Intersectionality and Cycling in a Neoliberal Landscape

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Abstract

Technocratic neoliberal policies have led to increased investment in cycling in the UK, justified by environmental, economic, health and liveability benefits. However, these benefits are not distributed equitably and cycling policy, planning and practice have perpetuated fundamental processes of marginalisation associated with neoliberal urbanism. Despite increased growth and investment in cycling in the UK, and the widespread 'cycling for everyone' rhetoric, it remains dominated by middle-class white men.

This PhD by publication brings together the research I have conducted on inclusive cycling over the past ten years, which has made three novel contributions. Firstly, I have advanced analysis of cycling inequalities through the novel application of intersectionality to sustainable urbanism and transport research. Secondly, my work has had a practical impact by informing the development of more equitable and inclusive cycling policies and environments through a decade of working with city officials, policymakers and practitioners globally. Finally, this thesis critically reflects on the structures, cultures and practices that limit the ability of intersectional interventions to impact cycling policy and planning.

The research presented encompasses three academic papers on inclusive city cycling, three policy papers on gender and sustainable urban mobility and planning and two practitioner papers on embedding equity in active travel. The original research took place between 2017 and 2023 and involved literature reviews, qualitative analysis of policy documents, semi-structured interviews, focus groups, the creation of zines to capture diverse women's experiences of cycling, ethnography at cycling events and autoethnography based on my cycling experiences in London.

My critical discussion of this body of work draws on contemporary autoethnographic reflections on my past experiences working with UK transport professionals and policymakers to promote inclusive cycling. I argue that the neoliberalisation of cycling and the de-politicisation of intersectionality inhibit the potential of intersectionality to make cycling more equitable and inclusive. I offer suggestions on how to challenge, reimagine and transform the ecosystem of cycling institutions such that they are structured to deliver cycling equity.

Dedicated to Nathan

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Original papers and co-author testimonies

Original papers

Paper 1
Lam, T. (2022). 'Towards an Intersectional Perspective in Cycling', *Active Travel Studies: An Interdisciplinary Journal*, 1(1): 4, pp. 1-11. https://doi.org/10.16997/ats.1264.

Paper 2
Lam, T. (2020). 'Cycling London: An intersectional feminist perspective', in Uteng, T.P., Christensen, H.R. and Levin, L. (eds.), *Gendering Smart Mobilities*, Abingdon, Oxfordshire: Routledge, pp. 109–126.

Paper 3
Lam, T. (2017). 'Hackney: A cycling borough for whom?', *Applied Mobilities*, 3(2), pp. 115-132. https://doi.org/10.1080/23800127.2017.1305151.

Paper 4
Lam, T. and Cosgrave, E. (2019). *Gender Inclusive Climate Action in Cities*. C40 Cities' Women4Climate. Available at: https://www.c40.org/women4climate/resources/women4climate-report-gender-inclusive-climate-action-in-cities/ (Accessed 18 February 2025).

Paper 5
Cosgrave, E., Lam, T. and Henderson, Z. (2022). *Scoping Study – London's participation in UN Women's Safer Cities and Safe Public Spaces Programme*. UCL Urban Lab. Available at: https://www.ucl.ac.uk/urban-lab/sites/urban-lab/files/scoping_study-_londons_participation_in_un_womens_safer_cities_and_safe_public_spaces_programme.pdf (Accessed: 18 February 2025).

Paper 6
Lam, T. (2021). *Towards Gender-Inclusive and Sustainable Transport Systems*. UK Women's Budget Group. Available at: https://wbg.org.uk/wp-content/uploads/2021/06/Gender-inclusive-transport-systems-V3.pdf (Accessed: 18 February 2025).

Paper 7
Lam, T. (2023). *For Everyone Strategic Framework*. Sustrans. Available at: https://www.sustrans.org.uk/media/13420/for-everyone-strategic-framework-public-facing-version.docx (Accessed: 18 February 2025).

Paper 8
Lam, T. (2022). *Gender budgeting in active travel in Scotland*. Sustrans and Transport Scotland. Available at: https://www.sustrans.org.uk/media/13355/gender-budgeting-in-active-travel-in-scotland.pdf (Accessed: 18 February 2025).

Co-author testimonies

Paper 4
Lam, T. and Cosgrave, E. (2019). *Gender Inclusive Climate Action in Cities*. C40 Cities' Women4Climate. Available at: https://www.c40.org/women4climate/resources/women4climate-report-gender-inclusive-climate-action-in-cities/ (Accessed 18 February 2025).

Tiffany Lam led the research for and writing of this paper under the supervision of Ellie Cosgrave. Tiffany conducted the literature review; developed interview questions for stakeholders; conducted stakeholder interviews; did research and analysis for two of the four case studies; coordinated with the research teams working on the two other case studies; wrote the report; and worked with graphic designers to conceptualise the infographics and oversee their development.

I confirm that the above is a true reflection of the contribution made by Tiffany Lam to this paper.



Ellie Cosgrave
13th Feb 2025

Paper 5
Cosgrave, E., Lam, T. and Henderson, Z. (2022). *Scoping Study – London's participation in UN Women's Safer Cities and Safe Public Spaces Programme*. UCL Urban Lab. Available at: https://www.ucl.ac.uk/urban-lab/sites/urban-lab/files/scoping_study-_londons_participation_in_un_womens_safer_cities_and_safe_public_spaces_programme.pdf (Accessed: 18 February 2025).

