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Executive summary

What, why and who for?

This document is the Mobility Guidance for Shropshire (2008 Edition). It has been developed to provide an overview of the key considerations that need to be made to ensure that the transport and highway infrastructure, services and information provided by Shropshire County Council and its partners are fully accessible to all people.

The Local Transport Plan (LTP 2006/07 – 2010/11) states that **"people with disabilities can experience very severe and specific barriers to accessibility which go beyond the availability of local services or transport provision, and are often related to the design of infrastructure or the way in which services are delivered".** This document is therefore intended to provide scheme designers and engineers with a clearer understanding of different mobility, sensory and cognitive needs and to recognise the implications of their designs for different users.

This document fulfils a commitment of the LTP (2006/07 – 2010/11) to work towards **"enhanced accessibility and mobility for people with disabilities and mobility impairments".** The document is intended to compliment existing policies and practices, to work alongside Shropshire County Council's Disability Equality Scheme document (DES, 2006-2010) and assist transport practitioners in promoting equality for disabled people in service delivery and in meeting the legal requirements of the Disability Discrimination Act and the Disability Equality Duty.

Status

The built environment in Shropshire has developed over many centuries and the standards that the built environment has been designed to have varied over time. It is therefore important to note that there may be instances where the potential to upgrade the existing built environment to the standards described in this document may be limited. This guidance is not a prescriptive design manual but is instead a starting point for the consideration of a wide range of issues and is to be read in conjunction with current design standards.

This guidance works on the basis that many enhancements that can be made in relation to access to transport and highway infrastructure can provide some level of benefit for all people, not just those people with long term disabilities. Similarly, the document recognises that transport practitioners have a number of different factors to reconcile when designing or implementing a scheme (local context, maintenance, value for money, effectiveness etc.) Therefore, the document recommends the consideration of a whole impact approach and a process of scheme evaluation that ensures that the most appropriate scheme is designed and the end-user remains in focus.

Defining 'disability'

The DDA defines a person as having a disability if they have "a physical or mental impairment which has a substantial and long term adverse effect on his ability to carry out normal day-to-day activities". In terms of this document, the following headings for the definitions have been used: the definitions of different disabilities are closely related to the functionality of transport infrastructure and information:

- Sensory impairment (hearing, seeing and speech)
- Physical impairment (mobility, coordination, dexterity, reaching and stretching)
- Mental health
- Learning disabilities and difficulties
- Cognitive impairments
- Other conditions

It is important to recognise that many people may experience temporary physical mobility difficulties such a broken leg, pushing a buggy or escorting a young child for example.

Key themes

This guidance covers the key themes that need to be considered in order to better understand and provide for people with disabilities in the design of transport infrastructure, services and information. These are summarised as follows:

Consultation with stakeholders

Consultation with people who have specific experience of the mobility requirements of people with disabilities can provide a significant contribution to the scheme design and validation process. Although the amount of consultation that is undertaken is likely to vary depending up the scale or impact of a scheme, it is generally suggested that consultation should be carried out at the preliminary design stage of a scheme.

The Mobility Guidance also provides details on how to conduct consultation including venue considerations, the publication of suitable materials and how to communicate in an effective and respectful manner.

Improving accessibility to buses

The provision of an accessible bus system requires a number of elements. In the first instance it is important to recognise the walk distance to bus stop locations in relation to likely usage levels and the need for good quality routes. In addition, bus users should be able to cross

the road and access bus stops in safety and without obstruction. Guidance is therefore provided on the provision of accessible bus stop and interchange facilities, accessible vehicles, driver training and accessible and appropriate bus information.

Improving Accessibility to rail

Although the County Council has no direct control over rail services or facilities, close working currently exists to improve accessibility. This document therefore provides guidance to assist in the provision of accessible routes to stations and consistent information.

Improving access to taxis and community transport

A primary requirement in the location of taxi ranks is that they are used. However, this guidance outlines the need for taxi ranks to be provided at key destination sites with corresponding turning spaces for wheelchairs and effective footway widths.

Both in relation to taxis and community transport this document considers the accessibility of vehicles and staff training in understanding the needs of disabled users.

Improving accessibility by car for disabled users

In general, Shropshire County Council aims to manage traffic levels through a range of measures that will encourage a greater proportion of journeys to be undertaken by foot, bicycle or public transport. However, it is recognised that the car provides a vital function for many disabled drivers or passengers.

This document therefore provides guidance on the location of disabled parking facilities, the appropriate features of a disabled parking space and kerbside parking, restrictions and enforcement, the provision of dropped kerbs and considerations in relation to car park access and equipment.

Improving accessibility for pedestrians

The Mobility Guidance recognises that almost all people are a pedestrian at some point in their journey and that whilst the individual characteristics of pedestrians may vary widely, they are all likely to have similar requirements of the pedestrian environment. The guidance reiterates the Institution of Highways and Transportation's 'Five C's' in understanding the needs of pedestrians; the pedestrian environment should be connected, comfortable, convenient, convivial and conspicuous.

This section of the document gives particular attention to the use of effective footway widths, gradients and crossfall, avoiding obstructions to movement, the location, type and style of rest points, street lighting, footway surfacing, tactile information and the provision of pedestrian crossings. The guidance also outlines some considerations in relation to ongoing maintenance as this can have a significant impact upon the level of service given to disabled users.

Improving accessibility for cyclists

Disabled people can benefit from the extension and expansion of the cycle network in two ways, firstly through providing facilities that are suitable for disabled cyclists and secondly through the provision of good quality cycle facilities that are typically characterised by low gradient routes and dropped kerbs.

The details contained within this document are based upon the Institution of Highways and Transportation's principles for convenient, accessible, safe, comfortable and attractive cycle facilities. In general, this document provides information on the necessary considerations in relation to the provision of cycle facilities that are shared with pedestrians, crossing facilities, sightlines, signs and markings, street furniture and surface treatment.

Infrastructure improvements in historic areas

It is important to consider the need for the sensitive and sympathetic design of transport schemes that are located in environments with historic significance. In conjunction, it is important that a consultation process is used to mitigate any local sensitivity and to build consensus. This document covers the use of high quality materials and the potential for variation to standards and alternative approaches that may be taken.

Accessible information

The provision of simple, comprehensive and consistent information can increase the legibility of an environment and enhance levels of orientation, wayfinding and independence for disabled users. Information can be available in a variety of forms such as signs, timetables, maps, street names or distinctive features and landmarks. This section of the document considers the appropriate location, style and design of information for people with sensory, cognitive and physical difficulties.

Conclusion

Ultimately it is intended that the Mobility Guidance for Shropshire will provide a useful resource for transport practitioners that compliments existing work practices. It is intended that the document will enable transport scheme designers and engineers to better plan for the needs of people with mobility, cognitive and sensory impairments and therefore improve the overall accessibility to transport for all people.

A full list of references and key literature is contained in Chapter 15 of this document.

1 Introduction

> "People with disabilities can experience very severe and specific barriers to accessibility which go beyond the availability of local services or transport provision, and are often related to the design of infrastructure or the way in which services are delivered".
>
> **Local Transport Plan (LTP 2006/07 – 2010/11)**

Current Government policies emphasise the need to consider different social groups and to work towards increasing social inclusion. Providing access to transport can contribute towards this aim.

The need to improve accessibility for all is demonstrated in the Disability Discrimination Act (DDA, 1995) and its subsequent amendments (2005). The amendments include a new Disability Equality Duty (DED) that came into effect in December 2006. The Duty outlines those things that public authorities must give due regard to in order to promote positive attitudes towards disabled people and to promote their participation in public life. Improvements to accessibility are also an integral component of the Local Transport Plan (LTP 2006/07 – 2010/11). A key accessibility priority contained within the LTP is "**enhancing accessibility and mobility for people with disabilities and mobility impairments".**

Through careful consideration to the barriers which exist for users (and potential users) it is intended that more people will be able to better access the goods and services which Shropshire has to offer. This contributes towards Shropshire County Council's vision **"to improve significantly the quality of life for Shropshire people"** and the core value to **"promote diversity"**. The LTP has a commitment to seeking access improvements for disabled people and as such maintains a dedicated Mobility Improvement Fund to undertake minor works to benefit disabled people in response to local concerns.

Shropshire County Council recognises that the level of mobility experienced is not always related to a long-term physical disability. Many people can experience temporary mobility impairments ranging from using a stick for some journeys or using a pushchair for small children. It is important to note that many enhancements to access for disabled people can provide some benefits for **all** people.

Purpose of the document

This document aims to provide an overview of the key considerations that need to be made to ensure that transport infrastructure, services and information provided by Shropshire County Council and its partners are fully accessible to all people. This document is intended to provide designers with a clearer understanding of different mobility needs and to recognise the implications of their designs for different users.

The document is intended to work alongside Shropshire County Council's Disability Equality Scheme (DES, 2006-2010) document and compliment existing transport policies and practices. The DES is a statement of what the Council have already done to promote equality for disabled people in both employment practice and service delivery, and what the Council plans to do in the future to further develop this.

A key aim of the document is to assist transport practitioners in promoting equality for disabled people in service delivery and in meeting the requirements of the DDA and the DED. The document is intended to contribute towards promoting positive attitudes towards disabled people, encouraging participation by disabled people in public life and, taking steps to account for people's disabilities.

Status of the document

The built environment in Shropshire has developed over many centuries and as such, the standards that this diverse built environment has been designed to have varied over time. It should be remembered that the potential to upgrade the existing environment to the standards described in this document may be limited by cost or be beyond the scope of a proposed scheme. The existing built environment may also restrict the space available to make improvements.

The guidelines contained within this document should be considered in new developments and when highways are subject to re-design. The application of these guidelines will therefore be part of an iterative process of improvement and will not constitute immediate widespread amendments to existing transport infrastructure.

The Mobility Guidance for Shropshire document is intended to be a guidance document only and is not a prescriptive design manual. The document should be used as a starting point for the consideration of a wide range of issues and should be read in conjunction with current design standards.

The information contained within this document should be used where it is reasonably possible to do so, however local circumstances may require alternative decisions to be made and standards may need to be compromised.

This document does not deal with the immediate access to, and within, buildings and alternative guidance should be sought in this area.

Structure of the document

The key areas covered by this document are:

- The key mobility requirements of disabled people
- Guidance on consulting with users with disabilities
- Shropshire County Council's objectives and targets relating to mobility of people with disabilities

- Key guidelines to be considered when providing transport infrastructure, services and information for people with disabilities
- Useful sources of further information

Where possible, examples of local schemes have been included to further illustrate the possibilities in terms of design. Guidance on suggested dimensions is included within each relevant section with more comprehensive detail provided in the Appendix A. A summary checklist is provided in Appendix D.

How to use these guidelines

This document has been written to provide you with guidance in ensuring that transport infrastructure, information and services are accessible to people with mobility or sensory impairments.

These guidelines are to be used as a generic guidance that should be incorporated into local procedures. **The guidelines are not intended to be prescriptive and local judgement in terms of appropriateness should always be employed.**

In all instances a generic set of questions should be applied:

- Is the scheme feasible?
- Have the needs of people with disabilities been considered in the scheme design?
- Will the scheme work effectively for the people using it?
- What measures might mitigate any adverse impacts – are there alternative choices?

This guidance is largely based upon the Department for Transport's Guidance on 'Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure'. All sign details have been taken from the 'Traffic Signs Regulations and General Directions 2002' (HMSO). Users of this guidance should make themselves aware of specific and regulatory guidance, details of which are provided in Section 14 of this document.

2 Types of disability

Paramount in the design of infrastructure for disabled people is an understanding of the various types of disability that exist.

The Disability Discrimination Act (DDA, 1995/2005) defines a person as having a disability if they have **"a physical or mental impairment which has a substantial and long term adverse effect on his ability to carry out normal day-to-day activities"**, whereby:

- Substantial means neither trivial nor minor
- Long term means the effect of the impairment has lasted, or is likely to last, for at least 12 months (recurring impairments are covered by conditions depending upon the likelihood of a substantial adverse effect recurring)
- Normal day to day activity must affect one of the 'capacities' listed in the Act such as mobility, speech, seeing, hearing, memory or manual dexterity
- Normal day to day activities are likely to include things like eating, washing, walking or going shopping [1]

The DDA is explained further in Chapter 3.

The DDA definition of disability is a medical one, however disability can be defined in a number of different ways. In terms of this document, the definition of disabilities is closely related to the functionality of transport infrastructure and information. Therefore, the definitions used are based upon those contained within the Department for Transport's 'Inclusive Mobility' document (2002).

The different types of disability are listed on the following pages. The list of disabilities outlined is not exhaustive and is somewhat generalised. It is important to recognise that there is a range of other conditions that may not fit into the classifications shown.

The types of disability listed are not exclusive – many people have more than one impairment, this may be especially apparent with older people. The likelihood of experiencing a form of disability generally increases with age. Where there is an aging population, such as in Shropshire, the necessity to provide for people with disabilities is growing. For example, it is estimated that by 2010, 55% of people in the UK who are over 60 years old will have hearing difficulties.

It is also important to recognise temporary physical conditions. For example, an individual may experience mobility difficulties if they have a broken leg, are pushing buggies or escorting pedestrians with lower levels of mobility, such as small children. The prevalence of these users may be exacerbated at particular locations, for example outside schools.

1 DDA interpretation taken from www.direct.gov.uk, produced by the Central Office of Information

Sensory impairment	
Hearing Seeing Speech	Hearing impairments can range from people who are profoundly deaf to those with impaired hearing that may be mild deafness or tinnitus for example. Visual impairments can include blind and partially sighted people, people with no central vision or vision to the sides, or people with blurred or patchy vision. The severity of different visual impairments can vary immensely. A sight problem can mean that while wearing glasses, people "are still unable to recognise someone across the street or have difficulty reading newsprint"[2]. Many blind or partially sighted people can travel independently using their remaining vision, a white cane or a guide dog. Some examples of speech impairments are stammering or a lisp.

Physical impairment	
Mobility Co-ordination Dexterity Reaching & Stretching	Physical impairment can include people that have mobility or locomotion problems. For example, wheelchair users or people who can walk but only with difficulty, often using some form of aid (crutches, frame, stick etc.). This definition can also include individuals that may have problems with physical co-ordination, restricted movement in some limbs or difficulties with dexterity. Some further examples of conditions that may result in physical impairment are: spinal cord injury, arthritis, repetitive strain injury (RSI), back problems, cerebral palsy etc.

Mental health
Mental health problems can cover "a broad spectrum of conditions and experiences, which have an adverse affect on an individual's mental health, their emotional well-being and sense of self" [3] (continued on next page).

2 Employers' Forum on Disability [no date], "A practical guide to employment adjustments for people with sight problems" – Briefing Paper.

3 Employers' Forum on Disability [no date], "A practical guide to employment adjustments for people with mental health problems" – Briefing Paper.

Mental health

Some examples of conditions are depression, post-traumatic stress disorder, schizophrenia, emotional behaviour disorders, severe phobias etc. For some people there may be an adverse perception of risk from physical danger.

Learning disabilities and difficulties

An individual "having a reduced ability to understand new or complex information and to learn new skills"[4]. A learning disability may also affect an individual's ability to interpret what they hear and see.

'Learning disabilities and difficulties' is an umbrella term that covers a variety of conditions such as Down's syndrome or dyslexia for example.

Cognitive impairments

There are a number of conditions that may affect an individual's memory, perceptions, communication or problem solving skills.

Some examples are: autism, Asperger syndrome, dementia, Parkinson's disease, Alzheimer's etc.

Other conditions

There are a number of other physical or medical conditions that may have an adverse impact on an individual's ability to response to their environment.

Some examples are: epilepsy, cardiovascular conditions, asthma, multiple sclerosis (MS), dyslexia, cancer etc.

The Shropshire Context

Shropshire has a total population of **285,600.** The number of older people living in Shropshire and the numbers of people registered with different types of disability is shown in the following table. An indication of the percentage of Shropshire's total population represented by each group is also shown.

It is important to remember that many Shropshire residents with mobility or sensory impairments may not be registered under these headings, or indeed be registered as disabled, for example walking stick users and those with temporary impairments as outlined earlier in

4 Employers' Forum on Disability [no date], "A practical guide to employment adjustments for people with learning disabilities" – Briefing Paper.

this chapter. Such groups will also benefit from accessibility and mobility improvements. Similarly, Shropshire has an ageing population and disabilities become more common with age.

Percentage of people with disabilities in Shropshire

Aspect	Number	% Population
No of people over 65	54,110	18.95
No of people with disabled parking badge	13,250	4.64
No of disability living allowance claimants	11,830	4.14
No of wheelchair users	6,000	2.10
No of people registered as severely sight impaired / blind	761	0.27
No of people registered as sight impaired / partially sighted	774	0.27
No of people registered as hard of hearing	1921	0.67
No of people registered as deaf without speech	44	0.02
No of people registered as deaf with speech	218	0.08

Data sources:

- No. of people over 65: **National Statistics Mid Year Population Estimates 2004**
- No. of people with disabled parking badge: **Shropshire County Council Blue Badges in circulation as of May 2006**
- No. of disability living allowance claimants: **Department for Work & Pensions, November 2005 – Cases in payment**
- No. of wheelchair users: **Shropshire Wheelchair Service data based upon 12,000 for old geographical county of Shropshire, the figure includes Telford & Wrekin but Shropshire Wheelchair Service use a 50% split to represent Shropshire**
- No. of people registered as severely sight impaired / blind: **Shropshire County Council Social Services IT Support, June 2006**
- No. of people registered as hard of hearing: **Shropshire County Council Social Services IT Support, June 2006**
- No. of people registered as deaf without speech: **Shropshire County Council Social Services IT Support, June 2006**
- No. of people registered as deaf with speech: **Shropshire County Council Social Services IT Support, June 2006.**

3 Why consider disabilities?

This section aims to establish why it is important to consider the needs of people with disabilities in the transport infrastructure, services and information provided by Shropshire County Council.

Disability Discrimination Act 1995 / 2005

The Disability Discrimination Act 1995 (DDA) came into force in December 1996 and made it unlawful to treat disabled people less favourably than other people for a reason related to their disability. The legislation provides protection from discrimination for people with disabilities in relation to:

- Employment
- Access to goods, facilities and services
- Education
- Management, renting or buying of property or land

The DDA also allows the government to set minimum standards to help disabled people to use public transport.

Since 1996 there have been several further requirements that have been placed upon service providers (organisations and businesses):

- To make reasonable adjustments for disabled people (providing additional help or making changes to their service provision) – October 1999
- To make reasonable adjustments to the physical features of premises in order to overcome any physical barriers to access (for example: replacing steps with a ramp, providing more legible signs for the visually impaired, providing a means of avoidance or a reasonable alternative etc.) – October 2004

A new Disability Discrimination Act was passed by Parliament in April 2005 which provides amendments or extensions to those provisions outlined in the DDA 1995. For example, the new act makes it unlawful for operators of public transport vehicles to discriminate against disabled people. The Act also ensures that discrimination law covers all of the activities of the public sector.

It is only a count of law that can determine whether a person is covered by the DDA or not, and whether they are disadvantaged. Therefore, Shropshire County Council needs to anticipate, as far as possible, the needs of people with disabilities. Adjustments can be made in a number of ways such alterations to a physical feature, a change in policy or the provision of an auxiliary aid for example.

The Disability Equality Duty (DED)

The Disability Discrimination Act 1995 has been amended by the Disability Discrimination Act 2005 to place a duty on all public sector authorities to promote disability equality. The Disability Equality Duty (DED) outlines those things that public authorities must give due regard to in order to promote positive attitudes towards disabled people and to promote their participation in public life. This means including people with disabilities from the outset rather than concentrating on responding to individual requests from disabled people.

This general duty applies to all public authorities and works alongside additional specific duties that support the majority of public authorities in achieving the overall outcomes required. When carrying out functions, the basic requirement for a public authority is to give due regard to the following[5]:

- Promote equality of opportunity between disabled people and other people
- Eliminate discrimination that is unlawful under the Disability Discrimination Act
- Eliminate harassment of disabled people that is related to their disability
- Promote positive attitudes towards disabled people
- Encourage participation by disabled people in public life
- Take steps to meet disabled people's needs, even if this requires more favourable treatment.

'Due regard' means that authorities should give due weight to the need to promote disability equality in proportion to its relevance (Disability Rights Commission).

In general, providers of public functions cannot:

- Treat a disabled person less favourably for a reason related to their disability
- Make an adjustment that results in a person suffering an adverse detriment or finding it unreasonably difficult or impossible to benefit from the function.

The DED for the public sector came into effect in December 2006.

In addition, it is important to recognise that there may be some circumstances where the level of provision for people with disabilities may be limited, such as where a change would fundamentally alter the nature of a given service or, where an existing legal obligation may impact upon the level of action that can be taken.

5 Disability Rights Commission. Accessed from: www.drc-gb.org

There can be severe consequences for a failure to comply with the DDA such as disciplinary action, impacts upon partnership working, civil court action or the loss of business opportunities.

Further details of the requirements from public service providers are outlined in the following documents that have been published by the Disability Rights Commission (see references in Chapter 15):

- Code of Practice – Rights of Access: services to the public, public authority functions, private clubs and premises
- Doing The Duty - An overview of the disability equality duty for the public sector
- Planning, buildings, streets and disability equality: A guide to the Disability Equality Duty and Disability Discrimination Act 2005 for local authority departments responsible for planning, design and management of the built environment and streets.

The Disability Equality Scheme (DES, 2006-2010)

By law, Shropshire County Council is required to produce a Disability Equality Scheme and involve disabled people in producing it. The DES is both a statement of what the Council have already done to promote equality for disabled people in both employment practice and service delivery and an Action Plan that details what the Council plans to do in the future to further develop this.

A key aim of the document is to assist transport practitioners in promoting equality for disabled people in service delivery and in meeting the requirements of the DDA and the DED. The document is intended to contribute towards promoting positive attitudes towards disabled people, encouraging participation by disabled people in public life and, taking steps to account for people's disabilities.

The DES considers disability both in terms of the definition provided in the DDA (1995) but also in terms of the Social Model of Disability. This model is based upon recognising the 'barriers' in society that disable people and prevent them from fully participating in society for example, the built environment, people's attitudes and organisational policies and practices. The DES contributes to working towards removing the barriers that exist in Shropshire County Council's service delivery.

The DES demonstrates Shropshire County Council's commitment to promote equality. The DES will be reviewed annually and developed in line with Shropshire County Council's core values, user feedback, best practice and legislation. A full review of the DES will be carried out every three years.

Benefits for all

In providing for disabled people, it is important that the **'whole impact'** is considered. Therefore, a consensus must be reached in order to avoid any adverse impacts from provision for disabled people.

It should be remembered that 'disabled people' are not a homogenous group and that the transport environment can have a number of requirements placed upon it. For example, the IHT guidance for 'Providing for Journeys on Foot' highlights the importance of considering the "Design Pedestrian" in understanding the different needs of users and therefore a footway may have the following requirements:

- **Commuters** Wide footways for increased flows at peak times
- **Blind / partially sighted pedestrians** Uncluttered streets / tactile information
- **Wheelchairs / buggies** Ramps not steps and smooth surfaces
- **Tourists** Places to consult maps or take photographs

Ultimately it should be considered that transport infrastructure and information needs to be not only easy to reach, but also easy to use.

However, in providing for people with disabilities, it should be remembered that many enhancements to access for disabled people (such as to widths, gradients, surfaces etc.) can provide benefits for **all** people, for example:

- Benefits to the elderly who are not registered disabled
- Benefits to people with less severe or temporary impairments
- Benefits to people with young children or pushchairs
- Overall enhancements to pedestrian accessibility (crossing provision, signs, safety etc.)

