

Disabled people's access needs in transport decarbonisation

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Attending to friction, ensuring inclusion

TRANSPORT DECARBONISATION AND THE ROLE OF ACTIVE TRAVEL AND ROAD SPACE REALLOCATION

Decarbonising transport is essential for achieving net zero. Transport is the largest contributor to UK domestic greenhouse gas emissions – responsible for 27 per cent in 2019, even excluding emissions from international aviation and shipping.¹ Simply electrifying private vehicle stock at existing levels of ownership and use will not be sufficient to achieve climate goals,² and will fail to address the public health epidemics of road deaths and serious injuries, physical inactivity, and air pollution, all enabled by private car ownership.³

Transport decarbonisation, then, necessitates increasing levels of active travel, as well as increasing public transport use – also recognising that most public transport journeys will start and end with active travel. Within this paper, active travel is understood as walking, wheeling, and cycling, with wheeling including fully-powered mobility aids such as electric wheelchairs and mobility scooters – reflecting the infrastructural needs of such modes, as well as acknowledging disabled people's often non-normative forms of physical activity.⁴

Active travel targets have been established across the UK, recognising the necessity of increasing mode share. For example, 50 per cent of trips in England's towns and cities to be walked, wheels, or cycled by 2030,⁵ a mode share target of 45 per cent for public transport and active travel in Wales by 2040,⁶ and a reduction in car use by 20 per cent in Scotland by 2030.⁷

“Safe and dedicated infrastructure is also important for extending the diversity of people travelling actively”

To increase levels of active travel, reallocating road space away from private vehicles and making space for and investing in safe, accessible, and dedicated walking, wheeling, and cycling infrastructure is essential. In a systematic review of a decade's worth of research on active travel interventions, Roaf et al demonstrate how active travel interventions with infrastructure change have the greatest positive

1 Department for Transport (2021) *Decarbonising Transport – A Better, Greener Britain*. <https://assets.publishing.service.gov.uk/media/610d63ffe90e0706d92fa2822/decarbonising-transport-a-better-greener-britain.pdf>

2 Ibid

3 Walker I, Tapp A and Davis A (2022) *Motornormativity: How Social Norms Hide a Major Public Health Hazard*. <https://doi.org/10.31234/osf.io/egnmj>; Miner P et al (2024) 'Car harm: A global review of automobility's harm to people and the environment', *Journal of Transport Geography*, 115, 103817. <https://doi.org/10.1016/j.jtrangeo.2024.103817>

4 Larrington-Spencer H (2024) 'Defining Active Travel: A Response to Cook et al 2022', *Active Travel Studies*, 4 (1). <https://doi.org/10.16997/ats.1621>

5 Active Travel England (2014), webpage, accessed 29 July 2024. <https://www.gov.uk/government/organisations/active-travel-england/about>

6 Welsh Government (2021) *Llwybr Newydd: The Wales Transport Strategy 2021*, accessed 29 July 2024. https://www.gov.wales/sites/default/files/publications/2021-03/llwybr-newydd-wales-transport-strategy-2021-full-strategy_0.pdf

7 Transport Scotland (2022) *Walking and Cycling: Developing an Active Nation*, accessed 29 July 2024. <https://www.transport.gov.scot/active-travel/developing-an-active-nation>

impact upon levels of active travel, whilst social and behavioural interventions without infrastructure change have little impact.⁸ Safe and dedicated infrastructure is also important for extending the diversity of people travelling actively. For example, women⁹ and disabled people¹⁰ often have a strong preference for dedicated cycling infrastructure, and such infrastructure has been demonstrated to increase the number of women cycling.¹¹

ACCESS FRICTIONS IN ROAD SPACE REALLOCATION AND NEW ACTIVE TRAVEL INFRASTRUCTURE

Access frictions are emerging as new infrastructure with an evidence base for positive impacts upon levels of active travel, for example dedicated and segregated cycle tracks and low traffic neighbourhoods,¹² is being implemented.¹³ Such frictions occur when nuanced and individualised embodiments of disability mean that the access needs of some disabled people, ie the things one needs to be able to fully and meaningfully participate within a space or activity such as travel, are seemingly incompatible with the access needs of other disabled people. Access friction between disabled people has also been discussed as ‘conflicting’ or ‘competing’ access needs. However, by putting disabled people’s access needs as oppositional, this framing precludes the potential for moving beyond such an impasse and developing more inclusive solutions. It also does an injustice to disability solidarity and the desire by most disabled people to meet the access needs of others, even when they are seemingly incompatible with one’s own. As Piepzna-Samarasinha reflects: “I’ve often seen crip-only spaces fill with feelings of betrayal and hopelessness when we cannot fulfil some of our friends’ needs”.¹⁴

To demonstrate access frictions within new active travel infrastructure, I discuss the case of bus stop bypasses below.

