



MANCHESTER
CITY COUNCIL



Design for Access



2



December 2003

Although the standards in Design for Access 2 are intended to provide best practice at the time of publication, the requirements of further legislation, and legal decisions arising from the operation of the 1995 Disability Discrimination Act (DDA), may require improvements to these standards over time, to comply with best practice and the requirements of the DDA.

This document may be reproduced free of charge in any format or medium in whole or in part on condition that it is accurately reproduced, not used in a misleading context, and that the reproduction identifies and acknowledges the source of the material and specifies the title of the publication.

Contents

	Page
Forewords	1
Introduction	3
Acknowledgements and Further advice and information	6
Contact details	7
Index of Design Standards	9
List of Diagrams	13
The Design Standards	15
Useful Sources of Information	101
Glossary	106
Conversion table (Metric/Imperial)	108



MANCHESTER CITY COUNCIL

Manchester City Council's aim is for Manchester to be recognised as the most accessible city in Europe and we are committed to improving access for disabled people to all our services.

In January 2000, the first Design for Access Manual was launched by Manchester City Council. This provided a practical approach to inclusive design and was adopted as policy by Manchester City Council as part of the City's Access 2000 Strategy.

Our approach to this strategy has been to work closely and in partnership with disabled people's organisations in the city to ensure that we draw on the invaluable experience and expertise that exists within our communities. This approach also ensures that we correctly identify the barriers that disabled people face and work together to remove them.

We are proud to be producing this, our second edition of Design for Access, in this European Year of Disabled People. The manual sets out aspirational standards which will, we believe, help to promote exciting, vibrant and creative accessible design. It is also intended that these standards will be pro-active in the national debate concerning the statutory framework needed to secure access for all.

The Council is committed to working with our partners to use these standards as best practice for projects undertaken in the city.

This manual presents a challenge to the designers of tomorrow. Inclusive design - an accessible environment for everyone - can you meet that challenge?

Councillor Martin Pagel
Manchester City Council

The second edition of the Design for Access Manual, Design for Access 2, is a co-production of disabled people's organisations in Manchester and Manchester City Council, to be used to implement best practice and provide a key resource for all public sector, voluntary sector and commercial organisations in Manchester and elsewhere.

Although there is still much to achieve in promoting access for disabled people, these standards, which were co-written by disabled people in Manchester, specialising in access issues, and Manchester City Council staff, are intended to be easily used and implemented by all organisations committed to access. Future editions will improve on these standards and extend them to other specialist buildings, environments and activities.

Disabled people's organisations in Manchester will continue to advise and campaign around the continuous improvement and development of access standards and welcome a dialogue with users of Design for Access 2 and suggestions for future editions.

Felicity (Flick) Harris

Chair, Manchester Disabled People's Access Group

on behalf of disabled people's organisations in Manchester

Introduction

What is Design for Access 2

Design for Access 2 is Manchester City Council's best practice guidance of inclusive design standards. These standards are based upon the Social Model of Disability and as a result, in some areas, improve upon the current government guidance and regulations. The first manual has been updated to reflect revised government guidance and regulations such as BS 8300: 2001 and Part M of the Building Regulations (2004 Edition). It has also been expanded to include new sections, and builds upon the knowledge and experience of disabled people. This revised manual is called Design for Access 2.

Design for Access 2 provides a practical approach to inclusive design and gives references for more detailed technical guidance.

Why do we need Design for Access 2

Manchester City Council's aim is for Manchester to be recognised as the most accessible city in Europe and the City Council is committed to improving access for disabled people, as set out in its Access 2000 Strategy.

Resources and expectations for removing barriers to disabled people are changing and improving all the time and **the guidance in Design for Access 2 reflects the current best practice**. The standards are based upon the Social Model of Disability and as a result, in some areas, improve upon the current government guidance and regulations.

Manchester's Experience

The Manchester Design for Access manual standards have been used extensively by a wide range of organisations to promote best practice.

Disabled people's organisations and Manchester City Council have worked together on a wide range of strategic and practical projects to identify the barriers to disabled people and work towards practical solutions.

Manchester's experience is that inclusive design can be innovative and need not stifle creativity.

Who developed the standards

This manual was developed jointly by Manchester City Council and Manchester Disabled People's Access Group with full consultation with members of the Access Review Forum.

The Access Review Forum is a consultative body of disabled people's organisations in Manchester which is convened by Manchester City Council to review and monitor each City Council department's policies, practices and procedures in relation to access for disabled people, alongside other specific activities and consultations undertaken by departments.

Who should use Design for Access 2

Design for Access 2 has been produced as a manual for architects, planners, engineers, landscape architects and other designers. It sets out the City's aspirations for inclusive development and will be vigorously promoted with developers. It is also invaluable as a key reference for service providers, and to inform disabled people of the standards they should expect.

When should Design for Access 2 be used

It is intended that the standards in Design for Access 2 should be used for all buildings and projects on which Manchester City Council lead or are the client, for the maintenance and improvement of highways, and for all development on City Council disposal sites. To ensure that the standards are taken into account at the earliest possible stage in the design process they should be incorporated into all design, development and project briefs, as it is more cost-effective to incorporate accessible design at the beginning of a process than to make adjustments later in the process.

In addition to new developments the standards in Design for Access 2 should be applied, where practicable, to refurbishments and conversions of buildings, including listed buildings, which Manchester City Council owns, has an interest in, or delivers a service from. These are the key standards against which City Council buildings will be audited to ensure that the Council meets its responsibilities under the 1995 Disability Discrimination Act.

Introduction

The aim of Design for Access 2 is to provide guidance on best practice. However, it may not always be possible to meet all the standards. To explain the process for dealing with these cases the manual includes a section on the compliance process within Manchester.

The standards in Design for Access 2 can be used by disabled people's organisations as the basis for access audits and surveys, and as the basis for access checklists for the voluntary sector and elsewhere.

Public sector and commercial organisations will be encouraged to use the standards in Design for Access 2 to assist in meeting the requirements of the 1995 Disability Discrimination Act. They are intended to be used by professional advisers, alongside other technical references, as a best practice guide within the framework of the Social Model of Disability.

How to use the document

The standards in Design for Access 2 can be used as part of an access audit before planning any refurbishment or development.

They can also be used in consultations with architects, designers, engineers and developers when agreeing plans and proposals.

In addition, the standards are intended to be used as a reference guide by anyone concerned with adaptations and the general maintenance and management of buildings and the environment to ensure that access for disabled people is considered as an integral part of any planning at all stages in the life of buildings and the environment.

Acknowledgements

The advice in Design for Access 2 is based on the experience of disabled people in Manchester, as well as on the best current guidance on inclusive design. The Editorial Board would like to acknowledge the contribution made during the production of the manual by disabled people's organisations, particularly the members of the Access Review Forum, by the Access Officer for Salford City Council, and by officers of Manchester City Council.

The Editorial Board comprised Flick Harris (Chair of Manchester Disabled People's Access Group), Neville Strowger and Lorraine Ward (Manchester City Council's Access Officers) and Joan Rutherford (Deputy Team Leader, Forward Planning and Regeneration Team).

Further advice and information:

Design for Access 2 is available:

Online from the Manchester City Council website at www.manchester.gov.uk, and

Manchester Disabled People's Access Group website at www.mdpag.org.uk

In **standard print** version from Manchester Disabled People's Access Group and from the City Council's Access Officers.

In **alternative formats** from Manchester Disabled People's Access Group and from the City Council's Access Officers.

For advice and information about the contents of Design for Access 2 please contact:

Manchester City Council's Access Officers
Telephone: 0161 234 4032/4598
Textphone: 0161 234 4505

Manchester Disabled People's Access Group
Telephone: (voice and text) 0161 273 5033
Email: admin@mdpag.org.uk
Website: www.mdpag.org.uk

Further details of the City Council's Access policies, including the Access 2000 Strategy and definition of the Social Model of Disability, can be found on Manchester City Council's website at www.manchester.gov.uk

Contact Details

The following organisations are members of Manchester City Council's Access Review Forum and can be contacted for advice and information on disabled people's issues:

Breakthrough UK Ltd.

Telephone: 0161 273 5412 Text: 0161 273 5727

Email: admin@breakthrough-uk.co.uk

Full Circle Arts

Telephone (voice and text): 0161 279 7878

Email: enquiries@fullcirclearts.co.uk

Website: www.fullcirclearts.co.uk

Greater Manchester Coalition of Disabled People

Telephone (voice and text): 0161 273 5154

Email: thelmatomlinson@gmcdp.fsnet.co.uk

Manchester Adult Dyslexia Group

Telephone: 0161 437 8953

Email: alanshoreman@aol.com

Manchester Deaf Centre

Telephone (voice and text): 0161 273 3415 Fax: 0161 273 6698

Email: manchdeafcentre@btconnect.com

Manchester Disabled People's Access Group

Telephone (voice and text): 0161 273 5033

Email: admin@mdpag.org.uk

Website: www.mdpag.org.uk

Manchester Environmental Group of Blind and Partially Sighted People and Manchester District Social Club of the Blind

Telephone/Fax: 0161 798 9137

Email: r-goulden@supanet.com

Narcolepsy Association, Manchester Branch,

42 Albermarle Street, Moss Side, M14 4NF

Shopmobility Manchester

Telephone: 0161 839 4060

Email: shopmobilitymcr@btconnect.com

Wythenshawe Shopmobility

Telephone: 0161 499 3466

Email: wythshopmobility@aol.com

Index of Design Standards

External Areas

Page

1.	Car Parking	15
1.1	On street parking	15
1.2	Off street parking	17
1.3	Multi-storey car parks	19
1.4	Garages, Secure and Enclosed Parking	19
1.5	Taxi Ranks	19
2.	Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces	21
2.1	Uncontrolled crossings	21
2.2	Controlled crossings	23
2.3	Refuge Islands	26
2.4	Raised Crossings	29
2.5	Metrolink Crossings	29
2.6	Dropped Kerbs	31
2.7	Tactile Surfaces	33
3.	Footways, Pathways and Access Routes	35
3.1	Access Routes	35
3.2	Temporary Obstruction of Access Routes	36
4.	Street Furniture	38
5.	Seating	41
6.	Ramps	42
7.	Footbridges	45
8.	External Steps	46
9.	Handrails (Ramps, Stairs and Steps)	49

Index of Design Standards

Buildings (other than dwellings)		Page
10.	Doors	51
	10.1 External Doors	51
	10.2 Internal Doors	53
11.	Design and Fitting of Doors and Entry Systems	55
12.	Door and Window Furniture	58
13.	Reception and Refreshment Areas	59
14.	Lobbies, Corridors and Internal Spaces	61
	14.1 Lobbies	61
	14.2 Corridors and Internal Spaces	63
15.	Internal Stairs	65
16.	Lifts	67
	16.1 Passenger Lifts	67
	16.2 Platform Lifts	70
17.	Toilets	71
18.	Baby Changing Facilities	75
19.	Showers and Bathrooms	77
20.	Kitchens	81

Index of Design Standards

Dwellings

Page

21.	Dwellings General	83
	21.1 Visitor Access	83
	21.2 Provision for Adaptation	85

General

22.	Surfaces and Finishes	87
23.	Communication Systems	88
24.	Signs and Wayfinding	89
25.	Lighting	90
26.	Sound	91
27.	Management and Maintenance	92
28.	Listed Buildings	94
29.	Playgrounds	95

Compliance Process

30.1	Manchester City Council	97
30.2	Voluntary Sector and Private Developments	98

List of Diagrams

	Page
1.1 On-Street Parking	16
1.2 Off-Street Parking	18
2.1 Uncontrolled Crossings - Layout of tactile paving	22
2.2 Controlled Crossings	
a) Design of crossing point	24
b) Layout of tactile paving	25
2.3 Refuge Islands	
a) Tactile surface when width is less than 2000mm	27
b) Tactile surface when width is greater than 2000mm	27
c) Staggered crossing	28
2.4 Raised Crossings	30
2.6 Dropped kerbs	32
a) Layout	
b) Section	
2.7 Tactile Surfaces	34
a) Blister surface	
b) Corduroy hazard warning surface	
3 Footways, Pathways and Access Routes	37
4 Street Furniture	40
a) Layout	
b) Section	
6 Ramps	44
8 External Steps	48
9 Handrails (Ramps, Stairs and Steps)	50
10.1 External Doors	52
a) Double door and sliding door	
b) Revolving door	
c) Recessed door	

List of Diagrams

	Page
10.2 Internal Doors	54
11 Doors - Design and Fitting	57
14.1 Lobbies - Alternative arrangements	62
14.2 Corridors and Internal Spaces	64
15 Internal Stairs	66
16 Passenger Lift	68
17 Toilets	74
18 Baby Changing Facilities	76
19 Showers and Bathrooms	
a) Shower	79
b) Bathroom	80

1 Car Parking

Designated parking bays for disabled people are for the use of vehicles displaying an official disabled person's parking permit, for example, a Blue Badge. Designated bays may be **on-street**, that is, on the public or adopted highway; or **off-street**, that is, on private land or on areas not forming part of the public highway. The minimum target percentage of designated on-street parking bays for disabled people in Manchester City Centre is 6%.

The marking for designated bays should contrast in colour and luminance with the background. Designated bays should be located as close as possible to pedestrian areas, or to the building to be served. Dropped kerbs should be provided to assist disabled people to transfer from vehicle and wheelchair to pavement.

A safe drop-off point for disabled people should be provided. This should be on level ground close to the accessible entrance to a building. Its location should be clearly indicated.

Car park entry and payment systems should be accessible.

1.1 On-Street Parking

1. Designated parking bays on the highway for disabled people require a Traffic Regulation Order under the Traffic Regulation Act 1984.
2. When parallel to the kerb, on-street designated parking bays should be 6600mm long and preferably 3600mm (minimum 2700mm) wide, as shown in diagram 1.1.
3. When at an angle to the kerb, on-street designated parking bays should be 4200mm long and 3600mm wide.
4. The bay should be clearly marked with the word 'DISABLED' as well as being clearly signed with the Blue Badge symbol. The signing and lining associated with this type of bay must comply with the Traffic Signs Regulations and General Directions 2002.
5. The pole sign should clearly say whether payment is required.
6. A dropped kerb should be provided to permit convenient access from the parking bay onto the pavement.
7. Accessible parking bays should be located on pedestrian access routes.

1.1 On-Street Parking



Not to Scale

Car Parking

1.2 Off-Street Parking

1. In pedestrianised areas, car parking for disabled people should be within 50 metres of the destination.
2. Individual bays and spaces should be wide enough to allow wheelchair transfer to and from the vehicle. The bay dimensions should be 4800mm x 2400mm with a minimum 1200mm 'safety zone' around the bay to maintain access to both the sides and the rear of the vehicle.
3. For economy of space, parking bays can be located side by side with a shared space of 1200mm between the two bays, as shown in diagram 1.2.
4. Where a covered area is involved, headroom should be no lower than 2600mm.
5. The bays should be clearly marked with the Wheelchair Symbol on the surface as well as being clearly signed with the Blue Badge symbol.
6. All designated parking bays for disabled people must be accessible from a safe independent pedestrian route.
7. A dropped kerb should be provided to permit convenient access from the parking bay onto the pedestrian area.
8. The surface of the parking space should be even and stable with any variation of surface profile not exceeding 5mm, that is, between paving, surface features and mix of different surfaces or finishes.
9. Information, including payment terms, should be provided at the entrance to a car park to make it clear whether or not free parking is available to disabled motorists.
10. The following ratio of accessible parking bays should be used for new developments:

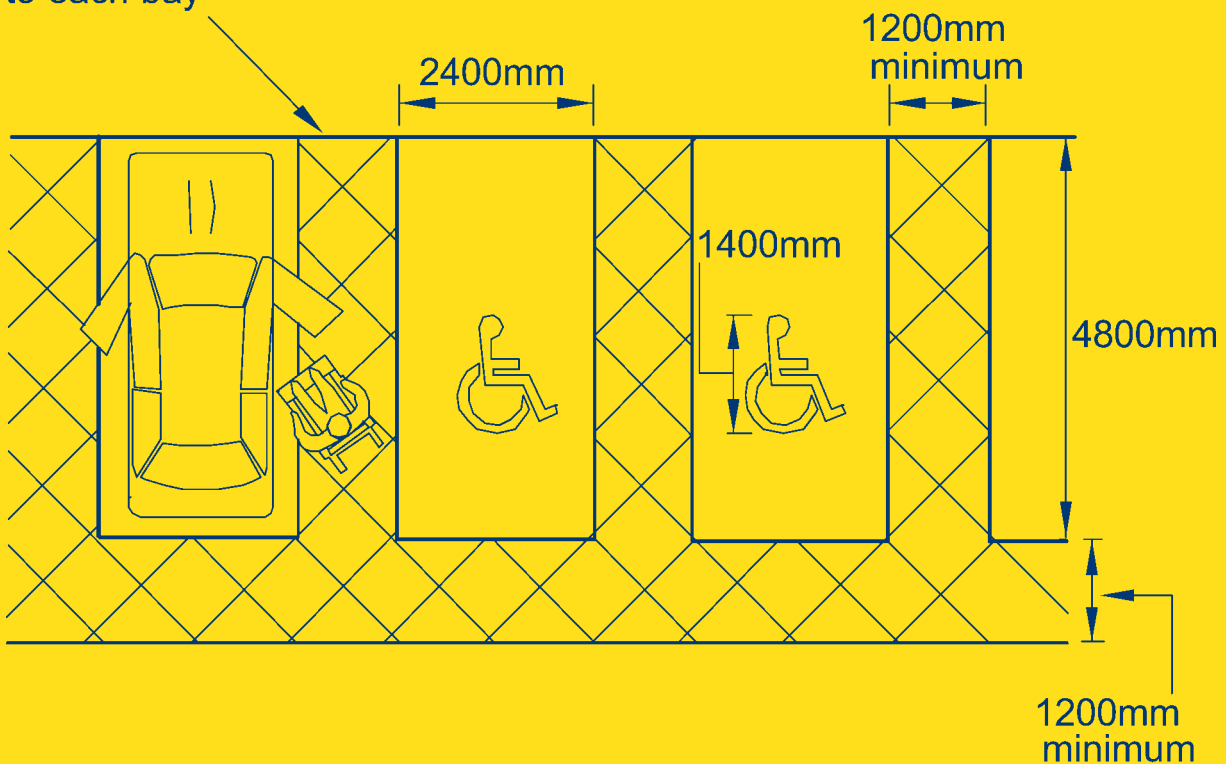
1 - 10	bays must include 1 accessible bay
11 - 25	bays must include 2 accessible bays
26 - 50	bays must include 4 accessible bays
51 - 75	bays must include 8 accessible bays
76 - 100	bays must include 12 accessible bays
100 +	parking bays must include 12% accessible bays.

1.2 Off-Street Parking



1. The pole sign should not obstruct an access route
2. The 'P' and wheelchair symbol on the pole sign should be blue
3. The bay and symbol markings on the surface will normally be in white or yellow, but other colours and coloured surfaces can be used to highlight the bays

Dropped kerb or level access point next to each bay



Not to Scale

Car Parking

1.3 Multi-storey car parks

1. The design of multi-storey car parks should meet the technical requirements in the previous section 1.2: Off-Street Parking.
2. In multi-storey car parks, designated parking spaces should be clearly signed and preferably available on every level. If this is not possible an accessible passenger lift, or a ramp which is separated from vehicular traffic, should be provided, linking different levels. Ramps and lifts should be designed in accordance with sections 6: Ramps and 16: Lifts.
3. Car park entry and pay equipment should be capable of use without the driver leaving their vehicle, in terms of closeness of approach and simplicity of operation.
4. Systems which rely only on intercoms should not be used.

1.4 Garages, Secure and Enclosed Parking

1. The access route should be level and preferably under cover.
2. The dimensions of an enclosed parking space should be 4200mm x 5700mm. Headroom should be no lower than 2600mm.
3. Where power-operated systems are fitted to the entrance to enclosed private parking or garages they should be remotely operable from inside a vehicle.

1.5 Taxi Ranks

1. Taxi ranks should have accessible seating, good lighting, shelter, and directional and other signage.
2. Taxi ranks should be well signed throughout the City, should be on safe pedestrian routes which include dropped kerbs and tactile surfaces and, if possible, should be near to a controlled crossing.
3. Taxi ranks should be located so that passengers can board at the near side (not the driver's side) of the taxicab.
4. Barriers or bollards should not be located near taxi ranks where they would obstruct the use of taxicab ramps.

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

Pedestrians require safe crossing places. Pedestrian crossings can be either **uncontrolled** or **controlled** and should be provided in on-highway and off-highway situations.

Uncontrolled pedestrian crossings are informal facilities where the volumes of pedestrian movement are not significant enough to merit stopping the flow of traffic.

Controlled pedestrian crossings are formal crossing points where pedestrians gain from varying degrees of priority depending on the type of crossing. There are four different types of controlled pedestrian crossings - Puffin, Toucan, Pegasus and Zebra crossings. (Pelican crossings are no longer used and have been replaced by Puffin Crossings).

