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Invisible cyclists? Disabled people and cycle planning–A case study of London

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Abstract

This paper reports on analysis of over 50 London transport and cycling strategy documents. Both image and text were analysed, in exploring representations of disabled people, particularly as cyclists or potential cyclists. It remains unusual for disabled people's cycling to be considered within broader transport strategy documents; instead they are overwhelmingly conceptualised as public transport users and pedestrians. By contrast it was more usual for cycling strategies to at least mention disabled people as cyclists or potential cyclists. However, discussion of policies that might increase disabled people's participation in cycling was often limited to general aspirations or references to leisure cycling clubs and training. Few images in cycling strategies (and even less so transport strategies) showed non-standard cycles of the kind used by some disabled cyclists. Disabled people's cycling (and barriers to cycling) needs further research and a policy approach that targets social and structural exclusion from cycling, not only individual ability and attitudes. More thought needs to be given to a range of types of disability and how these might affect cycling needs.

Keywords

Invisible Cyclists? Disabled people and cycle planning – a case study of London

Introduction

Regular transport cycling is an excellent way to improve and maintain health. However, cycling take-up is frequently unequal and not all communities and groups benefit equally from use of the mode. A growing focus on cycling equity has responded to this, including disparities between groups and the barriers to cycling faced by specific groups (e.g. Cox 2016, Van der Kloof et al 2014, Winters et al 2010). Recent work has covered age, gender, ethnicity, and income/deprivation. For instance, a systematic review of English-language literature showed that women express stronger preferences than men for infrastructure separated from motor traffic (Aldred et al 2017). Infrastructure location is another area of interest: research in USA has highlighted the building of new cycle routes in more affluent, disproportionately white areas (Flanagan et al 2016).

In parallel, sociological literature has discussed the construction of the 'cyclist', particularly in low-cycling countries, in relation to potential exclusions (Aldred 2013). For instance, Daley and Rissel (2011) analysed how in Australia, the image of cycling as a sporty activity helps marginalise and stigmatise cyclists. Writing about London, Steinbach et al (2011) argue that dominant constructions of cycling contribute to the exclusion of female and ethnic minority Londoners, who can less easily attach themselves to discourses of cyclists as risk-takers than younger men, for instance. If in many contexts the dominant image of the cyclist is the sporty risk-taker, this stereotype may also be particularly at odds with stereotypes widely held about disabled people.

This paper brings together the two strands of literature, exploring the representation of disabled people in cycle planning language and imagery. Disabled people have been relatively little discussed in relation to cycling policy and planning (Clayton et al 2017), perhaps due to an assumption that disabled people do not cycle. Some disabled people's advocacy groups describe cycling as itself a threat to disabled people, representing cyclists as for instance a 'silent menace'[1]. Representing disabled cyclists, groups such as Wheels for Wellbeing have suggested that many use a cycle as a mobility aid, finding cycling easier than walking, and hence deserve the recognition and protection officially granted to users of wheelchairs and mobility scooters. One problem in these debates has been a lack of data

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[1] https://www.standard.co.uk/news/london/cycle-lanes-for-undertaking-buses-8428588.html

1 and research on cycling (and barriers to cycling) by disabled people, and on the impact of

2 people cycling on disabled pedestrians. This paper deals only with the former issue.

3 The lack of data meant the authors had to order a commissioned Census table to examine

4 levels of commuter cycling in England and Wales among disabled people. The definition of

5 disability used in the Census refers to activity limitation, and includes illness. One of the

6 problems in researching this area relates to potentially differing definitions of disability, and

7 the tendency for policy and planning to focus mainly on physical disabilities (for instance, as

8 mentioned below 'bus accessibility' is in London frequently taken to refer to wheelchair

9 accessible bus stops). Here we are maintaining an inclusive definition of disability (in

10 England, temporary disabilities and illness are covered under disability legislation) but

11 acknowledge that knowledge needs to be developed about the needs of all groups of

12 disabled cyclists, not only (for example) wheelchair users.

13 The Census table demonstrated that disabled people do cycle to work, albeit at a lower rate

14 than non-disabled people. For instance, in Cambridge one in four disabled people cycle to

15 work, compared to an overall average of one in three. Among users of all modes, disabled

16 people are 6.7% of English commuters, and 5.7% of London commuters. The graphs below

17 illustrate (i) the proportion of users of different modes who are disabled, in England and

18 London and (ii) London modal share for all commuters and disabled commuters.
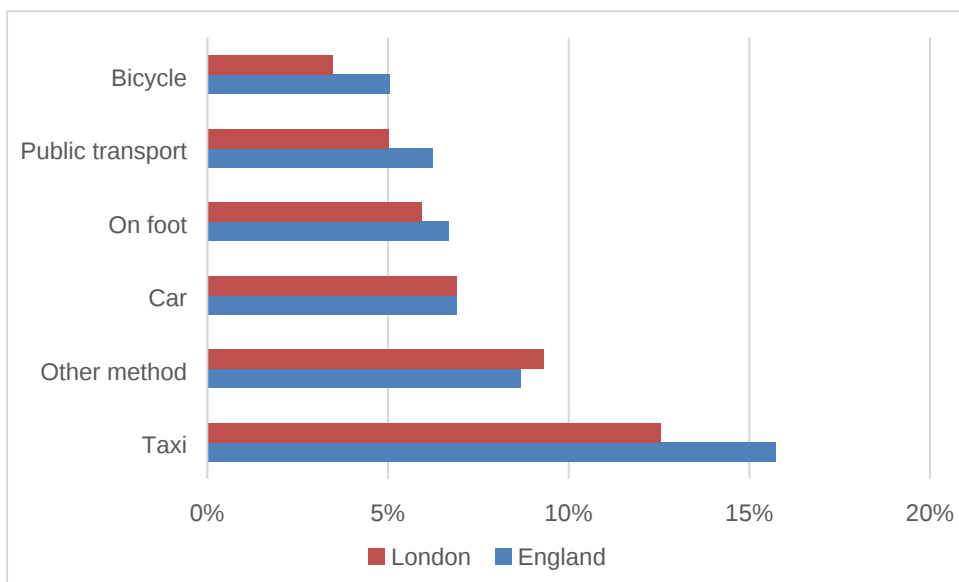
19

20 **Figure 1: disabled people as a percentage of those using different modes to commute (Census 2011 data)**

21 The highest proportions of disabled commuters in both England and London are found within

22 users of 'Other methods' (which includes for instance Demand Responsive Transport) and

23 taxis, with the lowest proportions of disabled people (5% in England; 3.5% in London) found

24 among those cycling to work. However, very low *numbers* of disabled people use 'other'