BUS STOP BYPASSES

Bus stop bypasses involve a dedicated cycle track being directed behind a bus stop, maintaining the separation of those using the cycle track from motor traffic on the road (Figure 1). Such a bypass means that cyclists and other cycle track users do not need to exit a protected cycle lane and mix with motor vehicles to overtake a stationary bus.

Bus stop bypasses are an important infrastructure to meet the access needs of disabled cyclists, for whom not sharing the carriageway with motor vehicles is often an important facilitator of being able to cycle.¹⁵ Such bypasses can also benefit disabled people who use class 2 or class 3 mobility scooters

8 Roaf E, Larrington-Spencer H and Lawlor E R (2024) ‘Interventions to increase active travel: A systematic review’, *Journal of Transport & Health*, 38, 101860. <https://doi.org/10.1016/j.jth.2024.101860>.

9 Aldred R et al (2017) ‘Cycling provision separated from motor traffic: a systematic review exploring whether stated preferences vary by gender and age’, *Transport Reviews*, 37 (1), 29–55. <https://doi.org/10.1080/01441647.2016.1200156>

10 Wheels for Wellbeing (2021) *Disability & Cycling. Report of 2021 National Survey Results*, accessed 7 September 2022. <https://wheelsforwellbeing.org.uk/wp-content/uploads/2022/05/Disability-and-Cycling-Report-of-2021-national-survey-results.pdf>

11 AitBihOuali L and Klingen J (2022) ‘Inclusive roads in NYC: Gender differences in responses to cycling infrastructure’, *Cities*, 127, 103719. <https://doi.org/10.1016/j.cities.2022.103719>

12 Low-traffic neighbourhoods are where modal filters remove through traffic from residential streets.

13 Aldred R and Goodman A (2020) ‘Low Traffic Neighbourhoods, Car Use, and Active Travel: Evidence from the People and Places Survey of Outer London Active Travel Interventions Transport Findings’, *Transport Findings*. <https://doi.org/10.32866/001c.17128>; Active Travel England (2024); Panter J et al (2016) ‘Impact of New Transport Infrastructure on Walking, Cycling, and Physical Activity’, *American Journal of Preventive Medicine*, 50 (2), e45–e53. <https://doi.org/10.1016/j.amepre.2015.09.021>;

Pedroso F E et al (2016) ‘Bicycle Use and Cyclist Safety Following Boston’s Bicycle Infrastructure Expansion, 2009–2012’, *American Journal of Public Health*, 106 (12), 2171–2177. <https://doi.org/10.2105/AJPH.2016.303454>; Crane M et al (2017) ‘Longitudinal evaluation of travel and health outcomes in relation to new bicycle infrastructure, Sydney, Australia’, *Journal of Transport and Health*, 6, 386–395. <https://doi.org/10.1016/j.jth.2017.07.002>

14 Piepzna-Samarasinha L L (2018) *Care work: dreaming disability justice*, Arsenal Pulp Press, p40

15 Wheels for Wellbeing (2021)

Figure 1: Photo of a bus stop bypass (courtesy of Charlie Fernandez).



Alt text: A cycle track diverts behind a bus stop, between the bus stop and the pavement. A raised zebra crossing connects the pavement and the bus stop. A woman is walking past the shelter whilst a red double decker bus pulls into the bus stop.

and powered wheelchairs and can legally use cycle tracks.¹⁶ For some mobility and electric scooter users, cycle tracks, when available, can be more accessible than pavements, as surfacing is often smoother, and kerb drops less of a concern when navigating junctions.