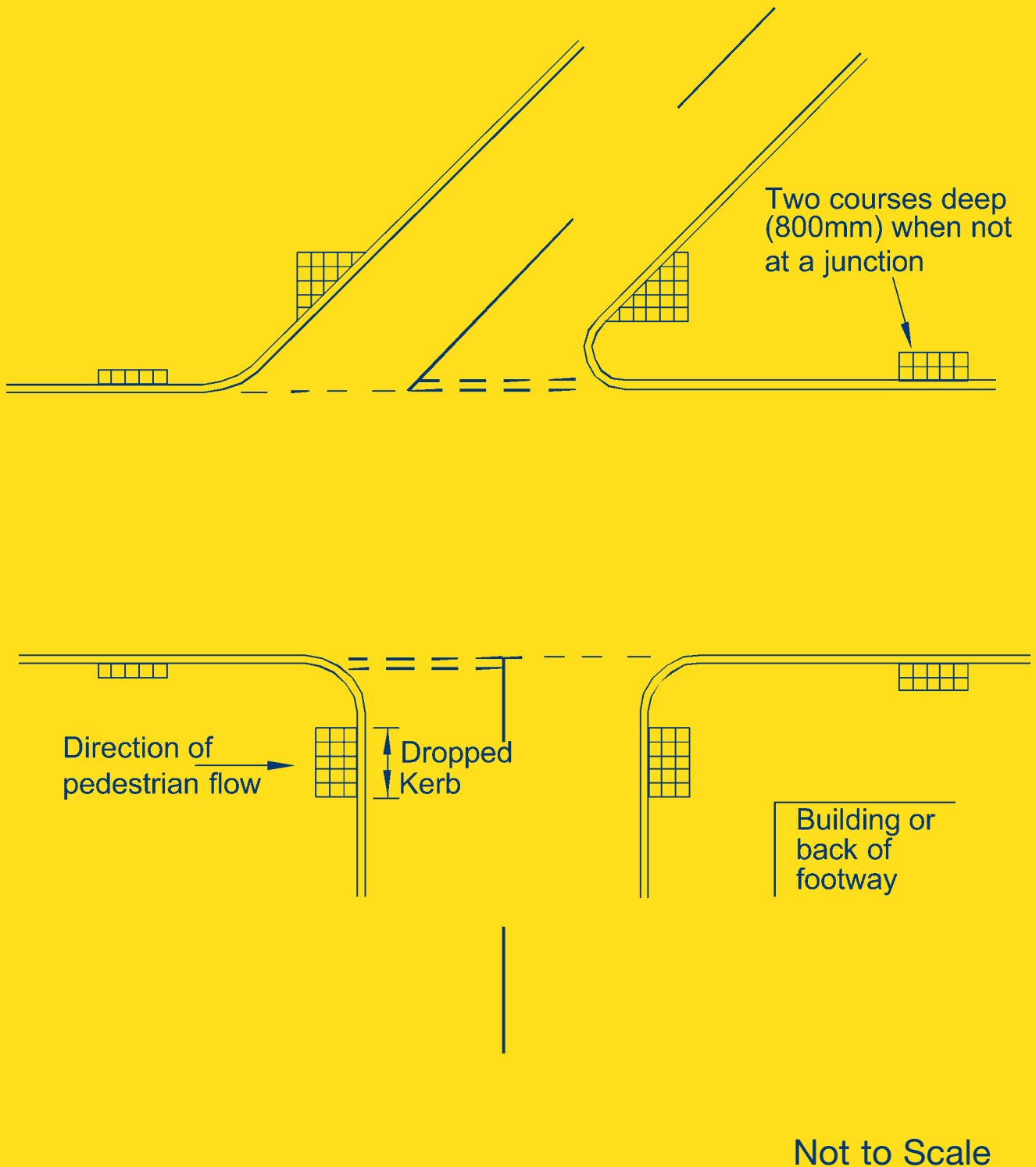
Some tactile surfaces are used to alert people to different types of pedestrian crossing. Other types of tactile surface are used to alert people to hazards and changes of level such as the top and bottom of external steps.

2.1 Uncontrolled Crossings

1. Uncontrolled crossings should have tactile paving which is buff or a colour (other than red) which provides a contrast with the surrounding footway surface.
2. Tactile paving one tile deep (400mm) should be provided on the approach to dropped kerbs to span the width of the crossing. When the pedestrian crossing is in line with the direction of pedestrian movement the number of tiles should increase to three in depth (1200mm). When the crossing is away from a junction the tactile paving should be two tiles deep (800mm). See diagram 2.1.
3. Tactile paving should generally be installed to provide a perpendicular crossing point to the kerb edge. When the crossing point is askew, skewed tactiles can be used to direct pedestrians to the line of walk.
4. Crossing points should be located on the pedestrian line of walk, even if this is across a radius kerb.
5. Pedestrian crossing points on segregated cycle tracks should be provided with a corduroy hazard warning surface.

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.1 Uncontrolled Crossings - Layout of tactile paving



Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.2 Controlled Crossings

Puffin, Toucan and Pegasus crossings are all signal-controlled crossings with 'L' shaped red tactile paving, an audible facility and rotating cones. They are used where vehicle speeds and flows are high. A push button unit is provided on the right hand side.

Puffin Crossings are for pedestrians. They have a nearside red/green man symbol and on-crossing and kerbside detectors. The on-crossing detectors can marginally adjust the pedestrian period depending on the speed of people crossing.

Toucan Crossings are for pedestrians and cyclists. They should have a nearside red/green man and a red/green cycle symbol.

Pegasus Crossings are for pedestrians, cyclists and horses. They should have a nearside red/green man, a red/green cycle and a red/green horse symbol. A higher level push button is also provided so that a horse rider does not have to dismount.

Zebra Crossings are crossings where pedestrians have priority over vehicles. They are not signal-controlled and so pedestrians must establish precedence by moving on to the crossing. They are used where pedestrian flows are relatively low and traffic flows are moderate, usually in residential areas. Zebra crossings are often used in conjunction with a raised plateau to ensure low vehicular speeds on the approach to the crossing. Signal-controlled crossings are safer and should be used in preference to zebra crossings. Whenever a zebra crossing is proposed, appropriate consultation should be undertaken and an Access Statement produced. See section 30: Compliance Process.

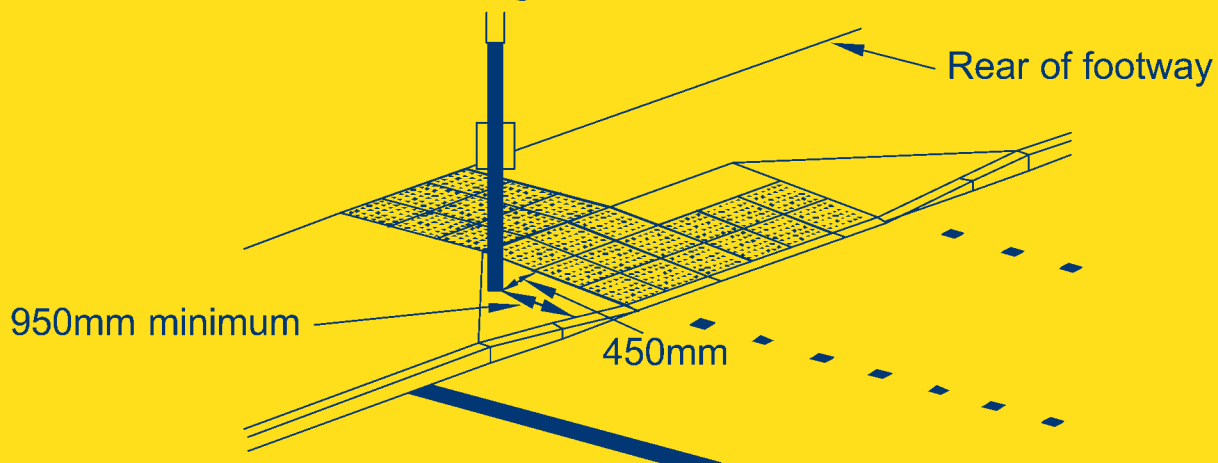
1. Signalised controlled crossings should have visual and audible signals for pedestrians, with red tactile paving and a white kerb edge.
2. For standard 'L' shaped tactiles the tail should extend to the back of the footway or for 5000mm. See diagram 2.2a.
3. For 'L' shaped tactiles on askew crossing points, tactile paving at the kerb edge should be two tiles (800mm) deep. If the crossing is in line with the direction of pedestrian flow, tactile paving at the kerb edge should be three tiles deep. See diagram 2.2b.
4. Controls should be set at a height of 900mm from ground level.

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

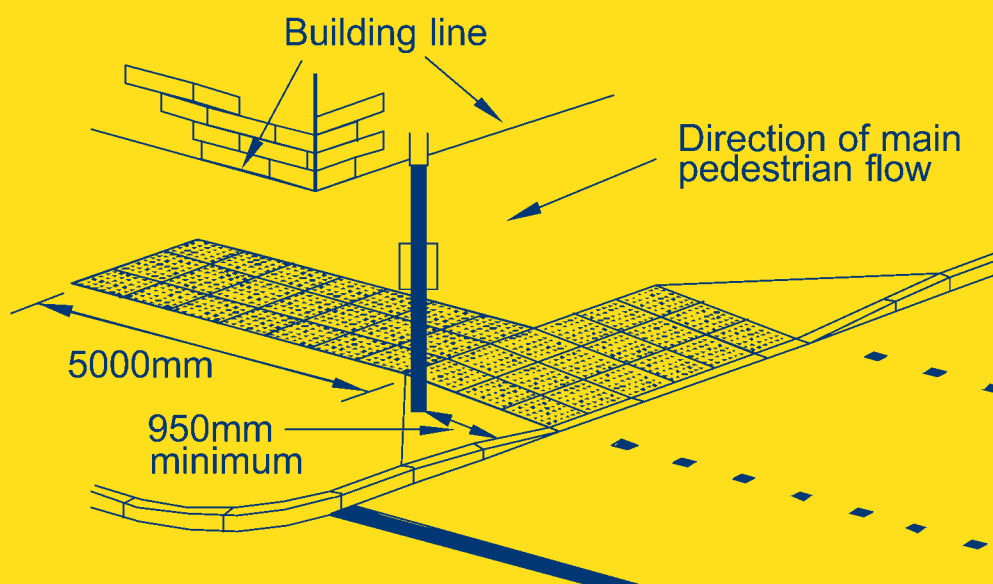
2.2 Controlled Crossings

a) Design of crossing point

Inset controlled crossing



In-line controlled crossing



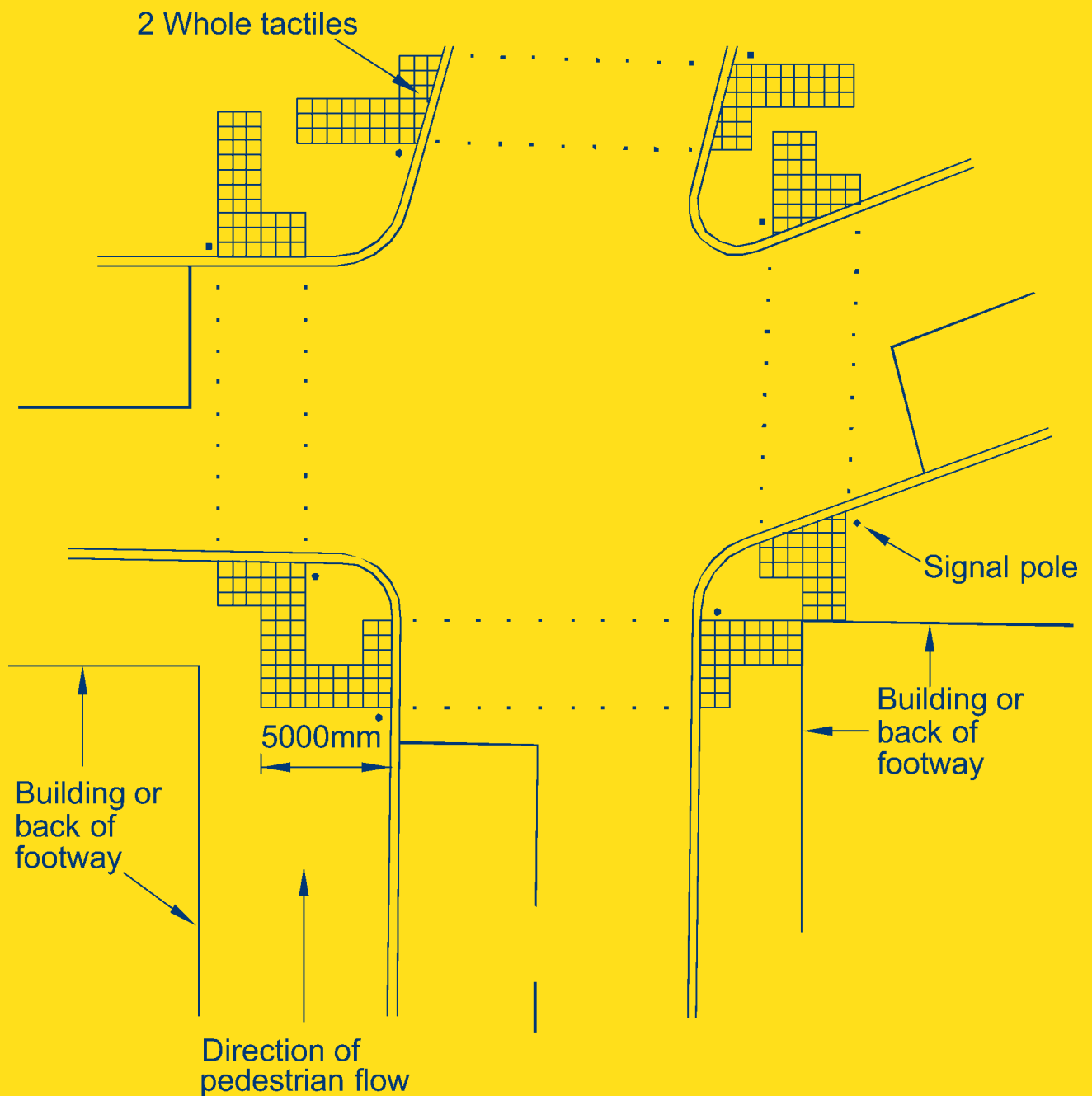
1. Further advice on the design of controlled crossings is given in Local Transport Note 2/95 "The Design of Pedestrian Crossings"
2. "L" pattern tactile surface arrangement to be used at all controlled crossings

Not to Scale

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.2 Controlled Crossings

b) Layout of tactile paving



Not to Scale

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.3 Refuge Islands

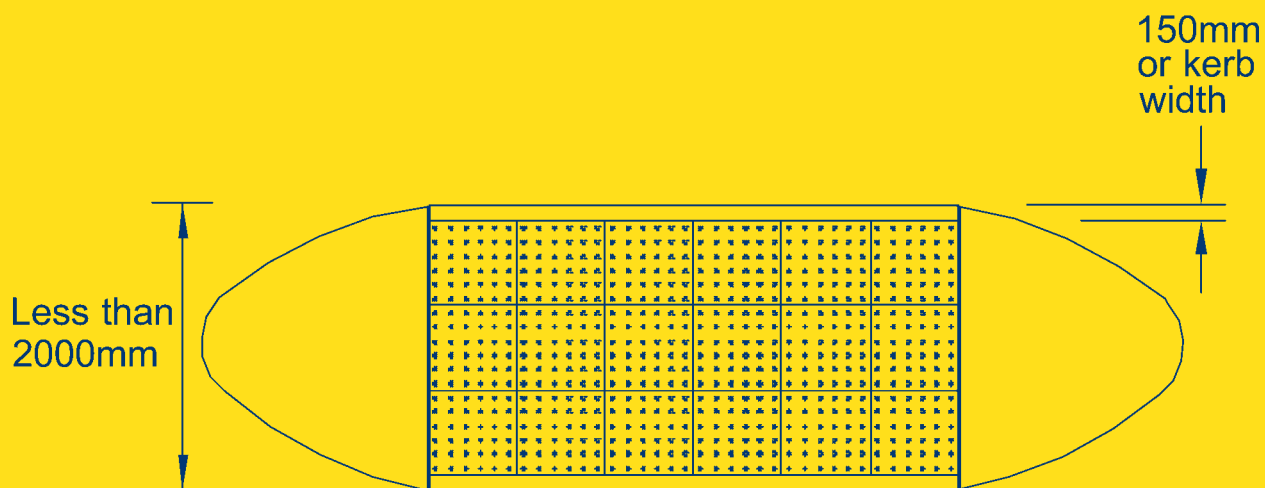
Refuge islands are generally constructed in the middle of a two-way carriageway and provide the opportunity for pedestrians to cross each traffic lane individually. They should have appropriate flush or dropped kerbs.

1. Diagram 2.3a shows a refuge island arrangement when the island width is less than 2000mm. This narrow refuge should only be used where the width of the carriageway does not permit the use of a wider refuge. There are three rows of tactile.
2. Diagram 2.3b shows a refuge island arrangement when the island width is greater than 2000mm. There are two separate rows of tactile each 2 tiles deep.
3. Diagram 2.3c shows a refuge island arrangement for a staggered crossing facility. There are two rows of tactiles, two tiles deep, at each crossing point, and guardrails around the island.

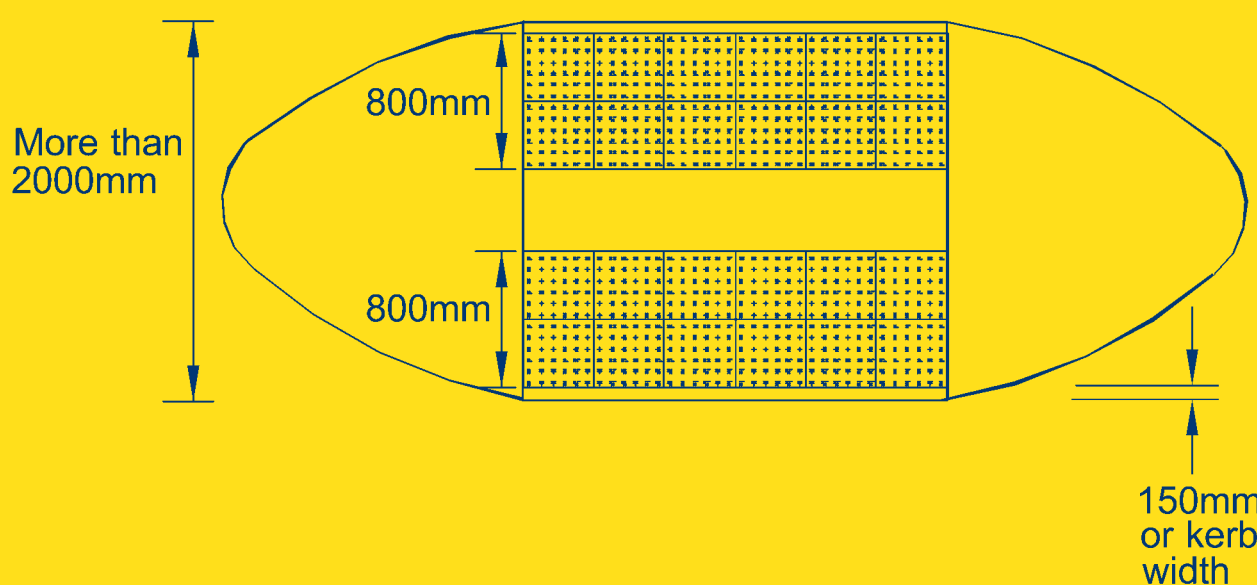
Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.3 Refuge Islands

- a) Arrangement of tactile surface when the island width is less than 2000mm



- b) Arrangement of tactile surface when the island width is greater than 2000mm

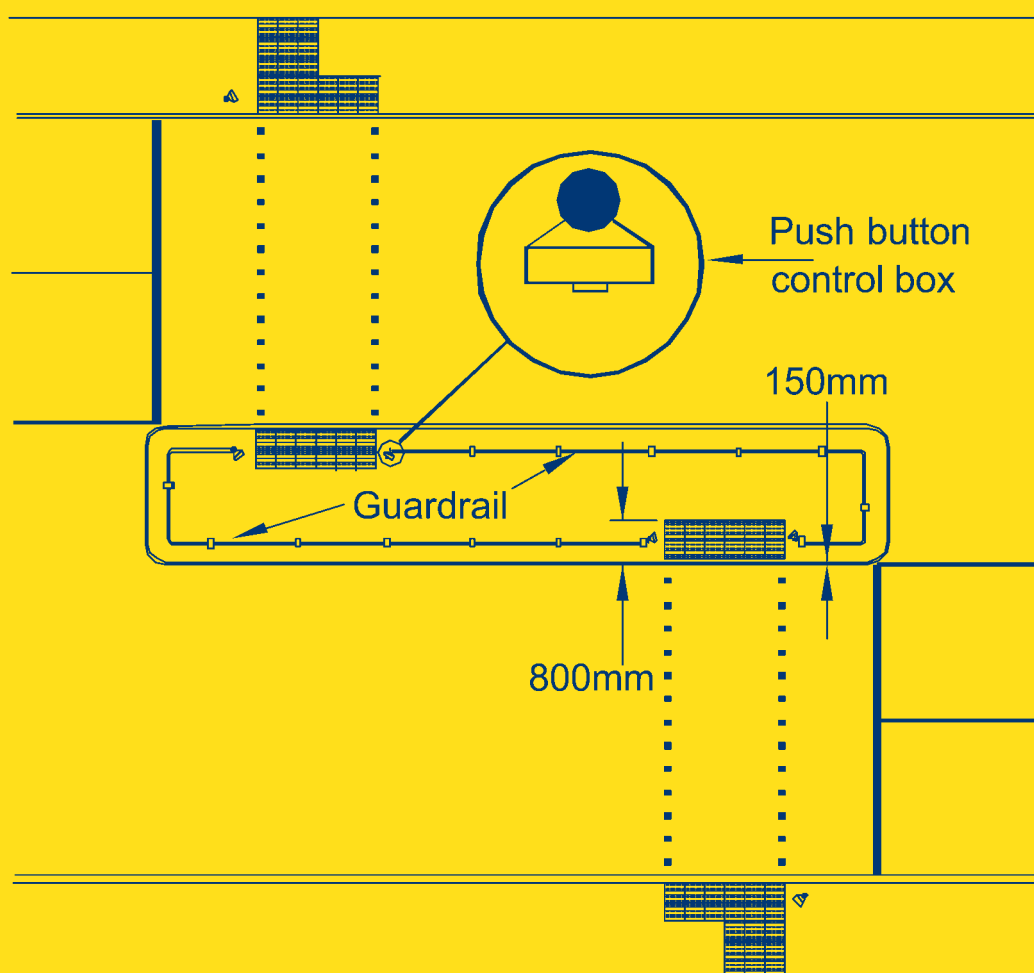


Not to Scale

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.3 Refuge Islands

c) Arrangement for a staggered crossing



Not to Scale

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.4 Raised Crossings

In traffic calmed areas a full road width flat top hump or plateau can be used as part of a controlled or an uncontrolled crossing.