1   methods and taxis to get to work. Figure 2 illustrates commute mode split for London;
2   disabled Londoners, like Londoners in general, overwhelmingly use public transport or the
3   car as their main mode. Cycling accounts for 3% of commutes by disabled Londoners, well
4   behind other modes but used by more Londoners than taxis and 'other' combined (each on
5   1%).
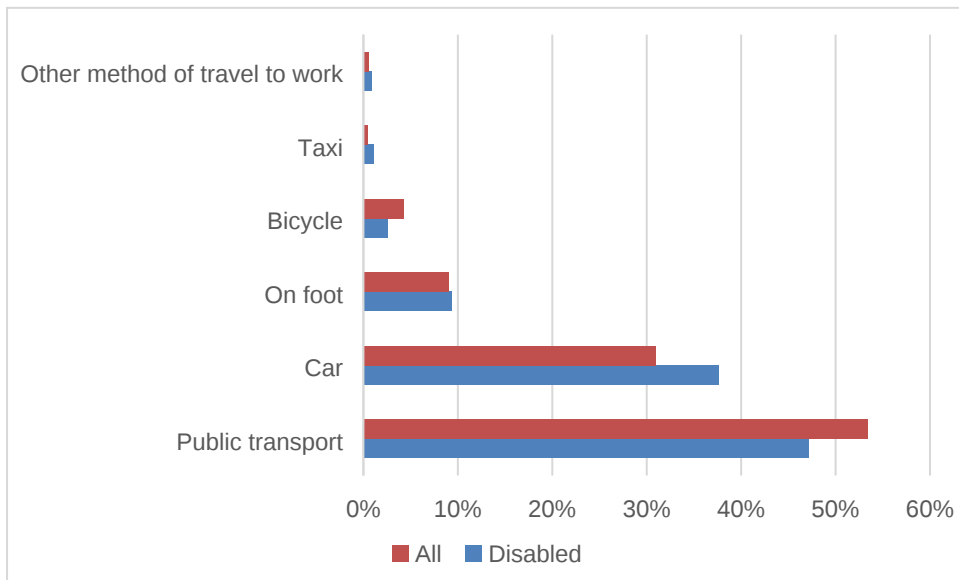
6

7   **Figure 2: percentages of disabled and all commuters using different modes in London (Census data)**

8   A new analysis of all-purpose data from the Active People Survey (Author refs removed)
9   similarly shows that while in England physically disabled people are around 50% less likely
10   to cycle than non-disabled people, absolute rates of cycling vary substantially. For example,
11   2.3% of disabled people cycled in the past 4 weeks in the three lowest-cycling local
12   authorities, compared to 21.9% in the three highest-cycling authorities. Many countries have
13   little data available on disabled people and cycling, so it is hard to see where England sits
14   relative to others. However, representation of other groups, such as women and older
15   people, varies substantially by context, with some countries much more equal than the UK
16   (Heinen et al 2010, Nehme et al 2016).

17   Therefore, while cycling rates in England are low generally, and lower among disabled
18   people than non-disabled people, in English local authorities with higher levels of cycling up
19   to one in four disabled people may ride regularly. This is despite a failure to recognise
20   specific needs of disabled people who cycle (Clayton et al 2017). Such specific needs may
21   or may not be related to use of adapted or specialist cycles. The examples below (see
22   Cycling UK undated for more) illustrate the different kinds of cycles that might be used by
23   people with different types of impairment. This is not intended as an exhaustive list, but to
24   give a flavour of the diversity that does and could exist.

- A tandem may be used by a visually impaired rider, cycling as 'stoker' with sighted 'pilot'.
- A tricycle could be used by people with balance issues, for example, people with scoliosis, who have had a stroke affecting balance, with dyspraxia[2], or with autism.
- Handcycles may be used by people with limited or no lower body mobility, e.g. because of paraplegia, leg amputations or arthritis.
- Some types of cycle (e.g. wheelchair cycles, cargo cycles, some side-by-side tandems) can be used by people who cannot pedal at all (by hand or foot).
- People with some mobility disability or high levels of fatigue/pain may find an e-cycle (including any of the above) suitable, as requiring lower levels of physical effort to achieve a given speed.

Not all disabled people use adapted or specialist cycles. A recent Wheels for Wellbeing survey (2017) found that among those cyclists who owned their own cycles, half owned a standard two-wheeled bicycle, with or without adaptions. Some 'standard' two-wheeled cycles are particularly suitable for people with more limited mobility; for example, step-through or low-step cycles. While the cycle itself (modifications and adapted cycles) has so far often been a focus, adaptations and support go beyond this. Cycle parking may not be suitable for all disabled people; either because it does not fit an adapted cycle, or because someone cannot lift their cycle if this is needed. Beyond the cycle, somewhere to park it, and (for tandem riders) a pilot or co-pedaller, other needs might relate to the provision of information in appropriate format, or to a cycling environment that is calm and easy to read. These areas remain even more under-researched than needs related to the cycle itself or to the removal of physical obstacles in the built environment.

While disabled people have historically been marginalised in cycle planning in England (Hickman 2016) there have been signs of change in London. Transport for London (TfL), the city's transport authority, has in recent years moved to explicitly include disabled cyclists, with the concept of the 'standard inclusive cycle' capturing types of vehicles used by many disabled cyclists and others (e.g. people carrying children and freight). The landmark document in this regard is the second London Cycling Design Standards (LCDS), originally published in draft form for consultation in June 2014[3] and adopted in revised form in December 2015. At a national level, the end of 2016 saw reference to a similar concept, the

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[2] A common disorder affecting motor coordination: https://dyspraxiafoundation.org.uk/about-dyspraxia/

[3] https://consultations.tfl.gov.uk/cycling/draft-london-cycling-design-standards/

1   'Cycle Design Vehicle' in Highways' England's Interim Advice Note 195, the first ever legal

2   standard for an inclusive cycle (in relation to the Strategic Road Network).

3   At a national level, policy is starting to recognise the potential for disabled people to cycle. A

4   Department for Transport report (2017[4]) outlined eight categories that may lead to exclusion

5   of different social groups, including disabled people, from cycling. Categories include areas

6   where differences in (for instance) preferences, abilities, and types of trips made may be

7   associated with indirect discrimination. This is in line with the social model of disability

8   (Oliver 1990), where individual differences are not seen as inherently leading to social

9   exclusion, but rather from the failure of society to plan inclusively for a range of individual

10   characteristics. The DfT (2017) report used the categories to lay out in general terms

11   strategies for more inclusive cycle planning; for instance, better inclusion of women may

12   necessitate moving from a focus only on the commute, as women make a greater diversity

13   of trip types than do men. This formed part of a wider project examining cycling potential

14   (Lovelace et al 2017).

15   The eight categories of exclusion (DfT 2017) are reproduced below, but with examples and

16   explanations used that all refer specifically to disabled people.

