

Train and Station Services  
for  
Disabled Passengers

A CODE OF PRACTICE

Draft for comment

Subject to revision and verification

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## KEY STANDARDS

The following index is to help those who want a quick reference to the requirements for key facilities on stations:

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## Rail Regulator's foreword

### ***Code of Practice for Disabled Passengers***

I am committed to playing my part to ensure that the railway industry makes real progress in improving the accessibility of its services to people with disabilities.

5 Section 70 of the Railways Act 1993, gives me a duty to encourage the adoption and implementation of this code of practice. The existing code of practice *Meeting the needs of Disabled Passengers* was published in July 1994. Section 70 requires me to prepare and periodically revise a code of practice. It is now timely in this respect that I should now consult on a full revision of the code.

10 The Disability Discrimination Act 1995 and the Rail Vehicle Accessibility Regulations 1998 made under it have introduced significant new legislative requirements that all those providing services are obliged to meet. The Government has also made clear its own commitment to meeting the needs of disabled passengers in its White Paper *A New Deal for Transport* and by setting  
15 up the Disability Rights Commission.

Substantial numbers of people have one or more disabilities. With an ageing population, the proportion of disabled people in the population is likely to rise. Progress has been made but more needs to be done in making the railway network more accessible to disabled passengers. At the formative stages of  
20 service and facility development, the needs of disabled passengers need to be an integral part of the planning process. Best practice needs to be recognised and built upon and the needs of disabled passengers need to be factored into the day-to-day operation of the railway.

The aim of the code is to set standards for passenger train and station services. I  
25 shall be requiring each holder of a passenger train operator and station operator licence to review its Disabled People's Protection Policy (DPPP). The consultation process also focuses on the structure of the guidelines to assist operators when reviewing their policies. The aim of the review is to provide a clear framework for progress towards a more accessible railway system. The  
30 commitments made by each licensee in its DPPP will be monitored and enforced through its licences where necessary, initially by this Office. I shall

expect each licence holder to respond to the spirit as well as the letter of the code.

35 In the Transport Bill currently before Parliament, the Government has proposed that the Regulator's responsibilities in respect of the protection of disabled passengers should pass to the Strategic Rail Authority (SRA). The SRA already exists in shadow form and has been closely involved in the preparation of the draft code. The Shadow SRA fully supports the approach I have taken and will proactively continue it following the planned transfer.

40 Input at this stage from all those with an interest is essential if this code is to play a full role in improving access to rail services for disabled rail passengers. I look forward to the responses to this consultation.

45

TOM WINSOR  
Rail Regulator

May 2000

## **Part A: INTRODUCTION**

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## A1 How this code works

### *A passenger-centred approach*

55 Part A sets out how the code of practice (code) fits in with key legislation and the regulatory framework. It describes the remit of the code and the requirements on passenger train operators, station operators and their suppliers to provide appropriate services and standards for disabled passengers.

60 The main part of this code (Part B: USING THE RAILWAY) sets out to describe the services and standards that operators are expected to provide for their disabled passengers. Design and operational standards and service requirements on operators are all to be found in Part B.

65 The text in Section B is split into two parts: above and below the line. Above the line is a narrative in plain language that summarises the intention of the services or standards. Below the line is whatever detail is necessary for the passenger train operators, station operators and their suppliers to help them meet the services and standards set out in this code, including:

- references to and/or extracts from any legislation, including relevant regulations;
- 70 • technical specifications and design standards, together with their source and the source of any further advice or information about them; and
- information about organisations and schemes referred to (contact details for which appear in the Appendices and Annexes at the back of the code).

75 Throughout the code are a number of requirements relating to services and standards. A must is a legal requirement or one that the Regulator requires to be adopted as policy by each operator, and will be enforced through the Provision of Services for Disabled People licence condition and/or other relevant statutory controls. An operator who complies with the services and standards in this code could have reasonable grounds to resist any Court proceedings  
80 brought by a third party in relation to the Disability Discrimination Act 1995.

A recommend in the code is a suggestion for additional enhancements that the Regulator believes that operators will wish to adopt, wherever possible, to demonstrate their commitment to disabled passengers.

85 Operators must note that these definitions should not be seen as a way  
of reducing their obligations under the Railways Act 1993, the Disability  
Discrimination Act 1995 and/or any other relevant legislation and  
governmental guidance.

90 All licensed passenger train operators and station operators will be required to  
review their Disabled People's Protection Policies (DPPPs). They will be  
expected to state that they fully endorse and are committed to adopting the  
services, standards and guidance in this code.

*In plain language*

95 The intention of this code is that it should be readily understandable by those  
who wish or need to use it. Plain language is used throughout, with technical  
terms used only where there is no alternative. Where technical terms are  
essential, they are accompanied by a translation into plain language. Similarly,  
the full versions of any abbreviated phrases are given.

100 Photographs or diagrams accompany any points that could be unclear in words  
alone. A key to the symbols indicating different kinds of impairment is given in  
Section A3.2.

Measurements are given in millimetres (mm), as used in engineering, rather  
than the more common metres and centimetres.

Further advice and copies of this code are available from:

105 The Librarian  
Office of the Rail Regulator  
1 Waterhouse Square  
138-142 Holborn  
London  
EC1N 2TQ

110 Tel: 020 7282 2000 Fax: 020 7282 2040  
Email: dor.orr@gtnet.gov.uk

The code is available, from this address, as text on 3¼ floppy disc and on audio  
tape. The code can also be viewed on the ORR website: <http://www.rail-reg.co.uk>. Please contact the ORR if these do not meet your needs.

## 115 *Updating this code*

This code will be updated from time to time in the light of experience, and to take account of new research and technological developments, as well as any fresh legislation.

## **A2 What and who is covered by this code**

120 The code applies to services provided by passenger train operators and station operators in Great Britain. Appendix A defines these services and the scope of this code, including the arrangements in Northern Ireland.

This second edition, brings together guidance on best practice and details of new legal requirements, and gives sources of information and advice.

## 125 **A3 Disabled passengers and their needs**

The underlying principle of this code is that passenger rail services should ultimately be made accessible to disabled passengers. The Regulator expects rail operators to commit themselves to a programme of continuous improvement on behalf of their disabled passengers. The passenger train operator or station operator's DPPP will be used to measure this.

In Britain today, about one person in eight has at least one disability. Many of those seven million disabled people find it difficult or impossible to use conventional public transport, including the railways.

135 The Disability Discrimination Act 1995 defines disability as: 'a physical or mental impairment which has a substantial and long-term adverse effect on a person's ability to carry out normal day-to-day activities.'

140 Physical impairments include things like blindness, deafness, paralysis or heart disease, whether in existence since birth or through illness or an accident. Mental impairment includes recognised mental illnesses such as depression, anxiety or schizophrenia. A learning disability is a lifelong condition which results from damage to the brain before, during or after birth, or from genetic or chromosome factors (like Down's syndrome).

Specifically, a disabled person may have a weakness or impairment in one or more of the following:

- 145 • mobility
- manual dexterity
- physical co-ordination
- continence
- ability to lift, carry or move ordinary objects
- 150 • eyesight (even when wearing glasses or contact lenses), speech or hearing
- memory, learning, concentration, understanding
- recognition of physical danger.

‘Substantial’ means more than minor, but not necessarily severe. Examples are:  
 155 inability to see moving traffic clearly enough to cross a road safely, inability to turn taps or knobs, and inability to remember and relay a simple message correctly. ‘Long-term’ means that the weakness or impairment has lasted or is likely to last a year or more, or that it is likely to last for the rest of the life of the person affected. ‘Day-to-day activities’ are things like eating, washing, dressing,  
 160 or turning on the TV.

Conditions that vary in severity and that may come and go, are specifically covered by the Act (arthritis for example), as are progressive conditions such as multiple sclerosis and severe disfigurements.

*Guidance on Matters to be Taken into Account in Determining Questions Relating to the Definition of Disability*, published by the Department for  
 165 Education and Employment (DfEE), gives more information about the nature of disability as covered by the DDA (see Appendix C).

### **A3.1 Putting improvements into practice**

Many of the good practices that can help to meet disabled passengers' travel  
 170 needs do not involve substantial investment. All operators must seek to incorporate these day-to-day operational improvements in their policies as a matter of good management practice.

The detailed specifications in this code are the result of many years of research and practical experience in balancing the needs of people with different kinds

175 and degrees of disability. Even a small change to the specifications, which may even appear to be an improvement, could have an adverse impact on some types of disability.

The principles set out in this code will benefit all passengers, regardless of how able-bodied or otherwise they are. People with a large amount of luggage, or  
 180 with small children and pushchairs, for example, will appreciate uncluttered stations, conveniently arranged seating, alternatives to stairs and doors that can be opened easily with one hand. Hence opening up the network to a wide range of people.

### A3.2 Symbols used in this code

185 To help those whose interest centres on overcoming difficulties experienced by people with a specific form of disability, certain sections of this code are marked with one or more of the symbols below (although, in practice, categories may overlap):

	<b>Symbol</b>	<b>Meaning</b>
190	[W]	Wheelchair user
	[M]	Impaired mobility (cannot walk far unaided or use steps, for example)
	[F]	Frail or with weak grip
	[V]	Visual impairment
195	[H]	Hearing impairment
	[S]	Speech impairment
	[L]	Learning disability

Some people have more than one impairment, and not all are as immediately obvious as those that necessitate using, say, a wheelchair or a white stick. Age  
 200 and disability are, of course, not synonymous, but there is a very strong correlation between them. Two-thirds of disabled people are elderly. The following statistics are based on research carried out for the Regulator by Cranfield University.

- 205 [M] [W] • **4,600,000 people have difficulty in walking. 800,000 of these people use a wheelchair**

Cluttered station layouts, and the need to change from one level to another, cause particular problems for people who cannot walk far or fast or at all.

- [H] • **2,700,000 people have impaired hearing**

210 People who are deaf or hard of hearing rely especially heavily on accurate, regularly updated travel information in visual form, and on well-trained staff.

- [V] • **1,600,000 people have impaired sight, even with glasses or contact lenses**

215 Difficulties for blind people and those with other sight limitations range from negotiating physical obstacles to being unaware of essential travel information because of colour-blindness (which affects around one person in ten) or a reduced field of vision. For example when walking some visually impaired people stop and look at the area 2-3 metres in front of them, from the ground to a height of about 1200mm, before taking each step. They may take some time to do this when they are in front of part of the environment which is changing, such as a doorway. Colour contrasting surfaces can help greatly, but an understanding of how visually impaired people see their environment is also essential. The use of colour and contrast has been researched by Project Rainbow – guidance can be obtained from the Joint Mobility Unit – see Appendix D.

220

225

- [L] • **1,400,000 people have intellectual impairments**

230 People with learning disabilities may have problems in understanding timetabling and ticketing information, and may be easily confused when faced with a busy station.

**[S] • 1,000,000 people have communication impairments**

235

People with a speech impairment may have difficulties making themselves understood by station or train staff. This can affect some deaf people who may also have speech difficulties.

**[M] • 1,800,000 people have orange badges**

240

Orange badges entitle the holders to parking concessions. They are generally for people who are unable to walk, or who have severe walking difficulties and therefore need parking spaces and set-down points close to the station entrance. The orange badge scheme provides parking concessions for people who have a permanent and substantial mobility impairment. The badge can be used by any vehicle the holder is travelling in. Broadly, badge holders can park free of charge and without time limit in streets with parking meters, pay and display systems or where waiting is time limited. Badge holders can park on single or double yellow lines for up to 3 hours in England and Wales, and without time limit in Scotland. This scheme is being replaced by a new European one. The badges will be blue and will be recognised throughout the European Community – parking concessions will remain the same. Blue badges were issued from 1 January 2000 and all orange badges will have been replaced by 1 January 2003.

245

250

**[F] • Many forms of disability affect people's ability to use the railway, and sometimes the disability is not obvious - as with deafness, partial sight, and arthritis-induced inability to reach, grip, negotiate steps, or stand for long periods.**

255

**A4 The Statutory Framework****A4.1 The Disability Discrimination Act 1995 (DDA)**

260

This major piece of legislation, brought in since the first edition of the code was published, already places legal requirements on passenger train operators. Requirements on station operators are being introduced in two stages.

### **A4.1.1 Passenger Trains**

Trains constructed or adapted to carry passengers on railways or tramways that are first brought into use, or belonging to a class of vehicle first brought into use, after 31 December 1998 have to comply with the Rail Vehicle Accessibility Regulations 1998, SI 1998 No 2456 (RVAR), made under section 46 of Part V of the Disability Discrimination Act 1995 (DDA). These Regulations impose a legal requirement on all licensed passenger train operators and all other passenger operators who are covered by the scope of the DDA. The DDA talks of the provision of services (and also goods and facilities) as services to the public. At the moment, some of these provisions do not apply to trains, except to the extent that they fall within the RVAR. The RVAR and refurbishment of passenger trains is dealt with under Section A4.7.2.

### **A4.1.2 Stations**

From 1 October 1999, service providers at stations, like other public buildings, must meet the requirements of Part III of the DDA. Services such as travel information are also covered by the Act. Service providers must make 'reasonable adjustments' for disabled people, but only to the way in which services are delivered - by offering extra help, or making changes to the way they provide their services for instance.

Part III of the DDA gives the following examples of 'reasonable adjustments' to the way in which services are delivered:

- changing practices or procedures (section 21 (1))
- providing auxiliary aids or services (section 21 (4))
- providing service by a reasonable alternative method (section 21 (2) (d)).

For guidance on service providers' duties and what is meant by 'reasonable' under Part III of the DDA see *Code of Practice: Rights of Access - Goods, Facilities, Services and Premises* (details in Appendix C). The onus is on service providers to show that 'reasonable' steps have been taken in cost-benefit terms.

For instance, it may be impossible or reasonably difficult for disabled people to use the means of access to the station. There is now a legal requirement on station operators to provide a reasonable alternative means of access for

disabled people. From 2004, if there is any physical feature that makes it  
295 impossible or reasonably difficult for disabled people to use a station, the station  
operator will have to either remove or alter this feature or provide a reasonable  
means of avoiding it.

Station operators will be responsible for ensuring that their stations meet the  
requirements of this code and the DDA. They will need to consult Railtrack  
300 (where it is their landlord) at an early stage to make sure that these obligations  
can be met and to agree who will be responsible for them. The station operator  
cannot avoid making alterations to the station purely because they are not the  
owner of the station. If a station operator is occupying the station under a lease,  
305 the owner cannot prevent that station operator from making alterations that are  
necessary in order to comply with the Act. Section 27 of the DDA says that any  
lease will have effect as if the operator may make the alteration with the written  
consent of the owner. The owner cannot withhold consent unreasonably.

Part III does not apply to means of transport, such as trains, unless they are  
included in Regulations (see A4.1.1). The DDA does allow the government to  
310 extend the scope of the DDA by making further Regulations if necessary.

The Disability Rights Commission (DRC) came into being from April 2000. The  
main duties of the DRC include: working towards the elimination of  
discrimination against disabled people; taking appropriate steps with a view to  
encouraging good practice in the treatment of disabled people; and advising the  
315 Government on the operation of the Disability Discrimination Act 1995 and the  
Disability Rights Commission Act 1999. The Government proposes the DRC be  
given specific functions that include: providing a central source of information  
and advice, particularly for service providers and other key stakeholders;  
preparing and reviewing statutory codes of practice; making arrangements for  
320 conciliation in the field of access to goods, facilities, services and premises;  
undertaking formal investigations; and carrying out research.

Requirements for stations appear in Section A4.7.1; specifications appear in  
Sections B1 to B5. Design standards for stations range from relatively  
inexpensive measures which must be adopted as normal practice, to initiatives  
325 which may be practicable only as part of refurbishment, major maintenance or  
construction projects. Section A outlines the legal and regulatory framework.

## A4.2 The Regulator's role under the Railways Act 1993

The Railways Act 1993 established the post of Rail Regulator. The Railways Act 1993 imposes two specific duties on the Regulator in respect of disabled passengers:

- section 4(1)(a) requires the Regulator to exercise his functions in the manner which he considers best calculated to protect the interests of users of railway services. Section 4(6) states that in performing this duty so far as it relates to services for the carriage of passengers by railway or to station services, the Regulator shall have regard, in particular, to the interests of persons who are disabled; and
- section 70 imposes an obligation on the Regulator to prepare and from time to time revise, having consulted the Disabled Persons Transport Advisory Committee (DPTAC), a code of practice for protecting the interest of users of railway passenger services or station services who are disabled, and to publish and otherwise encourage its adoption and implementation.

DPTAC is a statutory committee established under section 125 of the Transport Act 1985 to advise the Secretary of State for Transport on public passenger transport issues affecting disabled people. The Secretary of State has a statutory duty to consult DPTAC on Rail Vehicle Accessibility Regulations and any exemption procedures from these Regulations under Part V of the Disability Discrimination Act 1995. Under section 142(4)(a) of the Greater London Authority Act 1999 the Mayor has a statutory duty to consult DPTAC in preparing or revising the Mayor's transport strategy. DPTAC reflects the mobility needs of all disabled people. It is a useful source of advice on accessibility questions, and welcomes approaches from operators and others with an interest in transport services.

Appendix B gives details of the various other bodies, which enforce rules about what passenger train operators and station operators must do, along with relevant legislation and standards.

## A4.3 The code

The code provides standards for facilities and services at stations and on certain trains where the passenger areas are being replaced or refurbished, to which the

360 industry must work to meet the objective of achieving an accessible railway.  
Each passenger train operator and station operator's licence requires all such  
operators to have due regard to the Regulator's code.

The Regulator is seeking in this code to:

- 365 • set standards for passenger train and station services to meet the travel  
needs of disabled people on a consistent basis across the network;
- explain to operators the legislative and regulatory framework they are  
required to follow;
- create a robust system to monitor the performance of passenger train  
operators and station operators in meeting the needs of disabled people;
- 370 and
- provide a single point of reference for the standards which either must be  
adopted or are recommended to be adopted when the provision of new or  
refurbished facilities or services are being contemplated.

375 The Regulator will also encourage non-licensed passenger train operators and  
station operators (such as light rail and metro systems) to adopt and implement  
the code.