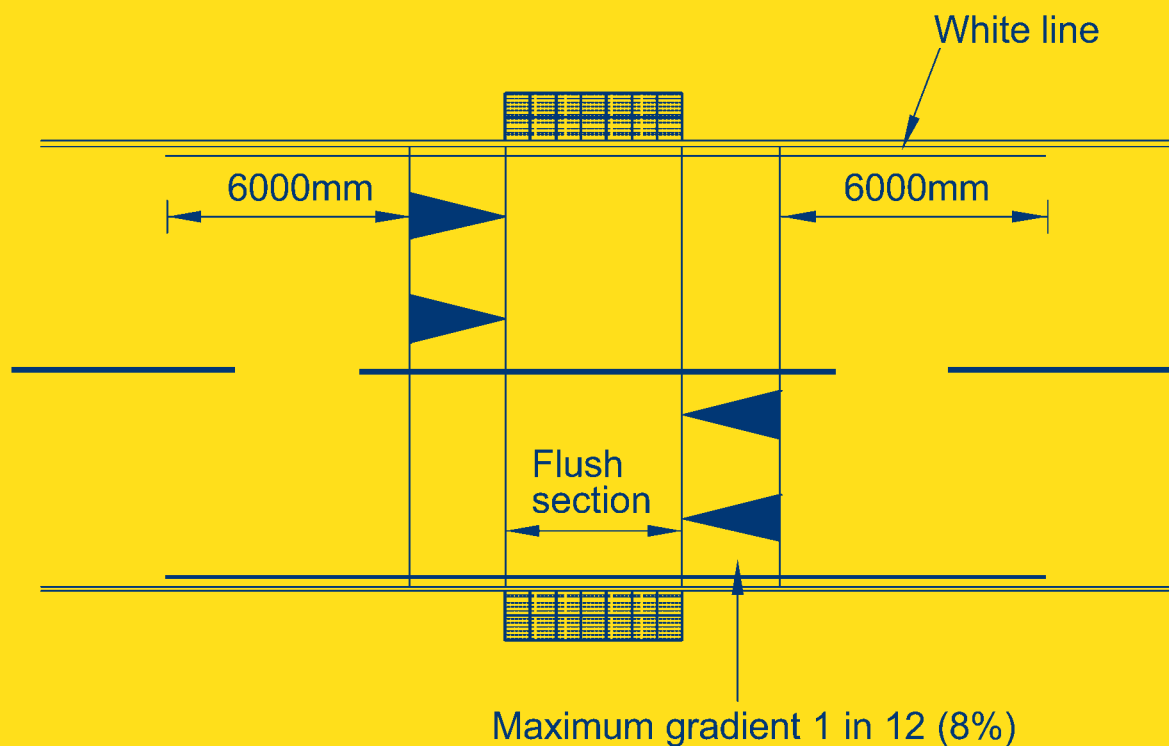
1. When raising the level of the carriageway to that of the footway, the resulting surface of the traffic calming feature should be flush with that of the footway. Care should be taken in the design, particularly at road junctions.
2. The gradient of the ramps at each side of the hump or plateau should be maximum 1 in 12 (8%).
3. Guard railing should be provided to 'deflect' pedestrians when the crossing point is not on the line of walk.
4. Tactile arrangements should be as described in sections 2.1: Uncontrolled Crossings and 2.2: Controlled Crossings.
5. See diagram 2.4 for details of raised crossings.

2.5 Metrolink Crossings

1. For street running sections, the pedestrian crossing points should be treated in the same way as for carriageways, that is, controlled or uncontrolled crossings, with appropriate tactile paving and dropped kerbs, should be provided.

Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.4 Raised Crossings



This example is an uncontrolled crossing

Not to Scale

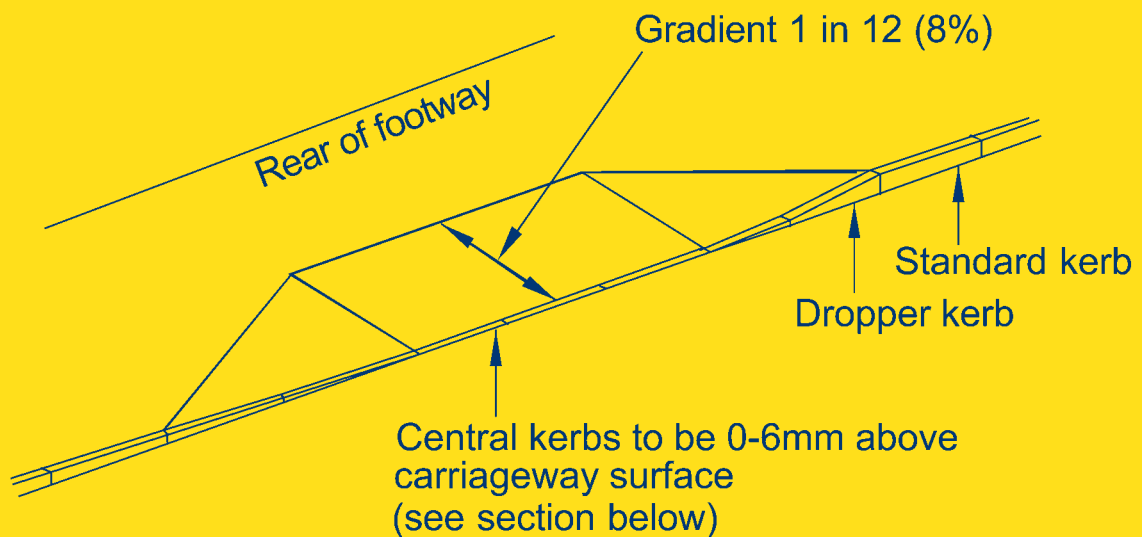
Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.6 Dropped Kerbs

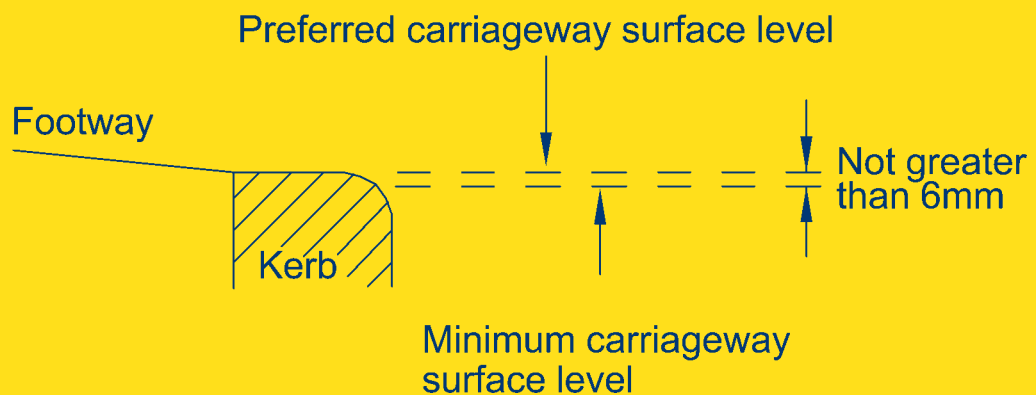
1. All pedestrian crossings should have a dropped kerb and tactile paving.
2. Dropped kerbs should have a maximum 6mm upstand. Detailed design prior to the installation of tactile paving is shown in diagram 2.6. These design details also apply to vehicular crossovers and vehicular accesses.
3. Gullies should not be located in the highway channel at dropped crossings and gradients should be sufficient to avoid ponding of water at the crossing.
4. Consideration should be given to measures to prevent the obstruction of dropped kerbs on uncontrolled crossings by parked vehicles.

2.6 Dropped Kerbs

a) Layout



b) Section



Not to Scale

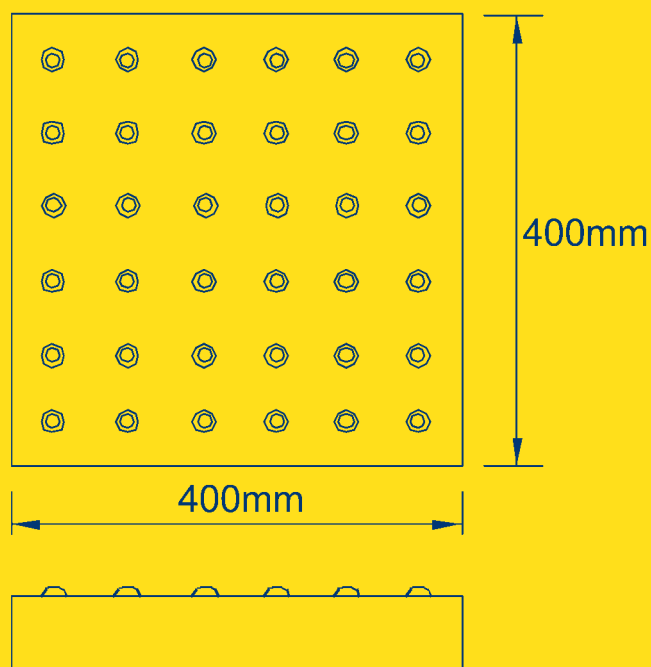
Pedestrian Crossings, Dropped Kerbs and Tactile Surfaces

2.7 Tactile Surfaces

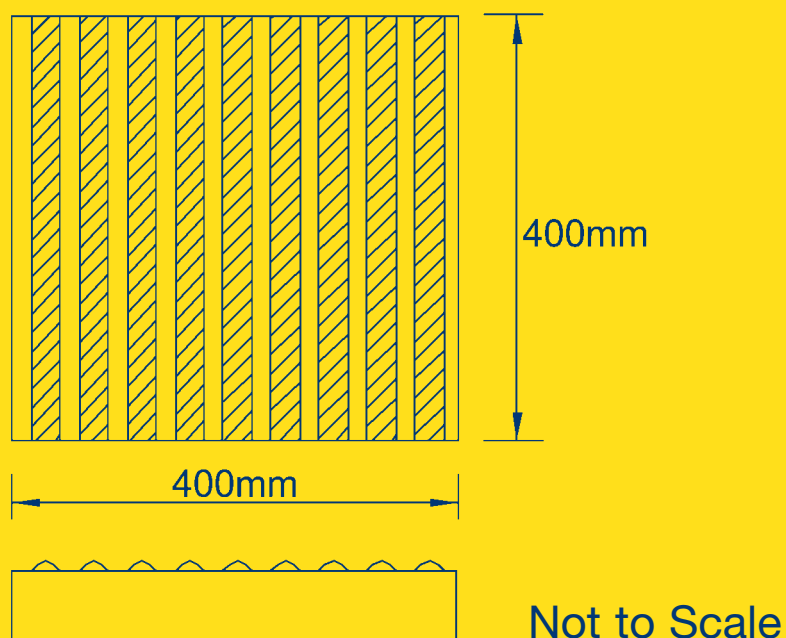
1. The nationally recommended tactile surfaces should be used for platform edges, segregated shared cycle tracks, guidance paths and information.
2. Where possible, pedestrians should be segregated from cyclists by a change in level on joint pedestrian/cycle routes.
3. A corduroy hazard warning surface should be used to alert people of hazards, for example, at steps, on level crossings and at the approach to on-street Metrolink platforms. Corduroy surfacing should also be used, on the cyclists' side, where a footway joins a segregated shared route for cyclists and pedestrians.
4. The profiles and plans of blister and hazard warning tactile surfaces are shown in diagram 2.7.

2.7 Tactile Surfaces

a) Profile and plan of blister surface



b) Profile and plan of corduroy hazard warning surface



Footways, Pathways and Access Routes

All pedestrian access routes should have clear street or other directional signs, be evenly lit and barrier free, and preferably segregated from any vehicular route.

Care should be taken to ensure that the location and direction of lighting does not create areas of glare or shadow.

3.1 Access Routes

1. Access routes should have a firm and smooth surface.
2. Access routes should either be level or have the shallowest possible gradient. Any access route that has a gradient of 1 in 20 (5%) or steeper should conform to the recommendations for ramped access in section 6: Ramps.
3. The joints between paving units should be flush with the surface. If this is not feasible, the joints should be no wider than 10mm, so long as they are completely filled, and no wider than 5mm if recessed.
4. With the exception of tactile paving and hazard warning, undulations in the surface of paving on an access route should not exceed 5mm under a 3000mm straight edge.
5. Drainage gratings should be positioned beyond the boundaries of the access route. Where this is not possible the gratings should be set flush with the surrounding surface.
6. Kerb edges and upstands of 100mm and above should be defined by colour and luminance contrast.
7. The cross fall gradient across an access route from building to pavement should not exceed 1 in 50 (2%) except when associated with a dropped kerb.
8. Access routes should have a minimum unobstructed width of 2000mm, and 1800mm over a short distance to pass an obstruction, for example, a tree.
9. Access routes in shopping areas and the City Centre should have a minimum width of 3500mm and 1800mm over a short distance to pass an obstruction, for example, a tree.
10. Footway widths at bus stops should have a minimum width of 3000mm and 1800mm over a short distance to pass an obstruction, for example, a tree.

Footways, Pathways and Access Routes

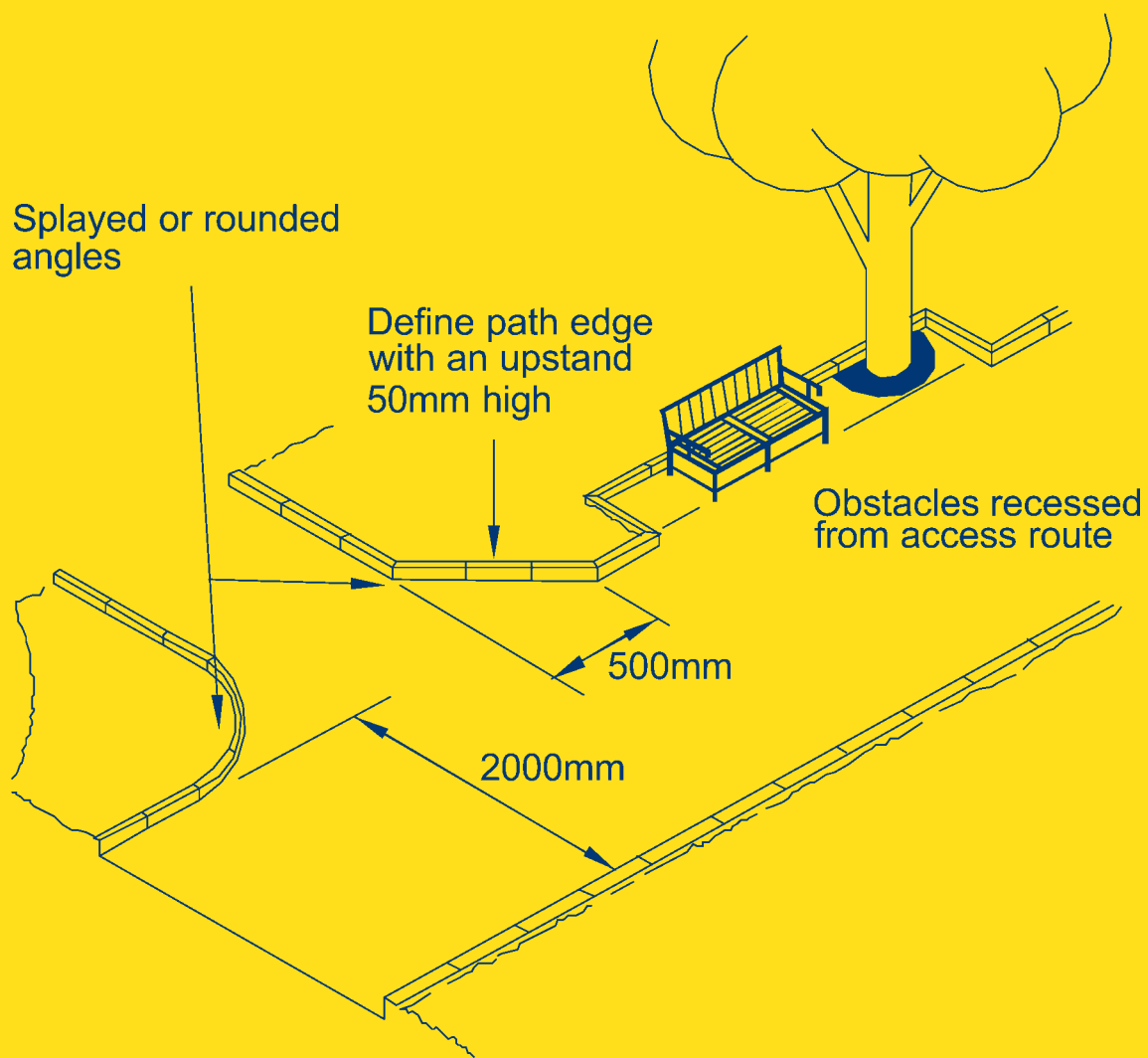
11. Access routes should not contain obstacles. Where an obstacle cannot be removed an alternative permanent route should be provided, where possible, and the obstacle should be identified with hazard warning. See section 4: Street Furniture.
12. Where railings are provided they should have a lower rail set 100mm from the ground.
13. Where there is no building line or railings, path edges should be defined with a 100mm upstand.
14. The swing of entrance and exit doors and windows should not extend into an access route.
15. Headroom of at least 2500mm should be provided between any footway and the underside of any projection from walls, buildings, canopies, signs, tree branches, etc.
16. Street signs should use clear text against a contrasting background. See section 24: Signs and Wayfinding.
17. See diagram 3 for details of Footways, Pathways and Access Routes.

3.2 Temporary Obstruction of Access Routes

1. Highway works and other authorised work on the highway must be provided with warning signs and barriers, in accordance with Chapter 8 of the Traffic Signs Manual published by the Department for Transport, and the accompanying Code of Practice 'Safety at Street Works and Road Works'.
2. Alternative safe crossings should be provided if existing dropped crossings are to be obstructed by the works.
3. Hoardings, scaffolding and skips on public highways must be licensed by the City Council. If these create an obstruction the license should state the alternative access arrangements.

Footways, Pathways and Access Routes

3 Footways, Pathways and Access Routes



Not to Scale

Street furniture may be **temporary** or **permanent** and may be a hazard if not carefully located.

Temporary features such as A-boards, tables and chairs, flower planters and construction and maintenance equipment can cause a hazard by obstructing pedestrian routes and crossings. The demarcation of areas which are approved locations for tables and chairs outside restaurants and coffee bars can assist in ensuring that these features do not obstruct a route.

Permanent features such as lighting columns, free-standing advertisements, bollards, litterbins and signposts can be hazards on footways, and in pedestrian areas and public squares, if not designed to allow for unobstructed access routes.

Low-level bollards and chain-linked posts are hazardous, and other solutions should be sought, for example, for the protection of shop windows against ram raiding.

1. Formal approval is needed from the City Council to place seats and tables on the public highway outside coffee bars, restaurants, and licensed premises. These areas should be clearly demarcated to ensure that they do not obstruct access routes.
2. For those instances where formal approval is not required the guidance in this section should be taken into account as best practice.
3. A-boards and other temporary features placed on the public highway are illegal and will be removed.
4. Temporary features which are placed on private forecourts, such as A-boards, paste tables, planters and market stalls, should be located so as not to obstruct access routes.
5. Street furniture that cannot be removed from the footway, such as lighting columns, signposts, free standing advertisements, litter bins and seats, should be positioned in a zone not exceeding 275mm from the back of the footway or in a zone at the front of the footway starting 450mm from the kerb face. An obstacle-free route of minimum 1800mm should be retained.
6. See diagram 4 for guidance on the location of street furniture.
7. All street furniture should be clearly distinguishable from the background by careful choice of overall colour, or by the use of colour bands or clearly defined logos.

