



Inclusive Urban Environments

Antony Clewes BEng(Hons) IEng FCIHT FIHE FRSA MICE



About me:

Waterman Aspen - Area Manager.

Sandwell Metropolitan Borough Council – Transportation Planning Project Manager.

University of Wolverhampton – Bachelor of Engineering in Civil and Transportation Engineering.

University of Cambridge – Master of Studies in Interdisciplinary Design for the Built Environment.

CIHT West Mids EP Vice Chair.

CIHT Council.

CIHT Board of Trustees.

CIHT EDI Panel.

CIHT EP Network Council Rep.

CIHT Technical Champion.

PIARC Technical Committee 2.2 Roads for Equity, Accessibility and Mobility in Rural and Interurban Areas.

ICE Delegated Engineer and Mentor for EngTech and IEng Apprentices.

Incorporated Engineer with Institution of Civil Engineers (ICE).

Fellow of Chartered Institution of Highways and Transportation (CIHT).

Fellow of Royal society for Arts, Manufactures and Commerce (RSA).

UNSDG's

Social
sustainability

14.6 million people in
the UK are disabled,
equating to 22% of the
population.

Why this topic?

Personal
impact

Equality Act 2010

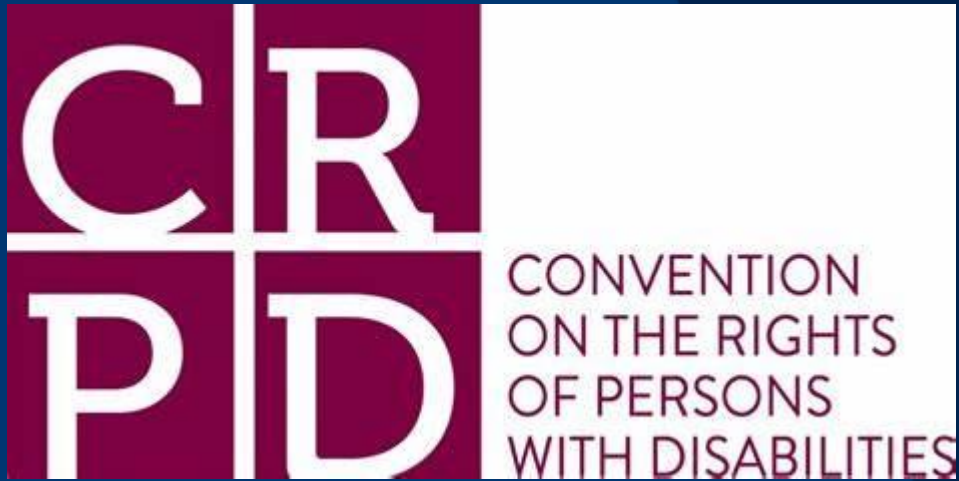
UNCRPD

Background

UNCRPD

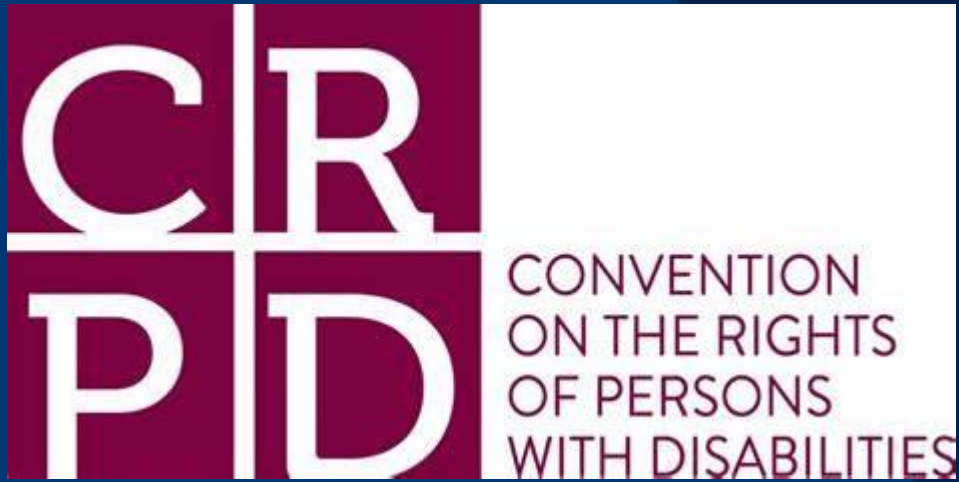
Show of hands





UN CRPD

- United Nations Convention on the Rights of Persons with Disabilities.
- Article 9 - Accessibility.
- Article 19 – Living independently and being included in the community.
- Article 20 – Personal mobility.
- Article 30 – Participation in cultural life, recreation, leisure and sport.



