

# Inclusive Landscape Design



## Supplementary Planning Document

London Borough of Islington

January 2010

## Contents:

### Introduction

- Background
- How to use this guide
- Principles and Process of Inclusive Design
- A Strategic Approach

### Design Guidance

1. Getting there!
2. Entry and exit points
3. Paths
4. Shared spaces
5. Ramps
6. Steps
7. Handrails
8. Seats and perches
9. Planting
10. Inclusive Play
11. Lighting
12. Public art
13. Way marking

## Appendices

### References:

1. The Mayor's Supplementary Planning Guidance  
Accessible London; achieving an inclusive  
environment.
2. Effective consultation

## Introduction:

### Background

Key among the objectives championed by Islington Council's Local Development Framework is that of an Inclusive Environment. That objective is upheld through policy, strategic planning documents, design guidance, development management procedures and enforcement.

This objective reflects that enshrined in the London Plan and the Mayor's Supplementary Planning Guidance 'Accessible London; achieving and inclusive environment' an extract of which is included in the appendices to this guide.

To assist designers and regulators realise the object of Inclusive Design, the Planning pages of the Council's website provide detailed advice, resources and specialist contacts. See:

[www.islington.gov.uk/Environment/Planning/PlanningPolicy/AccessibleDesign](http://www.islington.gov.uk/Environment/Planning/PlanningPolicy/AccessibleDesign)

The site refers to a number of national guidance documents including:

- The Approved Document to Part M of the Building Regulations
- BS 8300:2001 - Design of buildings and their approaches to meet the needs of disabled people: Code of Practice from British Standards Institution.
- Inclusive Mobility - A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure.
- The LB Islington Streetbook ([www.islington.gov.uk/Environment/Planning/Applications/ConservationAreas/islington\\_streetbook.asp](http://www.islington.gov.uk/Environment/Planning/Applications/ConservationAreas/islington_streetbook.asp)) and The LB Islington Urban Design Guide (IUDG) ([www.islington.gov.uk/Environment/Planning/urbandesignguide](http://www.islington.gov.uk/Environment/Planning/urbandesignguide))

However, these refer in the main to the built environment and to a lesser extent aspects of hard or soft landscaping.

The lead authority on the design and management of outdoor spaces is the Fieldfare Trust, which produces a comprehensive guide 'Countryside for All'.

There is however a gap, one that is felt significantly in Islington's historic urban setting with its 127 parks and open spaces, ranging from the Ecology Centre and parks with pitches to tow paths, elegant squares in residential areas, adventure playgrounds and hidden oases.

In addition there are many planning applications, submitted to the Council, that include a significant public realm and or landscaped element. The access aspects of those parts of the scheme will not be scrutinised by

Building Control and so the onus is with Development Management to advise and scrutinise those aspects of the proposal greater detail than would normally be associated with the planning stage of a development.

This draft Supplementary Planning Document (SPD), a design guide, has been produced by the Council's Access Officer, under the direction of a steering group drawn from the Greenspace landscape design, project management, playgrounds and maintenance teams. Its purpose is to provide guidance for Islington's own design teams, to enable project managers to set a standard for outside contractors and ultimately to provide a reference point for Development Management officers assessing planning applications.

Other useful references:

- *Centre for Accessible Environments 'Designing for Accessibility'*.
- *Department for Transport 'Manual for Streets'*.
- *English Heritage/HLF 'Easy Access to Historic Landscapes'*
- *English Heritage 'Easy Access to Historic Buildings'*
- *English Heritage 'Streets for All'*
- *Policy Advice Note 'Inland Waterways' - Town and Country Planning Association July 2009*
- *'Waterways & Development Plans' British Waterways 2003*
- *'Waterways for Tomorrow' (DETR 2000 )*
- *'Planning a future for the Inland Waterways' - Inland Waterways Amenity Advisory Council 2001*

Definition of 'landscape'

For the purposes of this document, its application and enforcement, the landscape to which it refers extends to:

- Parks
- Open spaces
- Sports pitches
- Tow paths
- Town Squares
- Garden squares
- Estate grounds
- Adventure playgrounds
- Ecology Centres
- Hidden oases
- Cemeteries
- Alleyways and pedestrian routes

It refers in effect to all the spaces between buildings except the public highway.

## How to use this guide

The introduction provides the philosophical, principled and strategic basis upon which designers should be expected to apply their skills. The emphasis is on the whole experience from a user's perspective. The philosophy is that of Inclusive Design, the tenets of which should be embedded within every aspect of the design process. From the inception to the completion of any scheme of works, every detail should be considered within that wider context and meaning.

An essential concept is that of the sequential journey, getting to and through a space, making use of the facilities it offers and exiting safely. Adopted as a working method it should ensure a consistency and a continuity of approach.

Key among those facilities, emphasised by all the disabled people involved in the production of this document, are accessible toilets and changing rooms. The design of these facilities falls beyond the brief of many landscape developments and also the scope of this document. Nonetheless, their provision and or local availability should always be considered. Contemporary design guidance is provided in BS8300:2009 and Changing Places see: <http://www.changing-places.org/> .

There are some basic objectives that should be met in relation to each step of that journey and a range of considerations to inform the design process.

The main body of this document is structured according to that journey, setting out practical objectives, design considerations and minimum provisions, which should ensure that barriers are designed out and flexibility built into any landscape design proposal.

The provisions describe one way in which relevant objectives can be met. There may be alternative site specific solutions but the onus will be on the designer or planning applicant to demonstrate their effectiveness.

Essentially, the viability of alternative and or innovative solutions will be demonstrated only through the active engagement of, and proper consultation with, a diverse group of users including deaf and disabled people.

The principles and guidance contained within this guide do not supersede or override any other contemporary British or European Standard and should be applied in a manner that enables all to be met satisfactorily.

### Principles and process of Inclusive design

Inclusive Design is not a fixed set of design criteria but an evolving philosophy that aims to produce aesthetically pleasing, functional environments that can be used equally by everyone, taking into account differences in age, gender or disability.

It cannot be fixed, in the same way a service provider's duties (under the Disability Discrimination Act (DDA)) are not fixed, but will evolve over time in line with advances in technology and rising expectations.

However, there are six guiding principles that have been set out by the Disability Rights Commission. These should underpin the thinking of any designer and provide a reference point for appraisal of any proposal.

- Diversity and difference

It should be recognised also that disabled people are not a homogenous group. Even within impairment types people have different abilities, they are also black, women, gay, may have caring responsibilities or have English as a second language.

- Ease of Use

No one should be forced to exert undue effort, experience discomfort or a loss of dignity.

- Freedom of choice and access to mainstream activities.

Independent access should be available but equally support and assistance should be provided to those who might require it and it should be provided on the users' terms.

- Quality

Aspects of design incorporated to meet the specific needs of disabled people should be produced to a standard equal to that in the remainder of the development. Designers should, wherever possible, exceed minimum standards, to avoid impressions of meanness or double standards.

Where adaptations are necessary to improve the accessibility of existing places the design should be confident and well-executed; approached as a design opportunity.

- Legibility and predictability

To obviate the need for excessive text based way finding devices, layouts should be rationalised and planting, street furniture, materials and finishes used judiciously.

- Safety

Environments must not only be safe but also inspire a sense of safety.

This will have implications for the layout, design of lighting, the use of particular materials, finishes and tones that may enhance or undermine the ability of people with a visual impairment to read spaces. It will also be a key area of collaboration between design and management.

Accepting these basic principles Inclusive Design is a process that:

- Begins at the beginning, with the development of a brief and site analysis.
- Like the DDA sees the design and management of the environment as inextricable partners.
- Takes account of user experience at every stage of the development.
- Is equally applicable to the development of landscapes, structure, materials and finishes, fixtures and fittings, and information;
- Brings together functional and aesthetic considerations.
- Is regularly monitored and evaluated

In addition to the principles and process it is generally agreed that minimum technical standards are still required to guarantee a base line beneath which accessibility is significantly compromised.

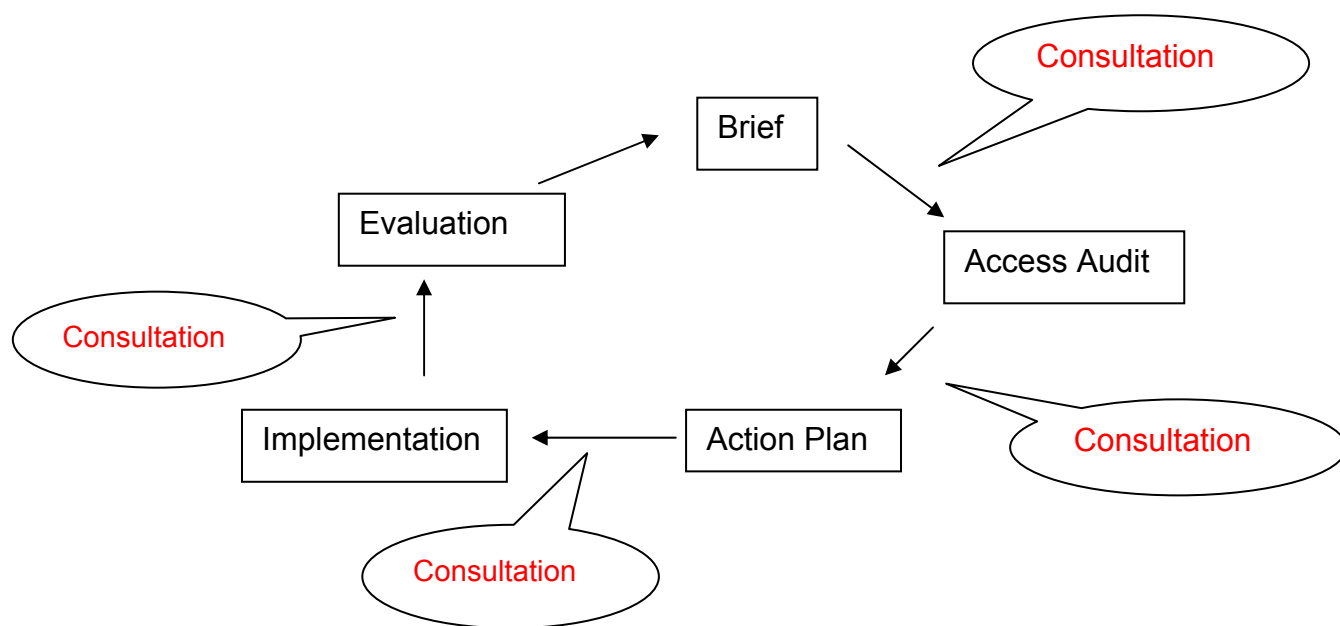


### A strategic approach

It is recommended in the Mayor's SPG 'Accessible London- creating and inclusive environment' that London Boroughs undertake access audits of the public realm and their open spaces. These exercises are both objective and subjective, recording (from the user perspective) existing barriers to and opportunities for greater inclusion. In 2007/8 the Council's Greenspace service (which manages the borough's parks and open spaces) commissioned Disability Action in Islington to undertake a rolling programme of these studies. The technical aspects of any future exercise of this sort should be undertaken with reference to the measures stipulated in this Inclusive Landscape Design SPD.

The findings of the auditing exercise will be used to produce an action plan for improvement that will be realised, over time, through a variety of projects. The guidance provided in this Inclusive Landscape Design SPD will provide a bottom line reference point for those improvement works and any deviation from it and or creative innovation subject to consultation with a diverse group of users including deaf and disabled people.

Once complete any improvement works should be evaluated and, because concepts of and opportunities to enhance inclusion move on, the findings fed into a renewed action plan.



# **Design Guidance**

## **1. Getting there!**

### **Objectives**

- **To secure access for all to the facility, including those with mobility, sensory or cognitive impairments.**

### **Design considerations**

- **The proximity and accessibility of public transport links**
- **The availability and location of safe and accessible drop off points and parking bays.**
- **The suitability of all pedestrian approaches.**

### **Provisions**

The site analysis and initial planning exercises should take into account the length and accessibility of journeys to it from public and private transport drop off points.