Street Furniture

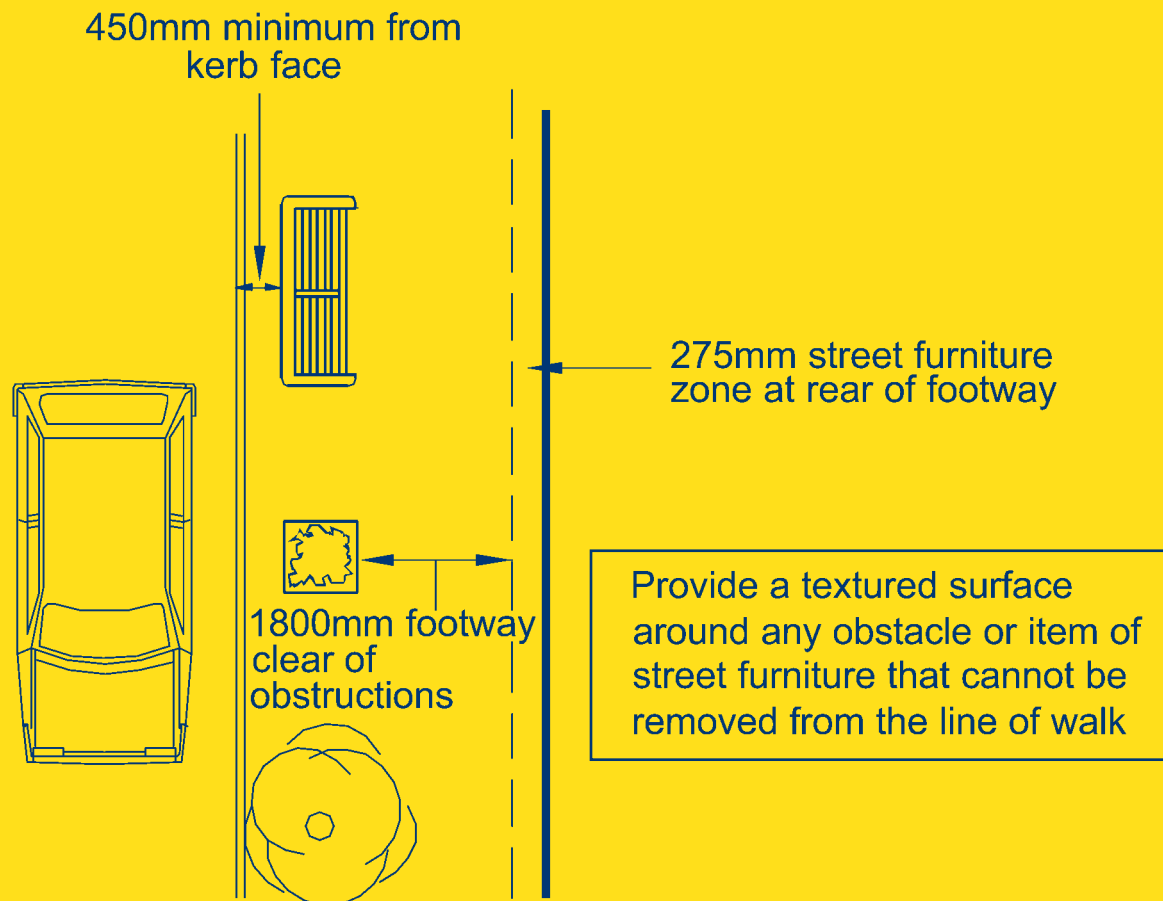
8. Any posts or columns or other obstructions within a route should incorporate a band, 150mm deep, with its bottom edge 1500mm above ground level. The band should contrast in colour and luminance* with remainder of the post or column.
9. Bollards should be at least 1000mm high and should not be linked with chains. Bollards also require a colour and luminance* contrast feature.
10. Obstructions within a route should be avoided. However, where this is not possible, a sett paved textured surface should be placed around any obstacle or item of street furniture that cannot be removed from the line of walk, starting on the line of walk a minimum of 1000mm in front of the obstruction, and extending a minimum of 300mm to the side. Tree grilles are an acceptable alternative around trees, to a width of 1000mm.
11. Hazard protection should be provided if an obstacle projects more than 100mm into a route and its lower edge is more than 300mm above the ground. Protection should take the form of a kerb or other solid barrier, which is colour and luminance* contrasted, and should not extend beyond the front edge of the object, nor be set back more than 100mm from its front edge.
12. Spaces beneath steps, stairways and ramps should be blocked off and provided with a protective guard-rail, or with some other permanent feature, which is colour and luminance* contrasted, at least 900mm above ground level, to avoid collision with the underside.

*See Glossary

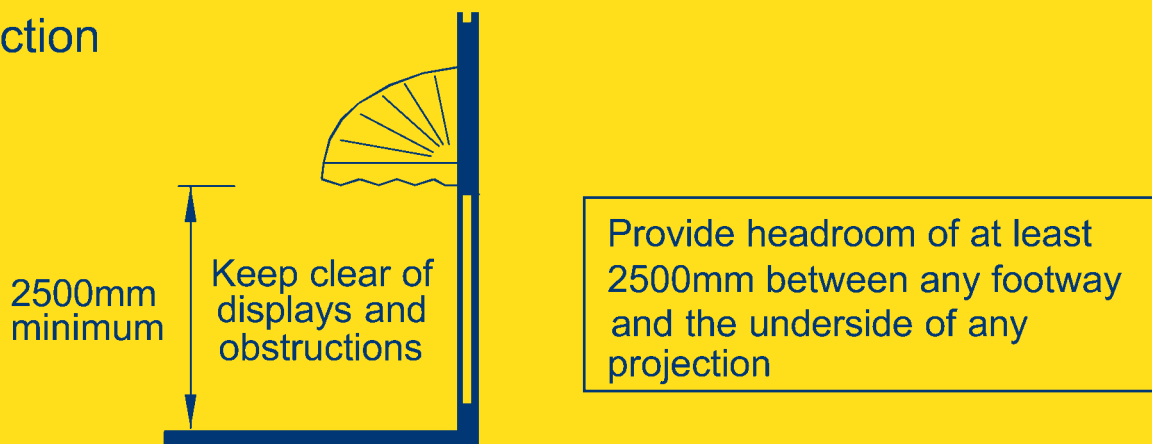
Street Furniture

4 Street Furniture

a) Layout



b) Section



Not to Scale

5 Seating

Seating should be provided at regular intervals along routes and should be at different heights.

1. Frequent resting places should be provided, not more than 50 metres apart, in pedestrian areas and at transport interchanges.
2. Seats should be located in safe, clearly visible and well lit areas.
3. Seats should be positioned off the footway, and should allow an area of 400mm in front of the seat.
4. A firm wheelchair parking area 900mm wide should be provided on both sides of seating.
5. The seat level should be 475-500mm from the ground. If a number of seats are to be provided, then some of these should be at a higher level.
6. Seat width should be 500mm. Include a back support and arm rests on both sides of the sitting position.
7. The seat colour and luminance* should contrast with the background.
8. Use materials which do not significantly retain heat or cold. For example, some metals or plastics would be inappropriate.
9. When seating forms an obstruction a tactile warning surface should be incorporated, in accordance with section 4: Street Furniture, whilst maintaining smooth access.

*See Glossary

Disabled people should be able to use the same entrance as everyone else, therefore the approach to and entrance into a building should ideally be level. If a change in level along the route is unavoidable, it will be necessary to provide a sloped surface for access. Any access route that has a gradient of 1 in 20 (5%) or steeper should conform to the requirements in this section.

Steps should also be provided as an alternative route.

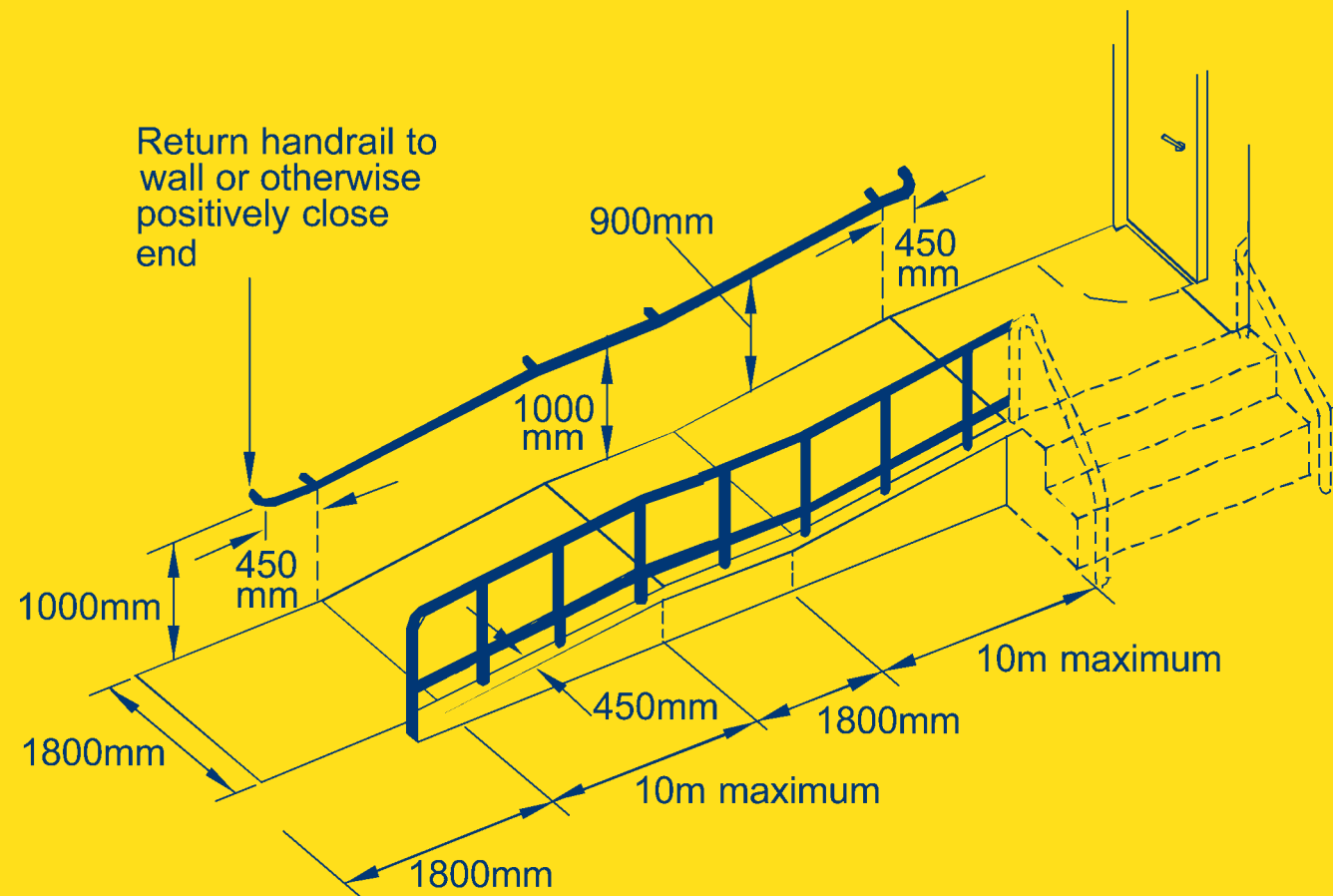
Landings are needed to provide resting places, and to enable people to manoeuvre and to open and to close doors.

1. The existence and location of a ramp should be clearly indicated.
2. The preferred surface width of a ramp is 1800mm minimum.
3. Stepped ramps should not be used.
4. A ramp into or within a building should have a gradient not exceeding 1 in 20 (5%).
5. No individual flight of a ramp should have a going (or horizontal distance) of more than 10 metres, or a rise of more than 500mm.
6. No series of ramps to a building should rise in total more than 2000mm. If the difference in height is more than 2000mm an alternative means of access, such as a lift, should be provided.
7. The maximum surface cross-fall gradient of a ramp should be 1 in 50 (2%).
8. Landings should be provided at the foot and head of a ramp and at intervals of no more than 10 metres.
9. Landings should be at least the width of the ramp and a minimum of 1800mm x 1800mm, clear of any door swing or other obstruction.
10. Handrails should be provided on both sides of all ramps. See section 9: Handrails.
11. Surface materials should be smooth, easy to maintain and slip resistant*.
12. The colour and luminance* of the ramp surface should contrast with that of the landings.
13. Highlight the top and bottom of the ramp by use of colour and luminance* contrast.

Ramps

14. Where a ramp runs along the side of a building a kerbed upstand, at least 100mm high and differentiated by colour and luminance* contrast, should be provided on the open side.
15. Good lighting should be provided, particularly at the top and bottom of the ramp. Avoid glare and cross-shadows, which can cause problems in detecting the top and bottom of a ramp and changes in gradient. See section 25: Lighting.
16. See diagram 6 for details of ramps.

*See Glossary



1. Gradient should not exceed 1 in 20 (5%)
2. Provide 100mm kerb to open edge
3. Highlight top and bottom of ramp with colour and luminance contrast

Not to Scale

1. Access to footbridges should be by both ramps and steps whenever possible. See sections 6: Ramps and 8: External Steps.
2. The ramps should not be less than 1800mm wide.
3. Handrails should be provided to both sides of the steps and ramps. See section 9: Handrails.
4. A central handrail should be provided when the width of steps or ramps exceeds 1800mm.

Warning of a change of level on an access route is essential. The warning needs to be placed sufficiently in advance of the hazard to allow time to stop, and should not be so narrow that it might be missed.

1. External steps should be protected from bad weather.
2. Ramped steps should not be used.
3. Steps which 'feather' into ramps should not be used, as changes of level are not easily detected.
4. Isolated single steps should not be used.
5. The unobstructed width of a stepped access route should be 1800mm minimum.
6. No flight of steps should rise more than 1200mm.
7. The rise of each step should be as close as possible to, but not less than, 150mm, and each rise within a flight, or series of flights, should be uniform.
8. The tread depth for steps should be 280mm. Each tread within a flight should be uniform and slip resistant.
9. A step should not overlap the one below. If an overlap is unavoidable, the nosing should not project over the tread below by more than 25mm.
10. All nosings should be distinguished by contrasting colour and luminance*.
11. There should be a level unobstructed landing of minimum 1800mm x 1800mm, clear of any door swing, at the top and bottom of each flight of steps.
12. A colour and luminance* contrasted corduroy tactile warning surface should be incorporated into the landings at the top and bottom of the steps.
13. Do not use open risers or tapered treads, including spiral and helical stairs.
14. Do not use open recesses under steps.
15. A flight of steps that contains two or more risers should have a continuous handrail on both sides.
16. If any stairway consists of two or more flights, separated by a landing or landings, each handrail should be continuous throughout the series of flights.

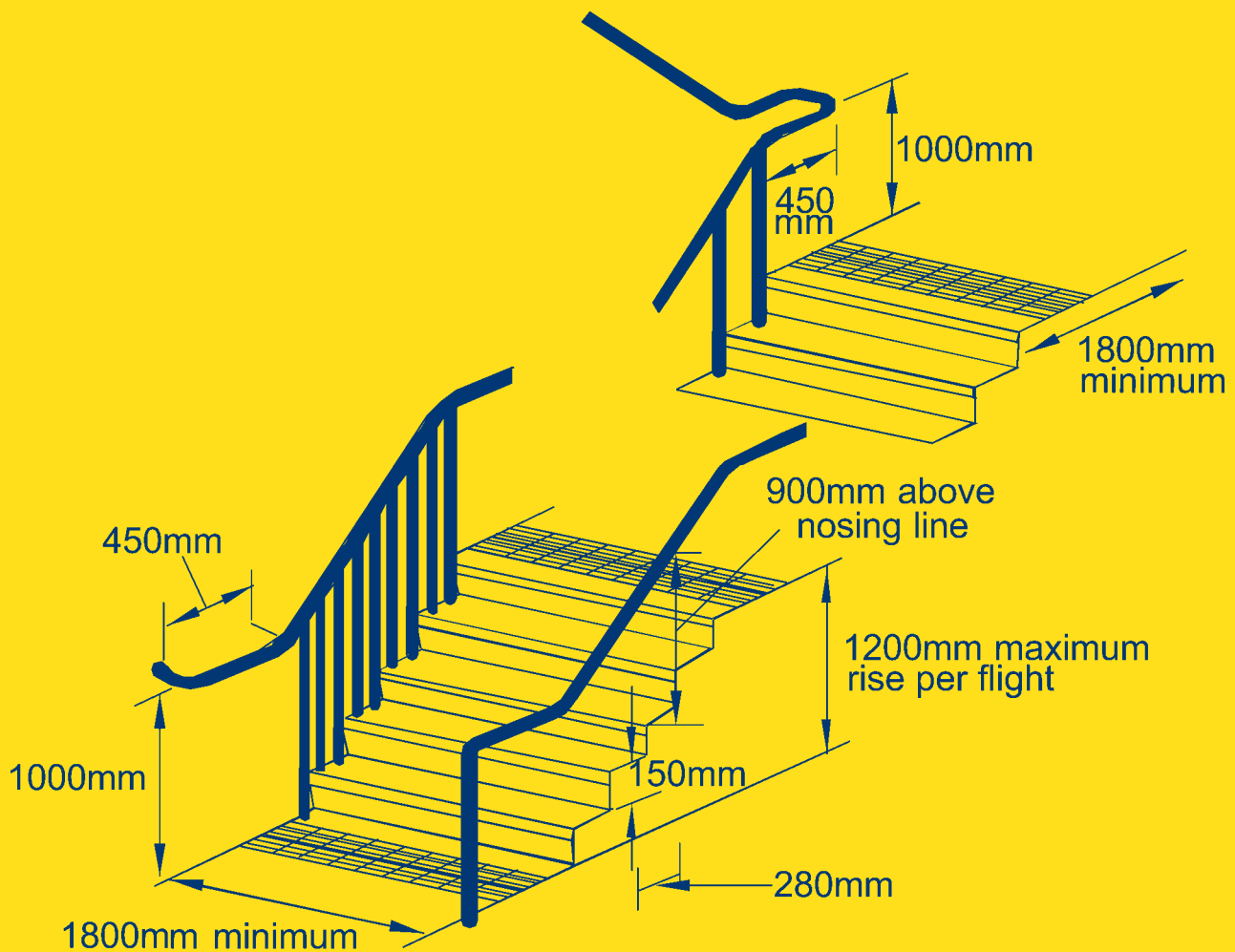
External Steps

17. Where the overall unobstructed width of steps is greater than 1800mm, an additional handrail or handrails should be provided to divide the flight into separate channels. No channel should have an unobstructed width of less than 1000mm or more than 1800mm. For further details about handrails, see section 9: Handrails.
18. Steps should have strong, even lighting throughout. Avoid glare and cross-shadows, which can cause problems detecting changes in gradient.
19. See diagram 8 for details of external steps.

*See Glossary

External Steps

8 External Steps



1. All nosings should be identified by a contrasting colour and luminance
2. Provide corduroy hazard warning at top and bottom
3. Landings should be minimum 1800mm x 1800mm
4. Open risers should not be used

Not to Scale

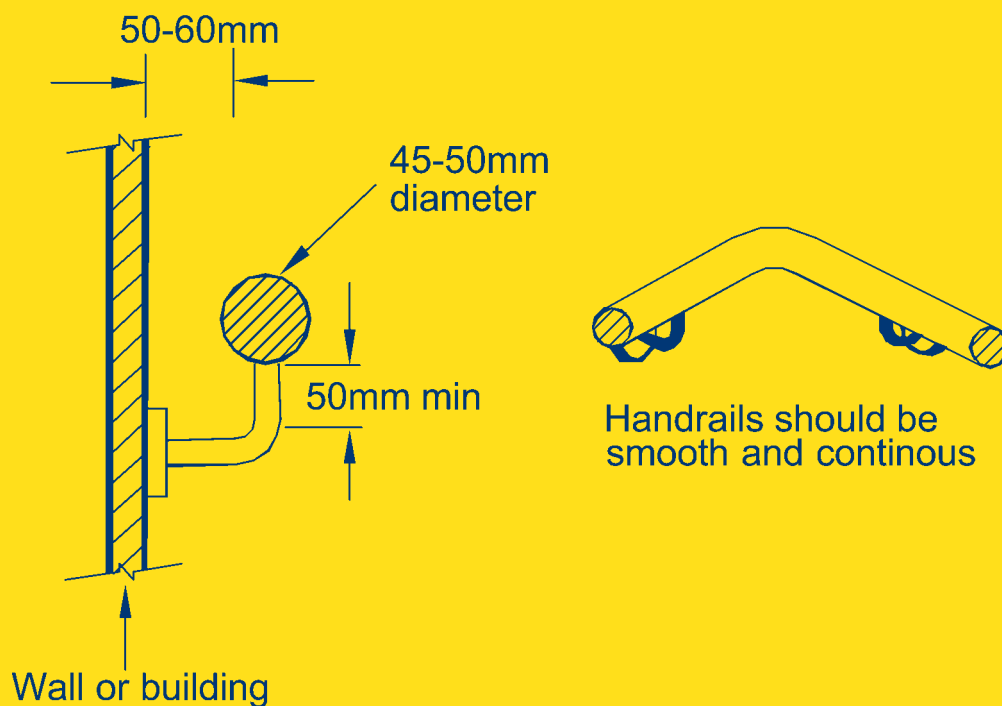
Handrails (Ramps, Stairs and Steps)

1. Handrails should be provided to both sides of ramps, stairs and steps.
2. A central handrail should be provided when the width of the ramp, stairs or steps exceeds 1800mm.
3. Handrails should be fixed 1000mm above the surface of landings, 900mm above the surface of ramps and stair nosings, and not more than 100mm beyond the surface width of the ramp or stairs.
4. Handrails should be continuous along ramps and stairs, and across landings and resting places.
5. Handrails should extend 450mm beyond the start and finish of the ramp or stairs.
6. Handrails should be turned down and terminated at the floor or ground level, or turned into the wall on the closed side of the ramp or stairs.
7. Handrails should be smooth, free of studs and comfortable to grip. Handrails should not significantly retain heat or cold, for example, some metals or plastics would be inappropriate.
8. Handrails should be finished to contrast in colour and luminance* with the surroundings.
9. Handrails should be of a circular profile, 40mm - 45mm in diameter, or an oval profile of 50mm width.
10. Handrails should be fixed 60mm - 75mm from any adjacent wall or surface.
11. See diagram 9 for details of handrails.

*See Glossary

Handrails (Ramps, Stairs and Steps)

9 Handrails (Ramps, Stairs and Steps)



Section through handrail

Not to Scale

10 Doors

For doors in dwellings refer to section 21: Dwellings.

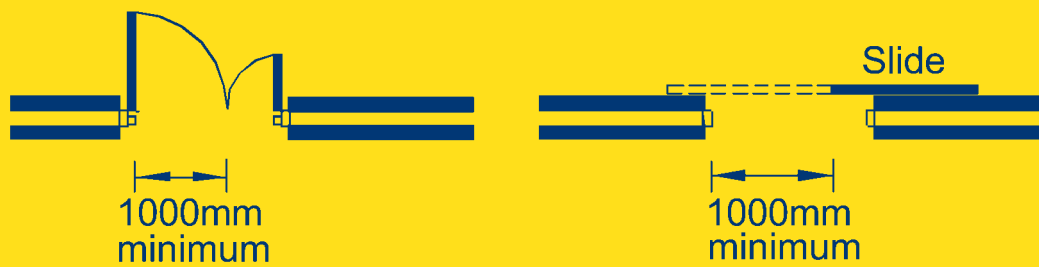
For door entry systems, refer to section 11: Design and Fitting of Doors and Entry Systems.

