

Design Issues for blind and partially sighted people



Helen Aluko-olokun
Policy Business Partner (Access and Inclusion)
Guide Dogs



This presentation will cover:

- Visual Impairment
- Design requirements for blind and partially sighted people
- Shared surface streets



The facts

- Only 10% of blind people have no residual vision
- Some have peripheral vision
- Others have central vision
- It is essential that designers take into account the differing needs of many types of visual impairment

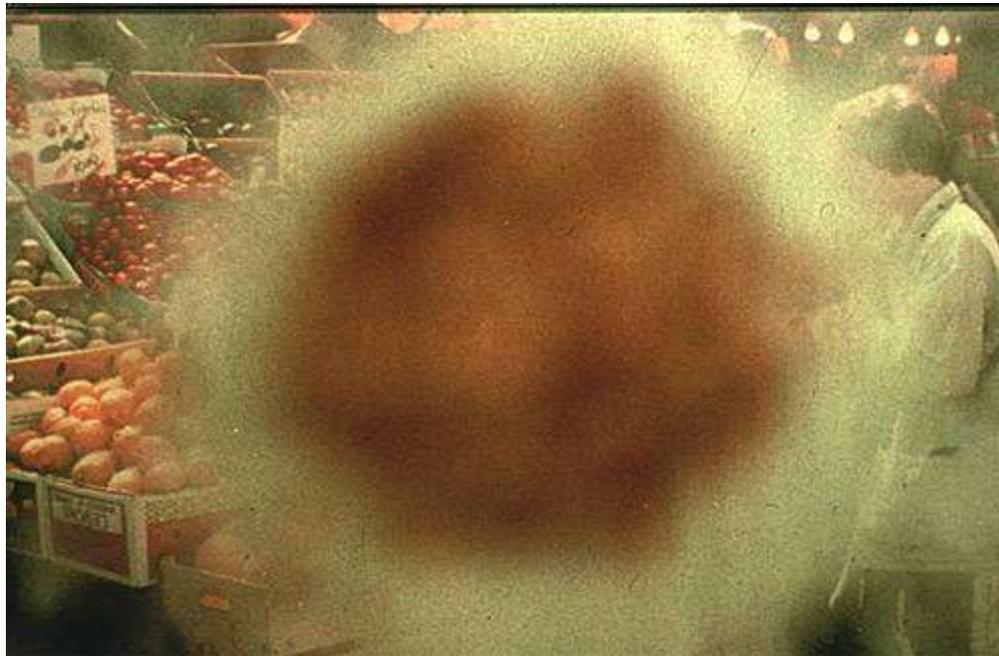


Visual impairment

- Peripheral vision - works in low light and detects movement
- Central vision - provides acuity and colour vision
- Design must consider:
 - the best lighting to maximise use of residual vision
 - the use of strong colour/tonal contrast to identify objects

Cataracts

- Colours are less clear
- Extra light may help / may cause 'white out'
- Small features difficult to see



Macular degeneration

- Poor depth / distance perception
- Poor fine colour discrimination
- Some colour loss



Glaucoma

- Bright light is painful and reduces vision
- Colour vision may be 'normal'
- Obstacles need to be defined



Diabetic retinopathy

- Features of MD and glaucoma





Design requirements - Pedestrian route

- Logical layout
- Defined, unobstructed routes
- Signage
- Street furniture
- Contrast and lighting
- Kerbs
- Tactile paving
- Cues and clues

Types of tactile surfaces

- Most common ones are:
 - Blister surface
 - Corduroy surface
 - Segregated shared cycle track/footway surface
 - Guidance path
- Others include:
 - Platform edge (off-street) surface
 - Platform edge (on-street) surface
 - Information surface

Shared surfaces: issues for blind and partially sighted people

- Guide dog owners, long cane users and those with no mobility aid rely on the kerb for orientation





Shared Surfaces – The problems

- Eye contact
- Equal priority
- No kerbed footways
- Limited or inappropriate tactile paving
- Lack of controlled crossings



TNS Research

- Survey of 500 blind and partially sighted people
- Only 2 liked shared surface streets
- 9 out of 10 concerned about shared surface streets
- 6 out of 10 said avoid them or very reluctant to use them



Challenging shared surfaces

- Shared surfaces discriminate against blind and partially sighted and other disabled people, effectively excluding them from the street environment
- Clearly defined pedestrian-only paths – a ‘safe space’ – must be provided for safer, independent travel
- Footways with kerbs, along with associated dropped kerbs and tactile paving, must be retained – unless an alternative delineator is demonstrated effective.



Inclusive Streets: Design principles for blind and partially sighted people

- Ambiguity and uncertainty may instil caution in driver....

.....but can and does undermine the confidence and independence of vulnerable pedestrians



Inclusive Streets: Design principles

- 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 and management



Inclusive Design

- Why do we tend to design for the most able of our society and then expect the least able to make do with add on modifications as an afterthought?
- “Inclusive “ design from the drawing board stage will minimise add-on design for disabled people



Quiet Vehicles

- Blind & partially sighted people are concerned about not hearing quiet vehicles.
- Quiet vehicles are near silent at under 20 miles per hr.
- Quiet vehicles need to generate a warning sound under 20 miles per hr.
- Blind & partially sighted people would like sound generated to be like traditional combustion engines.
- That these systems should be mandatory to fit by vehicle manufacturers.

Thank you

- For more information:
 - <http://www.guidedogs.org.uk/supportus/campaigns/streets-ahead/information-for-street-designers-and-councils/reference-documents/>
 - www.dft.gov.uk

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



Guidance on the use of Tactile Paving Surfaces

