversive and not be dominated by motorised modes in order to allow multiple activities and safe use by non-motorised ‘vulnerable’ users in exciting outdoor spaces that will contribute to the enjoyment of the city. To achieve this will require the support of employers, service providers and developers alike.

OBJECTIVES

The objective of this document is to promote good practice in the inclusive design of buildings and the public realm with respect to accessibility. The objectives for the design of buildings and public realm is design that:

• Places people at the heart of the design process;
• Acknowledges human diversity and difference;
• Offers choice where a single design solution cannot accommodate all users;
• Provides for flexibility in use;
• Aims to provide buildings and environments that are convenient, equitable and enjoyable to use for everyone, regardless of ability, age and gender; and
• A people led design methodology which places people at the top of the movement hierarchy with vehicles at the bottom is the first principle as outlined above.

STRUCTURE OF DOCUMENT

This document is structured to follow the typical ‘user journey’ from a to b via the public realm and via different transport modes. Each section includes a description of the content and the performance objectives followed by the ‘deemed to satisfy’ provisions and design guidance. Although it is mandatory to comply with the performance objectives there is the option to provide alternative solutions to those set out in the deemed to satisfy solutions. This provides designers with the flexibility to overcome non-standard situations and the ability to propose innovative solutions. Design guidance is provided to explain the reasoning behind the performance objectives in the context of best practice.

This document also includes the requirement for Project Sponsors or their agents to produce a detailed Access Strategy at the start of a project. The early development of an Access Strategy will allow Project Sponsors to:
• Demonstrate how access issues will be addressed from inception through design development, construction and into occupation;
• Provide an audit trail of the decisions made by the Project Team during design development and construction.

The Performance Objectives set out in this Code should be taken into consideration from the initial stages of the planning and design process in order to avoid potentially costly alterations at the construction stage.

The Scope and Use section explains in detail how the Code is to be used and applied.

DELIVERING THE ACCESSIBILITY DIVIDEND

The traditional view of designing for accessibility is to see a range of additional features and measures overlaid onto an existing design or setting. Whilst this view is often correct in older buildings and places the opportunity to positively design in accessibility exists when dealing with new or major refurbishment of buildings and places. Positive design involves eliminating many of the features associated with retrofitting by making accessibility an integral part of the design process.

The best solution is often the solution that is not needed. This statement is particularly relevant when it comes to accessibility. Whilst there are some features that will be needed regardless of how good the design and accessible thinking is, many features will not be required. When thinking along these lines it is possible to see that a built environment with a large number of accessible features will not necessarily be the most accessible environment. This is because when considering the retrofit option first other compromises in terms of design and accessibility will need to be made. What is good for one group can be detrimental to another group. By eliminating the need for these features it benefits all users. This benefit for all can be termed the ‘accessibility dividend’.

Delivering an accessible environment is not counter to delivering a high quality environment. High quality features can enhance the quality and character of a space. By making accessibility integral in the design process features such as paving, steps and balustrades can form part of the public realm design character, widening the scope of potential features rather than seeing these features as distracting from the aesthetic quality of an environment. There are many examples of where a building or public realm has been enhanced aesthetically by putting people and accessibility first. They are not mutually exclusive aims.

If you plan for vulnerable users you also enable better access for all users, thus achieving the accessibility dividend. Only by placing users at the centre of the design and decision making process a seamless city can be delivered.
**SCOPE & USE OF DOCUMENT**

**INTERPRETATION OF INSTRUCTIONS**

Where “shall” is used in this Code, it refers to mandatory design requirements and where “should” is used, it refers to recommended design requirements.

Unless otherwise specified, all dimensions shown in the figures in this Code are in millimetres (mm).

Unless the content otherwise requires:

a) Words imparting the singular shall include the plural and vice versa.

b) Words incorporating the masculine gender shall include the feminine gender and vice versa.

**CODE REQUIREMENTS**

The requirements set out in the Code are divided into three sections:

**MANDATORY DESIGN REQUIREMENTS**

The Performance Objectives are the guide for the design and construction of the public realm, buildings and the provision of facilities that are to be made accessible to all users in accordance with the Code. Compliance with the Mandatory Provisions will meet the requirements of the Mandatory Objectives. Where alternative designs solutions are proposed such alternative designs must be able to achieve the Mandatory Performance Objectives.

**MANDATORY PROVISIONS**

These are clearly identified in the Code. Mandatory Provisions detail the ‘deemed to satisfy’ design solutions that will meet the minimum Scope & Use of Document requirements of the Performance Objectives.

**DESIRABLE PROVISIONS**

Desirable Provisions detail the additional solutions that meet the higher level of performance.

**MANDATORY PROVISIONS**

Where alternative designs solutions are proposed such alternative designs must be able to achieve the Mandatory Performance Objectives.

**Laws or Regulations governing means of escape.**

Compliance with the Code does not imply or confer compliance with Federal Law No. 29 of 2006: In Respect of The Rights of People with Special Needs.

**Desirable Provisions**

Desirable Provisions detail the additional solutions that meet the higher level of performance.
EXTENT OF APPLICATION

Subject to the Exemptions listed below the Code shall apply to:
1. All areas of the public and private realm.
2. All new buildings.
3. Any alterations or additions to an existing building, the public and private realm that require DCCA approval.
4. All works shall be designed, constructed and maintained in accordance with the Performance Objectives of the Code.

EXEMPTIONS

The Code shall not apply to individual private dwellings intended for occupation by a single family.
The provisions of this Code shall not apply to any areas that would pose a health or safety risk to users. These areas include the following:
1. Process plants, equipment rooms and machinery spaces;
2. Loading docks;
3. Structures built for security, fire safety or life safety, e.g. guard towers, fire towers etc.
4. Construction sites and other sites directly associated with the process of construction.
5. Areas used for the storage of raw materials or produce or for bulk storage where:
   a) The stored material is hazardous
   b) The public is not permitted to enter.
6. Mezzanine floors used only for storage, plant and equipment.
7. Any route providing access only to an exempted area.

RESPONSIBILITY FOR COMPLIANCE

Building owners, construction companies and those who are responsible for the procurement, design, construction and maintenance of buildings and public realm areas must ensure that the works comply with the Performance Objectives of the Code. If the building work does not comply with the Code an enforcement notice may be issued on the building owner by DCCA.

BUILDING WORK

For the purposes of the Code ‘building work’ is defined as:
1. The construction of publicly owned streets, pathways, rights of way, parks, publicly accessible open space and any public and civic buildings and facilities therein.
2. The erection or extension of a building and work within the building plot
3. The provision or extension of facilities covered by the Code.
4. The material alteration of a building or facilities covered by the Code.
5. Any additional works so defined from time to time by DCCA

For the purposes of the Code an alteration is material if the work or any part of it would at any stage result:
1. In a building or facility not complying with a relevant requirement where previously it did;
2. In a building or facility which prior to the work did not comply with a relevant requirement being more unsatisfactory, in the opinion of the Authority, with respect to the requirement.

All building work must be carried out in such a way that when complete:
1. The works complies with the applicable requirements of the Code.
2. After work on a building, facility, external works or area of the public realm that complied with the Code the same still complies with the applicable requirements of the Code.
3. Works to existing buildings, facilities, external works or areas of the public realm that did not comply with the applicable requirements of the Code:
   a) The work itself must comply with the applicable requirements of the Code.
   b) The building, facility or area of the public realm must be no less unsatisfactory in relation to compliance with the applicable requirements of the Code than before the works were carried out.
1.0 MASTER PLANNING

1.1 ACCESSIBLE MASTER PLANNING

This section deals with the integration of accessible design into the masterplanning stage of the development. It is applicable to all masterplans submitted to DCCA.

PERFORMANCE OBJECTIVE

To create a masterplan that embeds accessibility into the design, limiting the need for additional provisions to be added later.

PROVISIONS

Many of the elements that will lead to an accessible environment are good practice in planning and design. The distinction with accessibility is that compromises to this good practice has a disproportionate impact on those with accessibility needs.

1.1.1 MANDATORY MASTERPLAN REQUIREMENTS

ACHIEVING A MIX OF LAND USES AND REDUCING THE NEED TO TRAVEL BY CAR:

The advantages for accessibility are that a mixed-use neighbourhood based on walkability will already exhibit many of the key features of an accessible neighbourhood. The principle of mixed land uses is an important part of delivering an accessible built environment. Reducing the distances need to travel has an accessibility dividend for all. Through a mixed use development the potential to reduce journey distances is enhanced. Reducing distances increases the potential for people to walk to their destination which in turn reduces the need for car based infrastructure thereby reducing severance. This virtuous circle is another example of the accessibility dividend benefiting all.

Masterplanners shall:

1. Pedestrians are prioritised in the design of streets, junctions and spaces. All junctions and paths shall meet the requirements set out in section 2 of this document.
2. Ensure junction radii and junction design create fully accessible crossing points at junctions. Where traffic signals or roundabouts are provided, every pedestrian crossing should be signalised. In corridors with more than 1 lane in each direction, mid-block crossings shall be pedestrian priority signalised crossings.
3. Ensure a clear route is maintained along all footpaths and maintain pedestrian priority across the vehicle entry point with no up-stand kerb and no change in the cross-fall of the path that would result in it being classed as non-compliant under section 2.2 of this document.
4. Establish a drop-off strategy that provides a fully accessible drop-off within 50m of the main entry point of every building.
1.0 Master planning

AVOIDING SEVERANCE THROUGH INFRASTRUCTURE, LEVELS OR LAND USES:

Large infrastructure such as roads or utility corridors can effectively sever different parts of the same community. This severance can be highly detrimental to those with mobility needs as traditional mitigation methods such as bridges or underpasses are cumbersome and difficult to achieve full accessibility without substantial increase in the distance of travel.

Masterplanners shall:
1. Ensure that major infrastructure corridors do not create severance within and between communities by ensuring fully accessible routes are no more than 50% greater than the straight line distance.

RESOLVING LEVELS TO BENEFIT ACCESSIBILITY:

Levels can present one of the largest challenges to achieving an accessible development. Variations in levels often result in steps or gradients that require remedial features to be included in the design. Through integrated design the need for these features can be significantly reduced or eliminated altogether. To achieve this those responsible for setting building and road levels need to work together or be the same person to ensure that levels do not impinge on delivering an accessible environment.

Masterplanners shall:
1. Ensure that levels are part of the masterplanning process and identify a grading strategy that minimises the number of slopes greater than 1:50.

DELIVERING HIGH CONNECTIVITY:

A highly connected environment will help increase accessibility. Limiting the size of development blocks ensures high levels of connectivity which means an increase in the choice of routes a person can take. Reducing block size also help reduce walkable journey times. In accessible masterplanning terms, a distinction can be made between vehicular blocks and walkable blocks which can differ through the provision of pedestrian only routes. When considering the size of blocks provision of drop-off spaces for vulnerable users needs to be considered.

Masterplanners shall:
1. Produce a Connectivity Strategy that ensures that at least 75% of pedestrian desire lines are maintained by locating a fully accessible crossing point within 50m of the desire line. Desire lines shall be identified as part of the Connectivity Strategy and approved by DCCA.
2. Ensure that no more than 25% of development blocks exceed 200m in width or depth.

ACHIEVING A COMFORTABLE ENVIRONMENT:

Accessible design needs to incorporate the comfort of the user in the design provision. The provision of shade can increase the usability of routes and spaces throughout the year. A choice of shaded routes should be provided throughout a development and form part of the masterplan process. At the masterplanning level, shading should look to rely on buildings, streets and landscaping to provide the majority of shaded routes. Shade structures can further enhance the shade provision at key spaces and where natural shade is not possible. To achieve natural shade from trees sufficient space needs to be provided for in ground trees to be provided. This needs to be considered when establishing utility corridors throughout a development. Influencing architectural design at the masterplanning level guidelines can be put in place to influence architectural design to enhance accessibility and comfort in the built environment. A masterplanning strategy for shading and wind tunnelling.

Masterplanners shall:
1. Ensure that at least 50% of all pedestrian routes in the development be shaded by either shade trees or shading structures. Shading is calculated by using the sun's position at 1pm on the Autumn Equinox. A minimum of 1.8m of the footpath should be in shade to qualify and be at least 60% shaded by trees canopy or structure. Further detail is provided in Section 3.5.
2. Preserve the priority of the shaded routes and avoid compromising it through the placement barriers such as car parking entrances or changes in levels.

ROLE OF STREET FURNITURE:

Street furniture can play an important part in enhancing accessibility across neighbourhoods. Whether it is providing places to rest or providing places to park cycles, well positioned and well designed street furniture has a role to play.

Masterplanners shall:
1. Ensure that primary pedestrian routes have a shaded rest space with accessible compliant street furniture at least one every 550m.
2. Provide bicycle parking within 20m of a buildings main entrance or accessible lift lobby if provided in the basement. Bicycle parking should be equal or greater than 5% of the total car parking spaces for a building.

HORIZONTAL SEGREGATION OF DIFFERENT MODES:

Horizontal segregation is particularly important for those with visual impairments and for older and younger people. This issue becomes more important the higher the traffic speed and for highly pedestrianised areas. In general for local streets the segregation of non-vehicular modes is not necessary and can impinge on accessibility as different barriers are put in place of free movement. This freedom of movement needs to be balanced with the need to provide an edge to the footpath for those with visual impairments. In new developments the use of sikkat should be encouraged used as they provide car free routes that can be shaded. Sikkat or lanes with active frontage are encouraged in denser urban areas.

Masterplanners shall:
1. Ensure a detectable edge is provided along the edge of the footpath either in the form of a kerb or a tactile paving.
2. Promote the use of traffic free routes through neighbourhoods in the form of sikkat’s. These sikkat’s shall be a minimum of 3m wide and paved to a footpath standard. They shall meet the requirements set out in section 2.2.
3. Utilise horizontal segregation between different modes on routes where the speed limit is above 50Kph. Cycle routes shall be segregated from vehicle and pedestrian traffic and have a dedicated cycle lane which is clearly marked. There should be no change of level between the pedestrian and cycle routes with the cycle route being wheelchair accessible.
2.0 ARRIVAL

2.1 CAR PARKING & DROP-OFF POINTS

THIS SECTION DEALS WITH THE PROVISION, LOCATION AND DESIGN OF PARKING AND IS APPLICABLE TO BOTH EXTERNAL, COVERED AND MULTI-STOREY PARKING.

PERFORMANCE OBJECTIVE

The provision of properly planned accessible parking is fundamental to the accessibility of a site. Accessible parking bays (see figure 3) shall provide sufficient space to enter and leave a vehicle on three sides, manoeuvre around it in a wheelchair or with a pushchair or luggage etc. and shall be located in close proximity to an accessible entrance to the building. The number of accessible spaces provided shall be appropriate for the location, building size and function.

People with mobility impairments shall be able to arrive by vehicle and be dropped off close to the principal entrance, which shall be accessible via a level approach. Parking and drop off areas shall be able to accommodate a wide range of commercial and private vehicles including those specially adapted for disabled use. Flexibility shall be designed in to accommodate future change to the number of required accessible spaces.

Management systems shall be used to ensure that designated disabled spaces are not used by others. The location of disabled spaces shall be identified by directional signs and the proper designation of each accessible parking bay.

Figure 3 / Car parking dimensions and alighting spaces

Hatched zones provided to in middle of spaces.

Rear safety zone for boot access and cars with rear hoists, outside the traffic zone.
2.0 Arrival

### 2.1.1 MANDATORY PROVISIONS

Car parking and drop off provision will satisfy the performance objectives if:

1. The number of accessible spaces provided is in accordance with Table 1 for the following land uses:
   - Residential (apartments and mixed-use residential developments)
   - Commercial office
   - Commercial retail
   - Hotel
   - Hotel Apartments
   - Public facilities
   - Education facilities
   - Industrial
   - Logistics
   - Sports Facilities

<table>
<thead>
<tr>
<th>Total number of Parking Spaces in Parking Facility (External, covered and multi-storey parking)</th>
<th>Minimum Number of Accessible Spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 25</td>
<td>1</td>
</tr>
<tr>
<td>26 - 50</td>
<td>2</td>
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</tr>
<tr>
<td>501 - 1000</td>
<td>2% of total</td>
</tr>
<tr>
<td>1001 and over</td>
<td>20, plus 1 for each 100, or fraction there-of, over 1000</td>
</tr>
</tbody>
</table>

**Table 1 / Car Parking Provision**

2. Where the function of the building means that a larger number of disabled people are expected, the numbers should be increased in order to meet the anticipated need.

3. The number of parking spaces required to be accessible shall be calculated separately for each parking facility. The required number shall not be based on the total number of parking spaces provided in all of the parking facilities provided on the site.

4. The dimensions for designated parking bays and access zones are as illustrated in Figure 3 - car parking dimensions and alighting spaces.

5. All car parking spaces and pedestrian routes within the car park are level or with gradients no greater than shown in Section 2.2 Pedestrian Routes. Drop kerbs are provided to give easy access for wheelchair users along routes between the parking area and the building. Tactile warnings are provided as shown in Section 2.2.

6. Designated bays and access routes have finished surfaces that are firm, smooth, durable, slip resistant and free from loose materials. Formless materials do not have undulations exceeding 5mm under a 1m straight edge.

7. Spaces shall not have cross falls greater than 1:50 and running slopes of no more than 1:53.

8. Ticket dispensing machines at car park entrances are usable by all motorists without leaving their vehicle.

9. Ticket dispensing and payment machines are positioned in accessible locations on level ground close to the designated parking bays and at an accessible height as illustrated in Figure 4.

10. Designated drop off points (see figure 5) are located within 50m of the principle building entrance which is reached via an accessible route.

11. Drop off points (see figure 5) provided allow the driver to park temporarily to assist a disabled person to alight from the vehicle and enter the building before returning to the vehicle. A driver is able to park whilst waiting to collect a disabled person from the building.

12. Drop off points are clearly signposted and located on level ground as close to the principle entrance as possible. The surface of the carriage way is level with the foot way to allow easy transfer to and from a wheelchair. In addition a section of the foot way has a kerb suitable for use by vehicles with integral fold-out ramps. Setting down points are provided with weather protection and shading.

13. Where designated on street parking is provided bays are designed to provide safe access via both sides and the rear of a vehicle as shown in Figure 3. One end of the bay is designed with a drop kerb or level surface to enable access to a vehicle using a ramp or tail lift. The area is identified with blister tactile paving. Any cross falls are no greater than 1:50.

14. Where the distance between additional designated parking bays and the principle entrance exceeds 50m the route is covered and seating is provided at regular intervals of no more than 50m spacing along the route.

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**Figure 4 / Car parking meters**

**Figure 5 / Disabled on-street space with dropped kerb arrangement**
2.1.2 MANDATORY DESIGN REQUIREMENTS

GENERAL

1. Access routes between parking bays and lift lobbies should be safe, easy to follow, unobstructed and take the most direct route possible. A pedestrian circulation strategy shall be developed within basement parking to identify and eliminate any conflicts between vehicles and access to the lift lobbies.

2. The circulation strategy should ideally provide pedestrian routes to front of vehicles and avoid routes to rear where visibility is restricted when making reversing manoeuvres.

3. Designated disabled parking bays and drop off points should be located in close proximity to the principle building entrance and reached via an accessible route.

4. In multi–storey car parks the designated spaces should be located at the same level as the accessible entrance to the building unless served by accessible lifts. All routes between the designated spaces and the building should be clearly signposted.

5. Where space permits separate setting down / waiting areas should be provided for both taxis and private vehicles.

2.1.3 DESIRABLE DESIGN OUTCOMES

In addition to the Mandatory Requirements the following elements are deemed desirable.

1. At the entrance to public parking areas the number and location of designated disabled spaces shall be indicated by prominent signs repeated at each change of direction or change in level within the car park.

2. All designated spaces shall be clearly identified with ground painted symbols and a wall or post mounted sign. Post mounted / wall signs should be installed at a height of at least 1500mm from the floor surface to the centre of the sign. Signs should include the telephone number of the building management company for the purpose of reporting of unauthorised parking. Disabled employee and disabled visitor parking should be differentiated.

3. Advance warning of height restrictions should be clearly signposted. Minimum clearance under height barriers should be 2.6m and this minimum clearance should be maintained along the routes linking the entrance, designated bays and the exit.

4. Wayfinding signs from disabled space to nearest main entrance or lift lobby.

LIGHTING

1. Artificial lighting providing an even level of illumination of 20 lux should be provided to designated parking bays and access routes. Where steps and ramps occur the level should be increased to 100 lux.

ACCESS CONTROL

1. Where access control systems are installed these should be located so as to be easily accessible to all users. Remote-control or proximity / swipe card systems with dual height readers are recommended.