10.1 External Doors

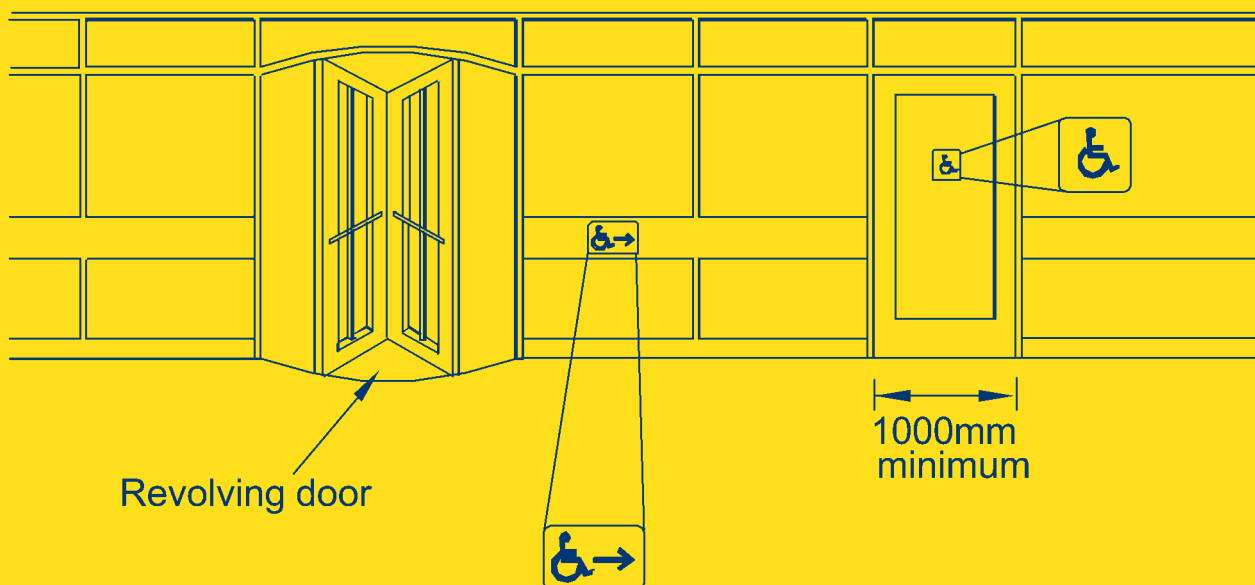
1. A single leaf external door should have a minimum clear opening of 1000mm. The effective clear opening should be free of projections such as door furniture.
2. Where there are double doors, at least one leaf should have a clear opening of not less than 1000mm. The effective clear opening should be free of projections such as door furniture.
3. Power operated sliding doors should be provided when possible.
4. Where there are revolving doors, there should also be an accessible side hung or sliding door, which is in regular use.
5. All outward opening doors should be recessed.
6. Protection from the weather should be provided at all non-powered entrance doors.
7. Thresholds should be flush.
8. See diagram 10.1 for details of external doors.

10.1 External Doors

a) Double door and sliding door



b) Revolving door



c) Recessed door



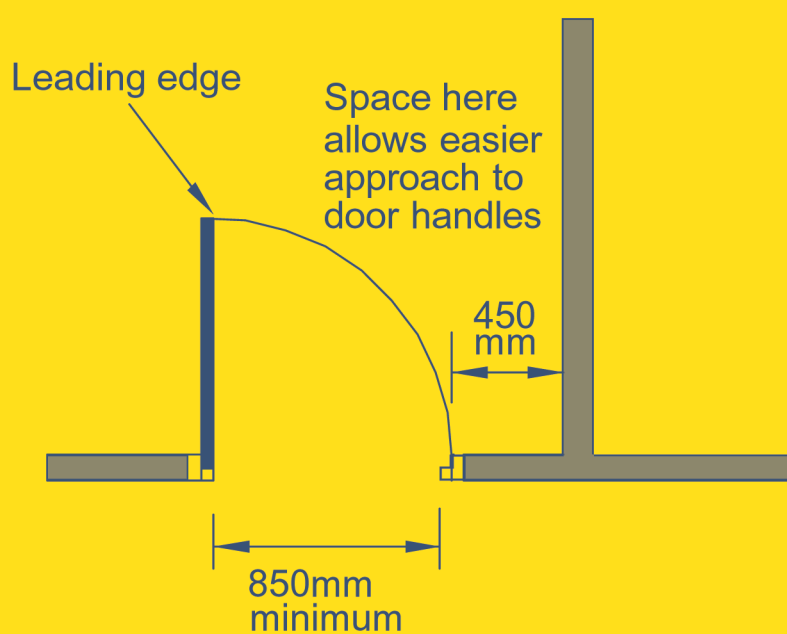
Not to Scale

Doors

10.2 Internal Doors

1. A clear opening of at least 850mm should be provided. Doors to accessible toilets and to baby changing facilities should have a minimum clear opening of 900mm. The effective clear opening should be free of projections such as door furniture.
2. At the leading edge of a door to an accessible area, a clear wall space of at least 450mm should be provided.
3. See diagram 10.2 for details of internal doors.

10.2 Internal Doors



Not to Scale

Design and Fitting of Doors and Entry Systems

These recommendations apply both to external and internal doors. See also section 12: Door and Window Furniture.

1. All main entrance doors and doors on circulation routes should be automatically activated with sensors.
2. Where possible, doors should have a two-way swing.
3. Where possible, doors should be hung to the same side and open in the same direction in communal and circulation areas.
4. Doors should have a closing force not exceeding 20 Newtons*, that is, they should open and close with a light touch.
5. Where doors form part of a building's security, fire protection or energy management systems, any 'hold open' devices should be fixed at the top rather than the bottom of the door.
6. Door furniture should contrast with the door and the door itself should contrast with its surround.
7. A kicking plate 250mm in height should be fitted to both sides of the door.
8. A vision panel of minimum width 150mm should be fitted to all doors to provide a viewing area, except where privacy is needed (to toilets, changing rooms or counselling rooms for example). The base of the vision panel should be no higher than 500mm above floor level, and should extend to a minimum height of 1500mm. Beading around the vision panel should be flush with the door.
9. Fully glazed doors should be highlighted with permanent contrasting strips or continuous features at heights of 1000mm and 1500mm above ground level. The leading edge of the door should be colour and luminance* contrasted.
10. Glazing in doors should be safety glass. Where they are capable of being held open, glass doors should be protected by guarding.
11. Where it is necessary to ensure that the door is closed, and the door is not self-closing, an additional horizontal handle fixed at 900mm above floor level will be required.

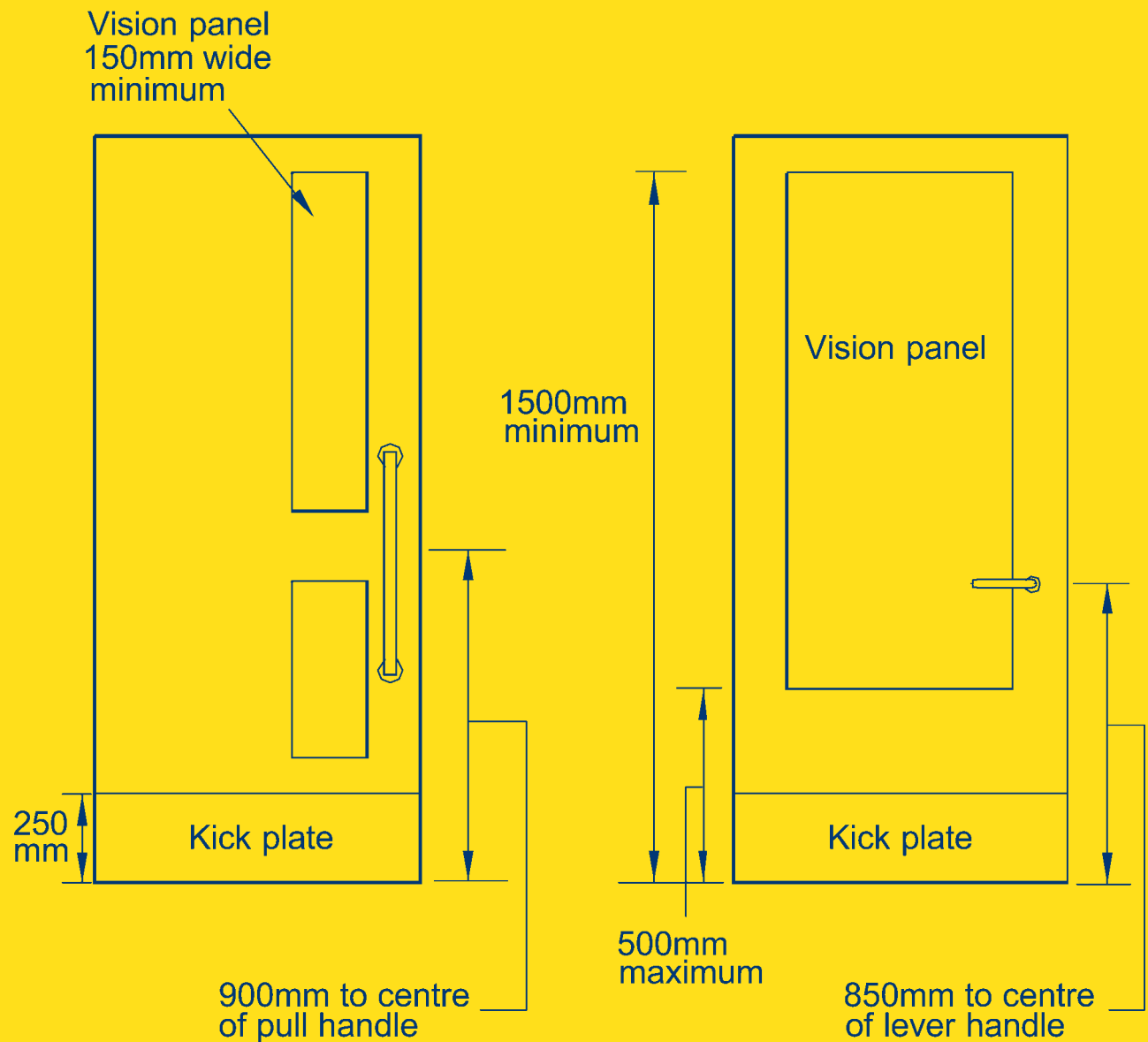
Design and Fitting of Doors and Entry Systems

- 12.** Entry systems for doors, gates and barriers should be designed to be accessible, located horizontally at 900mm above floor level and, where possible, should incorporate additional vertical systems.
- 13.** All numbers and letters on entry systems should be identifiable by raised symbols. The depth of embossing should be at least 1.5mm.
- 14.** Include clear instructions, in minimum 14 point font size, on the use of the entry system.
- 15.** Entry systems must not rely only on audible intercoms and must incorporate inclusive entry procedures. New technologies and improved designs for providing accessible entry systems should be used.
- 16.** Where possible, incorporate CCTV cameras at entry systems for security and information.
- 17.** See diagram 11 for details of the design and fitting of doors.

*See Glossary.

Design and Fitting of Doors and Entry Systems

11 Doors - Design and Fitting



Not to Scale

A balance must be struck between security from intrusion and the ability to undo catches and latches quickly and easily. Care should be taken that accessibility to door and window furniture does not in itself cause a hazard or obstruction.

1. Door and window weight should be as low as possible for the purpose and location. Hinges should be of sufficient strength and positioning for leaf width.
2. Where possible, use power-assisted activators for windows and doors which are operated by remote control, or design the structure to allow for powered control in the future. In all cases devices should 'fail safe' for manual operation in case of power failure.
3. Use fittings which are capable of being adapted to specific requirements.
4. All handles, levers, catches, keys and locks should be large enough to hold easily and not be circular in design. Keys and locks should, where possible, be useable within a 90 degree radius. The use of sliding bolts is not recommended.
5. Catches, handles and all projections should contrast in colour and luminance* with their surroundings.
6. Door fastening mechanisms should be of the lever type and fixed at a height not exceeding 900mm. Where a lock is needed for privacy (for example, for toilets, changing rooms or counselling rooms) this should be externally accessible, in case of an emergency, and should incorporate an 'engaged' indicator.
7. Locks should be fixed at 850mm above floor level.
8. Where horizontal handles are fitted these should be of minimum width 400mm and fixed 900mm above floor level.
9. Diagonal and vertical 'D' type handles should be fixed at 900mm from the centre of the handle to the floor.
10. Window fastenings should be located at 900mm above floor level.
11. Catches and locks should be smoothly free turning and maintained for low friction operation.

*See Glossary

Reception and Refreshment Areas

Convenient access to reception desks, counters, seating and information is essential for people if they are to make full use of a building, whether as a visitor or as a member of staff providing a service.

1. Signs should clearly identify the reception area from the entrance. See section 24: Signs and Wayfinding.
2. If the reception area is not continuously staffed, suitable monitoring equipment should be provided, for example, CCTV systems, to alert the receptionist that assistance is required. Intercoms should not be used.
3. Counters should be at 760mm above floor level, with knee recess spaces minimum 1500mm wide and 730mm high. An open shelf should be provided, above the counter, at 900mm. Counters should be 700mm wide and, where relevant, should provide a minimum depth of 400mm on the service side and 300mm on the customer side.
4. Where glazed barriers are installed, there should be no obstructions to the view of the receptionist's face.
5. Lighting should allow for lipreading and facial expressions. See also section 25: Lighting.
6. Displays, leaflets, booklets and other literature should be available at a height of 900mm.
7. Public address systems, where provided, should be supplemented by visual information systems with large print and colour contrasted* to the background.
8. Seats should be available at reception desks or counters, or a waiting area with seating should be provided, with sufficient space to manoeuvre. A mixture of seating options should be provided in a waiting area, for example, different heights, fixed or removable, and with or without arms. See section 5: Seating.
9. Information and menus on display should be in 18 point font minimum. Avoid words in capitals and italics and use of underlines. All information should use clear print guidelines, with additional alternative formats wherever possible. See Useful Sources of Information section.

Reception and Refreshment Areas

In addition, a reception area should have:

- | | |
|--|---|
| <p>10. An unobstructed space of 1800mm x 1800mm in front of the reception counter.</p> <p>11. Induction loops or other enhanced sound systems at the reception desk, with a sign clearly indicating their presence. See section 23: Communication Systems. Signs and/or badges should also be used to indicate whether interpreters are available.</p> | <p>12. Public telephones centred at 900mm above floor level, with the availability of text phones and hearing enhancement systems. They should be located where they can be used with privacy and their use will not cause an obstruction.</p> |
|--|---|

In addition, a café, bar or refreshment area should have:

- | | |
|---|---|
| <p>13. Aisles at counters which are minimum 1800mm wide.</p> <p>14. Tables and chairs, which are not fixed to the floor, to enable people to choose where they sit. Appropriate seating should be provided. See Section 5: Seating.</p> | <p>15. An unobstructed route of at least 800mm between sets of chairs and tables.</p> <p>*See Glossary</p> |
|---|---|

Lobbies, Corridors and Internal Spaces

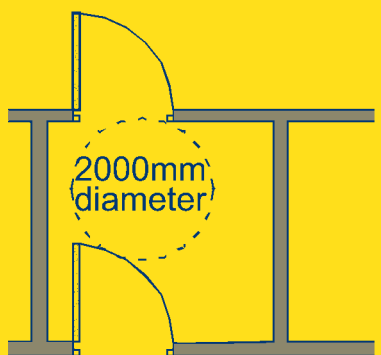
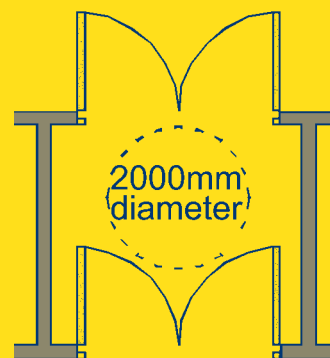
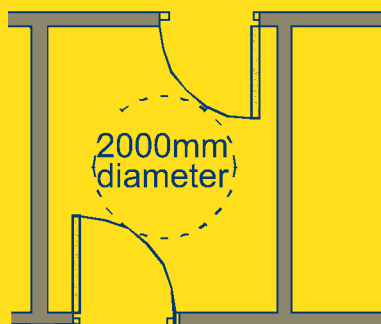
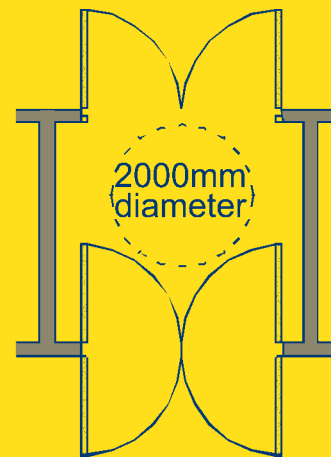
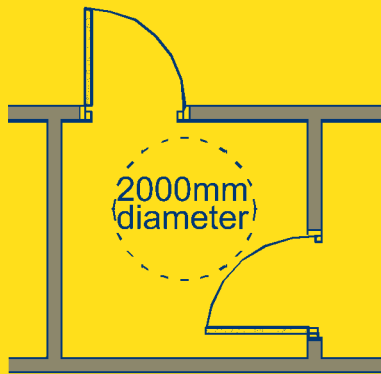
14.1 Lobbies

1. Lobby doors should be positioned for easy, unobstructed approach and passage, and should ideally be two-way swing.
2. When a door into a lobby is open, there should be a minimum turning circle of 2000mm diameter remaining within the lobby.
3. Mats should be flush with the floor surface. Avoid natural materials, which may cause traction.
4. Transitional lighting should be provided to reduce the contrast between the outside and the building interior. See section 25: Lighting.
5. Transitional schemes which contrast in colour and luminance* should be used to separate lobbies from other parts of the building.
6. See diagram 14.1 for alternative lobby arrangements.

*See Glossary

Lobbies, Corridors and Internal Spaces

14.1 Lobbies - Alternative arrangements



Not to Scale

Lobbies, Corridors and Internal Spaces

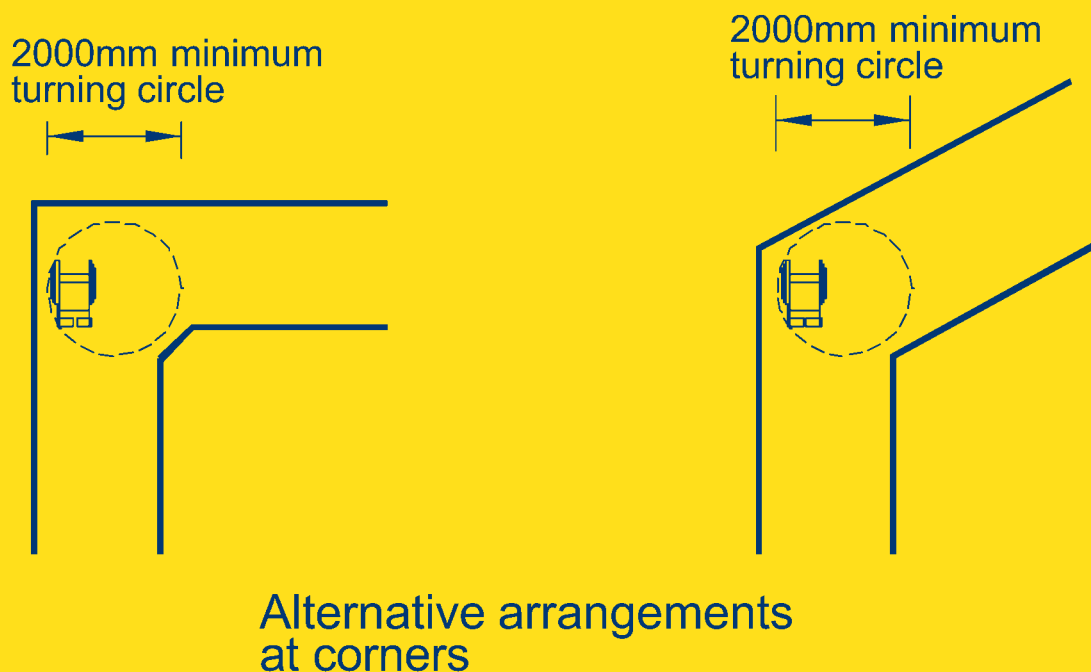
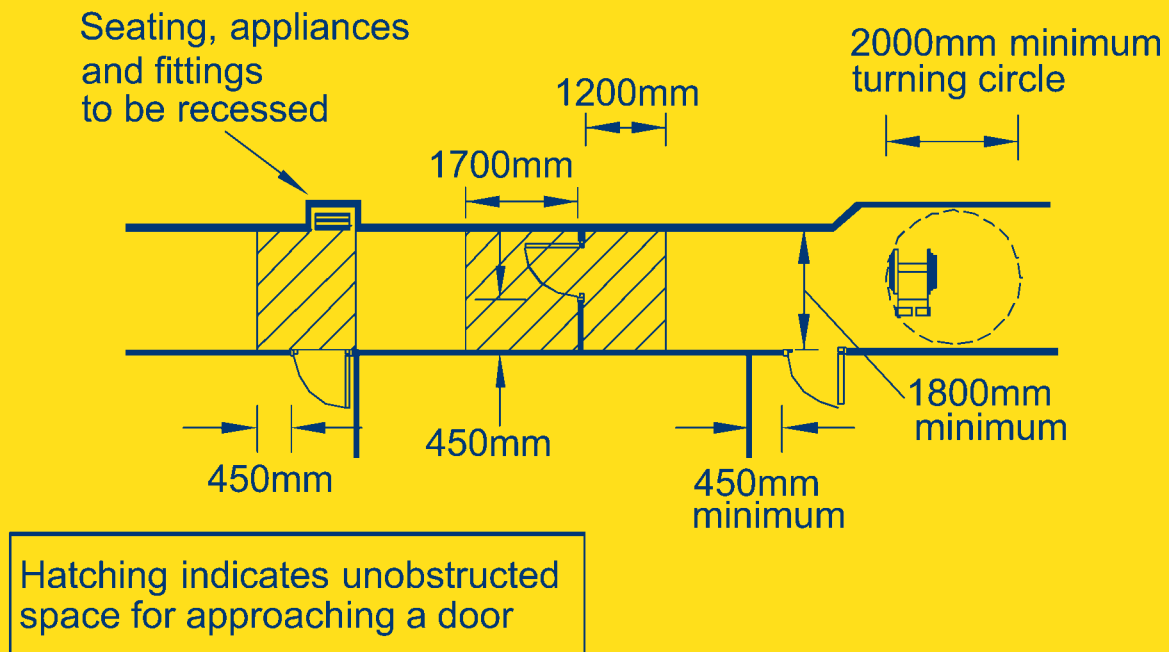
14.2 Corridors and Internal Spaces

1. Corridors and internal spaces should be a minimum of 1800mm wide.
2. Keep corridors and communal spaces clear of obstructions. Notice boards and appliances such as fire extinguishers should be recessed.
3. Use slip resistant* floor covering for corridors and communal spaces. See section 22: Surfaces and Finishes.
4. Provide unobstructed turning space of minimum 2000mm diameter at corners.
5. Provide unobstructed space for approaching and opening doors.
6. Provide recessed seating in all corridors longer than 50 metres.
7. There should be a contrast, in colour and luminance,* between walls and ceilings, and between walls and floors.
8. See diagram 14.2 for details of corridors and internal spaces.