The following diagram shows the range of factors that should be considered when establishing an acceptable level of provision for disabled people and balancing other network requirements in terms of transport infrastructure, services and information in providing an acceptable level of provision for all.

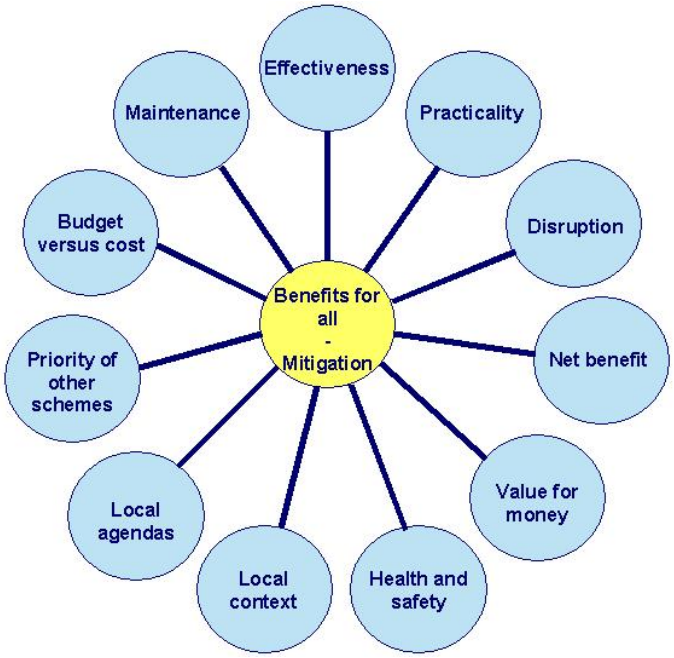


Figure 3.1 Mitigation and whole impact approach

The following paragraphs outline some further prompts for consideration with regard to provision for people with disabilities; the list is intended to be indicative and is by no means exhaustive.

Effectiveness	How effective will the scheme be in enhancing provision for disabled people? Will people use it?
Practicality	Is it practical to implement the scheme i.e. could enhancements be made elsewhere? Are other changes planned in the near future?
Maintenance	What are the maintenance implications of the scheme? How will any ongoing cost incurred be paid for? Are there other solutions?
Disruption	How will any disruption caused be dealt with? Will alternatives be provided if existing functions are rendered unusable during works?
Budget versus cost	It should be remembered that the budget may not always be available for the optimum provision; therefore a compromise may need to be reached.
Local context	There may need to be some flexibility and discussion regarding the treatment of schemes that are within aesthetically sensitive areas such as conservation areas.
Health and safety	The provision for people with disabilities should not cause any adverse impacts upon the level of health and safety of all people.
Value for money	Often budgets are allocated on an area wide basis. A balance needs to be made between benefit and cost, for example the implementation of ten small schemes versus the implementation of one large scheme.

Priority of other schemes	In connection to the '£ already spent', a consensus may need to be reached on the priority of schemes, for example funding may be allocated where there is an high level of accidents.
Local agendas	When considering the implementation of a scheme, it should be recognised that some things are not always possible due to existing local political agendas. Conversely, demand for a scheme may be skewed by the backing of a strong local agenda. It is therefore important to remain objective.
Net benefit	At all times consideration should be given to the balance between benefits and negative impacts. Will the scheme provide a benefit overall?

It should be noted that new developments are required to produce Design and Access Statements to demonstrate that an applicant for planning permission has considered how all people will be able to use a proposed development. In terms of access, this should relate to linkages to the road network and public transport and the ability to move through the proposed 'place'. Further information on Design and Access statements is contained in Chapter 14.

In conjunction with the 'whole impact' approach, it is suggested that the following systematic process is run through at regular intervals to ensure compliance with standards and to keep the needs of the end-user in focus. The process should provide a framework for ensuring that an appropriate scheme is designed and should also act as a guide to selecting appropriate stages for wider consultation (see Chapter 4).

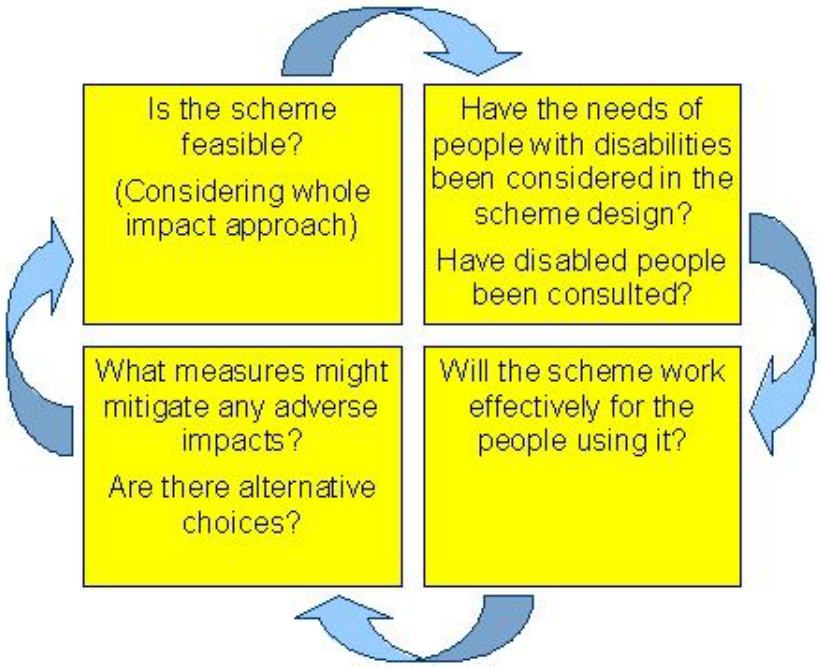


Figure 3.2 Systematic Assessment/Reassessment Process

4 Consultation with stakeholders

It is important that the needs of people with all disabilities are considered during the development of scheme designs. The consultation process is vital for all schemes to gauge the opinion of the public.

This section outlines some suggestions on how consultation may be incorporated into the development of a design and also provides some considerations in relation to the practicalities of conducting consultation. However, it is suggested that individual teams within Shropshire County Council are encouraged to develop a transparent and appropriate process for ensuring that representatives from disabled user groups are included in the review of scheme proposals.

When?

Consultation may take place at the key stages of the design process. The following list outlines the usual stages of a project and the level of consultation is likely to be dependent upon the scale and complexity of the scheme and its relevance to disabled users.

- Preparation of the design brief
- Preliminary design
- Detailed design
- Substantial completion

In general, initial consultation may be conducted at the preliminary design stage and possibly again at the substantial completion stage, depending upon the nature of the scheme. When dealing with larger schemes it is crucial that all necessary people are consulted, therefore it should be considered that consultation may need to take place at more than one of the project stages.

The decision on when it is appropriate to conduct consultation should be closely linked to the systematic assessment / reassessment process outlined in Chapter 3. This process is intended to run alongside the 'whole impact' approach and to keep the needs of the end-user in focus.

It should be noted that it is not always appropriate to consult upon all transport related schemes, for example routine sign installation or major maintenance on the highway would not normally be subject to consultation.

It should also be recognised that the consultation process can also be a useful way of letting people know that something has changed. Where possible, the potential for including notifications in user-friendly formats, such as talking newspapers, should be considered.

There is currently no consultation of this type with new developments. This is the responsibility of the relevant District Council as part of the planning application process.

Who?

Consultation with a range of stakeholders can be a valuable tool in identifying any potential issues and opportunities for improvement. Stakeholders may be from:

- Local user groups
- Local representatives affiliated to national groups (such as The Royal National Institute for the Blind for example)

User groups can provide a significant contribution to the design and validation process, especially where the needs of certain people are not directly within the experience of the designers. It is recommended that local mobility representatives are consulted at an appropriate stage of the design process to enable an awareness of their views throughout the scheme development.

A judgement will need to be made as to whether the magnitude or type of scheme requires a wider consultation exercise. Specific consultation should be undertaken with relevant disabled users on any scheme where there is a specific design for disabled people.

Where necessary, schemes should be forwarded to the relevant Access Officer at the Districts Councils. The relevant Local Access Group should also be consulted to ensure that the views of disabled users have been considered.

A standardised list should be in place to ensure that key stakeholders are consulted about a scheme. In is important that all contact details for consultation are updated on a regular basis to ensure that the right people are informed of potential schemes.

A list of possible points of contact for consultation is contained within Appendix 2.

Conducting consultation

In order to provide as wide an audience as possible with information it is important to consider the needs of disabled people in any consultation process where a consultation event is to be held. The provision of an accessible building will not only benefit disabled participants but will also allow parents to bring buggies for younger children, therefore not needing to arrange child minding.

Consideration should therefore be made to not only finding an accessible venue but also to any materials being exhibited. Specific guidance on meeting the needs of people with disabilities is contained within Section 8 of the Shropshire County Council **Communications Guidelines**: Corporate Standards for Communications.

In general consideration should be given to:

- The size and type of font used on leaflets and handouts
- The length of written paragraphs

- The use of colours to provide suitable contrast, consideration should also be given to the contrast between drawings and display backgrounds
- The height at which the information is displayed on boards – consideration should be given to the eye height of wheelchair users
- The positioning of boards to avoid shadows and conversely, glare from lighting, especially if materials are laminated
- There should be a clear passageway between any display boards to allow disabled consultees to pass easy
- Questionnaire format – instructions should be clear and concise and consideration should be given to providing a simple format for answers (such as tick boxes for example). The length of the questionnaire should also be kept to the minimum
- All written publications should contain a standard script on the back that contains contact information for the provision of the document in large print, Braille or on audio tape

Further guidance should be sought from 'Plain English & Clear Print' and 'Corporate Visual Identity' available on the Corporate Communications electronic Bulletin Board or the Design Unit of Shropshire County Council.

Participation Toolkit

Shropshire County Council has produced some guidance on how to deliver effective research, consultation and engagement through the active involvement of local people in decision making. The Participation Toolkit should be referred to prior to conducting any consultation.

Communication

There are several key points that need to be borne in mind when communicating or meeting with disabled colleagues and customers; some general notes are outlined for different impairment types as follows. Overall it is important to ask a disabled person if they need help before making the assumption that they do, and to treat them with respect.

It is also important to recognise that many disabilities may not be noticeable through physical appearance.

Physical impairments

- Consider that the person may need help doing things that you might not normally think about, opening doors for example
- The person may need a particular type of seat, depending upon their needs
- A seat should be offered if the person has been required to stand for a long time
- Where possible, put yourself at the level of the wheelchair user (avoid kneeling or squatting)

- When talking to the wheelchair users, direct conversation towards the wheelchair user and not their companion
- Avoid leaning on a person's wheelchair
- When arranging meetings, consider factors that may be problematic such as car parking and access both into, and within, buildings

Sensory impairments

Seeing:

- Approach the individual from the front or the side and do not startle by touching first
- Introduce yourself clearly
- Remember that a guide dog is a working dog, not a pet
- If guiding a person, mention steps in advance and tell them if you are moving away
- Remember that your body language may not be seen
- Use text that is aligned to the left
- Avoid using italics as they are harder to read
- Ensure that there is a good contrast between the text and the background colour used
- Do not rely on a PowerPoint presentation as the sole means of conveying information
- Provide information in alternative formats (The Disability Resource Centre in Shrewsbury can assist – contact details are contained within Appendix B)

Hearing:

- Ask the person what is their preferred method of communicating
- If an interpreter is present, speak to the person not the interpreter
- Get the person's attention before you start talking and face them at all times
- Do not cover your mouth when speaking
- Speak clearly and be aware that you might need to slow down
- Where possible, use natural gestures to aid communication
- If more than one person is present, avoid letting more than one person speak at a time
- At regular intervals, check that you have been understood

Speech:

- Ask the person to repeat if necessary
- Remember that it is only the speech, not the person, that is impaired
- Try not to finish or guess sentences for the person
- Remember that some people with speech impediments may be self conscious about using the telephone

Mental health problems:

- Do not assume that the person has misunderstood you
- Do not assume that the person will be violent or dangerous

- Understand that the person may exhibit some unusual or unexpected behaviour
- Remain patient and calm when dealing with any unusual behaviour

Learning disabilities and difficulties and cognitive impairments:

- Do not assume that the person has misunderstood you
- Where possible, use simple language and pictures

Key considerations

- Consultation must be conducted a suitable stage of a project, this will typically be at the preliminary design stage
- The level of consultation should reflect the likely scale or impact of a scheme
- Consider applying a process of assessment and reassessment to ensure that the end-users needs remain in focus and that individuals are not consulted unnecessarily
- Access Officers at District Councils or other Local Access Group contacts should be included in scheme consultation
- The venue for a consultation event must be in an accessible building
- The needs of user's when conducting consultation – format of written documentation and use of appropriate material on suitably placed display boards
- Communication with disabled people should be carried out with respect and it should be remembered that the conveyance of information may be required in different formats

5 Priorities for improving accessibility

Local views

A detailed consultation with local disabled user groups during the development of the second Local Transport Plan (LTP, 2006/07 to 2010/11), in conjunction with the responses to extensive consultation carried out for the first LTP (2001/02 – 2005/06), enabled Shropshire County Council to gain the opinions of disabled people regarding the transport network across Shropshire. Questionnaire surveys were distributed to people with disabilities through Local Access Groups and 'dial-a-ride' transport services in 2005. **This section is therefore a reflection of what people told Shropshire County Council during the consultation process.**

The consultation highlighted that people with restricted mobility can experience accessibility problems even where public transport services are available or facilities are within a reasonable walking distance. As highlighted in the LTP, the key issues arising from the consultation in relation to poor accessibility included:

- A lack of low floor bus services
- Poor enforcement of disabled parking spaces
- Blockages to footways and dropped kerbs
- A lack of controlled pedestrian crossings

Shropshire County Council is currently working towards addressing the issues listed above through a number of transport related initiatives.

The following table details **examples** of barriers to accessibility in relation to the transport environment, as identified through the targeted consultation carried out for both the first and second LTPs. It is important to note that different types of disability are not exclusive and that many disabled people may have more than one impairment. (Further details on the different types of disability are contained within Chapter 2).

Respondents were also asked to indicate any beneficial changes that have been made to transport in Shropshire over the last few years. The most cited positive changes were in relation to buses:

- Low floor buses / ramps
- Park and Ride
- Community transport services / Dial-a-Ride

Type of disability	Barriers to accessibility related to the transport environment
Locomotion	• Difficulty crossing the road - insufficient dropped kerbs, or crossing points blocked by parked cars. • Uneven footways • Narrow footways

Type of disability	Barriers to accessibility related to the transport environment
	• Vehicles parking on footways • Steep gradients • Footways with camber are difficult to negotiate • Lack of low floor buses • Insufficient space / facilities for wheelchair users on buses, trains and taxis • Lack of badly located disabled parking spaces and poor access to spaces • Abuse of disabled parking spaces by others • Access to pay machines for wheelchair users • Poor access to railway stations and platforms • Lack of signing and information about facilities / accessible routes for disabled people • Insufficient public transport and specialist community transport services • Costs of travel by taxi and public transport
Seeing	• Difficulty crossing the road - require pedestrian crossing points with audible signals • Obstacles on footways e.g. street furniture, parked vehicles, overgrown vegetation • Uneven footways • Lack of uniformity in the layout of buses and trains • Unable to read or access information • Lack of clear, visual information for partially sighted people (large print and legible screen) e.g. number and destination boards on buses, bus timetables etc. • Lack of audio information e.g. board buses and trains, at bus stops etc. • Access to train information at station • Driver attitudes and training • Insufficient public transport and specialist community transport services • Costs of travel by taxi and public transport
Hearing	• Require visual information e.g. display boards at bus / railway stations and onboard vehicles

Type of disability	Barriers to accessibility related to the transport environment
	• Problems with booking taxis • Driver attitudes and training
Learning disability	• Information presented in a way which is too complex e.g. public transport timetables, ticket machines etc. • Driver attitudes and training

The questionnaire demonstrated that there was considerable support for the key objectives that were set out in the previous LTP strategy for disabled people (2001/2002 – 2005/2006). As the following graph shows, the strongest support was for improvements to crossing points, bus services and community transport.

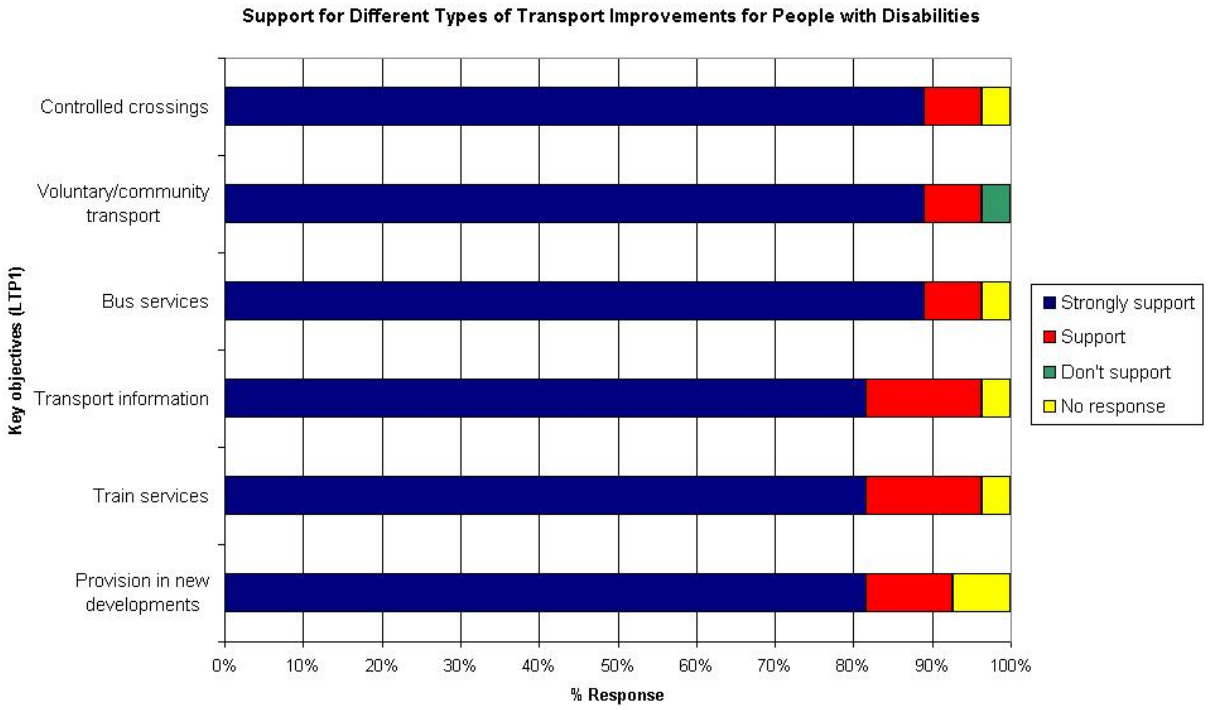


Figure 5.1 Support for key LTP objectives

The questionnaire asked respondents to highlight any ideas for additional things that they felt the County Council "should be working to achieve", the most commonly cited measures related to:

- Parking enforcement
- Maintaining obstruction free dropped kerbs and disabled parking bays
- Keeping footways clear

Local Transport Plan (2006/07 to 2010/11)

One of the strategic aims for local transport in Shropshire is to **"improve access to jobs and facilities in ways which are sustainable, particularly for people from disadvantaged groups or areas".**

One of the priorities contained within the LTP is for **"enhanced accessibility and mobility for people with disabilities and mobility impairments".** The LTP suggests that the following measures, and actions, will contribute towards achieving this priority, (the list is provided as an overview and the measures will be discussed in more detail in the proceeding sections of this document):

Improving transport services (medium contribution)

- Shift towards more Demand Responsive Transport (DRT) services
- Support and enhance community and voluntary transport

Better communications and information (medium contribution)

- Understanding accessibility needs
- Linkage of travel information with other information about services i.e. community transport

Reducing costs for disadvantaged groups (medium contribution)

- Revision of concessionary fares
- Explore opportunities to enhance accessibility through car and taxi sharing

Improving physical accessibility (strong contribution)

- Seek to increase the fleet of modern low floor buses
- Support community transport services (including Dial-a-Ride, community car services and introduction of more low floor bus services)
- Encourage the modernisation of taxis and PHV vehicles to provide better facilities for disabled people
- Pursue improvements to disabled access at rail stations and Shrewsbury Bus Station
- Complement this mobility guidance with training for planners and engineers to raise awareness of mobility difficulties and solutions
- Take account of people with disabilities when undertaking improvements to pedestrian facilities and maintain a dedicated Mobility Improvement Fund to undertake minor works to benefit disabled people in response to local concerns
- Support for the Oswestry and Shrewsbury Shopmobility schemes and support for the development of new schemes in other market towns
- Reduce the misuse of on-street disabled parking spaces through the implementation of Civil Parking Enforcement for on-street parking and consider applying white 'H' markings to discourage obstructive parking where there is a persistent problem

- Vulnerable road user audits for all transport schemes are to be piloted in order to work towards integrating the needs of people with disabilities into transport policy development
- Investigate ways in which improvements to transport services and facilities can enhance accessibility for people with learning disabilities

Enabling more walking and cycling (small contribution)

- Identify strategically important walking routes and development of quality walking routes (focusing on improvements to access, signs, maintenance, footway width, attractiveness etc.)
- Upgrade and introduce pedestrian crossings to reduce severance by main roads
- Expand and improve cycle networks in urban areas and enhance facilities in rural areas

Enhance accessibility through new developments (medium contribution)

- Work with partners to encourage the location and provision of services and facilities that will reduce the need to travel
- Work with District and Borough Councils to ensure that new developments are located and designed so as to be accessible for all people

Further information on Shropshire County Council's Local Transport Plan is available from Shropshire County Council's Transport Planning Team. The first and second Local Transport Plans are available online from www.shropshire.gov.uk by following the links to 'travel and transport' and 'transport planning'.

6 Improving accessibility to buses

As a rural county, Shropshire has an extensive bus network. There are generally three types of bus services: local town services, inter-urban services and rural services. In terms of improving physical accessibility for people with disabilities, the LTP states that Shropshire County Council will work towards:

- Enhancing the availability of Demand Responsive Transport (DRT) services in rural areas and providing more door to door transport opportunities using modern low floor buses
- Increasing the fleet of modern low floor buses on both subsidised and commercial services
- Opportunities to upgrade vehicles used for contract services to low floor vehicles (where operational restrictions permit)

In terms of general improvements to bus waiting facilities, the LTP aims to continue to offer parish and town councils contributions towards approved schemes to provide, or improve, bus shelters or stops.

Guidelines

In December 2006 new duties, introduced by the Disability Discrimination Act 2005, came into effect for operators of land based transport. The Disability Rights Commission (DRC, now the Equality and Human Rights Commission) published a **Code of Practice: Provision and Use of Transport Vehicles (2006)** to assist transport operators in preparing for the new duties. In addition, the DRC produced practical advice guides for transport providers on serving disabled customers on **scheduled buses and coaches** and **tour coach operators** (see references in Chapter 15).

Provision of an accessible bus system requires a number of elements. These are considered below:

Reasonable walking distances and accessible routes between home, bus stops and destination

Bus stops should be no more than 400m from any house in a residential area. Some consideration should be given to the nature of routes to bus stops, in terms of gradients for example. Research highlighted in the DfT's 'Inclusive Mobility' document suggests that once a bus stop is more than 200m (250m for able-bodied people) away usage can fall dramatically. Information on accessible walking routes is provided in Chapter 10.

On single carriageway roads, bus stops are typically staggered in opposing directions. The stagger should be a minimum of 40 metres and may have a crossing in between. As a general policy, dropped kerbs should be provided where necessary to enable disabled users to access the bus stops.