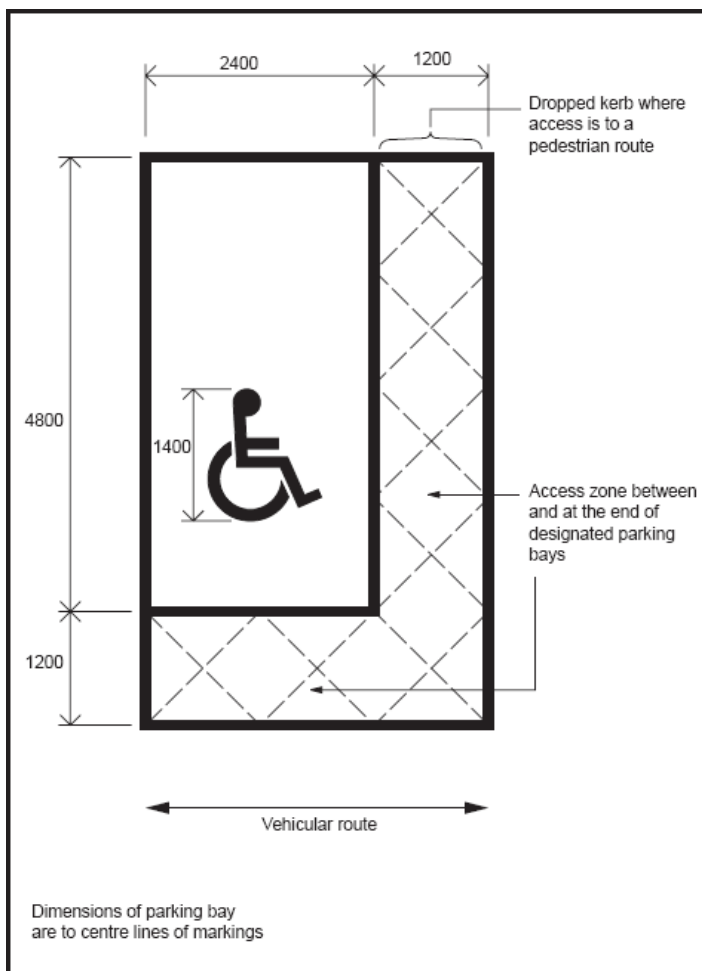
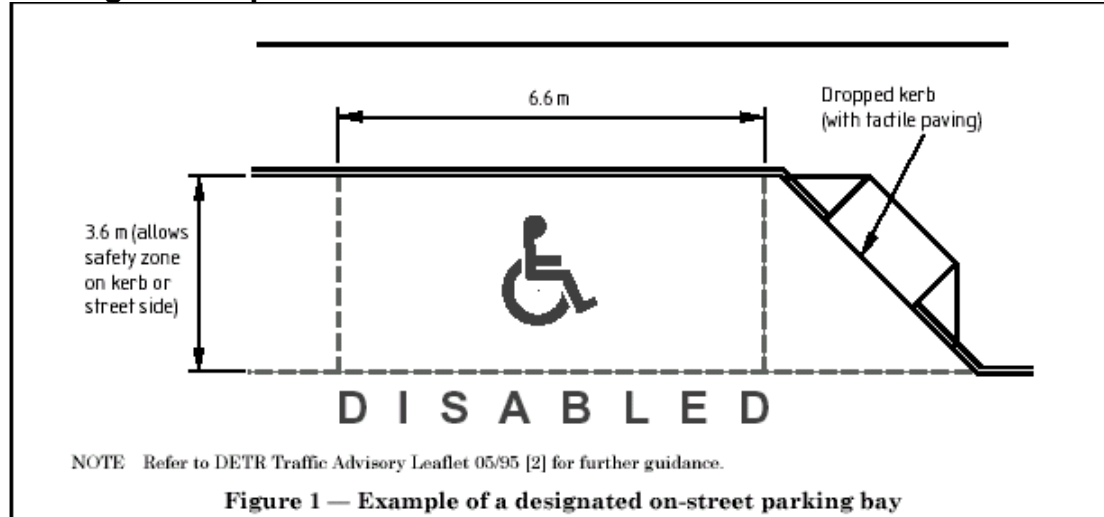
Consideration should be given to the fact that an accessible park or open space will become a destination facility for some disabled people even if conceived essentially as a neighbourhood amenity. In these circumstances the value of conveniently located accessible parking and drop off facilities cannot be overstated.

#### **Public transport:**

The TfL website provides information on the accessibility of specific services, stations and routes. See: <http://journeyplanner.tfl.gov.uk/>

The site also publishes up to date information on network access improvements.

### Parking and drop off:



The cross-fall over the bay and transfer zone should not exceed 1:50.

**Pedestrian routes:**

See 'Paths' (Section 3 below)

Consideration should be given to every approach; from public transport, parking, drop off and the immediate locality. Where improvements can be negotiated to bring their quality into line with the guidance provided in Section 3 below then every effort should be made to do so. Otherwise, a more strategic approach might be necessary to ensure that sufficient routes are accessible and that they are clearly identified and appropriately signposted.

On the approach to a site overall travel distances and the distance between resting points are critical. The opportunity to increase the number and convenience of entry points to a site should therefore be explored.

<b>Impaired group</b>	<b>Recommended distance limit without a rest (on level ground, obviously any inclined or uneven surface will reduce these distances)</b>
Wheelchair users	150m
Visually impaired	150m
Mobility impaired using stick	50m
Mobility impaired without walking aid	100m

Similarly, the availability and quality of suitably designed crossing points on the approaches will greatly enhance, or conversely detract from, the accessibility of a park or open space.

Guidance on their design (for the purposes of appraisal and negotiation) is provided by the DfT publication 'Guidance on the use of Tactile Paving Surfaces' is available to download from:

[www.dft.gov.uk/transportforyou/access/peti/guidanceontheuseoftactilepav6167](http://www.dft.gov.uk/transportforyou/access/peti/guidanceontheuseoftactilepav6167)

## **2. Entry and exit points**

### **Objectives**

- **To provide ready and inclusive access to each facility**
- **To provide safe egress for all users**

### **Design considerations**

- **The means by which entrances are located and identified.**
- **Access information that should be provided.**
- **The means by which motorised vehicles are excluded but mobility scooters and push bikes are admitted.**
- **The means by which child safety is secured but wheelchair access facilitated**
- **The means by which personal safety can be assured, when not all entry points are accessible.**
- **Provisions appropriate to the scale and nature of the facility**
- **The means by which emergency escape is provided.**

### **Provisions**

Entrance and exit points should be clearly signposted and identified by means of a contrast in tone or texture.

The overriding priority at any entrance point is to ensure ready access for legitimate users of the space. It is unlikely that any entry system could guarantee entry for all mobility scooters whilst simultaneously physically excluding all motorcycles. Disabled people, consulted as part of the production process of this SPD, felt that the problem was overstated. Kerbs and barriers between the footpath, outside a park entrance, and the adjacent road were thought to provide a realistic disincentive to motorbike riders without inconveniencing mobility scooter or wheelchair users. Suggestions that these barriers be removed and tables raised at the entrance to parks should be resisted.

An accessible entry point should provide a clear opening width of at least 1000mm.

The opening weight of any gate should not exceed 30N.

Any gate should provide zones of visibility between 500 and 1500mm above ground level.

Any handle, latch or other ironmongery should be located between 750 and 1000mm above ground level. They should be operable with a single closed fist (lever action controls are preferable) and not cold to the touch.

There should be a manoeuvring space of at least 300mm beyond the leading edge of any latched opening leaf. That width should extend back by at least 2000mm to enable mobility impaired users to reach and open the gate.

Mobility scooters take more space to turn than a wheelchair. To accommodate the full range of scooters, turning through 180<sup>0</sup>, a length of 2800mm and width of 2200mm would be required.

Space required for users of self-propelled wheelchairs to turn through 180° <sup>A)</sup>

Percentage of self-propelled wheelchair users accommodated	Turning space	
	Length mm	Width mm
80%	1 800	1 450
85%	1 910	1 450
90%	1 950	1 500

<sup>A)</sup> Sample size = 54.

Space required for a user to turn an electric scooter through 180° <sup>A)</sup>

Percentage of scooter users accommodated	Turning space	
	Length mm	Width mm
Complete range	2 000 to 2 800	1 300 to 2 200

Gates and their ironmongery should contrast tonally with their surroundings.

*Where an approach and or entry point cannot be made accessible then an alternative, of equivalent status and use, should be made available and clearly signposted.*

*Accessible exit points should also be signposted from within the facility.*

*Wherever possible the accessible inclusive entrance should be designated the principal entrance and the facility planned and managed accordingly.*

#### **Gates:**

- **Large Kissing Gate**
- The large refuge (1250mm wide x 1700mm deep) and wide gate should allow most disabled people
- Unless latched this gate is unlikely to stop motor-cyclists.
- The use of a straight forward latched, self-closing gate could be just a functional, cheaper and easier to use for all visitors



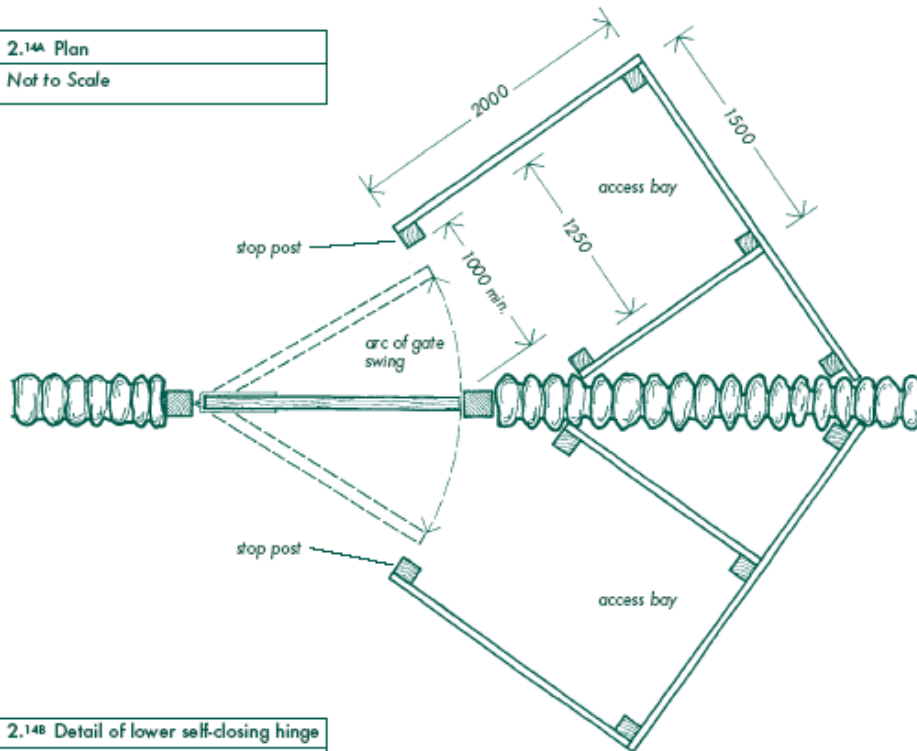
- **An urban equivalent**



- **Countryside for All Gate**

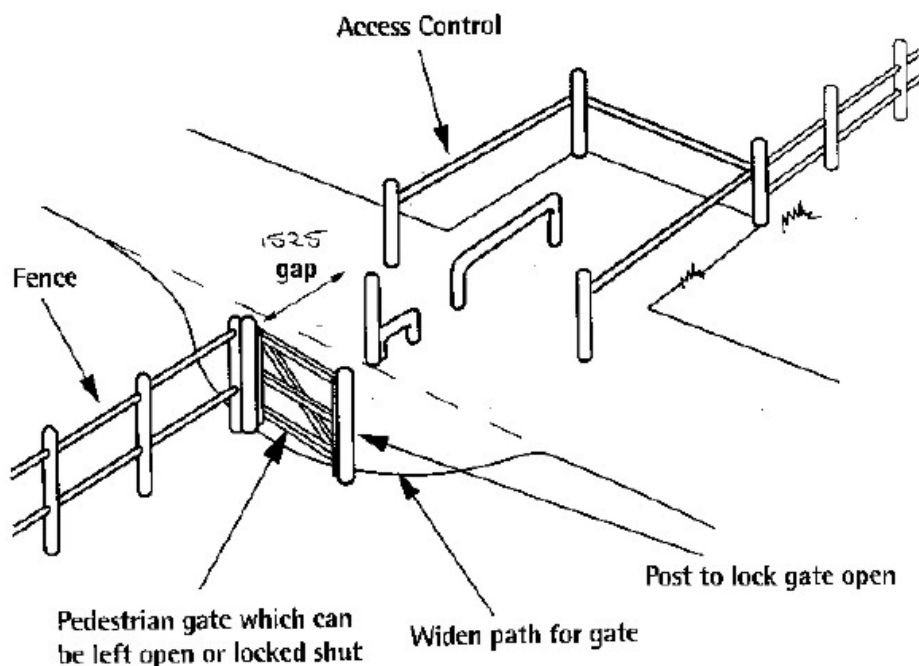
- The size of refuge illustrated (1000mm wide x 1600mm deep) should allow all but the very largest of wheelchairs and powered buggies to pass.
- The gate is self-centring and latched.
- The advantage over other kissing gate arrangements is that wheelchair users can push the gate, do not have to close it behind them and it can be used equally well in both directions.
- This gate requires an easily operated latch that will catch the return of the self-centring gate.
- The footprint of the gate is obviously larger than other designs and may be obtrusive in some settings.

