

Inclusive Streets: Design principles for blind and partially sighted people

Commissioned and produced by Guide Dogs on behalf of Action for blind people, Association of Visually Impaired Office Staff, Deafblind UK, Joint Committee on Mobility of Blind and Partially Sighted People, NALSVI, National Federation of the Blind UK, RNIB, Sense, The Access Association

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AVIOS



Position Statement

“Good streets are inclusive streets, and streets that are not inclusive are simply not good enough”

“The Equality and Human Rights Commission supports the important principle that Guide Dogs sets out in this position statement. Inaccessible and hazardous spatial environments impact adversely on many disabled people’s life chances, restricting their opportunities and everyday activities such as going to and from schools, workplaces and shops. All public authorities have a duty to ensure they meet the needs of disabled people, and actively involve disabled people in the design and delivery of their services.”

Neil Crowther
Disability Programmes Director
Equality and Human Rights Commission



Introduction

External spaces are important within any community setting, and how spaces are designed, adapted and managed plays a pivotal role in the quality of life of people using them. Good quality external spaces can enhance the use of a space, making it a pleasurable and fruitful experience both for individuals and for the community as a whole.

As part of the external environment, the modern street environment should be designed to address the needs of all the people who will use it. Importantly, it should maximise rather than inhibit everyone's ability to move freely, efficiently and safely around the environment, and encourage feelings of confidence when doing so. Achieving this is important for all users of the street environment, but especially for blind and partially sighted and other disabled people, older people and children.

An inclusively designed street environment will accommodate the differing needs and expectations of all those who use the space. It will enable people to feel comfortable and safe when moving around by giving them control over the pace at which they move, how they gather information, and how they interact with other users of the space.

Whilst encompassing and encouraging creativity, street designs must allow people to understand how they should use the space and what is expected of them in order to secure an appropriate level of safety for both themselves and for others using the street.

However, good modern street design is not simply about the provision of physical features or comprehensive information. It also requires an understanding of:

- How its design and management will influence the attitudes, expectations and behaviour of the people who will use it;
- The extent to which it encourages independent use of the space; and
- How those issues may be affected by varying abilities amongst individual users.



The Traditional Street Scene

A traditional street scene within the UK is one in which the activities of motorists, pedestrians and cyclists take place mainly within clearly defined areas. Features such as kerbs, crossing points and signage all act as reference points to help people understand how to use the space, something which is critical for all users but especially those who are blind or partially sighted.

In a good design, careful attention to the minimum widths of footways, the absence of obstructions and the number and position of crossing points with dropped kerbs and tactile paving can help to create a space that is accessible for everyone using it.

A well-designed traditional street also allows motorists to understand clearly what is expected of them in terms of their permitted speed, the direction of travel and the presence of areas within the space, such as crossings, over which they may drive but do not have priority. Pedestrians also benefit from knowing that the footway is an area where they should be relatively free from conflict with motorists or cyclists.

The familiar layout of a traditional street scene helps to instil feelings of familiarity and confidence amongst users. If you can identify where you are and if you behave in a certain way and follow particular patterns, you will be relatively safe, feel confident and be able to complete your journey.

The Concept of Sharing

In the last few years a new concept in urban transport planning has developed in parts of Europe and the UK which challenges the segregation found within the traditional street scene. It aims to create a street environment in which the use of the area, freedom to move around it, and user safety, are determined more by the interactions between users than by the intervention of hard delineation of the space.

It is suggested that creating a more pedestrian friendly public space will instil uncertainty amongst motorists, encouraging them to drive slower and with greater care, and allow pedestrians and cyclists to enjoy greater safety, improved accessibility and better choice of routes.

For such interactions to be fully and safely achieved however, it is critical that the designers and managers of any space:

- Address the needs of all those who use them, including blind and partially sighted people, other disabled people, older people and children;
- Understand that how people use a space, both in terms of their own actions and how they react to those of others, will be influenced by their own individual abilities and how they see or interpret the activities taking place within the space.

This is so for all users of the space but especially for those who are blind and partially sighted.

It has been suggested that introducing ambiguity and uncertainty for drivers may instil caution in the driver. However, care must be taken to ensure that such ambiguity and uncertainty does not also extend to pedestrians so as to undermine their confidence and safety.

The provision of wider footways, narrow non-linear carriageways, and the use of paving materials, lighting and features such as trees and street furniture to visually break up a carriageway for drivers, can all help to create streets and spaces that encourage caution amongst drivers whilst at the same time identifying it as an area that is pedestrian friendly, and one which vulnerable pedestrians can use with confidence and in relative safety.