Table 2 / Desirable Enlarged Parking Spaces Provision

<table>
<thead>
<tr>
<th>Total number of Parking Spaces in Parking Facility (External, covered and multi-storey parking)</th>
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</tr>
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</tr>
</tbody>
</table>

Figure 6 / Desirable Car parking dimensions and alighting spaces
2.2 PEDESTRIAN ROUTES

2.2.1 MANDATORY PROVISIONS

The design, provision and location of pedestrian routes will satisfy the performance objectives if:

GENERAL

1. Accessible pedestrian routes are provided to and around buildings.

PERFORMANCE OBJECTIVE

Accessible routes shall be provided across the development to ensure accessible connectivity. There shall be no gaps in the accessible routes through the development. Accessible pedestrian routes shall be provided to principal and alternative building entrances and emergency exit points. Accessible pedestrian routes shall be provided from designated parking areas and transport interchanges to the principal and alternative building entrances / exits. Accessible pedestrian routes shall be provided for both pedestrian priority is maintained near the building.

2. Gently sloping routes of gradients greater than 1:60 but less than 1:20 and with a level landing for each 500mm rise of the access route and / or change in direction are provided to accommodate minor level changes dictated by the topography.

3. Level changes do not exceed 1:20.

4. Principal routes are a minimum of 1800mm wide (see Figure 7).

5. Secondary routes are a minimum of 1500mm wide subject to the provision of 1800mm wide by 2000mm long passing places at intervals of no more than 25m (less if one passing place is not visible from another).

6. 2000mm long passing places at intervals of no more than 25m (less if one passing place is not visible from another). Passing places are provided at all junctions / changes in direction (see Figure 8).

7. A clear height of no less than 2100mm is maintained to the full width of all pedestrian routes and 2400mm to shared use routes.

8. Resting places with seating are provided at intervals of no greater than 50m. Seating areas are set back from the route boundary and designated in accordance with Section 3.1 – street furniture.

9. Routes have a cross-fall gradient no greater than 1:50.

10. Routes are clearly signed and are designed to assist natural wayfinding.

LAYOUTS AND GRADIENTS

1. Routes are generally level along their length with gradients no greater than 1:60.

2. Routes do not contain features that could form a barrier, e.g. benches, litter bins, cycle racks, lighting columns etc., to vulnerable users unless an appropriate means of bypassing the barrier is provided nearby and it is always available for use.

3. Shading is provided in accordance with Section 5.

4. Pedestrian priority is maintained at building driveways and car park entrances through the provision of a minimum of 1.8m pedestrian through route that maintains the same material and level as the adjacent footpath, has no drop kerbs and meets the provisions set out below for gradients.

5. Pedestrian routes shall be shaded and designed to avoid the use of ramps and steps.

6. Pedestrian priority is maintained at building driveways and car park entrances through the provision of a minimum of 1.8m pedestrian through route that maintains the same material and level as the adjacent footpath, has no drop kerbs and meets the provisions set out below for gradients.

7. Where space and demand allows it, segregated cycle lanes should be provided.

8. Clear headroom height of 2100mm.

9. Gently sloping routes of gradients greater than 1:60.

10. Always available for use.

11. Passing spaces are clearly signed and are designed to assist natural wayfinding.

12. Accessible pedestrian routes shall be provided from designated parking areas and transport interchanges to the principal and alternative building entrances / exits. Accessible pedestrian routes shall be provided for both.
SURFACES AND DRAINAGE

1. Surface materials shall be reasonably smooth, firm, durable, slip resistant and free from surface undulations greater than 3mm under a 1m straight edge for formless materials.
2. All drains are to be covered and be flush with the surrounding surface.
3. Joints between adjacent paving units or with utility access covers are detailed as follows:
   a) The level difference between paving elements with filled joints is no passing more than twice the joint width up to a maximum level difference of 5mm.
   b) Recessed filled joints are no deeper than 5mm, no wider than 10mm and the level difference between adjacent paving elements is no greater than 2mm.
   c) Unfilled joints are no wider than 5mm and the level difference between adjacent paving elements is no greater than 2mm.
4. Drainage channels are positioned outside of the access route wherever practicable. Where located within the access route they are flush with the surface and designed to avoid trapping wheels and walking aids – grating slots are no more than 13mm wide and set at right angles to the direction of travel; circular holes are no more than 18mm in diameter.
5. The frictional characteristics of adjoining materials are similar.
6. Surface materials have a minimum Surface Reflectance Index (SRI) of 29.

HAZARD WARNING AND PROTECTION

1. Street furniture is positioned in accordance with Section 3.1 - street furniture.
2. Tactile paving (blister type) is used to identify uncontrolled pedestrian crossing points and corduroy tactile hazard warning paving is used to identify the top and bottom of external steps (see figures 9 and 10). For signalised crossing points see Section 2.3.
3. Hazard protection, including guarding, is provided to any objects that project more than 100mm onto an access route within the zone of 300mm and 2100mm above ground level (see figure 11).
4. Tapping rails are flush with the front face of a projecting object or are set back a maximum of 100mm and are no more than 150mm above ground level – measure to the underside of the rail (see Figure 11).
5. All guarding and potential obstructions contrast visually with their surroundings.
6. Where the soffit beneath a ramp or stairs is less than 2000mm above the finished floor level the area beneath is protected by guarding and low level cane detection or a barrier providing the same degree of protection.
2.2.2  MANDATORY DESIGN OBJECTIVES

GENERAL

1. The provision of properly designed pedestrian routes is critical to the accessibility of a development or neighbourhood. The pedestrian routes are the connections that link different land uses and connect different transport modes to the buildings. The routes should be as direct as possible and free of obstructions.

2. The layout and levels of all pedestrian routes shall allow for safe unobstructed (vertically and horizontally) passage of all users. External spaces and the relationship between buildings and external spaces should be designed to minimise the requirements for steps and ramps. Routes should be designed to provide visual, audible, tactile and olfactory clues that aid navigation in addition to signs. This could be achieved by the use of tiling, sculpture, fountains etc.

3. All pedestrian routes leading to building entrances shall be usable during emergency exit procedures. At least one route must provide the adequate width, lighting and levels to be considered as emergency egress route and form part of the developers emergency exit plan.

4. All pedestrian routes should ideally be shaded from direct sunlight by softscape or physical structures. Consider the sun path in Dubai to determine best position of shading, taking into account the existing shading caused by the surrounding buildings. The main pedestrian route and emergency egress route should be shaded in accordance with Section 3.5.

5. Due to hot climate of Dubai, large external areas will require seating for resting along pedestrian routes. These provide pleasant amenity for residents or workers wishing to enjoy the outdoor spaces. A combination of open and shaded spaces should be considered in the landscape design.

6. Materials should be selected to perform a number of functions e.g. differentiate areas, aid wayfinding, and provide visual and textural contrast. Safety is of primary importance and therefore surface materials should be firm, durable and easily maintained. Surfaces should generally be level and free from undulations and heavily chamfered joints between materials. Loose surface materials such as gravel should be avoided. Wherever possible drainage channels and services covers should be located outside the access route. Surfaces should provide sufficient traction for the safe use of wheelchairs.

7. The reflective values of materials should be considered to avoid both undue glare and heat gain in full sunlight, a particular problem in Dubai during summer months.

8. Tactile paving materials should be used to provide hazard warnings, aid wayfinding and identify controlled and uncontrolled crossing points.

4. All pedestrian routes should allow for visual, audible, tactile and olfactory clues that aid navigation in addition to signs. This could be achieved by the use of tiling, sculpture, fountains etc.

5. Due to hot climate of Dubai, large external areas will require seating for resting along pedestrian routes. These provide pleasant amenity for residents or workers wishing to enjoy the outdoor spaces. A combination of open and shaded spaces should be considered in the landscape design.

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7. The reflective values of materials should be considered to avoid both undue glare and heat gain in full sunlight, a particular problem in Dubai during summer months.

8. Tactile paving materials should be used to provide hazard warnings, aid wayfinding and identify controlled and uncontrolled crossing points.

2.3 PEDESTRIAN CROSSINGS

THIS SECTION DEALS WITH THE DESIGN AND PROVISION OF PEDESTRIAN CROSSINGS. THE SECTION DEALS WITH SIGNALISED AND NON-SIGNALISED AT GRADE CROSSINGS PLUS GRADE SEPARATED CROSSINGS

PERFORMANCE OBJECTIVE

Deliver accessible pedestrian crossings to form a key part of the accessible pedestrian route outlined in 2.2, helping to deliver connectivity.

2.3.1  MANDATORY PROVISIONS

The design and provision of pedestrian crossings shall satisfy the performance objective if:

1. For roads with posted speed of 50 kph or less at grade crossings, are provided at each junction and at mid-block locations where pedestrian desire lines are identified at the master plan level.

2. For roads with posted speed greater than 50 kph at grade signalised crossings should be provided.

3. Audible and tactile traffic signals shall be provided at all signalised crossings.

4. Footbridges and/or underpasses shall be positioned at key desire lines across major roads which serve pedestrian connectivity where safe at grade crossing is not possible. Footbridges should be used only where the introduction of an underpass is deemed infeasible or impractical.

5. The provision of ramps to serve the underpass or footbridge meet the requirements of accessible ramps and steps as set out in sections 3.2 and 3.3.

6. Drop kerbs and tactile paving which meets the provisions set out in Section 2.2 be laid across the entire width of the crossing route. Where there is a change in level the slope shall be shallower than 1:20.

7. A minimum waiting area in a median should measure 2m x 1.5m in order to safely accommodate waiting users.

8. At vehicular access locations pedestrian priority shall be maintained by providing a minimum 1.8m wide section of footpath crossing the access point at the same level at the rest of the footpath and with a maximum cross-fall of 1:50.

9. The footpath should be constructed in the same material as the adjoining footpath to further reinforce pedestrian priority.

10. The width of crossing points should be informed by an understanding of pedestrian flows and external spaces should be considered in the relationship between buildings and external spaces.

11. Footbridges or underpasses should be considered to achieve access for wheelchair users.

12. Where at grade crossings are provided raised crossings or raised tables should be provided to further reduce speed and reinforce pedestrian priority over vehicles.

13. In line with best practice internationally pedestrian guard railing should be avoided for all at grade crossing points.

14. In addition to accessible ramps and steps, guard railing should be provided and maintained to allow for wheelchair users accessing raised and sunken levels of footbridges or underpasses.

15. The underside of footbridges and routes of underpasses should be activated with uses, street furniture, pocket spaces in dense urban areas where the adjoining pedestrian route is lined with such features to avoid creating a dead space within the users journey.

16. Pedestrian waiting times at pedestrian signalised crossings should not exceed 2 minutes.

17. Pedestrian countdown indicators are provided at signalised crossings to better inform pedestrians crossing the road.

2.3.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Pedestrians shall be at the top of the movement hierarchy when designing junctions and crossings. In busy pedestrian areas the use of pedestrian only phases to enable diagonal crossing should be considered.

2. Footbridges shall be roofed or climate controlled to create a comfortable pedestrian environment.

3. Underpasses and footbridges shall be provided across major roads that serve pedestrian connectivity where safe at grade crossing is not possible.

The following provisions are deemed as desirable by DCCA and should be provided for all schemes where practicable. The provision of these features will contribute to achieving a higher accessible scoring. The desirable provisions are:

1. Where at grade crossings are provided raised crossings or raised tables should be provided to further reduce speed and reinforce pedestrian priority over vehicles.

2. In line with best practice internationally pedestrian guard railing should be avoided for all at grade crossing points.

3. On local streets kerb build-outs which reduce the width of the carriageway and provide shorter crossing points whilst enhancing visibility should be provided.

4. In addition to accessible ramps and steps, guard railing should be provided and maintained to allow for wheelchair users accessing raised and sunken levels of footbridges or underpasses.

5. The underside of footbridges and routes of underpasses should be activated with uses, street furniture, pocket spaces in dense urban areas where the adjoining pedestrian route is lined with such features to avoid creating a dead space within the users journey.

6. Pedestrian waiting times at pedestrian signalised crossings should not exceed 2 minutes.

7. Pedestrian countdown indicators are provided at signalised crossings to better inform pedestrians crossing the road.
3.0 PUBLIC REALM

3.1 STREET FURNITURE

THIS SECTION DEALS WITH THE DESIGN, PROVISION AND LOCATION OF STREET FURNITURE.

PERFORMANCE OBJECTIVE

Street furniture (see figure 12) shall be provided for the purposes of litter collection, lighting and resting places and to facilitate wayfinding and hazard warning. Street furniture shall be located outside of the boundaries of access routes.

3.1.1 MANDATORY PROVISIONS

The design and positioning of street furniture will satisfy the performance objectives if:

GENERAL

1. Pedestrian routes are clearly defined by the use of visually and / or texturally contrasting materials and the provision of lighting.
2. There is a logical grouping of items based on functional relationships and they are placed in locations convenient to all uses, outside of the access route boundary.
3. Seating is provided in accordance with Section 7.4.
4. Areas below stairs, ramps or any structure where there is less than 2100mm headroom are either fully enclosed or protected by guarding and low level cane protection or other form of permanent barrier.
5. Bollards are at least 1000mm high, contrast visually with their surroundings, are not linked with rope or chains.
6. Cycle parking is positioned in locations convenient for users but not forming an obstruction to pedestrians. Cycle stands are 1000mm high, clearly visible and incorporate a horizontal tapping rail 150mm above ground level.

Figure 12 / Street Furniture
3.0 Public Realm

Accessibility Code For The Built Environment

7. Hazard protection is provided to objects that project more than 100mm into an access route and have a front edge more than 300mm above the ground.

8. Sculptures and art objects are placed where they do not form a hazard.

9. Where tree pits are installed and impinge on the accessible route they are safe to walk on and accessible for wheelchairs.

10. Sharp edges are to be avoided or mitigated with a permanent protection.

11. Street furniture should be designed to avoid the provision of elements that can be seen as climbing elements by children.

3.1.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The public realm, of necessity, contains many elements that could form obstructions and / or hazards if not designed and located correctly. The public realm should be designed so that it provides a supportive and safe environment for all users whilst also affording unobstructed access (see Figure 13).

2. Some elements of furniture will have natural groupings, e.g. lighting adjacent to seating and signage. Waste bins should be placed in close proximity to seating but not adjacent to it. Resting areas are multifunctional, providing a place for meeting others, resting or people watching. The arrangement and quantity of seating provided should have a qualitative impact on how the public realm is used.

3. The placement of furniture should be part of a wider shading and microclimate strategy. Passive and active mechanisms should be used to ensure that seating areas can be used comfortably throughout the year. Passive – use building shading and wind channelling. Active – use planting or shading devices.

4. The materials used for furniture should be considered for their heat absorption and reflective values. The high thermal conductivity of some materials is a dangerous hazard during hot months in Dubai. The reflective glare of polished materials can cause distraction and reduce visual contrast for all users of outdoor space.

5. The public realm, of necessity, contains many elements that could form obstructions and / or hazards if not designed and located correctly. The public realm should be designed so that it provides a supportive and safe environment for all users whilst also affording unobstructed access (see Figure 13).

6. The design of external ramps (see figures 14 and 15) will satisfy the performance objectives if:

   1. Directional signage is provided where the location of a ramp serving a building entrance or forming part of an external accessible route is not immediately apparent.

   2. Minimum ramp width is 1500mm between walls, kerbs or edgings and where ramps are wider than 2500mm a handrail divides the ramp into two widths with one section being a minimum of 1500mm wide and the space between handrails is not less than 1000mm and not more than 2000mm.

   3. Where the total rise is greater than 2m an alternative means of access is provided for wheelchair users, e.g. a platform lift.

   4. There is a level landing at the start and finish of the ramp that is a minimum of 1500mm long and the width of the ramp slope, clear of any door swings or other obstructions.

   5. Intermediate landings of 1500mm minimum width (clear of any door swings) are provided between each straight line ramp slope. Where there is a change in direction at an intermediate landing the landing length is equal or greater than the width of the ramp.

Figure 13 / Street Furniture

Figure 14 / Short rise ramp

3.2 EXTERNAL RAMPS

PERFORMANCE OBJECTIVE

The connectivity of the public realm and access to and between buildings and external spaces shall be designed to minimise the need for ramps. Where site constraints dictate an approach that is 1:20 or steeper the approach shall incorporate a ramped access as well as steps. Steps are not required where the level change is less than 300mm. A ramped access shall be designed, constructed and installed so that it provides safe unobstructed access for all users moving between different levels. Ramps shall be easily identifiable and located to ensure that deviation from the desire line is minimised.

3.2.1 MANDATORY PROVISIONS

The design of external ramps (see figures 14 and 15) will satisfy the performance objectives if:

1. Directional signage is provided where the location of a ramp serving a building entrance or forming part of an external accessible route is not immediately apparent.

2. Minimum ramp width is 1500mm between walls, kerbs or edgings and where ramps are wider than 2500mm a handrail divides the ramp into two widths with one section being a minimum of 1500mm wide and the space between handrails is not less than 1000mm and not more than 2000mm.

3. Where the total rise is greater than 2m an alternative means of access is provided for wheelchair users, e.g. a platform lift.

4. There is a level landing at the start and finish of the ramp that is a minimum of 1500mm long and the width of the ramp slope, clear of any door swings or other obstructions.

5. Intermediate landings of 1500mm minimum width (clear of any door swings) are provided between each straight line ramp slope. Where there is a change in direction at an intermediate landing the landing length is equal or greater than the width of the ramp.

Figure 13 / Street Furniture

Figure 14 / Short rise ramp

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The design of external ramps (see figures 14 and 15) will satisfy the performance objectives if:

1. Directional signage is provided where the location of a ramp serving a building entrance or forming part of an external accessible route is not immediately apparent.

2. Minimum ramp width is 1500mm between walls, kerbs or edgings and where ramps are wider than 2500mm a handrail divides the ramp into two widths with one section being a minimum of 1500mm wide and the space between handrails is not less than 1000mm and not more than 2000mm.

3. Where the total rise is greater than 2m an alternative means of access is provided for wheelchair users, e.g. a platform lift.

4. There is a level landing at the start and finish of the ramp that is a minimum of 1500mm long and the width of the ramp slope, clear of any door swings or other obstructions.

5. Intermediate landings of 1500mm minimum width (clear of any door swings) are provided between each straight line ramp slope. Where there is a change in direction at an intermediate landing the landing length is equal or greater than the width of the ramp.

Figure 13 / Street Furniture

Figure 14 / Short rise ramp
6. Where it is not possible for a wheelchair user to see from one end of the ramp to the other, or the ramp has 3 flights or more, the intermediate landings are a minimum of 1800mm long and 1800mm wide.

7. The maximum cross-fall gradient on the ramp or landing is 1:50.

8. A continuous handrail, set at appropriate height, is provided along both side of each ramp slope and all intermediate landings and extending 300mm beyond the start and finish of the ramp slope.

9. Edge protection, contrasting visually with the ramp and landing surface, formed by a continuous 100mm high up-stand or equivalent barrier is provided to any open edge of the ramp in addition to any requirements for guarding or handrails.

10. The surface materials are durable, easy to maintain and slip-resistant when wet. The surface materials' coefficient of friction is appropriate to the ramp gradient so that adequate traction is provided. The frictional characteristics are similar for ramp slope and landings even if the materials used are different.

11. The ramp is orientated to avoid glare from the surfaces or confusing strong shadows.

12. Artificial lighting providing, an even level of illumination of 100 lux (measured at the surface), is provided along the full length of the ramp and at landings.

13. Where temporary ramps are provided they comply with all of the above.

14. Portable ramps are only used in exceptional circumstances for existing buildings, are not be used for more than one calendar month in a calendar year, have a minimum width of 800mm and otherwise comply as closely as possible with all of the above.

15. Where the soffit beneath a ramp is less than 2000mm above the finished floor level the area beneath is protected by guarding and low level cane detection or a barrier providing the same degree of protection.

16. Guarding and handrails comply with Section 3.4.

3.0 Public Realm

3.2.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Ramps can form interesting landscape features or architectural elements if well designed and integrated at the initial design stage. Ramps should not be used as an afterthought to solve poor resolution of plot and / or building levels.

2. Although ramps enable wheelchair users, people with push chairs and wheeled luggage to negotiate level changes they may present difficulties to other vulnerable users. Limitations on ramp gradients and length and the provision of landings are designed to limit the physical effort required to negotiate ramps. Gradients should be kept as shallow as practicable.

Provided there is a level change of greater than 300mm (allowing for 2 steps) steps should be provided adjacent to ramps to provide an alternative form of access (see Figure 16).

500 rise

444 rise

375 rise

285 rise

166 rise

100 mm minimum kerb upstand to open sides of ramp slope and landing.

Guarding required where change in level is greater than 380 mm.

Level landing area depth 1500 mm (ideal 1800 mm).

100 mm minimum kerb upstand to open sides of ramp slope and landing.