#### **A4.4 Disabled People's Protection Policies (DPPPs)**

As a condition of their licence, each passenger train operator and station  
operator, including Railtrack in respect of the stations it operates, must establish  
380 and comply with a Disabled People's Protection Policy (DPPP), stating how they  
will protect the interests of disabled users of their trains and stations. The  
DPPP must be established within six months of the grant of the licence and  
must be approved by the Regulator. Under the terms of the licence condition,  
the Regulator can also instruct the licence holder to carry out a review of their  
385 DPPP.

The Regulator will require all operators to review their DPPPs promptly following  
the publication of this code. They will be expected to follow the guidance notes  
on what must be in a DPPP that will be produced at the same time as the  
revised code. The Regulator's guidance notes on DPPPs will set out a  
390 framework within which passenger train operators and station operators will be  
expected to comply. A DPPP that does not meet the requirements in the

guidance notes, or any other reasonable requirements that have been approved of by the Regulator, will not be approved.

395 The purpose of an operator's DPPP is to provide a statement of policy and a detailed body of arrangements, procedures, services and other benefits as set out in the Regulator's guidance notes. This will then provide disabled people with details of the services and facilities that they can expect to receive. The outputs from the DPPP will be measurable so that the Regulator can clearly see if the standards are being met. Operators must state in their DPPPs that they  
400 fully endorse and are committed to adopting the standards and guidance contained in the code. They must also inform the Regulator at an early stage where facilities and services are designed that do not meet these standards (see A4.7.1 and A4.7.2). A passenger train operator or station operator's DPPP must have elements of network-wide co-operation within it (see A4.8) and a  
405 commitment to use new build, refurbishment or maintenance as an opportunity for improvement, in line with the standards set out in this code, to be approved by the Regulator.

#### **A4.5 The code, DPPPs and the DDA**

410 In drawing up their DPPPs and in making any alterations to them, it is a licence requirement that passenger train operators and station operators have due regard to the Regulator's code. Of course, operators must also meet their obligations under the DDA, which apart from the RVAR which was made under Part V, include under Part III, providing access to services, facilities and premises. In respect of the latter, a cornerstone of the DDA is that service  
415 providers must do what is reasonable in the circumstances. In drawing up this code, the Regulator has consulted widely with the railway industry and groups representing the interests of disabled passengers, and has striven to set out what he considers is reasonable in all circumstances. Although what will be considered 'reasonable' under the DDA will ultimately be a matter for the courts,  
420 it will be difficult for operators to claim they are acting reasonably if they have not taken account of this code.

Sections B3 to B5 of this code cover the specifications for station buildings and other associated infrastructure which are open to the general public. Specific design details with reference to all statutory requirements can be obtained from  
425 the Building Control Department of the appropriate local authority. Accessibility Regulations form part of the Building Regulations.

## A4.6 Station Access Conditions

Station operators will be responsible for ensuring that their stations meet the requirements of this code and the DDA. Much of the work necessary to achieve compliance, however, will fall to Railtrack as a result of the existing split of maintenance and repair responsibilities in the Station Access Conditions.

The Station Access Conditions are multi-bilateral contractual provisions governing the relationship between individual parties at a station (including, at franchised stations, Railtrack in its capacity as freeholder). The Conditions cover matters such as charging; the common services and facilities available at a particular station; the responsibilities for repair and maintenance; and the process for making changes at a station.

Railtrack is bound directly by this code in respect of the Major Stations under its Station Licence. But Railtrack also has obligations under the Station Access Conditions and under Condition 7 of its Network Licence. In Part D of the National Station Access Conditions 1996, Railtrack must ensure that “Maintenance and/or repair (as the case may be) is carried out to those items of Equipment and those Elements of the Station listed as Railtrack’s responsibility”. The definition of repair in the Station Access Conditions includes any work required so that the station is safe for operation and/or use in compliance with the requirements of any statute for any purpose permitted under a station access agreement. Such repair will therefore include any modification necessary in order to comply with the requirements of the DDA. If Railtrack fails to comply with its obligations under the Station Access Conditions, a train operator who is party to the relevant Station Access Conditions may have the necessary work carried out themselves at Railtrack’s expense.

Railtrack also has obligations under Condition 7 of its Network Licence to maintain, renew and develop the rail network in accordance with best practice and in a timely, economic and efficient manner so as to satisfy the reasonable requirements of train operators and funders. “Network” in this context includes any estate or interest in, or right over a station. The Regulator is responsible for monitoring and enforcing compliance by Railtrack with its obligations under the Network Licence. It follows that, were a train operator or funder to make it explicit to Railtrack that compliance with the DDA and with the Regulator’s code was a reasonable requirement for the purpose of Condition 7 of Railtrack’s Network Licence, this reasonable requirement would then be enforceable by the

Regulator. This may be particularly relevant where train operators or funders are paying for enhancements being undertaken by Railtrack which result in an increase in a stations Long Term Charge. (The Long Term Charge is the charge set in the Station Access Conditions which a facility owner pays to Railtrack for the lease of the station premises).

## **A4.7 Design Standards**

### **A4.7.1 Stations**

The Regulator expects station operators including, where appropriate, Railtrack to meet both the content and the spirit of this code. It is expected that all *new* stations will meet these standards and dispensations will be granted only in very exceptional circumstances. The Regulator also expects station operators to make every attempt to ensure that *older* stations meet these standards when facilities are renewed or enhanced, although there may be physical or other constraints that limit what can be done.

In either case, dispensations will only be granted on the basis of exhaustive evidence and after thorough consultation. Each application will be very rigorously examined. Applications must be made in good time and well before finalising designs, arranging finance and before planning and other consents have been sought or construction has started. Late applications will not be sympathetically received.

Applicants for a dispensation from specific requirements of the code for stations must

- Prepare details of the proposed dispensation. Including; why the dispensation is being sought; a site plan of existing and proposed new works including measurements; photographs of the site and description of how the facility relates to other facilities in the station; alternative options and the views of the Train Operating Companies affected.
- Consult with DPTAC, the appropriate RUCCs and local disability groups, before submitting proposals to the Regulator. Any amendments to the proposal as a result of this consultation must also be detailed in the submission to the Regulator.
- Apply to the Regulator in good time, with a full explanation of why it is not possible to comply with the code including whether it is a physical or cost

495 constraint. If it is a cost constraint, information must be provided to the  
Regulator about the overall budget for the scheme versus the cost of full  
compliance. Station operators must demonstrate that all alternatives  
have been fully explored and costed. They will also be required to provide  
500 details of when the next opportunity to provide access in accordance with  
the code is likely to occur.

There are different requirements for stations of different sizes. Busy stations,  
those where a lot of people have to change trains, or those which link in with  
other means of transport have more demanding standards. Railtrack have  
through a *Consultation Report: Developing Modern Facilities at Stations*  
505 (*November 1998*) categorised stations and these categories are recognised by  
the railway industry. In the report Railtrack have identified requirements for  
access and facilities depending on the size and usage of the station. The  
*Railtrack Disability Strategy (December 1999)* also uses the same categories.  
Station operators must, when building, renewing or refurbishing, provide facilities  
510 and services for disabled people appropriate to the size and usage of  
each station.

The categories of station are:

- A – national hub stations
- B – regional hub stations
- 515 • C – important feeder stations
- D – medium staffed stations
- E – small staffed stations
- F – small un-staffed stations

Older stations which are not scheduled for a major refurbishment for a number of  
520 years may have features which are particularly difficult to use. In these cases, it  
is recommended that operators consult with their disabled customers and local  
groups to find out what the major problems are. Some may be easy to fix, and  
this information will help draw up lists of action points and priorities.

In Sections B1 to B5, reference is made below the line to a number of technical  
525 standards which must be followed by those who are building, modifying or  
operating railway stations. These have not been specifically written to cover  
disability issues, but apply more widely. They must be consulted to ensure that

the necessary approvals are granted and that operators comply with wider regulatory and safety standards. The main standards are:

- 530 • Railway Group Standards which cover mandatory safety standards which operators are required to comply with under the terms of their Railway Safety Cases and licences (Railway Group Standards condition).
- Building Regulations which lay down standards of construction and design. These will usually be less detailed than the specific requirements  
535 designed for railway situations, which are detailed in Railway Group Standards. Part M of the Building Regulations deals with design and fitting for access for disabled people in some detail.
- Health and Safety Executive/Her Majesty's Railway Inspectorate Standards which provide over-arching policy guidance specifically  
540 for railways.

#### ***A4.7.2 Passenger Trains***

Section A4.1.1 explains the requirements of the Rail Vehicle Accessibility Regulations 1998 (RVAR). The RVAR is a statutory document and applies to 'regulated rail vehicles'. Failure to comply with it is a criminal offence. In  
545 addition to these legal requirements, the Regulator considers it good practice for all passenger train operators to comply with the relevant standards of the RVAR when they undertake to replace or refurbish particular facilities on passenger trains. The section '*First brought into use before 1 January 1999*' explains how the Regulator requires operators, who replace or refurbish the passenger areas  
550 in older trains, to follow the standards of the Regulations and how these standards are incorporated in this code.

##### *First brought into use before 1 January 1999*

Licensed operators who own or lease passenger rail vehicles brought into use, or belonging to a class of vehicle brought into use, before 1 January 1999, and  
555 who propose to have the passenger areas replaced or refurbished, must follow the standards set out in this code.

For passenger rail vehicles covered by the scope of this code, where the refurbishment of a particular facility (e.g. the replacement of seats) is undertaken, then the standards in the relevant part of the RVAR, or subsequent  
560 changes to it, must be adhered to in relation to that particular facility. It will not

be necessary, in such cases, for operators to comply with each regulation within the RVAR. Examples of this are:

- 565 • If new seats and a new toilet were being fitted inside a passenger rail vehicle, the operator will be expected to comply with the standards in the parts of the RVAR which cover these facilities (i.e. seats and toilets). There will not be an expectation for operators to comply with the standards in the RVAR for unrelated facilities (i.e. door controls) if they are not part of the replacement or refurbishment of the passenger areas.
- 570 • Where the software in an information system is upgraded, but the information system itself is not physically replaced, passenger vehicles covered by this code will not have to follow the RVAR.

575 Full compliance in relation to other facilities on the train will only be required if the passenger vehicle comes under the scope of the RVAR (see page 22). A summary of the standards contained in the RVAR appears in Sections B6, B7 and B8.1 of this code.

580 Where replacement or refurbishment of passenger areas takes place in a rail vehicle not covered by the RVAR, but in circumstances such as the two examples above, the passenger train operator must comply with the relevant standards in the RVAR. If passenger train operators cannot comply with the relevant standards in the RVAR, the operator must apply to the Regulator for a dispensation from these. Applicants for a dispensation from specific requirements of the code must follow the process set out in Section A4.7.1, applying it to passenger vehicles rather than station facilities. In addition applicants must also provide explanations of the following:

- 585 • Technical, economic and operational reasons why a dispensation is sought.
- Effect which non-compliance would have on disabled people's ability to use the rail vehicles to which the dispensation relates.
- 590 • Any proposals for later modification of rail vehicles to secure compliance with the relevant standards in the RVAR within a stated period.

Where improvements being made are minor, it is recommended that disability accessibility improvements are incorporated at the same time, wherever they are reasonably practicable and do not incur excessive cost (e.g. using colour contrast when replacing decor or trim, or providing additional handrails).

595 *First brought into use after 31 December 1998*

The accessibility of passenger rail vehicles first brought into use, or belonging to a class of vehicle first brought into use, after 31 December 1998 is regulated by the Rail Vehicle Accessibility Regulations 1998 (RVAR). The RVAR states that these Regulations apply to “passenger vehicles used on railways, tramways, 600 monorail systems or magnetic levitation systems”. The Transport and Works Act 1992 defines a railway “as a system of transport employing parallel rails which (a) provide support and guidance for vehicles carried on flanged wheels and (b) form a track which either is of gauge of at least 350 millimetres or crosses a carriageway (whether or not on the same level) but does not include a tramway”.

605 Where passenger rail vehicles are covered by the RVAR, the procedure for operators seeking exemption from the requirements of the RVAR is described in the Rail Vehicle (Exemption Applications) Regulations 1998 (SI 1998 No 2457) and Section 47 of the DDA. The Secretary of State considers the application. The Schedule to the Regulations sets out the particulars to be provided. 610 The Secretary of State consults with HMRI, the Regulator and the SSRA under section 47(3) of the DDA. Exemptions from the requirements of the RVAR are administered by the Department of the Environment, Transport and the Regions (DETR). DETR are producing guidance this year on the requirements of the Regulations and the exemption procedure that exists.

### 615 **A4.7.3 Security**

The need to provide disabled access may appear to conflict with the need to make stations secure. These issues must be thought through from the design stage, with disability groups, early enough for problems to be resolved. Procedures must be put in place to be able to deal with disabled access where 620 security measures apply. More details of security requirements are in Railway Group Standards GO/RT 3434/1 and GE/GN 8512.

### **A4.8 Network-wide co-operation**

Some of the measures contained in this code will only work if passenger train operators and station operators work together. Operators are expected to show 625 a positive commitment to network-wide standards. The Regulator particularly expects genuine co-operation between industry parties, especially where one

(such as Railtrack) is the landlord and another (such as a Train Operating Company) is the operator of a station.

630 In particular, the Disabled Persons Reporting System (DPRS) involves close co-operation between different passenger train operators and station operators. See Section B2.1 for details.

635 Where disabled people need assistance during their journeys, it is important that they can have confidence that this will be provided. The DPRS is the mechanism for ensuring that this happens and operators must use it. Apart from the need to ensure that any help needed is provided for the full length of a journey, close co-operation is vital at stations used by more than one operator, and when severe delays or engineering works cause changes to the normal service.

640 Operators should co-ordinate action through the Association of Train Operating Companies (ATOC's own Code of Practice *Access and Travel Arrangements for Passengers with Disabilities* acknowledges the need for co-operation between the various companies to ensure a guaranteed and seamless level of service for any given journey) and with Railtrack, and other operators such as London Underground Ltd and Eurostar.



**645 Part B: USING THE RAILWAY**

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## B1 Introduction

660 The simple aim of this code is to assist those operating passenger train services or station services in make travelling by rail easier. Ultimately it should be as easy for disabled people to use the rail system as it is for everybody else. In this section of the code, details are given about what this means for the various parts of a journey.

Some considerations apply to the service as a whole, and these are described first in Sections B1 and B2.

### B1.1 Staff training

665 One of the most cost-effective ways of making services more attractive to disabled passengers is to provide properly trained staff.<sup>1</sup>

670 Disability awareness training is essential for all staff. This training must be provided for key managers who determine policy, project managers who make or approve physical changes to stations or trains, staff who come into contact with the travelling public at stations or on trains and for staff who provide or prepare information for passengers. All licensed operators must arrange for these staff to have disability awareness training.<sup>2</sup> This applies to all staff, whether the relevant operator employs them directly or indirectly.

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<sup>1</sup> DETAIL: Staff training and Part III of the DDA

Station operators are more likely to be able to comply with Part III of the DDA if they

- train staff to understand their policy towards disabled people;
- provide disability awareness training for all staff who have contact with the public;
- provide training relevant to the 'reasonable adjustments' they are making. (*Code of Practice: Rights of Access - Goods, Facilities, Services and Premises*, DfEE - see Appendix C).

Representatives of organisations for disabled people may be available locally to assist with disability awareness training. Many transport organisations have produced videos and other material to explain the problems and how staff can help. The Employers Forum has details of organisations which provide disability awareness training - see Appendix D.

<sup>2</sup> The DfEE's code of Practice "Disability Discrimination Act 1995: Code of Practice: Rights of Access, Goods, Facilities, Services and Premises" (See Appendix C) suggests under the heading "General Guidance on Good Practice" that service providers consider providing disability awareness training for all staff serving customers and monitor its implementation. For organisations that can help with training on equipment for people with disabilities, see Appendix D.

675 Such training should emphasise the danger of assuming that everyone is able to see, hear and move easily. Impairments which may not be immediately obvious, such as deafness, partial sight and arthritis, are very common. Training must also include specific guidance on communicating with disabled people.

Staff must also be trained in the use of equipment provided for people with disabilities.

680 For example, staff at booking offices and other information points where induction loops and text phones are provided must be able to test equipment to ensure that it is usable by those who are deaf and hard of hearing.

[W] Relevant staff must be given training in the use of ramps or similar  
685 equipment used to assist wheelchair users to get on and off trains.<sup>3</sup> They must be instructed on how the ramps are installed and stowed. Equally importantly, they must receive training so they know how to provide appropriate help, such as in bringing the wheelchair down a ramp backwards.

### ***B1.1.1 Emergencies***

690 Passenger train operators and station operator's plans for coping with emergencies must take into account the needs of disabled passengers. This may affect the design of passenger trains and stations as well as the procedures to be followed in an emergency, but must not conflict with the standards in this code. These procedures must be devised in consultation with disability groups and others involved with safety. For example, consideration must be given as to  
695 how to provide emergency information in visual and audible forms and ensuring that help is on hand for disabled passengers who have arranged for assistance during a journey. The strategy for evacuating disabled passengers that is drawn up must be communicated to staff, and be included as part of normal drills and training.

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<sup>3</sup> For details of organisations that can help with training on equipment used to assist wheelchair users to get on and off trains, see Appendix D.

## 700 **B1.2 Information**

Good information is vital. In addition to the same information as anyone else, disabled passengers may need extra information to enable them to undertake and complete their journey without anxiety. Some people with mobility impairments are understandably unwilling to start a journey until they know that it will be possible for them to complete it reasonably easily. Passengers must know that all the stations and trains that they will use will be accessible to them, and that this information is reliable. If they need help or any special facilities they must be reassured that it will be provided, and be able to rely on the fact that it will be as arranged. As train travel is usually a link in a much longer chain, they are likely to need to know about other transport services at the end of their journey.

[M] [F] As a general aim, it is recommended that all information is available to all passengers in forms which mean that no one is disadvantaged because of a sensory or physical impairment. Different information is needed at different times – see sections on booking assistance (page 31), stations (page 51) and on the train (pages 75 and 77) for more detail.

It is recommended that all station staff who are likely to come into contact with passengers are made aware of accessible transport services which might connect with their station, such as wheelchair-accessible taxis, buses, trams and other transport. See Section B8.3.

### ***B1.2.1 Leaflets and printed information***

Operators' must produce information for potential disabled passengers, in appropriate formats summarising their DPPP. This will outline what operators are committed to providing, including details about services and facilities designed to help disabled people and must describe the mechanism for making suggestions or complaints (see Section B9). It must also include appropriate telephone and helpline numbers for disabled passengers wishing to travel on the national network. These must be available at all normal information points and it is recommended that they are also distributed to disability organisations.