UN CRPD

- UN Committee 2016
- Concerns around transport for disabled people, such as parking, footway design, stairs.
- Lack of accessible facilities for sports and leisure.

Equality Act 2010

Part 12 – Disabled persons:
transport

Local transport authorities
expected to make 'reasonable
adjustments' to bus stops/stands.



The Equality Act 2010



UNSDG 11

- Target 11.2. Safe, accessible transport for all.
- Target 11.3. Inclusive urbanisation.
- Target 11.7. Universal access to safe, inclusive and accessible public spaces, particularly for women, children, the elderly and disabled.
- Target 11a. Positive social links between urban areas.



Factors to consider

- Wayfinding
- Comfort
- Lighting and safety



Wayfinding



References

Henshaws, 2018. *Mobility Canes: The Definitive Guide*. [Online] Available at: <https://www.henshaws.org.uk/definitive-guide-canes/> [Accessed 7th September 2021].

Independent living:

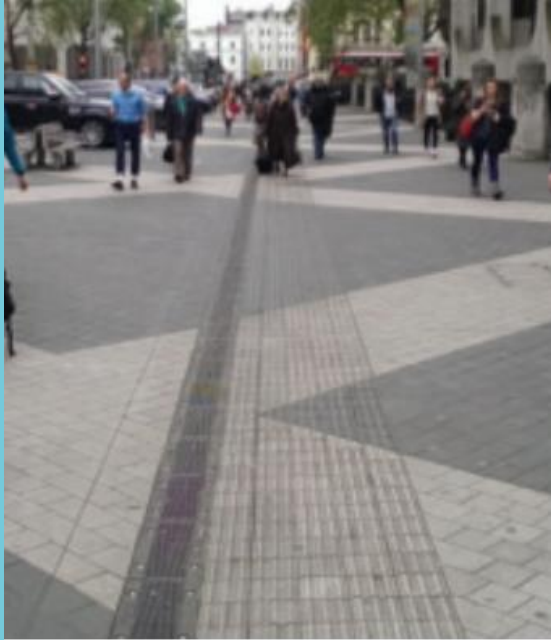
- Long cane users trained to feel for tactile paving.
- Guide dogs trained to react in certain ways depending on environment.
- Safer environments for vulnerable members of society, e.g. elderly and disabled.



Visually impaired pedestrian navigating by means of the long cane method (Kent Association for the Blind, n.d.).



Shared space scheme in Zurich, Switzerland. Note the lack of kerbs or tactile surfaces, making navigation for visually impaired pedestrians difficult (2030 Palette, n.d.).



Corduroy tactile paving used on Exhibition Road, Royal Borough of Chelsea and Kensington, to create a delineation, creating a 'pedestrian safe zone' (CIHT, 2018).



Shared space on New Road, Brighton (Bramley, 2014).

Shared space:

- Lack of kerbs/segregation between cars and pedestrians.
- 'Accidents by Design' - 2015.
- Only 11% of accidents reported.
- Shared Space design guidance withdrawn 2018.

“Every road tells a story. It's just that so many of our roads tell the story poorly, or tell the wrong story.”