Moving around and understanding where you are

Being able to gather information about a space you are using is important for everyone, but especially so for blind and partially sighted people. Around 75% of the information all people use to understand where they are, what decisions they need to make to take the best route, and for identifying potential obstacles or hazards along the way is gathered by vision.

Kerbs and tactile surfaces represent a major source of information for blind and partially sighted people when moving around. They should be used to delineate pedestrian routes and also to inform key decision points along a route.

Street scenes that adopt logical layouts and do not include unexpected features and obstacles projecting into circulation routes benefit all users, but especially people with reduced vision and those who may simply not be paying attention.

Generally, the ability of blind and partially sighted people to see fine detail is considerably less than that of sighted people. Most blind and partially sighted people are able to discern some colour (82%) and light (96%), and they use this to gather valuable information about the environment they are in. Thus good use of lighting and colour/tonal contrast greatly enhances the usability of a space for most blind and partially sighted people, when combined with essential tactile features.

Components of Good Street Design

Whichever street scene design concept is adopted, there are certain key components that are critical to the provision of any inclusive, accessible street environment. These are:

- **Priority for Pedestrians**
- **Appropriate Traffic Speed**
- **Logical Layout and Reference Points**
- **Clearly Defined, Obstacle Free, Pedestrian Routes**
- **Pedestrian Crossings**
- **Visual Contrast and Good Quality Lighting**
- **Maintenance Management**
- **Disability Equality and Consultation**
- **Education and Training**

Priority for Pedestrians

Priority for pedestrians over all other forms of transport, including cyclists, must clearly be indicated and enforced:

- On designated footways in traditional streets; and
- In shared space designs.

In pedestrianised areas where some vehicular access may be necessary, for example, for deliveries, dropping off and picking up disabled people:

- Only authorised vehicles should be allowed to use the space, and their speed should be restricted to a maximum of 10mph;
- With the exception of vehicles dropping off disabled people, access for all other vehicles to the area should be restricted to clearly defined times, preferably when pedestrian use is expected to be at its lightest;
- Restrictions must be rigidly and actively enforced;
- Vehicles should only be permitted to stop in clearly designated areas; and
- Cycling should not be allowed. This should be clearly signed and rigidly enforced.

Appropriate Traffic Speed

Maximum vehicle speeds for any street should be compatible both with the design of the street itself and the level of interaction between motorists and other users of the space. In most suburban streets and those based on the concept of sharing, this should not exceed 20mph. Indeed, in several areas of Europe, speed limits for pedestrian friendly zones are restricted to 20 kmph (around 12 mph).

Logical Layout and Reference Points

A logical layout of routes within a street scene helps all users to decide what to do and, importantly, when and how to do it.

Features such as kerbs and building lines provide vital reference points for blind and partially sighted people particularly those using mobility aids such as long canes and guide dogs.

In pedestrianised zones and open spaces reference points should be provided to assist blind and partially sighted people. This can be done in several ways including by incorporating features such as tactile guidance paths and visual contrast.

Talking signs and emerging new technologies which offer opportunities to receive information about the environment can provide useful supplementary information to aid orientation and navigation, but do not replace the need for a logical layout and consistent reference points.

Clearly Defined, Obstacle Free, Pedestrian Routes

Street design should include the provision of clearly designated and delineated areas for pedestrians. The need for 'safe areas' is recognised in the Manual for Streets (DfT 2007).

To enhance the protection of vulnerable pedestrians, all streets, including those using a shared space design, should include clear, continuous and readily identifiable routes that are clearly delineated from those used by cyclists and motorists.

Pedestrian routes between 'safe spaces' in a shared space scheme, and footways in a traditional street should be continuous and unambiguous.

Different use areas within street scenes should be clearly delineated by the use of:

- Clear, unambiguous physical delineation (currently a kerb with appropriately positioned dropped kerb crossing points but other methods may emerge which are shown to be effective for disabled people);
- Physical features at surface level, such as tactile paving or differences in surface texture; and
- Visual contrast at surface level. Contrast can be provided either as a band or by changes in colour between different use areas.

If carefully incorporated into the design, street furniture may also be used to enhance delineation between preferred uses within a street scene, to provide protection and to influence the flow of vehicles, pedestrians and cyclists.

Any method of providing delineation should not hinder general freedom of movement by pedestrians.

All pedestrian circulation routes, whether in a traditional street or as part of a shared space scene, should be free from obstacles. Where potential obstacles are incorporated, for example, seating, waste bins, bollards, planters, posts, signs and trees, these should be carefully designed and sited out of the main pedestrian flow and their position should be clearly identifiable to all users, including blind and partially sighted people, by the use of visual contrast and surface level tactile indicators and/or tapping rails.