Corduroy tactile warning at top and bottom of steps.
3.3 EXTERNAL STEPS

THIS SECTION DEALS WITH THE DESIGN, LOCATION AND PROVISION OF EXTERNAL STEPS.

PERFORMANCE OBJECTIVE

The connectivity of the public realm and access to and between buildings and external spaces shall be designed to minimise the need for steps. Steps shall always be provided in conjunction with ramps (where the change in level is greater than 300mm) to provide an alternative means of access. Steps and stairs shall be designed to ensure the safety and comfort of all users.

3.3.1 MANDATORY PROVISIONS

The design of external steps will satisfy the performance objectives if (see figure 17):

1. If not readily apparent stepped access is clearly signed.
2. Ramps are used in preference to single isolated steps where the rise is less than 300mm.
3. The riser and going dimensions for each step are consistent within a flight and across consecutive flights.
4. There are a maximum of 12 risers in any one flight where the tread dimension is less than 350mm and a maximum of 18 risers in any one flight where the tread dimension is 350mm or greater.
5. The minimum unobstructed flight width (between walls, balustrades, upstands and strings) is 1200mm and the width between handrails is not less than 1000mm.
6. Level unobstructed landings with a length equal to the width of the stair (not less than 1200mm) are provided at the top and bottom of each flight and no doors open across landings.
7. The dimensions of step risers are between 150mm and 170mm and the dimensions of step goings are between 300mm and 450mm. The relationship between the riser and going dimensions is twice the rise plus the going (2R + G) and equals between 550mm and 700mm.
8. The surface materials are durable, easy to maintain and slip-resistant when wet. The frictional characteristics are similar for treads and landings even if the materials used are different.
9. A permanent integral nosing that contrasts visually with the tread and riser surfaces is provided to the full width of each step. The nosing is between 50mm and 65mm deep and between 30mm and 55mm high. There are no open risers.
10. Where projecting nosings are provided they have a chamfered profile and a maximum overlap of 25mm (see figure 18).
11. Tactile surfaces in accordance with Section 2.2 are provided at the top and bottom of each flight as a hazard warning.
12. Surfaces finishes to the steps contrast visually with the landing surfaces.
13. The maximum cross-fall gradient on a stair flight or landing is 1:50.
14. A continuous handrail in accordance with Section 3.4 is provided to both sides of flights and around intermediate landings.
15. Where flights are wider than 2000mm a handrail divides the flight into two widths such that the space between handrails is not less than 1000mm and not more than 2000mm.
16. Artificial lighting providing, an even level of illumination of 110 lux (measured at the tread surface), is provided along the full length of the stair flight and at landings.
17. Where the soffit beneath a stair is less than 2000mm above the finished floor level the area beneath is protected by guarding and low level cane detection or a barrier providing the same degree of protection.

3.3.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Steps present a general hazard to vulnerable users particularly those with impaired sight. Flights of steps should therefore be readily identifiable with tactile markings at the top and bottom of flights. Tactile markings should not generally be used on intermediate landings unless there is an additional access route onto the landing.

2. The safe and comfortable use of the stair is largely dependent on the relationship between the height of the riser and the depth of the tread. Deeper treads provide greater tolerance for foot placement and at the upper end of the dimensional range the tread will allow people to stand and rest at any point on the flight. For vulnerable users to feel confident using a stair foot placement, a combination of visual location and physical feel, is critical. Users should therefore be easily able to differentiate steps and walking rhythm should not be broken by uneven riser heights within a flight. Stair treads should have sufficient slip-resistance so that users can feel confident of not slipping. The tactile sensation of foot on tread is important for both those with sight impairments and those who are physically frail and unsteady on their feet.

3. Handrails should provide a means of support and a visual and tactile guide to the stair location. Handrails should be provided even where there are only two steps.
3.4 HANDRAILS AND GUARDING

3.4.1 MANDATORY PROVISIONS

The design of handrails and guarding will satisfy the performance objectives if:

1. Handrails are continuous along all step flights, ramp slopes and around intermediate landings. Handrails extend 300mm beyond the top and bottom of a ramp or stair flight.
2. Handrails are mounted at a height of between 900mm to 1000mm above the pitch line of the stair or ramp and from the surface of landings.
3. Where the ramp or stair is accessible to the general public and / or children a lower handrail mounted 600mm above the pitch line of the stair or ramp is provided.
4. All guarding within the public realm and where a ramp or stair is accessible by children under 5 years of age the guarding prevents children from easily climbing the guarding and will prevent a 100mm sphere passing through any openings in the guarding.
5. Handrail fixings allow hand contact to be maintained for the full length of the handrail.
6. Handrails are easy to grip and comfortable to use and have a profile shown in Figure 19.
7. Handrail materials are slip-resistant and do not become excessively hot or cold to the touch.
8. The end of the handrail is finished to grip and comfortable to use and have a profile shown in Figure 19.
9. Handrails contrast visually with the background against which it is seen but is not highly reflective.
10. Guarding is provided up to a height of 900mm above the pitch line of a ramp or stair and 1100mm above landing finished floor levels. Guarding can resist, as a minimum, the loads given in BS EN 1991-1-1:2002 with its UK National Annex and PD 6688-1-1.

3.4.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Handrails are multi-functional in that they provide support to people negotiating changes in level, provide visual and tactile indicators of changes in level and provide directional guidance.
2. Provision of a handrail is pointless if it is not usable and therefore mounting heights, profiles and materials are important design considerations. In hot climates the material selected should have low thermal conductivity to avoid handrails becoming too hot to touch.
3. Handrail fixings should be robust enough to enable users to rely on handrails for support.
4. Handrails are required along all steps and around intermediate landings in the public realm.
5. Handrails must be continuous along all stair flights and around intermediate landings.
6. Handrails must be mounted at a height of between 900mm to 1000mm above the pitch line of the stair or ramp and from the surface of landings.
7. Handrails must be slip-resistant and do not become excessively hot or cold to the touch.
8. The end of the handrail must be finished to grip and comfortable to use.
9. Handrails must contrast visually with the background against which they are seen but are not highly reflective.
10. Guarding must be provided up to a height of 900mm above the pitch line of a ramp or stair and 1100mm above landing finished floor levels. Guarding can resist, as a minimum, the loads given in BS EN 1991-1-1:2002 with its UK National Annex and PD 6688-1-1.

3.5 SHADING

3.5.1 MANDATORY PROVISIONS

The provision of shading (see figure 20) will satisfy the performance objectives if:

1. 50% of principal pedestrian routes, 50% of all car parking areas and 100% of all seating areas are shaded where the Sky View Factor (SVF) is greater than 0.25.
2. Shade canopy is a key consideration in the selection of tree species such that at three year maturity the canopy will block 75% of sunlight.
3. Trees have a clear stem height of at least 2.5m on pedestrian paths and 2.5m in cycle routes and shared use paths. Tree guards and tree grates are clearly distinguishable from the adjacent paving and do not impinge on the clear zone (see Section 2.2).
4. Architectural shade structures have a minimum clear height of 2.4m for the full width of the pedestrian route.
5. Where colonnades are used to provide shading they are designed as part of the public realm and not as a private area.
6. The provision of shading is integrated into the overall design and reflects the architectural character of the development in terms of form and material.
7. Where shading devices are used they are integrated into the streetscape, contributing to its identity and aiding wayfinding.
8. Shading measures are used in conjunction with wind capture, planting and the careful selection of surface materials (See Section 4.4).
9. Shading devices do not hide the location of main building entrances.
10. Adequate artificial lighting is provided under shade structures so pedestrian feel safe at night.

3.5.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Modification of the external environment in order to provide a more comfortable environment for all users is critical to promoting an increase in the use of the public realm by a wider range of users. This is part of the objective to make streets more family friendly and facilitate inclusiveness. However, establishing comfort levels is dependent on a number of factors and is not always directly linked to direct sun exposure. The tolerance of outdoor thermal environments varies greatly based on whether you are considering local residents or visitors from colder or similar climates. However, the objective is to increase the thermal comfort period over the whole year for as many users as possible.
2. Shading is just one of several mechanisms that can be used to provide thermal comfort and should form part of an overall strategy for environmental modification. Likewise activity and the time spent in the sun can have a big impact on comfort levels. For those with mobility impairments the time it takes to travel walkable distances increases and therefore the
3.0 Public Realm
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The provision of shade increases in importance. The provision of a network of continuous shaded routes should be a priority. Likewise it is important to provide shading at waiting areas at transport interfaces. A 10 minute walk or 800m should be used as the basis for calculating walkable distances.

3. In general, shading structures should be integrated into the urban fabric as much as possible and should ideally reflect the architectural character of the development in terms of form and material.

4. Architectural shade structures can consist of structural or fabric canopies, pergolas and shelters. In commercial areas preference should be given to the use of colonnades. A clear path that meets the requirements of Section 2.2, Pedestrian Routes shall be provided in order for the route to be classed as a shaded route.

5. Brise-soleil (fr. sun-breaker) can be used as a cantilevered device to provide shading to pedestrians as an alternative to colonnades.

6. Patterns can add variety and interest to shading structures and pergolas but should not be contrived in the context of the development. In key locations identified as part of the masterplan or public realm strategy structural shading devices can be incorporated.

7. Detailed sun angle / shade projection studies should be carried out to identify where shading is required and shading solutions should be tested by CAD modelling prior to construction.

3.6 PARKS AND OPEN SPACES

This section deals with the design of parks and open spaces to meet the needs of all users.

Performance Objective

All aspects of the park and open space should be accessible to all users unless an exception has been given by DCCA on receipt of appropriate stakeholder correspondence from local disability groups that agree to the design of non-accessible facilities.

3.6.1 MANDATORY PROVISIONS

The performance objectives for parks and open spaces will be satisfied if:

PARKING

1. Car parking shall meet the design requirements as set out in section 2.1. A minimum of 5% of total car parking spaces should be allocated for disabled users and all spaces should be located within 50m of a principal entrance.

BEACH ACCESS

1. An accessible access to public beaches shall be provided every 1km. The access should extend to high tide point and be served by accessible car parking. A minimum of 5 spaces shall be provided at each accessible point. The point shall be clearly signed.

OFF-ROAD AND EXTREME SPORTS FACILITIES

1. The provision of off-road facilities such as bmx and mountain bike facilities should be done in consultation with local stakeholders to ensure that there is an understanding of the facility and potential use by both the developer and the community.

PARKS AND OPEN SPACES

1. All paths in parks shall be a minimum of 1.8m wide and meet the general provisions as set out in section 2.1.

2. Where there is a shared use path between cyclists and pedestrians this shall be a minimum of 3m wide.

3. Dedicated cycle tracks shall be a minimum of 3m wide.

4. A barrier shall be provided where there is a fall or access to water as set out in section 3.4.

5. Where board-walks are provided they shall have sufficient spaces to accommodate a pushchair or wheelchair users. The minimum space provided shall be 1200mm deep by 1800mm wide. The table surface should be a minimum of 760mm high. A minimum clearance underneath the table of 700mm in height and 500mm depth shall also be provided.

PATHS AND TRAILS

1. All toilet blocks and changing facilities shall contain accessible toilets that meet the requirements of section 4.5.

2. Any indoor facilities such as cafe’s and ticket areas shall meet the requirements as set out in section 4 of this document.

OUTDOOR SEATING AREAS

1. A minimum of 20% of tables shall have sufficient spaces to accommodate a pushchair or wheelchair users. The minimum space provided shall be 1200mm deep by 1800mm wide. The table surface should be a maximum of 760mm high. A minimum clearance underneath the table of 700mm in height and 500mm depth shall also be provided.

FACILITIES

1. All outdoor facilities such as cafe’s and ticket areas shall meet the requirements as set out in section 4.5 of this document.

2. Any indoor facilities such as cafe’s and ticket areas shall meet the requirements as set out in section 4 of this document.

3. Dedicated cycle tracks shall be a minimum of 3m wide.

4. A barrier shall be provided where there is a fall or access to water as set out in section 3.4.

5. Where board-walks are provided they shall have sufficient spaces to accommodate a pushchair or wheelchair users. The minimum space provided shall be 1200mm deep by 1800mm wide. The table surface should be a minimum of 760mm high. A minimum clearance underneath the table of 700mm in height and 500mm depth shall also be provided.

The performance objectives for parks and open spaces will be satisfied if:

1. Car parking shall meet the design requirements as set out in section 2.1. A minimum of 5% of total car parking spaces should be allocated for disabled users and all spaces should be located within 50m of a principal entrance.
3.0 Public Realm

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3.6.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Parks and Open spaces are key parts of the public realm provided for the communities leisure and enjoyment. It is therefore critical that these spaces are designed for all members of the community.

2. Accessible car parking and entrances are critical in enabling access to all users. The routes through the park should be universally accessible with a range of routes and paths, providing choice for different users. All areas of parks and spaces should be accessible, although this does not necessarily mean that parks should be flat. It requires that if there are changes in level the needs of all users needs to be considered.

3. Cycle tracks can be utilised by hand propelled bikes and wheelchairs whilst running tracks can be used by parents with baby joggers.

4. Paths and tracks should generally be flat or meet the general provisions of section 3.2 on ramps although consideration needs to be had to the different level of difficulty in designing different routes. At least one route should be fully accessible with other routes illustrating how accessibility has informed their design.

5. Café's and rest areas should be fully accessible with a choice of seating options and access to café's meeting the requirements of any other building.

6. As one of the key attractors of parks is the play equipment is is imperative that play equipment is accessible to all. The needs of the child and the parent/ carer need to be considered. One of the main barriers to access isn’t necessarily the play equipment, much of which is actually designed to be fully accessible but rather the barriers put in place through the choice of surface and physical access to the play area. In Dubai many of the play areas use sand as the impact attenuating surface. Whilst this makes sense from a cost and environmental perspective the use of loose surfaces restricts access to the play area for many groups. To overcome this issue it is recommended that a mix of surfaces is used in larger parks and smaller parks use solid impact attenuation surfaces.

3.6.3 DESIRABLE PROVISIONS

The following provisions are deemed as desirable by DCCA and should be provided for all schemes where practicable. The provision of these features will contribute to achieving a higher accessible scoring. The desirable provisions are:

1. All impact attenuating surfaces to be solid and fully accessible.
2. 50% of all play equipment to be fully accessible as defined by the IPEMA.
4.0 Internal Environments

4.1 Entrances

This section deals with the layout and design of building entrances.

Performance Objective

For all new buildings the principal entrance or entrances as well as any staff entrances and associated lobbies shall provide a safe and easily identifiable accessible means of entry into the building. For existing buildings where it is not possible to make the principal entrance accessible an alternative accessible entrance shall be provided.

4.1.1 Mandatory Provisions

The design of the building entrance (see figure 21) will satisfy the performance objectives if:

1. The principal entrance / entrances are easily identifiable both by their relationship to the approach route and by their design within the building façade.
2. The accessible entrances are clearly sign-posted from the edge of the site and from the principal entrance (if this is not accessible).
3. Signage is in accordance with Section 7.5 and is visible on and from the routes to the building.
4. The entrance doors contrast visually with the surrounding façade.
5. A clear level area of 1500mm x 1500mm, with a surface that does not impede wheelchairs, is provided in front of every accessible entrance.
6. Shading devices and / or recessed doors are provided and any structural supports are easily identifiable by people with a visual impairment.
7. The principal entrance should have a door entry systems accessible to people with hearing impairments and people who cannot speak.
8. Where outward opening doors are provided they are set back, recessed or protected by guardrails or planting beds so that pedestrians are protected (see Figure 22).

Figure 21 / Entrance identification
9. Where revolving doors are provided they are supplemented by an adjoining swing door (manual or powered) or an automatic sliding door.

10. The entrance threshold is level or has a maximum level change of 15mm. All up-stands higher than 5mm are chamfered or rounded.

11. Where mat wells are provided the finished surface of the mat is level with the adjacent floor finish. Mat materials and internal floor surfaces adjacent to the threshold do not impede the movement of wheelchairs, prams or wheeled luggage.

12. Where the accessible entrance is not the principal entrance and / or staff entrance an accessible internal route is provided to the spaces served by the principal and / or staff entrance.

**ENTRANCE LOBBIES**

The design of the entrance lobbies will satisfy the performance objectives if:

1. Their length with single swing doors is in accordance with figure 3.
2. Their length with double swing doors is at least 1570mm.
3. Their clear width is at least 1200mm for single leaf doors and at least 1800mm for double leaf doors.
4. Glazing within the lobby does not create distracting reflections and where full height is provided with manifestation in accordance with Section 7.1.
5. Projections into the lobby are no greater than 100mm unless they are protected by a visually contrasting guard rail.
6. The floor surface limits the potential for sand or rainwater to be carried into the building.
7. The floor surface does not impede the movement of wheelchairs, prams or wheeled luggage.

**4.0 Internal Environments**

**4.0 Internal Environments**

**Accessibility Code For The Built Environment**

**GENERAL**

1. Entrance lobbies serve a number of purposes:
   - To increase security
   - To maintain internal climate / comfort and reduce energy usage
   - To provide transitional lighting

2. A lobby may also allow the use of an external door closer with a lower power size rating but may not guarantee that it complies with Section 7.3.

3. A lobby should be of adequate size to allow a companion to assist a wheelchair user to open doors and guide them through – clearing one door before opening the second. The minimum length of the lobby is therefore related to the chosen door size, its swing and its projection into the lobby as well as the space required for a wheelchair with companion. Lobby sizes can be reduced by the use of automatic sliding doors or ‘reduced swing’ doors (see Figure 23).

4. A lobby area fitted with cleaning mats can also serve to limit the potential for sand or rainwater, which may cause a slip hazard, to be carried into the building.

5. A lobby area provides a transition zone allowing users to adjust to internal lighting levels and climate.

6. Revolving doors even if of a large diameter are not considered to be accessible.

7. Double leaf doors (ideally double swing) arranged for straight through travel are recommended.
4.2 ENTRANCE FOYERS

4.0 Internal Environments

THIS SECTION DEALS WITH THE LAYOUT AND DESIGN OF ENTRANCE FOYERS.

PERFORMANCE OBJECTIVE

The entrance foyer shall provide a welcoming and understandable transition point between the internal and external environment. The layout and use of signage shall facilitate the orientation of the user to the facilities and / or services provided within the building. The design shall respond to the needs of vulnerable users. The reception area shall be accessible to all users, located adjacent to a waiting area and provide access to horizontal and vertical circulation routes.

4.2.1 MANDATORY PROVISIONS

The design of the entrance foyer will satisfy the performance objectives if it is easily identified from the entrance door or lobby, is located in an area not at risk from noise pollution likely to hinder communication and can be approached via a direct route which is free from obstructions and is wheelchair accessible.

1. Where a reception point is provided it is easily identified from the entrance door or lobby, is located in an area not at risk from noise pollution likely to hinder communication and can be approached via a direct route which is free from obstructions and is wheelchair accessible.

2. Clear space of 1200mm deep and 1800mm wide is provided for manoeuvring in front of any reception desk or counter where a knee recess is provided.

3. Clear space of 1400mm deep and 2200mm wide is provided for manoeuvring in front of any reception desk or counter where no knee recess is provided.

4. The materials used comply with Section 4.4 Surfaces.

5. Information about the building is clearly displayed within the entrance foyer in a form that complies with Section 7.5 Wayfinding, Information and Signs.

6. Seating is provided that complies with Section 7.4 Seating.

7. Signage is provided that complies with Section 7.5 Wayfinding Information and Signs.

LAYOUT AND ORIENTATION

1. The layout of reception areas should be logical and provide sufficient space for general circulation and waiting based on the function and use of the building.

2. Routes from reception to the following areas should be easy to locate and identify without assistance:
   - Lifts
   - Stairs
   - WC's

ACCESS CONTROL

1. Where security systems are used to control movement from the reception area they should be designed, positioned and spaced to suit all users.

2. Where permanent or temporary barriers are required to enforce a queuing system barriers and rails should:
   - Contrast visually with surrounding surfaces
   - Be positioned and spaced to enable easy access for all users
   - Have a rigid top rail which is strong enough for people to lean on to rest
   - Have a rigid bottom rail designed as a ‘tapping rail’ with its lower edge no more than 150mm above the finished floor level

3. The bases to any barrier system supports should not present a trip hazard or reduce the usable width of the queuing channel.

4.2.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The reception area provides the first point of contact between users and the building’s facilities and services. Where security systems are used to control movement from the reception area they should accommodate all users. The selection of materials and use of lighting should aid the differentiation of surfaces and aid spatial awareness. Information about the building should be clearly displayed by signage and or visual display systems and be available at the reception point where provided.