730

730 It is recommended that all leaflets be produced in large enough print for as many people as possible and follow the rules for good legibility – clear typefaces, good contrast and clear layout. Standard print (often 10pt) is too small for many people. It is recommended that *all* leaflets are printed in at least 12pt type.

735 It is recommended that information is available in larger print for those who can't read type of this size. The smallest acceptable 'larger print' size is 14pt, although some people prefer even larger type. Generally the bigger the type the more people will be able to read it, although there is no advantage in using bigger than 20pt. It is recommended that other means of providing information are considered for people who cannot read type of this size - see below.

740 [L] It is recommended that where appropriate, leaflets include illustrations where these would make things clearer for people with learning disabilities.<sup>4</sup>

### **B1.2.2 Other formats**

745 Information, including details of services and facilities designed to help disabled people, must be available in other forms for people who cannot see, read or handle a leaflet. This could include, for example, tape, computer disc and, where the operator is linked in, via the Internet.<sup>5</sup>

## **B2 Pre-travel information**

750 Potential passengers must be able to find out in advance where they can catch their train, when it will leave, where they have to change, and what help or facilities are available for their particular needs. Without this information, some people may lack the confidence to travel at all.<sup>6</sup>

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4 ILLUSTRATION&CAPTION

Example of 14pt type ideally, [as in heading B2 Pre-travel information above].

5 *Informability Manual*, a guide to making information as accessible as possible to people with disabilities, is published by the Central Office of Information (see Appendix C).

6 *Rail Travel for Disabled Passengers*, a free leaflet published by ATOC and available from stations, explains how to book in advance, as well as giving details of the Disabled Persons Railcard scheme.

Passenger train operators and station operators must keep the Disabled Persons Reporting System (DPRS)<sup>7</sup> help pages up to date. This must include any significant temporary work being carried out over an extended period.

755 Station operators must also keep the DPRS abreast of any changes to stations that may mean they would be temporarily inaccessible to some disabled people.

## B2.1 Help and assistance with travel

Disabled people who need assistance at a station or special arrangements to board a train, could find it difficult to simply turn up and travel. At present many

760 unstaffed or smaller stations and some passenger trains are still not fully accessible to some people with disabilities, particularly where staff cannot always be on hand to help, or where a special facility is needed, such as a ramp.

To help solve these problems, each licensed passenger train operator must run or participate in a reservation system for disabled passengers (currently the

765 DPRS) whose journey begins at any of its stations. Passenger train operators must publicise these systems, so that potential passengers know that they exist, know how to make contact and how far in advance they have to book. Passengers must be able to make arrangements for assistance on a journey at

770 48 hours notice, but it is recommended that it is possible to do this at 24 hours notice. If a passenger wishes to purchase a ticket, passenger train operators must make it clear when longer notice periods are required for special fares, such as Apex.

[W] Disabled passengers who arrange for assistance in advance must be told about any engineering works that might mean they have to transfer to alternative

775 transport which is not fully accessible. They must be given this information at

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<sup>7</sup> DETAIL: Disabled Persons Reporting System (DPRS)

The Disabled Persons Reporting System, like the rest of the national rail Computer Reservation System (CRS), allows passengers to book tickets through one train operator regardless of how many operators' services the journey involves. See also *ATOC Code of Practice: Access & Travel Arrangements for Passengers with Disabilities* (Section 3.2.2) August 1998.

The DPRS is a 'one-stop shop' which makes arrangements for disabled passengers. Through it, the train operator that takes the booking can:

- reserve a wheelchair space or a seat with additional leg room on the train
- tell all stations involved in a disabled passenger's journey what help will be required
- consult a 'help page' detailing the level of accessibility at each station.

ATOC is modernising this system as part of the Rail Journey Information System (RJIS) project. It is envisaged through this system that it will become easier to access a wider range of facilities in the future.

the time of booking, but must also be able to check the situation near to the time of their journey. This is particularly important for wheelchair users and others who might not be able to travel if the type of service provided has been changed. Passenger train operators must make sure that this information is kept up to date.<sup>8</sup>

Where the type of service provided does change, the operators must make sure that appropriate arrangements are made to meet the needs of their disabled passengers. See Section B8.2 on Substitute Transport.

## **B2.2 By phone**

The National Railway Enquiry Service (NRES) is open 24hrs a day. It normally refers callers seeking details of facilities for people requiring assistance with their journeys to the passenger train operator providing the first train in their journey. This is normally done by giving the passenger train operator's helpline number for disabled people. In the future it is expected that the NRES will be able to transfer these calls directly.<sup>9</sup>

All telephone services for disabled people must have textphones such as Minicom for people who are deaf or hard of hearing. It is recommended that textphones have a dedicated telephone number.<sup>10</sup> People who answer telephones must be trained in communicating with people who may have difficulty speaking or hearing. Recorded information provided by telephone must be clear and must provide an option to be connected to a human operator, or must quote a phone number where a human operator can be contacted.

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<sup>8</sup> See also ATOC Code of Practice: Access & Travel Arrangements for Passengers with Disabilities (Section 3.1.3(d)) August 1998.

<sup>9</sup> See also ATOC Code of Practice: Access & Travel Arrangements for Passengers with Disabilities (Section 3.1.3(b)) August 1998.

<sup>10</sup> Details of textphones are available from the Royal National Institute for Deaf People. They also run BT sponsored Typetalk – a 24 hour service in which deaf, deafened, hard of hearing, deafblind and speech-impaired people with textphones can carry out conversations with someone on an ordinary telephone through an operator who relays messages between the two parties. See Appendix D for the address of the RNID.

### B2.3 On the Internet

If train operators provide details of their services on the Internet, it must be presented in a form which can be used by disabled people. Initiatives<sup>11</sup> exist that allow readers to display information on a computer at a size that suits them or allows them to make it accessible with image enhancing software, screen readers (which speak the text) or by converting it via a tactile pad into Braille. Where details of services are provided for passengers it is recommended that, wherever possible, information needed by disabled people to enable them to travel is included.

### B2.4 Via specialist information services

Specialised travel information services for people with disabilities will often be able to answer detailed enquiries. It is recommended that passenger train operators and station operators make sure that these agencies have up to date information, including leaflets, about timetables and fare structures, as well as details of physical access to the stations and trains.<sup>12</sup>

### B2.5 Updates

Information, especially about service or fare changes, must be publicised in advance. Passenger train operators must consider how best to reach disabled people when considering what media to use. Possibilities include press articles and advertisements, including talking newspapers<sup>13</sup>, local radio announcements, leaflets (at information, tourist and post offices, libraries, and other places visited by disabled people), notices at stations, and by using telephone enquiry numbers (possibly with some pre-recorded messages).

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<sup>11</sup> DETAIL: Care has to be taken that information provided via the Internet is compatible with earlier browsers and add on devices used by disabled people. The World Wide Web Consortium, known as W3C is a subscription organisation which sets standards for good practice across the Web. Its Web Accessibility Initiative gives guidance on the access and readability of web pages. [www.w3.org/tr/wai-webcontent](http://www.w3.org/tr/wai-webcontent). Bobby is a program which tests a website design for accessibility [www.cast.org/bobby](http://www.cast.org/bobby). Include is a European website concerned with designing information and communication systems so that they are accessible for everybody including disabled and elderly people – [www.stakes.fi/include](http://www.stakes.fi/include).

<sup>12</sup> Appendix E gives details of these.

<sup>13</sup> See Appendix E for information.

## B3 Getting to the station

### B3.1 Locating the station

825 It is recommended that station operators work with local authorities to ensure that stations are clearly signposted at street junctions, especially on pedestrian routes between public transport facilities.

The buildings and accessible entrances must be prominently signposted, and the main building must display the 'double arrow' railway logo<sup>14</sup>, so that passengers can find the station easily.

### B3.2 Car parking

830 The following requirements apply to station car parks which are part of the operator's lease. Where the car park is operated by someone else, the station operator must encourage them to meet similar requirements.

The location of the car park and entrance to the station must be clearly identified.

835 Parking places reserved for orange or blue badge holders must be close to the station entrance, with direct pedestrian-only access to the entrance. The number of parking spaces for orange/blue badge holders will depend on the overall capacity of the car park.<sup>15</sup> Standard dimensions for these spaces are given below.<sup>16</sup>

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#### 14 ILLUSTRATION & CAPTION

[double arrow logo] The symbol is a registered trademark. It must be displayed at or near all entrances to stations except Waterloo International, Ashford International and all stations operated by Heathrow Express. This display must also meet any requirements of the Traffic Signs Regulations and General Directions 1994.

#### 15 DETAIL: Station car parks for badge holders

- fewer than 20 spaces, a minimum of one reserved space
- 20 to 60 spaces, a minimum of two reserved spaces
- 61 to 200 spaces, 6% of capacity, with a minimum of 3 reserved spaces
- over 200 spaces, 4% of capacity, plus 4 reserved spaces

#### 16 ILLUSTRATION/CAPTION

Reserved parking places must be 4800mm long (plus a 1200mm safety zone to accommodate rear hoists) x 3600mm wide to accommodate transfer from the car to a wheelchair. Space can be saved by combining spaces in pairs of 4800mm x 2400mm with a common transfer zone of 1200mm.

840 The use of reserved spaces must be regularly monitored to make sure that there are enough of them, and to discourage non-disabled motorists from parking in them. This is particularly important as improvements in stations and rolling stock make it possible for more disabled people to travel.

Spaces must be clearly marked – for example by the international wheelchair access symbol on the road surface and by a notice at the drivers eye level.<sup>17</sup>

845 Any pay and display machines must be placed close to the reserved spaces, and be easily accessible to someone in a wheelchair.<sup>18</sup>

850 [W] Dropped kerbs or level access must be provided at exits from the car park to surrounding footpaths and to the station.<sup>19</sup> These must be kept free of obstruction. They must be marked by the recommended tactile surface so that visually impaired people are aware when they are moving onto a road. If there are alternative routes, the preferred route for wheelchair users must be clearly signposted.

It is recommended that a help point that can be used to summon assistance from station staff is installed near reserved parking spaces.

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<sup>17</sup> DETAIL: [W] DETR recommend that car parking bays which are flush with the footway are marked with 800mm of tactile paving to warn visually impaired people that they are no longer on the footway. The footway must, as far as reasonably practicable, be kept clear of parked or waiting vehicles, so that wheelchair users can always get onto the pavement without delay.

For more information about tactile surfaces, see *Guidance on the Use of Tactile Paving Surfaces*, DETR Mobility Unit, January 1999.

ILLUSTRATION/CAPTION picture of DETR's recommended tactile surfaces.

<sup>18</sup> DETAIL: Pay and display machines. Orange or blue badge holders should not have to pay - see page 11. Any charging policies must be clearly stated on signs near the ticket machines. In the interests of accessibility, it is recommended that the coin slot and other parts users have to reach are no higher than 1200mm above ground level. The machine should not be placed on a plinth.

<sup>19</sup> DETAIL: Dropped kerbs. It is recommended that dropped kerbs at the pavement edge are not more than 2000mm wide, with a level area at least 1000mm on the pavement to the rear of the dropped kerb. If this is not possible, the dropped kerb should be as wide as the pavement. The gradient should be 1:20 unless site constraints make this impossible, in which case the recommended maximum is 1:12.

### 855 **B3.3 Set-down and pick up points**

Set-down and pick-up points for cars and taxis must be as close as possible to the station entrance, with clear signs leading to them from the station concourse.

860 [W] Passengers must be able to choose between getting out of a car either at kerb level or at road level. Which of these is easier depends on the type of vehicle and the method of getting into and out of it.

Where people transfer onto a wheelchair at road level, the design of the set down point must allow them to do this without obstructing traffic. Where road level set down points have not been provided, the car has to be parked far enough away from the kerb to allow room for the wheelchair.<sup>20</sup> It is 865 recommended that road level set down points are near to a dropped kerb so that it is possible to get onto the safety of the pavement quickly.<sup>21</sup>

Where set-down and pick-up points can only be at pavement level, the kerb alignment must allow vehicles to park hard against it.

870 [W] Set-down and pick-up points must be wide enough to allow transfer to and from a wheelchair without getting in the way of other pedestrians.<sup>22</sup> They must be free of all obstacles.

Where taxis cannot pick up or set down passengers at the station entrance or at the same side of the road as the entrance, a safe crossing route must be provided to the taxi rank. A zebra crossing is generally regarded as best 875 practice. Crossings must have flush dropped kerbs which incorporate the DETR's recommended tactile surface - see illustration [not in this draft] on page 35.

Similar arrangements must also be made for pick-up and set-down from accessible bus services.

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<sup>20</sup> ILLUSTRATION/CAPTION to picture of ideal set-up.

<sup>21</sup> See page 35 for details of dropped kerbs and associated markings.

<sup>22</sup> DETAIL: The width of the unobstructed footway must be sufficient to allow the deployment of wheelchair ramps (up to 1620mm) and adequate manoeuvring space for the wheelchair user. The suggested total width is 4040mm.

**880 B3.4 Pavements and bollards**

[W] Pavements must be as slip resistant as possible, with a smooth consistent texture and have a well-defined kerb edge. Paving slabs must have an even surface to avoid the risk of tripping, and be smooth enough for wheelchairs.

885 [V] Where bollards are necessary to separate and protect pedestrian areas, they must be consistently spaced away from the general lines of pedestrian travel. Particular care must be taken to ensure they can be seen by visually impaired people.<sup>23</sup> Bollards must never be linked with a chain or rope. It is recommended that they contain a light if placed in areas which are dark at night.

**B3.5 Luggage Trolleys**

890 [W] Luggage can be difficult to manage for people who use wheelchairs. Help should be available by arrangement. It is recommended that the design of a luggage trolley which can be used by someone in a wheelchair be investigated.

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<sup>23</sup> **DETAIL: Bollards.** Bollards must be a minimum 1000mm high. They must be in a colour which contrasts with their surroundings, and they must have a colour-contrasting band around their neck. Examples of well-designed bollards are shown in *Building Sight*, RNIB (see Appendix C).

## B4 Inside the Station

### B4.1 Unobstructed progress

895 Routes to and within buildings must be wide enough for wheelchair users to use easily. They must be obstacle-free, direct and obvious.<sup>24</sup> Where necessary, they must be signposted (see Section B4.2.1).

900 Station furniture must be designed and placed so that it interferes with the main pedestrian flow as little as possible. Facilities such as telephones, vending machines and seating must be sited so that people using them do not get in the way of others. They must be clearly visible to all passengers.

Passages and subways must be well lit, with clear directional information.

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24 **DETAIL: Obstacle-free routes**

Pedestrian footways must be not less than 2000mm wide.

Where poles or columns are unavoidable they must be marked - as a minimum - by a horizontal band (preferably of alternate black and yellow stripes) 140-160mm wide, with the lower edge at a height of about 1500mm from the ground. Two such horizontal bands, one at 800mm above the ground and one at 1600mm must be used where the obstruction occurs on main pedestrian routes.

Lights and signs must be mounted on walls or suspended. Sharp edges are dangerous, and must be avoided.

Generally, it is recommended that freestanding objects such as bollards are placed clear of the pedestrian flow. They must be at least 1000mm high, with coloured bands or tops so that they stand out from the background (see Section B3.4). All objects which project beyond their base (such as cantilever seats) must be protected by rails or frames reaching from, or just above, ground level up to a height of 1000mm, to prevent visually-impaired people from colliding with, or tripping over them.

Where litter bins are provided, they must be brightly coloured, and placed so that they are not an obstruction. The top must be 1300mm above ground level, with an opening about 1000mm above the ground. The base must be wide enough to be detected by a cane.

'Tapering' obstructions such as the spaces below ramps and stairs, which cannot be detected by cane users and are not picked out by guide dogs, must be blocked in or protected by rails.

Station furniture must contrast both in tone and in colour with surrounding objects. There must be good colour contrast between walls, floors and doors for the benefit of visually impaired people. Walls must have light, non-reflective surfaces, and floors should ideally have a matt or semi-matt finish.

### **B4.1.1 Doors**

905 Thresholds must be flush with the surrounding floor; it is recommended that single steps be avoided.<sup>25</sup>

[W] Doormats must be fixed, and must be sunk so that they are flush with the floor. Soft mats and coconut mats must be avoided because they are difficult for people in manual wheelchairs to travel over.<sup>26</sup>

910 Doors at entrances must open and close automatically or be left open during working hours.<sup>27</sup>

[W] Doors which can open either way must have a clear panel so that anyone at a lower level such as a person in a wheelchair or a short person, can be seen approaching on the other side.<sup>28</sup>

915 It is recommended that doors that are self-closing be avoided. Where they exist, they must incorporate a delay mechanism. Inward-opening swing doors in exposed positions must be recessed or sheltered from prevailing winds so that heavy spring closers are not needed – these cannot be used easily by people with limited strength or by some people in wheelchairs.

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<sup>25</sup> DETAIL: Gradients at the approach to a door must be no more than 1:50.

<sup>26</sup> ILLUSTRATION/CAPTION: [illustration of weather bars]. Weather bars on external doors must be no more than 15mm high, and must have chamfered edges to reduce the risk of tripping.

<sup>27</sup> DETAIL: Door opening and closing

Automatic sliding doors linked to weight sensors in the floor, or to wall-mounted pedestrian detectors, offer the most suitable approach. Door must open no faster than 3 seconds and remain open for a minimum of 6 seconds (9 seconds preferred). The control mechanism must safeguard against someone being injured by closing doors. If automatic hinged doors are used there must be a clear indication of which way they open so that people do not collide with a door as it opens. Weight sensors must be sensitive enough to detect the weight of a small child, and wall-mounted sensors must be able to detect a fallen child or a guide dog.

Doorways should preferably be 1200mm wide with a minimum width of 900mm. Entrances to buildings and stations must have a minimum width of 1200mm. Where double doors are used, each must provide a clear width of at least 800mm (900mm preferred), and both must be free to open. Swing doors must be designed so that they can be left open at 90°. There must be a clear space of a minimum 1500mm (2000mm recommended) before and after the doorway to allow the wheelchair user space to manoeuvre.

<sup>28</sup> ILLUSTRATION/CAPTION:[illustration of visibility panel & wheelchair person]

DETAIL: Visibility panel. The visibility panel on a door that can open in either direction must be at a height of 900mm-1500mm from floor level.