Where no fixed bus stops are present, for example 'Hail and Ride', the stops should preferably have some clear identification, for example though the use of appropriately placed signs on existing street furniture in a suitable format for reading by visually impaired people.

Where possible, knowledge of the local area should be applied, for example where a bus stop is located close to an origin / destination where there is likely to be a higher number of mobility impaired users i.e. such as a hospital or old people's home, bus stops will require suitable placement and may be needed at more frequent intervals.

Accessible bus stop and interchange facilities

The quality of waiting facilities can have a large impact on the perception of the public transport experience. Specific recommended measurements for bus shelters are contained within the DfT's 'Inclusive Mobility' document, however the application of dimensions will depend upon the specific characteristics of the location in question.

Prior to defining the characteristics of a given bus stop, its overall location should be considered. Shelters should be provided where there is space to accommodate them. Shelters should be located so as to allow for free flow of pedestrians and wheelchair users, at either the front or the rear. The 'Inclusive Mobility' guidelines suggest that for a maximum length of 6 metres, there should be a preferred footway width of 2000mm to the rear of a bus stop, with a minimum of 1000mm.

When considering the provision of bus shelters it is important to remember that the presence of a shelter alone can provide a benefit for a number of people. However, it is important to acknowledge that when using the absolute minimum measurements, an unimpeded stretch of footway is required to allow people to pass the bus stop. Where the available width is insufficient to allow people with disabilities to pass, this can become a major point of severance in a journey.

It is important to consider the nature of a given location in assessing appropriate width allowances. For example, where a given footway has a high pedestrian usage (such as in a town centre) the space required in order to safely move past the bus stop is likely to be greater. Similarly, consideration should be given to the amount of passengers using a bus stop and to what extent they are likely to cause an obstruction in the footway, this may determine the type of shelter used in terms of providing an unobstructed stretch of footway for pedestrians not using the bus stop.

In most circumstances, there is an inevitable need for bus users to cross the road at either end of their journey. Consideration should therefore be given to the provision of suitable crossing facilities in the vicinity of bus stops, at a minimum this should be dropped kerbs that are aligned with one another. Any crossing facility should meet the main desire line of users and allow those crossing to cross in safety and without obstruction. Further details on pedestrian crossings are contained within Chapter 10.

Where possible, seating should be incorporated into the design of the stop/shelter; consideration should be given to the colour of seating to allow for a contrasting colour to the body of the shelter. The type of seating used should also be assessed. A balance will need to be made on an appropriate style that can provide comfort to waiting passengers but deter misuse.

The shelter should be constructed of transparent material to promote a positive sense of personal security. In some instances such as rural areas it is permissible to use materials sympathetic with the local environment. Where transparent materials are used, a tonally contrasting band should be used to aid people with visual impairments.

In addition, bus shelters should:

- Provide protection from the weather
- Allow users to see approaching buses
- Allow waiting passengers to be seen
- Have lighting
- Contain legible and correct bus information

Accessible buses

Shropshire County Council supports and promotes the use of low floor accessible local buses. There is an aim to increase the use of these buses on both subsidised and commercial services, including operation on new demand responsive services for rural areas. Low floor buses not only improve mobility for people with disabilities, but also for other users such as parents with buggies.

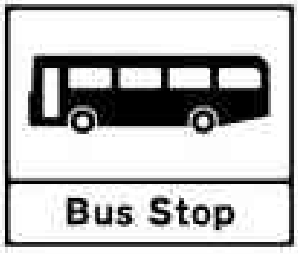
The location of the bus stop should allow buses to fully align with the kerb in order to ease access and egress and avoid the need to make passengers step down into the carriageway before boarding the bus.

The DfT 'Inclusive Mobility' document provides guidance on the design of raised kerbs at bus stops. However, in Shropshire the approach is to use traditional height kerbs combined with Super Low Floor buses that can pull close to the kerb and, if required, deploy an automatic ramp. Consideration may need to be given to whether raised boarding platforms are required on cross boundary corridors where Super Low Floor buses are not operated.

Drivers who understand the requirements of disabled users

Bus drivers should receive training to meet the needs of disabled users, for example waiting until passengers are seated before departure and speaking clearly to users. Bus operators should provide this kind of training. However, the County Council require all drivers on contracted services to carry a card that certifies that they have received training from a trainer that has been nominated by the Council.

Accessible information



In order to make people aware of the presence of a bus stop, it is recommended that flags be installed. 'Inclusive Mobility' recommends that bus stop flags should be no less than 2500mm from the ground (visible above road traffic, pedestrians and other obstructions nearby). The Traffic Signs Regulations and General Directions 2002 (TSRGD) implies that the minimum size for the flag is 300mm wide by 250mm high, however 'Inclusive Mobility recommends that a larger size of 450mm wide by 400mm high should be used if possible in conjunction with route numbers on the flag that are at least 50mm high [6].

The flag should have only the necessary information and additional information such as advertising should be awarded. Information such as direction of travel should be placed on the flag in order to make new users aware of the services. Supplementary plates may be added to show bus route numbers, name of stopping place /boarding point and reference to a telephone enquiry line.

Where feasible, timetable information should be available at as many bus stops as possible and be easy to comprehend. As a minimum, the information at bus stops should include details of the route(s), destination(s) served and departure times. However, consideration should be given to providing additional information such as those bus routes that run low floor accessible buses for example.

If a low floor bus is only available on particular services, this should be made clear to users. The uncertainty of arriving at bus stop and not knowing whether a low floor bus will be in use should be avoided wherever possible to enable disabled users to plan their journeys. Consideration should also be given to the availability of low floor buses to enable return journeys to be made.

Consideration needs to be given not only to the type of information displayed but also the placement of that information. For example, timetables located on bus stops or in bus shelters need to be conspicuous, legible (including free from vandalism such as graffiti) and at a suitable height (between 900mm and 1800mm). Important information should not exceed 1700mm from the ground and information that may be relevant to wheelchair users should be mounted at the bottom of the display.

Maps of the local area are also of use in conjunction with a marked location of the nearest public telephone and a contact number for the operator. Real time information on the status of the service is also recommended, the display should be shielded from direct sunlight in order to allow the information to be as legible as possible.

Routes with bus stops that operate on a 'hail and ride' basis should be clearly defined on route maps, in timetables and, as noted previously, be identifiable at street level.

6 Images taken from Traffic Signs Regulations and General Directions, 2002

Potential issues

The following list provides some examples of potential issues that disabled users have communicated to Shropshire County Council that should be considered when improving accessibility to buses:

- The need for publicised low level access to public transport on both outbound **and** return journeys to avoid being stranded.
- On-board facilities - the need to stabilise wheelchairs during motion.
- Bus drivers should always stop at bus stops as partially sighted passengers can not always see buses approaching in order to hail.
- Concessionary travel – concessionary services run at inconvenient times for those people with a disability who are in work.
- Visible destination information on buses, consider information on the side of buses as well as the front.
- The need to audio information as well as visual in some circumstances.
- The size of symbols on public transport information may need to be bigger.
- Pedestrian links from / to bus stops.

Local schemes

The following photograph shows an example of one of the Super Low Floor bus fleet provided with funding from the first LTP. As shown, the Super Low Floor bus is able to position close to the kerb and has a minimal step for the user to negotiate. Ramps are also available for wheelchair users.

Picture 6.1 Example of the Super Low Floor Bus Fleet

Key considerations

- Distance to, and between, bus stop locations and likely usage levels
- Bus stops should be clearly identifiable
- Bus users should be able to cross the road in safety and without obstruction
- Dropped kerbs should be provided to enable access to bus stops

Continued on next page

- Size and style of shelters and provision within them. Where transparent shelters are used, a contrasting colour band should be applied
- Appropriate width allowance for use by passengers and passing pedestrians
- Provision of correct timetable at a suitable height that is accessible by disabled people
- Services using low floor accessible buses should be clearly publicised
- Staff should be trained to understand the needs of disabled users

7 Improving accessibility to rail

Whilst the County Council has no direct control over rail services or facilities, close working exists to improve accessibility. This is mainly achieved by maintaining close links and dialogue with the Train Operating Companies (TOCs), Network Rail and other rail industry bodies. Shropshire County Council is also a member of the three Community Rail Partnerships for lines radiating from Shrewsbury:

- Chester to Shrewsbury
- Cambrian Lines
- Heart of Wales Line Forum

The Community Rail Partnerships have representation from all of the local authorities that the rail line passes through and meet on a frequent basis. The Partnerships also have representatives from Network Rail and the TOC – Arriva Trains Wales.

There is also a County Rail Forum. This is a medium for discussion between different stakeholders and user groups.

The LTP states that Shropshire County Council intends to work with the rail industry partners to pursue improvements to disabled access at rail stations in the County.

The provision of accessible rail services is governed by the Department for Transport and is largely the responsibility of Network Rail and TOCs. However, the County Council has a record of working in partnership to seek to make stations as accessible to the public as possible. For example, this could mean adapting the access to the main building or enhancing the provision of information in the station.

Guidelines

The key guidance document on the standards that are to be applied at stations is contained within '**Train and Station Services for Disabled People: A Code of Practice'**, this document is due to undergo a major review during 2006. A draft **TSI** (Technical Specification for Interoperability) **for People with Reduced Mobility** is due to come into force in 2008.

The Department for Transport strategy 'Railways for All' (2006) sets out how the rail industry will improve the accessibility of rail travel in Great Britain. The DDA (1995) made provision to ensure that station operators do not discriminate against people with disabilities and that all new trains meet improved accessibility standards. Under the DDA (2005), all rail vehicles will have to meet these standards by 2020.

The 'Railways for All' strategy outlines how the DfT plan to improve the accessibility of rail in the following areas:

- Information, ticketing and reservations
- Station buildings and platforms
- Train carriages
- The quality and consistency of staff training

All railway licence holders, including TOCs and Network Rail are required to have a Disabled People's Protection Policy (DPPP).

Further guidance developed by the Strategic Rail Authority (SRA – now the Department for Transport's Rail Group) can be found in 'Train and Station Services for Disabled Passengers: A Code of Practice' (2001).

The Disability Rights Commission (DRC, now the Equality and Human Rights Commission) published a **Code of Practice: Provision and Use of Transport Vehicles (2006)** to assist transport operators in preparing for the new duties that were introduced by the Disability Discrimination Act 2005. In addition, the DRC produced a practical advice guide for transport providers on serving disabled customers on rail services (see references in Chapter 15).

Information and ticketing

It is important that the provision of general station information is consistent in both visible and audible formats, where reasonably practicable. Specific guidance on the design of signs etc. is provided in the Code of Practice referenced earlier in this chapter.

Traditional timetables should be available at stations and be both visible and legible. Where stations are manned, the staff should be able to provide comprehensive travel information to all users. There is only one staffed station in Shropshire, Shrewsbury. However, both Ludlow and Gobowen have privately owned booking office travel centres on the platforms that provide a high quality of service.

All timetables can be downloaded from individual TOC websites. The main web source for all rail related information is **www.nationalrail.co.uk**; the site includes journey planning, real-time travel information, tickets and details of any engineering works. The website also provides information on the facilities at individual stations and a range of 'Maps for People with Reduced Mobility' is available. The maps indicate which stations have access to platforms without the use of steps and provide information on staffing levels. The website also provides details on the Disabled Persons Railcard and the TOC policy on the carriage of powered scooters and other mobility aids.

Shropshire County Council's own website provides access to updated large print train timetables. The format is simple and is based upon the former Shrewsbury Rail Guide booklet.

Understanding the different characteristics of stations is not only crucial in terms of determining the level of accessibility for disabled people, but also in evaluating whether assistance from individual train operators needs to be booked.

The National Rail Enquiry Service (08457 484950) can provide similar services as well as providing a link to the 'Assisted Passengers Reservation Service' (APRS). The enquiry line can also provide a connection to the Disabled Persons Railcard helpline.

Individual TOCs also offer their own enquiry services and provide specific information for customers with disabilities that can be accessed at stations or via websites. A mobility assistance telephone number is typically provided in pocket timetables. For example, Arriva Trains Wales has a 'Journey Care' telephone line and also provides information via Textphone. The TOC also produces 'A Guide for Customers with Disabilities'.

Arriva Trains Wales offers a number of services to customers with disabilities such as:

- The facility to plan rail journeys in advance to enable any special arrangements if necessary, including travel with other TOCs
- Support in the operation of the APRS to enable seat reservations and assisted travel on the National Rail Network
- Support for the Disabled Person's Railcard. This railcard provides a discount of one third off a range of tickets and allows one accompanying adult to travel at the same discount
- Wheelchair users who travel without a Disabled Person's Railcard and remain in their chairs are offered varying discounts for themselves and one accompanying adult
- Customers who are registered as visually impaired and travelling without a Disabled Person's Railcard are entitled to a discount off a range of tickets for both themselves and a travelling companion (no concession will apply if travelling alone or without a railcard)
- Customers who are registered as visually impaired are entitled to purchase a season ticket that covers themselves and a variable travelling companion, on a two travel for the price of one basis.

National Rail Enquiries and individual TOCs can also assist disabled customers by enabling them to buy tickets in advance, if desired.

When engineering work is taking place, replacement services are normally operated by bus. If the replacement service is deemed to be not accessible for an individual, it is up to the TOC to provide an alternative means of transport, where available.

It is the TOCs responsibility to train staff in providing assistance to people with disabilities. TOCs also have the responsibility of deciding which stations to put through the Secure Stations Scheme accreditation process in order to promote improved personal security at stations.

Station accessibility

A key objective of the 'Railways for All' strategy is to improve station accessibility and remove the barriers to travelling by rail, through the allocation of 'Access for All' funding.

The limited funding is split into improving access at the busiest stations and small schemes funding (the latter is to sponsored by a range of bodies including TOCs and Local Authorities). The funding is to be concentrated on major conurbations and stations in the south east of England where passenger numbers are highest. Although Shropshire will not be receiving funding, the principles of the strategy are important points for consideration.

In order to assist in the navigation of stations it is suggested that minimum levels of lighting, clearly marked facilities and appropriate, visible signs will improve station accessibility for all people.

The decision as to whether mobility scooters will be carried remains with the TOCs. Some existing rolling stock were designed before accessibility was a key consideration and the cost of modifying this stock is prohibitive. However, all TOCs will now accept lightweight scooters if they can be folded and carried on board as luggage.

The strategy works towards the provision of an 'Accessible Route' at stations whereby a clear, well-lit and signposted route with step-free access between that station and trains will particularly improve the station environment for people with mobility difficulties (including older people and people who have pushchairs or luggage) and visually impaired people.

It is suggested that the application of the 'Accessible Route' concept is considered when designing schemes close to stations. However, due to the limited availability of funding, it is important to recognise a balance in the level of provision at railway stations. For example, in some cases the decision to keep a station open is likely to take precedence over the use of crucial funding to make improvements to accessibility. A judgement needs to be made over what is reasonable to expect, what is practical and what is affordable given the layout and the level of usage at any particular station. Consideration should be given to the 'whole impact' approach as outlined in Chapter 3.

Trains

The Rail Vehicle Accessibility Regulations (RVAR, 1991) ensure minimum standards of accessibility:

- Boarding devices to enable wheelchairs to access and egress
- Larger and more accessible priority seats and wheelchair spaces for disabled people
- Provision of wheelchair accessible toilets
- Provision of improved travel information that can be seen and heard
- Use of appropriate tonal contrasting of features such as doors

Parking

In terms of parking, the Code of Practice (referenced above) recommends the following parking allocations for disabled people at railway stations:

< 20 spaces	1 reserved space (minimum)
20 – 60 spaces	2 reserved spaces (minimum)
61 – 200 spaces	6% of capacity, with 3 reserved spaces (minimum)
> 200 spaces	4% of capacity, plus 4 reserved spaces

Local schemes

The station car park at Whitchurch has recently been renewed and is now more accessible, with a more even, low gradient surface in conjunction with three designated disabled parking spaces.

Additionally, Shropshire County Council has worked closely with Powys County Council to install DDA compliant ramps at the station in Knighton.

The following photograph shows an example of the side by side information displays that are used at all rail stations in Shropshire.

Picture 7.1 Example of side by side information displayed at rail stations in Shropshire

Key considerations

- Consistent audible and visual information should be provided at stations
- Visible and legible timetables should be available at stations
- TOCs should train staff in providing assistance to people with disabilities
- Aim to provide an 'accessible route' within and around stations – a clear, well-lit, signposted route with step-free access
- Ensure that at least the minimum disabled parking spaces are provided at stations car parks
- Consider the 'whole impact' approach and consider what is reasonable in terms of the allocation of limited funding at stations – what is practical and affordable?

8 Improving accessibility to taxis/community transport

Taxis and community transport provide an integral role to all, especially the mobility impaired. They offer a demand responsive service which is often more suitable to the needs of people with disabilities than a conventional bus system as they can offer a door to door service. This type of service can be particularly valuable in rural areas.

The LTP states that Shropshire County Council will support district authorities, as the taxi licensing authorities, in encouraging the modernisation of taxi and PHV vehicles to provide better facilities for disabled people, and improve customer service.

Shropshire County Council aims to continue support for community bus services through the introduction of more low floor bus services and demand responsive bus services. This will enable operators to increase their focus on people with disabilities. The County Council also supports other community transport services such as Dial-A-Ride and community car services.

Guidelines

Whilst recognising the cost of the journey is likely to be at a higher cost (to the individual for taxis and the tax payer with community transport), community transport plays an integral role to people with no other means of convenient travel.

Attention should be given to those recommendations included within the 'Improving Accessibility by Bus' section to help ensure that community transport vehicles serving the needs of disabled people. It is important that the vehicles used are accessible by disabled users. Detailed guidance on the requirements for taxis is contained within Part V of the DDA 1995.

Further guidance is available in the **Code of Practice: Provision and Use of Transport Vehicles (2006)** and the **Practical Guide for Taxi and Private Hire Services** published by Disability Rights Commission (DRC, now the Equality and Human Rights Commission) to assist transport operators in preparing for the new duties that were introduced by the Disability Discrimination Act 2005 (see references in Chapter 15).

It is recommended that staff are trained to understand the needs of disabled users (as stated in the bus section of this document), for example in terms of boarding and alighting times and the need for face to face communication.

Taxi ranks should be provided at key trip generation sites that may be identified in consultation with taxi service providers, for example rail stations, retail areas etc. However, it should be remembered that a primary requirement in the location of taxi ranks is that they are used.

The rank should be clearly defined and provision should be made for users to board and alight from the nearside of the taxi. The width of footway at a taxi rank should be enough to allow for a ramp to be deployed and have space for a wheelchair to turn. Total suggested width is 4040mm. Where taxi users are likely to need to cross in proximity to the taxi rank it is recommended that suitable dropped kerb and tactile provision is made.

The licensing of taxis and private hire vehicles is the responsibility of the five Borough/District councils. Shrewsbury & Atcham Borough Council stipulate that any new taxis are to be wheelchair accessible.

Specific requirements in relation to the carriageway of disabled people in taxis are contained within the DDA Part V – Public Transport (1995).

Local schemes

There is a successful local community transport project at Craven Arms. The service provides both a timetabled and demand responsive system for local residents to use.

Picture 8.1 Local community transport project at Craven Arms

Key considerations

- Staff should be trained to understand the needs of disabled users
- Consideration should be given to the accessibility of the vehicles used
- Clearly defined taxi ranks should be provided at key destination sites with corresponding suitable footway widths and turning spaces for wheelchairs

9 Improving accessibility by car for disabled users

Shropshire County Council's main approach towards car use is to manage traffic levels through a range of measures. In urban areas the LTP suggests that where many journeys are short and shared transport is most viable, Shropshire County Council will encourage a greater proportion of journeys to be undertaken by foot, cycle or public transport. In rural areas, where the private vehicle is often the most practical way of getting around, it is intended that accessibility and choice will be improved to reduce the need to travel. Measures may be in terms of safer roads, flexible transport, provision of local facilities and increased electronic communication.

It is however recognised that for many people with disabilities the car provides a vital function. Many disabled people either drive or receive lifts to their chosen destination. It is therefore important to accommodate their needs when designing schemes affecting car users, in particular through the provision of parking and the design of car parking layouts.

Guidelines

Parking can be problematic for people with disabilities in a number of ways:

- Kerbside parking blocking dropped kerbs
- Misuse / poor enforcement of disabled parking bays
- Inadequate parking at key destinations resulting in complex vehicle movements i.e. outside schools
- Reduced visibility at uncontrolled crossings due to parked cars

It is important that these factors are recognised when considering scheme design, not only in terms of the position of parking but in terms of any changes that may act as a catalyst for problems elsewhere.

Further guidance on parking for disabled people is contained within the DfT's '**Inclusive Mobility**' document and '**Parking for Disabled People**' (Traffic Advisory Leaflet 5/95).

Disabled parking spaces

In general, provision should be made for disabled motorists (Blue Badge Holders) wherever conventional car parking spaces are provided.

In off-street car parks, designated disabled parking should ideally be located within 50m of the facilities being served with level or ramped access (with a preferred gradient of 5%), unless alternative provision has been made. Where designated spaces cannot be located in close proximity to the facility a set down point should be provided in conjunction with associated tactile surfacing.

Where car parks serve a larger area rather than a specific facility, a Shopmobility service should be considered. There are currently two such schemes in Shropshire, one at Raven Meadows in Shrewsbury operating six days per week and another operating five days per week in Oswestry.

For car parks serving existing employment sites 2% (minimum of one space) of spaces should be designated for use by disabled users. Spaces for disabled employees should be provided in addition to this minimum requirement.

Where new employment sites are created 5% of the total number of spaces should be designated as disabled parking, this figure can include the number of disabled employees.

Where car parks are associated with shopping facilities, a minimum of one space per disabled employee must be provided plus 6% of total spaces.

It should be remembered that although the disabled parking bay sign is characterised by a wheelchair, those entitled to using the bay may not be wheelchair users and as such consideration should be given to the needs of people with other disabilities as far as possible.

Where a key trip destination is likely, consideration should be given to the provision of a suitable setting-down point for disabled passengers where no other parking provision is available. Similarly, it should be recognised that there may be certain locations where there is a need for more disabled parking bays due to an increased likelihood of disabled users, near to medical facilities for example.

When considering the location of on-street disabled parking bays consideration should be given to the balance between providing disabled parking in a suitable location for access by disabled users and the likelihood of misuse. For example, where a disabled parking bay is located next to a cashpoint machine there is an increased likelihood that bay will be misused by people wanting to stop for short periods of time.

Bay design

The surface of designated parking spaces should be even and stable and in general, parking areas should be characterised by firm, level ground.

The following measurements for parking spaces are taken from the DfT Traffic Advisory Leaflet 5/95 ‘Parking for Disabled People’ and BS 8300 ‘Design of buildings and their approaches to meet the needs of disabled people: Code of practice’:

- On-street parking parallel to kerb — 6600mm long x 2700mm wide (preferably 3600 wide)
- On-street parking at an angle to the kerb — 4200mm long x 3600mm wide
- Off-street parking — 4800mm long x 2400mm wide (with additional space)

Reference should be made to the detailed measurements for both on and off-street parking to ensure that sufficient space is left available to access and egress vehicles.

It may be considered that where it is not physically possible to provide bays to the recommended dimensions, the provision of some disabled parking is likely to be better than no provision at all. Consideration should also be given to length of parallel disabled bays as rear access to a vehicle is often required. This may be for specially adapted vehicles where wheelchairs can be stabilised during motion, or for wheelchair storage etc.

The functionality of any provision for disabled users should be paramount. There is minimal value in providing infrastructure that is physically impossible to use for the people that it is intended for.