2. Recessed doorways to avoid swinging doors in walkways.

3. Dual-height reception counter to allow for seated and standing staff and visitors.

4. Visible distinct signage.

5. Unobstructed routes and clear signage to other parts of building.

6. Recessed fixtures on accessible routes to avoid hazards.

7. Clearly identifiable entrance with transitional lighting to lobby.

8. Flexible layout with space for wheelchair users and pushchairs.

9. Clear unobstructed and level entrance area.

10. Lobby size adequate to allow for wheelchair user and helper and allow for full manoeuvring of wheelchair.

Figure 24 / Entrance Foyers
4.3 RECEPTION DESKS & SERVICE COUNTERS

**THIS SECTION DEALS WITH THE LAYOUT AND DESIGN OF RECEPTION DESKS AND SERVICE COUNTERS.**

**PERFORMANCE OBJECTIVE**

The design of reception desks and counters shall be appropriate to the function of the building, the services being provided and the required interface between user / customer. Reception desks and counters shall be designed to be accessed and used on both staff and customer / visitor sides by all users.

**4.3.1 MANDATORY PROVISIONS**

The design of the reception desks and service counters will satisfy the performance objectives if:

1. Reception desks or counters are designed to accommodate both standing and seated visitors and a section of the counter at least 1500mm wide, with its surface no higher than 760mm, provides a knee recess of not less than 700mm above finished floor level.
2. Knee recesses on the staff side are 650mm deep and on the customer side are 500mm deep.
3. Counters designed for wheelchair use are at least 700mm deep.
4. Counter surfaces for people standing are positioned between 950mm and 1000mm above finished floor level.
5. The preferred width of low level counter desk top sections is 1800mm.
6. Counter surfaces for people standing are positioned between 950mm and 1000mm above finished floor level.
7. Knee recesses on the staff side are 650mm deep and on the customer side are 500mm deep.
8. Reception desks are provided with a hearing enhancement system, e.g. an induction loop.
9. Where security requires the use of fixed glazed screens voice amplification systems are installed.
10. Reception desks or counters are designed to accommodate both standing and seated visitors and a section of the counter at least 1500mm wide, with its surface no higher than 760mm, provides a knee recess of not less than 700mm above finished floor level.
11. Receptio

**DETAIL**

1. The reception desk should be clearly visible from the main entrance with a minimum 1800mm route being clear of obstacles and barriers.
2. The reception desk should be clearly visible from the main entrance with a minimum 1800mm route being clear of obstacles and barriers.
3. The floor level should be the same on both sides of a counter or desk. Where operational requirements dictate the staff side is at a higher level a ramp of no greater than 1:12 should be provided to the raised area.
4. The floor level should be the same on both sides of a counter or desk. Where operational requirements dictate the staff side is at a higher level a ramp of no greater than 1:12 should be provided to the raised area.
5. The profile of the leading edge of counters where tickets and or money are dispensed are designed to assist people with limited dexterity.
6. There should be a visual contrast between the counter surface, edgings and adjacent floor and wall surfaces.
7. There should be a visual contrast between the counter surface, edgings and adjacent floor and wall surfaces.
8. Where induction loops are provided they should be clearly signed and available for use at all times. Where multiple service points are provided e.g. in ticket offices care should be taken to avoid overspill between induction loops by appropriate spacing.
9. Where induction loops are provided they should be clearly signed and available for use at all times. Where multiple service points are provided e.g. in ticket offices care should be taken to avoid overspill between induction loops by appropriate spacing.
10. Lighting should be designed to facilitate easy lip reading between staff and customers. Provision of seating adjacent to low counters should be considered for the benefit of carers accompanying vulnerable users.
11. Lighting should be designed to facilitate easy lip reading between staff and customers. Provision of seating adjacent to low counters should be considered for the benefit of carers accompanying vulnerable users.

**4.3.2 MANDATORY DESIGN OBJECTIVES**

**GENERAL**

1. Careful consideration should be given to the location of desks and counters to avoid the unwanted impact of noise and / or light which may make communication with people with hearing or visual impairments difficult.
2. Consideration should be given to the provision of quiet areas or interview rooms to facilitate communication with customers requiring privacy or minimal background noise and / or distractions.
3. Consideration should be given to the provision of quiet areas or interview rooms to facilitate communication with customers requiring privacy or minimal background noise and / or distractions.

**VISITOR / CUSTOMER SIDE**

1. The dimensions enable a visitor using a wheelchair to bring the arms of their wheelchair to the edge of the counter in order to read and sign papers.
2. The dimensions enable a visitor using a wheelchair to bring the arms of their wheelchair to the edge of the counter in order to read and sign papers.

**STAFF / RECEPTIONIST SIDE**

1. The desk dimensions enable a member of staff using a wheelchair with desk armrests to sit close to a counter at normal desk height.
2. The desk dimensions enable a member of staff using a wheelchair with desk armrests to sit close to a counter at normal desk height.
4.4 SURFACES

THIS SECTION DEALS WITH THE SURFACE CHARACTERISTICS OF WALLS, FLOORS, CEILINGS, FIXTURES AND FITTINGS. THE PERFORMANCE OBJECTIVES SHALL APPLY TO BOTH INTERNAL AND EXTERNAL USE.

PERFORMANCE OBJECTIVES

The materials forming the surfaces of walls, floors, ceilings, fixtures and fittings shall have surface characteristics that individually and / or in combination facilitate accessibility by providing an environment that is safe, has acoustic clarity and which aids visual orientation. Designers should utilise Light Reflectance Values as a means of creating a legible environment for those with visual impairments by providing contrast between surfaces.

4.3.1 MANDATORY PROVISIONS

The design of the building/public realm surfaces will satisfy the performance objectives if:

1. Floor finishes are suitable for both foot and wheeled traffic and are firm, level and slip resistant.
2. Adjoining surfaces are at the same level and have a similar coefficient of friction. Adjoining surfaces contrast visually where their coefficient of friction differs significantly.
4. Surfaces with a Light Reflectance Value (LRV) higher than 80 are not used.
5. Changes in the texture of floor surfaces are used to warn of hazards or provide directional information.

WALLS

1. Shiny / highly reflective surfaces are not used.
2. The Light Reflectance Value (LRV) of wall is at least 30 points different to the LRV of the floor and ceiling to ensure that people with visual impairment can distinguish between the different surfaces. See figure 27.
3. Optimal visual contrast is provided between walls and doors and walls and switches and fittings.

CEILINGS

1. Where required to achieve an acoustically neutral environment the ceiling material has the appropriate acoustic absorption coefficient.

GLAZED SCREENS AND WALLS

1. Full-height glazing is provided with manifestation as section 7.1 Doors - external and internal.
2. Glass used for screens at reception desks or counters has a low light reflectance value.
3. The edges of free-standing glazed screens are provided with a high contrast edge strip.

4.3.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The materials selected to create an internal or external environment should be considered with respect to their ability to enhance or reduce spatial awareness both visually and aurally.
2. The visual and aural spatial environments are created by the interaction of the selected materials with natural and artificial light and sound. Lighting in particular can influence the way that spaces are understood through the interplay between light and shadow. Confusing shadows, highly reflective surfaces and glare should be minimised to avoid creating environments that are uncomfortable and potentially unsafe.
3. LRV’s should be considered when selecting the colour and finish of materials and products. See figure 1. In some circumstances e.g. lighting levels greater than 200 lux on a surface with a LRV of 20 may be acceptable.
4. For people with hearing impairments the poor selection of or combination of materials can have a significant impact on their ability to communicate effectively and at worst can cause discomfort. A balanced / neutral acoustic environment should be the objective.

5. The use of deep pile or excessively profiled carpets and coir matting should be avoided as they can be difficult for wheelchair users and people with prams or wheeled luggage to travel across.

6. Textured materials can be used to aid wayfinding provided that users have been made aware of their significance in advance.

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Figure 27 / Effectiveness of differing LRVs for adjacent surfaces
4.5 SANITARY FACILITIES

This section deals with the layout, design and provision of sanitary facilities.

Performance Objective

The provision of sanitary facilities shall be appropriate for the size, function, occupancy and use of the building so that all users are able to access conveniently located and appropriately designed sanitary facilities on every building level regardless of gender, age, physical ability and/or mental capacity. The requirements set out below are only applicable where the provision of toilets are required such as in offices, retail premises and other publicly accessible buildings.

4.5.1 Mandatory Provisions

Sanitary accommodation will satisfy the performance objectives if:

General

1. In multi-storey buildings the location of toilets is consistent on each floor.
2. In buildings where there is only space for one toilet it is of a wheelchair accessible unisex type and wide enough to accommodate a standing height wash basin.
3. At each location where sanitary facilities are provided for use by customers, visitors or users at least one wheelchair-accessible unisex toilet is provided.
4. Separate sex toilet accommodation includes at least one WC cubicle for use by ambulant disabled people.
5. Where four or more WC cubicles are provided in separate sex toilet accommodation one enlarged cubicle (for use by people who need extra space in addition to 4.5.1 General (4)) is provided.
6. One wheelchair accessible unisex toilet is provided as close as possible to the entrance and/or waiting area of the building.
7. It is located on accessible routes that are direct and obstruction free.
8. Any wheelchair user does not have to travel: a) more than 40m on the same floor. b) more than a combined horizontal distance of 40m where the unisex toilet accommodation is on the floor or immediately below or above the point of origin.
9. Changing Places toilets are provided in large public buildings in addition to standard accessible WC.
10. Where prayer washing facilities are provided they are accessible to vulnerable users.
11. In residential apartments an accessible WC is provided at the same level as the entrance and drainage provision is made for the retrofitting of a shower.
12. Provision is made for the retrofitting of a hoist or aerial between the principle bedroom and a bathroom, designed or convertible as item (11), in residential apartments.

Wheelchair-accessible unisex toilets

1. The arrangement of fittings and minimum overall dimensions comply with Figure 28. Where it is the only toilet available the internal width is increased to 2000mm.
2. The arrangement and height of fittings comply with Figure 29 and Figure 30 as appropriate.
3. An emergency assistance alarm is provided which is activated by an easily identifiable pull cord reachable from the WC and from the floor close to the WC. The alarm sound should be easily distinguishable from the fire alarm sounder. The pull cord is coloured red, located as close to the wall as possible and has 2 red 50mm diameter bangles.
4. The emergency assistance alarm activates a visual and audible sounder that can be easily seen and heard by people in the vicinity and activates an alarm signal at a staffed area of the building.
5. Visual and audible indicators are provided within the compartment to confirm that the emergency call has been received. Alarm reset controls are provided within the compartment – reachable from the WC or wheelchair.
6. Wheelchair manoeuvring and transfer space is not restricted by the positioning of heat emitters.
7. WC pans conform to BS EN 997:2012 with respect to critical dimensions in order to allow the use of a variable height seat riser. WC cistern flushing mechanisms are located on the open or transfer side of the space, irrespective of handing. WC pan supplier to confirm whether their products are compliant with the BS standard or equivalent.
8. For cleaning purposes a self-closing water spray head connected by a flexible hose is positioned beside the WC in a location that is reachable when seated.

One bangle is set 100mm above finished floor level and the other is set between 800mm and 1000mm above finished floor level.

Figure 28 / Unisex wheelchair-accessible toilet with corner WC
**4.0 Internal Environments**

**Accessibility Code For The Built Environment**

**TOILETS IN SEPARATE-SEX WASHROOMS**

1. The arrangement of fittings and minimum overall dimensions comply with Figure 31.

2. Where provided, a wheelchair-accessible compartment has the same layout and fittings as the unisex toilet.

3. Where provided, enlarged compartments for those who require additional space are 1200mm wide, have a layout based on Diagram 21 and include a horizontal grab bar adjacent to the WC, a vertical grab bar on the rear wall and space for a shelf and fold-down changing table.

4. Any compartment provided for use by ambulant disabled people has a WC pan that will accommodate the use of a variable height seat riser and complies with BS EN 997:2012 with respect to critical dimensions.

5. Doors to compartments for ambulant disabled people are outward opening and fitted with a horizontal closing bar on the inside face as shown on figure 4. Where limited space requires an inward opening door a 450mm diameter manoeuvring space is maintained. A wheelchair accessible washroom contains at least one washbasin with its rim set at 720 to 740mm above the finished floor level.

6. In male washrooms at least one urinal is provided with its rim set at 830mm above finished floor level.

7. For cleaning purposes a self-closing water spray head connected by a flexible hose is positioned beside the WC in a location that is reachable when seated.

WC pan supplier to confirm whether their products are compliant with the BS standard or equivalent.

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**Figure 29** / Heights and arrangement of fittings in a unisex wheelchair-accessible toilet

**Figure 30** / Height of various fittings in toilet accommodation

**Figure 31** / WC cubicle for ambulant disabled people
**WHEELCHAIR-ACCESSIBLE CHANGING AND SHOWER FACILITIES**

For changing and shower facilities:

1. Where more than one individual changing or shower compartment is provided there is a choice of layouts suitable for right-hand and left-hand transfer.
2. Compartments are fitted with wall-mounted drop-down support rails and wall mounted slip-resistant tip-up seats which are not spring loaded.
3. In sports facilities (with separate-sex communal changing facilities) individual self-contained changing and shower facilities are available.

For changing facilities:

4. Where accessible facilities are provided within a communal area they are provided with subdivisions with the same configuration of space and equipment as for self-contained facilities but without doors.
5. Facilities for limb storage are included for the benefit of amputees.
6. A pull cord activated emergency alarm system complying with 4.5.1 Unisex toilets is provided. The pull cord is easily identifiable and reachable from the wall-mounted seat or from the floor.
7. The arrangement of fittings and minimum overall dimensions comply with figure 32.
8. Where shower facilities are provided the changing room floor is level and slip resistant when wet or dry.
9. Manoeuvring space of 1500mm deep is provided in front of lockers.
10. Accessible lockers shall be available between 600mm and 1100mm from the floor.
11. Accessible lockers shall be located where a 1800mm and 1800mm space free of obstacles exists.
12. The arrangement of fittings and minimum overall dimensions comply with figure 32.
13. Where showers are provided for staff at least one wheelchair-accessible shower compartment complying with figure 33 is provided.
14. The shower curtain can be operated from the shower seat.
15. A shelf, reachable from either seat or wheelchair, before or after transfer is provided for toiletries.
16. The floor of the shower room is slip resistant and self-draining.
17. The shower terminal fitting complies with and the markings on the shower controls are logical and clear. Where located in communal areas shower controls are mounted between 750 and 1000mm above the finished floor level.

For shower facilities incorporating a WC:

18. The arrangement of fittings and minimum overall dimensions comply with figure 32.
19. Where more than one shower facility containing a WC is provided there is a choice of layouts suitable for right-hand and left-hand transfer.

**Figure 32 / An example of self-contained changing room for individual use**

**Figure 33 / An example of a self-contained shower room for individual use**
WHEELCHAIR-ACCESSIBLE BATHROOMS

1. The arrangement of fittings and minimum overall dimensions comply with Figures 35 and 34.
2. Where more than one accessible bathroom is provided there is a choice of layouts suitable for right-hand and left-hand transfer.
3. The floor is slip resistant when wet or dry.
4. A transfer seat 400mm deep and equal to the width of the bath is provided.
5. Doors are outward opening and fitted with a horizontal closing bar on the inside face.
6. Apull cord activated emergency alarm system complying with 4.5.1 Unisex toilets is provided. The pull cord is easily identifiable and reachable from the bath or from the floor.
7. For cleaning purposes a self-closing water spray head connected by a flexible hose is positioned beside the WC in a location that is reachable when seated.

SURFACES, DOORS, FIXTURES AND FITTINGS

1. Bath and washbasin taps are either controlled automatically or are capable of being operated using a closed fist, e.g. by lever action.
2. Terminal fittings comply with Dubai code.
3. Door handles and ironmongery comply with the provisions of Sections 7.1 and 7.3.
4. Light action privacy bolts are fitted to:
   a) WC compartment doors
   b) Doors to unisex wheelchair accessible toilets, changing rooms and shower rooms.
5. Doors are not fitted with self-closing devices.
6. Doors are fitted with an emergency release mechanism so that they can be opened from the outside in the event of an emergency.
7. Doors when open do not obstruct emergency escape routes.
8. Lighting controls comply with the provisions of Section 8.2.
9. Heat emitters have a protective screen or have their surface temperature limited to 43°C.
10. There is a visual contrast between compartment surfaces and between compartment surfaces and sanitary wareand fixtures.

CHANGING PLACES TOILETS

General

1. The arrangement of fittings and minimum overall dimensions comply with Figure 32.
2. The facility is actively controlled and managed.
3. Its location is clearly signed and access to it is convenient and direct.

Facilities

1. The WC is positioned so that there is sufficient space for transfer to and from a wheelchair or the ceiling hoist and space for an assistant on both sides.
2. Wall mounted vertical handrails and drop down support rails are provided on both sides of the WC.
3. Fixed handrails are tubular in cross-section (32mm to 35mm diameter), minimum 600mm long and with a wall clearance of 50mm to 60mm.
4. A large height-adjustable (380mm to 1030mm above finished floor level) washbasin with clear knee space below the bowl is provided.
5. Washbasin taps and shower valves are either controlled automatically or are capable of being operated using a closed fist, e.g. by lever action and are thermostatically controlled to deliver water at a temperature not exceeding 43°C.
6. A paper towel dispenser and a hot air dryer and provided close to the washbasin.
7. The WC has a backrest and seat (not gap-fronted).
8. A shelf for colostomy bags is provided in a location where it will not obstruct the use of the handrails but is still within reach of a person using the WC.
9. A ceiling track hoist with a minimum safe working load of 200kg is provided. The changing bench has minimum dimensions of 1800mm long by 500mm wide and has an adjustable height range of 500mm to 1000mm above finished floor level.
10. An adjustable height adult changing bench with a minimum safe working load of 200kg is provided. The changing bench has minimum dimensions of 1800mm long by 800mm wide and has an adjustable height range of 500mm to 1000mm above finished floor level.
11. A wide paper roll dispenser is wall mounted adjacent to the head of the changing bench and within easy reach of an assistant.
12. A wall mounted shower unit with a detachable shower head is provided adjacent to the changing bench. The shower hose is long enough to reach along the full length of the bench. The shower unit has a vertical mounted bar so that the shower can be used in conjunction with a shower chair.
13. For cleaning purposes a self-closing water spray head connected by a flexible hose is positioned beside the WC in a location that is reachable when seated.
14. A privacy screen is provided to the WC area.
15. The floor is slip resistant and self-draining.
16. A pull cord activated emergency alarm system complying with 4.5.1 Unisex toilets is provided. The pull cord is easily identifiable and positioned in the locations shown in Figures 28 – 34.
ACCESSIBLE BABY CHANGING FACILITIES

Accessible baby changing facilities will satisfy the performance objectives if:

1. The arrangement of fittings and minimum overall dimensions comply with the provisions in Figure 35.
2. A fixed height baby changing bench positioned 750mm above finished floor level is provided.
3. The washbasin has a rim height of 720mm to 740mm above finished floor level.
4. Soap dispensers and hand drying facilities are positioned close to the washbasin at heights between 800mm and 1000mm from the underside of the units to the finished floor level.
5. A wall mounted nappy vending machine is provided with controls and dispensing drawer located no more than 1000mm above the finished floor level.
6. A nappy disposal waste bin is provided – preferably recessed into the wall.

4.0 Internal Environments

Figure 35 / An example of a baby changing facility

4.5.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The location and design of toilet accommodation should respond to the needs of all building users. Unisex toilet accommodation should enable a partner or carer of the opposite sex to provide assistance if necessary. Changing places (CP) toilets should accommodate the needs of people with multiple disabilities who may require more space, additional facilities and appropriate assistance. CP toilets should be provided in retail malls, sports, leisure and entertainment venues, large hotels, transport interchanges, healthcare buildings and education establishments.
2. The provision of larger cubicles within separate sex toilet accommodation will benefit ambulant disabled people as well as parents with children and people with luggage.
3. In male toilet accommodation wheelchair users and people of shorter stature should have access to at least one urinal mounted at a lower height – where more than one urinal is provided.
4. The design of toilet accommodation should also take account of the particular safety issues related to vulnerable users e.g. the need for visual fire alarms for people with hearing impairments and the potential for people with reduced tactile sensitivity to burn themselves on hot taps. Likewise doors should be operable by people with limited strength or manual dexterity and be capable of being opened in the event that someone has collapsed against them whilst in the cubicle.
5. The travel distance to reach an accessible toilet should be kept to minimum as some users may need to use the facilities more frequently.

WHEELCHAIR-ACCESSIBLE UNISEX TOILETS

1. A unisex toilet is more readily identifiable than an accessible cubicle in a separate sex toilet and is more likely to be available when required.
2. The layout and positioning of the sanitary ware and associated fixtures is critical with respect to the wheelchair manoeuvring space and the dimensional guidance should be strictly adhered to.
3. Where more than one accessible unisex WC is provided the layout should be handed on alternate floors (or in different locations in large single storey buildings) to provide a choice of right-hand or left-hand transfer. Signage should be provided to indicate left-hand transfer layouts. Where space allows larger compartments should be provided which allow for both right-hand and left-hand transfer.
4. Consideration should be given to the provision of fold down tables within washrooms for baby changing.
5. Standard WC compartments should have adequate manoeuvring space clear of any door swing.