17   **Table 1: Exclusions that may affect disabled cyclists and potential cyclists**

Dimension	Explanations and examples
1. The environment and the rider	
Destinations	Disability status may affect the kinds of trips people want to make. A lower proportion of disabled adults are in work and a higher proportion of disabled people are over 60, compared with non-disabled people. Therefore focusing only on commuting may exclude the potential for other utility trips made by older and disabled people.
Route quality	Groups under-represented in cycling (including older people, more likely to be disabled than younger people) often express a particularly high need for good quality infrastructure, separating cyclists from motor traffic. They may therefore be disproportionately excluded by having to share with high volume or high speed motor traffic. Physical attributes of adapted or specialist cycles may also mean route quality matters more: for instance, surface quality is particularly important for

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[4] This will be online soon.

	three-wheelers which cannot easily avoid potholes and may risk tipping with adverse camber.
Route directness	Older people are less likely to be able or willing to cycle longer distances than younger people. Hence, if routes make detours (or unnecessarily include hills) this may disproportionately exclude older disabled people.
Obstacles	Many cycle routes include barriers to exclude motorcycles or other motor vehicles, include stepped access, or insist on cyclists dismounting. Some disabled cyclists are then unable to use those routes (e.g. 'cyclists dismount' signs do not account for disabled people who use their cycle as a mobility aid, and who may be physically unable to walk or wheel a cycle).
Discrimination and harassment	Disabled people have reported experiencing discrimination on public transport, street harassment, etc. While under-researched in relation to cycling, there may be analogous barriers relating to service providers (e.g. cycle hire, events) or to public attitudes and behaviour. Or conversely, cycling may make disabled people feel safer from harassment than some other modes, due to it providing greater independence and mobility (as has been anecdotally reported for women cycling, compared to walking).
2. The cycle and the rider	
Access to cycles	Adapted or specialist cycles and e-bikes can be expensive and few cycle shops can advise disabled people on the best cycling solutions. Disabled people may not believe they can cycle, or never have been taught to cycle, due to this belief. Some may need a tandem partner to ride.
Design, policy and imagery	If disabled people as cyclists are not explicitly included in policy documents and cycling promotion – both textually and in images – this may feed a belief that disabled people cannot or do not cycle. Information (such as maps) may need to be provided in a variety of accessible formats.
Parking	Different types of cycle have different parking needs, potentially needing both more space (e.g. three wheelers) and more security

	(due to cost). Proximity to end destination can be an issue for those whose cycles are mobility aids.

Source: adapted from DfT 2017

This paper focuses on policy discourse and imagery. While the table separates out barriers, they are inter-related. For example, if disabled cyclists remain invisible within policy documents, they are unlikely to be considered by planners. Hence environments may be designed that exclude them, such as cycle routes with sections where dismounting is necessary, meaning that those who can cycle but cannot walk are excluded. Conversely, where the cycling environment excludes disabled people, they are then likely to be under-represented among cyclists, leading to a perception among planners, policy-makers, and the public that disabled people do not cycle. The existence of a disablist environment itself can help make disabled people invisible, because of an assumption that all cyclists are able-bodied (c.f. the similar analysis in relation to wheelchair users by Gaete-Reyes 2015).

Methods

This paper builds on Hickman's (2016) paper exploring images of non-standard cycles (including those used by disabled people, and those used to carry cargo or children) in five UK cycle policy and planning documents. The table below reproduces his key findings. Two of the five documents contained neither images, nor drawings of non-standard cycles. Two contained only one photograph each (out of 18 between them) of a non-standard cycle. The last one, the above-mentioned LCDS, contained relatively few photographs but a relatively large number of drawings (7) illustrating the engineering specifications (e.g. turning circles) of non-standard cycles.

Document	Pages	Images containing cycle(s)			Images containing cycle(s) other than bicycle(s)	
		Images per page	Photographs	Drawings	Photographs	Drawings
Get Britain Cycling (APPCG, 2013)	16	0·9	5	9	0	0
Time to Choose Cycling (BC, 2014)	20	1·3	5	20	1	0
The Mayor's Vision for Cycling in London (GLA, 2013)	33	0·5	13	3	1	0
Handbook for Cycle-Friendly Design (Sustrans, 2014)	36	2·8	61	39	0	0
Draft London Cycling Design Standards (TfL, 2014a)	358	0·6	177	26	3	7

Table 1. Number of images that contain cycles compared with number of images that contain cycle's other than bicycles

Figure 3: Hickman's findings: images of non-standard cycles in five UK policy documents

1 Those documents were published in 2013-4, but only one has more than one representation

2 of a non-standard cycle, despite all having ambitions to grow and diversify cycling. Non-

3 standard cycles matter not just for disabled people, but also because where cycling is more

4 common, cargo cycles are widely used to transport children and goods. Getting more

5 women cycling is likely to require – among other things – planning for cycling with and by

6 children (Aldred et al 2017).

7 This article focuses on London, where arguably UK policy is most advanced in this regard. It

8 goes beyond Hickman's work in considering imagery *and* language, and in analysing more

9 documents from a longer period. This allows us to explore how discourse and imagery

10 related to disabled people and cycling has changed, to analyse disabled people described

11 both as cyclists and other transport users, and to compare qualitative and quantitative

12 differences. We include both cycle planning documents and broader transport planning

13 documents (in most cases LIPs, or Local Implementation Plans, which authorities produce at

14 regular intervals to secure funding from TfL – if this was unavailable we looked for a

15 transport strategy instead) from 33 London local authorities (32 boroughs and City of

16 London).

17 This enables a comparison between those authorities operating in a context where the

18 regional transport planning body, Transport for London has at least since 2014 explicitly

19 encouraged them to consider disabled people as cyclists. We included the GLA and TfL

20 cycling documents analysed by Hickman (Mayor's Vision for Cycling and London Cycle

21 Design Standards); and a second more recent document not analysed by Hickman ('Human

22 Streets', GLA, 2016).

23 Our research questions are:

24 • How many images of non-standard cycles do cycling strategies contain (absolutely

25 and as a proportion of all images of cycles)? How does this vary by authority and by

26 date of publication? And how do the findings compare to Hickman's results, which

27 primarily focused on national-level documents?

28 • How do both cycling and transport strategies refer to disabled people? How many

29 references are to disabled people as cyclists, and how many to disabled people as

30 users of other modes? What is the nature of references of disabled people as cyclists

31 (e.g. infrastructure design, training, etc.)?

32 All London boroughs were represented in the analysis, but some did not have cycling

33 strategies available online. No cycling strategy could be obtained for Barking and

34 Dagenham, Barnet, Bexley, Camden, Enfield, Havering, Hillingdon, Hounslow, Kensington

1   and Chelsea, Lewisham, Merton, or Newham. Transport strategies were available from

2   borough websites for all boroughs. The list below illustrates what was available and

3   analysed. Boroughs for which a cycling strategy was available had on average around

4   double the 2011 Census cycling rate of those that did not (5.3% vs. 2.8%). Thus those

5   boroughs with available cycling strategies were likely in general to be those with higher

6   levels of cycling. One exception was Camden, with 7.1% cycling to work but no separate

7   cycling strategy[5].