Kerbside parking bays should be located where there is a reasonably level road gradient and camber (i.e. 1:50) to avoid difficulties, particularly for wheelchair users. Where designated bays are located on-street, dropped kerbs should be provided with appropriate tactile information.

All signs and kerb markings should be installed in accordance with the TSRGD 2002. The signs and markings should be maintained to be visible and recognisable to discourage misue[7].

Parking restrictions

> The Blue Badge (formerly Orange Badge) Scheme provides a national arrangement of parking concessions for people with severe walking difficulties who travel either as drivers or passengers. The Scheme also applies to registered blind people, and people with very severe upper limb disabilities who regularly drive a vehicle but cannot turn a steering wheel by hand.
>
> **Department for Transport (2000) – The Blue Badge Scheme**

The national concessions that are available through the Blue Badge Scheme only apply to on-street parking and enable badge holders to park as close to their destination as possible.

Blue badge holders have the following parking allowances:

- Parking that is free of charge and with no time limit at on-street parking meters and ‘pay-and-display’ on-street parking facilities. An exception to this is if a local traffic order is in force that specifies a time limit for disabled badge holders
- Entitlement to park for up to 3hrs on double yellow lines (where no loading restrictions exist and where no obstruction is caused), this can often cause delay to other traffic and it is clearly in the interest of managing traffic to provide suitable designated car parking spaces

7 Images taken from Traffic Signs Regulations and General Directions, 2002

It is possible that the scheme may not apply in certain town centres where access is prohibited or limited to vehicles with special permits. Private roads are excluded from the scheme.

It is possible that blue badge holders may also be exempt from the parking time limitations that are imposed on other users; however this will depend upon local circumstances and traffic orders. Similarly, a time limit may be imposed on the use of reserved parking for disabled badge holders.

The restrictions placed upon disabled parking bays can be at any time ranging from 24 hours a day for seven days a week to more limited waiting restrictions. Any kind of restriction is permissible; however a good reason for the choice of restriction must be demonstrated. It is important that any specific information that is pertinent to disabled users is conspicuous, legible and easy to interpret.

Where Traffic Regulation Orders are likely to be in place, consideration should be given to the potential demand for the disabled bay(s) in relation to trip destinations. For example, where a location has a busy evening economy the need for a disabled parking bay is unlikely to be restricted to between 08:00 and 18:00.

The Blue Badge Scheme does not apply in off-street car parks. The requirement for blue badge holders to pay for parking varies in different locations. Where blue badge holders are charged this should be clearly highlighted to avoid confusion. If charges are to be made for disabled people the ticket machines should also be designed to allow for disabled use.

In general, blue badge holders are not allowed to park where other traffic orders are in operation or where parking would be obstructive or cause danger to others. More detailed guidance on national restrictions is contained within '**The Blue Badge Scheme**' (Department for Transport, 2000).

Vehicles that are parked partly on the footway can be a particular hazard to both visually and physically impaired pedestrians, as can the obstruction of dropped kerbs. In locations where there is a consistent problem with parked vehicles blocking dropped kerb access to footways, the application of white line 'H' markings may be considered.

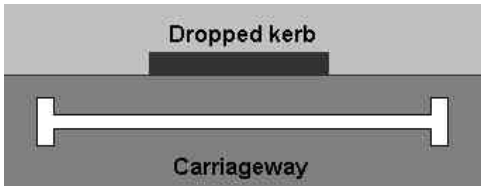


Figure 9.1 Example of 'H' marking on carriageway

An 'H' marking is likely to be more appropriate where there are no existing parking restrictions, however 'H' markings should be considered on an individual case basis and it should be remembered that they are not enforceable.

Consideration should also be given to the appropriate use of parking restrictions. The application of double yellow lines may be appropriate in certain locations depending upon local circumstances.

Enforcement

Shropshire County Council has implemented Civil Parking Enforcement for on-street parking. It is anticipated that this will help to reduce the misuse of on-street disabled parking bays. It will be important for Civil Enforcement Officer (Parking) to be fully trained on the restrictions for blue badge holders.

Using the car park

Many disabled users use high top cars or small vans, therefore if there are any height restrictions in the car park this should be made clear prior to the entry point and where possible, alternative provision for disabled parking should be made. Where height restrictions exist, adequate directional signs to alternative car parks must be provided.

In all car parks the design of entry equipment should be considered in relation to its use by disabled users. For example, the position and height of ticket machines and their associated dispensers and coin slots, will impact the extent to which they can be used by wheelchair users. Consideration should be given to the space required by a wheelchair at ground level to access a ticket machine, and the machines should not be placed on plinths (where absolutely necessary a plinth should not extend beyond the face of the machine).

Barrier control units should be between 1000mm and 1300mm above ground, with instruction plates located between 1000 and 1600 above ground level.

Where possible, an indication of where help can be obtained should be provided.

Consideration should also be given to the ease, and safety, with which disabled users can negotiate the car park to appropriate exit points and crossing points once their car has been parked.

Other considerations

Traffic calming measures should be introduced with consultation of appropriate guidelines and highway users, especially regarding safety equipment such as speed cushions as the impact or vibration can often be felt more by disabled car occupants e.g. those with spinal injuries.

Local schemes

Where additional width was available, wider disabled parking bays have been provided on Shrewsbury High Street. This extra width makes it easier for disabled people, particular those with wheelchairs, to get in and out of their vehicles. In this instance the parking bays have been designed to complement the streetscape.

Picture 9.1 Disabled parking provision in Shrewsbury town centre (Shoplatch)

Key considerations

- Designated parking spaces for disabled people should be located within 50 metres of the facilities served
- Shopmobility should be considered where car parks serve a larger area
- Consider suitable parking allocation for different land uses
- Remember that disabled parking bays are not only for use by wheelchair users
- Spaces should have good surface quality and comply with minimum standards in terms of space
- Provision of disabled badge holder parking and clear details of any restrictions that operate outside of the national Blue Badge Scheme
- Consider the appropriate location of dropped kerbs to provide access to and from parking spaces
- Signage should be visible and consistent
- Consider the appropriate height and position of equipment and information for use and recognition by disabled people

10 Improving accessibility for pedestrians

It should be considered that almost all people are a pedestrian at some point in their journey, be it walking to the bus stop or walking from the car park to the shops. Therefore, attention to pedestrian provision for people with disabilities is extremely important.

As part of the first LTP (2001/02 – 2005/06), Shropshire County Council pledged to provide for more walking trips in place of shorter car journeys. This has resulted in an extensive programme of works such as footway widening and improvements, new signal crossing installations and flush kerb crossing points.

The current LTP states that in undertaking improvements to pedestrian facilities, Shropshire County Council will ensure that, through design, the needs of people with disabilities will be accounted for. By adoption of an asset management approach, Shropshire County Council is defining levels of service for footways as well as other highway assets in order to target more effectively.

Guidelines

It is important to recognise that the majority of people are pedestrians at some time and that whilst the individual characteristics of pedestrians may vary widely, they are all likely to have similar requirements of the pedestrian environment.

'Encouraging walking: advice to local authorities' (DETR, 2000) and the IHT's 'Guidelines for providing for journeys on foot' (2000) recommend the use of **'The Five Cs'** as a checklist for assessing the overall quality of provision for pedestrians. This checklist provides a good basis for meeting the needs of all pedestrians, and the pedestrian environment should therefore be:

C	**onnected**	routes should link origins and destinations
C	**omfortable**	routes should meet design standards and generally be free from obstructions and substandard surface quality, safe and meet the needs of disabled people
C	**onvenient**	routes should facilitate key desire lines with minimal deviation
C	**onvivial**	pedestrian facilities should be pleasant and attractive to use
C	**onspicuous**	route design should promote personal security and safety

The Design Manual for Roads and Bridges (DMRB – Volume 5, Section 2) outlines a process for conducting audits of scheme designs for non-motorised users. Although the DMRB is largely designed to provide guidance for the trunk road network, the underlying principles in ensuring the viability of routes for non-motorised users (NMUs) is valuable in this context of considering mobility needs in scheme design.

This section provides the key dimensions required in relation to pedestrian facilities. A more detailed view of the minimum and maximum requirements required for people with different disabilities can be found in Appendix A.

It is important the culmination of all of the factors outlined in the following paragraphs result in an environment that is legible for pedestrians; an environment that can be interpreted in a way that makes wayfinding intuitive for people with disabilities.

Footway widths

It should be remembered that all existing footways provide some level of pedestrian amenity, irrespective of width. However, where footway width is insufficient to allow certain users, wheelchairs for example, to pass there are clear severance issues and alternative routes should be considered. Where possible, the width available for pedestrian use should be adequate for movement in comfort and both physical, and perceived safety.

The following diagram is based upon measurements taken from the DfT's 'Inclusive Mobility' document and provides an indication of the different passageway width allowances required by people with a range of disabilities. It should be noted that the requirements in transport regulations that were introduced under the Disability Discrimination Act 1995 are based upon an occupied wheelchair – 1200 x 700mm.

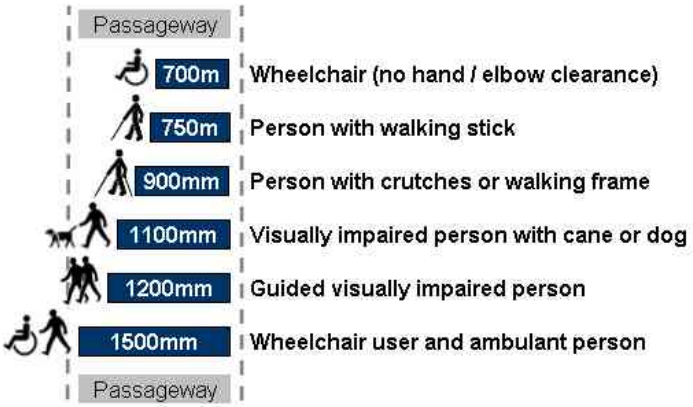


Figure 10.1 Recommended Width Allowances for People with Disabilities

Additional consideration should be given to any clearance required for a wheelchair user's elbows and hands; this is likely to be more of an issue in a constrained environment. The ISO standard for wheelchairs states that to propel a wheelchair manually a clearance of no less than 50mm is required.

Ultimately the width of the footway needs to be considered in relation to:

- The flow of pedestrians using the route
- The type of pedestrians using the route
- The characteristics of the adjacent carriageway i.e. speed and flow of vehicles.

When considering footway width it is also necessary to consider other factors that may restrict the available width for users, for example where street furniture is not aligned. Similarly, the available width for manoeuvre can be restricted where high pedestrian flows are expected, this may be at particular locations within a town centre or outside key origins or destinations such as a railway station, for example.

The following diagram shows the recommended footway widths as detailed in the DfT guidance 'Inclusive Mobility'.

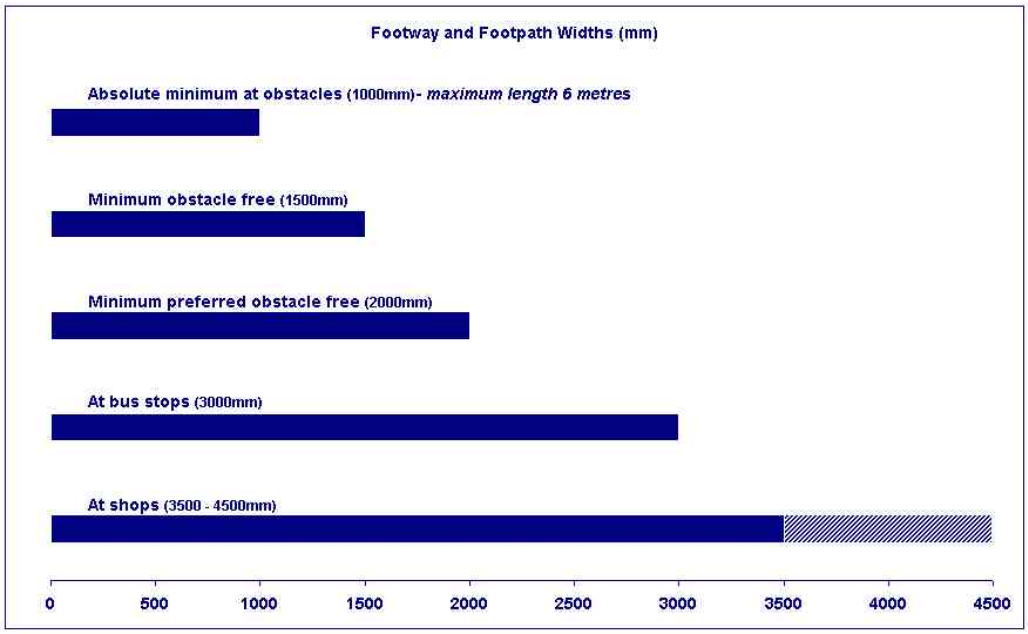


Figure 10.2 Recommended Footway and Footpath Widths

Information on facilities for shared use with bicycles is contained in Chapter 11.

Footway gradients and crossfalls

The presence of adverse gradients or crossfalls can have a significant impact upon people with disabilities. DfT's 'Inclusive Mobility' document states that there is a general agreement within a range of guidelines that manual wheelchair users are likely to have difficulties with any slope that is in excess of 8% (1 in 12), therefore a general gradient of **5% (1 in 20)** is preferred.

It should be remembered that gradients are often related to the natural topography of an area. In this instance, there is minimal scope for mitigation however consideration may be given to the provision of alternative routes.

Crossfall on footways and footpaths is often necessary to provide adequate drainage, however severe crossfall cause difficulties for wheelchair users and is likely to contribute towards tripping by other pedestrians. 'Inclusive Mobility' suggests that a figure of **2.5% (1 in 40**) should be treated as the maximum acceptable, with a preferable crossfall of between 1 and 2%.

Particular consideration should be given the impact of crossfall where access to residential parking crosses the footway.

Street furniture and obstructions to movement

The most accessible designs of footways can be compromised if the placing of street furniture is not considered carefully. Street furniture (such as litter bins, lighting columns, signs, planters, seating etc). should be aligned so that any obstruction to pedestrian movement is minimised. Particular consideration should be given to the use of bollards are these can be extremely problematic to disabled users.

Business premises should also be encouraged not to obstruct the footway with items such as A-frame signs. Street furniture associated with business premises or shop frontages should not obstruct normal pedestrian flow. It should be noted that many shops legally own some of the immediate area outside the premises, known as the curtalage. Therefore when designing schemes, it is imperative that an investigation into ownership of such land is undertaken.

Any street furniture should be a minimum of 1000mm high, consistent width to the ground level and have a contrasting band 1400mm – 1600mm above the ground level. Where items are below 1400mm the band should be placed near to the top. Street furniture should be round and where possible grouped together. Where street furniture overhangs the footway it should be not less than 2100mm from ground level.

The use of guard rail should be limited to where there are clear safety benefits and no feasible alternatives. Guard railing can often prevent individuals from following their desire line and can therefore cause severance in a pedestrian's journey. Where guard rail is installed, particular consideration should be given to the remaining effective footway width.

It is important to remember that some street furniture can cause further reductions to the footway width available for use, for example passengers waiting at a bus stop. Therefore, the overall impact of the placement of street furniture should be acknowledged.

Consideration should also be given to the 'tapping line' for white cane users. The cane is typically used to scan the ground to locate any potential obstructions, typically just beyond the width of the body. The use of variable surface types, that are sensitive to the surrounding environment, may be effective in delineating those areas of the footway where pedestrian flow is free from obstructions and those areas where aligned obstructions are present.

It should be noted that not all obstructions are at ground level (such as overhanging trees and signs for example) and due attention should be given to footway heights and vertical clearance. 'Inclusive Mobility' provides the following recommended guidance:

- Minimum vertical clearance 2300mm
- Minimum vertical clearance under signs 2100mm

- Minimum vertical clearance 2300mm
- Minimum vertical clearance under vegetation 3000mm

Colour contrast

The presence of certain key features can be accentuated by the use of colour or tonal contrasts. Such contrasts can particularly assist in the use of residual vision by visually impaired people. However, any use of colour contrast should be carried out with consideration to its appropriateness within its given context (for example, there may be particular sensitivities in historic areas or rural areas) and its value for money.

Variations in surface type and texture can by particularly effective in providing delineation and subtle information about the characteristics of a pedestrian environment, for example where there may be a change in use, where obstructions are present or at pedestrian crossings.

Shared surface schemes

'Shared space' is a term used to describe a joint approach to traffic engineering, urban design and road safety where there is a focus on integration rather than segregation for different functions and users.

In a transport environment, shared surfaces are typically characterised by no clear delineation between the carriageway and the footway. This feature may be as part of an enhancement scheme for an entire town centre street or may be a characteristic of smaller schemes such as a raised junction plateau.

When considering the implementation of a scheme that involves the use of shared surfaces, it should be recognised that the removal of the kerb edge / upstand can cause concern for groups that represent people who have a visual impairment in terms of safety, confidence and independence for blind and partially sighted people.

As outlined in Chapter 2, many blind or partially sighted people use a mobility aid such as a white cane or a guide dog and / or their remaining vision. User groups suggest that the kerb upstand or a tactile demarcation is a key feature for the successful negotiation of a street environment.

It is therefore recommended that if consideration is given to implementing a scheme that involves the use of shared surfaces, consultation is undertaken at an early stage to establish any features that may mitigate the impact to blind and partially sighted people (further information on consultation is contained within Chapter 4). Where a key objective of the scheme is to remove the kerb line, particularly consideration should be given to the provision of tactile information and sensitive colour contrast between different areas within the shared surface. Further information is contained in this chapter under 'colour contrast' and 'dropped kerbs'.

For further information The Guide Dogs for the Blind Association has undertaken some research into the perception of shared surface street environments for blind and partially sighted people: '**Shared Surface Street Design Research Project – The Issues: Report of Focus** Groups' (The Guide Dogs for the Blind Association, 2006).

Subways and bridges

Guidance on the design of subways and bridges for use by pedestrians and cyclists is contained with the Design Manual for Roads and Bridges (DMRB) standards TD 36/93 '**Subways for Pedestrians and Pedal Cyclists Layout and Dimensions**' and BD 29/03 '**Design Criteria for Footbridges**'.

Particular consideration should be given to determining a balance between the use of gradient on ramps and the accessibility for disabled users. The guidance contained within the DMRB provides details on minimum width requirements for footways/paths in subways and on footbridges.

Some thought should also be given to the perception of personal security in relation to subways.

Rest points

It is important to have an understanding of how far, and with what level of ease, people are able to walk or use a wheelchair; this is likely to vary depending upon the nature of a person's disability. This is particularly important in terms of the walk distances between key facilities, for example parking provision and shops. The following diagram uses average measures for the recommended distance limit without a rest point, taken from the DfT's 'Inclusive Mobility' document. It should be noted that the there will be variations between individuals and a number of factors may have an additional impact such as weather conditions, gradients, the presence of handrails etc.

Some people with mobility impairments may also find standing difficult, for example individuals with arthritis or back problems. These people will also benefit from appropriately designed and placed rest points on pedestrian routes.

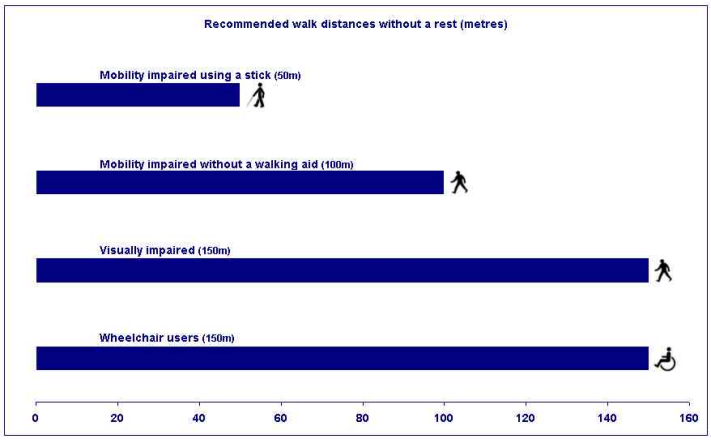


Figure 10.3 Recommended Walk Distances

It is recommended that, where possible, seating be installed at regular intervals in all new or upgraded schemes. It is important that any seating provided is in an appropriate location, this may typically be along key pedestrian routes or in locations where people may have to wait. However, the seating should not obstruct normal pedestrian flow. As a guide, the DfT's 'Inclusive Mobility' suggests that seats should be provided at intervals of no more than 50 metres.

The type of seating provided may vary depending upon whether it is inside or outside. It should be recognised that whilst conventional seat designs (within recommended dimensions) will suit most disabled people, perch type seating (where people can lean / sit) may be easier for some, however this kind of seating is unlikely to be suitable for amenity seating in outdoor public places.

When providing outdoor amenity seating, consideration should be given to the appropriate height and backing of the seating. The provision of backs on public seating will largely be dependent upon local circumstances and the position of the seating, for example in some locations seating without a back may be used to allow individuals to sit on both sides of the bench.

The guidance provided in 'Inclusive Mobility' suggests a range of appropriate seating heights, although seat widths are recommended to be a minimum of 500mm. However, it should be noted that the 'Inclusive Mobility' document deals mainly with seating for public transport waiting areas. Recent discussions with a Shropshire based Access Group have suggested that a preferred seating height is 480mm.

The type of material used is also important both in terms of colour contrast for visually impaired people, and also in terms of avoiding the likelihood of vandalism, misuse and the collection of rain water. Particular consideration will need to be given to the provision of public seating in aesthetically sensitive areas.

Consultation will need to be carried out with a wide range of stakeholders to agree on the function of the public seating and to ensure that the seating provides meets the needs of as many users as possible. It is recommended that disabled users are consulted to ensure the effectiveness of any seating provided.

Street lighting

Adequate street lighting is vital in order to create a more accessible environment for pedestrians. Well lit routes can create the perception of a safer, more secure environment and can generally allow the user to find their way more easily. Lighting should illuminate any potential obstacles that may be encountered, such as litter bins, changes in level or changes in textures/surfacing for example.

Lighting should be even, effective and minimise glare. For visually impaired individuals, this can assist in the use of residual vision to detect any contrasts in colour. Certain key features should have a greater degree of illumination e.g. in subways and on footbridges.

A balance will need to be made over the need for street lighting and any issues surrounding light pollution.

Footway surfacing

The choice of footway surfacing is an important consideration in relation to the comfort of use for disabled users, the attractiveness of pedestrian facility, the cost and the ongoing maintenance implications of a scheme. The choice of surfacing can also impact upon the drainage of water.

Footways should be evenly surfaced and maintained so as to allow easy passage by pedestrians. The types of surfacing used are likely to depend upon a number of factors: consistency with existing provision, historic context, durability etc.

Where possible, consideration should be given to pedestrian routes between key origins and destinations. The footway surfacing should contribute towards a seamless link whereby footways are firm, and are slip and trip resistant with no adverse crossfall or obstructions to movement.

All footways are subject to clearly defined safety inspections to highlight any potential trip hazards (see Chapter 14) that may arise from uneven flagstones or the deterioration of bituminous surfaces due to the presence of potholes, tree roots or poor reinstatements.

Where possible, surfacing should be consistent as sudden changes in colour can lead to confusion, for example a black bituminous reinstatement in a paved area may appear as a hole to people with cognitive difficulties. The use of reflective materials should be avoided where possible.

Particular consideration should be given to the use of high quality materials in historic environments (see Chapter 12). However, it should be borne in mind that irregular surfaces (i.e. cobbles) can be problematic or painful to pedestrians with physical impairments and the fear of falling can also be accentuated. Where small paviours are in use, particular attention should be given to ensuring that they are evenly laid.