TOILETS IN SEPARATE-SEX WASHROOMS

1. Ambulant disabled people and vulnerable users should be able to use a WC compartment within any separate-sex toilet washroom to avoid unnecessary travel to unisex toilet accommodation.
2. Where space allows enlarged cubicles suitable for use by both ambulant disabled people and people who require additional space e.g. parents with children and people with luggage should be provided.
4.0 Internal Environments

WHEELCHAIR-ACCESSIBLE CHANGING AND SHOWER FACILITIES

1. Vulnerable users should be able to use facilities independently or with the assistance of others where necessary. Whereas some users will be happy to use changing and shower areas that are open but provided with sub-divisions others may require the privacy of an individual self-contained cubicle or compartment providing space for a helper to provide assistance.

2. Where shower and changing facilities are combined they should be divided into distinct ‘wet’ and ‘dry’ areas.

3. Due to the difficulty of providing the configuration of controls, handrails and seating required for all vulnerable users in open changing and shower areas the provision of self-contained accommodation is the preferred option. Note that if the compartment contains a WC it should not be the only wheelchair-accessible WC provided.

4. For individual changing cubicle not associated with showering, e.g. in clothes shops, the recommended dimensions and fittings should be the same as for a self-contained cubicle in a sports building.

5. In large building complexes such as shopping malls and sports centres there should be at least one wheelchair-accessible unisex toilet sized to accommodate an adult changing table.

WHEELCHAIR-ACCESSIBLE BATHROOMS

1. The provisions section applies to bathing facilities where provided in buildings such as hotels and relatives’ accommodation in hospitals and where baths are provided as an alternative or in addition to showers. For guidance on the provision of en-suite bathrooms in hotels see Section 4.6.

2. Wherever possible a choice of bathroom layouts should be provided to meet the varied needs of vulnerable users and to help maintain independence. The spatial arrangement of bathrooms should facilitate independent use and provide space for a helper to provide assistance. The space required for manoeuvring is therefore critical.

SURFACES, DOORS, FIXTURES AND FITTINGS

1. Materials, fixtures and fittings should be robust, easy to use, maintain and replace.

2. The configuration of materials, fixture and fittings should minimise the potential for physical harm.

CHANGING PLACES TOILETS

1. People with complex and multiple disabilities require more space and additional facilities in order to use the toilet comfortably and where required with appropriate assistance. Changing Places (CP) toilets respond to this need and are designed for people who are unable to use standard accessible toilets and where required their provision is in addition to the normal range of accessible sanitary facilities.

2. CP facilities should be provided in retail malls, sports, leisure and entertainment venues, large hotels, transport interchanges, healthcare buildings and education establishments.

3. Where space allows, a CP toilet should be located close to a customer service desk or staffed area so that the facility can be actively controlled and managed. Routes to the CP toilet should be accessible.

4. Signage should be provided identifying the CP toilet and the location of the nearest unisex accessible toilet in order that it is not used by people who are able to use other facilities.

5. Due to the specialist nature of this facility local user groups, organisations and health professional should be consulted for guidance on the most appropriate equipment, fittings and layout.

6. Drop down rails that are height adjustable offer improved safety for users.

7. Hoists should be selected based on their compatibility with the widest range of sling types and guidance should be sought from local user groups. Handset control units should be easy to use and supplemented by auxiliary controls on the motor unit. Hoists should incorporate an emergency lowering and emergency stopping device together with selfstart and soft-stop motor control functions.

8. Hoists should be inspected, serviced and maintained on a regular basis to ensure continued safe and effective use.

9. Changing benches should have a powered height adjustment function and a back rest at one end for comfort. The surface material should be suitable for changing and showering.

10. The design of the facility should enable maximum flexibility with respect to use and users.

Materials, fixtures and fittings should be robust, easy to use, maintain and replace. The compartment structure will be required to accept a hoist installation.

11. Further detailed guidance regarding the design of CP toilets can be found in Changing Places: A Practical Guide and the Changing Places website: www.changing-places.org (Refer to Appendix A for the detailed link).

PRAYER WASHING FACILITIES

1. Prayer washing facilities should be accessible to vulnerable users whether they are provided in a mosque or in association with prayer rooms in other buildings such as offices, education establishments, airports etc.

2. The floor surface in prayer washing facilities should be self-draining and non-slip.

3. Consideration should be given to the provision of seats at different heights or adjustable height seating for the washing positions.

4. Hand dryers and coat hooks should be provided at a range of heights.

5. Footwear storage should be provided at a range of heights.

ACCESSIBLE BABY CHANGING FACILITIES

1. Where provided the facilities should be located separately from single sex sanitary accommodation so that they can be used jointly by male and female parents and carers. Fold-down baby changing tables should not be located in unisex accessible WCs.

4.5.3 DESIRABLE DESIGN FEATURES

1. In residential apartments there is at least one bathroom (located at the same level as the entrance) with toilet and shower/bathing facilities that can readily be retrofitted for use by the elderly and wheelchair users. The layout provides a clear space of 1500mm diameter or a 1700mm x 1400mm ellipse and the walls are reinforced to allow the retrofitting of grab bars between the height of 300mm and 1500mm above finished floor level.
4.6 FACILITIES

THIS SECTION DEALS WITH THE DESIGN AND PROVISION OF AUDIENCE AND SPECTATOR FACILITIES, SLEEPING ACCOMMODATION AND REFRESHMENT FACILITIES.

PERFORMANCE OBJECTIVE

All users shall have equal access to all areas, and the use of, all facilities provided within buildings. Buildings and facilities shall be designed so as to allow all users to participate equally as visitors, spectators, participants and / or staff. Accessible sleeping accommodation shall be provided in hotels, motels and student accommodation.

4.6.1 MANDATORY PROVISIONS

The design and provision of facilities will satisfy the performance objectives if:

AUDIENCE AND SPECTATOR FACILITIES

1. The minimum number of permanent and removable spaces provided for wheelchair users complies with Table 3 and the route to them is accessible by wheelchair users.
2. Stepped access routes to audience seating are provided with fixed handrails complying with Section 3.4 Handrails and guarding.
3. A proportion of the wheelchair spaces (permanent or temporary) are provided in pairs, with standard seating on at least one side.
4. There are good sight lines from all seating positions enabling viewers to see a speaker, a person assisting with sign language, a projection screen, performance or sports event, film or presentation.
5. Seating on a stepped terrace floor complies with the spacings and adjacencies shown in figure 36.
6. A proportion of seats are located so that there is space for an assistance dog to accompany its owner and rest in front of, or under the seat.
7. Standard seats at the end of rows and adjacent to wheelchair spaces have detachable or lift-up arm rests.
8. Where a podium or stage is provided it is accessible to wheelchair users by means of a ramp or lifting platform.
9. A hearing enhancement system is provided in accordance with Section 8.1.

<table>
<thead>
<tr>
<th>SEATING CAPACITY</th>
<th>MINIMUM PROVISION OF SPACES FOR WHEELCHAIRS</th>
<th>TEXT HEIGHT PERMANENT REMOVABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to 600</td>
<td>1% of total seating capacity (rounded up)</td>
<td>Remainder to make a total of 6</td>
</tr>
<tr>
<td>Over 600 but less than 10,000</td>
<td>1% of total seating capacity (rounded up)</td>
<td>Additional provision if desired</td>
</tr>
</tbody>
</table>

Table 3 / Provision of wheelchair space in audience seating
REFRESHMENT FACILITIES

1. A section of the working surface of a serving counter or bar is at a level not more than 850mm above finished floor level.
2. Shared refreshment facilities are accessible. Worktops are set at 850mm above finished floor level and a 700mm deep clear space is provided underneath a section of the worktop. See Figure 37.
3. There is a wheelchair accessible threshold at the transition point between an external seating area and the interior of the facility.

SLEEPING ACCOMMODATION

These requirements apply to all premises that offer the rent of rooms on a commercial basis such as hotels, apartment hotels, hostels etc.

1. At least one wheelchair-accessible bedroom is provided for every 40 bedrooms or part thereof and the choice of location and level of amenity is equivalent to that of other bedrooms.
2. Wheelchair accessible bedrooms are located on accessible routes connecting to all other available facilities within the building and:
   a) The entry door from the corridor complies with the relevant provisions of Section 7.
   b) The effective clear width of internal doors, including those to en-suite bathrooms and shower rooms, complies with Table 4.
   c) Where provided, wide angle viewers are mounted in the entry door at 1050mm and 1500mm above finished floor level.
   d) A level threshold is provided to a door complying with Table 4 where provides access from the room onto a balcony and the door has no horizontal transoms from 900mm to 1200mm above the finished floor level.
   e) There are no permanent obstructions in a zone 1500mm behind any balcony doors.
   f) Space is provided to manoeuvre at the side of the bed and transfer independently onto it. See Figure 3.
   g) The en-suite sanitary facilities comply with the relevant provisions of Section 4.5.
   h) A pull cord emergency assistance alarm complying with Section 8.1 is positioned within the room so that it can be operated both from the bed and the adjacent floor area.
   i) An emergency assistance call signal is located outside the bedroom in a position where it can easily be seen and heard and is linked to a central control point.

Table 4 / Approaches

<table>
<thead>
<tr>
<th>DIRECTION AND WIDTH OF APPROACH</th>
<th>NEW BUILDING</th>
<th>EXISTING BUILDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>straight-on (without a turn or oblique approach)</td>
<td>800mm</td>
<td>750mm</td>
</tr>
<tr>
<td>at right angles to an access route at least 1500mm wide</td>
<td>800mm</td>
<td>750mm</td>
</tr>
<tr>
<td>at right angles to an access route at least 1200mm wide</td>
<td>825mm</td>
<td>775mm</td>
</tr>
<tr>
<td>external doors to buildings used by general public</td>
<td>1000mm</td>
<td>775mm</td>
</tr>
</tbody>
</table>

Note: The effective clear width is the width of the opening measured at right angles to the wall in which the door is situated from the outside of the door stop on the door closing side to any obstruction on the hinge side, whether this be projecting door opening furniture, a weather board, the door or the door stop.

Figure 37 / example of shared refreshment facilities
3. For all bedrooms (see figure 38): 
   a) The effective clear width of the entry door from the corridor complies with Table 4.
   b) Where wardrobes and other storage units are fitted with sing doors they open through 180 degrees.
   c) Handles on hinged and sliding doors contrast visually with the door surface and are easy to grip and operate.
   d) Any openable windows and window controls are easy to grip and operate.
   e) All bedrooms have a visual fire alarm signal in addition to the requirements of Article 29 of the Dubai Building Code and the requirements of the National Fire Protection Association (NFPA) and (UAE) Government Safety Regulations (See Appendix A for the links to these documents).
   f) Room numbers are indicated in embossed characters.

4.6.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The objective is for all users to be able to access and use all facilities within a building. Where provisions are made for vulnerable users they should not be placed at a disadvantage by being placed in secondary locations or having limited choices. Choice of location and quality of view should be equally available to all users even when floor areas are split into different levels. Where sleeping accommodation is provided a proportion should be available for wheelchair users and the remainder should be usable by people who may have sensory, mobility, dexterity or learning difficulties.

AUDIENCE AND SPECTATOR FACILITIES

1. These types of facilities include: 
   a) Entertainment facilities (theatres, cinemas, concert venues).
   b) Stadia (sports facilities and concert venues).
   c) Conference halls and lecture facilities. The guidance provided in this section relates mainly to seating. For guidance on sales and reception counters see Section 4.3. Reception desks and service counters.

2. The use of removable seating provides the greatest flexibility and the opportunity to provide a greater number of spaces for wheelchair users than the minimum requirement. Wheelchair users should not be segregated into special areas and where accompanied by a companion or carer should be able to sit next to them. The greater spacing between rows required for wheelchair access will also provide more legroom for people of larger stature. Seating should contrast visually with the surroundings and seats should be available without armrests or with moveable arm rests that enable transfer from a wheelchair. All users should be able to make their way to and from seating areas and other facilities such as lavatories and bars.

SPORTS FACILITIES

1. For more detailed guidance on integrating the needs of vulnerable users into the design of stadia and other spectator facilities see ‘Accessible Stadia: a good practice guide to the design of facilities to meet the needs of disabled spectators and other users’ in accessible sports facilities.

REFRESHMENT FACILITIES

1. People should be able to access restaurants and bars independently or with companions. Changes in level used to differentiate internal spaces or between internal and external areas are acceptable provide they are accessible to all users. All users should have access to both self-service and waiter service areas where provided.
5.0 VERTICAL CIRCULATION

5.1 PASSenger Lifts & Lifting Platforms

This section deals with the provision, location and design of passenger lifts and lifting platforms.

Performance Objectives

The design and provision of accessible passenger lifts in terms of number, location, size and function shall be appropriate for the size, function, occupancy and use of the building such that all users are able to access all floors. Lifting platforms shall only be used for existing buildings.

5.1.1 Mandatory Provisions

The provision of lifting devices (see figure 39) will satisfy the performance objectives if:

1. All lifts in a building have appropriate provisions for the ambulant disabled and people with sensory impairments.
2. At least one lift in a building, serving all floors, is accessible to wheelchair users.
3. The lift lobby provides an unobstructed manoeuvring space of 1500mm x 1500mm as illustrated in figure 39.
4. The minimum internal accessible lift car dimensions are 1200mm wide x 1400mm deep.
5. The location of lifts is clearly identifiable from the building entrance and the routes to lifts are step free, direct and free from obstructions.
6. Lift call buttons are mounted 900mm to 1100mm above finished floor level and at least 500mm from any return wall.
7. The mounting plate for the lift call buttons contrasts visually with the wall and the buttons contrast visually with the mounting plate. Call button symbols are embossed to facilitate tactile reading and light up when pressed.
8. The lift car doors and the floor area outside the lift contrasts visually with the adjacent walls.
9. Visual and tactile floor level indicators are provided adjacent to the lift call buttons and on the wall opposite the lift doors.
10. Within the lift lobby area it is possible to hear and see visual and audible indication of the lift arrival, direction of travel and the location of the available lift within a bank of lifts.

Figure 39 / lift dimensions
11. Lifts that are designated for emergency evacuation are clearly identified within the lift lobby area.

**LIFT CAR DESIGN AND CONTROLS**

1. The lift car floor finish has a light colour or a high light reflectance value and has a similar or higher frictional value than the lift lobby floor finish.
2. A handrail is mounted on at least one side of the lift car, positioned at 875mm to 925mm above the lift car oor, with a minimum clearance of 55mm to the wall and with ends returning to the wall. Handrails comply with Section 3.4.
3. The slection and design of materials and lighting within the lift car minimise glare, reflections and confusing shadows.
4. The mounting plate for the lift control buttons contrasts visually with the surface on which it is mounted and the buttons contrast visually with the mounting plate. Call button symbols are embossed to facilitate tactile reading and light up when pressed.
5. Where glass is used in the lift car construction it is identifiable by people with impaired vision and incorporates manifestation in accordance with Section 7.1 Doors - external and internal.
6. Where lift cars are 1100mm wide x 1400mm deep and have a door only on one side a mirror is xed on the wall opposite the door with its bottom edge no lower than 900mm above the car oor.
7. Power-operated horizontal sliding doors provide an effective clear opening width of 900mm for lifts 1200mm wide x 1400mm deep and 1100mm for lifts 2000mm wide x 1400mm deep.
8. Doors are fitted with re-opening activators and timing devices to provide adequate time for slow moving users to enter and leave the lift car comfortably and safely. Minimum dwell time is 5 seconds.
9. Control panels are located (horizontally or vertically) on the side wall of the lift car at a height of between 900mm and 1200mm (ideally 1100mm) from the car floor and at least 400mm from any return.
10. In lift cars of 2000mm wide x 1400mm deep and larger, duplicate controls should be provided on both side walls.
11. Visual displays and audible announcements are provided to indicate the floor level reached.
12. The lift car has an emergency communication system which meets the requirements of BS EN 81-28. The system is push button activated and includes a visual acknowledgment that the alarm has sounded. It has a volume control and an inductive coupler. The lift manufacturer to confirm whether their products are compliant with the BS standard or equivalent.

**LIFTING PLATFORMS**

1. The vertical travel distance is no more than 2m where there is no lift way enclosure and no door penetration. A lift way enclosure is provided where vertical travel distance is more than 2m.
2. The rate speed of the platform does not exceed 0.15m/s.
3. The minimum clear dimensions of the platform are (see figures 40 & 41):
   a) 800mm wide x 1250mm deep for enclosed platforms carrying an unaccompanied wheelchair user.
   b) 900mm wide x 1400mm deep for enclosed platforms carrying an unaccompanied wheelchair user.
   c) 1100mm wide x 1400mm deep for enclosed platforms with two doors located at 90 degrees to each other carrying an accompanied wheelchair user.
4. Doors have an effective clear width of 900mm for platform type 3(c) and 800mm in other cases.
5. The doors contrast visually with the surrounding walls.
6. The lifting platform controls are positioned between 800mm and 1100mm from the platform floor and 400mm from any return.
7. The landing call buttons are positioned between 800mm and 1100mm from the finished floor level and 500mm from any return wall.
8. Continuous pressure controls are provided and clear instructions are provided for their use.
9. There is an audible and visual indication of platform arrival and level reached.
10. The lifting platform entrances are accessible from the remainder of the storey.
11. Areas of glass are identifiable by people with impaired vision and incorporate manifestation in accordance with Section 7.1 Doors - external and internal.
12. The design and manufacturer is approved by a noticed body.
13. Weather protection is provided for external platform lifts.
14. Gates and doors to lifts open outwards, are self-closing and are interlinked to the platform lift mechanism to prevent them opening until the platform is aligned with the corresponding landing floor.
15. Non-enclosed and partially enclosed platform lifts comply with BS 6440:2011. The lift manufacturer to confirm whether their products are compliant with the BS standard or equivalent.
16. Enclosed platform lifts comply with BS EN 81-41:2010. The lift manufacturer to confirm whether their products are compliant with the BS standard or equivalent.
5.1.2 MANDATORY DESIGN OBJECTIVES

GENERAL
1. The provision of passenger lifts serving all floor levels is the most effective way of providing comprehensive access to all areas, services and facilities within a building.
2. The minimum lift car size should be exceeded wherever space allows. A lift car with internal dimensions of 2000mm wide by 1400mm deep will accommodate most wheelchair types and provide space to turn around. If appropriate for the building layout the use of lift cars with doors on opposite sides of the lift will make entry and exit easier for wheelchair users where the lift car is the minimum size.
3. Lifts that are designated for emergency evacuation should be located within a fire-protected shaft and be provided with an independent power supply.
4. For existing buildings and in exceptional circumstances for new developments, where a passenger lift cannot be accommodated a vertical lifting platform (platform lift) may be considered as an alternative.
5. In exceptional circumstances in an existing building a wheelchair platform stair lift could be considered provided that it would not conflict with means of escape requirements.
6. The design of the lift lobby area should provide a calm environment free from any glare and acoustically neutral.
7. Where different lifts are programmed to serve certain floors either during standard or peak periods, at least one lift designated for wheelchair users should be programmed to serve all floors.

LIFT CAR DESIGN AND CONTROLS
1. All users should be given adequate time to enter and leave a lift car without coming into contact with closing doors.
2. Lift car controls should meet the requirements of BS EN 81-70. The provision of extra large controls as detailed in Annex G of BS EN 81-70 should be considered. Call buttons should provide visual and audible feedback when pressed. The lift manufacturer to confirm whether their products are compliant with the BS standard or equivalent.
3. Being trapped in a lift can be very stressful and therefore the emergency communication system should provide the means for clear two way communication between the occupants and a 24 hour staffed area or emergency service provider.
4. Consideration should be given to the provision of additional communication facilities at floor level accessible to someone who has fallen.

LIFTING PLATFORMS
1. Due to their limited capacity and low speed lifting platforms are not a substitute for a standard lift and should only be considered where they are the only means of improving the accessibility of an existing building.
2. A lifting platform should only be provided to facilitate the movement between levels or storeys of people with impaired mobility and their companions. Lifting platforms travel slowly and may not be suitable for lone users.
3. Access to the platform lift should be clear and unobstructed. The platform lift should be located adjacent to the stair with which it is associated.
4. Platform controls should meet the needs of users with varying degrees of dexterity.
5. Where lifting platforms are to be located in an unsupervised environment particular care should be paid to the product’s designed duty cycle.
6. Where planning allows, lifting platforms should be provided with opposing doors, when used for access between no more than two levels, to allow a wheelchair user to leave without reversing. Where doors are positioned 90 degrees to each other a larger platform should be provided.
7. The use of visually and acoustically reflective materials should be minimised within the lifting platform.