2.14A Plan  
Not to Scale



2.14B Detail of lower self-closing hinge  
Not to Scale

- **Chicane Barrier**
- This design of barrier is intended to allow for access for all legitimate users while being able to exclude motor bikes and other vehicles when needed.
- In its open gate mode it provides good access for all users, however, with the gate closed and locked it will not only exclude motor bikes but also the largest of powered mobility scooters, hand-crank cyclists, tri-cyclists etc





## **3. Paths**

### **Objectives**

- **To provide access for all users through, and between aspects and features of, a facility.**

### **Design considerations**

- **To provide sufficient width and an appropriate surface facilitate access for mobility impaired people.**
- **Equivalent alternative routes where the natural topography or terrain militate against universal access.**
- **To eliminate real and potential hazards along all routes.**
- **To secure real and perceived personal safety**
- **Turning spaces; in order to turn through 90<sup>0</sup> a manual wheelchair user requires a minimum space of 1200x1200mm and to turn through 1800 or 3600 a space 2000mmx2000mm is required.**
- **To distinguish between direct routes and meandering paths.**

### **Provisions**

A hierarchy of paths should be considered:

- **Direct through routes that are clearly defined and accessible to all;**
- **A network of less formal paths that are accessible and enable all users to make use of key facilities; and**
- **Reinforced off path options that stabilise grassy routes to and additional desire spots.**

Where paths provide a useful pedestrian through route they should, wherever possible, be kept open and lit at night.

To enable two wheelchair users to pass with ease a path should be 1800-2000mm wide. Where that is not achievable or appropriate then a width of 1500mm (absolute minimum 1200mm) should be provided, with passing (or turning) places every 50m on level ground.

Occasional narrowing of the access route, the restricted width should be at least 1000 mm and should extend for not more than 6.0 m in length

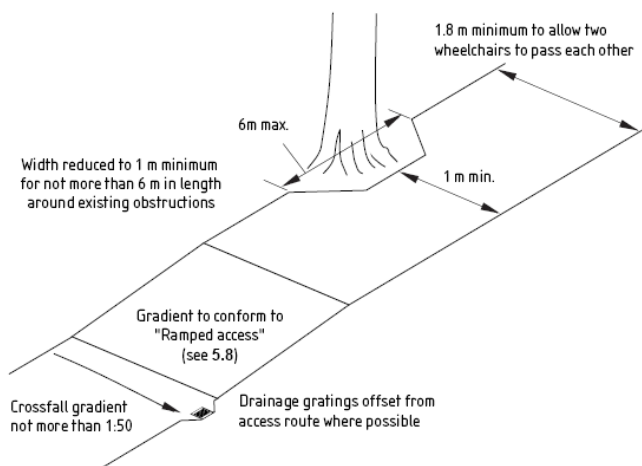


Figure 6 — The design of access routes

Drainage gratings should preferably be positioned beyond the boundaries of the access route. Gratings within an access route should be set flush with the surrounding surface. Slots in gratings should be not more than 13 mm wide and set at right angles to the dominant line of travel. The diameter of circular holes in gratings should be not more than 18 mm. Dished channels should not be incorporated within an access route as they increase the risk of tripping.

A visual (tonal) and tactile difference should be provided between the path and the adjacent land surface treatment. This is particularly important where no tapping edge is provided

Path surfaces should be firm, stable, non-slip (in all weather conditions) and obstacle free.

Material	Dry	Wet	Remarks
Clay pavers/tiles	Low potential for slip	Moderate to low potential for slip	Brick Development Association can advise.
Clay tiles textured	Extremely low potential for slip	Low potential for slip	Suitable for external stairs.
Concrete	A firm stable surface	A lightly textured surface can prevent the surface becoming slippery or gathering moss/algae.	High initial cost but low maintenance
Granolithic	Low potential for slip	Moderate to low potential for slip	Slip resistant inserts necessary if used for external steps.
Mastic asphalt	Low potential for slip	Low potential for slip	

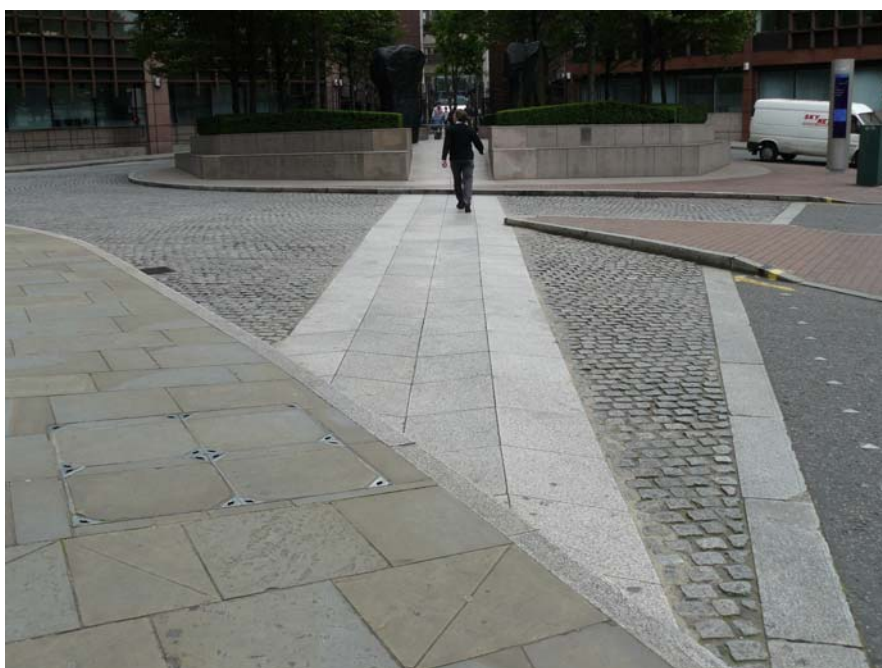
Bitumen Macadam	A firm and stable surface, becomes sticky in hot weather. Pot holes create obstacles.	-	High initial cost but low maintenance.  Weathers well and available in a range of colours.
Profiled ceramics	Low potential for slip	Moderate to low potential for slip	Suitable for use in barefoot areas.
PVC	Low potential for slip	High to moderate potential for slip	
PVC enhanced slip resistance	Low potential for slip	Low potential for slip	Effectiveness of anti-slip properties depends upon even distribution of aggregate.
Resin – smooth	Extremely low potential for slip	High to moderate potential for slip	
Resin – enhanced slip resistance	Extremely low potential for slip	Low potential for slip	Effectiveness of anti-slip properties depends upon even distribution of aggregate.
Rubber	Extremely potential for slip	High potential for slip	
Stainless steel	Low potential for slip	High potential for slip	Potential for slip significantly affected by surface finish.
Terrazzo	Low potential for slip	High to moderate potential for slip	Extremely low potential for slip. Polished Terrazzo should not be used for steps.
Timber – finished	Extremely low potential for slip	High potential for slip	Applies to sealed, varnished or polished timber.
Timber – unfinished.	A firm and stable surface	Algae can build up and create a slip hazard. Warping can also create trip and other hazards.	High initial and maintenance costs.
Stone	A firm and stable surface, pot holes and loose materials on the	Good drainage will prevent surface materials being dislodged.	Regular rolling and infilling required

	surface create obstacles.		
Brick	A firm and stable surface but movement over time can create obstacles and hazards.		High initial costs with significant maintenance implications.
Mown grass	Difficult to achieve firm and stable finish	Will crack in dry conditions and become muddy in the wet creating hazards and obstacles.	Subsurface matting can help. Regular mowing and rolling is essential.

### Cobbles

Cobbles can provide a warn-off surface around potential hazards such bicycle stands, public artwork, floor-mounted signage, planting etc. They should not be used on pedestrian walkways unless the cut, finish, installation and maintenance are of such a quality that the all trip hazards and potential for discomfort underfoot are eliminated.

*In conservation areas, where cobbles may already be in situ, adaptations may be required whereby a section of level York stone paving can be inserted to 1200mm wide to capture the width of wheels on a wheelchair.*

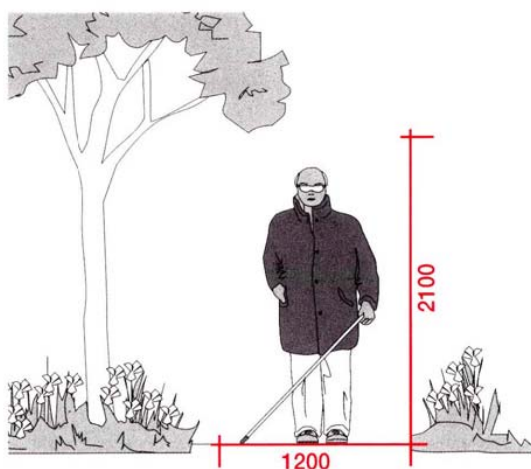


## Workmanship

With the exception of recognized tactile paving, undulations in the surface of paving, whether paving slabs, blocks, bricks or formless materials such as concrete or asphalt, should not exceed 5 mm under a 3 m straight edge.

The difference in level between adjacent paving units or utility access covers and paving units should be no greater than 5 mm. If feasible, the joints between paving units should be flush. Otherwise, the joints should be no wider than 10 mm and no deeper than 5 mm.

## Overhead clearance



Where there is a projection onto a path exceeding 100mm, it should be guarded and that guard should incorporate a kerb that is cane detectable.

Beneath trees, large shrubs or man-made features there should be a clear height of 2100mm for the full width of the path.

## **4. Shared spaces**

### **Objectives**

- **To provide safe and easy access for all users, including mobility, visually and hearing impaired people and cyclists.**
- **To provide for the exclusion or safe integration of occasional motorised traffic**

### **Design considerations**

- **To optimise the use of paths and through routes.**
- **To protect pedestrians, including those with visual, hearing and or cognitive impairments from cycles, mobility scooters and other occasional motorised traffic using the same or an equivalent route.**
- **Respect for the character and heritage value of the space or route.**

### **Provisions**

Shared spaces have become very fashionable of late and appear initially to offer a panacea to the landscape or urban designer; reducing congestion, street furniture and physical barriers. However, unless carefully considered, they expose users with visual or hearing impairments to some very real and perceived dangers. As a consequence those routes often become no-go zones for particular groups.

*Local disabled people involved in the production of this document were also concerned that people whose perception and or interpretation of hazards are impaired would also face an increased risk where surfaces are shared. All felt that clearly segregated routes are essential because, in their experience, claims that cyclists' behaviour is modified in pedestrianised areas are incredible.*

There are no hard and fast answers and no absolute solutions. The specific local conditions of each situation should be carefully considered and any proposal tested in liaison with relevant users.

Some conventions have been developed by, for instance, the Department for Transport, which recommends the clear delineation of pedestrians and cycles:

“The start of the pedestrian part of the shared surface should be identified by a section of corduroy profile tactile paving, laid at right angles to the direction of travel. The corduroy paving should consist of raised flat-topped bars each **5mm** ( $\pm 0.5\text{mm}$ ) high, **30mm** wide and spaced **70mm** apart. The start of the cyclists' part of the shared surface has exactly the same raised bars but laid parallel to the direction of travel.

“These tactile surfaces should be laid at the beginning and end of the shared segregated route, at regular intervals along the route and at any junctions with

other pedestrian or cyclist routes. The surfaces should be **2400mm** long, across the full width of the footway and cycle track.

“The centre delineator strip should be **12-20mm** high (preferably 20mm), **150mm** wide with sloping sides and a flat top 50mm wide. The strip should be finished in white. The delineator strip should run the entire length of the route except at crossing points and places where another cycle track crosses the pedestrian footway to join the route.

“It is useful too if there is some significant tonal contrast between the surface treatments of the cycle and pedestrian paths.

“A cycle symbol marking (in accordance with diagram 1057 of TSRGD) should be provided on the appropriate side at all entry/exit points, and at any junctions with footways or other shared routes. This should be repeated at every **50 metres** along the cycle way”

This convention is now broadly understood and widely deployed but nonetheless depends upon the good sense of users to abide by it. And, there is some evidence that the ‘false’ sense of security it offers exposes the user to greater risk than where greater care is demanded.

Particular care should be taken with the specification of tactile paving, for which there are a few well defined conventions. These are set out in another Department for Transport document: Guidance on the use of tactile paving surfaces available to download from:  
[www.dft.gov.uk/transportforyou/access/peti/guidanceontheuseoftactilepav6167](http://www.dft.gov.uk/transportforyou/access/peti/guidanceontheuseoftactilepav6167).

As well as the common crossing and hazard warning slabs there is some consideration of Guidance Paths.

“The purpose of the guidance path surface is to guide visually impaired people along a route when the traditional cues, such as a property line or kerb edge, are not available. It can also be used to guide people around obstacles, for example street furniture in a pedestrianised area. The surface has been designed so that people can be guided along the route either by walking on the tactile surface or by maintaining contact with a long cane.

“To maximise its effectiveness the surface should be used sparingly and only after local consultation with relevant local groups”

Bearing in mind the objectives and design considerations set out at the head of this section it is recommended that each site be considered on its merits, existing and proposed patterns of use, the management and supervision provided in the area, and with an awareness of the objective and subjective obstacles that people with a range of impairments face; to ensure that gains for one group are not won at the expense of another. Effective solutions are likely to be complex in their formulation if ultimately simple; there is no panacea!

The debate is alive and new research is underway and experimental design solutions constantly being tried and tested. Designers are therefore advised to explore and build on current findings and best practice.