When evaluating the balance between different needs the life cost of footway should be considered, for example the use of high quality materials may result in a more durable surface. It should be noted that the use of specifically made materials can provide strong links to aesthetics and the sense of ‘place’.

With careful consideration, the use of variable surface types, that compliment the surrounding environment, can be effective in delineating those areas of the pedestrian environment where obstacles are likely to be present and where a clear ‘through-route’ should be possible. This is likely to be most appropriate in a town centre environment.

The treatment of manhole covers for access to underground services should not be overlooked and it should be ensured that, where possible, the cover and frame are flush with the surrounding surface type.

Detailed recommendations with regard to footway surfaces are contained within '**Inclusive Mobility**' (DfT, 2002) with further advice in the IHT's '**Guidelines for Providing for Journeys on Foot**' (2000).

Tactile information

Tactile paving can greatly assist blind and partially sighted pedestrians. It can be used to delineate routes, to warn of a potential hazard, to segregate pedestrians from other users (cyclists for example) or to indicate the presence of an amenity. Once installed the paving should be checked closely in order to verify that its alignment is correct.

Repairs to tactile paving should be undertaken as quickly as possible in order to minimise any potential confusion. The tactile paving should be replaced to standard of quality that ensures that the information remains correct for the user. Particular attention should be given to fading colour and the level of reinstatement carried out by utilities companies. Tactile paving that is incomplete or erroneous can ultimately be dangerous to the user.

It is important to note that a number of visually impaired people use a guide dog. The dog is trained to lead its owner around obstructions and to stop at distinctive changes in level. A guide dog is generally not able to respond to any changes in colour or texture on the footway. Ultimately, when a guide dog stops at a given feature, the decision on how and when to proceed lies with the owner, the use of tactile information can assist in this decision making.

It is important that visually impaired people understand the different meanings that may be assigned to footway paving. Therefore, there is a need for these people to be made aware of the presence of any facilities in their area.

For detailed information on the various forms which tactile paving should take refer to the DfT's '**Guidance on the use of tactile paving surfaces**'. It is paramount that tactile paving must only be used for the purposes described within the guidance. Further information is provided in the following sections on the use of tactile information at road crossings.

Dropped kerbs

For the majority of wheelchair users level access, that is either flush with the carriageway, ramped or has a minimal upstand, is essential. Such access can also benefit people with other physical and sensory impairments and reduce the likelihood of tripping. It is recommended that level access (using dropped kerbs or raised road crossings) is provided at all zebra and controlled crossings and at side roads or access points that are used by pedestrians.

On residential roads or longer side roads, the DfT ('Inclusive Mobility') recommends that where possible, dropped kerbs should be provided every 100 metres to avoid lengthy detours for wheelchair users in order to cross the road.

It is important that consideration is given to the key pedestrian desire lines when determining the placement of dropped kerbs or raised crossings. Dropped kerbs should be visible to users and where they are providing a crossing facility they should be aligned, as far as possible, with a partner dropped kerb on the opposite side of the carriageway.

Consideration should also be given to the crossfall of the footway and carriageway in relation to the dropped kerb. An adverse crossfall can cause particular problems for wheelchair users both in terms of using the footway and if waiting to cross the road. The turning space and angle of approach to a dropped kerb for wheelchairs should also be considered.

Where possible, a dropped kerb should have the following characteristics:

- Provide level access to the carriageway (6mm max. rounded bullnose if possible). Careful consideration should be given to the provision of a completely flush scheme in relation to a dropped kerb as poor drainage leading to standing water at the crossing points can be an associated concern.
- Have a maximum gradient of 8% (1 in 12) on direct approach and 9% (1 in 11) on the flared sides
- The dropped area should have a minimum width of 1200mm (up to 3000mm where there are high pedestrian flows and 1000mm is acceptable adjacent to disabled car parking)
- When at a controlled crossing, the dropped kerb should be the same width as the crossing (2400mm minimum)
- The camber of the road at the foot of the dropped kerbs should be not more than 5% (1 in 20) for a wheelbase distance from the kerb line (600mm approximately)
- Where width allows, there should be a level area (900mm minimum) to the rear of the dropped kerb to allow for passage for wheelchair users who are not using the crossing.
- The dropped kerb should be indicated by the appropriate tactile information

Parked cars can be a particular obstruction for people with disabilities who need to use dropped kerbs, and can result in large deviations to a journey. In locations where there is a consistent problem with parked vehicles blocking dropped kerb access to footways, the application of white line ‘H’ markings may be considered (see Chapter 9 - Improving Accessibility by Car for Disabled Users).

Road crossings

Crossing points account for where the footway has been dropped to provide access to the carriageway or where the carriageway has been raised to the footway. Many disabled users become used to familiar routes and instinctively use the same crossing point on a regular basis.

It is important to recognise a balance between different users, for example a kerb upstand can be an essential indicator of the edge of footway for a visually impaired pedestrian, however in relation to the needs of other pedestrians or people with mobility impairments, crossings that are ramped, flush with the carriageway or have minimal upstand are likely to be necessary.

The use of tactile paving / information can compensate for absence of a kerb. However, the need for tactile surfacing will need to be assessed against a number of local factors and a balance will need to be made over what is considered to be a reasonable level of provision. For example, in suburban areas where pedestrian flow levels are likely to be low, there may be wider ranging benefits in providing a series of strategically placed dropped kerbs where none have existed previously than providing tactile information at a small number of existing informal crossing points.

The provision of tactile surfacing at **all** dropped kerbs at informal crossing points is unlikely to be viable both in terms of balancing needs and finances. However, in a town centre environment the need for tactile surfacing is likely to be more crucial in enabling safe navigation for blind and partially sighted people.

However, where it is considered to be appropriate and reasonable to provide tactile surfacing, the following guidance should be used as a basis (detailed information is available from the DfT's '**Guidance on the use of tactile paving surfaces'**):

- Where controlled crossings exist, RED coloured tactile paving should be used
- Where uncontrolled crossings exist, BUFF coloured tactile provision should be made NOT red
- At all crossing points with dropped kerbs, tactile surfacing should be laid across the full width of the dropped kerbs. At signalised crossings, the tactile paving should be installed from the kerb edge to the back of the footway

The choice of surfacing used can link strongly to aesthetics and the sense of 'place'. In many instances it may be appropriate to use a variation of the traditional style of tactile paving, for example possibilities exist in relation to 'stick on' tactile information or alternative surfacing constituents.

In certain conservation areas and in locations where listed buildings exist variations may be used, for example tactile surfacing can be manufactured in natural stone to enhance the steetscape. In Ludlow town centre, brass studs have been used instead of red tactile paving whereas in Oswestry buff coloured blister paving has been used at the controlled crossings within the conservation area. Brass studs may be used; however consideration should be given to the extent to which they may become slippery when wet.

Consideration may also be given to providing an element of colour / surface contrast at pedestrian crossings, where appropriate. This can not only provide some delineation for blind or partially sighted people but may also contribute towards providing an additional visual warning to motorists of the likelihood of pedestrian crossing movements.

It is important to consider what types of pedestrian crossing can be used and their corresponding impacts on disabled people:

Pedestrian refuges

Pedestrian refuges, or traffic islands, are placed in the middle of wider roads where there is no crossing point as they can help to narrow the road and facilitate crossing in two stages. Pedestrian refuges should be accompanied by dropped kerbs and tactile paving. Traffic is not required to stop and there is not formal indication of when it is safe to cross. Particular consideration should be given to the width of the central island to ensure that it is big enough to allow a wheelchair user to wait in safety.

Zebra

A zebra crossing is an uncontrolled crossing that is delineated by black and white stripes across the carriageway with flashing amber beacons. Motorists are required to give way to pedestrians that have moved onto the crossing. A zebra crossing should be accompanied by tactile surfacing with either dropped kerbs or a raised crossing. However, there is no formal indication of when the traffic has stopped or when it is safe to cross the road. The use of zebra crossing is generally not recommended on roads where traffic speeds exceed 35 mph.

Pelican

These are signal controlled crossings that are operated by pedestrians by using a control button to activate traffic signals. Pedestrian orientated signals are also provided, a green figure indicates when it is safe to cross the road and a red figure indicates when pedestrians should not cross. When the green figure flashes, a pedestrian should not start to cross, but those already crossing should have time to finish crossing safely.

Some pelican crossings have a bleeping sound that indicates to blind or partially sighted people when the constant green figure is showing. The pedestrian control units may also have a tactile indicator (see below). Pelican crossings are typically accompanied with dropped kerbs and tactile paving.

Toucan (Two-can cross)

These are signal controlled crossings that are operated by pedestrians or cyclists and work in a similar way to Pelican crossings.

PUFFIN (Pedestrian User – Friendly Intelligent crossings)

These are signal controlled crossings that are operated by pedestrians, however unlike Pelican crossings there is no flashing green phase and the read and green figures are located above the pedestrian control box. Generally, bleepers or tactile indicators will be fitted to the control unit.

Infra-red cameras are used to extend the amount of time that drivers see a red signal to ensure that elderly or disabled people have enough time to cross the road safely. Heat sensors are used to detect when pedestrians are waiting to cross the road. PUFFIN crossings are typically accompanied with dropped kerbs and tactile paving.

Staggered Pelican, Toucan or PUFFIN Crossings

These are two separate crossings that are not in line, but located on either side of a central island. Pedestrians are required to cross in two separate stages by activating traffic signals at each crossing. Central islands may typically be characterised by pedestrian guard railing, on a 'dog leg' island formation to confine pedestrian movements (pedestrians are effectively 'sheep-penned' until it is safe to cross). Consideration should be given to the ease of use for visually impaired pedestrians, and the impact of width and turning movements for wheelchair users.

Pelican, Toucan or PUFFIN crossings generally have the best level of provision for people with disabilities, however it is important to consider the appropriateness of different crossings in different contexts, for example a balance needs to be made on the level of demand for crossing at a particular location against the relative speed and volume of vehicles.

Consideration should also be given to:

- The appropriateness and usability of central refuges and 'sheep-penning'.
- The time allowance given to pedestrians crossing
- The delay in waiting for a crossing opportunity / 'green man' phase
- The indicators used – for example a tactile indicator should not be used as a substitute for audible signals, as they cater for different needs. Where an audible signal is used, consideration should be given to whether there is a need to phase the sound in order to minimise disturbance to residential properties during the night.
- The placement of the control unit on controlled crossings i.e. consistent placement to enhance use by visually impaired users and reduce the need for dog handlers to change sides
- The type of button used on controlled crossings, for example a raised button with a large diameter that can be activated by a closed fist is likely to make use easier by pedestrians with mobility impairments. Buttons should have an illuminated LED surround or be colour contrasted

The following list outlines some key recommended measurements in relation to controlled crossings:

- The control unit should be located near to the tactile surface
- The centre of the button on the control unit should be between 1000mm and 1100mm above footway level.
- The control unit post should be clearly marked with a contrasting band (140mm – 160mm depth), with lower edge located 1400mm – 1600mm above footway level.
- Where a tactile indicator is used (rotating cone) for the continuous 'green man' phase, it should be located on the right hand side of the bottom of the push-button unit (extending 20mm down with a diameter of 15mm)

- Centre refuges, where provided, should be at least 1500mm (preferably 2000mm) in order to cater for wheelchair users. If part of a staggered crossing, there should be a minimum clear width, between guardrails, of 2000mm in order to allow two wheelchair users to pass each other

It is also important to recognise the role of different roads when assessing the suitability of crossings. For example, a side road may be used as a 'rat run' and therefore the pedestrian flow may be interrupted by difficulties crossing and create an increased risk of accident.

Further detailed guidance on the appropriate types and designs of pedestrian crossings has been produced by the Department for Transport and is listed in the 'Recommended Literature' section contained within this document (Chapter 15).

Maintenance

The level of maintenance given to footways, crossings or other features can have a significant effect on the level of service given to all users, but particularly for sensory or mobility impaired users. Not only can poor maintenance impact upon the use of the network in terms of obstructions and trip or slip hazards but it can also contribute towards the level of perceived personal security.

Maintenance considerations may include:

- Broken street furniture / the likelihood of breakage
- Poor maintenance of soft landscaping, including the maintenance of overhanging foliage or hedges
- Ineffective drainage / standing water
- Placement of gullies (avoid trip hazards)
- Litter / dog fouling
- Fallen seasonal foliage
- Quality of repair by utilities companies / reinstatements
- Winter maintenance – ice etc.
- Quality of neighbouring properties

Consideration should also be given to the fact that some maintenance problems only manifest themselves at certain times, for example during wet or cold weather or at changes in season.

Direction on the treatment of street works should be sought from the DfT's **Code of Practice on Safety at Street works and Road works (2002).** The Code of Practice outlines the duty placed upon those undertaking street works to ensure that pedestrians are safe during the works. The Code of Practice states that the needs of "children, elderly people and people with disabilities, having particular regard for visually impaired people" must be taken into account. In doing so, a suitable barrier must be provided that separates pedestrians from hazards and provides sufficient access for people with pushchairs or wheelchairs.

In general, the Code of Practice outlines requirements for:

- Provision at footway closures
- The physical provision and signing for safe, alternative routes
- Provision for the closure of a pedestrian crossings i.e. turning of signals and use of barriers and signing to divert pedestrians
- Dimensions for temporary ramps to provide strong, slip resistant access that is suitable for use by wheelchairs[8].

Where maintenance by utilities companies is necessary, any provision for pedestrians such as tactile paving should be repaired to the original standard. It should be remembered that the level of provision for pedestrians during streetworks may be compromised by any emergency work that needs to be carried out by utilities companies.

Local schemes

The following photograph shows a Toucan crossing that has been installed on Shelton Road in Shrewsbury. The crossing displays the use of tactile paving and dropped kerbs that are flush with the carriageway for the full width of the crossing facility.

Picture 10.1 Toucan crossing on Shelton Road, Shrewsbury

8 Images taken from Traffic Signs Regulations and General Directions, 2002

Key considerations

- Pedestrian routes should be convenient, accessible, safe, comfortable and attractive
- A pedestrian environment should be legible to make wayfinding intuitive
- Attention should be given to footway widths, gradients and crossfall and suitable surfacing free from trip and slip hazards
- Tactile information should be correct in terms of type and alignment
- Crossings should be appropriate and consistent in provision in terms of tactile information, placement of signal activating equipment, dropped kerbs etc. It is important to consider the use of side road crossings in terms of continuity along a pedestrian route
- Dropped kerbs should be provided at all crossings, kerbside disabled parking and at regular intervals along desire lines
- Street furniture should be aligned have appropriate colour contrast.
- Street lighting should illuminate obstacles and be even, effective and minimise glare
- Rest points should be provided at regular intervals
- Consider the implications of maintenance, not only in determining new schemes but also in providing for street works and seasonal variations

11 Improving accessibility - cycling infrastructure

The provision of cycle infrastructure is vital in order to offer people an alternative and more healthy means of travel. Through extension and expansion of the cycle network disabled users can benefit in two main ways:

- The provision of facilities for disabled cyclists who use non-conventional bicycles such as tricycles and tandems.
- The provision of cycling facilities that disabled users who are not cyclists can use e.g. the provision of dropped kerbs and low gradient routes.

The guidelines below refer to specific features relating to cycle infrastructure. The guidelines should be used in conjunction with those outlined in Chapter 10 (Improving accessibility for pedestrians), as much of the information is relevant and is not repeated in this section i.e. signalised crossings, dropped kerbs, maintenance etc.

As outlined above, provision for cyclists can have a dual role. This chapter aims to consider the needs of both types of user and it is suggested that suitable cycle provision for these users is likely to result in wider benefits to other cyclists and pedestrians, and also young cyclists.

Guidelines

The Department for Transport's guidance on **'Policy, Planning and Design for Walking and Cycling'** (Local Transport Note 1/04 – Consultation Draft 2004) outlines five core principles in relation to the design requirements for the provision of high quality infrastructure, these are based upon an underlying principle – **"that measures for pedestrians and cyclists should offer positive provision that reduces delay, diversion and danger".**

These core principles are based upon key requirements derived from the Institution of Highways and Transportation (IHT) guidance for pedestrians and cyclists ('Providing for Journeys on Foot' and 'Cycle Friendly Infrastructure').

Convenient	Allow people to go where they want, new facilities should encourage directness and reductions in delay
Accessible	Schemes should aim to contribute towards a network of continuous and direct routes, where possible that serve key trip origins and destinations
Safe	Schemes must be physically safe, and perceived to be safe
Comfortable	Schemes should be compliant with appropriate design standards and cater for all users
Attractive	Facilities should encourage use and attention should be given to the level of integration with the surrounding environment in terms of aesthetics and noise

The following guidelines are based upon guidance issued by Sustrans (1997); '**The National Cycle Network Guidelines and Practical Details'** and the DfT Local Transport Note (2/04) on '**Adjacent and Shared Use Facilities for Pedestrians and Cyclists**'. Key guidance on the planning and design of cycle facilities is contained within the IHT document **'Cycle-friendly Infrastructure'** (1996).

It is anticipated that where a scheme is designed for pedestrians and cyclists to share, the design should automatically incorporate the needs of disabled users. The decision on whether to use segregated (adjacent use) or unsegregated (shared use) is based upon the flows of users and the proportions of different user groups (including disabled users) both along, and across, a route.

However, site specific factors should be considered at all times. If flow levels are too high on a shared, unsegregated route, disabled users are likely to be discouraged from using the facility, although this is less likely to be the case in pedestrian areas, locations with historic features and other vehicle restricted areas. Similarly, in rural areas shared use is likely to be more acceptable due to lower levels of pedestrian and cycle activity.

Some disabled users especially those with visual impairments and hearing difficulties have particular concerns with the development of shared use routes, especially those which are unsegregated. It is likely that unfavourable perceptions are a barrier to the use of cycle facilities and measures should be taken to alleviate such fears, for example through consultation at the earliest stage with potential disabled users.

It should be recognised that people with visual or hearing impairments may often not be aware of approaching cyclists. Where possible, cyclists should be made aware of the potential for encountering people with sensory impairments on adjacent or shared use cycle facilities.

Segregated cycle provision

Where possible it is preferable to segregate (adjacent use) cycleways and footways rather than use unsegregated (shared use) facilities. The DfT's Local Transport Note 2/04 states that "there should be a presumption in favour of segregation in the absence of reasons for not doing so". A route is more likely to be segregated if disabled, or other vulnerable road users, are likely to use it frequently. In Shropshire there is a general policy to use segregated facilities within urban areas, where possible.

There are number of different measures which can be pursued, in terms of segregation, including; a physical barrier such as the use of a kerb or a verge between the two paths, a flat white line, or a raised painted line delineating the change in use which can assist visually impaired pedestrians (described in more detail later in this chapter), especially white cane users. Where width permits, it is preferable to use a verge or kerb between the cycleway and footway, however the maintenance implications of this kind of approach will need to be reconciled.

Grade seperated facilities

In some instances, it may be considered appropriate to have a difference in level between a footway and the adjacent cycle track. This can provide clear delineation for pedestrians and cyclists and can particularly assist visually impaired pedestrians.

Grade separated facilities are only likely to be possible where a substantial amount of space is available. In particular this type of provision may be considered in new build developments. Consideration should be given to the need for dropped kerbs to access the footway and the provision of effective width to allow for ease of movement by pedestrians, wheelchair users and cyclists. The maintenance implications, such as drainage for example, will also need to be considered.

The following diagram shows an example of widths that would be appropriate for an adjacent use layout, as described by the DfT's Local Transport Note 2/04. It should be noted that this arrangement is likely to be appropriate for traffic free, shared use cycle facilities and in locations where there are high pedestrian and cyclist flows. The widths shown may need to be compromised in other situations, depending upon the local circumstances.

It may be considered appropriate to use kerbs with a chamfered edge, as these can provide a less severe barrier between cyclists and pedestrians and can assist wheelchair users if they need to use the other side of the facility to avoid obstructions. Although a level difference of 125mm is often used to separate footways and carriageways, 50mm is considered to be acceptable for shared use facilities where cyclists are to be discouraged from encroaching on to the pedestrian side

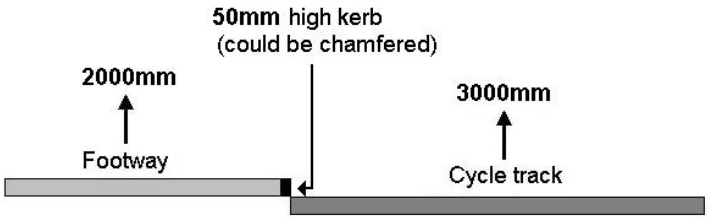


Figure 11.1 Grade seperated footway and cycle track

Care should also be taken over the choice of surface type to ensure that the grade separation is readily identifiable to pedestrians who are visually impaired or who may have cognitive difficulties.

White line separation

It should always be considered first whether it is possible to provide segregation between cyclist and pedestrian facilities by the means of a verge or grade separation. Only where this is not possible is separation by means of a white line acceptable.

'**The Guidance on the Use of Tactile Paving Surfaces'** (1998) states that a line can be laid to a height of between 12mm and 20mm, this can provide tactile information or a tapping line for visually impaired pedestrians. However, there are also safety concerns regarding

the use of raised white lines for pedestrians and cyclists in terms of the potential for tripping and slipping when crossing at a shallow angle, as well as problems of accumulation of debris and ongoing maintenance requirements. A flat white line may allow users to pass each other more easily and safely where width is restricted.

A balance needs be made between the benefits to visually impaired pedestrians and the potential hazards of a raised white line. The DfT Local Transport Note (2/04) states that unless consultation is undertaken, there is a presumption that a raised line is required for the minimum standard of segregation. Consultation with both cyclists and disabled user groups in Shropshire has revealed that there is no majority view on the use of raised white lines.

It is proposed that in Shropshire local scheme specific consultation is undertaken and site specific factors considered, but that there is a general presumption **not** to use raised white lines on segregated cycling infrastructure, unless case specific factors or particular requirements are apparent.

Instead a flat white line should be installed to delineate segregated, shared facilities and consideration given to providing a clear colour or surface texture contrast.

Corduroy tactile provision on cycleways in Shropshire

'**The Guidance on the Use of Tactile Paving Surfaces'** (1998) states that a tactile surface should be used on any segregated shared route where the designated pedestrian side is not physically separated (i.e. change in level) from the designated cyclist side.

The Guidance suggests that the tactile surface should be laid at both the start and end of a segregated, shared facility, at any junctions with other pedestrian or cycle route and at regular intervals along the route. The tactile surface should be laid across the full width of both the footway and cycle track and extend to a depth of 2400mm. Where repeater strips are installed, the depth is reduced to 800mm.

Cordoroy paving is typically used for tactile surfacing on shared, segregated cycle facilities. This type of paving is characterised by raised bars that are laid with the bars running transversely across the direction of travel on the pedestrian side and running in the direction of travel on the cyclist side.

When considering the appropriate segregation of adjacent use cycle facilities and the provision of any tactile information, consideration should be given to the extent to which a blind or visually impaired personal can interpret the facility. For example:

- Do visually impaired people know what the tactile information is communicating to them?
- Can visually impaired people recognise which side of an adjacent use facility is for pedestrians?

Informal consultation with both cyclists and disabled user groups in Shropshire has revealed that there is no majority view on the use of corduroy paving and the current layouts are poorly understood and inconvenient for many users. This consultation has also shown that cyclists are particularly concerned about the hazard posed to cyclists by corduroy paving running in the direction of flow on the cyclists' side of a segregated track.

It is therefore proposed that in Shropshire local scheme specific consultation is undertaken and site specific factors considered, but that there is a general presumption **not** to use corduroy paving on cycling infrastructure, unless case specific factors or particular requirements are apparent.