*See Glossary

Lobbies, Corridors and Internal Spaces

14.2 Corridors and Internal Spaces



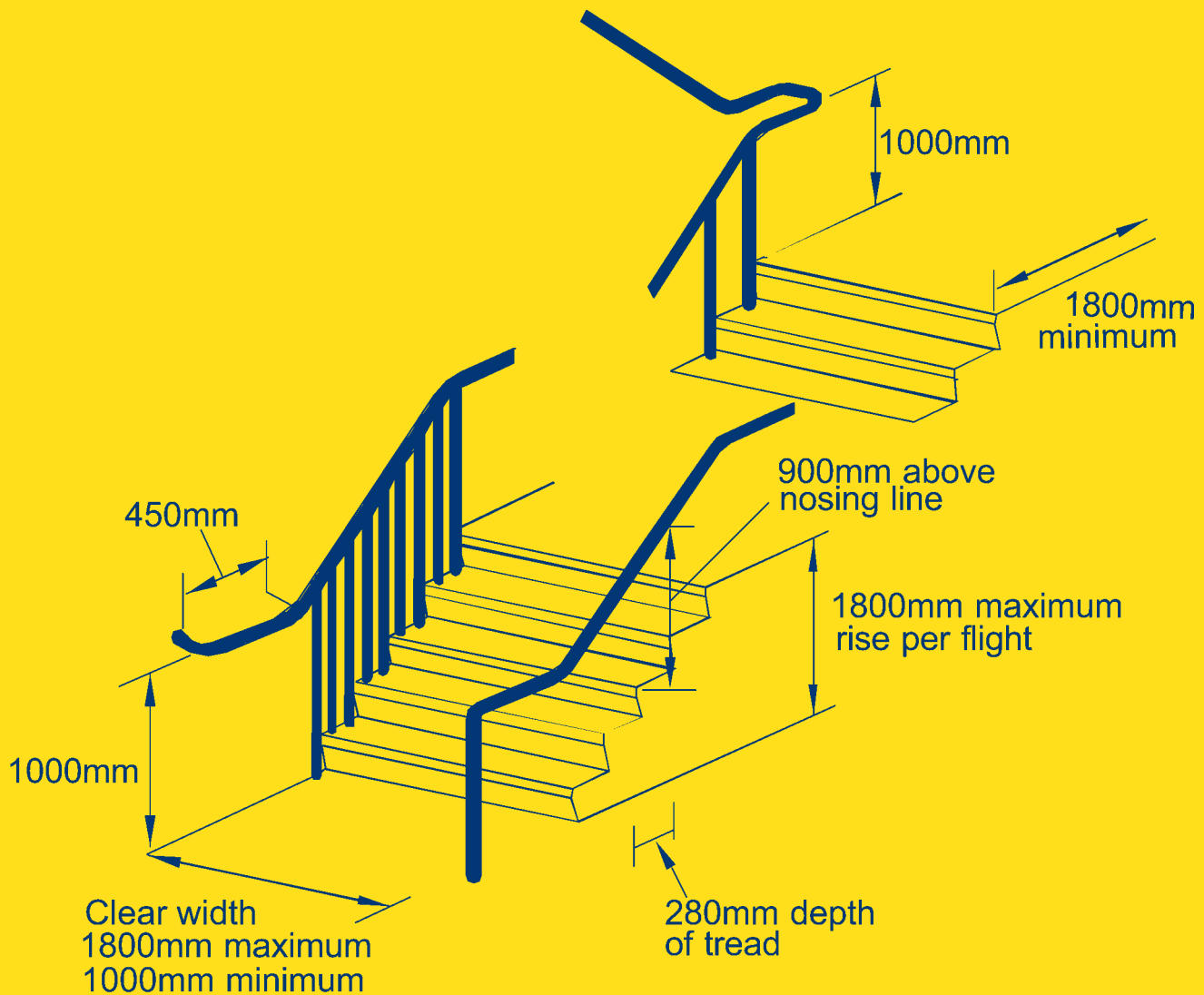
Not to Scale

1. Flights of stairs should have a maximum of 12 risers per flight and a maximum rise of 1800mm.
2. The clear width of stairs should be 1000mm minimum and 1800mm maximum.
3. The depth of tread should be 280mm.
4. Risers should be as close as possible to, but no less than, 150mm.
5. Do not use open risers, tapered treads or helical or spiral* stairs.
6. Avoid open recesses under stairs.
7. There should be a level unobstructed landing, 1800mm x 1800mm minimum, at the top and bottom of each flight, clear of any door swing.
8. A colour and luminance* contrast should be incorporated into the landings at the top and bottom of the stairs.
9. A step should not overlap the one below.
10. The leading edge of all steps should be distinguished by colour and luminance* contrast.
11. Treads should be constructed of opaque non-reflective materials.
12. Stairs should have strong, even lighting throughout.
13. For guidance on handrails see section 9.
14. See diagram 15 for details of internal stairs.

*See Glossary

Internal Stairs

15 Internal Stairs



1. Maximum of 12 risers per flight
2. Risers should be as close as possible to 150mm
3. Open risers should not be used

Not to Scale

These standards are for passenger lifts, platform lifts and goods lifts.

Passenger lifts provide access between levels and storeys. A disabled person needs sufficient space and time to enter and leave a passenger lift, particularly when sharing it with other people. Lift sizes should therefore be chosen to suit the anticipated density of use of the building and the requirements of disabled people.

Platform lifts (lifting platforms) should be used only where space is restricted and access is only between two levels.

Goods lifts, where provided, should be additional to passenger lifts, and should comply with the relevant standards from this section.

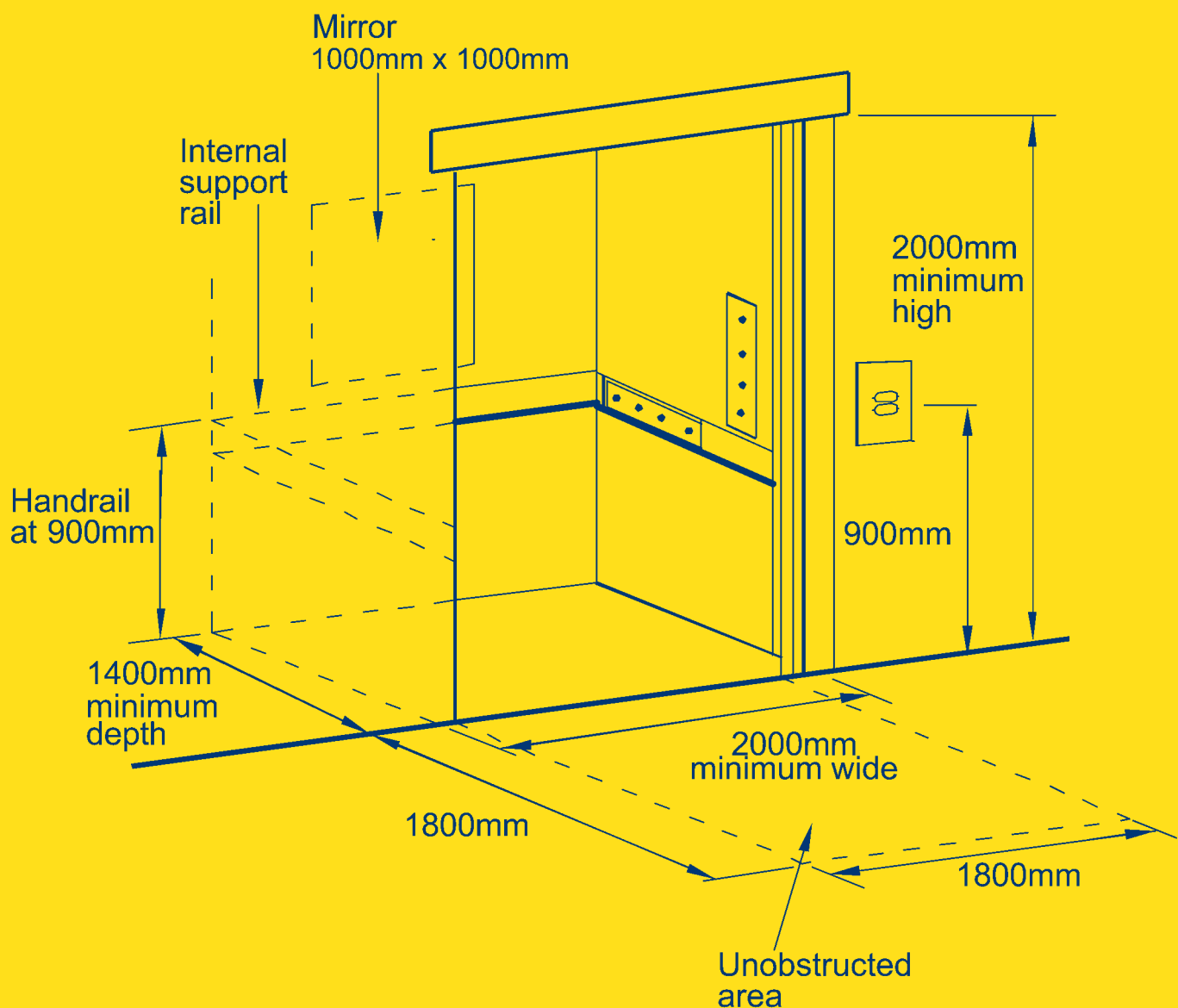
Stair lifts, which follow the line of a stair, should not be used in buildings other than dwellings. Where they are used in dwellings, they should be designed to meet the individual's requirements.

Internal stairs should also be provided as an alternative means of access to other levels, designed to the standards in section 15.

16.1 Passenger Lifts

1. Internal dimensions should be minimum 2000mm wide x 1400mm deep x 2000mm high with maximum 15mm finishes.
2. For specific constrained circumstances, for example, in refurbishment schemes, minimum internal dimensions of 1100mm wide x 1400mm deep x 2000mm high would be sufficient.
3. There should be an unobstructed area in front of the lift entrance of 1800mm x 1800mm.
4. The area in front of and to the side of the lift should be kept clear of obstructions to allow access to the controls.
5. Seating should be provided outside and near to the lift.
6. Illuminated and audible systems to identify floor levels should be positioned inside and outside the lift.
7. Internal handrails should be provided 900mm above floor level.
8. Where a lift has a single door, a mirror, with minimum dimensions of 1000mm wide x 1000mm high, should be positioned inside the lift on the wall opposite the door at no higher than 900mm above floor level.

16 Passenger Lift



Not to Scale

Door opening width should be 900mm minimum

16.1 Passenger Lifts (continued)

9. Doors should include a presence sensor and, where possible, have a minimum door opening time of 20 seconds.
10. The door to the lift should provide a clear opening width of minimum 900mm. Except where space is constrained in refurbishment schemes lifts should use single or opposite doors only.
11. Call buttons outside the lift should preferably be on the right side of the door, should be colour and luminance* contrasted with the surround, should have embossed symbols, and should be positioned no higher than 900mm.
12. Control buttons within the lift should be horizontal, centred at a height of 900mm above floor level, centrally placed on the lift walls, and preferably on both sides of the compartment. There should also be a standard vertical control panel near to the door.
13. All controls should be identifiable with raised and Braille symbols. The depth of embossing should be at least 1.5mm. The controls should be in a contrasting colour and luminance* on non-reflective panels.
14. Lifts should have emergency communication systems, located no higher than 900mm above floor level, which provide audible and visual signals, explain how to make emergency calls and indicate, audibly and visually, when an emergency call has been received.
15. Flooring, wall and ceiling finishes should be opaque, non-reflective and slip resistant*.
16. Lighting within lifts should avoid glare, reflection, shadows or pools of light.
17. At least one lift in each area of the building should be designed as an evacuation lift, with an independent power supply, and should be clearly indicated for this use.
18. Signage indicating the floor level should be provided on the wall opposite the lift doors on each landing.
19. See diagram 16 for details of passenger lifts.

*See Glossary

16.2 Platform Lifts

1. Internal dimensions should be minimum 1100mm wide x 1400mm deep.
2. There should be an unobstructed area in front of the lift entrance of 1800mm x 1800mm.
3. The area in front of and to the side of the lift should be kept clear of obstructions to allow access to the controls.
4. The door to the lift should provide a clear opening width of minimum 900mm.
5. The floor to the lift car should be level with the unobstructed area in front of the lift.
6. The lift car should be enclosed.
7. Flooring, wall and ceiling finishes should be opaque, non-reflective and slip-resistant.
8. The controls should be capable of use independently by the user and set no higher than 900mm above floor level.
9. The doors should not require the simultaneous operation of two mechanisms to open them.
10. The door opening and closing system should be automatic.
11. The lift should incorporate audible and visual alarm and emergency systems.
12. There should be clear instructions for use, with a font of at least 14 point sans-serif, and an audible and visual alarm system.
13. Where vision panels are fitted the base of the vision panel should be no higher than 500mm above floor level, and should extend to a minimum height of 1500mm.

*See Glossary

17 Toilets

For toilets in dwellings refer to section 21: Dwellings.

1. At least one separate unisex, accessible toilet facility should be provided for each suite of male/female toilets on each floor, with a maximum travel distance of 40 metres. Where more than one accessible toilet is provided, these should allow for transfer from alternative sides.
2. Suites of male/female toilets should include at least one larger sized cubicle, minimum 1200mm wide, with grab rails.
3. A separate unisex accessible baby changing area should also be provided. See section 18: Baby Changing Facilities.
4. Where a WC compartment is approached through a lobby the dimensions of the lobby should be as described in section 14.1 Lobbies.
5. The WC compartment door should open outwards and provide a clear opening of at least 900mm and should include a horizontal handle. See section 12: Door and Window Furniture.
6. For privacy, avoid the WC door opening directly on to a public and/or circulation area.
7. The flooring should be of slip resistant* material.
8. The door fastening mechanism should be of the lever type with an integral lock, which is externally accessible in case of an emergency. It should incorporate an 'engaged' indicator.
9. The WC compartment should be minimum 2000mm x 2000mm. This will provide options for positioning the WC pan.
10. Where there is only one toilet in a building the compartment should be increased to 2000mm x 2200mm.
11. A clear unobstructed approach should be provided to the WC. The mid-point of the pan should be located at 600mm from the adjoining wall or boxed-in pipes.
12. Generally the height of the WC pan should be 480mm and the front of the pan should be 750mm from the rear wall. In suites of toilets, different levels of pans, including at a lower height, should be considered.
13. Sensor controlled flushing systems are preferred, particularly where there is transfer space on both sides. Alternatively, a close coupled cistern should be installed with a large, dimple-type flushing handle on the transfer side, at a height of 800mm.

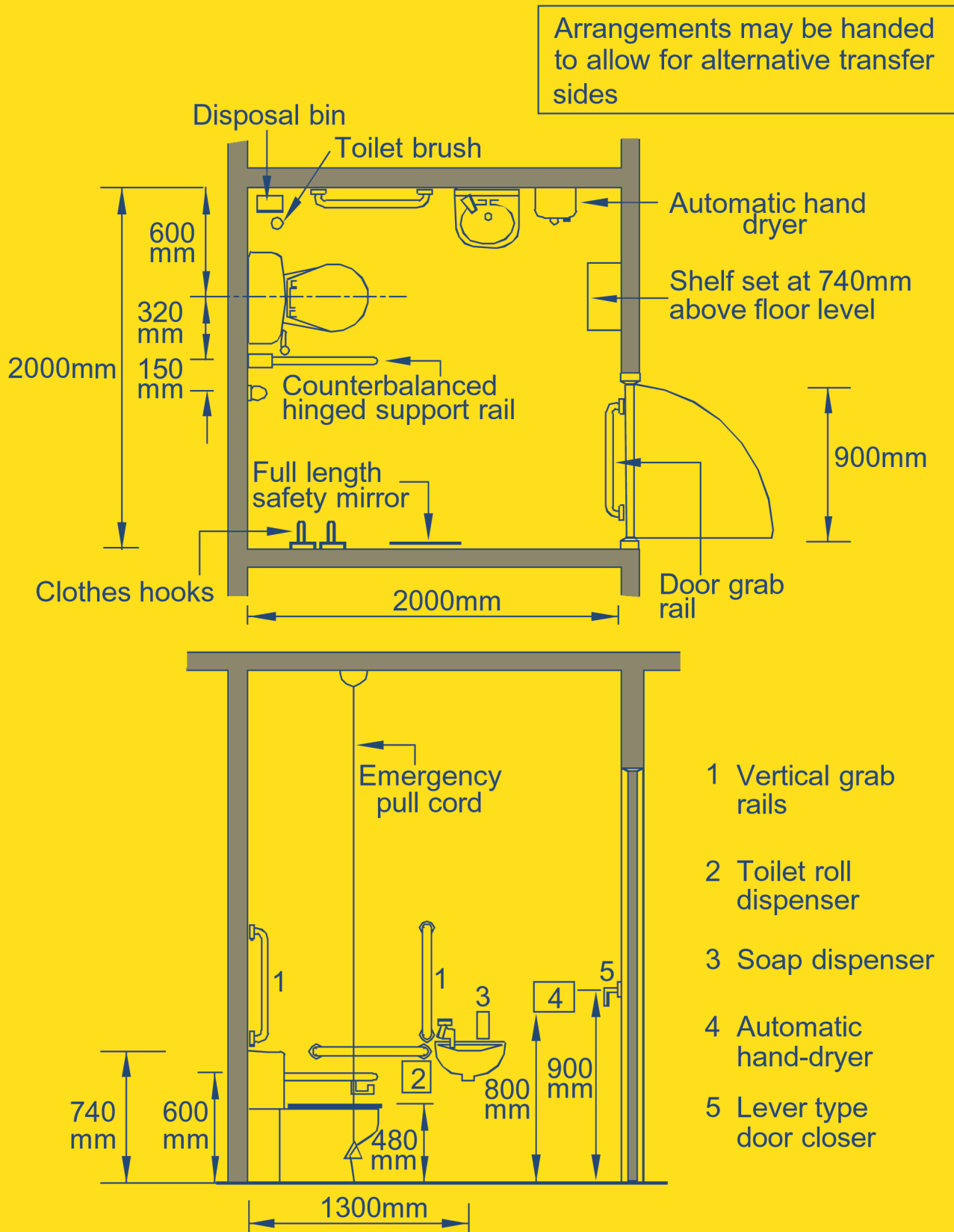
- 14.** A counterbalanced single bar hinged support rail with an integral toilet roll holder should be provided. All support fixings should be designed to withstand an ultimate load of 15kN (kiloNewtons)*.
- 15.** A small wash-hand basin should be installed at a height of 740mm. This should be positioned so that it can be reached by a person seated on the WC and should allow for a knee clearance of 450mm minimum. In no case should the wash-hand basin overlap the WC pan.
- 16.** Where there is only one toilet in a building, an additional wash-hand basin should be installed at a height of 800mm.
- 17.** A thermostatically controlled mixer tap with a lever handle should be provided, with the tap fixed on the side of the basin nearest to the WC. Sensor taps can cause difficulty.
- 18.** A soap dispenser should be sited over the wash-hand basin and should be operable with minimum pressure.
- 19.** A hot air hand drier and towel dispenser should be installed adjacent to the wash-hand basin at a height of 800mm above floor level.
- 20.** Small toilet roll dispensers are preferred and should be fitted at 450mm above floor level. If provided, larger dispensers should be 150mm above the grab rail.
- 21.** Coat hooks should be fitted at 1200mm and 1800mm above floor level.
- 22.** A full length safety mirror should be fitted, set at maximum 300mm above floor level.
- 23.** A small shelf should be fitted, set at 740mm above floor level.
- 24.** An emergency pull cord should be installed extending to 100mm above floor level on the transfer side of the WC. The cord should be fitted with several pull rings at different heights. Both the cord and the rings should be red coloured. The reset switch should be operable from the toilet seat.
- 25.** A fire alarm should be installed which has visual and audible signals.
- 26.** An emergency assistance system should be installed which indicates, audibly and visually, when an emergency call has been received, with visual and audible signals which are different from the fire alarm.

Toilets

- 27.** Lighting operated by sensors is preferred. Light switches should be installed no higher than 900mm above floor level. Where the light is operated by a pull cord it should be white coloured, and its end should be 450mm above the floor. Pull rings should be installed at the end and at 900mm above floor level.
- 28.** All fittings and the door should contrast in colour and luminance* with the walls and floor.
- 29.** See diagram 17 for layout of toilets.

*See Glossary

17 Toilets



Not to Scale

18 Baby Changing Facilities

All public areas should have a unisex accessible baby changing area.