For instance the research and development work being carried out by University College London <http://www2.cege.ucl.ac.uk/cts/arg/pamela2/laboratory/>, in relation to Exhibition Road (South Kensington) <http://www.rbkc.gov.uk/exhibitionroad/shared.html> and by TfL's Shared Surface and BVI165 Guidance and Research Group

Useful references:

'Designing of Disabled People in Homezones' (DPTAC)  
<http://dptac.independent.gov.uk/pubs/pm/homezones/01.htm>

'Shared Use Routes' (Sustrans)  
[www.sustrans.org.uk/assets/files/Info%20sheets/ff04.pdf](http://www.sustrans.org.uk/assets/files/Info%20sheets/ff04.pdf)



## **5. Ramps**

### **Objectives**

- **To manage changes in level in a manner that is safe and accessible for all users**

### **Design considerations**

- **To produce a gradient and route that is accessible and appropriate to the situation.**
- **For some users, a few easy going steps will be more accessible than a ramp.**
- **Any ramp, however shallow, will ultimately be inaccessible if the level change it seeks to overcome is too great.**

### **Provisions**

BT Countryside for All provides the following advice, designed for application in rural locations:

For wheelchair users all paths must be level or ramped however some ambulant disabled people can more comfortably and safely use steps. Wherever possible both should be provided:

Ramps (i.e. gradients exceeding 1:20) need flat landings at least 1200mm wide and 1500mm deep. Landings should be provided for every 750mm of vertical climb.

<b>Gradient</b>	<b>Urban/formal landscapes.</b>	<b>Urban fringe/managed landscapes.</b>
	<b>Maximum distance between landings for 750mm vertical climb</b>	<b>Maximum distance between landings for 830mm vertical climb</b>
1:20	15m	16.6m
1:18	13.5m	14.94m
1:16	12m	13.28m
1:14	10.5m	11.62m

*Local disabled park users, involved in the production of this document felt that, as with buildings the width, length, gradient and resting points are all critical.*

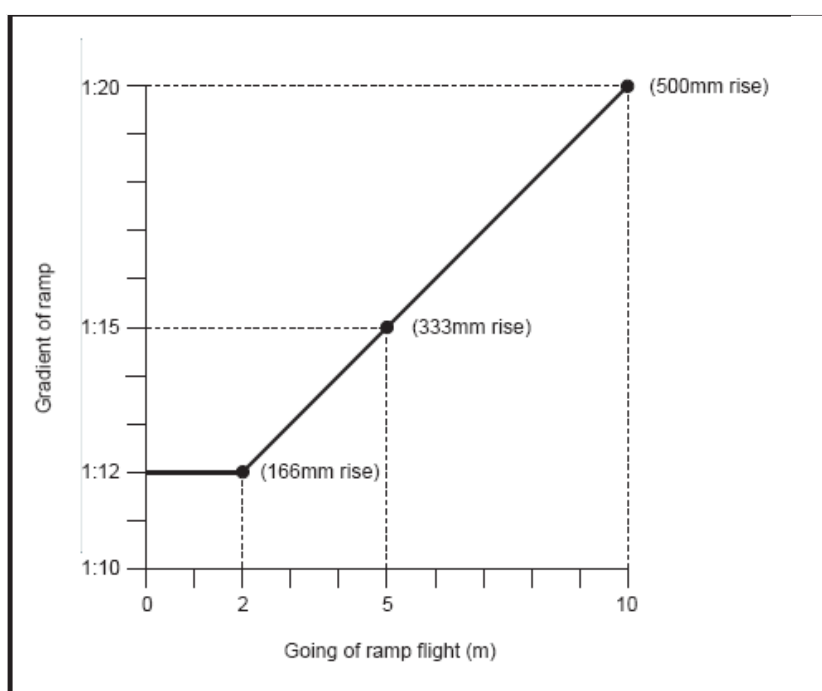
The Approved Document to Part M of the Building Regulations suggests the following as a minimum. These provisions are designed principally for application on the approach to buildings.

It should be noted however that ramps at 1:12 are too steep for many users and where the surface is uneven and or the wheelchair user has bags or battery loaded to the rear then the risk of tipping over backwards is significant.

Going of a flight	Maximum gradient	Maximum rise
10 m	1:20	500mm
5 m	1:15	333mm
2 m	1:12	166mm

**Notes:**

For goings between 2m and 10m, it is acceptable to interpolate between the maximum gradients, i.e. 1:14 for a 4m going or 1:19 for a 9m going (see Diagram 3).



Some flexibility of interpretation might be permissible in some of the borough's wilder open spaces. In those situations, the gradients stipulated above might not be universally achievable. Nonetheless, alternative properly accessible routes that obtain an equivalent experience should be established wherever possible and those routes properly signposted and maintained.

Ramps should be at least 1500mm wide and the surface slip resistant in all weather conditions. Where it is not possible to see the top from the bottom of a ramp, mid flight passing points will be necessary (1800x1800mm).

Where a level change exceeds 300mm, a stepped alternative should usually be provided and where the overall level change exceeds 2m, consideration should be given to the provision of a vertical rise lift. A lift and high level walk way may ultimately be easier to achieve and might impact less on the local ecology.

## **6. Steps**

### **Objectives**

- **To provide safe, convenient and easy access for all users, including mobility and visually impaired people.**

### **Design considerations**

- **To manage a change in level safely and conveniently**
- **To minimise the risk of tripping or slipping**
- **To optimise visibility**
- **To ensure riser and tread are easy going.**
- **To provide adequate and sufficient resting points.**
- **To provide support and guidance**

### **Provisions**

For many ambulant disabled people a short flight of easy going steps is more accessible than a ramp. It is therefore recommended that, wherever a change of level exceeds 300mm, steps are provided in addition to the ramp.

The Approved Document M recommends the following for steps designed as part of the approach to a building. In an urban public realm context it might be reasonably be expected that at least the principal access routes should conform to these provisions.

- a level landing at the top and bottom of each flight;
- the unobstructed length of each landing is not less than 1200mm;
- a 'corduroy' hazard warning surface is provided at top and bottom landings of a series of flights to give advance warning of a change in level.
- no doors swing across landings;
- flights whose surface width between enclosing walls, strings or upstands is not less than 1.2m;
- no single steps;
- the rise of a flight between landings contains no more than 12 risers for a going of less than 350mm and no more than 18 risers for a going of 350mm or greater;
- all nosings are made apparent by means of a permanently contrasting material 55mm wide on both the tread and the riser;
- the projection of a step nosing over the tread below is avoided but, if necessary, not more than 25mm
- the rise and going of each step is consistent throughout a flight;
- the rise of each step is between 150mm and 170mm, except adjacent
- the going of each step is between 280mm and 425mm;
- risers are not open;

- there is a continuous handrail on each side of a flight and landings;
- additional handrails divide the flight into channels not less than 1m wide and not more than 1.8m wide where the overall unobstructed width is more than 1.8m

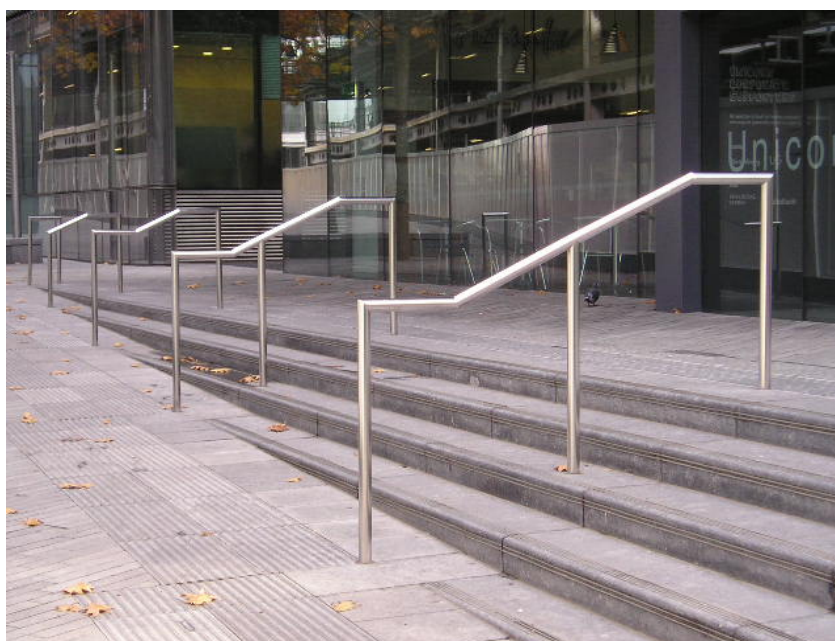
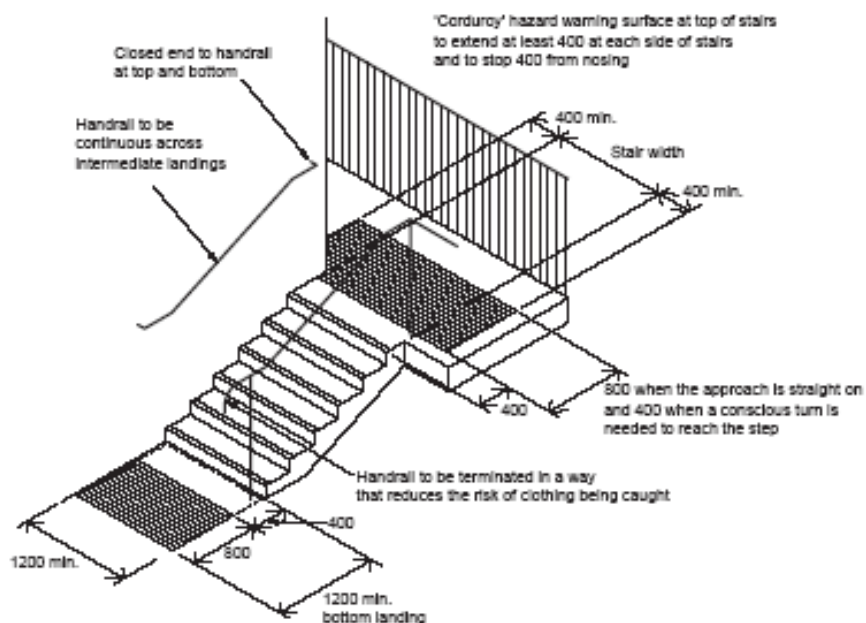
For less formal situations the BT Countryside for All guide advises as follows:

- Some ambulant disabled people will find steps easier than a ramp. So, wherever there is room provide steps in addition to the essential ramp.
- Tactile paving at the head and foot of a flight provides a conventional warning ([www.dft.gov.uk/transportforyou/access/peti/guidanceontheuseoftactilepav6167](http://www.dft.gov.uk/transportforyou/access/peti/guidanceontheuseoftactilepav6167) - provides specification and application details)
- Steps should be at least 1200mm wide
- A clear landing 1500mm deep should be provided at the head and foot of the flight.
- No flight should exceed 2000mm in height (1500mm is the preferred maximum). Intermediate resting points are required where the overall level change is greater.

In more urban and managed environments a lift would be recommended, in addition to the ramp) where the overall level change exceeds 2000mm.

- Single steps should be avoided (with the exception of kerbs)
- All steps should have the same tread depth and riser height
- Treads with protruding nosing and open risers should be avoided as they present trip hazards
- Stair treads should be non-slip in all weather and environmental conditions
- Step nosings should contrast with the treads and risers
- Tapered risers should be avoided as they create trip and fall hazards and result in expansive and messy areas of tactile corduroy paving.

*Local disabled people, involved in the production of this document made it clear that uneven risers and treads present a critical hazard. Nosings should also be highlighted. Handrails are perhaps the most important feature and they should start before and end beyond the end of a flight and be continuous.*



Combining ramp and steps is far from inclusive and creates hazards for users of both facilities. Single steps and tapered risers present a trip hazard, there is a potential collision of users at the head of the flight and no handrail to support or guide ramp users.

Tactile paving has been provided in the example given above but the application is unsatisfactory aesthetically and complicates access along the ramp at the head of the flight.



To resolve uneven falls in the landscape it is preferable to use hard landscaping or feature planting and lower level walls, which can also be used as rest point.

## **7. Handrails**

### **Objectives**

- **To provide safe and easy access for all users, including mobility and visually impaired people.**

### **Design considerations**

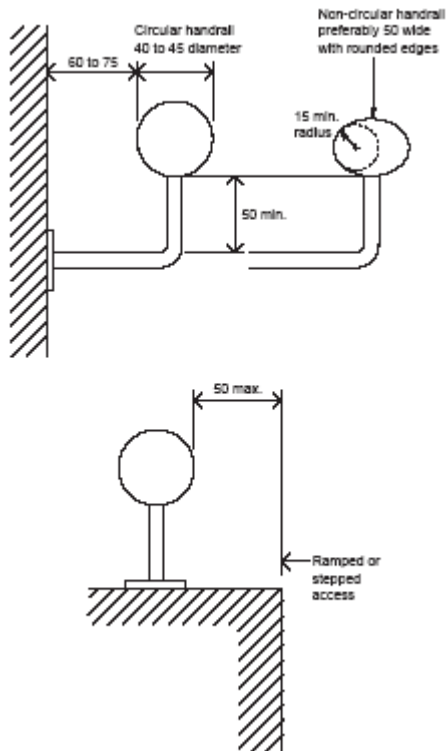
- **To manage a change in level safely and conveniently**
- **To provide support and guidance for all users**

### **Provisions**

The Approved Document M recommends the following for steps designed as part of the approach to a building. In an urban public realm context it might be reasonably be expected that at least the principal access routes should conform to these provisions.