8   Images were identified manually, by reading through all the strategies in question and

9   counting those depicting standard versus non-standard cycles. By 'image' what is meant

10 here is any kind of visual depiction: a photo, symbol, drawing, picture or sketch. Photos were

11 by far the most common type of image. 'Non-standard' cycle refers to any cycle other than a

12 standard two-wheeled bicycle, which could be (but is not limited to) a tricycle, handcycle,

13 tandem, recumbent or cargo bike.

14 Generally, each image was counted as 'one' (i.e. in some photos more than one cycle, or a

15 group of cycles, were depicted, but for simplicity that image would just be counted as 'one

16 image' of a cycle, rather than the 6 or 7 that might have been shown). Therefore, because

17 many images were of this nature (i.e. clusters or groups of cycles) and tended to

18 overwhelmingly depict standard two-wheeled bicycles, the under-representation of non-

19 standard cycles might be greater than stated. Efforts were made to ensure that duplicate

20 images within a document were not counted. Similarly, images were not counted where it

21 was impossible to tell what kind of cycle(s) were being depicted (usually this was the case

22 with images containing a crowded group of cycles, or an image showing only part of a cycle).

23 Of images depicting non-standard cycles, many were of cargo bikes and featured parents

24 with children, and so again the findings may not reveal the extent of under-representation

25 specifically of disabled cyclists.

26 The textual analysis proceeded differently; using NVivo to code and then analyse material.

27 Firstly, material was automatically coded that referred to a wider range of terms that might

28 be associated with disability, using the following stemmed NVivo search:

29   Disabled OR Disability OR Inclusive OR Ability OR Impairment OR Blind OR Deaf

30   OR Wheelchair OR Accessible OR Mobility

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[5] Arguably authorities should not need separate cycling strategies, walking strategies and so on if transport were truly integrated – in practice however, such strategies may well be useful in redressing the traditional prioritisation of motorised transport in the UK.

1   The terms were kept broad given the ambiguous nature of language. For instance,

2   'accessibility' is sometimes used to refer to the specific needs of disabled people, and

3   sometimes to refer to general ease of access (e.g. bus stops located near homes – which

4   itself may exclude disabled people, if assumptions are made about walking speeds). Manual

5   coding was then used, removing irrelevant material and coding sub-themes relevant to the

6   research question and emerging from the data, e.g. references to specific forms of transport.

7   Analysis included quantitative elements (e.g. counting types of reference by year of

8   publication) and more qualitative elements (e.g. coding types of intervention referred to, and

9   analysing these in the context of broader cycling discourses).

Results

About the strategies

The oldest documents dated from 2004, with the most recent from 2016. Below we present the dates by type of document; transport or cycling strategy, for all documents (i.e. including the GLA and TfL documents).
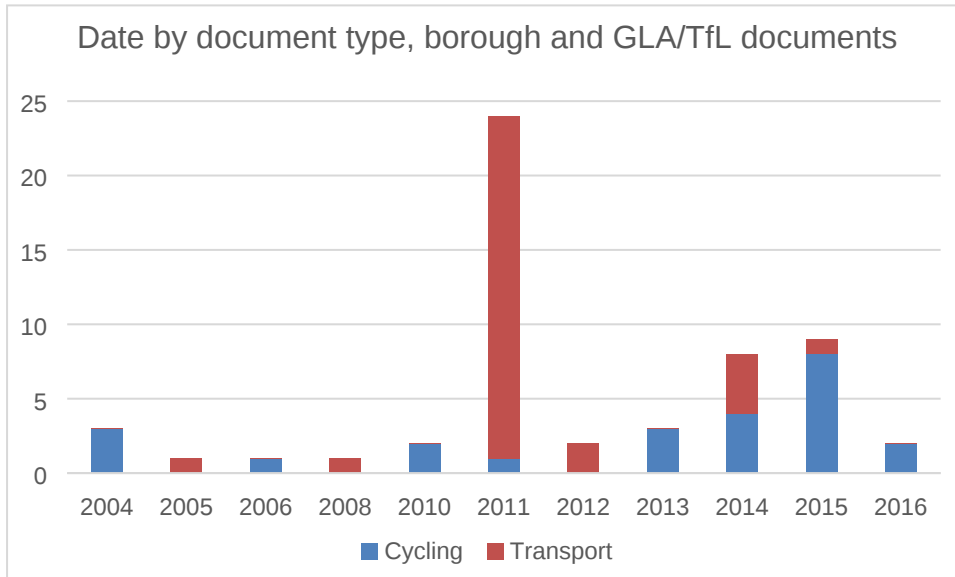
Figure 4: dates of reviewed documents

A peak in 11 relates to the publication in 2011 of 24 documents, almost all LIPs. This relates to the LIP cycle which is more structured (led by TfL) than is the production of cycling strategy documents. Cycling strategy documents are largely more recent; the year in which most were published being 2015. We might expect documents published between 2014 and 2016 to take more account of inclusive cycling, given the publication in 2013 of the GLA's *Mayor's Vision for Cycling* and in 2014 of TfL's *London Cycling Design Standards*, both seen broadly as heralding a new approach aiming to diversify cycling.

Imagery

The 56 documents reviewed contained a total of 364 images of cycles. Of these, 13 (or 3.6%) were non-standard. Some documents, particularly transport strategies, contained no or very few images of cycles or people cycling. The table below contains only those documents with 5 or more images of cycles[6], and the numbers and proportion of these that were non-standard.

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[6] Of documents with 1-4 images of cycles, none portrayed any non-standard cycles.

1 **Table 2: Images of non-standard cycles in documents with five or more images containing cycles**

Borough/organisation	Document Type	Date	Images of cycles	Images of non-standard cycles	% non-standard
TfL (LCDS)	Cycling	2014	203	10	5%
Harrow	Cycling	2015	10	1	10%
GLA (Mayor's Vision)	Cycling	2013	16	1	6%
Waltham Forest	Cycling	2015	16	1	6%
Ealing	Cycling	2010	16	0	0%
Brent	Transport	2011	8	0	0%
Lambeth	Cycling	2013	5	0	0%
Kingston	Cycling	2013	22	0	0%
Bexley	Transport	2014	5	0	0%
Sutton	Cycling	2015	7	0	0%
GLA (Human Streets)	Cycling	2016	6	0	0%
Brent	Cycling	2016	14	0	0%

2

3   There are only four documents containing any images of non-standard cycles. TfL's *London*
4   *Cycling Design Standards* (2014), a relatively visual document (being guidance for planners
5   and engineers) contains ten, while the first GLA document (*Mayor's Vision for Cycling*,
6   2013), Waltham Forest's cycling strategy and Harrow's cycling strategy all contain one
7   image each. Brent, Ealing and Kingston all show no non-standard cycles, despite each
8   containing images of at least ten cycles. No LIP/transport strategy documents showed any
9   images of non-standard cycles.