920 [F] It is recommended that manually operated doors be of a simple pull/push design with vertical handles.<sup>29</sup> Where this is not possible, handles with a lever action must be used.<sup>30</sup> Doorknobs that have to be turned must not be used, because many people find them impossible or painful to use.

Revolving doors must be avoided; where they already exist, an alternative side-hung or sliding door must be provided.

925 Doors and their frames must be in contrasting colours. The frame must be large enough for visually impaired people to be able to recognise it quickly. See Section B4.1.5 for information on transparent or glass doors.

### **B4.1.2 Lighting**

930 Good lighting at stations can enhance the appeal of public transport and give passengers a feeling of comfort and security.<sup>31</sup>

Lighting levels must be good and consistent throughout routes used by passengers. Glare and dazzle must be avoided. There must be no sudden major changes of lighting level and no areas must be excessively bright or dark.

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<sup>29</sup> ILLUSTRATION/CAPTION:[drawing/photo of good vertical handle]

DETAIL: Vertical door handles must be 30-35mm in diameter, in a colour/tonal contrast with the surroundings, and with an 'easy grip' or raised textured surface. They must be round in section with at least 45mm clearance from the door and must extend from a height of not more than 400mm above ground level to at least 1400mm.

<sup>30</sup> ILLUSTRATION/CAPTION:[drawing/photo of good lever handle] DETAIL: Lever handles must be fixed at a height of 900mm with a minimum length of 120mm. All handles within a station must be at a consistent height. Doors must have kick plates at least 400mm deep. It must be possible to open doors using a force of no more than 15 Newtons.

<sup>31</sup> DETAIL: Lighting guidelines

Higher levels of illumination are desirable for visually impaired passengers.

The recommended light level for circulation areas, lifts and stairs in stations is 100 lux. In particular, lighting levels must be at least 50 lux at the top and bottom of escalators and at least 10 lux along the whole of any platform edge (See Railway Group Standard: GM/TT0146 *Lighting of Railway Premises*' October 1993, for underlying mandatory requirements. This standard is due for revision during 2000. The latest edition of this on all standards must be consulted at all times).

White artificial light is more effective than yellow light. Strobe effects with lights must be avoided as these may cause problems for people who may have epileptic seizures. Wall-mounted lighting gives a more even distribution of light than column-mounted sources.

Lighting columns must be not less than 2000mm from the platform edge, 3000mm where line speed exceeds 165km/h (GC/RT 5161 *Station Platform Design Requirements* December 1995 clause 6.5.2 (or later version)).

935 There must be no areas of heavy shadow. Lighting must be uniform during the day and night.

See Section B5.2.4 for stair lighting, Section B5.2.7 for escalator lighting, and Section B5.3 for platform lighting.

### **B4.1.3 Floors**

940 It is recommended that all passenger facilities are on one level.<sup>32</sup> It is recommended that breaks in the surface such as single steps, thresholds, drainage channels and short sharp ramps are avoided.<sup>33</sup> See Section B.5.2 for information about larger changes in level.

945 It is recommended that floors have a matt or semi-matt finish wherever possible, to avoid reflection and glare. Polished surfaces can become slippery, and shiny surfaces can look slippery which mean people may not be confident about walking on them.

Floor surfaces must be firm, even, easily cleaned and slip resistant when wet or dry.<sup>34</sup> Where necessary, floors must be treated with a slip resistant finish.

950 [V] Main thoroughfares within buildings must have consistent floor surfaces. It is recommended that changes in colour and texture are used to mark the edge of the thoroughfares and any impending hazards such as projecting obstacles and stairways.

[V] [W] Steep cambers can cause problems for both visually impaired people and wheelchair users<sup>35</sup>, so must be avoided.

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<sup>32</sup> Ref to GC/RT 5161 Station Platform Design Requirements December 1995, clause 6.7.1 (or later version).

<sup>33</sup> DETAIL: Changes in floor level

Unexpected changes in level must be avoided. Where projections are unavoidable they must be protected by a barrier or rail, both at ground level and at a height of between 1000mm and 1200mm.

<sup>34</sup> DETAIL: Slip-resistant flooring

Polished tiles and terrazzo surfaces must be avoided as they become very slippery under certain conditions and are hard and unyielding for anyone who falls. Mats can be used to reduce risks, as long as there are fixed and flush with the floor, so there is no danger of tripping over them. See Section B4.1.1.

955 Drainage grills must be offset from the access route and set flush with the surrounding area. Grill bars must be set at right angles to the main direction of travel, if there is one, so that they do not trap wheels or long canes.<sup>36</sup>

Any temporary hazards, such as wet areas caused by a leak in the roof, must be marked. The signs or other devices used to do this must not be a hazard in themselves. They must be high enough, and in a colour which contrast to their surroundings.

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#### **B4.1.4 Walls**

Walls must have light, non-reflective surfaces. They must be in a colour which contrasts with the floor, so that the boundary of the floor is clearly visible.

#### **B4.1.5 Glass and transparent materials**

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[V] Serious injuries can be caused when people fail to see transparent panels or walls, plate glass windows, doors and shop fronts. This can affect sighted passengers as well as those with impaired vision. It is recommended that transparent walls or large transparent panels, including doors, are avoided, but where used they must be marked with a contrasting band of colour.<sup>37</sup> Contrast is the difference between reflectivity between two surfaces. An easy way of judging whether there is good contrast is to take a black and white photograph of the scene. A good contrast will show up black and white, poor contrast will show up as grey.

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975 The problem for the passengers with impaired vision is heightened by the use of stainless steel and blending shades of grey. Those finishes must be avoided.

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<sup>35</sup> DETAIL: The maximum recommended camber is 2.5%. See *Building Sight*, RNIB.

<sup>36</sup> DETAIL: The gap between grill bars must not exceed 13mm.

<sup>37</sup> DETAIL: Transparent wall markings

The contrasting band of colour on a glass wall or door must be 140mm -160mm wide, with the lower edge at a height of about 1500mm. Two such bands at heights of 800mm and 1600mm must be used where these are used on main pedestrian routes. For smaller areas of glass, a diagonal band can be used as an alternative to two horizontal bands. Bands may be made up of large shapes, but the space between these must not be excessive. Round, oval or irregular shapes must be avoided because they can be confused with gaps in people's visual field. Etched or clouded glass must be avoided as it looks like the misting of the visual field experienced by some people.

### **B4.1.6 Building works**

[V] [W] Building works are a particular hazard to disabled people. They can crop up unexpectedly in familiar places where people may not be looking out for them. Because they are temporary and changing, less attention is often given to minimising hazards and many building contractors are simply unaware of the need to make their sites more obvious or to provide accessible routes around them.

All works and builder's materials in thoroughfares must be enclosed by a fence or barrier which is at a height and colour to be seen easily.<sup>38</sup> Lamps must mark out the site when the area is not lit. The route round the works must be clearly marked and wide enough for wheelchairs. Where building works are of a size and type which may make it difficult for some people to use the station or facility concerned, information about the nature of the obstacle and about how long it will remain must be fed into the information network - see page 31.

[new point] Station operators who commission work must ensure that contractors are aware of these basic rules. Where necessary local access officers<sup>39</sup> or disability groups can be consulted for advice.

Handrails must always be provided on one side of staircases and ramps even when temporary work is underway.

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<sup>38</sup> DETAIL: Temporary safeguards while works are carried out

Barriers must incorporate:

- a visibility panel at least 150mm deep, integral with a separate panel (if appropriate integral with a handrail), fixed so that its upper edge is a minimum of 900mm above ground level. Visibility panels of yellow, white, orange or red/white sections are more easily detectable by partially sighted people.
- a tapping rail (panel for white-stick users) of a minimum depth of 150mm must also be provided, with its lower edge at ground level or up to a maximum of 200mm above the ground.
- where appropriate a handrail in a contrasting colour fixed at between 900mm and 1000mm above ground level; the rail must be reasonably smooth and rigid enough for pedestrians to use for guidance and some support.

<sup>39</sup> DETAIL: Local authorities have access officers who have responsibility for ensuring that buildings and their surroundings are accessible. They often work with local access groups of disabled people. Details can be found in telephone directories, public libraries or local council offices.

## **B4.2 Information at stations**

When information systems are being designed or renewed, care must be taken to ensure that information is given in both audible and visual forms.

### ***B4.2.1 Signs***<sup>40</sup>

1000 Station signs have to identify services, facilities and platforms, and guide passengers towards whichever of them they need.<sup>41</sup> To do this job effectively, all signs must form part of a comprehensive, coherent and consistent system. This is particularly important where several passenger train operators share a station.

1005 Signs are not a substitute for good station design. As far as possible, stations should be laid out in a logical way, so that finding a particular facility is partly intuitive. It is recommended that signs giving the same type of information have the same shape, positioning, colouring and format.

1010 Direction signs for pedestrians must be repeated where a route divides or where passengers join the route from platforms. Repetition ensures that people do not lose confidence that they are on the correct route. Consistency is essential - the sign for a particular objective must continue to appear until it is reached. Information for each platform must be of a matching type, position and size.<sup>42</sup>

The system must be adaptable so that changes can be made.

### ***Materials***

1015 Signs must be durable, and materials must be used which will not fade. The surface must be non-reflective to avoid glare.

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<sup>40</sup> For more information on signs see *Buildings and internal environments*, Joint Mobility Unit Access Partnership, 1999.

<sup>41</sup> ILLUSTRATION/CAPTION good signs, with captions showing what they illustrate.

<sup>42</sup> See Railway Group Standard: GC/RT 5161: Station Platform Design Requirements, December 1995.

### *Clarity*

Text and symbols must be concise so signs can be read and understood quickly. They must be clear and unambiguous.

- 1020 [L] Information displayed on signs must be as clear as possible to people with learning or comprehension difficulties, and not rely on their knowledge of language. It is recommended that operators consult with disability organisations who can advise on this.<sup>43</sup>

### *Position*

- 1025 The visibility of a sign is affected by its position, size and by its distance from the person reading it. This must take into account the likely direction from which people are likely to approach the sign and where they might stand to read it.

Overhead signs must be at least 2300mm above the ground.<sup>44</sup>

- 1030 All signs must be well lit at all times, whether by natural or artificial lighting (see Section B4.1.2). Signs must not be placed against low-level sunlight or artificial light because this makes them difficult to read. This must be checked both at standing and sitting height.

Signs must not be placed in walkways or where there may be an obstruction.<sup>45</sup>

### *Size of lettering*

- 1035 [V] Comparatively few people have perfect sight, and there is a very wide range of visual impairment before people consider themselves partially sighted.

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<sup>43</sup> See Appendix D.

<sup>44</sup> ILLUSTRATION/CAPTION: [Diagram to explain all these degrees, heights etc:] Most people's eye level is at between 1420mm and 1750mm when they are standing up and between 710mm and 860mm when sitting down. The clarity of signs decreases when they are not directly ahead, so it is recommended that the vertical displacement should not exceed 15° and that the side viewing angle should not be less than 45°.

<sup>45</sup> DETAIL: Where low level signs are supported on posts, the sign itself must not extend 150mm beyond the posts and a tapping rail at a maximum height of 250mm should be placed between such posts to prevent blind or partially sighted passengers colliding with the sign. Where signs containing detailed information such as timetables or maps are fixed to walls they must be centred around 1000mm from the ground, with the bottom edge 1300mm above the ground and the top edge up to 1800mm above the ground.

The greater the distance between the sign and its reader, the larger the lettering must be. The aim must be to use the largest practical size compatible with the space available.<sup>46</sup>

#### 1040 *Typefaces*

Research into legibility has led to the design of a number of typefaces which are used by the transport industry. Clear typefaces include Helvetica, Arial, Alphabet, New Johnston and Airport. Over-stylised designs and ornate typefaces can be very difficult to read <sup>47</sup> and serif faces must generally be avoided.

Lower-case lettering is generally easier to read than capital letters.<sup>48</sup> Research has also shown that a mixture of upper-case and lower-case letters (e.g. 'Sunderland') can be read more easily and recognised more quickly than capitals only (e.g. 'SUNDERLAND'), especially when used for place names, which passengers often recognise by the general shape of the word.

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#### *Colour and contrast*

Lettering on signs must stand out clearly from the background.<sup>49</sup> So that the sign can be seen against both light and dark backgrounds, it must have a border. This is mainly a matter of the amount of contrast in depth of colour between the

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<sup>46</sup> ILLUSTRATION/CAPTION:[photo/illustration showing 22mm height letter, and 75mm letter, in close up and at appropriate distance] As a general rule, letters and numbers must be at least 10mm high for every 1m of viewing distance, with no lettering less than 22mm high. Lettering on warning signs must be at least 75mm high. DETAIL: A character height of 50mm or more can be read a metre away by people's whose eyesight qualifies them to be registered as partially sighted.

<sup>47</sup> ILLUSTRATION/CAPTION:[Show Helvetica etc & a hard-to-read alternative]

<sup>48</sup> ILLUSTRATION/CAPTION:[Examples of all l/c, all caps, u/lc signs]

<sup>49</sup> TABLE: Shows appropriate colour relationships reproduced from Merseyside Code of Practice (see Appendix C for details) –

Background	Sign Board	Legend
Red Brick or dark stone	White	Black, dark green or dark blue
Light brick or light stone	Black / dark	White or yellow
Whitewashed walls	Black / dark	White or yellow
Green vegetation	White	Black, dark green or dark blue
Back-lit Sign	Black	White or yellow

1055 two colours.<sup>50</sup> Contrast is particularly important for colour-blind people (who may not be able to see red letters on a green or blue background or vice versa) and for partially sighted people.<sup>51</sup>

Particular care must be taken with any colour used to establish a corporate identity to ensure that it does not conflict with the clarity of signs.

## 1060 *Symbols*

Symbols (pictograms) can supplement or replace words to indicate specific facilities or the corporate identity of an operator. They can have the advantage of simplicity and greater clarity. Some, such as those for information and telephones, are now familiar and widely recognised.

1065 However symbols must not be used unless it is known that they will be understood by passengers. Complex or obscure designs may take longer to understand than words such as 'Way Out'.<sup>52</sup> New pictograms must be avoided, because they may be difficult to understand. If they are to be introduced, this must be done consistently across the railway network.

1070 [W] Because the international 'wheelchair' pictogram is commonly used as a universal sign for disability, it can cause confusion where the best route for passengers in wheelchairs is different from that of other disabled people such as those who may only be able to walk a short distance. It is recommended in this case that an alternative logo, such as a person walking with a stick, be adopted  
1075 for the latter route.<sup>53</sup>

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<sup>50</sup> Different situations need different solutions; see *Building Sight*, RNIB (see Appendix C).

PHOTO CAPTION:

The high-contrast combination of black letters on a yellow background is legible at three times the distance of a low-contrast combination of green on red.

<sup>51</sup> See *Building Sight*, RNIB 1995. For further information on colour contrast, see *A design guide for the use of colour and contrast to improve the built environment for visually impaired people*, K Bright, University of Reading 1997.

<sup>52</sup> ILLUSTRATION/CAPTION:[photos of examples of good and obscure pictograms]

<sup>53</sup> ILLUSTRATION/CAPTION:[wheelchair pictogram and person with walking stick pictogram]

*Illuminated signs and variable message signs*

1080 Internally illuminated translucent signs may be suitable inside buildings, but care must be taken that there is no glare to reduce their effectiveness. The colour and size of lettering may need to be different from externally lit signs to ensure a consistent standard of legibility.<sup>54</sup>

The rules about legibility set out above apply equally to electronic, screen or dot matrix signs. In addition, systems which give changing information must allow enough time for people to read and comprehend the information before it changes.<sup>55</sup>

1085 It is essential to ensure that the information given on variable message signs is accurate and up to date.

**B4.2.2 Tactile signs**

1090 Tactile signs must be provided where visually impaired people need them to be able to identify and use facilities on stations. They must be used on all lift controls on new lifts, and be fixed next to toilet doors on new toilets to identify whether they are unisex or which sex can use them. They must not be fixed on doors themselves, because of the danger of visually impaired people being knocked over. They must be at a standard height and position so they can be located easily. Tactile signs must be embossed, not engraved, and the letters or

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<sup>54</sup> ILLUSTRATION/CAPTION:[Photos of examples]

Passengers with visual impairments; find it particularly difficult to read any 'non-solid' messages made up of dots unless the grid used is fine enough to reproduce accurately the shapes of letters and numerals. Great care is therefore required to ensure that the letter shapes and colours used are clear; certain numerals such as '6' or '9' can be difficult to read and the figure '0' must not include a diagonal line.

<sup>55</sup> DETAIL: Guidelines for electronic customer information systems  
[PHOTO OF AN EXAMPLE]

- character width ratio of width to height should be between 3:5 and 4:5.
- stroke width ratio of stroke width to character height should be from 1:6 to 1:8; at the narrower end of this range for light characters and at the wider end for dark characters.
- character spacing horizontal spacing should be from 25 to 50 per cent of character height for characters within a word; 75 to 100 per cent of character height between words.
- line spacing vertical spacing should be at least 50 per cent of character height.

See *The development of ergonomic guidelines for electronic customer information systems*, Federal Transit Administration, Washington DC, December 1994, which also reviews the advantages and disadvantages of different types of Variable Message Sign.

1095 symbols must be large enough for people to read easily.<sup>56</sup> Where space permits, Braille must also be used.<sup>57</sup>

### ***B4.2.3 Maps***

1100 [V] [L] It is recommended that station maps, which show the layout of larger stations, are designed so that, as far as possible, wheelchair users and people with visual impairment or learning disabilities can use them. This may involve having maps at different heights. See also navigation systems (B4.2.4).

Where street maps are provided, it is recommended that they show local transport boarding points and telephone numbers of services.

### ***B4.2.4 Navigation systems for visually impaired people***

1105 Tactile maps in stations can be difficult to use. There are no common standards for symbols and they can be difficult and time consuming to read. The RNIB recommend using electronic navigation systems wherever possible. These give directional and other information through a series of loudspeakers installed in the station or by radio to a portable receiver with an earpiece. The information  
1110 provided changes according to where the user is. Visually impaired people carry a card that triggers the system. The system has the added advantage that information can be provided in different languages.<sup>58</sup> The Regulator recommends that these be investigated, especially for new stations or as part of a major refurbishment. Any such system must be able to cope with changes  
1115 due to temporary or other works.