- the vertical height to the top of the upper handrail from the pitch line of the surface of a ramp, or a flight of steps, is between 900mm and 1000mm, and from the surface of a landing is between 900 and 1100mm
- where there is full height structural guarding, the vertical height to the top of a second lower handrail from the pitch line of the surface of a ramp, or a flight of steps, is 600mm, where provided;
- it is continuous across the flights and landings of ramped or stepped access;
- it extends at least 300mm horizontally beyond the top and bottom of a ramped access, or the top and bottom nosing of a flight or flights of steps, while not projecting into an access route;
- it contrasts visually with the background against which it is seen, without being highly reflective;
- its surface is slip resistant and not cold to the touch;
- it terminates in a way that reduces the risk of clothing being caught;
- its profile is either circular with a diameter of between 40 and 45mm, or oval preferably with a width of 50mm;
- there is a clearance of between 60 and 75mm between the handrail and any adjacent wall surface;
- there is a clearance of at least 50mm between a cranked support and the underside of the handrail;
- its inner face is located no more than 50mm beyond the surface width of the ramped or stepped access.

## Inclusive Landscape Design



But that is not to say drama cannot also be achieved and should be encouraged..





In less urban or formal situations the BT Countryside for All guidance recommends:

On bridges and raised boardwalks handrails should be provided. Top, middle and bottom rails should be provided at 1000mm, 750mm and 750mm above the surface of the path. The lowest rail provides physical protection and a tapping edge for cane-users.

## **8. Seats and perches**

### **Objectives**

- **To provide socially inclusive and conveniently located gathering and resting opportunities**

### **Design considerations**

- **To provide a range of seating options**
- **To provide sufficient resting opportunities to encourage greater use of a facility**
- **To promote social interaction and facilitate quiet reflection.**

### **Provisions**

Islington already provides guidance on the design and location of street furniture in its Streetbook, which is available to download from:

[http://www.islington.gov.uk/Environment/Planning/islington\\_streetbook.asp](http://www.islington.gov.uk/Environment/Planning/islington_streetbook.asp)

Key among the principles, set out in that guide, are reducing clutter, aligning features and maintaining the footway clear of obstruction.

Not like this!!

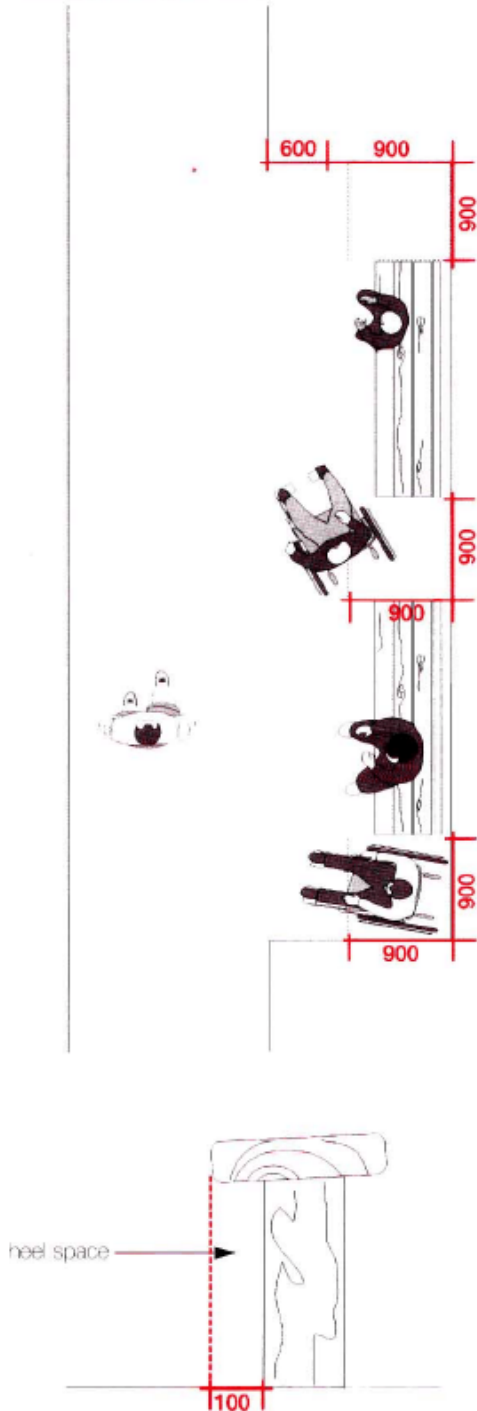


*Disabled people involved in the production of this document were interested in the multifunctional nature of some seating options and did not consider it necessary that all seats be accessible to all people. However, a percentage providing a choice of location should be provided with arm and backrests. An area of hard standing should also be provided beside all fixed seating locations. The practice of locating waste bins beside benches should be discouraged, not only does it obstruct the inclusion of wheelchair users but the bins tend to smell and attract wasps. They should nonetheless be reachable from an accessible path.*

*In addition to the path side resting points accessible seating should also be provided, via secondary accessible routes, at picnic and other activity areas.*

The BT Countryside for All guide provides the following advice:

Resting points (plan view):



N.B. All measurements are in millimetres

- Seats and perches should be placed at regular intervals along paths. The distance between resting points should be no more than 100m.
- Seats should be located where there is something to look at and preferably where there is some shade and or shelter.
- Resting points should be visible, one from the next.
- Consideration should be given to the provision of a tonally contrasted or tactile clue to alert visually impaired visitors to the seat's location.
- Seats should be set back from the main route by at least 600mm.
- A surfaced resting place, at least 900mm square should be provided next to seats to enable wheelchair users to sit beside family or friends.
- Seats should be 450-520mm high and perches should be 500-750mm high. It is best to provide both. Children may also benefit from seats at around 350mm above ground. All seats should be slightly sloped to facilitate drainage.
- Heel space of at least 100mm should be provided that will enable people to rise to their feet more easily.
- The surface under seats should be firm, stable and flush with the pathway.
- Some seats should have backs and armrests for additional support.
- Some seats might incorporate signage or other way finding advice.

## **9. Planting**

### **Objectives**

- **To provide an inclusive experience of the natural world in an urban context.**

### **Design considerations**

- **To engage all the senses**
- **To enhance way finding around a facility**
- **To provide inclusive play opportunities**
- **To provide inclusive community growing opportunities**
- **To minimise potential hazards.**
- **To provide shelter and shade to seating and gathering points**
- **To produce sustainable planting schemes**
- **To promote biodiversity**

### **Provisions**

#### **Engage the senses:**

In general it will be preferable to 'enrich the overall landscape' rather than to produce 'special' features.

To that end the Sensory Trust advises:

"It is worth remembering that there are many sensations we experience that are not formally categorised as one of the five senses, for example gravity, temperature, change, space and enclosure. The following lists are intended to offer some ideas that highlight the many different sensory experiences".

- **Looking and seeing – consider:**
  - Colour – themes, ranges and changes
  - Tones that enhance visibility and legibility
  - Texture – interest and contrast.
  - Pattern and shape
  - Movement
  - The effects of seasonal and climatic changes.
- **Listening and hearing – consider:**
  - Sounds created by the environment and by the user
  - Vibrations and percussive sounds.
- **Feeling and touching – consider:**
  - Tactile experiences that warn off or provide way finding clues

- Shapes that are bold or invite further investigation
- Temperature, the heat of the sun, shelter from the wind and or shade from the sun.
- Shelter from or exposure to the elements
- The density of planting underfoot.
- **Smell, the olfactory senses – consider:**
  - Scents (that fill the air, require investigation and or are released on contact)
- **Taste – consider:**
  - Safe exploratory experiences
- **Orientation, gravity and balance – consider:**
  - Site lines
  - Landmarks
  - Way finding clues
- **Moods – consider:**
  - Quiet and calming areas
  - Vibrant and stimulating
  - Contrast and or continuity

For more detailed technical advice see:

[http://www.sensorytrust.org.uk/information/factsheets/sensory\\_ip.html](http://www.sensorytrust.org.uk/information/factsheets/sensory_ip.html)

## Planting for Inclusive Play

Planting can also be used to great effect in the provision of inclusive and imaginative play opportunities. The following are taken from the KIDS inclusive design good practice guide.



In this adventure playground, the landscaped change in levels has been exploited to produce a step free approach to a high level boardwalk.

Passing places are also provided that double as look out posts or as landing from which to slide.



Imaginative planting can also create opportunities for fertile minds



Planting can be used to contain and divide activities while still providing a discreet but watchful view.

For more advice on the design of designated play facilities see the appendix to this report and specifically:

<http://www.communities.gov.uk/publications/communities/developingaccessibleplay2> - for ODPM good practice guide

<http://www.rospa.co.uk/playsafety/dda.htm> - ROSPA's approach to and advice on inclusion – a first principles approach.

'Planning and Design for **Outdoor Sport and Play** Fields in Trust (2008) See <http://www.sportsandplay.com/module/news/display/newsdisplay.aspx?news=3>

## Community Growing

Community gardens should not only be accessible to visitors but should be designed to facilitate the involvement of the whole community.

Care should be taken to maintain adequate circulation routes between beds and features (see section 3 – paths) and the beds themselves should be designed and constructed, taking into account the reach ranges of people with mobility impairments.

The following is taken from BS8300:2001 ‘Design of buildings and their approaches to meet the needs of disabled people.’

Person	Access	Reach angle	Height (H)		Depth (D)	
			Comfortable mm	Extended mm	Comfortable mm	Extended mm
Wheelchair user	Front	+70°	1 000	1 150	90	120
		horizontal	(750)	(750)	180	230
		-24°	650	650	120	200
	Side	+70°	1 060	1 170	100	135
		horizontal	(750)	(750)	220	310
		-24°	665	630	165	230
Ambulant disabled	Front	+70°	1 500	1 625	200	250
		horizontal	(850)	(850)	280	400
		-24°	750	700	180	310

NOTE 1 Dimensions have been rounded to the nearest 5 mm.

NOTE 2 Dimensions in brackets are for the horizontal reference plane.

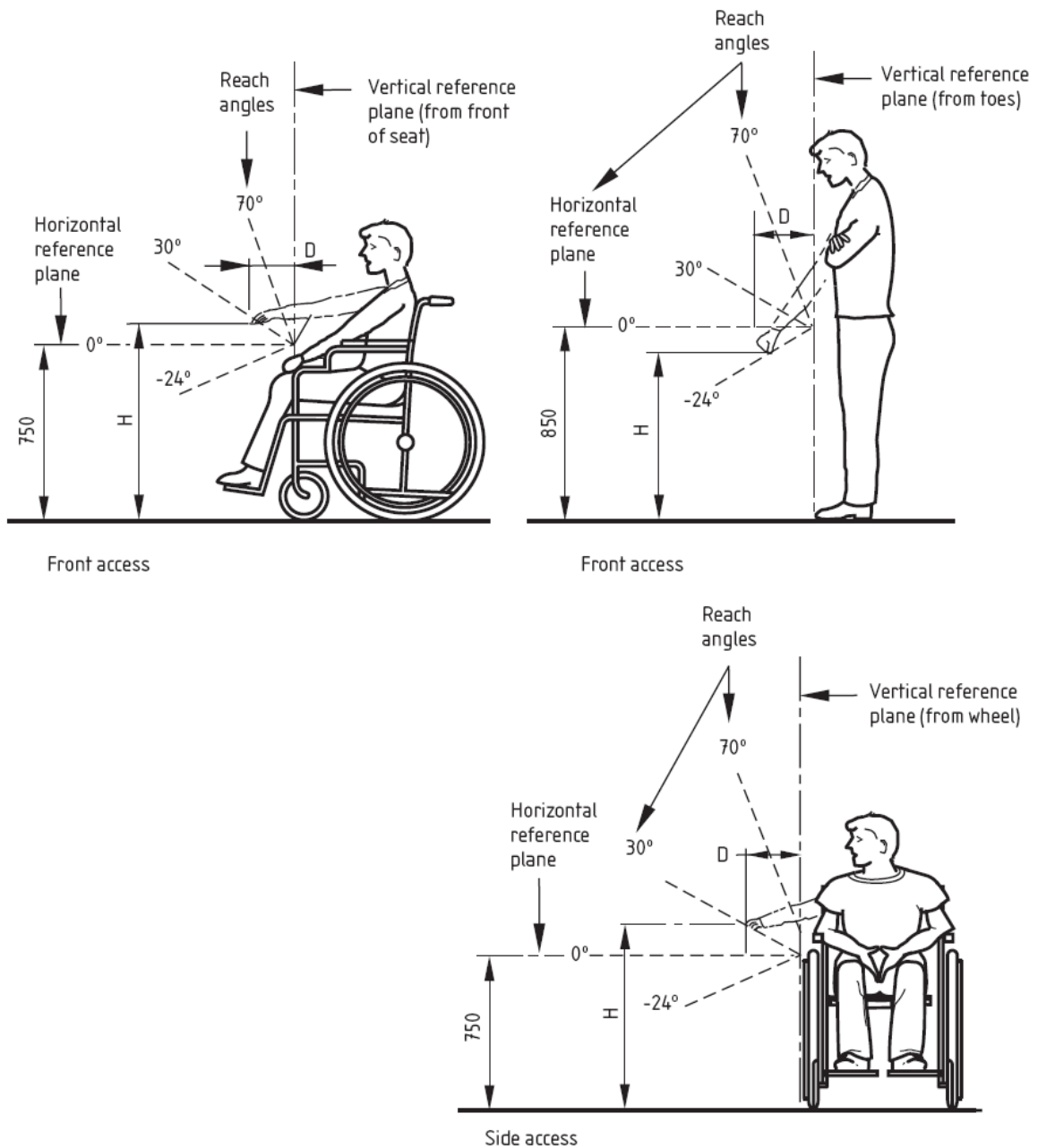
NOTE 3 It is assumed that any kneehole allows full reach capabilities.