10   All four documents containing such images were published between 2013-5. However, of the
11   eight that failed to show such images, six were published in 2013 onwards, one in 2011 and
12   one in 2010. Hence while it is only since 2013 that such images appear at all, there are still
13   many documents that fail to include them; even among those with five or more images of
14   cycles. Non-standard cycles are not reached for when an image of 'a cyclist' or 'a bike' is
15   needed; where documents have few images the norm is still always for these to be

1 'bicycles'. For instance the two documents from Hackney, published in 2015 in the highest-
2 cycling borough in London, contain between them three images of cycles, all bicycles.

Language and Discourse

Analysis Challenges

5 References to disabled people and cycling were at times surprisingly difficult to identify. The
6 reason for this is discursive, and relates to a couple of concepts used to discuss disabled
7 people, cycling, and transport. The first is the concept of 'accessibility'. This is at times used
8 specifically to discuss changes made to ensure disabled people can access transport
9 services; for example, Transport for London's 'bus stop accessibility programme', which
10 aims to ensure that 100% of bus stops can be accessed by wheelchair users.

11 At other times, 'accessibility' is used as a general term for ease of getting to places. For
12 instance, Greenwich LIP defines it as meaning 'how easy it is for people to get to places,
13 jobs, homes and services.' Complicating matters further, a general definition of accessibility
14 may obscure the needs of disabled people; for instance, if accessibility is defined as access
15 to public transport within a specific distance/time (as with TfL's PTAL, Public Transport
16 Accessibility Level, measure) this may exclude those who take longer to walk that distance.
17 In addition, at times accessibility is used in completely different ways, for instance Newham
18 used it at least once to refer to the ability of people of all faiths to access a site.

19 Therefore, reference to 'accessible cycle parking', for instance, does not necessarily mean
20 cycle parking that can be used by disabled people using non-standard cycles. At times, it
21 may simply mean cycle parking within a development which can be relatively easily
22 accessed by residents (e.g. not further away than car parking). If designers have forgotten
23 that disabled people might cycle, such parking could in fact end up not being accessible for
24 disabled people (for instance, if a lift is too small to fit in adapted cycles). In many cases
25 reading the document or surrounding text was necessary to make a judgement call on
26 whether the reference was about disabled people.

27 A second problem relates to the concept of 'ability'. 'All-ability' is sometimes used as a term
28 specifically to include disabled people; as in many strategies referring to 'all-ability' cycling
29 clubs run by organisations such as *Wheels for Wellbeing*, *Pedal Power* and *Bikeworks*. Not
30 all such organisations make much use of the 'all ability' term; instead some refer to
31 'inclusive' clubs and reference disabled people, in *Pedal Power*'s case teenagers and adults
32 with learning disabilities. However, while 'ability' sometimes seems to be a reference to
33 having (or not) a disability, it is also used in documents to refer to *cycling* ability. If these

1 were conflated it could incorrectly imply that disabled people in general have lower cycling

2 abilities than non-disabled people.

3 This second problem is deepened by the individualised tradition of cycling policy in the UK,

4 in which the unwillingness or inability to cycle in current conditions was interpreted as due to

5 a lack of cycling ability or confidence (Aldred, 2012). This could be analogised to the medical

6 model of disability, in which an individual's impairment rather than an exclusive environment

7 is blamed for the problems they experience (Oliver, 1990). The following extract from

8 Islington's LIP illustrates the approach; as well as not being clear whether it specifically

9 relates to cycle training inclusive of disabled people, or just cycle training for those with lower

10 cycling abilities.

11 *The council will continue to offer free cycle training courses to all residents, employees and*

12 *students based in Islington. The training offered is a proficiency test, delivered by accredited*

13 *instructors, that aims to improve cycle skills for all abilities. Cycle training is an important tool in*

14 *getting more people to cycle, improving skills and improving road safety. Cyclists who are*

15 *confident and proficient are more likely to cycle more often and less likely to become involved in a*

16 *road traffic accident.*

17

18 Similarly the comment below, from Hammersmith LIP, talks of 'all ability cycle training' but the

19 following phase suggests that this is aimed at stopping those with poor cycling skills or low

20 confidence (rather than disabled people) riding on footways.

21

22 *All ability cycle training will give cyclists the skills, knowledge and confidence to ride on roads*

23 *rather than footways.*

24

25 *Disabled People in Cycling and Transport Strategies*

26 As indicated above, categorising references to disabled people in these documents was not

27 always straightforward. It was perhaps particularly challenging for cycling, but also

28 problematic for other modes. For instance 'accessible stations' did not always refer to

29 making provision for disabled customers, but sometimes to, for example, opening up more

30 station entrances for people to use. In many cases judgement had to be used; drawing upon

31 expert knowledge of changes perceived to be aimed at benefitting disabled users (for

32 instance, reference to inclusive streetscape alongside tactile paving and decluttering; or

33 specific funded programmes such as the TfL Accessible Bus Stops Programme). On the

34 other hand, frequently there were general references to disabled people as important

35 transport users but without giving details of precisely what modes were to be considered or

36 what policies were envisaged.

Of the 24 cycling strategies analysed (21 from London Boroughs, plus one from TfL and two from GLA), only 17 (71%) referred to disabled people, whether as cyclists or not. By contrast, almost all (32/33; Tower Hamlets being the only exception) transport strategies referred to disabled people in some respect. The number of references per source varied from 0 to 96, with a mean of 17 and a median of 11 references per source. Some consideration of disabled people at least therefore seems usual in such documents, although to a lesser extent within cycling strategies.

Disabled People as Cyclists

The analysis that follows necessarily involves some interpretation as to what is, and what is not a representation of disabled people as cyclists. We restrict this to references that seem specific either in directly referencing disabled people, or changes that are clearly aimed at making cycling more accessible for disabled people (e.g. in TfL LCDS references to parking for tandems and cargo cycles). Thus, general references to 'accessibility' and 'inclusion' and to 'all ability', unless other information makes this clear that it is about disabled people have been excluded. The table below contains all these 'definite' references, and a classification of them in terms of policy (e.g. is the suggested policy response about design? About training? About events?)

Numbers of references to disabled people as cyclists

Twenty-one of the other fifty-seven documents (37%) made some reference to disabled people as cycle users. This was largely found within cycling strategies – 13 documents making such references were cycling strategies, compared to 8 which were LIPs or transport strategies.