1. Baby changing areas should not be placed in a unisex accessible toilet but should be in a separate space, to ensure that an accessible unisex toilet remains available to disabled people.
2. The area for a baby changing facility should be a minimum size of 2000mm x 2000mm.
3. The door should have a 900mm clear opening and should open outwards. It should include a horizontal or diagonal handle. See section 12: Door and Window Furniture.
4. The door fastening mechanism should be of the lever type with an integral lock which is externally accessible in case of an emergency. It should incorporate an 'engaged' indicator.
5. All fittings and the door should contrast in colour and luminance* with the walls and floor.
6. The changing table should be a maximum of 500mm deep and be permanently fixed at 750mm above floor level.
7. The table should be set against a wall, and should either be purpose-designed or have a raised edge and comply with all relevant safety standards.
8. A wash hand basin and hand dryer or towel holder should be installed at a height of 740mm, and a full length mirror set at maximum 300mm above floor level.
9. A chair should be provided for use if required.
10. Where vending machines are installed the controls should be no more than 900mm above floor level.
11. Nappy bins and other facilities should be recessed if possible, and should not obstruct circulation space.
12. Lighting should be even throughout with no spotlights used.
13. See diagram 18 for layout of baby changing facilities.

*See Glossary.

Baby Changing Facilities

18 Baby Changing Facilities

Not to Scale

For showers and bathrooms in dwellings refer to section 21: Dwellings.

The layout and fittings used for showers and bathrooms should aim to allow washing and bathing independently. Where it is not possible to design for specific individual requirements, showers and bathrooms should be designed to allow for the widest range of users.

Where a facility will have several showers and bathrooms, these should be configured in a variety of ways to maximise user choice including transfer sides, location of controls and layout of handrails.

1. A shower room should have a minimum floor dimension of 2500mm x 2500mm and should include a WC and a wash hand basin. See diagram 19a for layout of a shower room.
2. A bathroom should have a minimum floor dimension of 2500mm x 2700mm and should include a WC and a wash hand basin. See diagram 19b for layout of a bathroom.
3. Showers and bathrooms should be located on obstruction-free accessible routes.
4. Heating should be provided but should be designed and located so as not to cause an obstruction or hazard.
5. The door should open outwards and be self-closing.
6. The door fastening mechanism should be of the lever type, with an integral lock which is externally accessible in case of an emergency. It should incorporate an 'engaged' indicator.
7. The floor should be slip resistant* with level access.
8. An emergency pull cord extending to 100mm above floor level should be provided on the transfer side, near to the shower or bath. The cord should be fitted with several pull rings at different heights. Both the cord and the ring should be red coloured. A continuous electronic emergency touch strip around the base of the walls could be considered.
10. A full length safety mirror should be provided. This should be set a maximum of 300mm from floor level.
11. Coat hooks should be provided at heights of 900mm, 1200mm and 1800mm above floor level.
12. A towel rail should be positioned at a height of 900mm above floor level.
13. All fittings and the door should contrast in colour and luminance* with the walls and floor.

Showers and Bathrooms

In addition a shower room should have:

14. A wet area with a level permeable surface.
15. An easily adjustable shower seat in the wet area at a height of 480mm above floor level. It should be minimum 400mm in depth and self draining.
16. A fold-up seat in the dry area at a height of 480mm above floor level, with a minimum depth of 400mm.
17. An easily adjustable portable shower spray attached to a flexible hose with a rise and fall fitting to ensure that the shower spray can be easily adjusted to different positions.
18. A thermostatically controlled shower stream.
19. Lever controls set at 900mm above floor level.
20. Two counterbalanced drop down rails fitted at 600mm above floor level on both sides of the shower seat, and 320mm from the centre line of the seat.
21. Two vertical grab rails positioned just outside the drop down rails at 750mm above floor level.
22. Recessed soap holders fitted at 650mm and 900mm above floor level.
23. A shelf for toiletries fitted at 650mm which can be reached from the shower seat.
24. A shower curtain which surrounds the seat and rails, which is operable from the shower seat.
25. See diagram 19a for layout of a shower room.

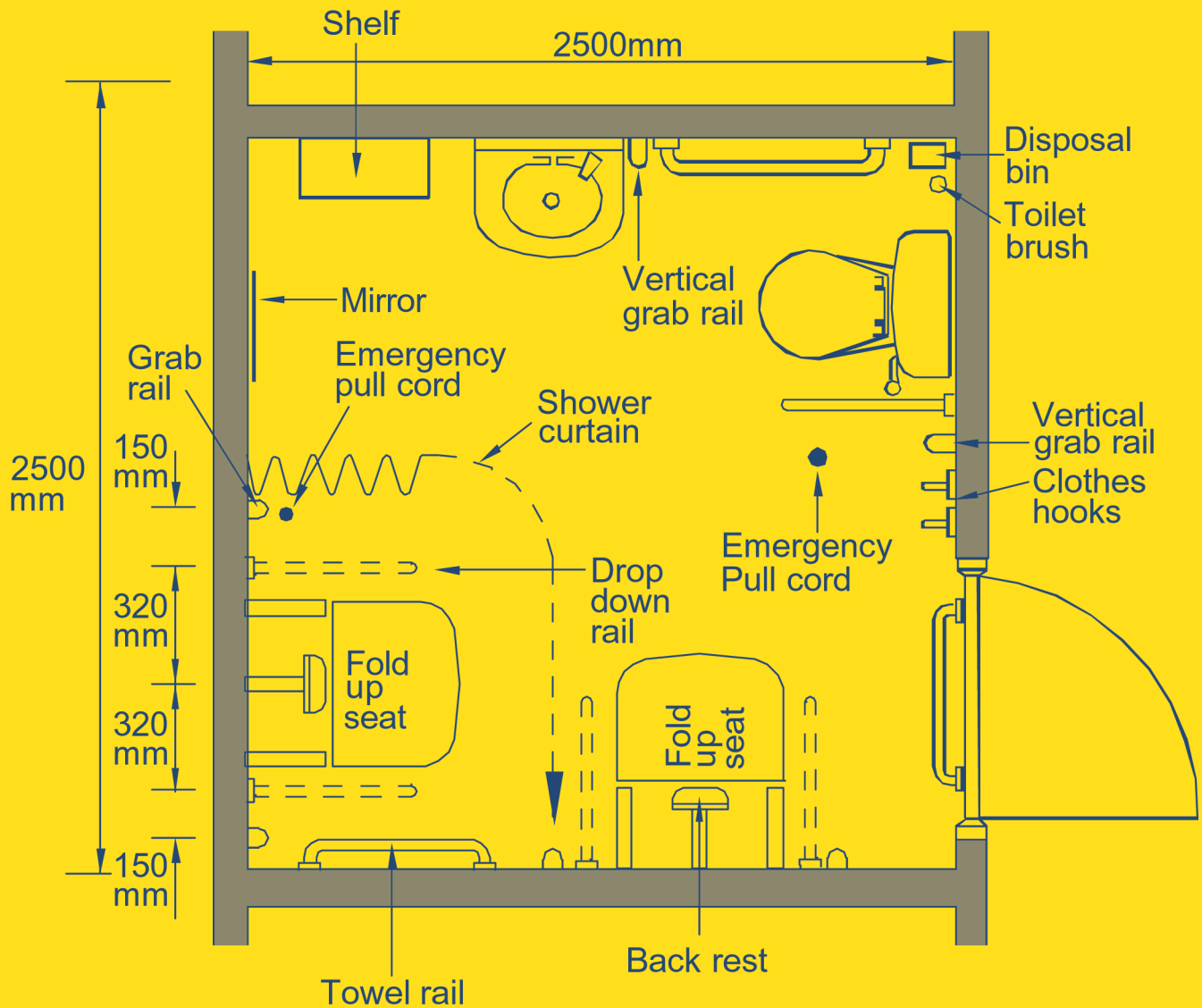
In addition a bathroom should have:

26. A bath board available for use.
 27. A thermostatically controlled mixer tap with a lever handle.
 28. See diagram 19b for layout of a bathroom.
- *See Glossary

Showers and Bathrooms

19 Showers and Bathrooms

a) Shower



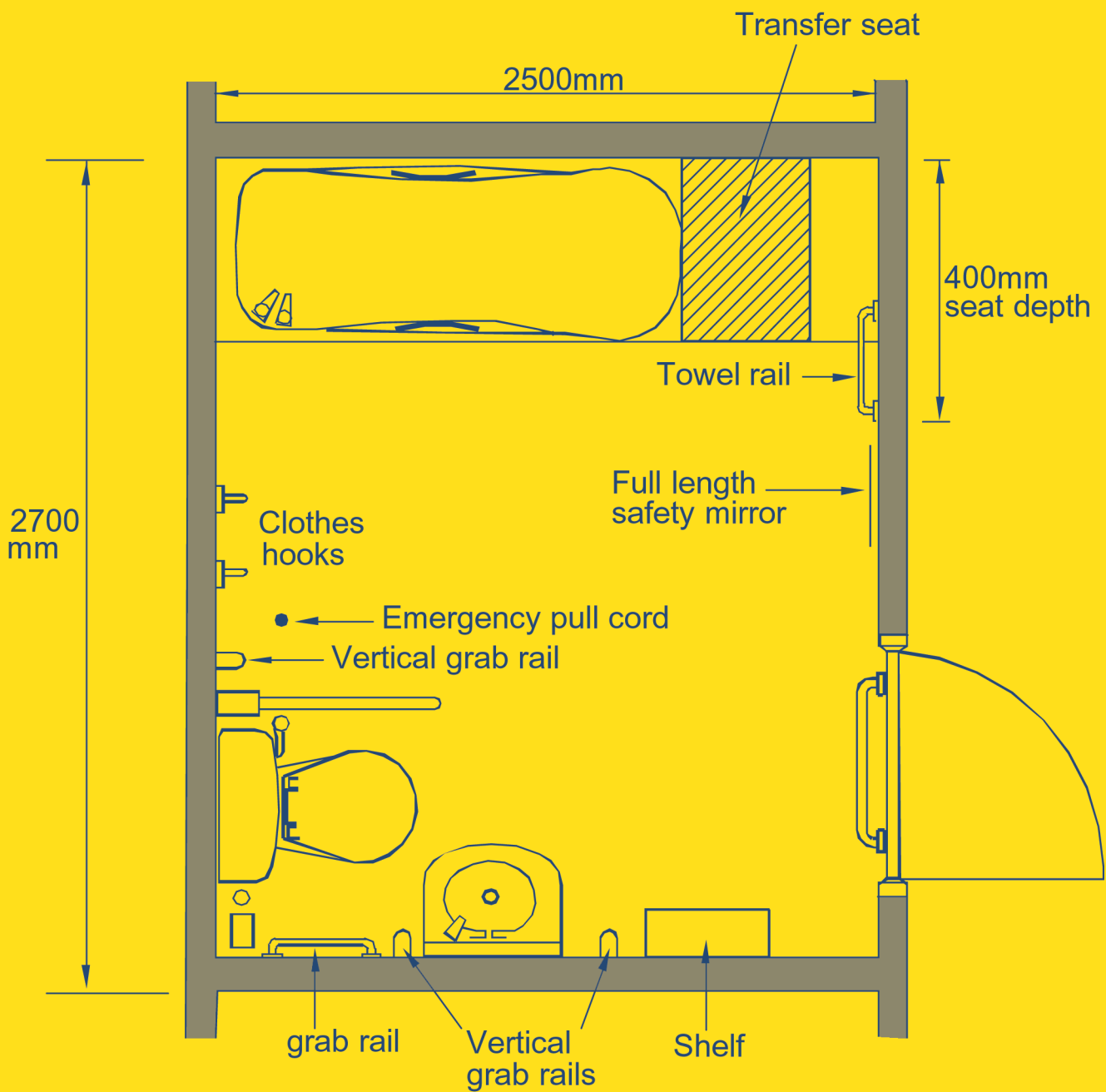
Not to Scale

Level controls should be set at 900mm above floor level

Example shown is for right hand transfer

Showers and Bathrooms

19 Showers and Bathrooms b) Bathroom



Not to Scale

Where it is not possible to design for specific individual requirements, kitchens should be designed to allow for the widest range of users. For kitchens in dwellings refer to section 21: Dwellings.

1. Provide a clear unobstructed circulation space of minimum 2000mm x 2000mm.
2. All ventilation controls should be at 900mm above floor level.
3. Provide a separate oven and hob at a height of 760mm.
4. Position controls at the front of appliances.
5. Provide dual height worktops, at 760mm and 900mm, with knee recess spaces 900mm wide and 730mm high.
6. Provide knee recess spaces below sink, hob and preparation areas. Knee recess spaces should also be considered beside floor mounted storage units, fridges, ovens, etc.
7. Worktops should be a maximum of 600mm deep.
8. Inset sink bowls should be 120mm to 140mm in depth and be designed to maximise the knee recess area.
9. Sinks and hobs should be insulated underneath.
10. Maximise storage space at ground level. Consider mobile storage units. Avoid wall mounted cupboards where possible.
11. All worktops should have rounded edges.
12. All drawers and cupboards should have full-length 'D' type handles.
13. All fittings and the door should contrast in colour and luminance* with the walls and floor.

*See Glossary

21 Dwellings

To increase the amount of housing stock in Manchester which meets the requirements of disabled people the Council has adopted policies which promote the provision of housing which is **accessible for all visitors** and which is also **capable of adaptation** to become a home for life.

To comply with these policies the following requirements apply:

Requirement 1.

All new housing developments on land which the City Council owns, including disposal sites, or in projects in which the City Council has an interest, must be **accessible for all visitors**.

Requirement 2.

All new housing developments on land which the City Council owns, including disposal sites, or in projects in which the City Council has an interest, must be **capable of adaptation** for occupation by disabled people.

Requirement 3.

All refurbishments and conversions of properties which the City Council owns, or in which the City Council has an interest, which include residential use, should seek to meet the standards in this section, or must demonstrate by means of an Access Statement why they cannot be met. See section 30: Compliance Process.

To satisfy these requirements, designers will need to meet the standards in the following sections 21.1: Visitor Access and 21.2: Provision for Adaptation.

21.1 Visitor Access

All new dwellings should meet the following requirements in order to be accessible for visitors.

1. The design of the external areas should meet the relevant guidance in sections 1 to 9 of this manual.
2. At least one accessible parking space should be provided for each dwelling. The design of parking spaces should meet the relevant guidance in section 1: Car Parking.
3. A level access route of minimum 1800mm wide should be provided to the principal entrance of each dwelling. Level access routes should also be provided to bin stores, garages and other facilities. The design of access routes should meet the guidance in section 3: Footways, Pathways and Access Routes.

21.1 Visitor Access (continued)

4. For flats and sheltered accommodation and for communal dwellings, the design of doors, lobbies, corridors and internal spaces should meet the guidance in sections 10.1: External Doors and 14: Lobbies, Corridors and Internal Spaces.
5. In flats and sheltered accommodation, facilities for parking and charging power wheelchairs and scooters should be provided close to function and meeting rooms and communal areas.
6. Lift access should be provided to each dwelling above ground level. The design of lifts should meet the guidance in section 16: Lifts.
7. For single family dwellings, external doors should have a minimum clear opening of 850mm. The effective clear opening should be free of projections, such as door furniture.
8. All dwellings that have access to an outside area, for example a garden or balcony, should provide level or ramped access to this area. See section 6: Ramps.
9. Where the accommodation is split level, provision should be made for visitors to access the main living areas.
10. For single family dwellings, the minimum clear width of halls and lobbies should be 1200mm and all rooms downstairs should preferably be accessed from the hall or lobby. If there are passageways, the minimum clear width should be 900mm. The design must accommodate circulation space.
11. An accessible WC should be provided at entrance level within each dwelling. An accessible WC should have minimum dimensions of 1500mm x 2000mm and should include a wash-hand basin installed at maximum height of 740mm, and a close coupled cistern fitted with a large dimple-type flushing handle at a height of 800mm on the transfer side.
12. Handles and locks, including those for garages and bin stores, and other controls and door and window furniture should be easy to operate by disabled people, and positioned so as to be accessible. Their design should meet the guidance in section 12: Door and Window Furniture.
13. Switches, sockets and service controls for heating, lighting, radio, television, telephones and computers, etc., should be centred at 900mm above floor level.

21.2 Provision for Adaptation

To meet the requirements of disabled people, a dwelling should have sufficient space to offer a choice of accessible layouts.

To widen the choice of accessible housing, a number of options could be considered for bedroom, toilet, shower and bathroom provision. Further guidance is given in sections 17: Toilets and 19: Showers and Bathrooms.

If the future occupier **is** known they should be consulted on the layout and fitting-out of kitchens, bedrooms and bathrooms, and about any other personal requirements.

If the future occupier **is not** known all the following requirements should be met in all new dwellings to ensure that they are capable of adaptation.

1. A suitable, safe location should be identified within each dwelling for parking and charging a power wheelchair or scooter.
2. The design of all new dwellings that are on more than one level should incorporate provision for a future stair lift, and also a suitably identified space of minimum 1400mm x 1100mm for the future installation of a house lift (through-the-floor lift) from the ground to the first floor. The proposed provision must satisfy all normal Building Regulations requirements.
3. At least one accessible bedroom should be provided in each dwelling, of minimum dimensions 4000mm x 4000mm.
4. Where a development incorporates dwellings with three or more bedrooms, a proportion of these should have a second bedroom of minimum dimensions 3000mm x 3000mm.
5. Where possible, ensuite facilities should be provided, of minimum dimensions 2000mm x 2000mm, and should include a WC, a wash hand basin and a shower.
6. Where only one bathroom is provided it should have minimum dimensions of 2700mm x 2500mm to allow for the provision of a WC, a wash hand basin a bath and a shower. See diagram 19b for suggested layout of a bathroom.

7. Walls in bathrooms, showers and toilets should be constructed to take adaptations such as grab rails.
8. Ceilings, walls and floors in bedrooms, toilets, showers and bathrooms should be constructed to take adaptations such as track hoists.
9. Circulation space of minimum 1800mm x 1800mm should be available in kitchens after fitting-out.
10. On each floor there should be no stepped changes of level.
11. Internal doors should have a minimum clear opening of 800mm. The effective clear opening should be clear of projections. Double doors may be fitted, if preferred.
12. Window sills should be no more than 900mm above floor level. Any glazing less than 900mm above floor level should be safety glass.
13. The width of internal stairs should be minimum 900mm.
14. Do not use open risers or open recesses under stairs.
15. A step should not overlap the one below.
16. There should be a continuous handrail on both sides of the stairs and on landings. See section 9: Handrails.
17. For new-build or complete refurbishment, the use of residential sprinklers should be considered.

1. Surfaces and finishes should be durable, even and slip resistant*.
2. Surfaces that are highly polished and reflective should be avoided.
3. Finishes should be combined to ensure that the overall acoustic performance avoids unnecessary reflection, reverberation, echo or excessive acoustic absorbency. See section 26: Sound.
4. All floor coverings should be firmly fixed.
5. Floor coverings should avoid the use of deep pile carpets and natural materials, which create traction.
6. Door mats should have a feathered or graded edge or a shallow well. Where a well is used there should be a non-compressible mat and the finished surface should be level with the floor.
7. Designs for carpets, walls and other fittings should not use distinctive patterns, simulated steps or stripes, which can be disorientating.
8. Colour and or texture coded circulation schemes should be used to identify specific areas and routes, but should be limited to 5 overall themes.
9. There should be a contrast, in colour and luminance,* between walls and ceilings and between walls and floors.
10. Glazed areas should be identified with permanent contrasting strips or continuous features at heights of 1000mm and 1500mm above ground level. These should not obscure communication.
11. All fixtures, fittings and controls should be identified by texture and colour and luminance* contrast.

*See Glossary

The design of buildings should incorporate a range of communication systems to ensure that all possible aids to communication are available and that there are no physical barriers to communication.

1. Where permanent or temporary induction loops* and other enhancement systems are likely to be required, the design of the structure should avoid interference from other electrical systems and electro-magnetic fields, and the use of structural metalwork and other potential structural interference, such as suspended ceiling grids.
2. All public meeting and interview rooms should have an induction loop or other hearing enhancement system permanently fitted and regularly maintained.
3. In auditoriums and conference rooms, and where extra information is provided through audio description, infrared systems* and induction loops should both be available.
4. Where confidentiality is an issue, specialist advice should be taken about the appropriate induction loop or other hearing enhancement system, to avoid leakage of information into other rooms and corridors.
5. All communication systems and their controls should be visually identified and clearly indicated to public users.
6. Visual alarm systems should be installed in all public areas to supplement audible alarm systems. An alarm button with a visual display should also be installed in lifts, toilets and other places requiring emergency communication.
7. Security, emergency and alarm systems should be linked into hearing enhancement systems. Pagers should also be used where possible.
8. All communication equipment should be installed by trained staff.
9. Regular testing of communication equipment, by trained staff, should be included in maintenance procedures.
10. Space should be made available to allow for clear vision of interpreters.

*See Glossary

Signage and wayfinding strategies should include signs for **information** about services and facilities; **direction** to facilities, reception, advice, exits and key areas; **identification** including rooms, facilities and equipment; and **safety** such as warnings, prohibitions, hazards, fire exits and refuges.

Words and symbols should be used consistently within sites and buildings.

1. Facilities for disabled people should be clearly and consistently signposted at ramps, car-parking spaces, entrances, toilets, baby changing facilities, lifts, reception areas, counters, and accessible routes externally and internally.
2. Floor plans, where provided, should be located at the main entrance to a building, or in a designated place on the floor of entry, at a maximum height of 900mm from floor level. Floor plans should ideally be slightly inclined from the horizontal, in line with the building's orientation, and with 'You are here' indicated.
3. Signage should be well lit.
4. Materials for signs should have a non-reflective surface.
5. Signage, and symbols within signs, should be colour and luminance contrasted* with their background.
6. Text on signs should be clear and simple using sans-serif fonts. Words should not be made up of capital letters only.
7. Avoid long lists of items on signs. Shorter columns are easier to read and remember.
8. Internationally recognised and pictorial symbols, with explanatory text, should be used wherever possible.
9. Signage indicating rooms should be placed on the wall next to the door on the door handle side. A small embossed arrow should be used to indicate direction. Where Braille is used, it should be located directly below the text, and arrow if used, and justified to the left.
10. Where raised numbers, letters, Braille and symbols are used, these should be located at 900mm from floor level. The depth of embossing should be at least 1.5mm.
11. The design of distinct functional areas and routes in a building should be clearly identified through colour, signage and in other ways, to assist orientation within a building.
12. All doors should be colour and luminance contrasted* with the surrounding walls.