WHEELCHAIR PLATFORM STAIR LIFTS
1. The installation of a wheelchair platform lift should only be considered for conversions and alterations where it is not possible to install a conventional passenger lift or a lifting platform. They are intended for use only by wheelchair users seated in their wheelchair. They should not be installed if their operation would restrict the safety use of the stair by other people.
2. Platform controls should meet the needs of users with varying degrees of dexterity.
3. Wheelchair platform stair lifts should not be used unless management supervision can be ensured and appropriate instructions given to users.

5.2 INTERNAL RAMPS, STEPS, STAIRS AND HANDRAILS

RAMPs
1. Are only provided where changes in level within existing buildings is unavoidable or are required to accommodate a level change between an existing building and an extension.
2. Where provided they comply with Section 3.2 excepting any requirements that relate specifically to the external environment.

STEPS AND STAIRS
1. They comply with Section 3.3 excepting any requirements that relate specifically to the external environment.

PERFORMANCE OBJECTIVES
A ramped access shall be designed, constructed and installed so that it provides safe unobstructed access for all users moving between different levels. Steps and stairs should be designed to ensure the safety and comfort of all users (see figure 42). Handrails shall be provided in locations where users require support (physical and visual) to negotiate changes in level via ramps, steps or stairs. Handrails shall be positioned at heights that are appropriate for the user and shall have profiles that are easy to grip and comfortable to use. Balustrades or guarding shall be provided in all locations where falling from ramps, steps or stairs is a hazard and shall be sufficiently robust to withstand both static and dynamic loads.

5.2.1 MANDATORY PROVISIONS
The design and provision of the internal ramps, steps, stairs and handrails will satisfy the performance objectives if:

d) The minimum headroom above the stair pitch line is 2000mm.

HANDRAILS
1. They comply with Section 3.4 excepting any requirements that relate specifically to the external environment.

5.2.2 MANDATORY DESIGN OBJECTIVES

GENERAL

SEE SECTIONS:
• 3.2 External ramps
• 3.3 External steps
• 3.4 Handrails and guarding

Figure 42 / Stair positioning in relation to a principal circulation route
6.0 HORIZONTAL CIRCULATION

6.1 HORIZONTAL CIRCULATION

THIS SECTION DEALS WITH THE DESIGN OF HORIZONTAL CIRCULATION.

PERFORMANCE OBJECTIVES

Horizontal circulation shall be designed so that it provides logically arranged, well lit, safe and easy to negotiate routes, suitable for the patterns of use within a building, which allow all users to access services and facilities provided therein and exit the building in the event of an emergency.

6.1.1 MANDATORY PROVISIONS

The design of horizontal circulation will satisfy the performance objectives if:

CORRIDORS AND PASSAGEWAYS

1. Corridors and passageways have an unobstructed minimum width of 1800mm (excluding any projections into the space) along their length.
2. Within residential apartments the minimum corridor width relates to the clear width of door openings in accordance with Table 5.
3. In existing buildings where the unobstructed width of the corridor or passageway is greater than 1200mm but less than 1800mm passing places at least 1800mm long and with a width of at least 1800mm are provided at regular intervals along their length. See Figure 43.
4. Elements such as columns, radiators and fire hoses are recessed or protected by a guardrail and are easy to identify.
5. Internal circulation routes within new buildings are level.
6. Internal circulation routes within existing buildings with a gradient between 1:20 and 1:60 have a level rest area at least 1500mm long for every 500mm change in level and have a clearly differentiated surface.
7. Internal circulation routes within existing buildings with a gradient steeper than 1:20 are designed as an internal ramp in accordance with Section 5.2 and steps are provided in addition where the level change is greater than 300mm.
8. If guarding is provided where a corridor is divided along its length between a level and a sloping section.
9. Where leaf-and-a-half doors are provided the wider leaf is located on the same side over the length of the corridor.
10. Outward opening doors are recessed so that when fully open they do not project into the circulation route.
11. Circulation routes in open plan areas comply with items 1 to 10.
12. Surfaces, finishes and lighting comply with Section 4.4 Surfaces and Section 8.3 - Internal Lighting.
6.1.2 MANDATORY DESIGN OBJECTIVES

GENERAL

- Corridors and passageways should be designed to provide adequate passing and turning space for all users including people with luggage or buggies, on crutches or in wheelchairs. Reductions in corridor widths from that shown in Figure 43 may be acceptable in existing buildings.
- The selection of materials and finishes should assist spatial orientation and provide an acoustically neutral environment which will be of benefit to those people with a visual and / or hearing impairment.
- The design and layout of corridors and passageways should be logical and in multi-storey buildings the primary routes should ideally be the same on each level, particularly with respect to fire escape routes.

<table>
<thead>
<tr>
<th>WIDTH OF DOORWAY</th>
<th>MINIMUM CORRIDOR WIDTH PERPENDICULAR TO THE DOORWAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>900mm</td>
<td>1000mm</td>
</tr>
<tr>
<td>850mm</td>
<td>1100mm</td>
</tr>
<tr>
<td>800mm</td>
<td>1200mm</td>
</tr>
</tbody>
</table>

Table 5 / Minimum corridor width
7.0 ELEMENTS

7.1 DOORS - EXTERNAL AND INTERNAL

7.1.1 MANDATORY PROVISIONS

The location and design of external and internal door, doorsets and doorways will satisfy the performance objectives if:

EXTERNAL DOORS

1. Where required to be self-closing a power operated door is installed unless a manually operated door can be opened using a force of not more than 30N at the leading edge from 0° (the door in the closed position) to 30° open, and not more than 22.5N at the leading edge from 30° to 60° of the opening cycle.

2. The effective clear width provided through a single leaf door, or one leaf of a double leaf door complies with Table 6 when measured in accordance with Figure 44.

3. Doors are constructed in accordance with all of the following:
   a) Door leaves and side panels wider than 450mm incorporate vision panels towards the leading edge of the door to provide, as a minimum, the zone or zones of visibility shown in Figure 45.
7.0 Elements

**DIRECTION AND WIDTH OF APPROACH**

<table>
<thead>
<tr>
<th></th>
<th>NEW BUILDING</th>
<th>EXISTING BUILDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>straight-on (without a turn or oblique approach)</td>
<td>800mm</td>
<td>750mm</td>
</tr>
<tr>
<td>at right angles to an access route at least 1500mm wide</td>
<td>800mm</td>
<td>750mm</td>
</tr>
<tr>
<td>at right angles to an access route at least 1200mm wide</td>
<td>825mm</td>
<td>775mm</td>
</tr>
<tr>
<td>external doors to buildings used by general public</td>
<td>1000mm</td>
<td>775mm</td>
</tr>
</tbody>
</table>

Note: The effective clear width is the width of the opening measured at right angles to the wall in which the door is situated from the outside of the door stop on the door closing side to any obstruction on the hinge side, whether this be projecting door opening furniture, a weather board, the door or the door stop.

Table 6 / Minimum effective clear widths of doors

- a) There is an unobstructed space of at least 300mm on the pull side of the door and any return wall.
- b) Where fitted with a latch the door ironmongery can be operated with one hand using a closed fist e.g. a lever handle.
- c) All door ironmongery contrasts visually with the surface of the door and is not cold to the touch.
- d) The ability for manual or automatic opening in the event of power failure.
- e) They incorporate a safety stop that is activated if the doors begin to close when a person is passing through.
- f) Manual controls which contrast visually with their background are located between 750mm and 1000mm above finished floor level and are operable with a closed fist. Controls are set back 1400mm from the leading edge of the door when fully open if positioned on the opening side of a door.

**INTERNAL DOORS**

1. The door can be opened using a force of not more than 30N at the leading edge from 0° (the door in the closed position) to 30° open, and not more than 22.5N at the leading edge from 30° to 60° of the opening cycle.
2. The effective clear width provided through a single leaf door, or one leaf of a double leaf door complies with Table 6 when measured in accordance with Figure 44.
3. Where fitted with a latch the door ironmongery can be operated with one hand using a closed fist e.g. a lever handle.
4. All door ironmongery contrasts visually with the surface of the door.
5. The door frames contrast visually with the surrounding wall.
6. For doors that are not self-closing or are likely to be held open the surface of the leading edge contrast visually with the other door surfaces and its surroundings.
7. Door leaves and side panels wider than 450mm incorporate vision panels towards the leading edge of the door to provide, as a minimum, the zone or zones of visibility shown in Figure 45.
8. When made of glass they are clearly defined with manifestation on the glass that complies with figure 46 & 47.
9. When of glass or fully glazed they are fully differentiated from any adjacent glazed wall or partition by the provision of a high-contrast strip at the top and on both sides.
10. Fire doors, particularly on circulation routes, are held open with an electro-magnetic device, but self-close when:
   - a) Activated by smoke detectors or other fire alarm sensor, individually or as part of a building fire / smoke alarm system.
   - b) When the power supply fails.
   - c) Activated by a hand-operated switch e.g. fire alarm break glass call point.
11. Fire doors, particularly to individual rooms, are fitted with swing-free devices that close when activated by smoke detectors or the building’s fire alarm system or when the power fails.
12. Any low energy powered swing door system is capable of being operated in manual mode, in powered mode or in powered-assisted mode.
7.0 Elements | Accessibility Code For The Built Environment

**GLASS DOOR AND GLAZED SCREENS**

1. Transparent glazing, forming glazed screens and glass doors, with which people are likely to come into contact while moving in or around a building incorporates features that make it apparent to all users.

2. Methods used to make glazing apparent adopt one of the following:
   a) Incorporate permanent manifestation.
   b) Incorporate mullions, transoms, door framing or large pull or push handles.

3. Provide glass doors and glazed screens (including glazed screens alongside a corridor) with all of the following:
   a) Manifestation at two levels, as shown in Figure 47.
   b) Manifestation that, when seen from both inside and outside in all lighting conditions, contrasts visually with its background.
   c) Manifestation in the form of a logo or sign, a minimum of 150mm high (repeated if on a glazed screen), or a decorative feature of 50mm minimum height e.g. broken lines or continuous bands (see figure 46).
   d) Where glazed doors are beside or part of a glazed screen, they are clearly marked with a high contrast strip at the top and on both sides.
   e) Where glass doors may be held open they are protected with guarding to prevent people colliding with the leading edge.

4. Sufficient manoeuvring space should be provided for wheelchair users to operate manually opened doors. Door ironmongery should be operable by people with limited manual dexterity.

5. Where glass screens or glazed walls and doors are used all users should be made aware of the location of glass by the use of manifestation and / or design features.

**7.1.2 MANDATORY DESIGN OBJECTIVES**

**GENERAL**

1. Doors to the principal and alternative accessible entrances should be accessible to all. The design should respond to the needs of vulnerable users. Entrance doors should be capable of being held closed when not in use but this may cause problems for some users unless the maximum opening force is limited. Powered doors (manually controlled or automatically operated by sensors) should therefore be provided as the preferred solution. Automatic sliding door arrangements are safer than swing doors and make it possible to reduce the length of any entrance lobby.

2. Once open, all doors to accessible entrances should provide sufficient clear opening width to allow unrestricted passage for all users. People should be able to see other people approaching from the opposite direction allowing sufficient reaction time to avoid collision. Exceptions may be considered for privacy or security reasons subject to demonstration of alternative safety provisions.

3. Sufficient manoeuvring space should be provided for wheelchair users to operate manually opened doors. Door ironmongery should be operable by people with limited manual dexterity.

4. The presence of doors should be readily apparent whether open or closed. There should be a visual contrast that will allow people with a visual impairment to identify a door opening within a wall as well as the leading edge of the door.

5. Where glass screens or glazed walls and doors are used all users should be made aware of the location of glass by the use of manifestation and / or design features.

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**Figure 46 / Markings on glazed surfaces**

**Decorative logo 150 mm minimum height**

**Decorative feature such as repeated dots or broken lines at least 50 mm high.**

**Figure 47 / glazing clearly defined with manifestation at two levels**

**1400-1600 mm above floor level**

**850-1000 mm above floor level**

**Glazing clearly defined with manifestation at two levels.**
7.2 DOORS - ACCESS CONTROL SYSTEMS

This section deals with access control systems linked to either powered or manually operated internal and external doors.

Performance Objective

Access control systems and/or barrier systems shall be designed and positioned so that the control functions and operation of the system/barrier shall not act as an additional impediment to any user gaining authorised access to a building (see Figure 48).

7.2.1 MANDATORY PROVISIONS

The design of the access control system will satisfy the performance objectives if:

1. There is a clear level approach free from obstructions to door entry controls and adequate space is provided for wheelchair manoeuvring.
2. Entry system controls are positioned within 200mm of the door opening, adjacent to the leading edge of the door and at a height of between 900mm and 1100mm above finished floor level.
3. All entry system controls contrast visually with the surface they are mounted on and the area they are located in is well lit.
4. Door entryphones provide both audible and visual communication and a visual display capable of duplicating audible information.
5. There is a visual and audible confirmation that a call has been received and the door lock has been released.
6. The design of the entryphone makes it easy to understand and operate independently by a wide variety of users.
7. At least one hinged gate, of minimum width 900mm, is provided in conjunction with any installation of turnstiles or ticket-control barriers.
8. Cameras and visual displays forming part of a control system are duplicated where necessary to make them accessible from both a seated and a standing position.
9. Swipe card readers are positioned vertically at a height of between 950mm and 1000mm above finished floor level.

7.2.2 MANDATORY DESIGN OBJECTIVES

General

1. Access control systems are designed to restrict access to authorised users. Designers should recognise that the appropriate design and location of controls is critical for vulnerable users.

The accessibility of control systems should be considered with respect to:

1. Physical location – can they be reached and can they easily be identified?
2. Usability – e.g. are they suitable for users with limited manual dexterity, with hearing or visual impairments?
3. Barriers – can someone in a wheelchair, with luggage or a buggy safely and easily negotiate the security barrier?
4. Access control systems can be beneficial when they are linked to power operated doors.

Figure 48 / Door access height
7.3 DOORS - OPENING AND CLOSING SYSTEMS

This section deals with the design, selection and operation of door furniture and fittings including mechanical and electrically powered opening and closing devices.

Performance Objective

Door furniture and fittings (manual or electrically powered) shall be appropriate to the door characteristics, location and function such that their operability does not present an immediate barrier to users.

7.3.1 MANDATORY PROVISIONS

The design of opening and closing systems will satisfy the performance objectives if:

**Door Furniture**

1. Manually operated doors with latches are fitted with lever handles, as shown in Figure 49, which can be operated with one hand or a closed fist.

**Self-closing and Hold-open Devices**

1. Self-closing devices are appropriate for the size and weight of the door, its location and the resistance of its component parts and fittings.
2. High-efficiency self-closing devices are used and their point of maximum closing force is located between zero and fifteen degrees.
3. The force required to open a door fitted with a self-closing device is no greater than 30N from the closed position up to 30° of opening and no greater than 22.5N from 30 to 60° of opening.
4. Any self-closing devices are site adjustable and are subject to a regular maintenance regime.
5. The effective clear opening width of the door is not reduced by any backcheck facility where fitted.
6. The use of self-closing devices is limited to where there is a mandatory requirement for their installation unless it can be demonstrated that there is a benefit to users and their use does not impose an unnecessary impediment on accessibility.
7. Where in buildings, with fully automatic fire detection and alarm systems, hold-open devices are used to improve the accessibility of circulation routes.

**Power-operated Doors**

1. A direct, clear and level approach is provided to power operated doors.
2. Power operated doors are not located at the top or bottom of ramps or sloping floors and power operated swing doors do not open across any adjacent access route.
3. The sensors on an automatically activated powered door ensure that the door's are fully open before an approaching person is closer than 1400mm to the door opening.
4. Automatic doors allow sufficient time for safe entry and exit.
5. Where manual controls are provided for powered doors they are mounted between 750mm and 1000mm above finished floor level.
6. All power operated doors are provided with presence and motion sensor detectors for safety.
7. All power operated doors can be manually operated in the event of power failure.
8. Keypads are large, easy to operate and be provided with tactile identification.

**General**

1. The accessibility of an appropriately designed door depends to a great extent on the selection of door furniture, fittings and equipment. It is important therefore that the design of a door as an element is not considered in isolation and vice versa the furniture, fittings and equipment.
2. Hinges should be selected to suit the mass of the door and potential additional loading such as from a person using the door as a temporary support. Low friction hinges should you be used to minimise opening and closing forces.
3. Pivot hinges should be considered where there is a need to be able to open a door in the reverse direction in the event of an emergency.
4. Consideration should be given to the use of modified strike plates with a gravity cam which will enable a door to fully close with less force.
5. Door fittings should be regularly maintained to ensure that the resistance to opening does not increase from that originally designed.
6. The overuse of self-closing devices can present an unwelcome barrier to all building users. A poorly specified and / or poorly adjusted self-closing device can make a door a barrier to even fit adults.
7. Where fire regulations require the extensive use of self-closing devices along circulation routes consideration should be given to the use of hold-open devices linked to a fully automatic fire detection and alarm system. However, accessibility should also be considered in an emergency situation when the doors have been automatically closed.
8. Swing-free hold-open devices are suitable for inward opening room doors but not on circulation routes.
9. Power operated opening and closing doors should be a first choice with respect to main entrance doors as they provide ease of access to all users whilst maintaining internal and external environmental separation.
10. Access needs to be controlled for security reasons the use of proximity readers provides a user friendly solution for building staff but may have to be supplemented by additional access systems to accommodate visitors.
11. In situations where passing pedestrians may inadvertently activate sensor activated doors on a continuous basis the use of manually operated automatic doors should be considered. The needs of all building users and any security requirements should be considered when selecting controls for manually activated doors.
7.0 Elements

Accessibility Code For The Built Environment

### 7.4 SEATING

**THIS SECTION DEALS WITH THE PROVISION, LAYOUT AND DESIGN OF INTERNAL AND EXTERNAL SEATING.**

#### 7.4.1 MANDATORY PROVISIONS

The design and layout of seating will satisfy the performance objectives if:

1. Seats are provided at intervals along internal and external routes and where waiting is likely.
2. Seating is located on level ground or floor surface, set back a minimum of 500mm from pedestrian routes (so as to maintain required circulation width) and provided with a direct and unobstructed approach.
3. A clear space of 1500mm x 1500mm is provided at the side of fixed seating. See figure 1.
4. Where rows of fixed seating are provided adequate space is provided for vulnerable users in accordance with Figure 51.
5. Seating contrasts visually with the surrounding surfaces.
6. A range of seating types, sizes and heights is provided to suite the function of the space and / or building and the needs of a wide variety of users.
7. Seats are not mounted on a plinth.
8. Seating in external areas is provided at a range of heights from 380mm to 580mm.

**PERFORMANCE OBJECTIVE**

Adequate and appropriately designed forms of seating (to suite the function of the spaces in which they are located and the needs of the users) shall be provided for amenity purposes and to provide places to rest.

- Seats are provided at intervals along internal and external routes and where waiting is likely.
- Seating is located on level ground or floor surface, set back a minimum of 500mm from pedestrian routes (so as to maintain required circulation width) and provided with a direct and unobstructed approach.
- A clear space of 1500mm x 1500mm is provided at the side of fixed seating. See figure 1.
- Where rows of fixed seating are provided adequate space is provided for vulnerable users in accordance with Figure 51.
- Seating contrasts visually with the surrounding surfaces.
- A range of seating types, sizes and heights is provided to suite the function of the space and / or building and the needs of a wide variety of users.
- Seats are not mounted on a plinth.
- Seating in external areas is provided at a range of heights from 380mm to 580mm.
7.4.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Seating is provided in a wide variety of locations and serves a wide variety of functions e.g. work, rest and leisure. The layout of seating can be highly structured such as in concert halls and waiting rooms or less structured such as seating in parks or on circulation routes.

2. The usability of seating depends on both the seat design and its accessibility to a wide variety of users. Lack of adequate circulation/manoeuvring space can make seating unusable. Unless there are specific functional requirements the provision of a mixture of fixed and loose seating can provide greater flexibility in space use.

3. Seats with armrests should be provided to assist people who have difficulty lowering or raising themselves into or out of a seat. A proportion of fixed seating should be provided at the end of rows, with no aisle side armrest, so as to allow transfer from a wheelchair.

4. Consideration should be given to the provision of a proportion of seating suitable for those of large stature.

7.5 WAYFINDING, INFORMATION & SIGNS

THIS SECTION DEALS WITH THE LAYOUT OF BUILDINGS WITH RESPECT TO THE PROVISION OF SIGNAGE FOR THE PURPOSE OF CONVEYING INFORMATION THAT ASSISTS WAYFINDING AND THE IDENTIFICATION OF SERVICES AND FACILITIES.