It makes sense to separate pre-2014 from the 2014-6 period, as 2014 was when the draft LCDS was published, with its extensive coverage of non-standard cycles. Between 2004-13, four of ten (40%) cycling strategies mentioned disabled people as cycle users, and six did not. Conversely, between 2014-16, nine of fourteen (64%) did, while five did not. Thus it became more usual for cycling strategies to at least mention disabled people as cycle users, although still (in the 2014-6 period) this is far from universal, with around a third of such documents making no mention of disabled cyclists. For example, transport or cycling strategies produced by the London Boroughs of Bromley, Hackney, Harrow, and Wandsworth in 2015-6 made no mention of disabled people as cyclists.

The picture is less encouraging for transport strategies. Only five of the sample documents were published in 2014-6, but only one of these (20%) made mention of disabled cyclists, compared to seven out of the twenty-eight (25%) strategies published in earlier years.

1 Content of references to disabled people as cyclists

2 Where disabled people <u>were</u> referred to as cyclists, what does this mean? Broadly speaking,
3 most references fell into several different categories. There was *aspiration*, where a local
4 authority described a desired future in which disabled people (and others) happily cycle, but
5 no specific means of achieving this was outlined, even in general terms. There was *design*,
6 into which all London Cycle Design Standards references fell – where accessible design of
7 routes, parking facilities, etc. was referenced. There was *training* and *clubs*, where
8 documents spoke of getting disabled people to undertake cycle training or to attend cycling
9 events. Finally, references were made to *promoting* cycling among disabled people.

10 Firstly, we removed references found in LCDS as they were characteristic of a design guide,
11 and rather different to the borough strategies (and the two GLA documents). Indeed, 16
12 references to disabled cyclists were found in LCDS alone, compared to 40 across all other
13 documents. The LCDS provides very detailed guidance alongside general principles on
14 inclusive design and the concept of the 'standard inclusive cycle'. The table below illustrates
15 the numbers of references to each category in other documents (two fell into more than
16 one), with examples of each.

17 **Table 3: themes used to discuss disabled people's cycling**

Category	Number of references	Sources covered	Example
Aspirational – general references to more disabled people cycling as desirable.	7	Brent, Hammersmith, Haringey, Harrow (two), Kingston and Tower Hamlets cycling strategies	'Cycling is an activity for all regardless of age, gender, disability and ethnicity' (Brent)
Clubs – specialist sports and leisure clubs for disabled cyclists.	8	Hackney cycling strategy (two), Kensington LIP (three), Lambeth cycling strategy, Tower Hamlets cycling strategy (two)	'More actively promote Bikeworks 'All Ability Cycling Club' based from Victoria Park and Pedal Power based in Finsbury Park.' (Hackney)
Design – including references to removing obstacles, inclusive cycle	14	Croydon cycling strategy, Hammersmith LIP (two), Haringey cycling strategy, Kingston LIP, Lambeth cycling strategy,	'Design infrastructure, including parking, to accommodate different designs of cycles.' (Southwark)

parking, better quality routes.		Richmond LIP, Southwark cycling strategy (three), Sutton cycling strategy (two), Waltham Forest cycling strategy (two)	
Promotion – changing perceptions and knowledge about cycling.	4	Lambeth transport strategy, and Hammersmith, Southwark, and Waltham Forest cycling strategies	'Ensuring that older people and disabled people are engaged and aware of the services available will address the perception that disabled and older people can't cycle.' (Southwark)
Training – cycle training for disabled adults and children.	9	Camden LIP, Hammersmith cycling strategy, Hammersmith LIP (two), Haringey cycling strategy, Harrow cycling strategy, Lambeth transport strategy, Southwark transport strategy (two)	'The Council will pursue the objective of road danger reduction through investment in appropriate road-based cycle training to the National Standard, for children, adults and people with disabilities.' (Haringey)

1

2   Strategies differed widely in tone and content. For instance, Tower Hamlets Cycling
3   Strategy, Hackney Cycling Strategy, and Kensington LIP only made references to disabled
4   people and cycling in clubs, suggesting that it is not seen as a mode of transport for disabled
5   people, but rather a leisure activity. Southwark and Waltham Forest Cycling Strategies
6   specifically highlight cycling as a transport mode for disabled people, referring both to design
7   and promotion. Other strategies are more aspirational in tone. Harrow's strategy contains
8   two aspirational statements, but in terms of suggested policies and interventions, this is
9   followed only by one reference to training:

10   *'Creating the right environment for children to cycle safely will also make it easier for us to*
11   *widen the demographic of cyclists to include more women, people from minority ethnic*
12   *groups, older people and disabled people for whom the bicycle can bring greater freedom*

[…] Cycling should be seen as an enjoyable, safe, practical and accessible everyday option

for more people, including older and people with disabilities, children and families. […] The

Council will provide cycle training for adults and children and for people with disabilities to

create a confident and responsible cycling community in the Borough.'

To what extent are different dimensions of inequality dealt with in the strategies? Of course,

not all may apply, but this gives a sense of how these documents (and presumably, policy-

makers involved) understand barriers to disabled people cycling. The table below re-

analyses the material from cycling strategies to identity whether they cover the different

dimensions of exclusion (from DfT 2017). In some cases it is difficult to identify whether the

dimensions are covered and this is noted below (for this reason we also do not separate

references and sources covered).

Table 4: barriers to disabled people's cycling participation covered in the cycling and transport
strategies

Dimension	References	Example
1. The environment and the rider		
Destinations	No explicit discussion of whether/how disabled people's trip destinations/origins might vary from non-disabled people's trips. In terms of trip purposes of disabled cyclists, eight references are made to leisure cycling clubs, one to cycling as a leisure activity, and one to cycling to school.	'We also want to encourage cycling amongst disabled people – cycling is the second most popular activity (after swimming) for disabled people, but often requires specially adapted bikes.' (Hammersmith).
Route quality	No references to high quality routes being needed by disabled cyclists. However, six references are made to designs that accommodate specific needs of disabled cyclists (e.g. related to width of adapted cycles, or to accessible crossings).	'All facilities should be able to accommodate hand bikes, trikes and other none standard cycles.' (Croydon).
Route directness	No mention of the importance of route directness specifically for disabled cyclists.	N/A

|		
Obstacles	Nine references, although not all specifically referenced disabled cyclists.	'Physical barriers will be removed such as railings and kerbs in order to provide convenient local access by bicycle, especially through estates.' (Lambeth)
Discrimination and harassment	No mention of this as a possible barrier.	N/A
2. The cycle and the rider		
Access to cycles	The eight references to leisure cycling clubs cover providing access to specialist cycles, while there are two additional references to the need for adapted/specialist cycles. Nine references to training to ensure disabled people can cycle.	'we will empower more residents with disabilities to cycle through more structured provision of opportunities for all ability cycling (e.g. adapted bike loan)' (Waltham Forest)
Design, policy and imagery	No document sets out a need to depict disabled cyclists and/or adapted cycles within, for instance, broader transport policy communications.	N/A
Parking	Three (possibly more depending on the meaning of 'infrastructure').	'Design infrastructure, including parking, to accommodate different designs of cycles' (Southwark)