NOTE 4 Maximum heights are measured from the 70° line; minimum heights from the -24° line (see Figure D.3).

NOTE 5 For some activities, the recommended dimensions in the standard are extended beyond those resulting from the research trials on the basis of accepted practice.







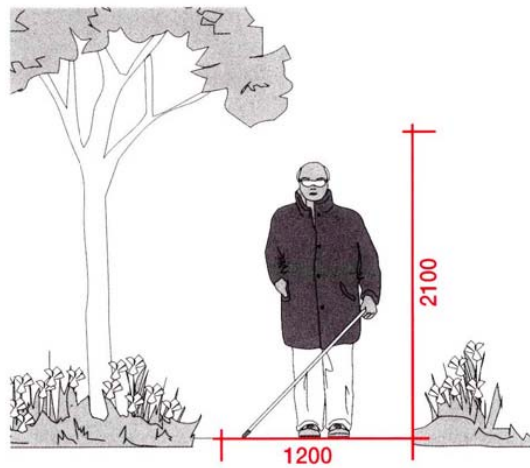
NOTE 1 Horizontal and vertical dimensions are measured from where the fist passes through each reach angle.

NOTE 2 Maximum heights in Table D.2 are measured from the 70° line; minimum heights, from the -24° line.

**Figure D.3 — Reference planes, reach angles and definition of height/depth**

## Hazards

When designing planting schemes care should be taken to ensure paths are and can easily be maintained clear of obstruction.



Where there is a projection onto a path exceeding 100mm, it should be guarded and that guard should incorporate a kerb that is cane detectable.

Beneath trees, large shrubs or man-made features there should be a clear height of 2100mm for the full width of the path.

Designers should also be aware that some people will use the edge of a path as a guide. Contact with planting that flanks a route might be pleasurable but care should be taken to avoid spiky or otherwise hazardous species in those locations.

## 10. Inclusive play

### Objective

- To produce play opportunities that are inclusive and celebrate diversity
- To produce environments that promote free play

### Design considerations

- To engage all the senses
- To present physical and sensory challenges whilst managing appropriate risks.
- To take into account the interests of all children, parents and carers including those who are disabled.

The Department for Children Schools and Families (DCSF) has produced a National Play Strategy (<http://www.dcsf.gov.uk/play/downloads/PlayStrategy.pdf>). The department also provides capital and revenue funding for play through the Fair Play Playbuilder programme, which requires that “sites are open-access and free of charge. They must also ensure better access and experiences for disabled children across all the sites that are developed”. To that end it endorses a number of useful guides including ‘Design for Play’ - see <http://publications.dcsf.gov.uk/eOrderingDownload/Design%20for%20Play.pdf> and ‘Managing Risk’ - see <http://publications.dcsf.gov.uk/eOrderingDownload/00942-2008DOM-EN.pdf>, both produced by Play England.

Islington’s own Play Strategy sets out three overarching principles: to develop the provision of good inclusive and accessible play; to reduce barriers to free play; and to involve children and young people in the planning and management of play projects.

The principle of Free Play (free form and imaginative as well as free of charge) is one that has been developed and promoted by a number of play organisations as one that provides for inclusion, nurtures and celebrates diversity. It should open rather than direct or constrain opportunities. It should enable individuals to explore their abilities and imagination, to take risks and to learn through experience. Free play spaces should also make use of natural elements to engage all the senses, be sustainable, appropriately maintained and allow for change over time.

Both the DCSF and Play England refer, on the specific issue of inclusive design to the KIDS publication ‘**Inclusion by Design**; a guide to creating accessible play and childcare environments, published by the KIDS Playwork Inclusion Project’ an extract from which is printed below. The document is

available the Playwork Inclusion Project (see <http://www.playwales.org.uk/downloaddoc.asp?id=224&page=532&skin=0>)  
A summary checklist is also available to download at:  
[www.kids.org.uk/files/102530/FileName/PIPBriefingFeb09.pdf](http://www.kids.org.uk/files/102530/FileName/PIPBriefingFeb09.pdf)

The (KIDS) study findings are summarised according to the six principles of Inclusive Design as defined by the Disability Rights Commission, and provide relevant food for thought and development.

- Ease of use
- Freedom of choice and access to mainstream activities.
- Diversity and difference
- Legibility and predictability
- Quality
- Safety

### **Ease of use**

*Facilities that are easy to reach, to get around and to use.*

KIDS explored 'destination' and 'local facilities'; some that were well connected by public transport and or safe to access on foot or by private vehicle.

It was interesting how many basic principles (adopted in relation to play buildings) were forgotten outside but refreshing to find soft landscaping used to effect in the management of levels and natural and recycled materials used imaginatively.

### **Freedom of choice**

*Equipment and activities that could be used in different ways by different children, the effective use of enabling equipment and specific management procedures that support the inclusion of disabled children.*

KIDS found a fantastic range; bikes and trikes that were ridden or pushed, multitude swings, boats and cradles that enable children to play together or alone and indoor activities that could be entered into independently or with help. Much of the equipment was built and activities devised on site according to recognised needs and wants.

Children with physical disabilities, in the play environment, might want to get out of their wheelchairs and or abandon walking aids to play; a freedom that should be, and was in many cases, facilitated and factored into the design of play equipment and activities.

### **Diversity and difference**

*Spaces, places, equipment and activities that enable children to explore their uniqueness; that provide the opportunity for private play; and or effectively draw in marginalized individuals.*

KIDS found wonderful hiding places, designed just enough to spark the imagination.

The manipulations of scale, pattern and texture, and some interesting modern interpretations on the traditional sand and water options, all provided for variety and personal interpretation.

Sensory pleasures are not restricted to those with specific impairments!

### **Legibility**

*Site layouts that are easily understood and navigated without the use of formal signage.*

KIDS found some impressive landscaping that maintained necessary sightlines without diminishing the sense of adventure and intrigue.

High spots and look out posts had been exploited, were accessible and provided a space to stay and play.

Boundaries between activity zones were handled in a variety of interesting ways and in some cases were enhanced by additional scented or tactile clues!

Where more detailed information was needed KIDS also found some imaginative non-verbal, non-text methods for conveying complex messages.

### **Quality**

*Good looking facilities and adaptations demonstrate that aesthetic and functional requirements are not mutually exclusive!*

KIDS found some beautifully crafted pieces of equipment; artworks that delight the senses that were produced collaboratively with the children; and some fabulously inventive uses for recycled materials

### **Safety**

*Secure but accessible entrances, appropriate levels of supervision and sensible risk management procedures.*

KIDS found an understanding that (for all children) within an essentially secure environment, a level of risk and even injury is, important and possible; not a principle that, arguably, is acceptable in any other context.

KIDS found equipment and activities where the level of risk/challenge could be varied and individuals step up to the challenge.

### **Consultation**

*Key to the process of inclusive design KIDS looked at consultation with children and families on the design and management of each of the study's play facilities.*

KIDS found evidence of real energy and commitment; children were engaged through workshops, interactive exercises, competitions and enticing visualisations.

Information and events were organised to be as accessible as possible but at the same time specific and targeted approaches were made to local disability organisations and SEN schools.

In one area the exercise took 3 years but secured sufficient funding as a result to create the playground of their dreams, somewhere else a weekly meeting run by the children decides the programme of activities. Both were inspiring in their own way and have achieved the level of ownership and pride in an inclusive facility that ensures its success.

For further information and advice on and good practice examples of inclusive consultation exercises, **CABE** has produced 'What would you do with this space? - Involving young people in the design and care of urban spaces', which can be downloaded from: [www.cabe.org.uk/AssetLibrary/2317.pdf](http://www.cabe.org.uk/AssetLibrary/2317.pdf)

In Islington it is also recommended that designers consult with relevant play professionals. For public sector schemes advice is also available from the Play Strategy Partnership (contact [Christine.Lehmann@islington.gov.uk](mailto:Christine.Lehmann@islington.gov.uk)) and for third sector development an equivalent service is provided by Islington Play Association.

**In the production of this guide the views of disabled students (attending Richard Cloudesley School) were sought.**

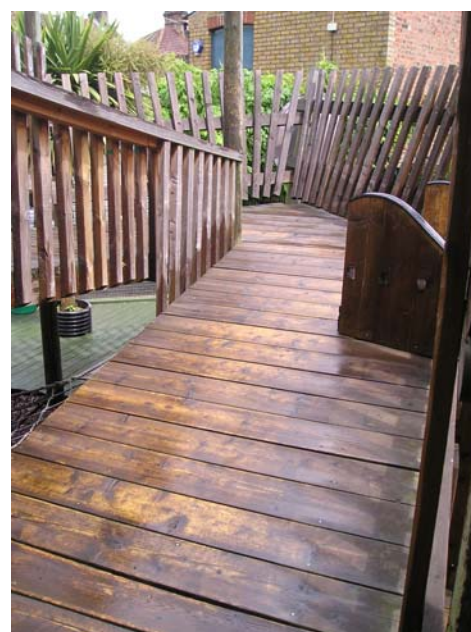
#### What the young people like:

- For two of the young people, playing ball was the most fun a playground offered.
- The opportunity to socialise in the park was important. Hard landscaped areas that enable a group to gather casually in the shade, surrounded by attractive planting, provide the necessary flexibility.
- Water jets were very popular, particularly where the jets form alternating walls of water, a type of maze.
- Some swings with supported backs and straps are good and also ground level wheelchair-accessible roundabouts.

- Circular swings (see below) are popular, in part because two or more children can swing together. It can also be fun to push and turn the swing for others or even empty. This item inspired the suggestion of a ground level ro-ro equivalent.



- Where the slide is wide enough for two that also enables some children to use it accompanied by a friend or held/supported by an adult.
- The young people were thrilled, slightly scared but very excited by the opportunity and experience of crossing a wobbly bridge and mounting a wooden structure, which is essentially a long switchback ramp, rising to around 30ft.



- The young people loved the hidey hole beneath the walkway. It was accessible to them all and the salvaged piano strings and revolving percussion instruments provided real interest and amusement.



- The creative use of salvage to produce sculpture and general decoration was much appreciated. Distorting mirrors, particularly overhead, provided a fascinating diversion.



Suggestions made by the young people:

- All were keen to see some sort of wheelchair accessible see-saw.
- A wheelchair accessible maze (hedge or water walls) – something like 'Appearing Walls', installed on London's Southbank.



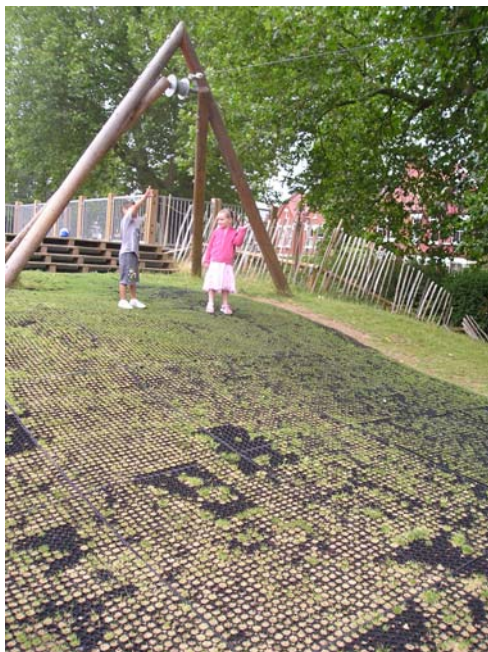


- These more conventional water features are also accessible to the majority, are easier to maintain and cleaner than the traditional paddling pool.



- Swings and see saws with supported seats and straps.

- Rip wire cum chair lift. This example at Myatt's Fields uses reinforced grassy inclines rather than stepped platforms to access the ride:



- The use of rubber matting to secure a durable grass surface is welcome in part because it improves the accessibility of the grassy areas. Rather than simply reinforce areas of heavy use around specific pieces of equipment, continuous routes should be provided across the grass between key features of a park or play area. It should be noted that the holes within the matting will trap cigarette ends, glass and other waste unless regularly and well maintained.
- Timber decking can also be useful but, as described above should serve all key features. Gravel and woodchip are hopelessly inaccessible to those with mobility impairments



- Parallel areas ie wheelchair accessible activities alongside the mainstream equivalent.
- Super-size board games, for instance 'snakes and ladders' or 'pairs', where players physically move from one square to another or one card to another. Rather than apply a paint finish, game boards could be created from different coloured safety surface.