*See Glossary

The use of lighting to define the shape of spaces helps with orientation.

Lighting is a specialised subject and reference should also be made to the guidance in the technical documents listed in the Useful Sources of Information section.

1. Entrance areas, foyers and lobbies should be used as transition areas to enable people to adjust to changes in lighting levels from inside to outside, and outside to inside, and to lighting levels within different parts of a building. In public buildings, electronic monitoring of lighting levels inside and outside should be considered.
2. Use light colours for walls and ceilings as these help to reflect and diffuse the light. Gloss finishes should not be used on walls or ceilings.
3. Lights should be positioned where they do not cause glare, reflection, shadows or pools of light and dark.
4. Uplighters should not be used at street or floor level but should be positioned above 2000mm from ground or floor level.
5. Light fittings in circulation and work areas should be selected to have a non-directional even light spread.
6. Fluorescent light fittings should be screened, maintained to avoid flicker, and located to avoid interference with hearing enhancement systems.
7. All lighting systems should be compatible with hearing enhancement and radio frequency systems.
8. Where possible the lamps should have good colour rendering properties, for example, use 'daylight' lamps.

The requirement for clear uncluttered sound is important not only for communication but also for directional guidance. Inappropriate sound not only confuses meaning but may also disorientate the listener.

For guidance on communication systems, including security, emergency and alarm systems, see section 23: Communication Systems.

1. Buildings should be designed to reduce background noise, reverberation and echoes.
2. Where public address systems are used wall, floor and ceiling surfaces should be sufficiently acoustically absorbent to limit extended reverberation, or purpose-made absorbers should be installed.
3. All cables and other electrical equipment should be designed, screened and located to avoid interference with personal hearing aids and hearing enhancement systems.
4. Background noise should be kept to a minimum, for example, avoiding the use of music in public information areas.
5. Equipment and fittings should be selected and maintained to minimise background noise.
6. Where provision is made for signing or lipreading, this should be suitably located to afford maximum visibility and should be well lit avoiding a distracting background.

All external and internal fixtures, fittings and features should be designed to ensure that they are easily maintained.

Maintenance and enforcement procedures should be frequently monitored and reviewed.

The following are examples only and should not be considered a comprehensive list.

1. Ensure that paths, ramps and steps are kept clean, unobstructed and free of surface water, leaves, snow and ice.
2. Regularly review the number of accessible car parking spaces.
3. Ensure that parking spaces which are marked out for use by Badge holders are kept clear and unobstructed.
4. Ensure that surfaces and floor coverings are regularly inspected and that any trip hazards are repaired immediately.
5. Ensure that passenger lifts, stair lifts and platform lifts are checked regularly for proper working order. Have procedures in place so that services can be offered when such facilities break down.
6. Ensure that spaces required for wheelchair manoeuvring are kept unobstructed, for example, by temporary displays, deliveries and cleaning equipment.
7. Ensure that accessible WC areas are not used as storage spaces.
8. Ensure that shower heads are returned to the bottom of the shower rail after use.
9. Ensure that emergency pull cords are not left tied up after cleaning.
10. Ensure that wheelchair spaces are provided and maintained in all seating areas.
11. Ensure that access routes, of minimum width 900mm, to key facilities are provided and maintained between moveable tables and chairs.
12. Ensure that windows, lamps and blinds are kept clean to maximise available light.
13. Ensure that hearing enhancement systems are clearly indicated, tested regularly and maintained.
14. When carrying out refurbishment or redecoration, ensure that textures and colour schemes comply with the guidance in section 22: Surfaces and Finishes.
15. Ensure that signs are replaced and updated when necessary.

Management and Maintenance

16. Ensure that there are emergency evacuation plans, which are regularly reviewed, for all visitors and staff.
17. Ensure that there are emergency assistance procedures to respond to requests for assistance by the use of alarm systems in lifts, toilets, showers, bathrooms, etc.
18. Provide ongoing disability equality training for all staff.

Access to a listed building should be possible without compromising the building's special interest.

In most cases Listed Building Consent will be required for access provision, as the proposals are likely to affect the character of the listed building.

Elements that should be particularly considered include:

- a) access to the building;
 - b) reception and information areas;
 - c) clear circulation within all parts of the building;
 - d) identifying and providing warning of potential obstructions or hazards that cannot be removed;
 - e) provision of lifts where possible;
 - f) signage within the building;
 - g) information in different formats, including information about parts of the building that may not be accessible.
1. Designers should aim to meet the guidance given in the relevant sections in this manual and should consult access officers, planners, conservation officers, building control officers and disabled people's access groups, as appropriate, to ensure that an acceptable balance is reached between the provision of good access and the protection of the character of the listed building.
 2. Designers should submit an Access Statement when proposing works that will affect access to a listed building. The Access Statement should identify the physical and communication barriers to access, assess the impact of access requirements on features of historic, architectural or archaeological interest or their setting, and devise a solution that reconciles access and conservation requirements.

For further guidance on Access Statements see section 30: Compliance Process.

Playgrounds should be designed for the enjoyment of everyone. Play value should be maximised, and barriers to access removed, in order to ensure play opportunities for all.

Disabled parents and carers should be considered at all stages, by ensuring that equipment, pathways and access routes are wide enough and firm enough to accommodate disabled adults with their children.

The design of playgrounds should meet all the relevant requirements in the previous sections.

1. Play areas should be fenced, with gates of minimum width 1000mm, and should have attractive, welcoming entrances, with appropriate signs and information. Any closing mechanisms should be fixed at 900mm above ground level and should be smoothly free turning and maintained for low friction operation.
2. Landmarks are important features, whether a tree, a mound, a pond or a play structure, and of particular value is a tall feature from which views can be had.
3. A network of unobstructed paths should connect directly with all entrances and exits and main activity centres, going around and through pieces of equipment.
4. Paths should be stable (not sand, bark or loose gravel), smooth, firm, slip resistant*, without grids and anti-skid, and joints should be tight and flush. Paths should be no steeper than 1 in 20 (5%) and should be at least 1800mm wide.
5. Rubberised safety surfaces should be used.
6. Bitmac and paving can be used in different colours, as can rubberised safety surfaces, to indicate different functions, different areas and changes in level. Different textures can provide clues as to different areas of the playground.
7. Different items of play equipment should be provided in order to offer opportunities for all abilities, encourage independence and offer a wide range of experiences and challenges.
8. Seats and/or shelters should be provided every 50 metres to give opportunities for opting out of activities or choosing others. See section 5: Seating. Retreats and breakaway points should be provided so that a child has the opportunity to check out an activity before deciding to take part. Seats and tables, dens and retreat areas should be accessible to disabled children and adults.

- 9.** Features in playgrounds can be designed to stimulate the use and development of all the senses. Communication can be through more than visual cues, for example, sounds can be used. The repetition of cues can be particularly useful, for example, striking a stick on railings. However, if a system of tracking by use of colour, texture, graphics or sound is used, it is important to use it consistently.
- 10.** Where tunnels and bridges are provided they should be sturdy enough and wide enough to accommodate wheelchair users. Tunnels with sequences of solid walls, window openings and exit/entry places reflect sound differently and can give clues to location, so long as materials that echo are used.
- 11.** Seesaws, and other equipment, should be designed to allow a disabled child to transfer from a wheelchair on to the equipment.
- 12.** Steps as well as ramps should be provided to high places.
- 13.** Slides should either allow use by a wheelchair user or provide the opportunity to transfer by ensuring access to the top and bottom of the slide.
- 14.** Modular play equipment should have ramps at gradients generally no steeper than 1 in 20 (5%), with handrails, leading to towers, the tops of slides and across bridges. Ramps should give access to the highest platform and should be designed as an integral part of the equipment. Platforms, resting places and places to turn around should be provided. Different colours could be used on floors and railings at different levels to cue children about how far they are from the ground.
- 15.** Water features, such as paddling pools, should have textured slip resistant* surfaces and gently chamfered edges, to allow disabled children to completely enter the pool. Waterfalls, streams and channels should allow disabled children to get up close.
- 16.** Where opportunities for gardening, nature study and messy play are provided, these should include sand trays, flower beds and nature study areas that are raised to different heights, and shaped so that users can play easily. Height and reach should be carefully calculated.

*See Glossary

30.1 Manchester City Council

The standards in Design for Access 2 should be used for all buildings and projects on which Manchester City Council lead or are the client, including the audit and implementation of works to ensure that the Council meets its responsibilities under the 1995 Disability Discrimination Act, and commitment to the Access 2000 Strategy. The standards should also be used for the maintenance and improvement of highways, and for all development on City Council disposal sites.

The City Council will expect all such proposals to comply with the guidance in this manual and will require an Access Statement to be submitted to demonstrate compliance. In some instances compliance may present difficulties, and in these instances the Access Statement should be more comprehensive. The Access Statement should be revised, if necessary, during any negotiations, so that it remains relevant and up to date.

The Access Statement should identify the philosophy and approach to inclusive design, the key issues of the particular scheme and the sources of advice and guidance used. It should suggest options for overcoming barriers to access, state which is the preferred option and give the reason.

For example, there may be steps to the principal entrance of an existing building. The recommended gradient for a ramp is 1 in 20 but there may be insufficient land outside the principal entrance to provide a ramp to this entrance. In this example, options might include raising the level of the external area, provision of a lift, or a 1 in 15 ramp. An Access Statement should be produced which clearly describes the options, states which is the preferred option, and gives the reason.

The City Council's Access Officers or Access Manager should consider the Access Statement and provide comments to the relevant decision-making body. This may be the Planning and Highways Committee in the case of a planning application, or the Disability Discrimination Act (DDA) Programme Board* in the case of proposed works to a City Council building.

*Manchester City Council has a full and comprehensive DDA programme which is strategically managed and coordinated by the DDA Programme Board.

Compliance Process

30.1 Manchester City Council (continued)

1. For all buildings or projects on which Manchester City Council lead or are the client, for the maintenance and improvement of highways, and for all development on City Council disposal sites, designers should seek to comply with the relevant standards in Design for Access 2.
 - f) the source(s) of advice and guidance used, and the consultation process undertaken.
2. For all buildings or projects on which Manchester City Council lead or are the client, for the maintenance and improvement of highways, and for all development on City Council disposal sites, designers must submit an Access Statement. The Access Statement should include:
 - a) the philosophy and approach to inclusive design;
 - b) where relevant, a description of the building or environmental feature's barriers to access;
 - c) where relevant, the reasons for non-compliance with Design for Access 2;
 - d) the proposed or alternative design solutions;
 - e) the reason(s) for the proposed solution(s) as a reasonable adjustment; and
3. The Access Statement should be referred to the Access Officers or Access Manager for comments before the proposal is submitted to the relevant decision-making body.
4. Access Statements should be made available for public scrutiny. For example, they should be displayed in the relevant reception area, or on the Council's internet site.

Compliance Process

30.2 Voluntary Sector and Private Developments

Manchester City Council, Manchester Disabled People's Access Group and other members of the Manchester Access Review Forum will encourage the voluntary sector and private developers to use Design for Access 2 as best practice in the context of the 1995 Disability Discrimination Act, and to improve access into and within buildings and the external environment.

Design for Access 2 standards should be used alongside and, where they are an improvement on, in preference to, statutory and other guidelines, as they encompass current best practice and an inclusive approach to accessible design, within the Social Model of Disability.

The standards also provide a useful approach to implementing the requirements of the 1995 Disability Discrimination Act to make reasonable adjustments to buildings, where compliance with Part M of the Building Regulations and BS 8300:2001 may not be sufficient. The Disability Rights Commission recommends that all access audits should include consultation with disabled people's organisations, particularly disabled people's access groups.

There may be different ways to comply with these standards, or difficulties in meeting the best practice guidance. To assist in achieving the best solutions, an Access Statement should be provided at the same time as submitting a planning application, a building notice or proposals for building regulations approval. The Access Statement should be revised, if necessary, during any negotiations, so that it remains relevant and up to date.

The Access Statement should identify the approach taken to developing inclusive design, the key issues and difficulties of the particular scheme, and the sources of advice and guidance used. It should suggest alternative options for overcoming the barriers to access and identify the preferred option, justifying the reason for this option as a reasonable adjustment.

The Access Statement will provide useful documentation to assist in consultations and decision making. It will also be helpful for the individuals or organisations responsible for the management and control of the buildings or the environment, particularly where refurbishments are considered or where concerns are raised in relation to the Disability Discrimination Act. It will also explain to disabled people the options that have been considered and the reasons for choosing a particular option.

For advice on the format for an Access Statement, see section 30.1 and any relevant Disability Rights Commission guidelines.

For further information, contact the Access Officers and/or the Access Group

Useful Sources of Information

You should note that the information in these references may conflict.

Inclusion in this list of organisations and resources does not imply a recommendation as best practice and may not comply with the Social Model of Disability.

For advice on best practice within Manchester please contact Manchester City Council's Access Officers or Manchester Disabled People's Access Group.

British Standards Institute

BS 8300: 2001 Design of Buildings and their approaches to meet the needs of disabled people. Code of Practice (2001).

BSI, 389 Chiswick High Road, London W4 4AL

Tel: 020 8996 7720

Website: www.bsi-global.com

Centre for Accessible Environments

Produces Access by Design journal and information, mainly based around BS 8300:2001 standards.

Website: www.cae.org.uk

Chartered Institute of Building Services Engineers (CIBSE)

Lighting Guide (2001)

Chartered Institute of Library and Information Professionals (CILIP)

Provides Equal Opportunities briefings on library and information services.

Website: www.cilip.org.uk/practice/equalopps.html

Manchester Disabled People's Network Steering Group

Guidelines for Accessible Meetings and Events.

BEVC, Aked Close, Ardwick, Manchester M12 4AN

Tel: 0161 273 5033

Email: info@dpnsg.org.uk

Department for Education and Skills (DfES) Schools Building and Design Unit

Key Design Guidance (2003) - includes large bibliography

Website: www.teachernet.gov.uk

Useful Sources of Information

Department for Transport Mobility and Inclusion Unit, Access for Disabled People

Environmental and building standards, research and consultations, includes:

Traffic Signs Regulations and General Directions (1994)

Parking for Disabled People - Traffic Advisory Leaflet (1995)

Misuse of Off-street Disabled Parking Spaces Leaflet (2002)

Safety at Street Works and Road Works - Code of Practice (2002)

Website: www.dft.gov.uk

Disabled Persons Transport Executive Committee

Publications and resources on all forms of transport.

Website: www.dptac.gov.uk

Disability Rights Commission

Information on legislation and codes of practice, including Access Statements, also various publications including:

Good Signs - improving signs for people with a learning disability

Freepost MID02164 Stratford-upon-Avon, CV37 9BR

Tel: 08457 622 633

Fax: 08457 778 878

Textphone: 08457 622 644

Website: www.drc-gb.org

English Heritage

Advice on adapting heritage sites and listed buildings including:

English Heritage Access Policy (2001)

Easy access to historic properties (1999)

Tel: 0207 973 3434

Website: www.english-heritage.org.uk

Useful Sources of Information

Greater Manchester Passenger Transport Executive

Information on Metrolink trams, buses, trains, arranged passenger transport (apt) and the transport environment. Guidance includes:

Design Guidelines for Bus Stops on Quality Bus Corridors (QBCs) in Greater Manchester (January 2002)

Guidelines for the Design of off-highway Bus Facilities (August 2003)

Guidelines for Enhancements to Bus Stops on routes that have not been designated as QBCs (August 2003)

Website: www.gmpte.com

Guild of Architectural Ironmongers

Hardware for Inclusive Designs (2003)

Tel: 020 7790 3431

Fax: 020 7790 8517

Email: info@gai.org.uk

Website: www.gai.org.uk

Her Majesty's Stationery Office

Government legislation including:

Town and Country Planning Act (1990)

Building Regulations Approved Document, Part M - Access and facilities for disabled people (1999)

Disability Discrimination Act (1995)

Website: www.hmso.gov.uk

JMU Access Partnership

Publications including:

The Access Journal (with the Access Association)

Building Sight (1995)

Colour and Contrast (CD-ROM)

Sign Design Guide (2000)

Website: www.jmuaccess.org.uk

Useful Sources of Information

Manchester City Council

The Manchester Plan (1995)

A Hierarchy of Road Users (1997)

A Guide to Development in Manchester (1997)

Access 2000 Strategy (2000)

Pedestrian Strategy (2001)

Design for Access Manual (2000)

Website: www.manchester.gov.uk

National Health Service - Wayfinding

A useful outline of developing good practice for signage and wayfinding.

Website: www.patientexperience.nhsestates.gov.uk/wayfinding/wf_content/home/home.asp

Office of the Deputy Prime Minister

Includes guidance on Building Regulations, housing, resources on fire safety, neighbourhood renewal and planning and includes:

The Building Regulations 2000-Approved Document M (2004) Access to and use of buildings. (Comes into effect on 1 May 2004).

Planning and Access for Disabled People - A Good Practice Guide (2003)

Planning Policy Guidance Notes (PPGs) as follows:

PPG1: General Policies and Principles

PPG3 : Housing

PPG6 : Town Centres and Retail Developments

PPG12 : Development Plans & Regional Planning Guidance

PPG15 : Planning and the Historic Environment

PPG17 : Sport & Recreation

Website: www.odpm.gov.uk

Planning Portal

Information and guidance for professionals and for anyone interested in or needing to know about the planning process.

Website: www.planningportal.gov.uk

Useful Sources of Information

Research Group for Inclusive Environments, University of Reading

Research and publications on design standards.

Website: www.rdg.ac.uk/ie

Royal National Institute for the Blind (RNIB)

Various publications and guidance including:

See it Right pack (2001)

Website: www.rnib.org.uk

RNIB Web Access Centre

Website: www.rnib.org.uk/xpedio/groups/public/documents/publicwebsite/public_webaccesscentre.hcsp

Royal National Institute for the Deaf (RNID)

Various publications, online factsheets and guidance:

Tel: 0808 808 0123

Textphone: 0808 808 9000

Fax: 020 7296 8199

Email: informationline@rnid.org.uk

Website: www.rnid.org.uk

Sport England

Design Guidance Notes online including:

Access for disabled people (2002)

Access audit sheets for sports centres

Sport England Publications, PO Box 255, Wetherby, LS23 7LZ

Tel: 0870 5210 555

Fax: 0870 5210 266

Website: www.sportengland.org

Colour and Luminance Contrast

Colour contrast can help people with visual impairments to distinguish objects and surfaces. There are different types of colour contrast, the most obvious being those involving the primary colours.

Luminance is a measurement of the brightness or light intensity of a surface.

The use of colour from different parts of the spectrum (colour of different hue) is less suitable than combinations chosen for both colour and luminance contrast because some people may be less sensitive to differences in hue. For further guidance refer to BS8300:2001, 9.1.1 Visual Characteristics.

Hearing enhancement systems

Hearing enhancement systems enable sound signals to be transmitted to people with impaired hearing, without interference from background noise or excessive reverberation. Hearing enhancement systems may use induction loop, infrared or radio transmission. Sound field systems are also used, especially in educational settings. For further guidance refer to BS8300:2001, 9.3.2 Hearing Enhancement Systems.

Helical stairs and spiral stairs

A helical stair is a stair that describes a helix around a central void.

A spiral stair is a stair that describes a helix around a central column.

Induction Loop hearing enhancement system

An induction loop system consists of a microphone and an amplifier/transmitter with the output connected to a continuous loop of wire that acts as an aerial and encircles the space. The system transmits the sound signal to the person's hearing aid. The signal can be received when the induction pick-up facility has been selected (generally by moving a switch on the hearing aid to a position marked 'T') or by programming the aid to pick up the signal. For further guidance refer to BS8300:2001, 9.3.3 Induction Loop Systems.

Infrared hearing enhancement system

Infrared systems are commonly used in multi-screen cinemas, theatres and lecture theatres where it is convenient for visitors to borrow headsets from a central source. The infrared system allows the user to benefit from a simultaneous voice-over, such as audio description. Alternatively, the infrared receiver can be coupled to the person's own hearing aid by means of a small induction loop worn around the neck. For further guidance refer to BS8300:2001, 9.3.4 Infrared Systems.

Glossary

Newtons

A Newton is a measurement of force. One Newton is the unit force required to cause a mass of one kilogram to accelerate at a rate of one metre per second squared. One kiloNewton (1kN) is equal to 1000 Newtons.

Slip resistance

Many products used for tread and floor finishes will change significantly merely on installation. Wear, anticipated usage, potential contamination, cleaning and maintenance regimes will all have an impact on the performance of a tread or floor finish over its lifetime. For further guidance refer to BS8300:2001 Annex C Table C1.

Conversion Table

Metric measurements and their approximate Imperial equivalents.

Metric		Imperial
Millimetres		Feet and Inches
25mm	=	1 inch
50mm	=	2 inches
100mm	=	4 inches
300mm	=	1 foot
400mm	=	1 foot 4 inches
450mm	=	1 foot 6 inches
500mm	=	1 foot 8 inches
900mm	=	3 feet
1000mm	=	3 feet 4 inches
1500mm	=	5 feet
1800mm	=	6 feet
2000mm	=	6 feet 8 inches
3000mm	=	10 feet
4000mm	=	13 feet 4 inches
5000mm	=	16 feet 8 inches
6000mm	=	20 feet

For advice and information about the contents of Design for Access 2
please contact:

Manchester City Council's Access Officers
Telephone: 0161 234 4032/4598
Textphone: 0161 234 4505

Manchester Disabled People's Access Group
Telephone: (voice and text) 0161 273 5033
Email: admin@mdpag.org.uk
Website: www.mdpag.org.uk