1

2   While most transport strategies still fail to discuss disabled people as cyclists at all, some

3   cycling strategies clearly do better, especially around using clubs to provide access to

4   adapted/specialist cycles, removing obstacles on cycle routes, and to a lesser extent

5   recommending infrastructure accommodating different types of cycle or the specific needs of

6   disabled cyclists. However, the coverage is still often relatively limited, with general

7   aspirations towards inclusivity often not accompanied by more specific identification of

8   barriers to be tackled. Southwark and Waltham Forest, recent and relatively comprehensive

9   examples, have clear aspirations to change design to be more inclusive. Southwark

1   additionally lists policies that should be followed to achieve this, while Waltham Forest refers

2   to bicycle access, parking, and inclusive on-street design. In general, however, even the

3   most comprehensive examples lack discussion of how different types of disability might

4   imply different policy and planning changes. This points to the relative lack of knowledge in

5   the area and the assumption, perhaps, that most disabled cyclists are physically disabled.

6   No strategies include recommendations about route directness as particularly important for

7   disabled cyclists, none mention the need to counter discrimination or harassment of disabled

8   cyclists, and none recommend use of images of disabled cyclists and adapted cycles within

9   other documents. Further, discussion of destinations is generally implicit; there seems often

10 to be an assumption that disabled people are more interested in leisure than utility cycling

11 but (while it might be the case for older disabled people no longer in paid work, for instance)

12 this is not explicitly stated nor justified. While the use of adapted/specialist cycles by some

13 disabled people is discussed, this is usually in the context of leisure clubs offering such

14 bikes, and less often in the context of transport authorities facilitating everyday access to

15 such cycles, or providing suitable cycle parking.

16 *Disabled People as Users of Other Modes in transport strategies*

17 How does coverage of disabled people as cyclists compare with users of other modes? In

18 the transport strategy documents, the figure below shows how many of the 33 strategies

19 referred to disabled people as users of different modes.

20
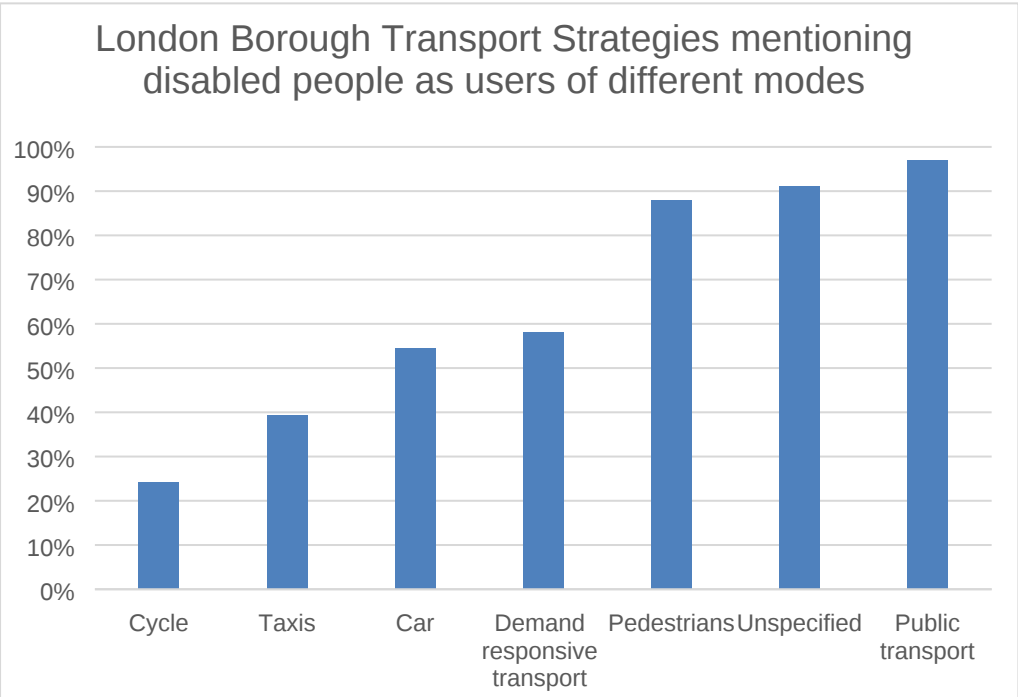
21

22 **Figure 5: sources referring to disabled people as users of different modes in transport strategies**

1 'Unspecified' refers to general statements about supporting the mobility of disabled people.

2 While very common (30/33 documents) this was exceeded by 32/33 documents referring to

3 disabled people as public transport users. Many documents spoke of funded programmes to

4 overcome barriers to disabled people using public transport, such as TfL's Bus Stop

5 Accessibility and Station Accessibility programmes. Indicators were referred to, primarily the

6 percentage of bus stops accessible to people with mobility impairments, but also (for

7 example) numbers of stations with step free access. Almost as common were references to

8 disabled people as pedestrians (29/33 documents), with references to streetscape

9 programmes seeking to remove clutter, install tactile paving, and so on. Less common (19

10 and 18/33 documents) were references to demand responsive transport and car use (and

11 related policies such as provision of disabled car parking) with references to cycling least

12 common (8/33 documents).

13 The chart below illustrates the contrasting numbers of references within the sources, to the

14 different modes ('unspecified' removed):
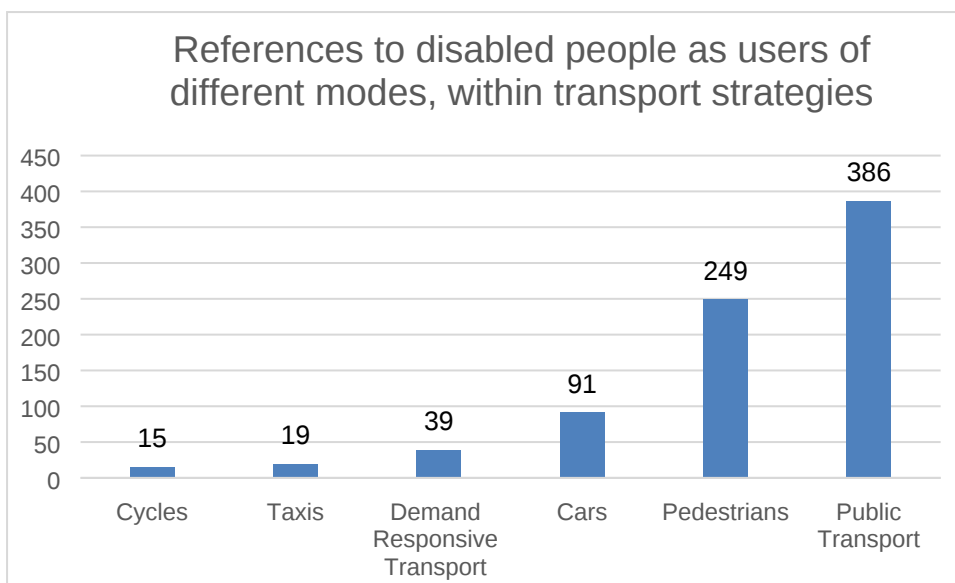
16 **Figure 6: references to disabled people as users of different modes in transport strategies**

18 References to public transport are now clearly dominant, compared to pedestrians. Although

19 a similar number of documents discuss disabled people as car and DRT (demand

20 responsive transport) users, there are well over twice as many references to car users,

21 compared to DRT users.