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<sup>56</sup> DETAIL: Tactile sign recommendations

Tactile signs are essential for people who have no sight, and those who cannot make out individual characters. Characters on tactile signs must be raised by 1mm to 1.5mm from background. They must have a stroke width of 1.5mm to 2mm and a height of at least 15mm, maximum 60mm. An ideal height range for the sign is between 1400mm and 1700mm from the floor, with a maximum horizontal stretching distance of 500mm. More information on tactile signs can be found in *Buildings and internal environments*, Joint Mobility Unit Access Partnership, 1999 (see Appendix D).

ILLUSTRATION/CAPTION:[photo of person 'reading' a tactile sign that fits the requirements below]

<sup>57</sup> Grade 1 Braille can be used for single-word signs, contracted Braille (grade 2) for multi-word signs. These must be located on a Braille bar 1 metre above floor level.

<sup>58</sup> These systems are currently undergoing trials. More information from the RNIB.

### ***B4.2.5 Announcements***

#### *Content*

1120 Clear announcements of every departure, giving time, platform and destination are particularly valuable for blind and partially sighted passengers, and a reassurance to all.

1125 At very busy stations it may not always be possible to announce every departure because there may be too many messages to convey at the same time, and passengers may become confused. In these cases, audible announcements must give priority to covering any variations from the normal timetable (emergencies, revised platforms, cancellations or late running), and details of longer distance or special services.

Announcements must include information about the probable length of any delay, where this is known.

1130 Announcements must be given early enough to allow enough time for people to act on them, without having to rush.

Where announcements do not cover every departure, an alternative means of providing visually impaired people with this information should be found. At the very least, staffed and telephone information points must be able to provide this information.

1135 *Clarity*

Announcements must be clearly audible throughout the station. Because many people have difficulty hearing higher frequencies, it is recommended that announcement systems be adjusted to boost the lower end of the frequency scale.

1140 All PA systems must be linked to induction loops that cover the whole station. All induction loops must be kept in working order. Operators must make sure of this by testing them regularly. Where induction loops break down, operators must ensure that they are repaired within a reasonable timescale.

### *Recordings*

- 1145 All recorded information must be clear and succinct, and the quality of recording must be high. All systems which relay recorded information (PA, help information points, for example) must be equipped with an induction loop.

### *Emergency Alarms*

Emergency Alarms must be both visible and audible.

- 1150 ***B4.2.6 Help and information points***

### *Help points*

- 1155 Where staff are not always available to give information, clearly marked help points are recommended for key locations so that passengers can talk to enquiry offices or other points of assistance. As well as providing information, this will help reassure passengers who may feel nervous or threatened. Staff must be available to answer calls at all times information desks or booking offices are open.

New installations must be fitted with induction loops. It is recommended that old points are fitted with them wherever reasonably practicable.

- 1160 [V] They must be designed so that visually impaired people can find and recognise them.<sup>59</sup>

### *Information points*

- 1165 All larger stations<sup>60</sup> must have an information point that is open at all times the booking office is open. It need not be dedicated to disabled people only, but it must be marked as the best place for disabled people to get advice. This point must be in an obvious position close to or on the concourse and well signposted, including from the main display of timetables. Booking offices themselves could meet this requirement if suitably marked and equipped.

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<sup>59</sup> From Appendix A to *Railtrack Disability Strategy* (see Appendix C).

<sup>60</sup> DETAIL: National hub stations, Regional hub stations and Important feeder stations.

1170 These points must be designed and equipped to make it easy for disabled people to use them.<sup>61</sup> Staff must have appropriate training to help them communicate with people with different disabilities – see page 27.

Staff at information points must be able to provide the most up to date information available for disabled people including in print, in a form which follows legibility guidelines (see page 29).

1175 Detailed information about the accessibility of all stations served by trains from the station at which the inquiry is made must be available. This must include toilets, catering and any other facilities or services that may be provided.

1180 Timetables, fares, connections and confirmation of any help arrangements that have been made through the DPRS must also be made available at the information point.

1185 [M] A change of train may be involved during the course of a journey. Passengers with a mobility impairment may require assurance that their whole journey can be made without undue difficulty or stress. Passengers must be able to get all the information they need from one source. Staff at information points must therefore be able to give specific advice on services and facilities provided by other operators for disabled people. A high level of co-operation is needed between the different service providers.

1190 Non information staff who are likely to be asked for information must at least know where it can be obtained. Better still, they should be able to answer the most frequently asked questions themselves.

Passenger train operators and station operators are expected to make progress towards providing real-time information as quickly as possible. Information must not only include timetables, but details of delays, diversions and any other events that may affect the journey.

1195 Staff must be able to help with new arrangements where journeys have been disrupted or delayed.

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<sup>61</sup> DETAIL: Counters no higher than 850mm; Induction loops must be provided.

1200 It is recommended that information staff are able to provide information about the accessibility of other transport available near the station, including the general level and nature of the services provided. If they cannot provide full timetable details, they must at least be able to tell people where this information can be found.

### ***B4.2.7 Timetables, posters and leaflets***

1205 [W] [M] Timetables, posters and leaflet racks must be placed so they can be used by people sitting in wheelchairs and by standing passengers who may be unable to stoop. It may be necessary to have more than one, and place them at different heights.

1210 Some people may not be able to read timetables or other information given on posters because of their type size or position. Although every attempt should be made to provide displays which can be used by a wide range of people, it is recommended that information is also available in other formats. Information on display should be colour contrasting, on matt paper and for timetables be clear between the week and weekends. Relatively unchanging information can be given in leaflets and all information on display must be available through telephone help lines and staffed information points.

## **B4.3 Ticket sales points**

### ***B4.3.1 Booking Offices***

1220 Station booking offices must sell a wide range of tickets to passengers accurately and impartially.<sup>62</sup> The Regulator explained in his policy statement on retailing<sup>63</sup> that this meant “providing accurate information and advice on journey and ticket options – irrespective of which company provides the service – to

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<sup>62</sup> Operators must comply with the Ticketing and Settlement Agreement (TSA), as a requirement of the Through Tickets and Network Benefits condition of their passenger licences. The TSA sets out the range of tickets which each station booking office must sell, whether it must offer reservations as well as the sale of tickets and the hours it must be open. In a limited number of cases, mainly at large stations, there are additional booking offices to the main office, run by different train operators. These are not *obliged* to sell the full range of tickets or other operators' tickets if they make clear that they are dedicated booking offices, although in practice many of these offices sell the full range. See also *ATOC Code of Practice: Access & Travel Arrangements for Passengers with Disabilities* (Section 3.1.3(c)) August 1998.

<sup>63</sup> The Regulator's Policy Statement – Accurate and impartial retailing (August 1996) explains these issues in greater detail. A section (paragraphs 2.27-2.31) of that document describes the issues facing disabled passengers.

allow passengers to make an informed choice". This does not always mean selling the cheapest ticket for the quickest journey. In many cases disabled passengers may find other factors as or more important, in particular they may need to know if they can make a journey without having to change trains.<sup>64</sup>

1225 Franchised passenger operators must also accept the Disabled Persons Railcard as a condition of their franchises and they must make sure that they give the correct discounts for the card holder and any companion.<sup>65</sup>

1230 If a disabled person needs to arrange for help on a journey, the booking office must either be able to make these arrangements directly or advise the passenger who they should contact to make these arrangements.

1235 [W] Booking offices must have at least one position suitable for wheelchair users.<sup>66</sup> After any major refurbishment to the booking office, those with only one window must be designed so that wheelchair users can use it as well as everybody else. In other cases alternative arrangements must be made for wheelchair users so that they can buy tickets at the same times as other people.

Waiting at booking offices is difficult for people who cannot stand for long periods. One solution is to provide handrails of a type that can be leant on in places where there are often queues.

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<sup>64</sup> The Ticketing and Settlement Agreement also requires operators to test how well their booking offices are performing against the accuracy and impartiality requirements and to carry out improvements if they fail. The tests, involving mystery shoppers include a scenario testing how well the needs of disabled passengers are met.

<sup>65</sup> Details are available in an ATOC publication: *Rail Travel for Disabled Passengers*.

<sup>66</sup> DETAIL: Wheelchair-height ticket sales

The counter height must be between 775mm and 800mm, and there should be knee clearance space below the counter that is at least 750mm high, 900mm wide and 500mm deep. An alternative would be to use height adjustable counters. The counter must have a slight upstand at the front edge so that tickets or change do not fall on the floor.

1240 Booking offices must have amplification systems if they are screened, and must be fitted with induction loops.<sup>67</sup>

### ***B4.3.2 Ticket machines***

1245 It is especially important that ticket machines are as simple as possible to operate, and for instructions to be clear. Many people are intimidated by machines, and may be deterred from using public transport if purchasing a ticket seems too complicated.<sup>68</sup>

## **B4.4 Passenger Facilities**

### ***B4.4.1 Telephones***

Telephones must be clearly signposted and marked.

1250 [W] It is recommended that at least one telephone (or more if appropriate to the size and usage of the station) is placed at a convenient height for wheelchair users, and is identified with a wheelchair and telephone symbol.<sup>69</sup>

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<sup>67</sup> DETAIL: Sound amplification at security windows

Speak-through security panels can be a particular communication barrier for visually impaired and hard of hearing passengers. An amplification system must be installed whenever such a screen is used, with induction loops to assist hearing-aid users. The induction loop must be mounted at a height of 1100mm so that there is no visual barrier between the booking clerk and the passenger. The standard induction loop sign must be displayed wherever they exist.

[ILLUSTRATION OF THIS SYMBOL]

ILLUSTRATION/CAPTION: Glass screens must be unobstructed and non-reflective to help lip readers.

[photo along lines of one shown in existing code, including induction loop logop25]

<sup>68</sup> DETAIL: Accessible ticket machines

For automatic ticket vending machines to be physically accessible to all passengers, none of the operating parts, or the coin slot, must be higher than 1200mm or lower than 700mm from the ground. Ticket machines and other vending machines must be well lit, so that information and operating instructions are clearly visible when they are in use. Operating buttons must be at least 20mm in diameter and must protrude sufficiently to be used by those who rely upon palm pressure. Tickets and change must be easy to retrieve by people with limited manual dexterity. For advice on ticket machines suitable for various types of disability, consult DPTAC.

<sup>69</sup> Telephones should be 260mm lower than the standard height. A clear space of at least 760mm x 1220mm is required in front of the telephone. The cord must be at least 735mm long.

1255 [H] To help passengers with a hearing impairment, all new public telephones must have a volume control and must be fitted with an induction loop. For heavily used areas, it is recommended that at least one payphone is a textphone for deaf passengers.

[V] Overhanging hoods must not be fitted where they would be a hazard for visually impaired passers-by.

#### ***B4.4.2 Seating***

1260 Seating for passengers is extremely important, as many people find standing for more than a few minutes uncomfortable or impossible.

1265 As a general rule, seating must be clean, comfortable, easy to get in and out of, and freely available. It is recommended that outdoor seating is designed to prevent rainwater collecting in any part of the seat and the seating is made of a material that dries relatively quickly. In some areas, seats may need to be designed to prevent people sleeping on them. This can be done by providing separate seats or placing armrests between seats.

Seating must not obstruct the main flow of passenger movement, be clearly visible and able to be detected by long-cane users.<sup>70</sup>

#### *Priority seating*

1270 [V] Even where no specially designated seating is available in a waiting room or elsewhere in a station, it is recommended that consideration is given to labelling certain strategically-positioned seats as being priority seating for disabled

<sup>70</sup> DETAIL: Seating Areas

There must be a range of seat heights to meet individual needs. Standard seats should be about 450mm from the floor, with a minimum of 420mm. Other seats should include seats with horizontal perch rails at a height of about 700mm; these higher seats are for people who find getting up out of standard seats difficult.

Arms should be provided on both sides of each single or double seat at a height of 200mm above the seat to give passengers the options of an arm on either or both sides to push themselves up from the seat. Sharp edges and corners must be avoided.

There must be spaces for wheelchairs where there are fixed seats:

<i>Fixed seating capacity</i>	<i>Number of wheelchair spaces</i>
4 to 25	1
26 to 50	2
51 to 300	4
301 to 500	6

1275 people, older people, pregnant women and those carrying young children. Such seating must be near to entrances, toilets and other facilities, and is clearly marked. There must be enough space under these seats to allow a guide or hearing dog to lie clear of the pedestrian route.

### **B4.4.3 Toilets**

As a general principle, disabled people must not have to travel further to find a usable toilet than other people. Toilets must be signposted and well marked.

1280 Toilets must be designed so that they can be used independently. People may need assistance because of their disability. They should never need to ask for assistance because of the design of the toilet.

1285 [V] [F] Where turnstiles or other barriers are used at toilet entrances, a permanently available gate must be available for passengers who would not otherwise be able to get in. Coin slots must be clearly visible and easy to use by passengers who are visually impaired, or have impaired hand or arm movements.

1290 Where new toilets are being built, or where they are undergoing a major refurbishment (involving renewal or removal of walls, sanitary ware or plumbing, for example), toilets for disabled people must be provided. As well as being accessible to people in wheelchairs, a well designed toilet must be easy to use for a wide range of other people including those who cannot bend, those with limited strength, impaired balance, impaired vision and those who make involuntary movements.

1295 The number of accessible toilets will vary according to the size of the station and its pattern of use.<sup>71</sup> Accessible toilets must, wherever practicable, be unisex<sup>72</sup> so that, if necessary, a companion of the opposite sex can assist the disabled person. Accessible toilets must also include baby changing facilities.

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<sup>71</sup> Railtrack consultation report gives some guidance: *Developing Modern Facilities at Stations (November 1998)*. Operators must provide accessible toilets appropriate to the size and usage of the station.

<sup>72</sup> CAPTION/ILLUSTRATION The layout of a typical accessible unisex toilet.

1300 The guidelines for unisex toilets have been summarised from various sources<sup>73</sup> to allow for a variety of methods of transfer and general comfort. The source documents should be used for more detail.

1305 *Doors.* The door must be wide enough.<sup>74</sup> Door signs must contrast with the door colour. See page 48 for details of tactile signs. The door must be light enough to be opened and closed by people with limited strength. Door handles and locks must be large enough to be easy to grasp by people with impaired hand movement (see specifications given for doors in Section B3.5). There must be a horizontal pull bar to make it easy to pull the door shut. It must be possible to unlock the door from outside in an emergency.

1310 *Space.* The room must have sufficient unobstructed space to allow wheelchairs to manoeuvre and turn. The toilet must be large enough to allow wheelchair users to transfer from the front, side or when the chair is placed diagonally alongside the pan. There must be enough space for an assistant to the side of the toilet and in front of it.<sup>75</sup>

1315 *The Toilet.* The toilet pan must have a wide opening as some people cleanse themselves while sitting on the toilet.<sup>76</sup>

The pan must be wall mounted so that male wheelchair users can get close enough to use it as an urinal without having to move their feet off the wheelchair's footplates. The front of the pan must be far enough away from the back wall to allow a wheelchair to be lined up with it for transfer.

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<sup>73</sup> *Good loo design guide*, Centre for Accessible Environments, 1988. *Approved Document M*, Access and facilities for disabled people, The Building Regulations 1991, 1999 edition, The Stationary Office.

<sup>74</sup> At least 1000mm wide.

<sup>75</sup> As a guide the whole toilet must have internal dimensions of at least 2000mm wide x 1800mm deep (from Merseyside Code of Access, see Appendix C) so it is big enough to accommodate the growing number of people using buggies/scooters (which are longer) and also allow more room for transfer and an assistant. There must be at least 800mm space between the pan and the wall, and 1200mm clear space in front of the pan. Space must not be reduced by obtrusive pipework or fittings below a height of 1050mm. Sharp edges and rough surfaces must be avoided throughout to lessen risk of injury to people who make involuntary movements.

<sup>76</sup> The water level must not be less than 200mm from the rim for the same reason. The seat must be 450mm-475mm above the ground. It must be firm, stable and comfortable. Open seats (those with a gap in the front) make transfer more difficult and must be avoided.

1320 The flush must be easy to operate. A large easy to grip handle must be used, placed to one side to be within reach of someone sitting in a wheelchair (not on the wall side). It must be designed so that it can be operated by a fist or by an elbow. Tactile signs must say where the handle is.

1325 *Rails.* Rails are required to give support and stability when transferring, standing up or sitting down and when adjusting clothing. They must be firmly fixed. They must be placed so they do not cause an obstruction themselves.<sup>77</sup>

1330 [V] *Colour and contrast.* Toilets often have white fittings and walls. These must be avoided as the fittings will not be visible to some partially sighted people. Walls and other surfaces must have a matt finish. All fittings, rails and controls must either contrast with the colour of the walls or with their surroundings. Shiny metal fittings including chrome must be avoided because they are cold to the touch and cause glare for visually impaired people. Diffused lighting must be used to reduce glare.

1335 *Basins and taps.* The basin and its taps must be close enough to be used while sitting on the pan so that hands can be washed before transferring back onto the wheelchair. The basin must be shallow and be in a position, which does not prevent people, reaching other fittings such as towels or soap dispenser. There must be a remote plug control. Taps must be easy to use. Automatic taps are one option. Otherwise lever types are easy to push. Where mixer taps are used,  
1340 the water temperature must not be more than 30°C.

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<sup>77</sup> Rails 35mm in diameter give good grip in wet conditions are recommended. Rail configurations include:

Drop down or hinged rail – used in combination with a fixed rail for getting on and off the seat and for general support. It must be easy to reach and release from its upright position. When down it must be very steady. The front of the handrail must line up with the front of the toilet. The Centre for Accessible Environments recommend this is fixed at a height of 700mm.

Horizontal rails. These are usually placed behind the toilet and on the opposite side to the drop down rail, so that both can be used together if required. If they are more than 125mm from the side of the toilet, the toilet will become inaccessible to the wheelchair user.

Vertical rails. These are usually placed each side of the toilet.

Other fittings must be designed and placed in a way, which makes the toilet easy to use for the widest range of people.<sup>78</sup>

1345 Alarm and light cords. An alarm (usually a cord) must be reachable from the toilet and from the floor. It must be thick to make it easier to see and grip and be coloured red to distinguish it from the light cord.<sup>79</sup>

Where unisex toilets cannot be provided, a less ideal solution is to provide accessible cubicles in both the women's and men's toilets.<sup>80</sup>

1350 [M] [V] [F] Some toilets in older buildings cannot be made fully accessible for physical reasons. Where these have no more than three steps they must be made at least partially accessible as part of any refurbishment. At least one cubicle and urinal must have handholds. At least one urinal and sink must be at a lower level. Fittings must be colour contrasted and suitable for people who have weak grip or limited strength.