- Fixed table tennis tables are popular and accessible to wheelchair users. However, a fixed net limits the table's use. A removable net or a neighbouring/parallel table without a net, to provide a choice, would be preferable.



- Obstacle courses and or simple shapes to follow incorporating different tactile surfaces.
- A rotating swing onto which a wheelchair user could wheel directly from ground level.
- Planting and accessible routes around the park that would facilitate game of hide and seek.
- Spring platforms that would be accessible and safe for wheelchair users.

- An accessible drinking fountain
- Accessible toilets and changing areas.
- Where toilets are provided with mobile hoists then it could also be used to enable wheelchair users to transfer from their chairs to a swing or other piece of equipment.

Talking specifically about the advice LBI should give park and playground designers, all agreed that the Council should advise designers to discuss their proposals with disabled children.

### **Safety versus risk, fun, challenge and danger!**

**KIDS** and **CABE** have established useful principles and highlighted examples of good practice. At the other end of the scale **ROSPA** sets out a bottom-line checklist to ensure the safety of any play facility. See <http://www.rospea.co.uk/playsafety/dda.htm> and below:

### **Car Parking**

1. Where car parking space is available at least one (on road) or two (in car park) designated wide spaces should be provided for use by disabled persons
2. Surfacing of the car park area should be suitable for wheelchair use
3. Slope of car park by special bays should not exceed 1:12.
4. Designated parking bays should be as close to the access path to the play area as possible

### **Paths**

1. Paths should be a minimum of 1.2m wide and have a maximum slope of 1:12 with a maximum camber of 1:40
2. Path surfaces should be suitable for wheelchairs in all weather conditions
3. Passing spaces (1.8m wide) should be provided on longer paths
4. Where a path is longer than 50m a seat suitable for those with mobility difficulties and a wheelchair space should be provided every 50m.

### **Gates and fencing**

1. Gates should be provided to keep the area dog free (with the exception of guide dogs) They should have an open width of at least 1m. There should be at least two gates.

2. Gates should have low resistance against opening. Gates should be self closing with closure time of at least 3 - 5 seconds
3. Dog grids, styles, kissing gates etc are not suitable.
4. If latches are provided they should be at 900mm height. (Where the area is known to be used by autistic children a second catch should be provided where practical at a height only accessible to adults). They should be smoothly free turning and well maintained for low friction operation
5. Fencing should be provided to keep the area animal free (with the exception of guide dogs)

### **Seats**

1. Seating should be provided on the play area
2. At least one seat should incorporate arm rests to aid those with walking difficulties to get up.
3. Where picnic type benches are provided they should incorporate provision of wheelchair access to the table.

### **Internal Surfacing**

1. A network of unobstructed paths should connect directly with all entrances and exits and main activity centres going around and/or through pieces of equipment.
2. Paths should be stable and suitable for wheelchair use (not sand, gravel, bark etc) and should be slip resistant without gaps in joins etc. Edges of paths should be in good repair.
3. Slopes should not exceed 1:15 (ideally not more than 1:20)
4. Any sudden changes of level should be indicated by change of colour or surface texture (for those with visual impairment) and ramps for wheelchair users.
5. Where there are changes in level a hand rail (max 60mm diameter) should be provide at 650mm-800mm height)
6. Any ramps etc should have a "non slip" surface
7. Different colours can be used to indicate different functions or areas (Bitmac and paving can be coloured as can rubberized surfaces).
8. Different ground textures can also be used for identification
9. Where practical provision of "tapping" surfaces should be provided for use by those with visual impairment. Fences etc provide a surface against which a stick can be tapped. Changes in sound from ground

surfaces can also provide sound clues as to routes to be taken (Grass sounds differently to Bitmac for example).

10. Use of different textures can also provide good communication for those with visual impairment (and also stimulate the senses). Where wooden equipment is used different carvings (animal footprints etc) could be used to differentiate different routes etc.

## **Equipment**

1. Equipment should be designed with disabled children in mind and should provide opportunities for disabled children to experience as many basic activities as possible
2. Play equipment should encourage independence and exploration and provide a level of challenge
3. Play equipment should not look as if it was designed specifically for use by disabled children
4. There should be sufficient space between equipment to allow free access for wheelchairs etc.
5. Use of equipment which provides the opportunity for sound (musical tubes, speaking tubes etc) is particularly suitable for those with visual impairment.
6. Water features such as paddling pools etc should have slip resistant surfaces and gentle slopes to allow disabled children to completely enter the pool. There should be clear visual/surface changes around water areas to help identify them to those with visual impairment.

## **Surfacing**

1. Safer surfacing should allow free access to wheelchairs. This normally means tiles, wet pour, or grass matting type of surfacing. Carpet surfacing, if worn or in poor condition, may have excessive resistance to wheelchairs.
2. Loose fill materials (bark, wood chip, engineered wood fibre) may allow passage for short distances (2-3m).
3. Any raised pits should have adequate ramps for wheelchair users provided.
4. In areas regularly used by particularly vulnerable disabled children the surfacing should be tested to ensure that when installed on site it more than meets the HIC requirements of EN1177.

**Further reading.**

- Relevant British Standards see [www.rospa.com/playsafety/info/10\\_en1176.htm](http://www.rospa.com/playsafety/info/10_en1176.htm)
- ‘Developing Accessible Play Space: A Good Practice Guide’, see: [www.communities.gov.uk/publications/communities/developingaccessibleplay2](http://www.communities.gov.uk/publications/communities/developingaccessibleplay2) -
- The Mayor’s SPG ‘Providing for Children and Young People’s Play and Informal Recreation’ see: [www.london.gov.uk/mayor/strategies/sds/spg-children-recreation.jsp](http://www.london.gov.uk/mayor/strategies/sds/spg-children-recreation.jsp)

## **11. Lighting**

### **Objectives**

- **To provide a safe environment for all users after dark.**

### **Design considerations**

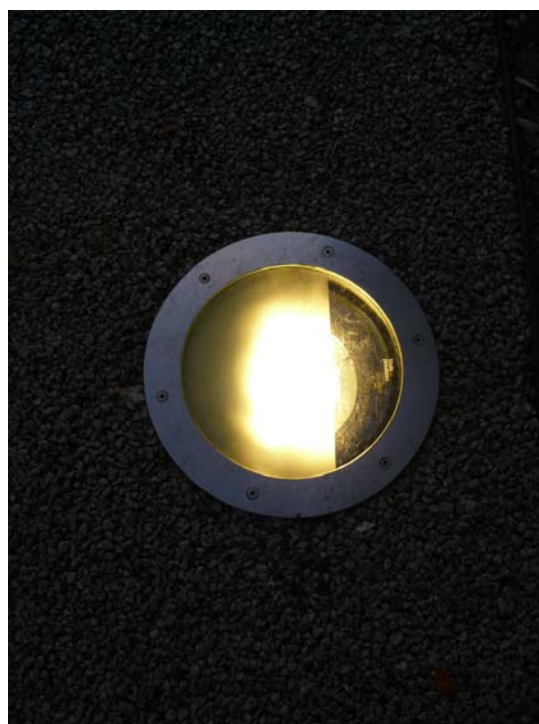
- **To enhance way finding**
- **To avoid dazzle and glare**
- **To avoid deep shadows and pooling of light.**

### **Provisions**

Well-designed lighting schemes are critical in determining the accessibility of an environment to people with a visual and/or hearing impairment. Too little light and clues are lost, and tonal contrasts lose their distinction. Too bright a light and the glare becomes a menace, throwing spaces into silhouette and shadow, obliterating vital details. Dramatic changes in lighting levels will also have a 'blinding' effect; gradual change enables the eye to adjust to a new environment and to pick out necessary details.

There are various pieces of software (e.g. REALity [www.lightingreality.co.uk/](http://www.lightingreality.co.uk/)) that enable designers to model, assess and adjust a lighting scheme and that could be used to facilitate effective participation with disabled users. The Public Lighting team within the Public Realm division of the Council can, for a fee, provide a computer modeling service. Contact [public.realm@islington.gov.uk](mailto:public.realm@islington.gov.uk) for a quote.

Floor mounted up-lighters should generally be avoided as these tend to shine into the face of on-comers, to dazzling effect! They tend also to produce a very uneven quality and intensity of light with associated areas of deep shadow. Any use of such lighting needs to ensure that the bulb is sufficiently diffused; the glass acid etched or sand blasted and the bulb concealed by an angled louvre.





CIBSE (Chartered Institute of Building Services Engineers) issues the following advice:

- For pedestrian areas, low level lighting by means of bollards which do not emit light above the horizontal will often find favour with people who are visually impaired because it provides light on the ground without glare.
- Ensure that stairs, ramps and changes of level are lit so that they can easily be identified when approaching in either direction.
- Ensure that lights over entrances and exits do not emit glare to those entering or leaving the building. Unshielded bulkhead luminaires will not normally be suitable.
- Consider the need to provide a gradual reduction in illuminance from inside to outside at night. This will allow the extended adaptation times of people who are visually impaired to be accommodated.
- In car parks serving shopping malls or other external areas, ensure that pedestrians leaving the shops and moving towards the car park do not suffer from glare from high mast or roadway type lighting of the parking areas.

See also [www.dft.gov.uk/rmd/project.asp?intProjectID=10040](http://www.dft.gov.uk/rmd/project.asp?intProjectID=10040) for updates on current research into inclusive lighting design.

## **12. Public Art**

### **Objectives**

- **To provide added interest and enhance the environment for all users.**

### **Design considerations**

- **To engage all users with the piece**
- **To engage a variety of senses**
- **To install work that speaks to the diversity of our communities**
- **To ensure that no piece presents any hazard**

### **Provisions**

*Disabled people involved in the production of this document considered that art works are most effective when they are multifunctional and where all possible conflicts of interest have been taken into account.*

*Suggestions were made that works of art might appeal more readily to a more diverse audience where appropriate and sustainable technologies are employed to power moving parts, heat, light and sound installations.*

For detailed advice on access to and interpretation of art works see Arts Council England's 'Disability access; good practice guide for the arts', available to download at:

[http://www.artscouncil.org.uk/publications/publication\\_detail.php?browse=archive&id=165](http://www.artscouncil.org.uk/publications/publication_detail.php?browse=archive&id=165)

It includes the following advice:

“Access considerations are often overlooked for public art. The public will experience and interpret the artwork in ways that are individual to the person, and often not imagined by the artist. For instance, a wheelchair user will experience the artwork from a seated position. Consideration should be given to the experience of people with a range of physical, sensory, and intellectual needs, to ensure that the artwork is accessible. If you exhibit public art in or around your building, you need to have:

- a variety of interpretative elements such as large print and Braille information, tactile signage, and audio guides
- considered the inclusion of sensory elements to enable the work to be experienced through hearing, sight, touch and smell

It is important that all art works are safe to the wider public. Visually impaired people may wish to touch the art work, for instance, even though this may not have been the artist's intention. The art work and the approach to it will also need maintaining, if it is to remain in a safe condition. You will need to consider:

- the materials to be used for the art work itself, and any risks associated with those materials
- the routes to and from the art work
- lighting
- the maintenance of the piece and its site. (For external sites, for instance, who will ensure that leaf fall is regularly swept away from paths so that it does not impede access and become a danger to visually impaired people, or that surrounding branches or plants do not impede the approach to the work or obscure interpretation panels)

In fact, since by their nature public art works have a high profile, much can be done through public art commissions to raise the profile of disabled artists and to educate the wider public of the positive contribution disabled people make to society.



These examples perhaps give food for thought. Are they inclusive or have needs of particular groups been overlooked?

Some effort has been made to identify these features within the landscape but the textured paving used is not effectively ‘tactile’, does not conform to recognised conventions, and so will not be understood by visually impaired people. The result is hazardous; particularly in a busy tourist area! That is not to say the artistic intention could not have been realised in a more inclusive manner.

*Disabled people involved in the production of this document judged the problems associated with these examples completely avoidable, had the aesthetic and accessibility issues been considered simultaneously from the outset and the development tested in liaison with disabled people.*

Public art also presents an opportunity to combine aesthetic interest with practical purpose, like seating or free play facility.

## **13. Way marking**

### **Objectives**

- **To enable users to navigate through and explore the open spaces within the borough comfortably and safely.**
- **To enable users to safely and effectively navigate the pedestrian environment throughout the borough.**

### **Design considerations**

- **To rationalise layouts and specify planting, general landscaping, lighting, materials and finishes to enhance the ability of users to find their way to and through a space.**
- **To communicate information through diverse and multiple channels**
- **To minimise the use of text based signage but wherever necessary that signage to be accessible to all users.**

### **Provisions**

Key to the accessibility of an environment is the ease with which it is negotiated, how information is communicated and the means by which directions are given and understood.

It is important that all users, including those with sight and/or hearing impairments and those with learning difficulties can find and make use of facilities independently and are confident of a safe escape.