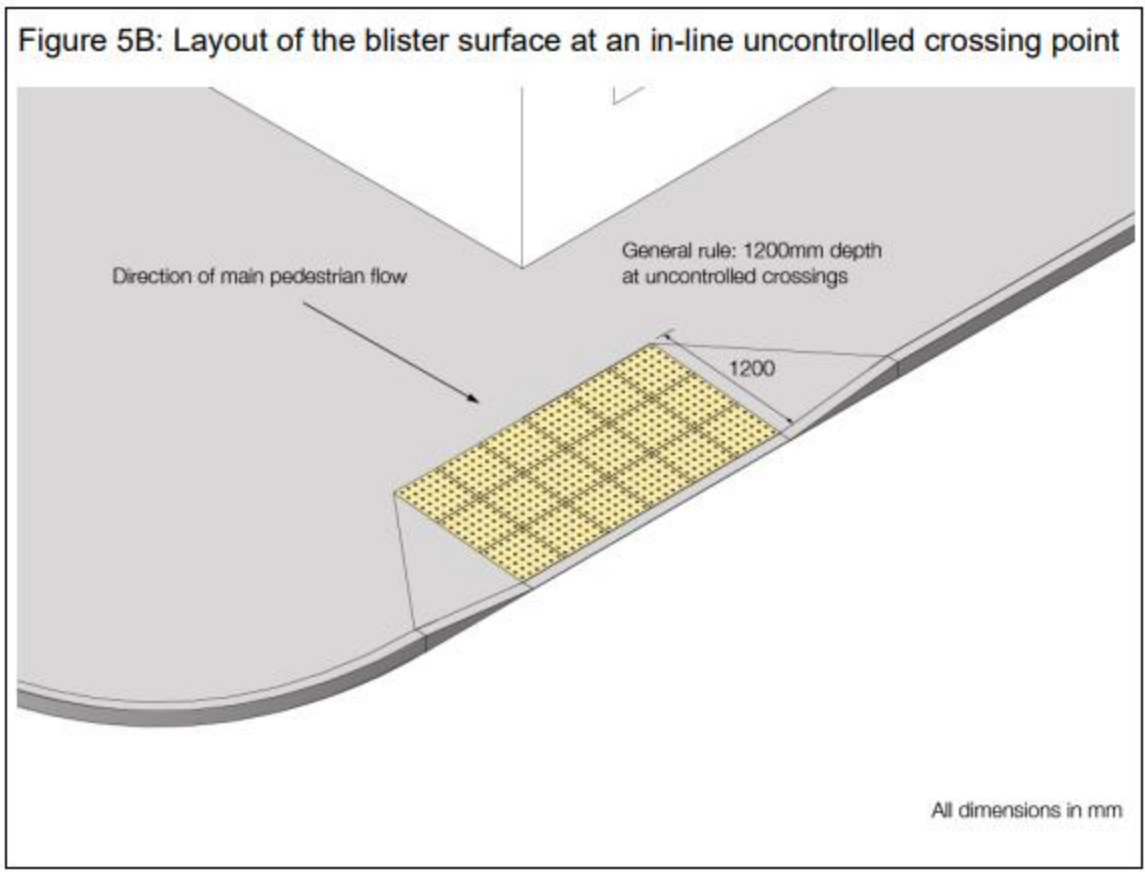
Hans Monderman 1945 - 2008







What do the standards and guidance



Guidance on the Use of Tactile Paving Surfaces – page 29



What do the standards and guidance say?

15.1.2. The term 'controlled crossing' refers to Zebra, Parallel, Puffin, Pedex, Toucan and equestrian crossings as defined in the Regulations, at which vehicles must give way or stop to allow pedestrians, cyclists or equestrians to cross. Note that a Zebra crossing is considered to be a controlled crossing, as the design is prescribed in the Regulations, and drivers must give way to anyone on the crossing.

TSM Chapter 6 – Traffic Control

At controlled crossings the blister surface should be red (the colour that has been established for this application since 1981) to indicate to partially sighted people that the crossing is controlled. Red blister paving should not be used in any other circumstances.

Guidance on the Use of Tactile Paving Surfaces – Section 1.5.4, para. 2

The blister surface should be red at controlled crossings. The colour red should not be used for any other tactile paving surface, nor for the blister surface at uncontrolled crossings. The blister surface at uncontrolled crossings is usually buff but may be any colour (other than red) that provides a contrast with the surrounding surface. See Section 2.3 below for the definition of controlled and uncontrolled crossings.

Guidance on the Use of Tactile Paving Surfaces – Section 2.2, para. 3









Comfort

Footway widths;

Person with walking stick – 0.75m

Person on crutches, using two sticks,
or a wheelchair – 0.9m

*ISO 7193 - clearance of preferably 100mm on both
sides of wheelchair users. Min. 50mm clearance both sides.

Long cane or guide dog user – 1.1m

Visually impaired person being guided – 1.2m

Level areas at crossings.

Benches and resting areas;

Min. interval of 50m between seating. Up to 100m in countryside
settings.

Benches to be set back at least 600mm adjacent to footways, with
900mm square level area for wheelchair users.

Benches to be contrasting colours.



A frame – a barrier to more
than anti-social behaviour!



Lighting and safety

Lime Micromobility

- 69% of riders want better lit parking areas.
- 67% want more cycle lanes.
- 1 in 5 feel safe cycling alone at night.

CPTED (*sighted*)

- Reduce opportunities for criminal behaviour.
- Natural surveillance.
 - Footways, bus stops, parking etc. well lit, overlooked by buildings.
- Broken Windows Theory.



Thank you

Antony Clewes

[LinkedIn](#)

waterman
aspen

watermanaspen.co.uk