However, there has been pushback particularly from blind and visually impaired people and representative organisations, such as the Royal National Institute of Blind People (RNIB), the National Federation of the Blind (NFB), and Guide Dogs charity, because of the emergent access frictions. These are that bus stop bypasses negatively affect the ability of blind and visually impaired pedestrians to safely and independently use buses, as pedestrians must step into a ‘live’ cycle track to access the bus stop. Problems encountered include blind and visually impaired people not knowing whether a cyclist is using the track, or whether a cyclist will stop, even if there is a zebra crossing.¹⁷ This can result in a hostile public realm for blind and visually impaired people and limit opportunities to access public transport. Whilst RNIB and Guide Dogs call for a halt to the implementation of bus stop bypasses, NFB go further, calling for their removal.¹⁸

16 GOV.UK (2024) *Using mobility scooters and powered wheelchairs*. GOV.UK, webpage, accessed 13 September 2024. <https://www.gov.uk/mobility-scooters-and-powered-wheelchairs-rules/driving-on-the-road>

17 RNIB (2021) *Seeing streets differently: How changes to our streets and vehicles are affecting the lives of blind and partially sighted people*. https://media.mib.org.uk/documents/Seeing_Streets_Differently_report_RNIB_2021.pdf; Guide Dogs (2024) *Designing for Inclusion: The accessibility challenges of some active travel infrastructure for people with vision impairment and other disabled people*, accessed 26 September 2024. <https://gd-prod.azureedge.net/-/media/project/guidedogs/guidedogsdotorg/files/how-you-can-help/campaigning/ucl-guide-dogs---designing-for-inclusion-full-report-sept-2024-final.pdf>

18 Guide Dogs (2024); RNIB (2024) *RNIB's statement on floating bus stops*. <https://www.rnib.org.uk/news/rnibs-statement-on-floating-bus-stops>; HAD (2023) *Bus Stop Bypasses (Petition)*, accessed 26 September 2024. <https://www.had.org.uk/post/bus-stop-bypass-petition>

“Such appropriation of access conflicts simplifies complex embodiments of disability, drowns out the diversity of disabled voices, and objectifies and simplifies disabled people’s experiences”

When such access frictions emerge within the implementation of active travel interventions, they are often also appropriated by non-disabled people to support divergent political positions on active travel and transport decarbonisation.¹⁹ In the case of bus stop bypasses, for example, the dying days of the last Conservative government saw then Transport Secretary Mark Harper publicly announcing that they were considering ‘banning’ such infrastructure.²⁰ Considering the appalling track record of the Conservative government on the safety and wellbeing of disabled people,²¹ such an announcement can be better understood as an attempt to further stoke the active travel ‘culture war’ in the build up to the 2024 election than as an attempt to protect the mobility practices of disabled people.²² Such appropriation of access conflicts simplifies complex embodiments of disability, drowns out the diversity of disabled voices, and objectifies and simplifies disabled people’s experiences. Such objectification is symptomatic of endemic ableism and the continued medicalisation of disability; a dominant social paradigm in which disabled bodies are objects to be controlled and improved.²³

ATTENDING TO ACCESS FRICTIONS

Attending to access frictions in the implementation of active travel infrastructure and transport decarbonisation is necessary. This is especially true when considering the potential negative impacts upon mobility for some, often compounding the already substantial barriers faced by disabled people in accessing all forms of transport.²⁴ Such immobility has detrimental financial, health, and wellbeing impacts on those affected.²⁵

But how do we respond to access frictions? Do we simply, as proposed in the case of bus stop bypasses, ‘ban’ new active travel infrastructure when friction occurs? If we did, we would only achieve alternative forms of friction; for example, the inaccessibility of urban cycling for disabled people who use cycles as mobility aids. It is understandable to desire a return to the status quo,