PERFORMANCE OBJECTIVE

All buildings and external spaces shall be easily and independently understandable and usable by all users. Visual, tactile and audible information shall be provided (as appropriate to the location, function and use of the space) conveying information to all users about the function and layout of internal and external spaces. All signage and information systems shall comply with relevant British Standards.

7.5.1 MANDATORY PROVISIONS

The building layout and signage provision will satisfy the performance objectives if:

GENERAL

1. Building layouts and external spaces are arranged in a logical manner which assists independent wayfinding.

2. In multi-storey buildings the key facilities such as toilets and reception areas are positioned in similar locations on each floor level.

3. Information and directional signs are provided within and to identify, as a minimum, the following areas:
   a) Routes to and from the building from the edge of the site.
   b) Car parking
   c) Entrance foyers and reception areas
   d) Lift landings and junctions in circulation routes
   e) Toilets
   f) Waiting areas and help desks
   g) Refreshment facilities
   h) Emergency exits and accessible routes and additional signage is provided as required (as part of a comprehensive signage strategy) to assist independent wayfinding.

4. Lettering, symbols and pictograms contrast visually with the signboard and the signboard contrasts visually with its background.

5. Internationally recognized public information symbols are provided to identify relevant facilities.

6. Signage complies with BS 8300:2009+A1:2010. The signage manufacturer to confirm whether their products are compliant with this BS standard or equivalent.

7. Public address systems are clearly audible and supplemented by visual information where practicable.

8. Hearing enhancement systems (complying with BS 8300:2009+A1:2010), using induction loops, infrared or radio transmission are provided, as a minimum, in the following areas:
   a) Classrooms, meeting rooms and lecture theatres.
   b) Sports and leisure venues including theatres and cinemas.
   c) Service and reception counters.
   d) Mosques
   e) and additional areas as required to ensure that users with hearing impairments are not disadvantaged.

The hearing enhancement system manufacturer to confirm whether their products are compliant with this BS standard or equivalent.

<table>
<thead>
<tr>
<th>VIEWING RANGE</th>
<th>EXAMPLE</th>
<th>TEXT HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short range</td>
<td>Room name signs, viewed at close range</td>
<td>15mm to 25mm</td>
</tr>
<tr>
<td></td>
<td>Directional signs</td>
<td>50mm to 100mm</td>
</tr>
<tr>
<td>Long range</td>
<td>Building name signs, viewed from a distance</td>
<td>75mm</td>
</tr>
</tbody>
</table>

Note: The text height refers to the lower case letter height.

Table 7 / Text heights and viewing distances for signs
7.5.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. A logical building layout is the simplest aid to wayfinding and views into and out of spaces should provide useful visual clues as to location and direction of travel. Changes in the types of materials should provide tactile, visual and auditory differentiation of spaces.

2. Signage should be provided to clearly identify the location of facilities on each floor of a building and the routes thereto particularly at junctions of circulation routes (see figure 52).

3. For some complex buildings and external areas more detailed information should be provided in a variety of formats to assist all users to independently orientate themselves and identify routes to facilities and services. The following are some examples of information provision:
   a) Plans and maps including tactile information
   b) Models
   c) Assistive technology including interactive displays, audible information and electronic navigation systems.

4. A wayfinding strategy should be developed for all external areas and building types taking into account the needs of all users and the size and complexity of the building / external area layout. Signage should form part of an integrated communication strategy that provides information about the use of a building as well as directional information.

5. In larger public buildings such as shopping malls, sports and leisure venues and transport interchanges where public address systems are commonly used there should be identified areas where announcements can be transmitted through a hearing enhancement system. See Section 8.1 Communications systems and Assistive Technology.

6. The use of the latest innovations in technology should be considered in order to provide the best user experience e.g. GPS systems on smart phones providing mapping information and information about the location of facilities and services.
8.0 SERVICES

8.1 COMMUNICATION SYSTEMS & ASSISTIVE TECHNOLOGY

THIS SECTION DEALS WITH THE PROVISION AND DESIGN OF COMMUNICATION SYSTEMS, ASSISTIVE TECHNOLOGY AND THE ACOUSTIC ENVIRONMENT IN WHICH THEY ARE LOCATED.

PERFORMANCE OBJECTIVE

The built acoustic environment shall enable clarity of audible communication between users and facilitate the use of a wide range of communication equipment enabling all users to gain information, interact with others and make full use of services provided. Assistive technology shall be provided to increase, maintain, or improve the functional capabilities of vulnerable users wherever practicable.

8.1.1 MANDATORY PROVISIONS

Communication systems, assistive technology and acoustics will satisfy the performance objectives if:

GENERAL

1. Cables and equipment generating magnetic fields likely to interfere with hearing aids are screened or located away from public areas.
2. Air conditioning equipment and any plant or equipment generating noise are located in positions where they will not cause a disturbance.
3. Assistive technology is provided wherever practicable.

ACOUSTICS

1. The installed combination of materials used for ceiling, wall and floor finishes provides an acoustic environment that enables audible information to be heard clearly and assists people with sight impairments understand a space and orientate themselves.
2. Separation is provided between quiet and noisy areas of a building and areas where communication is important e.g. reception desks are positioned away from potential noise sources.
3. Intrusive noise from outside the building or from adjacent internal areas is minimised by the use of insulation within the construction elements.

PUBLIC ADDRESS SYSTEMS

1. In large spaces a series of speakers positioned at designed intervals provide a sound volume that is appropriate to the particular environment and circumstances in which it is heard.
2. Public address systems for performances and announcements are linked to one or a combination of the following systems:
   a) Induction loops.
   b) Infrared or radio
   c) Soundfield
   d) Visual display systems
3. The number and type of systems installed is appropriate to the needs of a wide range of users.

HEARING ENHANCEMENT SYSTEMS

1. Are provided in rooms / spaces used for the following purposes:
   a) Performance venues
   b) Film theatres.
   c) Meeting and Lecture rooms
   d) Teaching
   e) Reception and enquiries
   f) Payment and service counters
   g) Any additional areas where there is a demonstrable need to provide support for vulnerable users.
2. The number and type of systems installed is appropriate to the needs of a wide range of users.
3. Signage is provided (in accordance with Section 7.5 Wayfinding information and signs) on the approach to and within rooms fitted with hearing enhancement systems.

4. Line input sockets are provided in accessible location in rooms or spaces used for presentations.

5. Monitoring equipment installed to enable the detection of microphone defects at an early stage.

TELEPHONES FOR PUBLIC USE

1. Where payphones are provided they are accessible to wheelchair users.

2. Keypads and other controls are positioned 750mm to 1000mm above finished floor level.

3. Are positioned so that they can be approached from the front and both sides and are located in a clear floor area of at least 1200mm wide x 1850mm deep. Where approach is not possible on three sides a knee recess 500mm deep and 700mm high is provided.

4. Keypad buttons incorporate large embossed numbers and have a raised dot on the number five.

5. The telephone includes volume control and an ear piece inductive coupler.

6. Fixed support rails are provided where seating is provided.

7. A shelf is provided adjacent to the phone to enable users to use their own portable text phones.

8. The location of accessible phones is highlighted with tactile signage in accordance with Section 7.5 Wayfinding, information and signs.

FIRE AND EMERGENCY ALARM SYSTEMS

1. A fire alarm notification is visible as well as audible to all users.

2. Additional notification systems are provided in isolated areas e.g. toilets and in noisy environments to alert people who have hearing impairments.

3. Visual and audible feedback is provided to indicate that an alarm call has been acknowledged and is being actioned.

4. There is no visual or audible confusion between a fire alarm and an emergency alarm.

8.0 Services  Accessibility Code For The Built Environment

8.1.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. The comfortable use of a building should not be compromised by the poor design and/or location of MEP services. The impact of services should be considered with respect to both airborne and impact noise and electromagnetic interference.

2. Communication systems should be designed and built to take into account the size and use of the relevant spaces and the needs of potential users.

3. The acoustic properties of a public building are determined by the layout, spatial volumes and selection of materials all of which impact on the clarity and effectiveness of audible communications. The starting point should therefore be to provide an acoustic environment that does not have a detrimental effect on peoples’ ability to communicate and is beneficial to the visually impaired in terms of providing acoustic clues that aid understanding of a space.

4. The provision of communication systems should therefore be primarily to provide people with information and/or additional functionality rather than dealing with problems associated with a poorly designed acoustic environment.

5. The telephone includes volume level.

PUBLIC ADDRESS SYSTEMS

1. Poorly designed public address systems can render the information being provided unintelligible and/or uncomfortable. This is usually a result of incompatibility between the acoustic environment and the sound system with respect to the positioning of speakers and the volume level.

2. The design and installation of a public address system should be appropriate to the particular environment and circumstances in which it is heard.

ASSISTIVE TECHNOLOGY

1. “Assistive technology is any product or service that maintains or improves the ability of individuals with disabilities or impairments to communicate, learn and live independent, fulfilling and productive lives.” British Assistive Technology Association. It can also be useful to a wide variety of users who do not have impairments.

HEARING ENHANCEMENT SYSTEMS

1. Hearing enhancement systems provide a direct link between sound amplification systems and personal hearing aid devices without interference from background noise or excessive reverberation.

2. Such systems are particularly useful where the level of background noise is high or where glazed screens are installed for security purposes.

3. Due to the wide range of systems, their limitations and benefits, specialist advice should be obtained at an early stage of the design process in order to identify the most appropriate system for each location. It is possible that a combination of systems may be required in order to meet a range of user needs.

4. Commonly used systems include

a) Induction loops – can be either permanent or portable. Typically used at enquiry desks and service counters but can also be used in meeting rooms and auditorium.

b) Infrared systems – can operate through headsets or be linked to personal hearing aid devices. Ideal for use in controlled environments such as cinemas and lecture theatres and here confidentiality is important as the signal cannot be picked up outside of the source room.

c) Radio systems – useful in situations where portability is important e.g. guided tours but can also be used in an education environment where children move between classrooms and carry the equipment with them. The use of different channels can prevent overspill issues but there is still the potential for electromagnetic interference and disturbance from other radio channels.

d) Soundfield systems – are beneficial to a wide range of users by providing a consistent sound level around a room regardless of distance from the source. These systems should be linked to an induction loop, infrared or radio hearing enhancement system, where provided.

TELEPHONES FOR PUBLIC USE

1. Although the increased use of personal mobile phones has resulted in a reduction of the number of public phones there is provision is still important particular for visitors to the country who may not have a local mobile phone and wish to avoid roaming charges.

2. The provision of talking signs, particularly in locations such as transport interchanges should be used to provide multi-lingual information points. Systems providing wayfinding assistance include the REACT system developed through the Royal National Institute of the Blind. Small personal radio trigger fobs activate pre-recorded messages from speakers positioned along a route. Remote infrared audible signage RIAS can be used externally or internally in conjunction with personal receivers and headsets to relay a wide variety of information.

3. The increasing use of personal mobile devices including GPS and mapping facilities offers further opportunities for the development of systems providing location based information direct to users.
8.2 SWITCHES & CONTROLS

**THIS SECTION DEALS WITH THE PROVISION, LAYOUT AND DESIGN OF SWITCHES AND CONTROLS.**

**PERFORMANCE OBJECTIVE**

The design and positioning of switches and controls shall be consistent within a building and shall enable all users to identify them, understand their purpose, access them and operate them easily, safely and effectively.

8.2.1 MANDATORY PROVISIONS

The design and layout of switches and controls will satisfy the performance objectives if:

1. Switches and controls are operable without the simultaneous use of both hands except where safe operation of machinery requires it.
2. Where red and green are used as “ON” and “OFF” indicators the switch or control status is clarified by additional text or pictograms.
3. The positioning of switches and controls falls within the ranges shown in Figure 53 and is consistent within the building.
4. Switches and controls contrast visually with their mounting plates (where fitted) and the wall surface.
5. Equipment instructions, visual and tactile, are positioned adjacent to the relevant switch or control and are readable at close range.
6. Electrical mains and circuit isolation switches are clearly labelled and the on and off positions are easy to identify.
7. All electrical power sockets are switched and the on and off positions are easy to identify.

8.2.2 MANDATORY DESIGN OBJECTIVES

**GENERAL**

1. In some circumstances such as the provision of ‘cleaner’s sockets’ health and safety requirements may dictate that sockets are located at low level to avoid trailing cables becoming a hazard.

8.3 INTERNAL LIGHTING

**THIS SECTION DEALS WITH THE PROVISION AND DESIGN OF ARTIFICIAL LIGHTING AND THE CONTROL OF DAYLIGHTING.**

**PERFORMANCE OBJECTIVE**

Where artificial lighting is provided to supplement or replace natural lighting within buildings it shall provide good visibility and shall ensure safe access, circulation and exit for all users. Artificial lighting shall be provided wherever required to ensure safety.

8.3.1 MANDATORY PROVISIONS

The design and layout of artificial lighting and the provision of natural lighting will satisfy the performance objectives if:

1. Artificial lighting systems are designed to maintain a level of illumination that is suitable for people with sight impairments as well as all other users.
2. Illumination levels across a room or space are even so that there is no glare, pools of bright light or strong shadows.
3. Artificial lighting provides good colour rendering.
4. Natural & artificial lighting levels are controllable and adjustable to suit individual need.
5. Artificial lighting is compatible with electronic and radio frequency installations and does not cause interference to hearing aids.

8.3.2 MANDATORY DESIGN OBJECTIVES

**GENERAL**

1. Natural lighting should be used wherever possible provided heat gain and the potential for glare can be controlled. Artificial lighting provides the means to ‘model spaces’ by accentuating colour, tone and texture, provides background and task lighting, highlights signage, provides safe access and makes face to face communication comfortable. It also has the ability to change the ‘mood’ of a space from warm and welcoming to cold and clinical. Lighting design should therefore be carefully considered from the perspective of the needs of all users and how they will use / interact with a particular space in order to ensure that accessibility is not compromised by the lighting design. Reference should also be made to Section 4.4 Surfaces.
2. Where face to face communication is important e.g. at reception desks the lighting design should provide good illumination to the receptionist’s face.
8.4 EXTERNAL LIGHTING

THIS SECTION DEALS WITH THE PROVISION AND DESIGN OF EXTERNAL ARTIFICIAL LIGHTING.

PERFORMANCE OBJECTIVE

Where artificial lighting is provided to supplement or replace natural lighting in the public realm, it shall provide good visibility and shall ensure safe circulation for all users. Artificial lighting shall be provided wherever required to ensure safety.

8.4.1 MANDATORY PROVISIONS

The design and layout of external artificial lighting will satisfy the performance objectives if:

1. Lighting provides bright, safe lighting levels with good uniformity of light.
2. Provision of white light and high colour rendering to enhance users’ ability to recognise shapes and colours. Artificial lighting systems are designed to maintain a level of illumination that is suitable for people with sight impairments as well as all other users.
3. Illumination levels across a space are even so that there is no glare, pools of bright light or strong shadows.
4. Artificial lighting provides good colour rendering.
5. All new lighting is designed to minimise the effect of obtrusive light at night and minimise the impact during daylight hours.
6. Lighting levels are appropriate to the location and activity and always provide no less than a uniform level of 30 lux.

8.4.2 DESIGN OBJECTIVES

1. All lighting in the public realm should be part of a comprehensive plan providing consistent lighting levels and quality across a development zone. The primary focus should be the illumination of pedestrian and traffic areas to ensure general safety and aid orientation.
2. All lighting should be designed to eliminate glare by the appropriate selection and positioning of fittings. Targeted lighting, providing more intense illumination, should be provided at junctions and road crossing points. Lighting should generally be designed to provide a balanced distribution of light that will provide good visual perception after dark and allow peoples’ eyes to adapt to changing light conditions.
9.0 MANAGEMENT

9.1 BUILDING MANAGEMENT

THIS SECTION DEALS WITH THE MANAGEMENT OF INTERNAL ENVIRONMENTS AND THE PRIVATE REALM ASSOCIATED WITH BUILDINGS.

PERFORMANCE OBJECTIVE

Management plans shall be developed and implemented to ensure that all internal and external environments remain safe and accessible during the lifetime of the facility. Management plans shall be updated as required to reflect modifications to the facilities or changes in use or occupation.

9.1.1 MANDATORY PROVISIONS

Management of external and internal environments will satisfy the performance objectives if:

EXTERNAL AREAS

1. Information regarding parking provision is made available to prospective customers and visitors.
2. Designated parking bays and setting down areas are monitored and unauthorised users are penalised.
3. The usage of designated parking bays is monitored and additional spaces are made available if demand increases.
4. There is a regular monitoring and maintenance programme that ensures pedestrian routes remain clear of obstructions, free of sand, water and other loose materials.
5. The surfaces of pedestrian routes are monitored and maintained to ensure that there are no uneven or damaged areas that may present a trip hazard.
6. That modifications and / or maintenance work does not result in a reduction in accessibility.
7. There is a regular monitoring and maintenance programme to ensure that adequate lighting levels are maintained to all areas and in particular to external steps, ramps and access routes.
8. In shared space areas the traffic speed limits are enforced and delivery and parking restrictions applied to ensure that pedestrians can use the area safely.

INTERNAL AREAS - GENERAL

1. Access control systems are monitored and tested on a regular basis with respect to door operation and communication facilities.
2. Powered door opening and closing systems are monitored and tested on a regular basis to ensure designed operational speeds and activation timings are maintained.
3. Manual door closers are monitored and tested on a regular basis to ensure the opening force is within the required limits.
4. Door furniture is kept clean and free moving.
5. Hold open devices linked to the fire alarm system are monitored and tested on a regular basis.
6. Staff are always on call to respond to entry-phone or access control system queries and / or problems and to provide assistance if required.
7. Lobbies, reception areas, lift lobbies and circulation routes are maintained free of obstructions, including deliveries.
8. Adequate space is maintained in cafes and restaurants between moveable tables and chairs to ensure ease of access for all users.

LIFTS

1. Regular inspections, statutory testing and servicing is carried out.
2. Alternative arrangements are provided and communicated in the event of a lift failure or a lift being taken out of action for maintenance.
3. Emergency call and communication systems are monitored and tested on a regular basis to ensure that they are fully operational at all times.
4. Regular checks are carried out to ensure that there is alignment between lift car floors at every landing level.
**SANITARY FACILITIES**

1. There is a regular inspection, cleaning, re-stocking and maintenance regime for all sanitary facilities.
2. The time and date of the last inspection is displayed within the sanitary facility.
3. Where there is a requirement to keep accessible or Changing Places toilets locked a key is always available nearby and there is a clear notification of where it can be obtained.
4. There are regular checks to ensure that the assistance alarms are fully operational and accessible.
5. Building managers ensure that trained staff are always available to respond to assistance alarms and provide appropriate and effective assistance.
6. Information regarding hoist operation and sling compatibility is provided in Changing Places toilets.

**BUILDING SERVICES**

1. There is a regular monitoring and maintenance programme to ensure that adequate lighting levels are maintained to all areas. Light bulbs are replaced as soon as they have failed and fluorescent tubes are replaced if they start to flicker.
2. Regular inspections, statutory testing and servicing is carried out on all equipment.
3. There is a regular inspection, cleaning an maintenance regime for all air-conditioning, mechanical ventilation and heating systems.
4. Windows are cleaned on a regular basis and blinds and solar control devices are inspected, cleaned and maintained on a regular basis.

**SURFACES**

1. There is a regular inspection, cleaning and maintenance regime.
2. Where modifications or redecoration is carried out the works achieve the original performance objectives.

**COMMUNICATIONS**

1. Information regarding a buildings facilities and access arrangement is available in a range of formats and is updated on a regular basis.
2. Pre-visit information regarding access and facilities is available on a web site and/or a telephone number is provided for audio description services.
3. There is a regular inspection, cleaning and maintenance regime for all air-conditioning, mechanical ventilation and heating systems.
4. Windows are cleaned on a regular basis and blinds and solar control devices are inspected, cleaned and maintained on a regular basis.

**MEANS OF ESCAPE**

1. There are regular checks of internal and external emergency exit routes and access for fire fighting vehicle is available at all times.
2. There is a regular inspection, cleaning and maintenance regime for all air-conditioning, mechanical ventilation and heating systems.
3. Building evacuation tests are carried out on a regular basis to ensure that fire marshals are properly trained and all staff are implementing emergency evacuation procedures and duties correctly.
4. There is regular liaison with vulnerable users and visitors to agree and update personal emergency evacuation plans. See Section 11.1.

**BUILDING SERVICES**

1. There is a regular monitoring and maintenance programme to ensure that adequate lighting levels are maintained to all areas. Light bulbs are replaced as soon as they have failed and fluorescent tubes are replaced if they start to flicker.
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**SIGNAGE AND COMMUNICATION SYSTEMS**

1. Signage and communication systems are updated as required to respond to changes in the buildings’ occupants, services and facilities. All new signage is integrated with the existing.
2. Temporary signage is removed as soon as it is no longer relevant. Signage removed for redecoration is replaced correctly.