22 An example of disabled people being considered as transport users but not as cyclists can

23 be found in the Bromley LIP (2014:47). The text illustrates the identification of the Equality

24 Act duty towards disabled people, and defines them as public transport users,

1 pedestrians/footway users, and car users, but not cycle users (there are no references to

2 disabled cyclists in the document, nor in the borough's Cycling Strategy).

3 Emphasis is our own, to highlight the different modes covered.

4 *The Council has a duty to promote equality for people with a disability. In terms of transport,*

5 *the Council will continue to engage with organisations representing disabled people when*

6 *preparing schemes.*

7 *We will also: • Continue to improve access to <u>bus services</u> by ensuring that buses can*

8 *approach the kerb closely enough to use their access ramps. • Work to improve or adapt*

9 *conditions in the <u>footway</u>, and to ensure unobstructed level access to <u>bus stops</u> as our work*

10 *programmes progress. • Work with the rail industry to co-ordinate improved access in the*

11 *highway with improved access <u>within the railway estate</u>, for example when lifts or ramps are*

12 *provided at stations. • Continue to identify and act on the need for on-street <u>disabled [car]</u>*

13 *<u>parking</u> spaces.*

Discussion

15 Disabled people as cyclists are still rarely encountered within London transport strategy

16 documents. They are somewhat more present in cycling strategies, albeit only just over half

17 the cycling strategies we analysed contained reference to disabled cyclists, barriers they

18 face or changes that might be made to facilitate their cycling. Only one document, London

19 Cycling Design Standards, referred explicitly to Britain's Equality Act in this regard, although

20 this places duties on public authorities to ensure equal access, including to transport

21 services and the street environment.

22 Narratives around disabled cyclists are still, in the main, relatively under-developed. For

23 instance three strategies (two cycling, one transport strategy) refer only to disabled cyclists

24 in the context of clubs. We are not suggesting that such clubs (and recreational cycling more

25 broadly) are not important. However, an exclusive or majority focus on clubs suggests a view

26 that disabled people are only recreational and not utility cyclists. It further suggests the

27 authorities in question are perhaps not aware of design barriers to utility cycling on the

28 highway by disabled people, which they may have the power to mitigate. These might

29 include obstacles, narrow cycle tracks, and traditional cycle parking that does not

30 accommodate larger cycles.

31 Findings relating to references made to disabled people as users of different modes

32 suggests that London's transport authorities still fail to see disabled people as current or

33 potential cyclists, often with specific accessibility needs. This could have a negative impact

1   on the ability of authorities to deliver fully inclusive cycling infrastructure. Moreover, 30% of

2   cycling strategies failed to mention disabled people at all, either as cyclists or non-cyclists

3   potentially affected by cycling or by cycling infrastructure.

4   As public bodies, London's local authorities are required by the Public Sector Equality Duty

5   (PSED) to ensure that they consider the needs of all individuals in their day-to-day work.[7]

6   The function of the PSED is to help public bodies consider how different people will be

7   affected by their activities and to make sure that this forms part of their policy and decision-

8   making processes. None of the documents audited were *directly* or *specifically* related to

9   disabled people or disability issues, and could well be pieces of work seeking to discuss

10   transport or cycling policy in a general sense. Some were short and no more than a dozen

11   pages, leaving little room for detail (while others were more than a hundred pages). Yet,

12   what these findings reveal is a probable lack of awareness of the needs of disabled people

13   as cyclists and the ways in which infrastructure and policy may create and reinforce barriers

14   to disabled people's cycling.

15 Conclusion

16   Finally, we conclude with some thoughts on further research and policy implications. We

17   need more analysis and better data on disabled people's cycling and barriers to take-up and

18   continuation; not just in London or England but in other cities and countries where data and

19   research are often limited (Clayton et al 2017). This might be conducted through new

20   academic or government-led research projects, or through secondary analysis of existing

21   datasets, such as in England the Active People Survey/Active Lives Survey or National

22   Travel Survey. Studies should also develop knowledge about how different types of disability

23   impact on cycling needs, considering physical, mental, and developmental disabilities. New

24   research could usefully examine how different high and low-cycling contexts vary in the

25   discourse and imagery that they use around cycling and disabled people.

26   While this study only covered London, there are implications for other cities and countries,

27   as they seek to diversify cycling. New concepts and the promotion of inclusive approaches at

28   the top (e.g. in the TfL LCDS, and in the Highways England IAN) need to feed into

29   monitoring and change at a local level. In London transport strategies, requirements to report

30   on bus stop accessibility, and the availability of a Bus Stop Accessibility programme with

31   funding attached, seemed to have helped increase awareness that disabled people (or at

32   least wheelchair users) face barriers to bus use, and that this could be changed through

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[7] 'Quick start guide to the public sector Equality Duty', Government Equalities Office, (2011), p. 3. See:
https://www.gov.uk/government/publications/public-sector-quick-start-guide-to-the-public-sector-equality-duty
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design. In London and elsewhere, measuring inclusiveness and accessibility of cycle routes could be a first step towards providing targets for improvement and funding to help authorities make changes. A broader ongoing policy shift (Aldred et al 2017) from seeing individual cycling ability as determining cycling participation, and towards addressing structural and social barriers to cycling, should also help disabled cyclists although their needs will have to be explicitly considered.

We would suggest measures to improve the overall visibility of disabled cyclists through imagery and language, which can be a quick (and inexpensive) win for those involved in cycling policy. By increasing the visible representation of disabled cyclists in cycling and transport policy documents – in a way that is both meaningful and relevant – those responsible for planning and implementing cycling policy will not only be enhancing their own understanding of their responsibility towards disabled cyclists, but will be actively encouraging more disabled people to take up cycling. The more images of non-standard cycles made available and in circulation, the more likely it is that a disabled person will come across them and be encouraged to discover more. The same principle can be applied to an increased number of references made to disabled people as cyclists. This could be supported by the creation of national image banks that can easily be used by authorities putting together transport and cycling strategies.

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