- 19 Hamraie A (2021) *Crip Mobility Justice: Ableism and Active Transportation Debates - Spotlight On The Disabling City*. IJURR, accessed 24 May 2023. <https://www.ijurr.org/spotlight-on/disabling-city/crip-mobility-justice>
- 20 Walker P (2024) ‘Transport secretary considers ban on floating bus stops in UK cycle lanes’, *The Guardian*, accessed 13 September 2024. <https://www.theguardian.com/news/article/2024/may/10/uk-floating-bus-stops-cycle-lanes>.
- 21 EHRC (2017) *Being disabled in Britain: A journey less equal*, Equality and Human Rights Commission, accessed 12 January 2023. <https://www.equalityhumanrights.com/sites/default/files/being-disabled-in-britain.pdf>; EHRC (2023) *Seven years on: disabled people’s right to independent living, employment and standard of living in the UK*, accessed 26 September 2024. <https://www.equalityhumanrights.com/our-work/our-human-rights-work/monitoring-and-promoting-un-treaties/crpd/progress-disability-rights?return-url=https%3A%2F%2Fwww.equalityhumanrights.com%2Fsearch%3Fkeys%3Dukim>; Ryan F (2019) *Crippled: austerity and the demonization of disabled people*, Verso; Pring J (2024) *The Department: How a Violent Government Bureaucracy Killed Hundreds and Hid the Evidence*, Pluto Press.
- 22 Grünwald Z (2024) ‘UK voters “absolutely sick to death” of the culture wars, says Labour’s Louise Haigh’, *New Statesman*, accessed 26 September 2024. <https://www.newstatesman.com/politics/uk-politics/2022/06/louise-haigh-labour-party-uk-voters-absolutely-sick-death-culture-wars>.
- 23 Hayes J and Hannold EM (2007) ‘The road to empowerment: a historical perspective on the medicalization of disability’, *Journal of Health and Human Services Administration*, 30 (3), 352–378.
- 24 Darcy S and Burke P (2018) *On the road again: The barriers and benefits of automobility for people with disability. Transportation Research Part A: Policy and Practice*, 107, 229–245. <https://doi.org/10.1016/j.tra.2017.11.002>; Wheels for Wellbeing (2021); Park J and Chowdhury S (2022) ‘Towards an enabled journey: barriers encountered by public transport riders with disabilities for the whole journey chain’, *Transport Reviews*, 42 (2), 181–203. <https://doi.org/10.1080/01441647.2021.1955035>; Transport for All (2024) *Walking and Wheeling*, accessed 26 September 2024. <https://www.transportforall.org.uk/the-issues/active-travel/walking-and-wheeling>.
- 25 Inckle K (2020) ‘Disability, Cycling and Health: Impacts and (Missed) Opportunities in Public Health’, *SJDR*, 22 (1), 417–427. <https://doi.org/10.16993/sjdr.695>.

considering that levels of access, even inequitable and flawed levels of access, have been hard won by disabled people, and any changes risk challenging ways that one has learned to be mobile, despite such uneven urban landscapes. However, as Transport for All reflect in their research, identifying access frictions in the implementation of low traffic neighbourhoods (LTNs) in the UK: “We don’t believe ripping them out and returning to normal is the way forward. Indeed, the ‘normal’ we had before was not accessible enough either”.²⁶

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Instead, I propose we need to attend to access frictions and face the contradictions and complexities of disabled people’s access needs in active travel interventions. Whilst the very existence of friction is uncomfortable and may make us desire the status quo, it is necessary to harness and address frictions to ensure that active travel futures are inclusive of all disabled people.

DEVELOPING COLLECTIVE ACCESS

The first step in doing this, I believe, is recognising that we have been here before with new active travel infrastructure. After the second world war, many veterans were returning to the United States as wheelchair users. Facing solid kerb drop-offs when trying to navigate crossing roads, disabled veterans began lobbying for kerb drops. The first was installed in Kalamazoo, Michigan in the 1940s, and the infrastructure became popularised after disability activists in Berkley in the 1960s began installing their own across the city as the public works programme on kerb drops was slow and limited.²⁷ An access friction emerged, however, as kerb drops were developed “on the presumption of chair users as the prototypical disabled body”.²⁸ For blind people, this initial iteration of kerb drops would often cause disorientation by disrupting learned ways of navigating the built environment, where the solid drop-off from the pavement indicated the meeting of pavement and road.²⁹ Further iterations followed. For example, implementing kerb drops a distance from road crossing points to maintain street legibility for blind and visually impaired pedestrians. However, this meant that wheelchair users had to navigate motor traffic to reach the crossing from the ramp or face the dangers of crossing a road where there was no crossing point.³⁰ A further iteration, now considered best practice, was the use of tactiles in combination with kerb drops at crossing points, allowing wheelchair users to access crossings from the pavement, whilst also alerting blind and visually impaired pedestrians of the intersection of road and pavement.³¹