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3. Building evacuation tests are carried out on a regular basis to ensure that fire marshals are properly trained and all staff are implementing emergency evacuation procedures and duties correctly.
4. There is regular liaison with vulnerable users and visitors to agree and update personal emergency evacuation plans. See Section 11.1.

**9.1.2 MANDATORY DESIGN OBJECTIVES**

**GENERAL**

1. If the facilities provided for vulnerable users are not available due to lack of maintenance or poor management a facility can be rendered inaccessible. Accessibility cannot be achieved by good design and code compliance alone. In most cases the same good maintenance practices required to ensure a building is safe and easy to use will also ensure that it remains accessible.
2. All buildings and external areas should have comprehensive management plans that address:
   - a) Staff training
   - b) Inspection, testing and maintenance regimes
   - c) Health and safety
   - d) Parking provision and availability
   - e) Facilities provision and availability
   - f) Communication systems
   - g) Means of escape
3. Information about a building’s facilities, services and accessibility should be made available on the internet to allow visitors to plan their visit in advance e.g. provision and location of designated parking.
4. Appropriately trained staff should be available to provide information / assistance to users regarding the building’s facilities and access arrangements. However, the provision of well thought out signage and communication systems should mean that users are able to access facilities and services independently for most of the time.
9.2 MANAGEMENT OF PUBLIC REALM

9.2.1 MANDATORY PROVISIONS

Management of public realm will satisfy the performance objectives if:

1. Information regarding parking provision is made available to prospective customers and visitors.
2. Designated parking bays and setting down areas are monitored and unauthorised users are penalised.
3. The usage of designated parking bays is monitored and additional spaces are made available if demand increases.
4. There is a regular monitoring and maintenance programme that ensures pedestrian routes remain clear of obstructions, free of sand, water and other loose materials.
5. The surfaces of pedestrian routes are monitored and maintained to ensure that there are no uneven or damaged areas that may present a trip hazard.
6. That modifications and/or maintenance work to the public realm does not result in a reduction in accessibility.
7. Street furniture, particularly seating areas, are regularly monitored and maintained to ensure they do not present a hazard to users through loose fixtures or fittings.
8. A management plan is produced and implemented for the maintenance of softscape to ensure plants do not impinge on access routes (horizontally or vertically) or present unnecessary danger by virtue of thorny or loose branches.
9. There is a regular monitoring and maintenance programme to ensure that adequate lighting levels are maintained to all areas and in particular to steps, ramps and access routes.
10. In shared space areas the traffic speed limits are enforced and delivery and parking restrictions applied to ensure that pedestrians can use the area safely.
11. Adequate space is maintained between tables and chairs and other street furniture in outdoor seating areas of cafés and restaurants to ensure ease of access for all users.
12. There is a regular inspection, cleaning and maintenance regime for all areas of the public realm.
13. Signage and communication systems are updated as required to respond to changes in the public realm. All new signage is integrated with the existing. Temporary signage is removed as soon as it is no longer relevant. Signage removed for redecoration is replaced correctly.
14. Public address systems are monitored, tested and maintained on a regular basis.
15. Public and civic buildings and facilities comply with Section 9.1.

9.2.2 MANDATORY DESIGN OBJECTIVES

GENERAL

1. Lack of maintenance or poor management can lead to the creation of barriers and areas of the public realm becoming inaccessible. Accessibility cannot be achieved by good design and code compliance alone. In most cases the same good maintenance practices required to ensure the public realm is safe and easy to use will also ensure that it remains accessible.
2. The public realm should have a comprehensive management plan that addresses:
   a) Staff training.
   b) Inspection, testing and maintenance regimes.
   c) Health and safety
   d) Parking provision and availability
   e) Communication systems
3. Information about facilities within the public realm, transportation and pedestrian access should be made available on the internet to allow visitors to plan their visit in advance e.g. provision and location of designated parking.
4. Appropriately trained staff should be available to provide information / assistance to users of public facilities. However, the provision of well thought out signage and communication systems should mean that users are able to access facilities and services independently for most of the time.
10.1 ACCESS STRATEGY STATEMENTS

This section deals with the communication and documentation of the applicants understanding of accessibility requirements.

Performance Objective

The applicant shall clearly demonstrate and communicate to DCCA their understanding of the accessibility needs of the building’s end-users and its facilities and their chosen approach to meeting the performance requirements with respect to those needs.

10.1.1 Mandatory provisions

The Access Strategy document will satisfy the performance objectives if:

1. It explains the Project Sponsor’s policy and approach to access and the needs of vulnerable users.
2. It details the professional advice that will be or has been obtained with respect to accessibility and related technical issues.
3. It details any specialist user group consultations planned or undertaken and the degree to which the design process has been influenced by the consultations.
4. It details and explains any specific issues affecting accessibility to, or within, the particular environment.
5. It details and explains any specific issues affecting the provision of services, employment or educational opportunities.
6. It details the access solutions proposed to address issues in (4) and (5).
7. It details the management, maintenance and training policies adopted, or to be adopted, to ensure that features, facilities and equipment continue to ensure accessibility.
8. Drawings and / or models are provided illustrating the routes to, into and around the building; vertical and horizontal circulation routes; the location of accessible parking bays and setting down points and the location of public transport interchanges where applicable.
9. It details the provisions to be made for the evacuation of all users from the building during an emergency, including vulnerable users who may need assistance or special equipment.
10. It considers and details the design approach at four key stages:
   a) Strategic development of the project brief and access policy by or on behalf of the Project Sponsor;
   b) Planning – development of the initial design proposals;
   c) Detailed design stage;
   d) Post occupancy.
11. Where Alternative Solutions are proposed the applicant demonstrates that they comply with the Performance Objectives and where appropriate provides supporting evidence in the form of research or reference to British Standards.

10.1.2 Design Objectives

General

1. The Access Strategy (AS) document provides an additional opportunity to consider the proposed use and management of the building/built environment from the perspective of the needs of its users. Additional information is provided in Appendix 2 Guidance on Access Strategy Statements.
2. It should provide an opportunity for Project Sponsors to demonstrate their commitment to accessibility and show how issues will be addressed from design inception through to occupancy.
3. The level of detail to be provided in the AS document should be agreed with DCCA and it will depend on the size, function and complexity of the proposed building or space.
4. The AS document should be considered as a ‘live document’ which, post occupancy, can be used to evaluate the performance of the completed building.
11.0 MEANS OF ESCAPE

11.1 MEANS OF ESCAPE

This section deals with the fire safety management processes for the emergency evacuation of building users.

Performance Objective

The design and layout of a building shall enable all users to evacuate the building independently and safely in the event of a fire or emergency. For vulnerable users for whom this is not practicable management processes shall be in place to ensure that they receive assistance from staff and/or have access to and the use of auxiliary aids to assist them to evacuate the building safely. Fire safety management plans shall be updated on a regular basis for the lifetime of the building.

11.1.1 Mandatory Provisions

The fire safety management processes will satisfy the performance objectives if:

1. An accessible means of egress is provided and maintained for the lifetime of the building.
2. The building complies with BS 9999: 2008 or BS 7974: 2001 or equivalent and has a comprehensive and integrated package of fire safety measures appropriate to its size, use and facilities.
3. The Fire Safety Management Plan takes into account the full range of people who may use the building and is updated whenever there are changes to the construction and/or use of the building and on a regular basis.
4. Staff are adequately trained to carry out the procedures necessary for the safe evacuation of the building.
5. Provisions as detailed in Table 5 are being met.
6. Emergency communication systems are provided.
7. Stairway identification photoluminescent signage is provided as well as stair markings.

The responding fire brigade are able to access a fire on any floor and begin suppression operations within 30 minutes of transmission of the alarm call, 95% of the time.

98% of the expected occupants can evacuate the building in a time not greater than 50% of the required fire resistance of the primary structure without outside assistance.

Table 8 - Means of Escape

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Fighting Lifts</td>
<td>If building has occupied floor 22.86 above lowest level of fire vehicle access</td>
</tr>
<tr>
<td>Emergency Evacuation designed lifts</td>
<td>If building has occupied floor 22.86 above lowest level of fire vehicle access</td>
</tr>
<tr>
<td>Protected refuge areas and provision of devices for taking people up or down stairs</td>
<td>Where Emergency Evacuation designed lifts are not provided.</td>
</tr>
<tr>
<td>1400mm wide minimum stair width</td>
<td>Where stairs are the Primary means of access</td>
</tr>
<tr>
<td>1100mm wide minimum stair width</td>
<td>Where an emergency lift is provided</td>
</tr>
<tr>
<td>Video cameras in every stairways at every 5 flights linked to emergency control room</td>
<td>If building has occupied floor 22.86 above lowest level of fire vehicle access</td>
</tr>
</tbody>
</table>
11.1.2 MANDATORY DESIGN OBJECTIVES

GENERAL
1. The provision of an Accessible Means of Escape should be an integral part of the building design, construction and fire safety management process. The full range of people who might use the building needs to be considered and in particular the needs of vulnerable users. High rise buildings present particular problems with respect to the evacuation of mobility-impaired people. The use of appropriately designed fire evacuation lifts should be considered for Stage 1 evacuation.

2. Designers should note that BS 9999: 2008 takes an approach that is highly end user and use specific. For complex projects where the use of BS 7974: 2001 is considered appropriate, designers should consider the appointment of a qualified fire safety engineer.

3. It should be recognised that mobility-impaired people constitute a larger group than just wheelchair users. The population is ageing, there is increased obesity and reduced fitness levels. There may therefore be users who are able to use stairs but will be unable to reach a place of safety within the required evacuation timescale. The following features should be considered in the design of an accessible escape route:
   a) Horizontal evacuation to a different fire compartment
   b) Making all escape routes accessible
   c) The use of lifts
   d) Installing additional handrails and edge markings

4. Horizontal evacuation to the outside of the building or another fire compartment is the preferred method of evacuation for vulnerable users with mobility impairments if an evacuation lift is not provided. Carrying people up or down stairs, with or without assistive devices is not ideal and should be avoided in high rise buildings. It is unlikely that one solution will fit all circumstances and therefore evacuation strategies should be flexible enough to respond to a wide variety of situations.

5. Although Building Emergency Evacuation Plans should be developed with reference to the specific building type, use, occupancy etc they should be supplemented by Personal Emergency Action Plans (PEEPs) in order to respond to the specific needs of vulnerable users. PEEP’s include both person-specific and standard plans.
   a) Standard PEEPs are generic and applicable to buildings such as shopping malls, leisure and entertainment venues, where visitors will not generally make themselves known to the building management. In these circumstances the PEEP should anticipate the needs of as wide a range of users as possible.
   b) Visitor PEEPs are person-specific plans prepared for members of staff and regular visitors to a building. The PEEP will therefore be developed in conjunction with the individual and respond to their specific needs.

6. In circumstances where evacuation may not be possible within the evacuation refuges may be used to provide a place of safety. Two way communication between the occupants of the refuge and the team organizing the building evacuation should be provided to give re assurance to users.

EVACUATION USING LIFTS
1. A lift used for the evacuation of vulnerable users should be either a fire-fighting lift of an evacuation lift constructed in accordance with Annex G of BS 9999: 2008. The lift manufacturer to confirm whether their products is compliant with the BS standard or equivalent. There may be circumstances, subject to risk assessment, when a non-evacuation lift could be used in the initial stages of a fire e.g. where automatic sprinklers are installed and there is significant compartmentalisation and / or smoke control.

STAIRWAYS
1. Building evacuation via stairways is highly reliant on flow rates and maintenance of an unobstructed stair. People falling on the stairs can become a significant hazard. People with mobility or sensory impairments are at increased risk and therefore unnecessary evacuation should be avoided. Staff training is critical to this process as they need to understand how to provide assistance to a variety of vulnerable users and evaluate risks.

TRAINING AND TEST EVACUATIONS
1. Staff designated to assist vulnerable users should be fully trained in evacuation techniques and equality awareness so that they are confident in the required techniques and communicating with vulnerable users. Test evacuations should be carried out at least once a year. It should be recognised that some evacuation procedures will carry a higher degree of risk for some vulnerable users so the number of test evacuations and the potential for false alarms should be assessed accordingly.
APPENDIX A: STANDARDS & PUBLICATIONS


BSI Group (2010) BS 5395-1:2010 Stairs Code of practice for the design of straight-flight stairs and steps. BSI. UK

BSI Group (2008) BS 9999:2008 Code of practice for fire safety in the design, management and use of buildings, including improving emergency exit access for disabled people. BSI. UK


BSI Group (2001) BS 7974: 2001 Code of practice for the application of fire safety engineering principles to the design of buildings. BSI. UK


BSI Group (2010) BS EN 997-2012 WC pans and WC suites with integral trap. BSI. UK


Department for Transport (2005)

Inclusive mobility: A guide to best practice on access to pedestrian and transport infrastructures. HMSO UK

Lifetime Homes (2011) Lifetime Homes Design Guide. BRE Group. UK


Sport England (2010) Accessible sports facilities. HMSO. UK


The National Fire Protection Association: www.nfpa.org/codes-and-standards

**ACCESS STRATEGY STATEMENT PROCESS**

**INTRODUCTION**

The Approval process should not be considered as a ‘one off’ document review even for the simplest of projects. The minimum audit level should comprise a review of documents at initial design and construction drawings stages together with an audit of the completed project when fully operational. Materials and samples should be requested as a matter of course where illustrations and specifications do not provide sufficient clarity. Approvals should be retained for checking against the completed project.

**THE REVIEW AND APPROVAL PROCESS**

Although the whole process could be described as an audit the actual Audit does not take place until the project is completed and operational. The precursor to the audit is a checking and review process based on drawings and data submitted to DCCA for approval under the Building Codes. The scope of the Accessibility Code means that there are very few aspects of the public domain and the built environment that it does not impact on. It is also important to recognise the interaction between the various elements and not sign off sections of the code in isolation. The interface of the public realm with building plots and buildings is a good example of this and auditors should ensure that they have adequate information to make an assessment. Likewise the procurement process may result in submissions by more than one party and a potential splitting of responsibility. It is important therefore that the required standards are established by the Project Sponsor from the initial design stages and form the basis of a set of Project Requirements that all parts of the project team have to comply with.

The Access Strategy Statement is an important document which should be submitted to DCCA by the Project Sponsor at the start of the project design phase. This document will provide the auditor with key information about the project and will assist them in programming the design review process. It will also allow the auditor to establish whether those parties acting for the Project Sponsor understand and are following his requirements. There is little point wasting review time where it is obvious that there is a significant difference between the submitted designs and the Project Sponsors’ requirements. Likewise reviews should not be carried out based on incomplete information.

As a minimum the Access Strategy Statement should contain:

1. A plan of the plot locating it within the development zone.
2. A detailed plot plan
3. A building footprint, including basement, ground floor and typical floor plans.
4. Sections

The drawings should illustrate the location of transport interchanges, routes to, from and around the building, the location of accessible parking and horizontal and vertical circulation routes. The document will also detail the philosophy and approach to inclusive design and any challenges posed by the site constraints. Due to the variety of programmes and procurement routes that may be encountered it is useful to consider the review process in terms of the level of detail examined at each stage.

**USING THE CHECK LISTS**

Check lists have been provided for each section of the Code and can be used for both the design review stage and the audit stage. The check lists cover the deemed to satisfy solutions which represent the minimum mandatory requirements and the management requirements that need to be demonstrated at the occupation stage. Where there are multiple elements of a particular feature within the same development a checklist should be completed for each instance where there is a significant difference. When carrying out a design review there will be some questions on the check list that cannot be answered until the development is operational, e.g. Is the required clear headroom provided for the length of the route? Where this related to planting the auditor should look for evidence in the specification and maintenance requirements documents that this provision has been allowed for.

The person carrying out the review or audit should follow the ‘user journey’ set out in the Code. Although we have referred to various stages in the development process it is useful to think of the review process as a number of levels where the quality and level of detailed information increases. The final audit being the most complex in that it includes an evaluation of operational issues.
LEVEL 1 – DESIGN CONCEPT

At this stage the auditor should be looking to see that the design team has considered the following issues:
1. Location and orientation with respect to minimising travel distances.
2. Potential conflicts between pedestrians, cars, cyclists and other modes of transport.
3. Transport interchange locations and their accessibility.
4. The level of accessible parking provision.
5. The technical guidance to be used to develop the detailed design.
6. An initial assessment of how means of escape will be addressed.
7. Consultation with user / potential user groups that may be required.
8. Communication methodologies with respect to dissemination of information about the site, its facilities and management practices.

LEVEL 2 – DETAILED DESIGN

At the detailed design stage the designers should have established how the Project will meet the Performance Objectives of the Code – through ‘deemed to satisfy solutions’ or by Alternative Solutions. If they are using the deemed to satisfy solutions then the auditor can follow the standard checking process. If Alternative Solutions are proposed they must be evaluated against the Performance Objectives and more detailed discussions and investigation may be required prior to giving approval.

LEVEL 3 – CONSTRUCTION

In the event that the detailed design information forms the basis of the Employer’s Requirements for issue to a Design and Build Contractor it will be necessary for the Contractor to submit their construction drawings for approval. With this procurement route it is unlikely that the detailed design drawings are in fact sufficiently detailed to enable a complete review.

LEVEL 4 – OCCUPATION

At the occupancy stage the actual Access Audit is carried out. The Auditor should be in possession of the updated Access Strategy Statement and the approved documents. The maintenance schedules should prioritise essential facilities such as lifts, induction loops, lighting levels, etc.
Appendix B: Access Strategy Statement Process

NOTES

Consider the needs of all potential users. Identify the guidance, codes and standards used.

The Access Strategy provides an opportunity for Project Sponsors to demonstrate their commitment to accessibility and will provide an audit trail of the decision making processes during the design and development of the project.

The level of detail provided in the document for formal submission should be appropriate to the size and complexity of the project. As a minimum the document shall contain:

1) A plan of the plot locating it within the development zone.
2) A detailed plot plan.
3) A building footprint, including basement, ground floor and typical floor plans.
4) Sections

The drawings shall illustrate the location of transport interchanges; routes to, from and around the building; the location of accessible parking and horizontal and vertical circulation routes.

The development of the document should commence at the project brief stage to ensure that accessibility issues are considered at the start of the project. This will require the Project Sponsor to provide the Project Team with information about the proposed building use, its potential users and its long-term management.

At the planning stage the Project Team should analyse the issues raised in the project brief with respect to:

a) Location and orientation with respect to minimising travel distances.
b) Potential conflicts between pedestrians, cars, cyclists and other modes of transport.
c) Transport interchange locations and their accessibility.
d) The level of accessible parking provision.
e) An initial assessment of the technical guidance to be used to develop the detailed design.
f) An initial assessment of how means of escape will be addressed.
g) Details of any consultations with user/potential user groups.
h) Communication methodologies with respect to dissemination of information about the site, its facilities and management practices.

At the detailed design stage it should be established how the Project will meet the Performance Objectives of the Code – through ‘deemed to satisfy solutions’ or by Alternative Solutions. Suppliers of services and equipment should also provide information detailing how their services and products meet the Performance Objectives of the development.

At the occupancy stage the updated document shall detail the approvals obtained and the policies in place to ensure the appropriate maintenance of the internal and external environments and facilities. The maintenance schedules should prioritise essential facilities such as lifts, induction loops, lighting levels, etc.

CONSULTATION

The extent of consultation is dependent on the size, use and complexity of the project. For large complex projects which will have a significant impact on the community extensive consultation should be undertaken with a wide range of user groups. Consultation is not a substitute for obtaining technical advice and guidance. Consultation should assist the Project Sponsor in identifying the key issues related to ensuring the development is accessible.

USE OF GUIDANCE

The Project Sponsor is responsible for ensuring that the Project complies with the relevant sections of the Code. Although there is extensive international guidance with respect to accessibility it is possible that gaps may be identified particularly where innovative or alternative solutions are being considered. The document provides the opportunity to explain the rationale behind the design philosophy and the guidance being followed. It should also be recognized that guidance is subject to change and there is an implicit requirement to ensure that current best practice is being followed.

MANAGEMENT

Proactive management of buildings and facilities should be integral to the maintenance of accessibility. This should include regular structured reviews and inspections for compliance with legislation including Health and Safety, Fire and Accessibility. Managers should also be required to review regular reports on operational issues and put in place action plans for remedial works if barriers to accessibility are identified. Reports should include feedback from regular users and visitors. Staff should receive appropriate training in disability awareness and the use of specialist equipment and there should be evidence of ongoing reviews of new technologies and training to ensure that staff adopt current best practice.