However differentiation between the cyclist and pedestrian sides of a cycle track should be emphasised by use and maintenance of white cycle and pedestrian symbols on the surface of the appropriate sides of a shared use facility at both the entry and exit points and at any junctions.

It should also be remembered that the use of different colours or surface textures can assist people with visual impairments. Consideration may be given to the use of different surfaces on the different sides of a segregated, shared route.

Effective width

The following diagrams (Figures 11.2 and 11.3) show the standard width measurements for cycle facilities, both segregated and unsegregated, as recommended in the DfT Local Transport Note (2/04) and reflected in the Sustrans National Cycle Network Guidelines and Practical Details (1997). **It should be noted that the dimensions shown for the cycle facilities are considered to be absolute minimums.** The widths are given as guidance and consideration will need to be given to the specific characteristics of proposed schemes where adaptations of the recommended widths may be necessary.

Where appropriate, consultation should be carried out with the relevant user groups to determine the effective type of provision for given locations. Consideration may also need to be given to the use of non-conventional bicycles and the potential need for a wider facility.

Ultimately, consideration should be given to the effective width given to both cyclists and pedestrians in shared use facilities, both segregated and unsegregated, for example can the facility be used and are alternatives available for sections where the width may be restricted by other features?

An indication of the recommended widths required for ease of movement for people with disabilities is contained within Chapter 10.

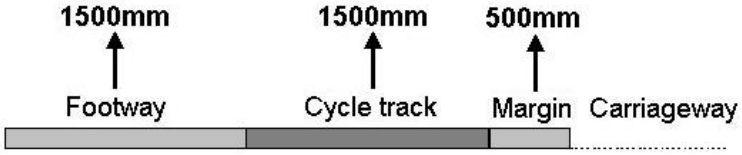


Figure 11.2 Recommended widths for a segregated cycle track / footway

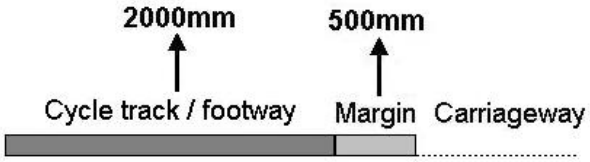


Figure 11.3 Recommended widths for an unsegregated cycle track / footway

Particular consideration should be given to whether the facility is 'bounded' i.e. where the width of a footway or cycle track is restricted by a wall, carriageway, bush or barrier. Under these circumstances additional width may be required if the effectiveness of the facility is to be maintained.

The Sustrans guidance (1997) suggests that a footway, as part of a segregated facility, should be a minimum width of 1750mm where bounded. The DfT Local Transport Note (2/04) provides specific guidance on the additional width required for different heights of vertical features or upstands. This is summarised as follows:

Additional width requirements for footways and cycle tracks (DfT Local Transport Note 2/04)

Type of edge constraint	Additional width
Low upstand, up to 150mm high	200mm
Vertical feature from 150mm to 1200mm high	250mm
Vertical feature, over 1200mm high	500mm

Legal status of manual/electric wheelchairs and mobility scooters on adjacent and shared use facilities

In terms of road traffic legislation, manual / electric wheelchairs and mobility scooters are categorised as invalid carriages and although some are powered, they are not classed as a motor vehicle.

The DfT Local Transport Note (2/04) on '**Adjacent and Shared Use Facilities for Pedestrians and Cyclists**' details three categories of invalid carriage:

Class 1 Manual, self propelled or attendant propelled wheelchairs

Class 2	Powered wheelchairs and mobility scooters for footway use only, with a maximum speed of 4 mph
Class 3	Powered wheelchairs and mobility scooters with a maximum speed of 8 mph for use on roads. When used on footways they must not exceed 4 mph and be fitted with a converter which prevents that speed being exceeded. Vehicles can be used on the road however they cannot be used on motorways or in bus lanes. In some instances, a Traffic Regulation Order may prevent Class 3 vehicles from being used in cycle lanes.

An invalid carriage can be used on footways, footpaths, bridleways or pedestrianised areas providing that it is used in accordance with the prescribed requirements. Invalid carriages have no specific right to use a cycle track but users commit no offence in doing so, unless an order or local bye-law exists creating one. Powered invalid carriages are not classed as motor vehicles for the purposes of Road Traffic Legislation (Road Traffic Act 1999, section 185(1)). As Class 3 carriages can be used on the road, care should be taken when preparing the wording of a Traffic Regulation Order for cycle lanes so that these vehicles are not inadvertently banned from using them.

Department for Transport (2004), Local Transport Note (2/04) 'Adjacent and Shared Use Facilities for Pedestrians and Cyclists'

Provision alongside carriageways

Where an adjacent or shared use cycle track runs adjacent to a carriageway, a margin strip of 500mm should be provided between the track and the carriageway. If segregated, the cycle track should normally be located between the footway and the carriageway. Consideration will need to be given to the treatment of a margin strip:

- Placement of the kerb – this can achieve a greater width available on a cycle track where it may otherwise be restricted
- Grass – consideration should be given to the maintenance implications of the use of grass margins
- Contrasting surface types that are sympathetic to the surrounding environment e.g. brick paving, stone setts etc. Coloured surfacing will not usually be considered for cycle tracks or margin strips.

A white line should not be used to delineate a margin as this can confuse motorists' perception of the location of the edge of the carriageway and increase the risk of vehicles mounting the footway, especially after dark.

Where possible it should be made obvious that the margin is not part of the facility, however in areas where width is constrained or where aesthetics are of a sensitive nature, this may not always be possible or appropriate.

The use of a margin strip can enhance the available space and perception of safety for disabled users. The margin strip also enables the alignment of street furniture such as sign posts or lighting columns. Typically, signs must be 500mm back from the carriageway and ideally this should be matched on the cycle track side. The margin may be as narrow as 500mm, however specific guidance should be sought and a judgement is likely to be based on the width available for use.

Crossing facilities

The guidelines provided in the previous section on pedestrians, should be referred to with regard to crossing facilities. In addition to the guidance provided in the two DfT Local Transport Notes on the assessment and design of pedestrian crossings (1/95 and 2/95), more specific guidance on Toucan crossings is available in the DfT Traffic Advisory Leaflet (TAL 4/98) '**Toucan Crossing Development**'.

Dropped kerbs

Consideration should be given to the guidance on dropped kerbs contained within Chapter 10 (Improving accessibility for pedestrians) in terms of wheelchair use and minimum upstands. There should be an aim to make dropped kerbs as close to flush with the carriageway as possible, with particular consideration to the angle at which users are expected to approach the facility – the presence of upstands can be hazardous to cyclists if approaching from an oblique angle. However, a balance may need to be made with regard to the maintenance implications of kerbs that are flush, for example the likelihood of standing water collecting.

Subways and bridges

Guidance on the design of subways and bridges for user by pedestrians and cyclists is contained with the Design Manual for Roads and Bridges (DMRB) standards TD 36/93 '**Subways for Pedestrians and Pedal Cyclists Layout and Dimensions**' and BD 29/03 '**Design Criteria for Footbridges**'.

Particular consideration should be given to:

- Continuity in separate cyclist and pedestrian routes through the subway (desirable)
- The need for cyclists to slow down on ramps and before sharp bends and the need for compliance with minimum stopping distances (TD 36/93) – a balance needs to be made between the use of gradient to slow speeds and the accessibility for disabled users
- The need for cyclists to have the ability to keep to the cycle track side of a subway
- The need to avoid potential conflict between pedestrians and cyclists, especially where visibility is limited
- The minimum width requirements for footways/footpaths and cycle tracks as recommended by the DMRB

Cycle parking

Secure cycle parking should be provided as close as possible to key destinations if it is to be used successfully and assist in encouraging use of the bicycle as a viable mode of transport. Cycle parking should be adequately lit and well signed.

Consideration should be given to the type of parking provided. Cycle parking should be easy to access and the use of conventional locking devices should be possible. The cycle parking should also provide support for the entire bicycle and offer the possibility of securing both the frame and wheels. One type of stand that meets these requirements is the 'Sheffield' stand. The use of 'butterfly' racks (attachment for wheels only) should be avoided as they provide less support and can act as a trip hazard for pedestrians. Consideration should be given to the aesthetic impact of cycle parking and other options may be considered to be more appropriate.

The guidance contained within the section on 'Street Furniture and Obstructions to Movement' should also be considered when providing cycle parking. Cycle parking provision should not obstruct pedestrian flow. Particular consideration should be given to the impact upon people with a visual impairment (i.e. marking cycle parking with contrasting coloured bands) or the effective width available for wheelchair users.

Further guidance on the provision of cycle parking is provided in the Sustrans Information Sheet FF37 – '**Cycle Parking**' (2004) and '**The National Cycle Network Guidelines and Practical Details'** (Sustrans, 1997).

Other design considerations

Consideration should also be given to the following when designing infrastructure for bicycles.:

- Sightlines – cyclists and pedestrians must have a clear warning of each other's approach. This is particularly important at corners, junctions and at vehicular accesses to private premises.
- Signing, marking and information should be produced in accordance with the guidance contained within the DfT Local Transport Note 3/04 '**Signs and Markings on Cycle Routes**' (Draft). Consideration should be given to the potential use by disabled users and the need for consistency. The use of reminder track markings (i.e. cycle symbols on the track surface) can be particularly valuable on segregated facilities
- Street furniture should not obstruct the facility across its width. Particular consideration needs to be given to the use of bollards and where possible reflective bands should be fitted. The vertical clearance of signs, overhanging vegetation and subways should also be considered.
- Lighting should be considered to enhance perceptions of personal security for users; this can also assist visually impaired pedestrians. A balance will need to be made over the need for lighting and any resulting light pollution
- Surfacing – The IHT Guidelines for Planning and Design ('**Cycle-friendly Infrastructure**') provides a number of options for creating a smooth transition between a cycle track and the carriageway.

- Maintenance, in particular surface quality, drainage, debris or litter on the route and overhanging vegetation.
- Barriers or gates may be considered to be necessary in certain locations to promote the safety of those using the cycle facility. Consideration should be given to the ease with which disabled users can negotiate any barriers or gates put in place. This type of provision should only be used as a last resort.

Local schemes

The following pictures show an example of a scheme undertaken at Market Drayton where a former footpath was upgraded to a shared use cycleway. The photographs show how the improvement in quality has enhanced the accessibility of the route by disabled users.

Picture 11.1 Market Drayton cycleway (before)

Picture 11.2 Market Drayton footway (after)

Key considerations

- Understand the likely flows of pedestrians and cyclists and choose a scheme type accordingly
- Consider the actual width of a facility in conjunction with any vertical features that may reduce the width available
- Do footbridges and subways act as a barrier to use of the route?
- Consider appropriate segregation measures
- Consider appropriate crossing facilities in providing for cyclists and disabled users
- The continuity of routes for pedestrians and cyclists
- Sightlines - Is there any potential conflict between pedestrians and cyclists?
- What are the general design requirements in terms of lighting, maintenance, street furniture and signage?

12 Infrastructure improvements in historic areas

Many of the market towns within Shropshire have historically significant cores with networks of narrow streets. It is therefore necessary to consider the sensitive and sympathetic design of schemes that are to be located in historic environments.

Guidelines

A number of guidance documents have been produced by the English Historic Towns Forum (such as 'Traffic in Historic Town Centres', 1994) and these should be referred to, especially where listed buildings are in close proximity to the works.

Reference should also be made to design statements (where they exist), which have been developed with many of the town councils in the County along with guidelines given in the recommended literature section.

It is recommended that an ongoing dialogue be developed with the necessary stakeholders (i.e. town councils, planning authorities, conservation officers etc.) over creating a balance between the aesthetics of the built environment, the needs for transport infrastructure and the accessibility requirements of disabled users.

Particular consideration should be given to the use of high quality materials in historic environments. The use of specifically made materials can provide strong links to aesthetics and the sense of 'place'. A number of benefits can be realised for the wider community in terms of both improvements to physical accessibility and also, an enhanced sense of civic pride. The ongoing maintenance implications and life cost of a scheme should also be evaluated.

Other initiatives may be to incorporate disabled parking into a scheme of overall carriageway narrowing, the use of local or aesthetically pleasing materials and surface contrasts (as used on the High Street route in Shrewsbury), and the provision of smooth even sections within cobbled areas to minimise discomfort to disabled users etc. However it should be remembered that irregular surfaces (i.e. cobbles) may be problematic, frightening or painful to pedestrians with mobility difficulties.

The potential for variations to standards that can be used in certain conservation areas or historic locations should be explored and an overall consensus between key stakeholders developed. For example, in Ludlow town centre brass studs have been used instead of red tactile paving. However, the likelihood of brass studs becoming slippery when wet must be borne in mind and their use should be the output of a detailed consultation exercise. Similarly, the use of irregular surfaces, such as cobbles, can be problematic for people with mobility difficulties.

A process of consultation should be used to work towards consensus building for the mitigation and treatment of any issues arising from the sympathetic treatment of historic environments.

The shape and type of environment will often dictate what types of scheme are possible and designers should adopt a holistic approach in order to examine the wider potentials for mitigation measures and overall improvement to the level of provision for people with disabilities. For example, where space is limited to expand footways, consideration may be given to the possibility of wider traffic calming, for example introducing one-way street networks or partial / full pedestrianisation.

It is important that the needs of disabled users outlined in the preceding sections of this document are considered and that a process of mitigation and consensus building is developed for individual schemes.

Key guidance is contained within '**Traffic in Historic Town Centres'** (English Historic Towns Forum, 1994) and '**Traffic Measures in Historic Towns - An Introduction to Good Practice**' (Civic Trust/English Historic Towns Forum, 1993). Further assistance can be obtained from the relevant Conservation Officer within the County Council.

Potential issues

The following list provides some examples of potential issues that disabled users have communicated to Shropshire County Council through a consultation exercise on this document that should be considered when undertaking improvements to infrastructure in historic areas:

- The use of highway features that are intended to reduce the visual impact upon aesthetically sensitive environments may cause confusion or particular trip of slip hazards for disabled users. For example, a reduction in colour contrast or the use of alternative tactile surfaces.
- The need for clear delineation at crossing points in historically sensitive areas.
- The use of cobbles can be particularly problematic to disabled users and the use of 'smooth' alternatives, such as york stone, should be considered.
- Brass studs can become slippery underfoot, especially when wet or worn.
- Deviation from the standard application of coloured surfaces can lead to confusion for disabled users.

Local schemes

The photographs below show two examples of where sympathetic street works have been undertaken in Shrewsbury. Measures to make the streetscape more accessible have included the rationalisation of street furniture, rerouting of traffic, uncontrolled at-grade crossings and improvements to signs.

Picture 12.1 High Street

Picture 12.2 High Street/Milk Street

Key considerations

- Potential for variations to standards
- Consensus building and consultation with key stakeholders
- Consideration of benefits for all and 'whole impact' approach (see chapter 3)

13 Accessible Information

The term 'accessible information' covers a range of issues from pre-trip information to route signs. Information can be available in a variety of forms, for example timetables, the internet and telephone help lines (as described in the rail section of this document), signs, distinctive features or landmarks, maps, street names etc. The provision of comprehensive and consistent styles of information can assist disabled users in building a mental image of an area and consequently enhance orientation, wayfinding and independence.

It is particularly important to make information simple and easy to comprehend to assist people with visual impairments, hearing impairments and learning difficulties. This is not just about making signs legible for people with visual impairments, but also about acknowledging that signs need to be easy to comprehend for people with learning difficulties, that people with hearing difficulties are likely to be more reliant on written information and that people in wheelchairs will need information to be provided in a visible and accessible location.

Used in conjunction, the use of tactile information, colour and tonal contrasts and the position of appropriate signs with compliant text sizing, fonts and finishing can assist in making an environment legible for users.

Guidelines

General information and provision

Signs should be provided that encompass facilities and key trip destinations in the area. In particular, services that are for disabled people in particular should be highlighted (such as disabled toilets, accessible buses, Shopmobility etc.). Key guidance is contained within the DfT's '**Inclusive Mobility**' document and the '**Sign Design Guide**' (2000).

Pre-trip information media

In order to provide users and potential users an appropriate understanding of the potential trips they could make it is vital to have this information available to as wide an audience as possible. This information can vary from bus timetables to cycle maps. Possible ways of getting the message across include; door to door delivery, telephone enquiry line, websites and press advertising.

Real time passenger information is being used increasingly for both pre trip planning and also route updates. Real time information can take a number of forms including continuous and demand responsive information.

Timetables and maps

Timetables should be clear and easy to understand, this can be achieved through a number of ways. For local services this could be through using symbols of key landmarks as opposed to names alone. The use of symbology can be particularly important for people with learning difficulties to enable them to comprehend the necessary information.

Consideration should be given to the font and colours used so as to assist visually impaired people. The DfT document on '**Inclusive Mobility**' recommends that simple mixed case sans serif typefaces are used at a print size of 16 point with a good contrast between the information and the background on timetables that are read from a short distance.

Ideally information should be a matt finish to avoid reflection; this should be complimented by careful consideration when locating the information. In general, care must be taken to avoid clutter on maps and timetable information. Consideration should also be given to rationalizing information in display cases e.g. reducing advertising clutter to make the bus information conspicuous.

Consideration may be given to the use of different maps, perhaps that display more icons or, as has been achieved in Bristol ('The Legible City'), orientating 3-dimensional maps towards the viewpoint of the user.

Signs

Adequate signs are vital for the user to find their way to the destination, it is important to remember that a trip is likely to be two-way so provision must be made for both directions of travel. As with timetables, the use of symbols is favoured.

For pedestrian and cycling signs, it may be more useful to provide an indication of approximate distance in time rather than mileage, for example it is likely to take much longer to walk half a mile up hill than down hill. If journey times are to be placed on signs it is likely that some form of dispensation will be required as current sign regulations do not favour journey times.

In general the height of letters used should be at least 1% of the distance at which the message will usually be read, with a minimum height of 22mm, where space permits the height should be greater.

Fonts / typefaces should:

- Be Sans Serif
- Use sentence case lettering (easier to distinguish than upper case)
- Use Arabic numbers
- Have a width to height ratio of between 3:5 and 1:1
- Horizontal spacing between characters should be 25-50% of character width and 75-100% between words
- Vertical spacing between lines should be at least 50% of character height

It is important that words and symbols on a sign contrast with its backing. Whether light text on a dark background or vice versa is used it should be based upon site specific characteristics and a judgement will need to be made (e.g. white on black, gold on black or white on blue).

A person's ability to see and read displayed information can depend upon a number of factors such as light available, shadows and the height of the information.

In terms of positioning, the DfT's 'Inclusive Mobility' contains the following recommendations:

- The optimum viewing angles for signs mounted on vertical surfaces are +/- 30° in the vertical place (from eye level) and up to 20° either side of a 90 ° line to the sign in a horizontal plane. Consideration should be given to potential obstructions such as passers by

- The optimum viewing angle for signs on mounted on vertical surfaces are +/- 30° in the vertical place (from eye level) and up to 20° either side of a 90 ° line to the sign in a horizontal plane – consideration should be given to potential obstructions such as passers by
- Wall mounted signs / information should be centred around 1400mm from the ground with the bottom edge no less than 900mm from the ground and the top edge no more than 1800 above the ground. It may be considered necessary to duplicate certain signs at lower levels (i.e. at 1600-1700mm and 1000-1100mm to assist viewing by wheelchair users
- The size of letters should vary depending upon the likely distance from which the sign is being read. For example: long distance reading (i.e. building entrances) = 150mm (min), medium distance reading (i.e. directional signs in corridors) = 50-100mm and close up reading (i.e. wall mounted information signs) = 15-25mm
- Consideration should be given to visually impaired users, for example for someone registered as partially sighted (6/60 vision) the character size to reading distance ratio is approximately 1:27 or 3.75%
- When using Variable Message Signing (VMS) consideration should be given to different reading rates

Numerous studies exist on the design of signs however the most extensive and legal requirements can be found in **Traffic Signs Regulations and General Directions 2002.** Dispensation may be sought; however this is likely to be subject to the relevant Highway Authority's permission.

Audible information

When providing audible information, consideration should be given to the level of surrounding ambient noise in relation to the volume of the signal or announcement.

Wayfinding and orientation

Signs should provide information on key trip destinations, facilities for disabled users and street names. In particular, older people who may suffer from dementia often get lost due at key decision making points such as road junctions. However, these people often remember streets, buildings and other distinctive features and these can assist with orientation. Therefore, when designing schemes, consideration should be given to the provision of landmarks such as street furniture, planters or public art, this should not however cause an obstruction to other users.

Where signs are provided, consideration should be given to rationalisation and the avoidance of clutter, a finger post with multiple pointers can be ambiguous and confusing.

Local schemes

The following picture shows an example of good practice in providing accessible information.

Picture 13.1 'How to get to....' leaflets

The leaflet shown is an example of a 'How to get to…..' leaflet that has been produced by Shropshire County Council. The leaflet is easy to read and provides details of disabled parking provision. The leaflet also contains contact details for having the leaflet reproduced in large print, Braille or audio tape.

Key considerations

- Consider the appropriate location of information both in terms of reading distance and height, attention should be given to potential obstructions
- Signs should contain information on key destinations and specific facilities for disabled users
- There should be good colour contrast between the background of the information / sign and the text
- Consideration should be given to level of background noise when providing audible information
- Consult Traffic Signs Regulations and General Directions 2002

14 Other key considerations

Construction, Design and Management Regulations 2007

The design of a scheme can have a crucial role in determining the level of health and safety on site, effective planning and managing risk. It is therefore imperative that clients, designers and contractors are aware of their duties under the Construction, (Design and Management) (CDM) Regulations 2007. The CDM Regulations contain a set of legal requirements relating to those involved in construction work at all stages, including design. Failure to comply with these duties is a criminal offence and both companies and individuals can be prosecuted.

Refer to: **The Construction (Design and Management) Regulations 2007** available from the Health and Safety Executive (www.hse.gov.uk).

Design and Access Statements 2006

In May 2006 the government introduced changes to the planning application process and set out formal requirements to ensure that high quality places are developed that are attractive, practical and inclusive for all people. Design and Access Statements are documents intend to assist the planning application system and explain the design principles behind an application. A Design and Access Statement is used to demonstrate that the applicant has considered how all people (including young children, disabled people and old people) will be able to use a proposed development.

The Design and Access Statements accompany a planning application, but are not part of it. The statements are needed with most types of application, excluding householder applications.

The Access Statement must show that all access issues have been considered:

- Linkages to road layout and public transport provision
- Inclusive access – movement occurs through the place on equal terms regardless of age, disability, ethnicity etc.

The design statement includes details of the physical characteristics of the place in terms of use, quantity, layout, scale (of buildings and spaces), landscaping and appearance.

Refer to: **Design and Access Statements – How to write, read and use them,** Commission for Architecture and the Built Environment (CABE) 2006 and **Guidance on changes to the development control system- Circular 01/06** available from the Department for Communities and Local Government (www.communities.gov.uk).

Highway Inspection Manual

The **Code of Practice for Highway Maintenance Management** (July 2005) outlines guidance on the establishment of an effective regime of inspection, assessment and recording. As part of this, safety inspections are designed to identify defects that are likely to cause danger or serious inconvenience to users of the network or the wider community. Different categories are applied depending upon the likely levels of risk of damage or injury to the highway user.

It is recommended that circumstances that relate to special usage or vulnerable users (such as access to schools, hospitals, people with special needs etc.) are taken into account.

The **Highway Inspection Manual** (2000) outlines the standard for highway safety inspections on Shropshire's roads. In terms of footways and cycleway safety inspections, the network is consistently categorised to dictate the intervals for safety inspections. For example, if a footway is in a main urban shopping area it will require a safety inspection on a more regular basis than a little used rural footway. Similarly, cycleways will be treated differently depending upon whether they are part of the carriageway or part of a shared use facility with pedestrians.