Pedestrian Crossings

Controlled crossings with dropped kerbs and tactile paving should be provided at regular intervals, and particularly near bus stops and key destination points. Crossings should be provided with audible and tactile signals (ie. rotating cone).

Controlled crossings should be provided at the beginning and end of pedestrian zones and shared spaces and, (for large areas or long streets) at key points where people need to cross areas. Informal crossing points may also be provided at strategic points to supplement controlled crossings, but they should not replace them.

Visual Contrast and Good Lighting

All potential obstacles should contrast visually with the background against which they will be viewed.

Incorporating colour/tonal contrast to highlight different use areas within a street scene, either by contrasting whole areas or by clear banding at interfaces, is beneficial for all users, but especially for blind and partially sighted people, and can also enhance design. Note that visual contrast alone is not sufficient, physical detectability is also required.

Good lighting is essential to enhance feelings of personal safety, to identify routes and obstacles, and to gather information provided by, for example, signage and visual contrast.

Lighting should be designed to address the needs of motorists, cyclists and pedestrians. Lighting should not cause undue or confusing shadows and be designed

to deliver a uniform illumination at surface level.

The selection of light sources (bulbs and lamps) should also take into account how their colour rendering performance will affect issues such as visual contrast.

Management practices should be in place to ensure that lighting is appropriately maintained.



Maintenance and Management

All streets and public spaces should be regularly cleaned and maintained.

Obstacles that are temporary or not consistent in their use or location, for example advertising A-boards, café furniture, and wheelie bins can be a problem for all users, but especially for blind and partially sighted people. Management and enforcement practices should be in place to ensure that all potential obstacles are either positioned in clearly defined areas away from pedestrian routes or removed.

Disability Equality and Consultation

The Disability Discrimination Act 2005 sets out a clear duty on public bodies such as local and highway authorities to promote equality of disabled people in the practices and policies they undertake and to engage and involve them in:

- Policy development; and
- The design, delivery and implementation of developments such as the provision of streets and external spaces.

Consultation with local people, including disabled people, older people and children, should be a fundamental part of any street design process, and details of the extent and scope of the consultation should be clearly identified in any Design and Access Statement prepared for planning permission.

Design and Access Statements are part of the Access Statement process which should start at the strategic or briefing level of any development and 'grow' through the planning and design stages to guide and inform the management of the completed development.

Education and Training

Inclusive, accessible streets and public spaces will only be possible if everyone responsible for their development, planning, design, and management is fully aware of the needs of the disabled and non-disabled people who will use them, and of the equality issues involved.

Disability awareness and equality training, including a sound understanding of the mobility needs of blind and partially sighted people, are crucial in achieving this.

Acknowledgements:

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References:

There are several guidance documents on inclusive design which provide information on how streets should be designed to be safe and accessible. Some of these are available free. Key documents include:

“Inclusive Mobility: A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure”

(Department for Transport, 2002). A guide to best practice on access to the pedestrian environment and the minimum standards that local authorities should adopt, and work to. Free from Department for Transport (DfT) or download at: www.dft.gov.uk/transportforyou/access/peti/inclusivemobility

“Guidance on the Use of Tactile Paving Surfaces”

(Department for Transport, 1999).

Free from Department for Transport (DfT) or download at: www.dft.gov.uk/transportforyou/access/peti/guidanceontheuseoftactilepav6167

“Manual for Streets”

(Department for Transport, 2007). Design guidance for streets. The focus is on lightly trafficked residential streets but may also apply to High Streets. Free from Department for Transport or download at: www.dft.gov.uk/pgr/sustainable/manforstreets

“BS8300: The design of buildings and their approaches to meet the needs of disabled people – Code of practice”

(British Standards Institute, 2009). The focus is on buildings but also includes guidance on the external environment where this relates to approaches to buildings. Cost: £240 or BSI Member Price £120. Available from BSI Customer Services: Tel 020 8996 9001; email: orders@bsigroup.com

“The Principles of Inclusive Design”

(Commission for Architecture and the Built Environment (CABE), 2006). This guide sets out the principles of inclusive design to create places that everyone can use. Free from CABE or download at: www.cabe.org.uk/files/the-principles-of-inclusive-design.pdf

“Planning, buildings, streets and disability equality”

(Disability Rights Commission, 2006). 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. Free from Equality and Human Rights Commission (EHRC) or download at: www.dotheduty.org/files/Planningbuildingandstreets.doc