

# Addressing the needs of disabled cyclists

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# Overview

1. Rationale – why focus on disabled cycling?
2. Review – what do we already know about disabled cycling?
3. Examples of adapted cycles
4. Inclusive cycling in policy and law
5. Experiences of inclusive cycling in Bristol
6. Conclusions

# Why focus on disabled cycling?

*A person has a disability if they have a physical or mental impairment, and the impairment has a substantial and long-term adverse effect on their ability to perform normal day-to-day activities. (Equality Act, 2010)*

- Almost one in five people (19%) in UK have disability
  - Only 17% of those with a disability have condition from birth
- Mobility impairment is the most commonly-experienced form of disability
  - 57% of people with disability report this
  - Mobility impairment can be quite ‘invisible’
- Transport is largest concern in local area for disabled people
  - Barrier to employment
- People with a disability at greater risk of poor health more generally
  - Disabling conditions have a significant association with obesity through reduced movement
- Cycling has the potential to make people more active
  - Combat disease and enhance wellbeing
  - Currently a lack of focus on disabled cycling despite large benefits

# Disabled cycling: what do we know?









- Common misconception that cycling is simply not possible for the majority of people experiencing a disability
- In fact, cycling is often possible for disabled people, and may even be *more possible* than other forms of active travel (i.e. walking)
- Cycles can be a very effective mobility aid
  - Bicycle included
- Free mobility can mask disability
  - Positive: allows people experience of free motion and simply ‘fitting in’ to the cycling crowd
  - Negative: means levels of disabled cycling underappreciated

# Disabled cycling: what do we know?








- Currently, much of the cycle network in the UK is not particularly inclusive for those with a disability
- Whilst cycling can allow free mobility, issues remain for disabled cyclists:
  - Mounting and dismounting
  - Walking alongside the cycle
  - Balancing at low speeds or whilst static
  - Manoeuvring in confined spaces and parking
  - Reading signage

*Therefore, infrastructure design that is truly inclusive needs to cater for those with all levels of ability and experience*

# Adapted cycles

	Solo	Tandem
Tricycle		
Handcycle		
Recumbent tricycle		
Recumbent handcycle		



	Solo	Tandem
<b>Mixed recumbent / upright and pedal / hand-crank</b>	N/A	
<b>Pedalled quadricycles</b>		
<b>Hand-cranked quadricycles</b> (tandem example is mixed pedal and hand-cranked)		
<b>Wheelchair clip-on cycles</b> (tandem example is electrically assisted)		

# Disability cycling in law

- Currently no legal requirement in UK for local highway authorities to prepare cycling strategies or provide urban cycle networks, however...
- The Disability Discrimination Act (1995)
- The Countryside and Rights of Way Act (2000)
- The Land Reform (Scotland) Act (2003)
- Traffic Management Act (2004)
- The Disability Discrimination Act (2005)
- The Active Travel (Wales) Act (2013)
- **The Equality Act 2010**
  - Requires authorities to make reasonable adjustments to remove barriers for disabled people. This applies to the street environment and to public transport services and covers disabled cyclists as well as pedestrians
- **The Infrastructure Act (2015)**
  - Requires the Secretary of State to set a Cycling and Walking Investment Strategy. In order to help inform the develop a National Cycling and Walking Infrastructure Plan.



# Disability cycling in design guidance

- In Britain, disabled cyclists treated as specific group with specific needs
  - Disabled cyclists' needs completely separate from those of more general cycling population
  - Assumes cyclists without a disability will accept a network with poor accessibility/continuity
    - Obstructions, pinch points, sharp bends, dismounting points
  - Some exceptions to this:
    - Design Guidance Active Travel (Wales) Act 2013
    - London Cycle Design Standards (TfL, 2005)
  - Cyclists lumped in with pedestrians and equestrians
  - Change on horizon with new Interim Advice Note (2016)
- International best-practice focusses on simply providing an accessible network for all
  - Dutch guidance (CROW, 2006)
  - Collection of Cycling Concepts (Cycling Embassy for Denmark, 2012)
- Key factor is that well-written and adhered-to inclusive design guidance for a general class of cyclist should remove the need for disabled cyclists to be treated as a separate group
  - GB guidance provides framework for this
  - However, poor implementation for general class of cyclists
  - Which leads to exclusive infrastructure for disabled cyclists

# Study methodology

- Qualitative study of the experiences and needs of a group of disabled cyclists using an inclusive cycling scheme in Bristol
- Disability is heterogeneous, sample representative of the experiences of this specific group
  - Nonetheless relevant to other disabled cyclists, and the general cycling population

	Disabled cyclists (DC)	Care providers (CP)	Scheme organiser (SO)	Total
<b>Focus group</b>	8	7	1	16
<b>Interview</b>	0	0	1	1

# Experiences of disabled cycling

Benefits	Barriers
<ul style="list-style-type: none"><li>■ First experience of cycling</li><li>■ Pleasurable experiences<ul style="list-style-type: none"><li>– Kinaesthetic</li><li>– Freedom</li><li>– Exhilaration</li></ul></li><li>■ Good for developing confidence</li><li>■ Health benefits</li><li>■ Independence</li><li>■ Involvement in community</li></ul>	<ul style="list-style-type: none"><li>■ Other cycle path users</li><li>■ Infrastructure</li><li>■ Financial cost<ul style="list-style-type: none"><li>– Security</li></ul></li><li>■ Breakdowns<ul style="list-style-type: none"><li>– More serious for certain types of disability</li></ul></li><li>■ Staffing/funding</li></ul>

# Conclusions (1)

- Health benefits of cycling evident for disabled people
- Cyclists with disabilities experience the same pleasures and frustrations of cycling as the more general cycle user population
  - Kinaesthetic pleasure
  - Freedom
  - Occasional altercations
  - Poor infrastructure
- At the same time, there are a number of specific infrastructural requirements for support
  - Variable by type of disability
- Dimensions still an issue
  - Physical barriers remain
- Cost of bikes can lead to security concerns
  - Provision of more secure storage
- Breaking down is a concern
  - Provision of public repair stations
  - Provision of seating/recovery areas

# Conclusions (2)

- Cycle design guidance in GB is slowly improving, but not currently meeting needs
  - Often vague
  - Limited to physical dimensions of the cycle
- Significant gap in literature in understanding experiences of disabled cyclists
  - Present study sample limited
  - Experiences of infrastructure important for informing design of infrastructure
- Further research required with different groups of disabled cyclists
  - Experiences of disabled cyclists in a range of contexts



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