The Highway Inspection Manual outlines different defect categories that can be applied that record how quickly maintenance action on the defect is to be taken. The following defects may be recorded within a safety inspection:

- Major cracking / pothole / abrupt difference in level
- Fretting
- Slab profile – uneven / trips / gaps >20mm
- Slab rocking
- Slab missing
- Overgrown by vegetation
- Defective trench (service companies)
- Root damage – abrupt difference in level

Manual for Streets

The Manual for Streets (MfS) supersedes 'Design Bulletin 32' and 'Places, Streets and Movement'. The document is intended to provide guidance on how street design considerations can support the delivery of "attractive, safe and well-designed residential environments" in accordance with Planning Policy Statement (PPS) 3: Housing.

The Manual for Streets is to be used as a guide to the design, construction, adoption and maintenance of new streets, and existing streets when they are subject to re-design.

One of the main features of the MfS is its revision of guidance relating to highway design. The document moves away from the traditional emphasis on the functionality of highways for the motorist and instead looks at reducing visibility and using alignments to encourage reductions in vehicle speeds. This revision is intended to maintain, or improve current safety levels but also contribute towards creating places that encourage movement by non-motorised modes of transport and that are conducive to social activity.

15 Recommended literature

The following references deal specifically with the needs of people with disabilities and the appropriate design of transport related facilities. The references listed are intended to provide guidance and are generally not prescriptive in their contents.

A number of references are repeated where they are applicable to more than one subject area.

General

- **Code of Practice – Rights of Access: services to the public, public authority functions, private clubs and premises** Disability Rights Commission. Available from: *www.equalityhumanrights.com*
- **Communications Guidelines** Building the Brand – Communications Guidelines for all Shropshire County Council Staff
- **Disability Discrimination Act** HMSO, 1995
- **Doing The Duty - An overview of the disability equality duty for the public sector** Disability Rights Commission. Available from: *www.equalityhumanrights.com*
- **Equality and Human Rights Commission (formerly the Disability Rights Commission)** A range of free information documents, media and resources relating to the Disability Discrimination Act and different disabilities. One section of documents is dedicated to 'Transport'. Available from: *www.equalityhumanrights.com*
- **Inclusive Mobility – A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure** Department for Transport, 2002
- **Local Transport Plan for Shropshire 2006/07 – 2010/11** Shropshire County Council
- **Planning, buildings, streets and disability equality: A guide to the Disability Equality Duty and Disability Discrimination Act 2005 for local authority departments responsible for planning, design and management of the built environment and streets.** Disability Rights Commission. Available from: *www.equalityhumanrights.com*
- **Provision for Non-Motorised Users** Design Manual for Roads and Bridges, Volume 5 – Section 2.
- **Safety at Street Works and Road Works – Code of Practice** Department for Transport, 2001
- **The Disability Equality Duty and involvement: Guidance for public authorities on how to effectively involve disabled people** Disability Rights Commission. Available from: *www.equalityhumanrights.com*

Buses

- **A Practical Guide for Scheduled Buses and Coaches Disability Rights** Commission, 2007. Available from: *www.equalityhumanrights.com*
- **A Practical Guide for Tour Coach Operators** Disability Rights Commission, 2007. Available from: *www.equalityhumanrights. com*
- **Accessibility and the Bus System: from concepts to practice** Tyler N., 2002

- **Bus stop designs for low floor bus accessibility** London Bus Initiative Partnership, June 2000
- **Bus stops: a design guide for improved quality** The Bus Priority Working Group, Translink et al, 1997
- **Code of Practice: Provision and Use of Transport Vehicles** Disability Rights Commission, 2006. Available from: *www.equalityhumanrights.com*
- **Design and Operation of Accessible Public Transport JMU Access Partnership, 1996**
- **Inclusive Mobility – A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure** Department for Transport, 2002
- **Reading and Using Plans** Thorpe S., 1994 (ISBN 0 903976 26 9)
- **Wheels within wheels: a guide to using a wheelchair on public transport Ricability, 2003 Available from:** *www.ricability.org.uk*

Rail

- **A Practical Guide for Rail Services** Disability Rights Commission, 2007. Available from: *www.equalityhumanrights.com*
- **Code of Practice: Provision and Use of Transport Vehicles** Disability Rights Commission, 2006. Available from: *www.equalityhumanrights.com*
- **Making railway stations accessible** TRL Report 199, Transport Research Laboratory
- **National Rail Enquiries** Information available from: *www.nationalrail.co.uk* / 08457 484950
- **Railways for All: The Accessibility Strategy for Great Britain's Railways** Department for Transport, 2006
- **Train and Station Services for Disabled Passengers: A Code of Practice** Strategic Rail Authority, 2001
- **TSI** (Technical Specification for Interoperability) **for People with Reduced Mobility** European Commission, due 2007

Taxis and community transport

- **A Practical Guide for Taxi and Private Hire Services** Disability Rights Commission, 2007. Available from: *www.equalityhumanrights.com*
- **Advice for Taxi Drivers - Meeting the Needs of Disabled PassengersDPTAC, 1**995.
- **Code of Practice: Provision and Use of Transport Vehicles** Disability Rights Commission, 2006. Available from: *www.equalityhumanrights.com*
- **Guidance on Training for Taxi and Private Hire Drivers in Disability Issues** DPTAC, 1997
- **Guidelines for the Establishment of Taxicard SchemesDPTAC, 1997**
- **Making Private Hire Services More Accessible to Disabled People:** ***A Good Practice Guide for Private Hire Vehicle Operators and Drivers*** *DPTAC, 2003*

Car use by disabled users

- **BS 8300: Design of buildings and their approaches to meet the needs of disabled people – Code of practice** British Standards Institution, 2002
- **Parking for Disabled People** Department for Transport, Traffic Advisory Leaflet 5/95

Walking

- **A Design Guide for the Use of Colour and Contrast to Improve the Built Environment for Visually Impaired People** Joint Mobility Unit (JMU) RNIB and University of Reading, 1997
- **Adjacent and Shared Use Facilities for Pedestrians and Cyclists Department for Transport** Local Transport Note (LTN) 2/04
- **BS 7997: Products for Tactile Paving Surface Indicators – Specification** (Draft) British Standards Institution, 2002
- **BT Countryside for All: Standards and Guidelines – A Good Practice Guide to Disabled People's Access in the Countryside** BT, 1997
- **Code of Practice on Safety at Streetworks** Department for Transport, 2002
- **Design Criteria for Footbridges** Design Manual for Roads and Bridges, BD 29/03
- **Encouraging Walking: Advice to Local Authorities** DETR, 2000
- **Guidance on the Use of Tactile Paving Surfaces** DETR, 1998
- **Inclusive Mobility – A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure** Department for Transport, 2002
- **Policy, Planning and Design for Walking and Cycling** Department for Transport, Local Transport Note (LTN) 1/04, Consultation Draft 2004
- **Providing for Journeys on Foot** The Institution of Highways and Transportation, 2000
- **Provision for Non-Motorised Users** Design Manual for Roads and Bridges, Volume 5 – Section 2.
- **Revised Guidelines for Reducing Mobility Handicaps – Towards a Barrier Free Environment** The Institution of Highways and Transportation, 1991
- **Shared Surface Street Design Research Project – The Issues: Report of Focus Groups** The Guide Dogs for the Blind Association, 2006
- **Subways for Pedestrian and Pedal Cyclists Layout and Dimensions** Design Manual for Roads and Bridges, TD 36/93

Crossing facilities

- **Audible and Tactile Signals at Pelican Crossings** Department for Transport, Traffic Advisory Leaflet 4/91
- **Audible and Tactile Signals at Signal Controlled Junctions** Department for Transport, Traffic Advisory Leaflet 5/91
- **The Assessment of Pedestrian Crossings** Department for Transport, Local Transport Note (LTN) 1/95

- **The Design of Pedestrian Crossings** Department for Transport, Local Transport Note (LTN) 2/95
- **Toucan Crossing Development** Department for Transport, Traffic Advisory Leaflet 4/98

Cycling

- **Adjacent and Shared Use Facilities for Pedestrians and Cyclists** Department for Transport, Local Transport Note (LTN) 2/04
- **Code of Practice for Class 3 Vehicle Users** Department for Transport [no date].
- **Cycle-friendly Infrastructure – Guidelines for Planning and Design** Institution of Highways and Transportation, 1996
- **Cycle Parking** Sustrans Information Sheet FF37, 2004
- **Design Criteria for Footbridges** Design Manual for Roads and Bridges, BD 29/03
- **Guidance on the Use of Tactile Paving Surfaces** DETR, 1998
- **Guidelines for Cycle Audit and Cycle Review** Institution of Highways and Transportation, 1998
- **Policy, Planning and Design for Walking and Cycling** Department for Transport, Local Transport Note (LTN) 1/04, Consultation Draft 2004
- **Provision for Non-Motorised Users** Design Manual for Roads and Bridges, Volume 5 – Section 2.
- **Shared Surface StreetDesign Research Project – The Issues: Report of Focus Groups** The Guide Dogs for the Blind Association, 2006
- **Signs and Markings on Cycle Routes** Department for Transport, Local Transport Note (LTN) 3/04 [Incomplete Draft]
- **Subways for Pedestrian and Pedal Cyclists Layout and Dimensions** Design Manual for Roads and Bridges, TD 36/93
- **The National Cycle Network Guidelines and Practical Details** Sustrans, 1997
- **Toucan Crossing Development** Department for Transport, Traffic Advisory Leaflet 4/98

Historic areas

- **Access to the Historic Environment – Meeting the Needs of Disabled People** Foster, L. 1997
- **Easy Access to Historic Properties – English Heritage** English Heritage, 1995
- **Traffic in Historic Town Centres** English Historic Towns Forum, 1994
- **Traffic Measures in Historic Towns - An Introduction to Good Practice** Civic Trust/English Historic Towns Forum, 1993

Accessible information

- **Bristol Legible City** Information available from: www.bristollegiblecity.info
- **How to use easy words and pictures** Disability Rights Commission, 2006. Available from: *www.equalityhumanrights.com*

- **Legibility of Timetables, Books, and Leaflets: A Code of Good practice** DPTAC, 1996
- **Printed Public Transport Information a Code of Good Practice** ATCO, 2003. Available from:http://www.atco.org.uk/publications /pubs5.html
- **Reading and Using plans** Thorpe S., 1994. (ISBN 0 903976 26 9)
- **Sign Design Guide** JMU Access Partnership and the Sign Design Society, RNIB, 2000
- **The Traffic Signs Regulations and General Directions** 2002 HMSO, 1994

Other suggested reading

- **Access Audits - A Guide and Checklists for Appraising the Accessibility of Buildings for Disabled Users** Fearns D., 1993
- **Building Homes for Successive Generations** Access Committee for England, 1992
- **Buildings for All to Use** Bone S., [No date]
- **Building Sight** Barker P., Barrick J. & Wilson R., 1997
- **Designing for Accessibility - An Introductory Guide** Palfreyman T., 1994
- **Designing for Spectators with Disabilities** Football Stadia Advisory Design Council [No date]
- **Designing for the Disabled** Goldsmith S., 1997
- **Get mobile: your guide to buying a scooter or powered wheelchair,** RADAR (The disability network) 2007.
- **Informal Countryside Recreation for Disabled People** Countryside Commission, 1994
- **Lighting and Low Vision** Electricity Association / Partially Sighted Society, 1993 (Electricity Association: Ref 1377/11.93)
- **Low Floor Buses System and report of the Action (COST 322)** Director General for Transport and Director General for Science, Research and Development
- **Neighbourhoods for life: A Checklist of Recommendations for Designing Dementia-friendly Outdoor Environments** Housing Association and OCSD Cities
- **Shared Facilities for Pedestrians and Cyclists** Joint Committee on Mobility of Blind and Partially Sighted People, 1996
- **Tourism for All: Providing Accessible Accommodation** Penton J., 1990
- **Tourism for All: Providing Accessible Visitor Attractions** Donaldson B., 1994
- **Wheelchair Housing Design Guides** Thorpe S. / National Wheelchair Housing Association Group [No date]

16 Glossary

APRS	Assisted Passengers Reservation Service
BS	British Standard
DDA	Disability Discrimination Act 1995
DED	Disability Equality Duty 2005
DETR	Department for the Environment, Transport and the Regions (now Department for Transport)
DfT	Department for Transport
DPPP	Disabled People's Protection Policy (for rail licence holders)
DPTAC	Disabled Persons Transport Advisory Committee
DRC	Disability Rights Commission (now Equality and Human Rights Commission)
DRT	Demand Responsive Transport
IHT	Institution of Highways and Transportation
LTN	Local Transport Note
LTP	Local Transport Plan
NMU	Non-motorised user
RNIB	Royal National Institute for the Blind
RNID	Royal National Institute for Deaf People
SRA	Strategic Rail Authority (now Department for Transport Rail Group)
TAL	Traffic Advisory Leaflet
TOC	Train Operating Companies
TSRGD	The Traffic Signs Regulations and General Directions 2002
VMS	Variable Message Signing

Appendix A Dimension guidelines

The following list is based upon the summary of dimensions outlined in the Department for Transport's Guidance document '**Inclusive Mobility'** (see Chapter 15).

Basic dimensions of people and equipment	
Minimum passage width stick user	**750mm**
Minimum passage width double crutch / walking frame user	**900mm**
Minimum passage width long cane user / adult plus dog	**1100mm**
Minimum passage width adult and child	**1100mm**
Minimum passage width adult plus helper	**1200mm**
Minimum passage width wheelchair	**900mm**
Length of space for wheelchair and user conventional seating	**1250mm**
… leg outstretched	**1500mm**
Length of space for wheelchair and assistant	**1750mm**
Length of space for adult and assistance dog	**1500mm**
Length of powered scooter / electric pavement vehicle	**1500mm**
Width of wheelchair (with elbows)	**900mm**
Width of 95th percentile manual wheelchair (excluding elbows)	**695mm**
Width of electric pavement vehicle or scooter	**800mm**
Eye level of wheelchair user	**960 - 1250mm**
Eye level of scooter user	**1080 - 1315mm**
Seated height of wheelchair user	**1300 - 1400mm**
Seated height of scooter user	**1200 - 1450mm**
Knee height of wheelchair user	**500 - 690mm**
Seat height of wheelchair	**460 - 490mm**

Ankle height of wheelchair user (manual)	**175 - 300mm**
Ankle height of wheelchair user (electric)	**380 - 520mm**
Height of bottom of foot support	**60 - 150mm**
Manoeuvring space for wheelchair 90º turn	**1200mmx1200mm**
Manoeuvring space for wheelchair 180º turn	**1600mmx2000mm**
Footways and footpaths	
Minimum preferred obstacle free footway width	**2000mm**
Minimum obstacle free footway width	**1500mm**
Width at bus stops	**3000mm**
Width at shops	**3500 - 4500mm**
Absolute minimum width at obstacles (max length 6 metres)	**1000mm**
Unobstructed height above footways	**2300mm**
Gradients	
Preferred maximum gradient on ramp	**1 in 20**
Maximum gradient (not exceeding 2m long)	**1 in 12**
Dropped kerbs	
Width of dropped kerb - minimum	**1200mm**
Width of dropped kerb at controlled crossing - minimum	**2400mm**
Width of dropped kerb - high pedestrian flows	**3000mm**
Width adjacent to parking for disabled car users	**1000mm**
Gradient of dropped kerb - maximum	**1 in 12**
Steps and stairs	
Minimum number of steps in a flight	**3**
Maximum number of steps in a flight	**12**
Preferred riser height	**150mm**
Minimum riser height	**100mm**
Maximum riser height	**170mm**

Preferred tread depth (going)	**300mm**
Minimum tread depth	**250mm**
Preferred unobstructed width of stairs (between handrails)	**1200mm**
Minimum unobstructed width of stairs (between handrails)	**1000mm**
Ramps	
Preferred gradient	**1 in 20**
Maximum gradient (not exceeding 2m long)	**1 in 12**
Absolute maximum gradient over length up to 600mm	**1 in 10**
Preferred unobstructed width of ramp (between handrails)	**2000mm**
Minimum width of ramp	**1200mm**
Minimum unobstructed width (between handrails)	**1000mm**
Maximum length of ramps	**132 metres**
Preferred maximum length	**50 metres**
Maximum length of single ramp	**10 metres**
Handrails	
Circular section diameter	**40 - 50mm**
Non-circular section	**500mmx38mm**
Clearance from wall	**60mm**
Extension beyond end of steps, ramp	**300mm**
Height above step nose, ramp	**900mm**
Guardrails and barriers	
Minimum height	**1100mm**
Upstand / tapping rail minimum height	**150mm**
Doors	
Preferred clear open width	**1200mm**
Minimum clear open width	**900mm**
Lifts	
Doorway unobstructed width	**900mm**
Minimum dimensions of cabin (one wheelchair user	Depth **1400mm** Width **1100mm**

and one accompanying person)	
Minimum dimensions of cabin (one wheelchair user + several passengers)	Depth **1400mm** Width **2000mm**
Preferred minimum depth of cabin	**1500mm**
Minimum height of cabin	**2300mm**
Positioning of poles	
Distance from property line to outer edge of pole	**275mm**
Minimum distance from edge of carriageway	**500mm**
Maximum distance from edge of carriageway	**600mm**
Clear distance between two poles	**1000mm**
Mounting height to bottom of sign	**2300mm**
Colour contrast marking	
Depth of contrast marking	**150mm**
Height of contrast marking (bottom edge)	**1400 - 1600mm**
Waste bins, bollards, seats and flower boxes	
Height of top of waste bin	**1300mm**
Height of bollard minimum	**1000mm**
Height of seats	**470 - 480mm**
Width of seats minimum	**500mm**
Height of perch seating	**700mm**
Height of flower boxes and free standing objects minimum	**1000mm**
Overhanging trees and signs	
Trees minimum trimming height	**3000mm**
Minimum height of signs	**2100mm**
Preferred height of signs	**2300mm**
Bus stops	
Minimum kerb heights	**125mm**
Preferred kerb heights	**160mm**
Raised boarding area - minimum length (single door buses)	**3000mm**
Raised boarding area - minimum length (2-door buses)	**9000mm**

Preferred width cantilever shelters	**1400mm**
Preferred width enclosed shelters	**2000mm**
Width of clear space to front or rear of shelter	**1000 - 2000mm**
Bus stop flag size minimum	**450mmx400mm**
Bus route number (height of figure) minimum	**50mm**
Timetable information height above ground	**900 - 1800mm**
Car parking	
On-street parking parallel to kerb bay space	**6600mmx3600mm**
On-street parking at angle to kerb bay space	**4200mmx3600mm**
Off-street parking bay space minimum	**4800mmx2400mm**
… where parallel to access aisle extra length of	**1800mm**
… where at 90º to access aisle extra width of	**1200mm**
… where at 90º to access aisle extra length of	**1200mm**
Unobstructed height in parking garages	**2600mm**

Appendix B Possible consultation contacts

General: Local groups/representatives

Access Group – Oswestry & District

Mrs M. Chambers
8 Powys Avenue
Oswestry
Shropshire
SY11 2JS

Tel. 01691 650917

Access Group – Shrewsbury & Atcham

Gill Berry
Severn Oak
Chavel
Ford
Shrewsbury
SY5 9LB

e-mail gill.berry@severnoak.freeserve.co.uk

Access Group – Shropshire County

Shaun Luke
48 Edgefield Green
Bicton Heath
Shrewsbury
Shropshire
SY3 5HD

Tel. 01743 249377

Fax 01743 249377

e-mail shaun@augmail.com

The County group considers all access issues in Shropshire for people with mobility problems, the elderly, disabled, parents with young children, etc. The Group holds quarterly meetings at Shirehall.

Access Group – South Shropshire

Richard Philips
17 Battlefield Close
Leominster
Herefordshire
HR6 8DH

Tel. 07939 800320

Access Group – Telford & Wrekin
Del Gibson
29 The Common
Spring Village
Telford
TF4 2LT

Tel. 01952 504126

Access Officer
Bridgnorth District Council
Janice Baybutt
Westgate
Bridgnorth
Shropshire
WV16 5AA

Tel. 01746 713136

Web www.bridgnorth-dc.gov.uk

Access Officer
Oswestry Borough Council
Tim Mason
Council Offices
Castle View
Oswestry
Shropshire
SY11 1JR

Tel. 01691 677252

Web www.oswestrybc.gov.uk

Access Officer
South Shropshire District Council
Malcolm Marsh
Stone House
Corve Street
Ludlow
Shropshire
SY8 1DG

Tel. 01584 813000

Fax 01584 813128

e-mail malcolm.marsh@southshropshire.gov.uk

Web www.southshropshire.gov.uk

Only works on Thursdays and Fridays.

Age Concern (Shropshire Head Office)
3 Mardol Gardens
Shrewsbury
SY1 1PR

Tel. 01743 233123

Fax 01743 248848

e-mail enquiries@ageconcernshrops.org.uk

Web www.shropshireonline.gov.uk/ageconcern.nsf

The UK's largest organisation working with and for older people. Also:
- South Shropshire Office
- Wrekin Office
- Whitchurch Office
- Northeast Shropshire Rehabilitation Scheme

DIAL
Shaun Luke
Ground Floor
Allison House
Oxon Business Park
Shrewsbury
SY3 5HJ

Tel. 01743 240404

Fax 01743 233272

e-mail shaun@augmail.com

Web www.dialuk.info

DIAL (Disability Information and Advice Line) Shropshire Telford & Wrekin provides independent information and advice on all aspects of disability.

Independent Living Partnership
Barbara Newson
Joint Use Centre
Meadow Farm Drive
Shrewsbury
SY1 4NG

Tel. 01743 450900

Fax 01743 461349

e-mail information@ilp-ltd.co.uk

Web www.independentliving.co.uk

An organisation of disabled people to raise awareness and represent disability issues.

Shropshire County Council Disability Resource Centre

Lancaster Road
Harlescott
Shrewsbury
Shropshire
SY1 3NJ

Tel. 01743 253878

An organisation of disabled people to raise awareness and represent disability issues.

Seeing: Local groups/representatives

The Guide Dogs for the Blind Association – Shropshire District Team
Global House
Shrewsbury Business Park
Shrewsbury
Shropshire
SY2 6LG

Tel. 01743 270072

Fax 01743 260870

e-mail nwmidlands@guidedogs.org.uk

Web www.guidedogs.org.uk

A team that works closely with clients, and in partnership with other agencies, to provide a quality service to blind and partially-sighted people living in Shropshire, Staffordshire and the West Midlands.

Hearing and Visually Impaired Support Group (Oswestry)
Mr Tom Sadler
Suilven Cottage
Lower Hengoed
Oswestry
Shropshire
SY10 7EG

Tel. 01691 658037

Oswestry Hearing and Visually Impaired Support Group offers support for anyone with hearing and visual impairment. The Group meets at 2.00pm on the first Tuesday of each month at Masonic Hall.

Market Drayton VIP Club
Mrs B. Shingler
Methodist Church Hall
Market Drayton
Shropshire

Tel. 01630 652555

Shropshire Sensory Impairment Group
Don Sunderland
1 Allfield Cottages
Condover
Shrewsbury
Shropshire
SY5 7AP

Tel. 01743 873 815

e-mail info@sishropshire.org.uk

Web www.sishropshire.org.uk

Shropshire Sensory Impairment Group is a discussion group that meets quarterly between service providers and users.