So, an infrastructure was developed, through pan-disability iterations and negotiations, to support wheelchair users and blind and visually impaired pedestrians to navigate pavements and pedestrian crossings. What is important to recognise in the development of this infrastructure is that it is not ‘perfect’. Tactiles can be painful for people in wheelchairs and a trip hazard for people with walking

26 Transport for All (2021) *Pave the way: The impact of Low Traffic Neighbourhoods (LTNs) on disabled people. and the future of accessible active travel*, p71, accessed 11 May 2022. <https://www.transportforall.org.uk/wp-content/uploads/2021/01/Pave-The-Way-full-report.pdf>

27 Hamraie A (2017) *Building Access: Universal Design and the Politics of Disability*, accessed 12 September 2022. <https://www.upress.umn.edu/book-division/books/building-access>.

28 Ibid p118

29 Hamraie A (2017)

30 Zukas H (2000) ‘National Disability Activist: Architectural and Transit Accessibility, Personal Assistance Services,’ an oral history conducted in 1997 by Sharon Bonney. Builders and Sustainers of the Independent Living Movement in Berkeley. Regional Oral History Office, The Bancroft Library, University of California, Berkeley, 2000. https://oac.cdlib.org/view?docId=kt4c6003rh&brand=oac4&doc.view=entire_text; Hamraie A (2017).

31 Ibid

difficulties,³² and mobility training for blind and visually impaired pedestrians has also had to develop to incorporate navigating kerb drops within the built environment.

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The kerb drop then, is an example of ‘collective access’; “access that we intentionally create collectively, instead of individually”.³³ Through this creation, complexity is recognised and embraced, and access is understood as a “constant process that doesn’t stop”,³⁴ rather than a static outcome. Instead of striving for an unobtainable ‘fully accessible’, which obscures access frictions, as well as dematerializes other forms of difference that intersect with disability,³⁵ is a better outcome not one in which, like the kerb drop with tactiles, nobody is excluded and everybody has the best experience possible?

To achieve this, disabled people must be at the centre of developing collective access for active travel infrastructure. The making of such collective access will not be easy and will involve ongoing and difficult conversations between disabled people with diverse impairments and seemingly incompatible access needs, whilst also ensuring that racialised, gendered, and classed forms of difference are also materialised. Whilst it is important that we understand the embodied experiences of new active travel infrastructure by impairment type, it is essential that the design and development of active travel infrastructure is pan-disability.

Disabled people’s role in collective access making for active travel infrastructure cannot be tokenistic. Not only because the foundation of disability justice is ‘nothing about us with us’, but because, as Piepzna-Samarasinha says: “If you don’t know how to do access, ask disabled people. We’ve been doing it for a long time”.³⁶ Disabled people are experts and designers of everyday life.³⁷ Don’t just consult us. Respect our skills and our knowledge and learn from us. Involve us from the beginning but remember that collective access making is a process. Be open and flexible (in mind but also in funding) to development and change, to ongoing insight and to improvements. As disabled people, and however frustrating it might be, we also need to respect the access needs of others that may not align with our own, and commit to “build[ing] a model of experimenting and seeing how it works out, then adjusting”.³⁸ When nobody is excluded and everybody has the best access experience possible, we are ensuring inclusion.

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32 Kapsalis E, Jaeger N and Hale J (2022) ‘Disabled-by-design: effects of inaccessible urban public spaces on users of mobility assistive devices – a systematic review’, *Disability and Rehabilitation: Assistive Technology*, 0 (0), 1–19. <https://doi.org/10.1080/17483107.2022.2111723>

33 Piepzna-Samarasinha L L (2018) p29

34 Ibid, p30

35 Hamraie (2017)

36 Ibid, p26

37 Hamraie A and Fritsch K (2019) ‘Crip Technoscience Manifesto’, *Catalyst: Feminism, Theory, Technoscience*, 5 (1), 1–33. <https://doi.org/10.28968/cftt.v5i1.29607>; Hayes J and Hannold EM (2007)

38 Piepzna-Samarasinha L L (2018) p40