1355 Accessible toilets must be open at all times other toilets are open. However, locked toilets can be more of a problem for disabled people because there may be no accessible alternative nearby. In places where toilets are locked (for example, when station staff go off duty), it is recommended that operators consider making the accessible toilet part of the National Key Scheme.<sup>81</sup>

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<sup>78</sup> *Other fittings.* The toilet roll dispenser must be within reach, and must allow sheets to be torn off with one hand. Soap dispensers must not have stiff buttons. A hand dryer avoids the need for paper or cloth towels. It must be fixed no more than 900mm above the floor. The mirror must be at least 400mm wide x 900mm high, should be angled for wheelchair users and must be fixed no more than 900mm above the floor.

A shelf is useful and should be placed from 750mm – 800mm above the floor and clear of manoeuvring space. Recommended size 600mm long x 250mm deep so that it can be used as a baby changing facility. Any shelf over 200mm deep would need the additional depth added on to the depth of the entire toilet so as not to intrude on the wheelchair space.

A sealed container should be provided for incontinence pads etc. It may need to be fixed to prevent theft, but should not restrict circulation space.

<sup>79</sup> The alarm must ring at a continually staffed location. The pull switch for the room light must descend to 1000mm above floor.

<sup>80</sup> Operators should consult DPTAC for details (see Appendix D).

<sup>81</sup> **DETAIL:** National Key Scheme (NKS) Accessible toilets which can be unlocked with a special key. This scheme is operated by RADAR - see Appendix E.

#### **B4.4.4 Vending machines and cashpoints**

1360 It is recommended that cash machines, vending machines and other facilities provided by outside companies are fully accessible. Station operators must encourage the installation of these services, and endeavour to make accessibility a requirement of their contract with the service provider.

#### **B4.4.5 Catering and refreshment facilities**

1365 Franchised caterers are independently liable under the DDA for providing accessible facilities and services. The Regulator expects operators to ensure that they are aware of their responsibilities under the DDA and recommends that they follow these standards below:

- Priority seating in restaurants and cafeterias are clearly marked.
- 1370 • Tables and other fittings are designed so that people in wheelchairs can use them.<sup>82</sup> Tables and chairs should not be placed on to the main concourse if they would get in the way of pedestrians.<sup>83</sup>
- [V] It is recommended that tables and seating are arranged in a regular rather than random pattern, as this is less hazardous for visually impaired people. Gangways should be wide enough for wheelchairs and others who need space.<sup>84</sup> Some seats should be moveable so that wheelchair users can get to a table.
- 1375 • Self-service restaurants and cafeterias are designed so that a customer in a wheelchair can reach and move along the full length of all counters.
- 1380 • [H] It is recommended that an induction loop is fitted at the counter for customers who are hard of hearing.

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<sup>82</sup> DETAIL: Cafeteria furniture

Tables designed for wheelchair users should have a maximum height of 730mm; the space beneath each table for 'leg room' should be at least 500mm deep, 600mm wide and 700mm high, as measured from floor-level. Furniture and fittings in public areas should have beneath their most protruding point a toe clearance space of at least 230mm in height to enable wheelchair users to turn more easily.

<sup>83</sup> DETAIL: Cafeteria seating

Where 'pavement café' style facilities are provided, a clear route at least 1800 mm wide should be allowed for pedestrians. Pedestrians should be discouraged from walking between the tables by a continuous barrier (using plants or fencing, for example). Such barriers must be readily detectable by both long-cane users and those with a visual impairment. (See *Building Sight*, Appendix C).

<sup>84</sup> DETAIL: Gangways in cafeterias should be at least 1300mm wide.

- All chairs and tables have rounded edges.
  - Furniture, trays and crockery are in colours that contrast with each other.
  - Lighting is even, and does not create pools of light and dark.
- 1385 • Menus and price lists are available in large print.

#### ***B4.4.6 Luggage facilities***

[W] Left luggage facilities must be accessible to wheelchair users. Lockers of different sizes must be placed at various heights to suit the range of passengers who wish to use them.

### 1390 **B5 Getting to the platform**

#### **B5.1 Ticket barriers and gates**

- [V] [F] During staffed hours, where ticket barriers and gates are in use, at least one gate must be permanently available for passengers using wheelchairs, those with guide dogs and others who cannot pass through the standard space.
- 1395 At all other times when stations are open, ticket barriers and gates must be fixed in an open position. Ticket or coin slots must be designed to be clearly visible and easy to use by passengers who are visually impaired or have limited manual dexterity.

#### **B5.2 Changing level**

- 1400 This section covers the various ways of coping with changes in level at stations.

##### ***B5.2.1 Crossing the track***

- In many stations, the only way of crossing from one platform to another is by footbridge. Footbridges are often too high for ramps to be practical because the ramp would be too long or steep to be usable by disabled people. Where refurbishment or replacement is being carried out, the installation of a lift must be considered. See B5.2.2.
- 1405

If the installation of a lift is not appropriate, for example where a station is elevated or in a cutting and the only access to the platforms is currently via stairs, then ramps must be provided as an alternative where refurbishment or

1410 replacement is being carried out. This may be a particularly appropriate solution at many unstaffed stations. See B5.2.3.

At some stations crossings across the track are provided. These are generally known as barrow crossings as their original use was for luggage and parcel barrows. In certain circumstances they can be used by people in wheelchairs, or  
 1415 with walking difficulties. They must be accompanied by staff conversant with the instructions for use of barrow crossings at the location concerned.

### **B5.2.2 Lifts**

When Part III of the DDA comes into force in 2004, operators will have an obligation to make physical adjustments to overcome barriers such as those  
 1420 preventing people using wheelchairs to reach the trains. In many cases this can be achieved by providing lifts; ramps; platform lifts; stairlifts, or wheelchair-carrying stair climbers.

Lifts<sup>85</sup> must be provided where there are significant changes in level. They are the ideal option for wheelchair users and others who cannot manage stairs.  
 1425 They must be located as near as possible to the stairs. Lifts of a standard size are likely to be cheaper than lifts that are specially designed<sup>86</sup> – manufacturers can supply details.

Lifts are ideal at large stations and must be considered whenever major rebuilding at a station takes place. In some locations due to physical  
 1430 constraints, ramps may offer better solutions to access.

Passageways which lead to lifts which are used by passengers must be wide enough for people in wheelchairs.<sup>87</sup>

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<sup>85</sup> Details of lifts are given in *Approved Document M*, Access and facilities for disabled people, The Building Regulations 1991, 1999 edition, The Stationary Office, 1998 and in BS 5655: Parts 1 and 2 also in Part 5: 1989 *Specification for dimensions of standard lift arrangements* and Part 7: 1983 *Specification for manual control devices, indicators and additional fittings*.

<sup>86</sup> Typical dimensions are 1100x1400mm (8 person), 1600x1400mm (13 person), 1950x1400mm (16 person).

<sup>87</sup> DETAIL: Approaching the Lift

There must be a clear turning circle of at least 1700mm on bends and corners for wheelchair users.

1435 Seating must be provided close to lift entrances<sup>88</sup> for waiting passengers who cannot stand for long periods. Lifts on platforms must have a sheltered waiting area, with seating, nearby.

### *Type and sizes of lift*

1440 The size of the lift<sup>89</sup> will depend on the level of demand and the physical layout of the station. Through-lifts must be fitted wherever the geography of the station allows. These have a door at either end of the lift. This is much easier for wheelchair users who do not have to turn round in the lift or back out of it – a manoeuvre which can be difficult and time consuming.

1445 It is recommended that when lifts are constructed, operators consider using glass doors. This is so that passengers using the lift can be seen and passengers waiting for the lift can see if anyone is using it. It may be that in appropriate locations, the walls of the lift and the lift shaft can also be constructed using glass. However, as large areas of plain glass are confusing for visually impaired users, these should be broken up with markings – see Section B4.1.5 for recommended solutions.

1450 Operators who are proposing smaller dimensions for lifts than this code specifies, must apply to the Regulator for a dispensation (see A4.7.1).

### *Lift Operation*

Lift doors must be in a colour that contrasts with the surrounding wall. Doors must open automatically and have a sensor to prevent them closing on

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<sup>88</sup> Lifts must have a clear landing of at least 1500mm x 1500mm in front of the entrance.

<sup>89</sup> Where space allows, the minimum internal dimensions of a lift must be 1950mm (wide), 1400mm (deep) and 2300mm (high). However it is recommended that the depth is 1500mm so that people in larger wheelchairs or with extended footrests can get into the lift. The lift door(s) must open to a clear width of 900mm and 2100mm in height.

Where space for a lift is confined by physical features such as an existing lift shaft, then a through-lift must be fitted. Through lifts also provide a particularly useful means of access to footbridges and narrow platforms. In each of these circumstances the minimum internal dimensions of the through-lift must be 1100mm (wide), 1400mm (deep) and 2300mm (high). However it is recommended that the depth is 1500mm so that people in larger wheelchairs or with extended footrests can get into the lift.

A handrail must be provided on each of the lift's walls 900mm to 1000mm above the floor. The handrails must not be less than 30mm in diameter and should have a clear space of at least 35mm between rail and wall.

1455 passengers or baggage.<sup>90</sup> Doors must remain open for at least 20 seconds. There must be a button to reopen them for those who need longer to get in or out of the lift. Outside the lift, a visible and audible acknowledgement must be given when the lift has been called (recommended to be 5 seconds), when it has arrived and when doors are opening or closing.

1460 Lift controls<sup>91</sup>, both outside and inside the lift, must be operable by people in wheelchairs and must have tactile markings. Where there are announcements inside and outside the lift, they must tell people when the doors are opening or closing and must say which floor has been reached and be complemented with visual displays.<sup>92</sup>

1465 Flooring must be slip-resistant. Lifts must have automatic floor-levelling devices to avoid gaps that can be hard to negotiate.<sup>93</sup> Spotlights must not be used in lifts as they can make it difficult for visually impaired people.

The lift design must take into account the need to allow disabled passengers to leave as quickly as possible in an emergency.<sup>94</sup>

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<sup>90</sup> It is a requirement of BS 5655 that automatic doors have reopening activators, operated by invisible beam or contact with passengers.

<sup>91</sup> These should be large; 19-20mm in size and at least 10mm apart and all must be within reach of wheelchair users – between 850mm and 1050mm (preferably 1000mm) from the floor. They must not be placed in corners but be at least 400mm from the front and back walls of the car. They should protrude slightly from the wall and be of a design which allows them to be worked by, for example, an elbow, fist or palm of the hand. The force needed to press the buttons should be between 2 and 5N. There should be no surfaces below the buttons which protrude from the wall by more than 100mm because this might prevent some people using the controls. They must contrast in colour with their surroundings. Tactile markings and Braille (1mm high) must be used to identify each button.

<sup>92</sup> In the lift, floor numbers, where appropriate, must be announced and shown in visual form. It should be possible to see visual indicators whichever way you are facing in the lift. A mirrored panel can be used to achieve this. A clear contrast between the lift walls and floor will assist visually impaired people. Walls of the lift must not be mirrored, as this can be very confusing for visually impaired people. Audible warnings must be given when doors are about to be opened or closed.

<sup>93</sup> Stopping accuracy must be within 10mm, and gaps between the floor and lift must be no wider than 20mm.

<sup>94</sup> Emergency controls must be no lower than 900mm from the floor. An additional emergency call button should be provided for passengers who fall in the lift. The emergency intercom system must have an induction loop. No part of the emergency communication system must be more than 1200mm from the floor.

### **B5.2.3 Ramps**

- 1470 Changes in level up to 500mm must, wherever possible, be by ramp for all passengers. For changes in level above 500mm, where it is inappropriate for a lift to be installed, a dual arrangement of stairs and ramps must be provided, subject to physical constraints.<sup>95</sup> Where this is done the ramp and stairs must be near to each other. The ramp must not appear to be a secondary, inferior entrance.
- 1475

The direction of slope of a ramp must be marked with a triangle on the ramp, pointing towards the top of the incline. The tactile corduroy warning surface detailed in section B5.2.4 must not be used with ramps.

### **B5.2.4 Steps and stairs**

- 1480 [V] So that people can pick out stairways<sup>96</sup>, the floor at the top and bottom of each flight of steps must be a different colour to the surrounding floor.

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<sup>95</sup> DETAIL: Ramp gradients

Ramps must slope at a consistent angle at a gradient of not more than 1:20. Where a ramp of 1:20 is not considered possible, a dispensation from the code must be sought. An absolute maximum slope of 1:12 may be allowed in exceptional circumstances. However ramps as steep as this are very difficult for some people who propel their wheelchair themselves and for some who push the chair from behind. For this reason, the Regulator is unlikely to approve ramps of this type at new stations or where facilities are being renewed at existing stations. In no cases will a ramp of steeper than 1:12 be approved unless there are other ramps or lifts available which meet the requirements of this code. Crossfall on ramps is necessary to provide good drainage and should be between 1 and 2% (max 2.5%). The length of the ramp must not exceed 6 metres between horizontal landings. If, in existing stations, a ramp steeper than 1:12 is unavoidable, it must not be longer than 3m. Landing areas should be not less than 2000mm x 2000mm, although on narrower sections this can be reduced to 1350mm x 1350mm. There must also be a clear landing space of a minimum 1200mm x the full width at the top and bottom of the ramp.

Ramps should have a minimum width of 2000mm between handrails. Over short lengths this can be reduced to 1350mm provided that there is a minimum of 2000mm between handrails at the top and bottom and on any intermediate horizontal landings. On longer ramps, separate 'up' and 'down' streams may be provided, with a minimum clear width of 1000mm between the side and central handrails.

The sides of ramps must be protected by raised kerbs of at least 100mm high, detectable to long cane users. All ramps must have handrails on both sides, with a central handrail on wider ramps. The surface material should be firm and non-slip; gravel or loose chippings must be avoided.

See GM/RT5161 clause 6.7.4, which states that ramps shall comply with the requirements of GC/RT 5110 *Design Requirements for Structures*.

<sup>96</sup> ILLUSTRATION:[redrawn diagram from p21 of old code]

1485 [V] When new stairways are installed or a stairway is being refurbished, a textured warning surface must be included at the top and bottom of each flight of steps. The DETR have specifications for a corduroy hazard warning surface, which consists of rounded bars which run across the direction of travel. This surface conveys the message 'hazard, proceed with caution'. The surface must be in a contrasting colour to the surrounding area. The surface must be large enough to give adequate warning, and be placed so that there is no danger of missing it.<sup>97</sup> Flights of steps must be well lit, without glare.

1490 There must be unobstructed access to and from stairways. Stairs with open sides must have balustrades or other fittings to eliminate any danger of falling off. It is recommended that the underside of stairways are enclosed or protected.

1495 There are detailed recommendations for the shape and size of steps.<sup>98</sup>

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<sup>97</sup> These must be at a maximum distance of 400mm from the nosing at the top, and 400mm from the bottom step. The surface must extend 400mm beyond each side of the stairway and be 800mm long. More details in *Guidance on the use of tactile paving surfaces*, DETR, 1999.

<sup>98</sup> DETAIL: Step specifications

There must be a minimum of three steps in each flight; any fewer have been shown by research to be less safe. Risers must be of a consistent height between 130mm and 150mm high. Treads must be between 280mm and 350mm, with a preferred depth of 300mm and non-slip. The maximum steps per flight must be 16. For single flights of steps, an overall rise of 300mm is allowed where physical constraints apply. Nosings must be splayed or rounded to a 6mm radius without overhang, and must be colour-contrasted from the rest of the step, for the full width of the step. Highly reflective surfaces such as stainless steel or brass must not be used because reflections can cause disorientation. Nosings must be at least 55mm deep on the tread and the riser. As a matter of general practice, curved flights of stairs should be avoided.

The maximum rise of a flight of steps between landings must be 1200mm with all steps uniform. Resting areas must be of a minimum size of 1200mm x 1200mm (1800mm length preferred). The minimum width of stairs between handrails must be 1200mm.

More information on stairways can be found in *HMRI's Railway Safety Principles and Guidance (for Stations)* and in *Buildings and internal environments*, Joint Mobility Unit Access Partnership, 1999.

1495 **B5.2.5 Handrails**

Continuous handrails<sup>99</sup> must be provided on both sides of ramps, stairs and landings.

1500 An additional central handrail must be provided on wide ramps and stairways.<sup>100</sup> It is recommended that double rails are used to avoid clashes between users on different sides.

**B5.2.6 Platform lifts and wheelchair stairlifts**

[W] Where lifts or ramps cannot be provided, a platform lift or wheelchair stairlift may provide an alternative solution.

1505 A platform lift is a platform capable of carrying a wheelchair up and down a short distance, but is not part of the stairway. Regulations restrict the distance they can travel <sup>101</sup>, so they can only be used for relatively short changes in level.

A wheelchair stairlift is a platform that is mounted on rails which follow the line of a staircase. Stairlifts can be installed on curved stairways and on those with

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<sup>99</sup> DETAIL: Handrail Details

Handrails must be set at a height of between 850mm and 900mm above the surface of the ramp or the nose of steps, with a second, parallel rail at between 500mm and 550mm for use by children and shorter people. The handrails must be round in section, with a diameter of 45-50mm and clearance of 50mm (60mm preferred) between handrail and wall. There must be a minimum of 600mm clear space above the handrail. They must also be colour-contrasted and non-slip to assist visibility and grip. Stainless steel or shiny metal handrails must be avoided because the reflections they cause can mislead visually impaired people. Curved sections on handrails can be difficult to grip. For this reason, the internal radius must be no more than 50mm.

The ends of handrails must extend at least 300mm horizontally beyond the top and bottom of ramps and steps, with smooth shaped ends, and turned into the wall or curved downward to just above floor level or have a minimum rounded down-turn of 100mm. A raised stud can be fitted on handrails above the first and last step of a flight to alert visually impaired people.

<sup>100</sup> DETAIL: An additional central handrail must be provided where ramps and stairways are wider than 2000mm.

<sup>101</sup> Guidance about the design of platform lifts is in BS 6440: 1983 *Powered lifting platforms for use by disabled people*. This restricts the maximum lifting distance to 1980mm if there is only one barrier rail for security. However this can be increased to 4000mm by ISO 4000, although the lift will then have to be enclosed for safety and meet certain other requirements.