South Shropshire Visually Impaired Club
Mr George Jones, Chairman & Organiser
The Green Cottage
3 Minton
Church Stretton
Shropshire
SY6 6PS

Tel. 01694 781224

e-mail edmintongeorge@aol.com

South Shropshire Visually Impaired Club caters for anybody with a visual impairment or anyone interested in their welfare living in South Shropshire.

Hearing: Local groups/representatives

Hearing and Visually Impaired Support Group (Oswestry)
Mr Tom Sadler
Suilven Cottage
Lower Hengoed
Oswestry
Shropshire
SY10 7EG

Tel. 01691 658037

Oswestry Hearing and Visually Impaired Support Group offers support for anyone with hearing and visual impairment. The Group meets at 2.00pm on the first Tuesday of each month at Masonic Hall.

North Shropshire Hearing Support Group (HEAR-HEAR)
Mr. John Edge
7 Smallbrook Buildings
Whitchurch
Shropshire
SY13 1BS

Tel. 01948 664093

The North Shropshire Hearing Support Group supports people with hearing impairment and tinnitus. The group meets on the first Tuesday of each month from 2.00pm to 4.00pm at St Johns Church Hall, Whitchurch.

Shrewsbury Hard of Hearing Group
Don Sunderland (Chairman)
1 Allfield Cottages
Condover
Shrewsbury
Shropshire
SY5 7AP

Tel. 01743 873 815

e-mail info@sishropshire.org.uk

Web www.sishropshire.org.uk

The Group offers support for hearing impaired people. The Group meets on the second Monday of each month, 2.00 pm - 4.00 pm at the United Reformed Church, Coleham Head, Shrewsbury.

Shropshire Sensory Impairment Group
Don Sunderland
1 Allfield Cottages
Condover
Shrewsbury
Shropshire
SY5 7AP

Shropshire Sensory Impairment Group is a discussion group that meets quarterly between service providers and users.

Tel. 01743 873 815

e-mail info@sishropshire.org.uk

Web www.sishropshire.org.uk

The Royal National Institute for Deaf People (Midlands Office)
RNID Birmingham
Regency House
97-107 Hagley Road
Birmingham
B16 8LA

Tel. 0121 450 8980

Fax 0121 455 6750

e-mail information.midlands@rnid.org.uk

Web www.rnid.org.uk

Physical disability: Local groups/representatives

Dial-A-Ride - Oswestry
Oswestry Community Action
Qube
Oswald Road
Oswestry
Shropshire
SY11 1RB

Tel. 01691 656882

Fax 01691 680862

e-mail qube@wnsc.ac.uk

Web www.qube-oca.co.uk

Qube Transport operates the Community Transport Schemes, Dial-a-Ride and Community Cars, in the Borough of Oswestry and across the Welsh border.

Dial-A-Ride - Shrewsbury
Lyn Chatham (Chief Officer)
Unit One
Lancaster Road
Harlescott
Shrewsbury
Shropshire
SY1 3LG

Tel. 01743 450350

Fax 01743 440744

e-mail shrewsbury.dialaride@virgin.net

Shrewsbury Dial-a-Ride is an accessible minibus service operating within a ten-mile radius of Shrewsbury town centre.

Mobility Information Service
20 Burton Close
Dawley
Telford
TF4 2BX

Tel. 01743 340269

e-mail mis@nmcuk.freeserve.co.uk

Web www.mis.org.uk

An information and assessment organisation covering all aspects of mobility problems connected with disability. Information is available to people with a disability, their carers and professionals.

Shropshire Wheelchair Service
Krystyn Jarvis
Disability Resource Centre
Lancaster Road
Harlescott
Shrewsbury
SY1 3NJ

Tel. 01743 444051

Fax 01743 444061

e-mail Krys.Jarvis@telfordpct.nhs.uk

The service covers the whole of the county, serving both Telford & Wrekin PCT and Shropshire County PCT. The Wheelchair Service provides for the basic mobility needs for people of all ages with permanent disabilities.

Shropshire Wheelchair Users Group (SWUG)
Sue Wood (Chairperson)
71 Ashfield Road
Shrewsbury
SY1 3SD

Tel. 01743350460

Web www.swug.co.uk/

The Shropshire Wheelchair Users Group is a proactive group of users working alongside the wheelchair service.

The dates for SWUG meetings are scheduled for the first Thursday of each month at the Disability Resource Centre, Lancaster Road, Harlescott, Shrewsbury at 12:30pm.

Learning disability/mental health: Local groups/representatives

MENCAP - Bridgnorth & District
Mr D Moorhouse (Secretary

Tel. 01746 762059

Fax.

e-mail: derek.moorhouse@btopenworld.com

Web www.mencap.org.uk

Available between 18:00 and 20:00 only.

Shropshire Mind
Units 3 & 4
Observer House
Holywell Street
Shrewsbury
SY2 6BL

Tel. 01743 368647

e-mail admin@shropshiremind.org

Web www.shropshiremind.org

Shropshire Mind is a local mental health charity.

Appendix C National contacts

The following list provides contact information for organisations and groups that may be able to provide additional assistance in understanding the needs of people with disabilities. The list is not exhaustive and it is recommended that additional research is carried out if necessary. Some addresses are repeated to assist in referencing.

General

Accessibility and Equalities Unit (AEU)
The Department for Transport
4/25 Great Minster House
76 Marsham Street
London
SW1P 4DR

Department for Transport unit that looks at promoting socially inclusive transport. The website includes a specific section on access for disabled people with further guidance.

Tel. 020 7944 6100

Fax 020 7944 4912

e-mail aeu@dft.gsi.gov.uk

Web www.dft.gov.uk

Age Concern England
Age Concern England
1268 London Road
London
SW16 4E

The UK's largest organisation working with and for older people.

Tel. 0800 009 966

Web www.ageconcern.org.uk

British Standards Institute (BSI)
British Standards House
389 Chiswick High Road
London
W4 4AL

National Standards Body of the UK and develops standards and standardization solutions to meet the needs of business and society. They work with government, businesses and consumers.

Tel. 020 8996 9001

Fax 020 8996 7001

e-mail info@bsi-global.com

Web www.bsi-global.com/businessinformation

Community Transport Association
Highbank
Halton Street
Hyde
Cheshire
SK14 2NY

Tel. 0870 774 3586

Fax 0870 774 3581

e-mail info@ctauk

Web www.ctauk.org

Member organisation that promotes excellence in community transport and works to reduce social exclusion.

Direct.gov.uk

Web. www.direct.gov.uk/DisabledPeople/fs/en

This in an online guide to public services and provides a comprehensive list of contact details and legislative information.

Equality and Human Rights Commission
2nd floor
Arndale House
Arndale Centre
Manchester
M4 3AQ

Tel. 0845 604 6610

Fax 0845 604 6630

e-mail info@equalityhumanrights.com

Web www.equalityhumanrights.com

This commission comprises of the:

- Disability Rights Commission

- Commission for Racial Equality

- Equal Opportunities Commission

A key aim of the commission is to end discrimination and harassment of people because of their disability, age, religion or belief, race, gender, or sexual orientation.

Disabled Persons Transport Advisory Committee (DPTAC)
4/24 Great Minster House
76 Marsham Street
London
SW1P 4DR

Established by an Act of Parliament as an independent body to advise the government on the transport needs of all disabled people across the UK, including advice on the built environment.

Tel. 020 7944 8012

Fax 020 7944 6998

e-mail dptac@dft..gsi.gov.uk

Web www.dptac.gov.uk

JBU Access Partnership
105 Judd Street
London
WC1H 9NE

A leading access consultancy with an aim to improve the everyday environment in which disabled people live.

Tel. 0207 296 8000

Fax 0207 296 8199

e-mail helpline@rnid.org.uk

Web www.jmuaccess.org.uk

Mobilise
National HQ
Ashwellthorpe
Norwich
NR16 1EX

A charity to promote and protect the welfare of disabled people and to promote their personal mobility. Formerly the Disabled Drivers' Motor Club and the Disabled Driver's Association.

Tel. 01508 489449

Fax 01508 488173

e-mail hq@dda.org.uk

Web www.dda.org.uk

RADAR
12 City Forum
250 City Road
London
EC1V 8AF

RADAR is a national network of disability organisations and disabled people. Members' opinions are represented collectively to policy makers.

Tel. 020 7250 3222

Fax 020 7250 0212

e-mail radar@radar.org.uk

Web www.radar.org.uk

Seeing - blind or partially sighted

Action for Blind People
14 - 16 Verney Road
London
SE16 3DZ

A national charity that provides practical support to blind and partially sighted people through work, housing, leisure and support.

Tel. 0800 915 4666

Fax 020 7635 4829

e-mail info@actionforblindpeople.org.uk

Web www.actionforblindpeople.org.uk

Guide Dogs for the Blind Association
Hillfields
Burghfields Common
Reading
RG7 3YG

A charity that provides guide dogs, mobility and other rehabilitation services that meet the needs of blind and partially-sighted people.

Tel. 0118 983 5555

Fax. 0118 983 5433

e-mail guidedogs@guidedogs.org.uk

Web www.guidedogs.org.uk

Deafblind UK
National Centre for Deafblindness
Cygnet Road
Hampton
Peterborough
Northamptonshire
PE7 8FD

Deafblind UK assists dual sensory impaired people in leading as independent lives as possible. Deafblind UK offers comprehensive services to deafblind people, their support assistants and other professionals.

Tel. 01733 358100

Fax 01733 358356

e-mail info@deafblind.org.uk

Web www.deafblind.org.uk

LOOK National Federation of Visually Impaired Children
c/o Queen Alexandra College
49 Court Oak Road
Harborne
Birmingham
B17 9TG

LOOK is a national charity that helps families with visually impaired children by providing information, support and advice.

Tel. 0121 428 5038

Fax 0121 427 9800

e-mail office@look-uk.org

Web www.look-uk.org

National Federation for the Blind of the UK
Sir John Wilson House
215 Kirkgate
Wakefield
West Yorkshire
WF1 1JG

An organisation of people who are blind or partially sighted that campaign for better service provision and an enhanced quality of life for all blind and partially sighted people.

Tel. 01924 291 313

Fax 01924 200 244

e-mail nfbuk@nfbuk.org

Web www.nfbuk.org

Royal National Institute for the Blind
105 Judd Street
London
WC1H 9NE

Tel. 0207 388 1266

Fax 0207 388 2034

e-mail helpline@rnib.org.uk

Web www.rnib.org.uk

The UK's leading charity offering information, support and advice to blind and partially sighted people.

Sense (West)
9A Birkdale Avenue
Selly Oak
Birmingham
B29 6UB

Tel. 0121 415 2723

Fax 0121 472 8449

e-mail westenquiries@sense.org.uk

Web www.sense.org.uk

UK Deafblind Charity that also works with people with single sensory impairments and a wide range of other difficulties - including physical disabilities, learning disabilities, and challenging behaviour.

Hearing

Deafblind UK
National Centre for Deafblindness
Cygnet Road
Hampton
Peterborough
Northamptonshire
PE7 8FD

Tel. 01733 358100

Fax 01733 358356

e-mail info@deafblind.org.uk

Web www.deafblind.org.uk

Deafblind UK assists dual sensory impaired people in leading as independent lives as possible. Deafblind UK offers comprehensive services to deafblind people, their support assistants and other professionals.

Hearing Dogs for Deaf People
The Grange
Wycombe Road
Saunderton
Princes Risborough
Buckinghamshire
HP27 9NS

Charity working to train dogs to alert deaf people to specific sounds, whether in the home, workplace or public buildings.

Tel. 01844 348100

Fax 01844 348101

e-mail info@hearing-dogs.co.uk

Web www.hearing-dogs.co.uk

Royal National Institute for Deaf People
(Head Office)
19-23 Featherstone Street
London
EC1Y 8SL

The RNID provides a range of services for deaf people and the professionals who work for them.

Tel. 0207 296 8060

Fax 0207 296 8199

e-mail training.services@rnid.org.uk

Web www.rnid.org.uk

Physical disability

Arthritis Care
18 Stephenson Way
London
NW1 2HD

Arthritis Care exists to support people with arthritis. This is a large, national, user-led organisation working with and for all people who have arthritis.

Tel. 0808 800 4050

Fax 0207 380 6505

e-mail helplines@arthritiscare.org.uk

Web www.arthritiscare.org.uk

British Council of Disabled People (BCODP)
Litchurch Plaza
Litchurch Lane
Derby
DE24 8AA

Tel. 01332 295551

Fax 01322 295580

e-mail general@bcodp.org.uk

Web www.bcodp.org.uk

Represents some 126 groups run by disabled people in the UK at national level. The BCODP is run entirely by disabled people of all impairments and is therefore representative of a range of interests.

Council for Disabled Children
Administration
8 Wakeley Street
London
EC1V 7QE

Tel. 020 7843 1900

Fax 020 7843 6313

e-mail cdc@ncb.org.uk

Web www.ncb.org.uk

A national forum for the discussion and development of a wide range of policy and practice issues relating to service provision and support for youngsters with disabilities and special needs.

Cognitive (learning disability/mental health)

British Dyslexia Association
98 London Road
Reading
Berkshire
RG1 5AU

Tel. 0118 966 8271

Fax 0118 935 1927

e-mail helpline@bdadyslexia.org.uk

Web www.bdadyslexia.org.uk

A national group working towards promoting a dyslexia friendly society.

British Institute of Learning Difficulties (BILD)
Campion House
Green Street
Kidderminster
Worcestershire
DY10 1JL

Tel. 01562 723010

Fax 01562 723 029

e-mail enquiries@bild.org.uk

Web www.bild.org.uk

BILD works with the government and other organisations to improve the lives of people with learning disabilities

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Foundation for People with Learning Disabilities (FPLD)
9th floor
Sea Containers House
20 Upper Ground
London
SE1 9QB

Tel. 020 7803 1100

Fax 020 7803 1111

e-mail fpld@fpld.org.uk

Web www.learningdisabilities.org.uk

FPLD promotes the rights, quality of life and opportunities of people with learning disabilities and their families. It promotes social inclusion, supports local communities and works towards practical improvements to services.

Mind
15 - 19 Broadway
Stratford
London
E15 4BQ

Tel. 020 8519 2122

Fax 020 8522 1725

e-mail contact@mind.org.uk

Web www.mind.org.uk

Mind (The National Association for Mental Health) is the leading mental health charity in England and Wales.

Learning Disability Helpline
Mencap
4 Swan Courtyard
Coventry Road
Birmingham
B26 1BU

Tel. 0808 808 1111

Fax 0121 707 3019

e-mail help@mencap.org.uk

Web www.mencap.org.uk

MENCAP is the UK's leading learning disability charity working with people with a learning disability and their families and carers. It is an individual membership organisation, with a local network of more than 1,000 affiliated groups.

Royal Society for Mentally Handicapped Children and Adults (MENCAP)
123 Golden Lane
London
EC1Y 0RT

Tel. 020 7454 0454

Fax 020 7696 3254

e-mail help@mencap.org.uk

Web www.mencap.org.uk

MENCAP is the UK's leading learning disability charity working with people with a learning disability and their families and carers. It is an individual membership organisation, with a local network of more than 1,000 affiliated groups.

Appendix D Checklist

Introduction

The main aim of this document is to increase the awareness of the needs of people with disabilities and to ensure that they are considered in the design of transport and highway schemes in order to create a more inclusive transport environment.

The following checklist is intended to provide an initial assessment of the extent to which the needs of people with disabilities are catered for in the design and construction of transport related schemes. The checklist is not intended to be a substitute for design manuals and guidance but instead, should act as prompt for checking that any changes to the design or construction of a transport scheme reflect good practice. The guidance contained within this document should be used in conjunction with wider design principles for vulnerable users.

Therefore, the key purpose of the checklist is to provide the following:

- A holistic overview of promoting safe access to the road network for people with disabilities
- Design of transport related schemes that meet the needs of people with disabilities
- Specific measures that are designed in accordance with best practice
- A wider understanding of the needs of people with disabilities amongst transport planners and engineers
- Ensure that the Local Transport Plan priority of “enhanced accessibility and mobility for people with disabilities and mobility impairments” is met

Application

The checklist should be broadly applied to the following schemes,

- Major transport schemes
- Improvements to the highway (i.e. as a result of maintenance or accident reduction)
- Traffic management schemes (including traffic calming, pedestrian priority, signs, carriageway markings etc.)
- Temporary traffic management schemes (for example, ensuring that needs are catered for on alternative routes)
- Experimental traffic management schemes
- Schemes that are led by new development

Checklist

General

	Yes	No	N/A
Is the scheme appropriate to its wider context?	☐	☐	☐
Does the scheme compliment / improve existing facilities?	☐	☐	☐
Is the scheme likely to be safe for disabled users?	☐	☐	☐
Are the routes direct and continuous and do they provide good access to key destinations?	☐	☐	☐
Does the scheme benefit as many people as possible?	☐	☐	☐

Accessibility to buses

	Yes	No	N/A
Does the design provide suitable access to vehicles for disabled users (both to bus stops and in access and egress from vehicles?)	☐	☐	☐
Is the bus stop in a safe, convenient and secure location?	☐	☐	☐
Does the bus shelter provide protection from the weather and a comfortable environment for waiting users	☐	☐	☐
Is the bus stop identifiable and are flags legible?	☐	☐	☐
Is the placement of timetable information appropriate for use by disabled users?	☐	☐	☐
Is there an appropriate footway width allowance for use by waiting passengers and passers by?	☐	☐	☐
Have staff been trained in understanding the needs of disabled users?	☐	☐	☐

Accessibility to rail

	Yes	No	N/A
Is audible and legible information consistent and of good quality?	☐	☐	☐
Are timetables available at the station?	☐	☐	☐
Are timetables visible and legible for disabled users?	☐	☐	☐
Is there an ‘accessible route’ within and around stations (i.e. with signs and lighting)	☐	☐	☐
Is adequate disabled parking provided at the station?	☐	☐	☐

Accessibility to taxis / community transport

	Yes	No	N/A
Have staff been trained in understanding the needs of disabled users?	☐	☐	☐
Are the vehicles accessible for people with disabilities?	☐	☐	☐
Have taxi ranks been provided at key trip destinations?	☐	☐	☐
Are taxi ranks clearly defined with suitable footway widths and turning areas for wheelchairs?	☐	☐	☐

Accessibility by car

	Yes	No	N/A
Has provision been made for car parking spaces for disabled drivers?	☐	☐	☐
Have the needs of disabled users been taken into account at kerb-side parking (i.e. dropped kerbs)	☐	☐	☐
Have the needs of ***all*** disabled users been taken into account?	☐	☐	☐
Have measures been taken to deter parked cars blocking dropped kerbs?	☐	☐	☐
Are accessible parking bays clearly signposted both from the carriageway and within car parks?	☐	☐	☐
Are signs consistent?	☐	☐	☐
Are disabled bays clearly marked for use by people with disabilities only?	☐	☐	☐
Are disabled bays located as close to the facilities that they serve as possible?	☐	☐	☐
Do parked cars adversely reduce visibility at uncontrolled crossings?	☐	☐	☐
Do spaces have good surface quality and comply with the minimum standards for width?	☐	☐	☐
Has equipment and information been located at an appropriate height and position for recognition and use by disabled people?	☐	☐	☐
Is there step free access of an adequate width to enable disabled people to use any information or parking equipment?	☐	☐	☐

Walking

	Yes	No	N/A
Does the scheme enhance the pedestrian network?	☐	☐	☐
Does scheme facilitate key desire lines?	☐	☐	☐

Are the footways / footpaths continuous with step-free access?	☐	☐	☐
Have potential conflict points between traffic and pedestrians been kept to a minimum?	☐	☐	☐
Are footway widths adequate for use by disabled users and the overall flows of pedestrians?	☐	☐	☐
Are pedestrian routes free of adverse gradients and crossfalls (where possible)?	☐	☐	☐
Have changes in level been avoided where possible?	☐	☐	☐
Do reinstatements maintain an even surface quality that is free of trip / slip hazards?	☐	☐	☐
Has appropriate colour or textual contrast been used?	☐	☐	☐
Are dropped kerbs located on desire lines?	☐	☐	☐
Are dropped kerbs flush with the carriageway with appropriate widths, gradients, level areas to the rear etc?	☐	☐	☐
Is tactile paving present, correct and consistent?	☐	☐	☐
Has street furniture been located to avoid obstructing, or reducing the width the footway?	☐	☐	☐
Is street furniture aligned (bollards, litter bins, light columns etc)?	☐	☐	☐
Has seating been provided at suitable intervals along routes?	☐	☐	☐
Is wayfinding intuitive for disabled users?	☐	☐	☐
Have signs been kept to a minimum to avoid clutter?	☐	☐	☐
Has local distinctiveness (including landmarks) been maintained to enhance way-finding and orientation?	☐	☐	☐
Where necessary, is effective street lighting present to illuminate obstacles, minimise glare and avoid shadowing?	☐	☐	☐
Has overhanging vegetation been maintained to minimise obstruction to movement?	☐	☐	☐
Are drainage gullies pedestrian friendly?	☐	☐	☐
Do temporary works cater for disabled users?	☐	☐	☐

Crossing facilities

	Yes	**No**	**N/A**
Has the most appropriate crossing been chosen?	☐	☐	☐
Will the crossing feel safe for users?	☐	☐	☐
Does the crossing match the desire line?	☐	☐	☐

Is enough time available for people with disabilities to cross safely?	☐	☐	☐
Have pedestrian facilities been provided at side roads and major crossing points?	☐	☐	☐
Have dropped kerbs been provided in pairs at side roads, access points to parking and key desire lines?	☐	☐	☐
Is there appropriate provision of audible and tactile devices at controlled crossings?	☐	☐	☐
Is there a consistent placement of push button control boxes at crossings?	☐	☐	☐
Is tactile paving present and correct?	☐	☐	☐
Are central refuges sufficiently wide to cater for disabled users?	☐	☐	☐
Are ramps of an acceptable gradient for disabled users?	☐	☐	☐
Are bridges and subways accessible by disabled people (i.e. ramps and widths)?	☐	☐	☐
Is the function of facilities intuitive at decision making points?	☐	☐	☐

Cycling

	Yes	No	N/A
Is the scheme type appropriate for the volume of cyclists and / or pedestrians?	☐	☐	☐
Does the available width take account of vertical features?	☐	☐	☐
Are footways and cycle tracks segregated where possible?	☐	☐	☐
Are the segregation measures appropriate to encourage use by disabled users?	☐	☐	☐
Is any signing and marking visible, legible, consistent and suitable for use by disabled users?	☐	☐	☐
Are the routes for cyclists and pedestrians continuous in the quality of provision?	☐	☐	☐
Do sightlines minimise any potential conflict between pedestrians and cyclists?	☐	☐	☐
Is the surface quality even and free of trip / slip hazards?	☐		☐
Is the facility maintained i.e. vegetation, drainage etc?	☐	☐	☐
Is the facility free from obstructions to movement?	☐	☐	☐
Is lighting present (where appropriate) with minimal shadowing?	☐	☐	☐

Historic areas

	Yes	No	N/A
Is there any potential for variation to standards to cater for disabled users in a historic context?	☐	☐	☐
Has a consensus been developed with key stakeholders?	☐	☐	☐

Accessible information

	Yes	No	N/A
Is information located in an appropriate position in terms of reading distance, height and obstructions?	☐	☐	☐
Does information contain details of key trip destinations and specific facilities for disabled users?	☐	☐	☐
Are signs consistent in style and colour?	☐	☐	☐
Has clear colour contrast and appropriate fonts been used – are the signs legible?	☐	☐	☐
Are leaflets and timetables produced in a suitable font that is legible for users with appropriate information?	☐	☐	☐
Has consideration been given to the level of background noise if providing audible information?	☐	☐	☐