Suitably designed and located signage is clearly essential but it should also be noted that many other design features contribute to, or detract from, an individual's ability to read a space. The facilitation of strategic sightlines, the use of colour, tone, landmarks and design of planting schemes can provide vital clues but equally, without careful consideration, may further disorientate the user.

No single medium can communicate sufficient information effectively to all users. Individuals will pick up numerous clues, order, interpret and draw their own conclusions from them. It is important then that messages are consistent and the modes of communication complimentary.

- **Materials and finishes**

The choice of materials underfoot or beside a route can lead the way or provide a hazard warning.

Some visually impaired people use the effect of reflected sound to orientate themselves and navigate a route. Designers have the opportunity to enhance those abilities and facility.

High gloss, polished finishes should also be avoided as the reflections they create produce an optical illusion that can be disorientating for people with visual impairments.

- **Colours and contrast**

A bold contrast in tone between key elements of the environment provides a useful clue to many people with a visual impairment who will use these differentiations as a navigational guide. Incidental objects and potential hazards within circulation areas might also be highlighted in this way.

Design and or planting decisions of this sort should also be considered in terms of colour blindness. This tool can be useful:  
<http://colorshemesdesigner.com/>

- **Signage**

Location: Signs are most usefully provided at nodal points; entrances and junctions. Signs should also be provided at key destinations and particular facilities.

Individual routes should be readily identifiable one from another. A clear indication of any obstructions to access should be provided from the outset of any given route.

Signs may be located overhead so that they can be read from the line of travel (a minimum clear head height of 2300mm above ground should be maintained). However, they should be supplemented by wall-mounted signage at eyelevel that can preferably be read through touch. Freestanding signs and fingerposts should be avoided wherever possible since they add to the number of potential obstacles and hazards along a route.

Signs should also be well lit and also positioned to avoid reflections from artificial or daylight sources.

Height: Wall mounted signs should be mounted between 1400 and 1700mm above ground. However, interactive signs should be mounted between 900

and 1200mm above ground to be within reach of the majority of wheelchair users.

**Format:** Plain English should be employed at all times, using short words and sentences but avoiding abbreviations or acronyms. Words and lines should not be placed too close together. Text should be ‘capitalised lower case’ i.e. lower case but the first letter of a sentence or name in upper case. The font should also be ‘sans serif’ i.e. without unnecessary curls or flourishes. Helvetica, Arial, Futura or Avant Garde are commonly used.

Where more than one line of text is necessary, text should be justified to the left

**Size:** the distance from which it will be read will determine the height of lettering. The following provides a guide:

Viewing distance	Type of sign	Height of lowercase characters (mm)
<u>Long distance</u>	External fascia sign	200
	External location sign	90-120
	External direction sign	90
Medium range	Location and direction	60
	Identification signs	40
Close range	Facility identification signs	30
	Directories	15
	Wall mounted information	15

**Symbols:** There are very few internationally recognized symbols that describe features that enhance the accessibility of the environment. Many service providers have therefore resorted to developing a bespoke system in the mistaken belief that this will help people with learning difficulties or who have no English. The fact is that many of these ad hoc symbols serve to further confuse building users who are unable to interpret the abstract images. So, where no recognized symbol exists the feature should simply be described in Plain English adopting the principles and practice of accessible signage as described above.

**Tactile signs:** To be read through touch individual characters should be embossed to a depth of 1-1.5mm, the width of the embossed line should be 1.5-2.0mm, the edges slightly rounded and the letter heights 15-50mm. Engraved signs cannot be read in the same the same way.

Braille is not read by all people with a visual impairment. Unless a Braille system of signage is logical, comprehensive and consistent it becomes virtually useless because users will not know how or where to find it! Nonetheless, where the Braille equivalent can be and is provided with care it will enhance the accessibility of facility. Grade 1 Braille should be used for single word signs but Grade 2 contracted Braille used to reduce the length of multi-word signs. Where Braille is incorporated into a general text sign, a notch might be provided on the edge of the sign to enable the user to locate the Braille information.

Colour: The colour and luminance of individual characters should contrast with that of the wall or backing plate behind. The following provides a simple guide:

Wall on which signboard is mounted	Signboard or other surface against which characters are mounted	Text (individual) characters
Dark brick or dark stone	White	Black, dark green or dark blue
Light brick or light stone	Dark or black	White or yellow
Whitewashed wall	Dark or black	White or yellow
Green vegetation	White	Black, dark green or dark blue
In general light coloured text against a dark background is preferred.		

Where the signboard is the same colour as the surrounding wall a contrasting border might be introduced.

Material finishes: The material selected for the board and for the individual characters should be non-reflective.

**The BT Countryside for All guidance advises designers to consider:**

Where possible ensure that people can physically reach the sign; visually impaired people may need to get up very close in order to read or touch the sign.

The surface around the sign should be level and well maintained for wheelchair access.

If possible integrate signs with resting points.

Ensure that signs can be read from a standing or seated position by placing them within the accessible cone of vision.

Viewing distance	Lowest point not below	Highest point not above
1m	800mm	1850mm
2m	700mm	2150mm
3m	650mm	2400mm

Signs placed on the ground should be tilted at 60° so that they can be read from a standing or seated position.

Keep the number of signs to a minimum and their design and location consistent.

- **Audible clues**

Taped spoken messages can be used to supplement conventional signage. There are an increasing number of smart devices, employing a variety of technologies, which may be installed to provide this type of broadcast information.

For more information on the RNIB 'REACT' system see:

[http://www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public\\_b2b\\_react.hcsp](http://www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public_b2b_react.hcsp)

- **Maps**

Diagrammatic maps should be user orientated and (way finding illustrative rather than as geographically referenced) ie the map should be displayed in line with the user's view rather than with north automatically at the top.

Maps should identify all entrance and exit points and key activity areas.



## Appendices

### 1. Extract from Mayor of London's Supplementary Planning Guidance 'Accessible London: achieving an inclusive environment'

#### 3.12 The public realm

Extract from London Plan Policy 4B.2 Promoting world-class architecture and design

The Mayor will work with partners to prepare and implement:

- design guidelines for London
- a public realm strategy for London to improve the look and feel of London's streets and spaces.

Extract from London Plan Policy 4B.4 Enhancing the quality of the public realm

The Mayor will, and boroughs should work to ensure that the public realm is accessible, usable for all, meets the requirements of Policies 3A.14 (Addressing the needs of London's diverse population) and 4B.5 (Creating an inclusive environment) and that facilities such as public toilets are provided. Planning applications will be assessed in terms of their contribution to the enhancement of the public realm.

PG Implementation Point 21: Access Action Plans

*The Mayor recommends that boroughs produce Access Action Plans to identify projects and proposals to improve the external environment and the public realm, including parks and open spaces to make them fully accessible to disabled people.*

3.12.1 Making the roads and pavements and the spaces between buildings fully accessible is as important as making the buildings themselves accessible.

However, despite comprehensive guidance since 1991 ('DU1/91- The provision of dropped kerbs and tactile paving' Disability Unit Department of Environment 199141, 'Reducing Mobility Handicaps in the Pedestrian Environment' - The Institution of Highways and Transportation 199142), London's streets, pavements and pedestrian crossings can still create insurmountable barriers to many disabled and older people. Poor workmanship and maintenance (broken paving stones), poor choice of materials (uneven cobbles or wide jointing in small unit paving), lack of dropped kerbs, incorrectly laid tactile paving (often too much and of the wrong profile), lack of easy to use seating (no arms or backrests and too low), all contribute to making the external public realm inaccessible. The challenge is

to develop innovative and creative solutions that integrate traffic management within a high quality accessible public realm.

3.12.2 Much can be done to improve this situation. One way of planning improvements is to undertake access audits in conjunction with the local access group and produce Access Action Plans, which set targets and dates for implementing improvements. Access Action Plans could include details of improvements such as the installation of dropped kerbs and tactile paving, making pedestrian crossings safe by installing audible and tactile signals, the removal of obstacles on the footway, the installation of seats along routes for people to use to rest, the provision of signs and other way finding and orientation tools. They could also be used to identify access improvements to shops and town centre facilities for use by town centre managers. Access Action Plans can also be used to compile information about the lack of accessible public toilets and other community facilities in the borough, and hence as a source of projects suitable for Section 106 Agreements and developers' contributions. Many authorities are already producing plans in preparation for the 2004 provisions of the Disability Discrimination Act (DDA) 1995.

3.12.3 As service providers assess how to ensure they are not discriminating against disabled people, there is likely to be an increase in planning applications leading up to October 2004 for external ramps at entrances to buildings, some of which are likely to be on the public highway. Boroughs should be prepared for such applications and introduce policies and procedures to co-ordinate planning and highway requirements.

*Further information about the external environment*

The government's 'Inclusive Mobility A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'<sup>7</sup>, published in October 2002, includes detailed standards on the design and layout of street furniture, the layout of footways and crossing points - including dropped kerbs, tactile paving and facilities at signal controlled crossings, street lighting, signage, and public toilets. A copy can be viewed at [www.mobilityunit.dft.gov.uk](http://www.mobilityunit.dft.gov.uk).

Streetscape Guidance for the Transport for London Road Network (TLRN) 43 is currently being drafted (it should be available from TfL in the summer of 2004 [www.tfl.gov.uk/streets](http://www.tfl.gov.uk/streets).) and will provide advice on the design of streetscape improvements to enable those responsible for the TLRN to create high quality streetscapes through the application of specific design principles and the use of preferred materials and products.

The Guidance will highlight relevant policies and guidance that have an impact on the quality of the streetscape and offer guidance on how potentially conflicting requirements should be resolved. The Guidance will act as a 'gateway' to other local, regional and national good practice and examples, plus be a source of information to those outside TfL.

### 3.13 Open spaces

Extract from London Plan Policy 3D.11: Open space strategies

Boroughs should, in consultation with local communities, the Mayor and other partners, produce open space strategies to protect, create and enhance all types of open space in their area. To assist with such strategies the Mayor has produced a Guide to Preparing Open Space Strategies<sup>44</sup>.

3.13.1 Access to existing open spaces can be widely improved by dealing with environmental barriers such as narrow and uneven footpaths, inaccessible public transport, and the lack of facilities such as accessible public toilets and parking for disabled people. Young disabled people report that public transport constitutes an important barrier to their physical access to open space. Parental anxiety about safety in open spaces can also result in disabled children facing particular restrictions.

3.13.2 The creation and management of high quality public spaces is essential to delivering an urban renaissance in London. The Mayor will encourage and promote good practice in the management and enhancement of London's open spaces, through guidance, information and best practice examples.

His 100 Spaces for London programme seeks to show how new public spaces can make a real difference to individual quality of life, community vitality and London-wide liveability. These projects will strive for excellence in design - design which is inclusive, enhances the quality of the public realm, respects local context and meets the needs and aspirations of local communities.

3.13.3 The Best Practice Guide 44 to preparing open space strategies states that the following should be included in strategies for creating and enhancing open space:

- a comprehensive audit of all open space
- assessments of local needs and the value of existing open space, including for cultural, educational, structural, amenity, health and biodiversity value
- protection by appropriate designation on UDP maps
- prioritisation of investment to address identified needs and deficiencies
- identification of opportunities for improving access to and accessibility to open spaces, particularly by promoting public transport, cycling and walking and improving access and facilities for disabled people
- identification of opportunities for improving linkages between open spaces and the wider public realm.

3.13.4 As recommended in SPG Implementation Point 21 on Access Action Plans, audits of parks and open spaces should identify improvements needed to make them accessible and inclusive to all potential users, regardless of disability, age and gender.

## 2. Effective consultation

### **Extract from the Disability Rights Commission's 'Creating an Inclusive Environment'**

5.4 The inclusion of well informed disabled people, local access groups and other consumer groups is essential in delivering an environment that fully meets everyone's performance requirements. Genuine consultation is not a one-off event organised for cosmetic purposes in order to ratify planning and design decisions already taken. It should be an ongoing relationship commencing at the inception of a project, extending through planning, design and onto management and operational matters.

5.5 Consultation should not be a substitute for professional advice or technical guidance. It should supplement such sources with additional information based on personal and practical experience, regarding such issues as access in the local context or functional implications of proposed design solutions.

To download the complete document visit:

[http://83.137.212.42/sitearchive/DRC/library/publications/services\\_and\\_transport/creating\\_an\\_inclusive\\_environment.html](http://83.137.212.42/sitearchive/DRC/library/publications/services_and_transport/creating_an_inclusive_environment.html)

### **Disability Action in Islington (DAII)**

Disability Action in Islington (DAII) an organisation run by and for disabled people. It aims to support disabled people, so that they:

- gain more control and choice over their lives
- have better access to services and opportunities
- are able to challenge exclusion and discrimination.

DAII also works to raise awareness of the needs, interests and views of disabled people in Islington and to promote a more accessible and inclusive environment.

DAII can be commissioned to:

- Provide the feedback of a disabled access auditor on a technical issue. However, that auditor will not be a local disabled person and will not be providing feedback from a local disabled person's perspective.
- Bring together and facilitate groups of local disabled people who are interested in the physical environment, who would attend issue specific meetings and comment from the view of the local disabled person.

**For further information and to contact DAII visit [www.daii.org/](http://www.daii.org/)**