1510 intermediate landings as well as on straight flights.<sup>102</sup> When not in use they fold up out of the way.

Both types must have enough space at the top and bottom to allow passengers to get on and off the lift easily.<sup>103</sup>

1515 Guard rails must lock into place automatically. Platform lifts and stairlifts must have controls which enable them to be used by someone in a wheelchair without help. The controls must not require users to maintain a constant pressure on them. They must not be locked.

### **B5.2.7 Escalators**

Escalators are useful additions to stairs and lifts, but they cannot be used by wheelchair users and some people lack the confidence to use them.

1520 Where escalators are provided, stairs must be located nearby for those who have difficulty using escalators.

The approaches to the top and bottom of escalators must be indicated by a change of floor colour and new installations must be marked by a tactile warning surface (see section B5.2.4).

1525 Step edges must be clearly defined in a contrasting colour, such as a yellow line.

There must be enough space at the top and bottom to give passengers enough space to get on and off safely. 10 metres or more is recommended where reasonably practicable.

1530 The direction of travel must be clearly indicated at the top and bottom of each flight.

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<sup>102</sup> Standards for Wheelchair Stairlifts are in BS 5776: 1996 *Specification for powered stairlifts*. Also see BS6440: 1999 *Power Lifting platforms for disabled persons* (code of practice). Stairlifts should not be used if they would reduce the width of the stairway to less than 1200mm.

<sup>103</sup> A minimum clear access of 1200mm is recommended.

Lighting must be provided near to floor level. There must be a noticeable change in lighting at the bottom and top of the escalator.<sup>104</sup> The sides of the escalator must be in a non-reflective material.

1535 Moving handrails must be rounded in section and be in a colour that contrasts with the background.

Emergency stop buttons must be clearly marked. It must be possible for people with limited hand dexterity to use them.<sup>105</sup>

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<sup>104</sup> GM/RT1201 'Escalators and Passenger Conveyors on Railway Stations' (September 1996) clause 6.7 says that illumination shall be to the minimum standards set out in GM/TT 0146 (Lighting of Railway Premises, Oct 1993), where these are higher than the requirements of BS EN 115 (1995).

<sup>105</sup> DETAIL: They must not require much force, and it must be possible to use them with the palm of the hand.

### B5.3 Platforms<sup>106</sup>

1540 When a substantial part of a platform is rebuilt or resurfaced<sup>107</sup>, a tactile strip in a contrasting colour must be included to identify platform edges.<sup>108</sup> Where there is a risk of turbulence from passing trains, warning signs and marked safe areas for the use of passengers using wheelchairs must be provided.

1545 It is recommended that entrances to platforms from lifts, escalators, ramps or stairways are parallel with the platform edge, wherever possible, to minimise the chances of people falling onto the line.<sup>109</sup>

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<sup>106</sup> DETAIL: GC/RT5161 (Station Platform Design Requirements) December 1995, applicable from 6 April 1996 and to be updated during 2000. The latest edition of this must be consulted at all times. It gives details of recommended platform design, including dimensions and surfaces.

<sup>107</sup> Defined by Railtrack as works carried out within 2000mm of the platform edge and that are greater than 30 per cent of the length of the platform. Where this criteria applies the whole platform length must include a tactile strip. Station Regeneration Project, *Sponsor Guidance Notes, Section 5.1 Provision of Facilities for Mobility Impaired Passengers*. Railtrack May 1997.

<sup>108</sup> DETAIL: Platform Edges: The platform edge warning surface consists of offset rows of flat-topped domes 5mm ( $\pm$  0.5mm) high, spaced 66.5mm apart, centre to centre. It can be of any colour except red, but must provide a good contrast with the surrounding area. Note that this surface is different from that used at pedestrian crossing points on roads. The surface must be laid immediately behind the platform edge coping stone. This is usually between 600mm and 700mm from the platform edge, but is sometimes as little as 500mm from it. It must never be less than this because it may not allow enough time for people to stop after detecting the surface. The surface must be 400mm wide and extend for the length of the platform.

The edge of the platform must also be marked with a white line (100mm wide) to help partially sighted people.

An additional yellow line 1000mm from the edge must be provided where trains pass at faster speeds than 165km /hr (100mph).

The paving used at platform edges must have a non-slip surface and must be level with the platform. They must slope away from the platform edge.

*Guidance on the Use of Tactile Paving Surfaces*, DETR, 1999 gives specifications of surfaces.

Upright posts, grab rails and pillars must be of a contrasting colour to the surrounding platform surface. Where this is not possible, they must be marked with a coloured band 140-160mm wide with its lower edge at 1500mm.

<sup>109</sup> DETAIL: Entrances to platforms from different levels.

If it is not possible for entrances to platforms from different levels to be parallel with the platform edge, barriers must be provided to prevent wheelchair users from accidentally falling over the platform edge.

Platform lighting must provide uniform illumination.<sup>110</sup> Where the rear of the platform is open there must be a raised kerb or 'kicking board' in addition to rails or fencing. Such a kerb may be used as a tapping rail by long cane users.<sup>111</sup>

1550 Platform repairs must not contrast significantly in texture or colour with the existing surface and there must be no significant cracks or breaks in the surface or changes in level.

It is recommended that enclosed waiting shelters, where practicable, have sufficient turning space for a wheelchair.<sup>112</sup>

## 1555 **B6 Boarding**

The standards from the RVAR are used in sections B6.2, B6.3, B7 and B8.1 of this code, which deal with train boarding and travel, and are for the most part limited to a summary (*indented, in italics*), of what disabled passengers have a right to expect where passenger train operators are replacing or refurbishing the passenger areas of rail vehicles brought into use, or belonging to a class of vehicle brought into use, before 1 January 1999. Section A4.7.2 must be consulted to see how this code applies these standards and for what to do when an operator cannot meet them. Passenger train operators must refer to the RVAR for full details of each standard.

1565 Passenger vehicles brought into use, or belonging to a class of vehicle brought into use, after 31 December 1998 are covered by the RVAR. Operators who cannot meet the standards in the RVAR for these types of vehicles must consult with DETR.

1570 Aspects of train boarding not covered by the standards set out in the RVAR (such as the stepping distance between the platform and the train) are covered in more detail.

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<sup>110</sup> DETAIL: Light levels

Platform lighting must be even, and comply with Railway Group Standard GM/TT0146, *Lighting of Railway Premises*. The RNIB makes recommendations - see *Building Sight*, 1995.

<sup>111</sup> DETAIL: The bottom edge of the board must be not more than 200mm above ground level and must have a depth of 150mm.

<sup>112</sup> DETAIL: Glazing in shelters

Glazing in waiting shelters must allow passengers with impaired hearing to see trains coming, but must comply with requirements in B4.1.5.

## B6.1 Wheelchairs and Powered Scooters

1575 Many people with mobility impairments are dependent on their wheelchairs and powered scooters for getting around. Some are able to transfer from these into a seat and the wheelchair or scooter has to be stored for the journey. Others remain in their wheelchair during the journey the whole time, and most trains now have specified areas for this. However, not every wheelchair can be used in passenger vehicles and many (if not most) powered scooters are unsuitable. This is because of one or more of the following factors:

- 1580
- Size
  - Manoeuvrability
  - Stability
  - Weight

1585 In this code the understanding is that, when wheelchair access and facilities are described on trains, no wheelchair larger than that described in the RVAR<sup>113</sup> can be catered for, other than by special arrangement.

1590 Where lifts, doorways, train areas or other limitations apply certain types of equipment cannot be carried. The Regulator is aware of discussions which have been ongoing between DETR and the wheelchair and scooter supply industry to ensure that when products are placed on the market, purchasers are made aware that some of the larger and heavier items are not suitable for public transport. This applies particularly to the range of powered scooters which are designed to give people with mobility impairments local mobility (for shopping etc), but which are far too large for transport on even the most modern trains.

## 1595 B6.2 Stepping on board

[M] [V] The stepping distance between the platform and the train is important for everyone, but especially for people with impaired mobility or sight. Difficulties may arise because the stepping distance is affected by both platform and train

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<sup>113</sup> The "Reference Wheelchair" described in Regulation 2(1) of the RVAR is defined as an occupied wheelchair having certain overall dimensions. These are 1350mm high, 700mm wide and 1200mm length, with other details defined in the following diagram:

Diagram from the schedule on page 12 of the RVAR.

1600 specifications which in some cases were set many years ago.<sup>114</sup> Where stepping distances have not yet been reduced to recommended measurements, suitable warnings must be provided. While help will always be available for passengers who have arranged it in advance, it is recommended that staff are trained to be able to help people who ask for it on the spot.

1605 *Steps at the external doors of regulated trains must be colour contrasted, illuminated and slip resistant, with a vertical riser between each step.*<sup>115</sup>

1610 *Doors to regulated trains must contrast in colour with the exterior of the vehicle to each side of the door to show visually impaired passengers where they are. They must also have distinctive audible warning devices to tell passengers when doors can be opened, and when they are about to be closed.*<sup>116</sup> *Carriages with wheelchair spaces (see B6) must have a door on each side of the carriage which is suitably wide for wheelchair access, and marked with the appropriate*

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<sup>114</sup> DETAIL: Stepping Distances.

New stations must be designed to meet current Railway Group Standards (see notes below). Improvements must also be made to existing stations whenever significant works are undertaken, or when new trains begin to stop at the station concerned.

When work is undertaken on a platform, either to accommodate new trains or as part of rebuilding works, the following figures apply for straight and level track only; a standard height of 915mm from track level and a minimum offset of 730mm. Due allowance must be made for the effects of horizontal and vertical curvature, including super-elevation (cant).

Railtrack Guidance Note GE/GN 8501 (Guidance Note on Platform Stepping Distances, July 1998) explains the implementation of relevant Standards. See also GC/RT5161 (Station Platform Design Requirements, December 1995) and GC/RT 5204 (Structure Gauging and Clearances, November 1995).

The edge of the platform must be located so that the distance to the top edge of the step board or floor of trains using the platform is kept to the minimum necessary to maintain structural clearance. Stepping distances should be kept as small as possible but must not exceed the following nominal values without a derogation from the relevant Railway Group Standard:

- - horizontal 275mm
- - vertical 250mm
- - diagonal 350mm.

In reducing stepping distances, consideration must also be given to ensuring safe clearance for types of train which do not stop at the station concerned.

Where a new or reconstructed platform abuts an existing platform which has a substandard stepping distance, the discrepancy must be removed by bringing the existing platform into line with the required Standard as soon as possible.

<sup>115</sup> Full details of requirements for steps are given in RVAR Regulation 6.

<sup>116</sup> Full details of requirements for doors are given in RVAR Regulation 4.

*symbol. The passageway between the door and the wheelchair space must be substantially flat, and wide enough to allow access and turning.<sup>117</sup>*

1615 *Door controls must be identifiable by contrast and by touch and must light up when the doors can be opened; they must be at a specified height, and operable by light pressure.<sup>118</sup>*

1620 *A powered lift or powered or manually operated ramp must be fitted at any accessible doorway which a wheelchair-using passenger wishes to use unless the gap between the train and the platform is very small.<sup>119</sup> If a lift or powered ramp is not fitted to the carriage, the train operator must provide a separate ramp and assistance in using it.<sup>120</sup>*

### **B6.3 Information outside the train**

1625 *The RVAR require regulated trains to have displays of a specified size on the front of the leading carriage, or on the sides of the carriages, depending on the size and type of train. These displays must be used to show the destination or route while the train is in a station.<sup>121</sup>*

## **B7 Travelling**

### **B7.1 General design**

1630 *Several aspects of a train's internal design can make travel easier and safer for disabled passengers, whether using wheelchairs or not:*

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<sup>117</sup> Full details of the requirements for wheelchair access are given in RVAR Regulation 19.

<sup>118</sup> Full details of requirements for door controls are given in RVAR Regulation 5.

<sup>119</sup> **DETAIL:** Full details of requirements for boarding devices are given in RVAR Regulation 23. In summary: paragraph (4) describes the size, marking and safety measures required for lifts; paragraph (5) describes the controls and safety measures required for powered ramps and says that help must be provided by the operator if the ramp gradient is 9 degrees or more; paragraph (7) describes the size and markings required for ramps; paragraph (8) says that powered devices must also be operable manually and help must be available if powered operation fails; paragraph (9) says that it must not be possible to use a device unless the train has stopped.

<sup>120</sup> See RVAR Regulation 23 paragraph (6).

<sup>121</sup> RVAR Regulation 13 specifies the letter size and positioning for visual destination displays on the outside of a train.

- 1635 \* *Train floors must be non-slip and clearly marked to show doorways and lobbies.*<sup>122</sup>
- \* *Internal doorways which lead to designated wheelchair spaces, wheelchair accessible toilets (see B7.4) or wheelchair accessible sleeping accommodation (see B7.5) must be wide enough to allow wheelchair access.*<sup>123</sup>
- \* *Door handles must be operable with little pressure.*<sup>124</sup>
- \* *Colour contrasted non-slip handrails or handholds of specified sizes must be fitted on either side of external doors and to seats in gangways.*<sup>125</sup>
- 1640 \* *Transparent panels in carriages must be clearly marked or placed away from areas where they could be bumped into.*<sup>126</sup>

## **B7.2 Seating**

1645 *At least a tenth (but not more than eight altogether) of the seats in a carriage must be priority seats for the use of disabled passengers. These must be of specified dimensions <sup>127</sup>, and be clearly marked to show that disabled people have priority use of them.*<sup>128</sup>

1650 *There must be at least one wheelchair space in each class of accommodation on the train (more for longer trains).<sup>129</sup> These wheelchair spaces must be suitably sized, with a means of locking the wheelchair in place and of attracting attention in an emergency. There must be no obstructions in the space, nor must any folding or tip-up seat provided for other passengers obstruct the space.*<sup>130</sup>

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<sup>122</sup> See RVAR Regulation 7.

<sup>123</sup> Full details of requirements are given in RVAR Regulation 22.

<sup>124</sup> See RVAR Regulation 12.

<sup>125</sup> See RVAR Regulation 11.

<sup>126</sup> See RVAR Regulation 10.

<sup>127</sup> See RVAR Schedule (Diagrams B1,2,3,4).

<sup>128</sup> See RVAR Regulation 8.

<sup>129</sup> DETAIL: For passenger trains with 2-7 carriages, 2 spaces; 8-11 carriages, 3 spaces; 12 or more carriages, 4 spaces (RVAR Regulation 15).

<sup>130</sup> Full details of requirements for wheelchair spaces are given in RVAR Regulation 16.

1655 *If 10 per cent or more of the seats in a carriage have tables or trays, similar suitably positioned fittings must be provided at each wheelchair space. Help must be available to fit or remove these on request.<sup>131</sup>*

### **B7.3 Passenger information**

1660 *There must be audible announcements and visual displays inside each carriage for passenger information. Displays should be visible from most seats, including priority seats. They must be used to give the destination or route of the train while it is in the station, to announce the next stop, to give details of delays or diversions, and to make emergency announcements.<sup>132</sup>*

### **B7.4 Toilets**

1665 *All toilets on trains must have door controls which can be operated with little pressure, colour-contrasted fittings and controls, and controls identifiable by touch.<sup>133</sup>*

1670 *If a carriage has toilets, the nearest cubicle to a wheelchair space or wheelchair accessible sleeping accommodation (see B7.5) must be wheelchair accessible. The passageway to and from the accessible toilet must also be accessible, and there are requirements for the internal dimensions and layout of the cubicle itself. These include the provision of handrails and at least two emergency alarms, one close to the floor and one at a higher level.<sup>134</sup>*

### **B7.5 Other facilities**

1675 *Where sleeping accommodation is provided for other passengers, suitable sleeping accommodation must be provided for at least one wheelchair user, and for at least two wheelchair users if more than one carriage has sleeping accommodation.<sup>135</sup>*

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<sup>131</sup> See RVAR Regulation 18.

<sup>132</sup> Full details of information systems are given in RVAR Regulation 13.

<sup>133</sup> Full details of requirements for toilets are given in RVAR Regulation 14.

<sup>134</sup> Full details of wheelchair accessible toilets are given in RVAR Regulation 20.

<sup>135</sup> See RVAR Regulation 17.

*If a carriage has a telephone, it should be wheelchair accessible. Alternatively a mobile phone must be available on request.<sup>136</sup>*

1680 *Where catering facilities are not wheelchair accessible, a reasonably similar service must be provided to any disabled person in a wheelchair space or wheelchair accessible sleeping compartment.<sup>137</sup>*

## **B8 Arriving**

### **B8.1 Getting out**

1685 *[V] Where passenger-operated powered doors are used, the push-buttons must be illuminated<sup>138</sup> when available for use, and at the same time must emit a distinct sound<sup>139</sup> to help visually-impaired passengers to find the exit. Continuity in the use of such tones is most important if the system is to be understood.*

### **B.8.2 Substitute transport**

#### ***B8.2.1 Pre-planned***

1690 *Buses or other substitute transport arranged on a pre-planned basis<sup>140</sup> must be accessible to disabled people.*

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<sup>136</sup> See RVAR Regulation 21.

<sup>137</sup> See RVAR Regulation 24.

<sup>138</sup> See RVAR Regulation 5(1c).

<sup>139</sup> See RVAR Regulation 4(3).

<sup>140</sup> Pre-planned Substitute Transport: Where passenger train services are shown as being operated by buses in the National Rail Timetable and any supplements, passenger train operators must make sure that accessible substitute transport is provided.

Through the licence system and the Station Access Conditions, passenger train operators are required to submit details of services they will run where there are planned engineering works by Railtrack. It is a requirement by the Regulator that this information is provided at least twelve weeks before the engineering works take place. Passenger train operators must ensure that accessible substitute transport is provided during such engineering works.

Where passenger train services are affected by engineering works at short notice, passenger train operators must provide accessible buses where reasonably practicable. Where this cannot be achieved, operators must ensure that other suitable accessible transport is available to disabled passengers.

### ***B8.2.2 Emergency***

1695 If an emergency occurs on the network which leads to serious disruption to passenger train services, operators must seek to provide a suitable alternative means of transport for disabled people. Where accessible buses cannot be provided due to short notice, it is recommended that operators provide accessible taxis instead. Operators must ensure that this information is supplied to NRES, other information services and station staff on affected routes.

## **B8.3 Connecting transport**

### ***B.8.3.1 Getting to other transport services***

1700 Trains and stations are only part of the story. Most people need to use other means of transport to get to their departure station and to continue their journey after reaching their destination station. Some people will need to have details about what is involved in doing this and some may need to arrange for help with the transfer.

1705 It is recommended that station operators gather and update details about local services so that station staff can provide information about access to taxis, buses, trams, metro systems and any other form of transport available within practical reach of the station. This information may include:

- 1710 • walking distances, steps and any obstacles which may get in the way of someone using a wheelchair
- timetables
- toilet facilities
- refreshment facilities
- 1715 • safe waiting areas

1720 Passenger train operators and station operators must consult and work with others involved in the transport chain (local authorities, transport operators, disability and access groups) to ensure that their services integrate in a sensible and practical way and that information about interchanges is shared between the various transport and information services concerned.

## B9 Following up

### B9.1 Comments, feedback and complaints

1725 All train and station operators must have a well-advertised means of enabling passengers to make comments and suggestions. This must encourage people to provide feedback on any part of the service they have been impressed with as well as allowing them to draw attention to any shortcomings.

1730 All systems of feedback must make it easy for disabled people to communicate their observations and comments easily. They must be equipped to receive feedback by telephone, textphone, tape, Braille, e-mail as well as face to face via any information point.

The Rail Users' Consultative Committees (RUCCs) protect the interests of all passengers.<sup>141</sup> They seek passenger's views and represent them to the rail industry.

1735 They also monitor standards of performance and investigate complaints where these have not been satisfactorily resolved by the company concerned. The RUCCs take a special interest in the needs of disabled passengers. They are involved in the consultation on train operating companies' DPPPs and on other working parties.

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<sup>141</sup> DETAIL: Rail Users' Consultative Committees (RUCCs)

The RUCCs were set up under the Railways Act 1993 to protect the interests of users of Britain's rail network. There are eight RUCCs, representing regions of England, Scotland and Wales, set up by the Regulator. The London Regional Passengers' Committee does the same job for rail users in and around London. The Central Rail Users' Consultative Committee (CRUCC) co-ordinates the work of the RUCCs, and deals with issues affecting rail users nationally (see Appendix E).

The Transport Bill 1999 proposes that Sponsorship of the Committee/Council Network will transfer to the Strategic Rail Authority, in line with the intention of having all aspects of consumer protection under the same organisation. Their role will be broadened, encompassing responsibilities to co-operate with other bodies representing the interests of users of other public passenger transport services besides rail.

The rail services within their remit will no longer be confined to those provided by the British Railways Board, under a franchise agreement, or on behalf of the Franchising Director, as is currently the case.

They will also have a new duty, to keep under review matters affecting the interests of the public in relation to railway passenger services and station services.

The Rail Users Consultative Committees (RUCCs) and the Central RUCC, which co-ordinates the activities of the others, will be renamed respectively as Rail Passengers' Committees, and the Rail Passengers' Council.

## 1740 APPENDIX A

### UK railway services and the scope of this code

#### *Domestic services*

1745 Under the Railways Act 1993, all operators of railway assets (trains, networks, stations or light maintenance depots) must have a licence from either the Rail Regulator or the Secretary of State of the Environment, Transport and the Regions (DETR), unless they are exempt from the requirement to be licensed. Operators who breach the conditions of their licences risk enforcement action from the Regulator. The process for enforcement action is detailed in sections 55 and 56 of the Railways Act.

1750 The Regulator requires all passenger train operators and station operators (including Railtrack as operator of Major Stations) to comply with this code in line with the commitments in their DPPP.

Details of those who are exempt from the requirements of the passenger train or station licence, or who fall outside them, are given below.

#### 1755 *Exemptions*

Services which are, to a varying extent, exempt from the licence are:

**Heathrow Express** – trains are licensed by the Regulator. However stations at Heathrow are licence exempt. The main consequence of this is that the operator does not have to offer through tickets from Heathrow.

1760 **London Underground** – most of the system is licence exempt. But where underground trains run on the Railtrack network, and where they operate stations used by national passenger train operators, they are covered by licence and are regulated by the Regulator.

1765 **Charter trains** – these services include special trains such as football specials, tourist services and speciality journeys such as the Orient Express. In many

cases the licensed operator has no direct relationship with the passenger, who has booked a trip with a promoter. Promoters may or may not be licensed.

In addition to these, *The Railway (Class and Miscellaneous Exemptions) Order 1994 [SI 1994 No. 606]* exempted all companies and operations which were not part of British Rail at the time the Act came into force. These included obvious anomalies such as miniature railways on private land and fairground rides. Also exempted were:

**Narrow and broad gauge railways** (anything which runs on non-standard track) - these include historical railways, cliff railways and funicular systems.

1775 **Heritage railways** - some of these run on track which is not connected to the national network. Some, however, do link in, and some share stations. Where shared stations are run by a licensed operator, the operator is bound by the code. In some cases, part of the station is run by the heritage railway, and that part of the station is exempt.

1780 **Light railways** – at the time of the Act, these were the Docklands Light Railway (including the Beckton extension), Glasgow Underground, Manchester Metro Link and the Newcastle Metro. New systems will be licensed by the Regulator unless the operators apply for and are granted an exemption.

### ***Outside the scope of the Regulator's powers***

1785 **Tramways**

Tramways fall outside the scope of the Regulator's powers as they are not defined as railway services under the Railways Act 1993. Tramways are, however, covered by the RVAR. Tramways are defined to include a system which has track wholly or mainly along a street or other public place. In addition to these, some services have been designated as tramways by the legislation which brought them into existence, even when they have not met this condition.

### **Northern Ireland**

The 1993 Railways Act does not apply to railways in Northern Ireland. Stations and trains are run by NI Railways, and some services are shared with the Irish

1795 Republic. The Rail Vehicle Accessibility Regulations do not apply either, although the Disability Discrimination Act gives the Northern Ireland Department of the Environment powers to make rail accessibility regulations.

### **International services**

1800 These are regulated by the International Rail Regulator (IRR) – set up to implement a Directive from the European Commission (Council Directive 95/18/EC as the Licensing of Railway Undertakings). The IRR's function is defined in The Railways Regulations 1998 [S1 1998 1340], and by Railways (Amendment) Regulations, 1998, [SI 1998 1519].

1805 At present all international passenger train services operating through the channel tunnel are covered by licences from the IRR, apart from Eurotunnel's own shuttle services for cars which fall outside the scope of the Directive. The Directive lays down the areas to be covered by the international licence. This does not include disability issues, and so the international licence does not contain any conditions equivalent to the Provision of Services for Disabled  
1810 People condition included in the domestic licences.

Stations in Great Britain operated by Eurostar (Waterloo International and Ashford International) are domestically licensed by the Regulator.



## APPENDIX B

### Rail authorities, standards and legislation

1815 ***Rail authorities***

Under the provisions of the Railways Act 1993, three separate bodies enforce all the different rules about what passenger train operators and station operators must do.

1820 **The Rail Regulator** (and the Office of the Rail Regulator, ORR) grants licences to operate trains (including passenger trains), networks, stations and light maintenance depots, and regulates access to railway facilities. The Regulator is also responsible for protecting the consumer interest through the licence conditions. This includes protecting the interests of disabled people using railway services.

1825 **The Franchising Director** awards franchises for passenger train services, and has a duty to promote the improvement of facilities for disabled passengers, taking into account the Regulator's code.

1830 **The Secretary of State** (and Department of the Environment, Transport and the Regions, DETR) appoints the Rail Regulator and the Franchising Director, gives instructions and guidance and sets objectives for the Franchising Director. The Secretary of State has the power to grant licences and is responsible for overall policy relating to the railways.

All three are involved in regulating closures of railway facilities.

1835 The government introduced a Transport Bill to the House of Commons on 1 December 1999. It envisages the creation of a new Strategic Rail Authority (SRA). When the SRA comes into being, it will take over the consumer protection (including disabled accessibility) functions of the Rail Regulator, as well as all the duties of the Franchising Director. The Regulator will need approval from the SRA if he wishes to include conditions in licences or licence exemptions that relate to consumer protection. The Transport Bill is expected to

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receive Royal Assent before the end of 2000. In the meantime, responsibility for this code rests with the Rail Regulator.

Other bodies involved in rail regulation are:

1845 **Health and Safety Executive (HSE)** is the executive arm of the Health and Safety Commission. It carries out duties and tasks on behalf of the Commission and makes arrangements for enforcement of the relevant health and safety legislation under the 1974 Act.

1850 **Her Majesty's Rail Inspectorate (HMRI)** is an integral part of HSE and is the safety regulatory body for the railways. The work undertaken by it is varied but includes; routine and preventative inspection of premises and activities on the railway; investigations of accidents, dangerous occurrences, incidents and complaints; enforcement of the 1974 Act through the issuing of notices and prosecution; setting appropriate safety standards and making contributions to the development of safety-critical rules, procedures and standards by others,  
1855 including participation in the consultation process for the preparation of new or revised Railway Group Standards.

### ***British and international Standards***

1860 In the UK the British Standards Institution (BSI) is responsible for the development of national standards and for representation on international standardisation organisations. There are over 17,000 British Standards, covering such things as the design, performance, construction and safety of products.

1865 Standards are drawn up by committees made up of representatives who have a particular interest in the subject, including manufacturers, users, research organisations, government departments and consumers. BSI staff act as secretaries to these committees and co-ordinate the work and project manage the production of standards. Before any standard is published, it is made available for public comment.

1870 By law, some products have to comply with a British Standard or a European Directive before they can be offered for sale in the UK or EU. All European standards are automatically adopted as British Standards. Many standards have been developed in co-operation with industry bodies and trade associations to

1875 allow their members to compete on equal terms. BSI co-ordinates the views of British industry at an international level as a member of the International Organisation for Standardisation and the International Electrotechnical Committee and within Europe as a member of CEN and CENELEC.

### ***Building Regulations***

1880 Building regulations are made for specific purposes - health and safety, energy conservation and the welfare and convenience of disabled people. Building regulations are mandatory and are enforced through the planning system. Part M of the Building Regulations is an *approved document* which provides practical guidance for providing access and facilities for disabled people for some of the more common building situations. Because there may be alternative ways of complying with the regulations, there is no obligation to adopt the precise solutions described in the approved document. However the requirements of

1885 the Building Regulations must always be met.

### ***Railway Group Standards***

1890 These are defined as rules, regulations, instructions and procedures which are produced as mandatory operational and engineering standards for ensuring safety on the network as administered by the Railtrack Safety and Standards Directorate. All licensed operators are required to comply with the Railway Group Standards that are relevant to their licensed activities.

### ***Safety legislation***

1895 *The Railways and other Transport Systems (Approval of Works, Plant and Equipment) Regulations 1994. These cover "new works" which are subject to approval by the HSE.*



## APPENDIX C

### Publications referred to in the code

<i>Title, publisher, price</i>	<i>Available from</i>
The Building Regulations 1991, Approved document M, Access and facilities for disabled people, DETR 1999 edition £7.95.	<b>Stationery Office bookshops</b> PO Box 29 Norwich NR3 1GN 0870 600 5522 www.tso.gov.uk
Building Sight, RNIB 1995, £25.	<b>RNIB</b> 224 Great Portland Street London W1N 6AA Tel 020 7387 7109 www.rnib.org.uk
Buildings and internal environments, Joint Mobility Unit, 1999, £10.	<b>Joint Mobility Unit</b> Access partnership 224 Great Portland Street London W1N 6AA Tel 020 7387 7109 www.jmuaccess.org.uk
Code of Practice: Rights of Access – Goods, Facilities, Services and Premises, DfEE 1999, £12.95.	<b>Stationery Office bookshops</b> PO Box 29 Norwich NR3 1GN 0870 600 5522 www.tso.gov.uk
Good loo design guide. Advice on WC provision for disabled people in public buildings, Centre for Accessible Environments, 1988, £10.	<b>Centre for Accessible Environments</b> Nutmeg House 60 Gainsford Street London SE1 2NY Tel/textphone 020 7357 8182 Fax 020 7357 8183 e-mail cae@globalnet.co.uk website www.cae.org.uk
Guidance on Matters to be Taken into Account in Determining Questions Relating to the Definition of Disability, DfEE 1996, £7.50.	<b>Stationery Office bookshops</b> PO Box 29 Norwich NR3 1GN 0870 600 5522 www.tso.gov.uk
Informability Manual 1998, £25  Central Office of Information Informability Unit.	<b>Stationery Office bookshops</b> PO Box 29 Norwich NR3 1GN 0870 600 5522 www.tso.gov.uk
Railtrack Disability Strategy, 2000.	<b>Public version not available</b>
Rail Travel for Disabled Passengers, ATOC, free.	from stations
Merseyside Code of Practice on Access and Mobility, Sefton Metropolitan Borough Council, 1999	<b>Merseytravel</b> 24 Hatton Garden Liverpool L3 2AN 0151 227 5181



## APPENDIX D

### Organisations which can give advice on technical aspects of this code

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<i>For advice on:</i>	<i>Organisation to contact</i>
The CAE has an advisory and information service on design and technical matters relating to buildings and their surroundings, including application of the building regulations. They offer consultancy services on access matters, and can audit premises.	<b>Centre for Accessible Environments</b> Nutmeg House 60 Gainsford Street London SE1 2NY Tel/textphone 020 7357 8182 Fax 020 7357 8183 e-mail cae@globalnet.co.uk www.cae.org.uk
Providing information on tape.	<b>Confederation of tape information services (COTIS)</b> 67 High Street Taporley Cheshire CW6 ODP tel 01829 733351 fax 01829 732408 www.cotis.org.uk
Free material on the Disability Discrimination Act.	<b>Disability Discrimination Act Information Line:</b> Tel 0345 622 633 Textphone 0345 622 644. e-mail ddahelp@stra.sitel.co.uk website www.disability.gov.uk
This code of practice, including proposals to depart from its recommendations.	<b>Disabled Persons Transport Advisory Committee (DPTAC)</b> c/o Department for the Environment, Transport and the Regions Great Minster House 76 Marsham Street London SW1P 4DR tel 020 7890 4140 fax 020 7890 6102 email dptac@detr.gov.uk
Disability Awareness Training (see Section B1) The Employers Forum on disability (an employers' organisation which focuses on disability) have a list of organisations who carry out disability awareness training.	<b>Employers Forum on Disability</b> Nutmeg House 60 Gainsford Street London SE1 2NY Telephone/textphone 020 7403 3030 Fax 020 7403 0404 e-mail efd@employers-forum.co.uk website www.employers-forum.co.uk

Can provide interpreters for people who are deafblind.	<p><b>The Interpreter Unit Sense</b>          (The National Deafblind and Rubella Association)          11-13 Clifton Terrace          Finsbury Park          London N4 3SR          tel 020 7272 7774          textphone 020 7272 9648          fax 020 7272 6012          e-mail enquiries@sense.org.uk          www.sense.org.uk</p>
The RNIB and the Guide Dogs for the Blind Association have set up a Joint Mobility Unit which advises on all mobility issues (and cover all types of impairment). They have consultancy training and advisory services, carry out research and publish information.	<p><b>Joint Mobility Unit</b>          Access partnership          224 Great Portland Street          London W1N 6AA          Tel 020 7387 7109          www.jmuaccess.org.uk          e-mail jmu@rnib.org.uk</p>
All mobility matters. In particular Government Policy, the RVAR, Orange and blue badges, recommended tactile surfaces for visually impaired people.	<p><b>Mobility Unit</b>          Department of the Environment, Transport and the Regions          Great Minster House          76 Marsham Street          London SW1P 4DR          tel 020 70207 890 4140          fax 020 7890 6102          email mu@detr.gov.uk          www.mobility-unit.gov.uk</p>
All matters relating to hearing impairment, textphones, deaf-awareness training and communication skills. They can provide interpreters for deaf people.	<p><b>Royal National Institute for Deaf People</b>          19-23 Featherstone Street          London EC1Y 8SL          tel 020 7296 8000          fax 020 7296 8199          textphone 020 7296 8001          email helpline@rnid.org.uk          www.rnid.org.uk</p>
Provide information on all matters relating to visual impairment, including the design of buildings, products and information.	<p><b>Royal National Institute for the Blind</b>          224 Great Portland Street          London W1N 6AA          tel 020 7388 1266          email Jhowell@rnib.org.uk          www.rnib.org.uk</p>

## APPENDIX E

### Services for disabled rail travellers

<i>Service provided</i>	<i>Organisation to contact</i>
Consumer advice and assistance. Contact the CRUCC (see opposite) for the address of regional committees.	<b>Central Rail Users' Consultative Committee</b> Clements House 14-18 Gresham Street London EC2V 7NL Tel 020 7505 9090 Fax 020 7505 9004 e-mail CRUCC@gtnet.gov.uk
Holiday Care provide information about accessible holidays, including transport and hotels for disabled and elderly people and their carers.	<b>Holiday Care</b> Imperial Buildings Victoria Road Horley Surrey RH6 7PZ tel 01293 774535 textphone 01293 776943 fax 01293 784647 emailholiday.care@virgin.net <a href="http://freespace.virgin.net/hol.care">freespace.virgin.net/hol.care</a>
Operates the National Key Scheme (NKS) - see Section B4.4.3. The National Key Scheme provides a standard key for around 4000 accessible toilets up and down the country. RADAR will advise on mobility matters. RADAR can give general advice on the Disability Discrimination Act. Publish Door to Door – a guide to transport for disabled people, £8.	<b>Royal Association for Disability and Rehabilitation (RADAR)</b> 12 City Forum 250 City Road London EC1V 8AF tel 020 7250 3222 fax 020 7250 0212 textphone 020 7250 4119 email radar@radar.org.uk <a href="http://www.radar.org.uk">www.radar.org.uk</a>
The Association provides newspapers and magazines and a guide to tape services for visually impaired and disabled people.	<b>Talking Newspaper Association of the United Kingdom</b> The National Recording Centre Heathfield East Sussex TN21 8DB Tel 01435 866102 Fax 01435 865422 e-mail info@tnauk.org.uk website www.tnauk.org.uk
Travel information for disabled people. Tripscope will provide free and detailed information on how to travel between any two points in the country. They can answer questions about most mobility matters.	<b>Tripscope</b> Alexandra House Albany Road Brentford Middlesex TW8 ONE Telephone/Textphone 0345 585641 fax 020 8580 7022 email Tripscope@cableinet.co.uk <a href="http://www.justmobility.co.uk/tripscope">www.justmobility.co.uk/tripscope</a>