Zoe Henderson started researching and drafting this paper. Tiffany Lam supplemented the literature review that Zoe started, made substantial edits to the working draft and finished the paper under the supervision of Ellie Cosgrave.

I confirm that the above is a true reflection of the contribution made by Tiffany Lam to this paper.



Ellie Cosgrave
13th Feb 2025

Table of Contents

Preface 1

1. Introduction 3

2. Overview of cycling equity 6

   2.1 Cycling and neoliberalism 7

   2.2 Demographic inequalities in cycling 9

   2.3 Spatial inequalities in cycling infrastructure 11

   2.4 Inequalities in cycling practices 12

   2.5 My research 14

3. My research: Approach and methods 18

   3.1 Methods 18

   3.2 New research 21

4. Intersectionality 23

   4.1 ‘We’re not a social justice organisation’ 26

   4.2 Dominance of UK Equalities legislation 27

   4.3 Ornamental intersectionality 27

   4.4 Summary 28

5. Impacts & responsiveness 30

   5.1 Diversity & inclusion 31

   5.2 Institutional capacity for intersectional analysis 34

   5.3 Ways forward 45

6. Conclusion 47

References 50

Appendix 1: Original papers

Appendix 2: Mind the Cycling Gender Gap #1

Appendix 3: Mind the Cycling Gender Gap #2

Appendix 4: Autoethnography protocol

List of tables

Table 2.1: My papers.....16-17

Table 3.1: Methods.....19

Table 4.1: Intersectionality across my publications.....24-25

Table 5.1 Recommendations to increase equity and inclusion in active travel.....30

Table 6.1 Original research questions and answers.....47

Table 6.2 New research questions and answers.....47

Preface

As a native New Yorker, I never learned how to drive. I loved walking around the city and public transport was a lifeline, especially during my teenage years. Before I could understand or articulate my experiences, I knew that as a female, my mobility was proscribed. I was 12 years old when a teenage boy followed me, stared and made lewd comments as I walked to the train station to go to school some mornings. I was 13 years old when my best friend arrived at school in tears because a man flashed her on the train. I was 15 years old when a man followed me, masturbating as I walked to the train station to meet a friend.

When I started cycling at the age of 22 while living in Washington, DC, I felt liberated from sexual harassment in public space. The trade-off was that I was more exposed to road traffic danger – close passes, near misses, verbal abuse from drivers and the stress of cycling on car-centric streets became a new daily reality. The last time I had been on a bicycle was when I was a child, cycling around the block or the park, so I was terrified of cycling in traffic. I only started cycling so that I could go to morning yoga classes before work. The yoga studio was two miles away, which was a 50-minute public transport journey involving two buses and a 15-minute walk at each end or a 15-minute cycle ride. After a few weeks of the arduous bus commute, I decided to save time by cycling.

I enlisted a friend who was an avid cyclist and volunteer for the Washington Area Bicyclist Association (WABA) to help me build my confidence and capability to cycle in traffic. It felt less scary after a few weeks, and I started cycling to/from work every day instead of taking the bus so that I could save money for law school. My friend roped me into volunteering for WABA because it was 'full of MAMILs [middle-aged-men-in-lycra] and triathlon dudes with fancy road bikes' and needed 'more normal people who just want to ride to yoga or to save money.' 2013 was an opportune time for me to get involved because mainstream American cycling advocacy was having open conversations about the need to make cycling more equitable and inclusive.

I became a 'Roll Model' for WABA's new Women and Bicycles programme, in which I recruited, mentored and created a peer support network for women who did not cycle to encourage them to start cycling. I learned that the gender gap in cycling was virtually the same in all major cities in English-speaking countries – for every female cycling, there were three or four men cycling. This struck me as an interesting problem to solve, especially as I was a paralegal at a Civil Rights law firm at the time, working on high profile sex discrimination class action lawsuits. The embodied experience of learning to navigate the city by bicycle made me

see how spatial and socioeconomic inequalities converged and compounded each other in urban space.

I shifted gears and decided to forgo law school and get a Master's degree at the Cities programme at London School of Economics instead. I wrote my dissertation on the gender gap and other inequalities in cycling in London. I felt like I was just scratching the surface and applied for doctoral programmes to deepen my research. Although I was unsuccessful in getting funding, I have continued to advance a new research agenda on intersectionality and cycling by doing academic research and working with policymakers and practitioners to apply it to cycling policy and planning. Doing this PhD by publication has allowed me to contemplate my often frustrating experiences of having my research co-opted and compromised by active travel institutions.

I planned on doing this PhD by publication during my maternity leave with my son Nathan. Sadly, Nathan was stillborn in August 2024. This thesis has become a container for my grief and pain following Nathan's loss. Working on it has also enabled me to channel my rage – my rage that Nathan died; my rage that I, and too many women and girls, are routinely subjected to sexual harassment and violence while out and about; and my rage that my employer tried to make me redundant while I have been on maternity leave. This PhD by publication has been integral to my healing process. I hope that articulating and sharing my experiences can contribute to collective action towards more just cycling policies and environments.

1. Introduction

Over the past two decades, cycling has gained prominence on global policy agendas to decarbonise transport and improve public health. Despite increased growth and investment in cycling, it remains white, male dominated in English-speaking, low cycling contexts (Pucher & Buehler 2008; Aldred, Woodcock & Goodman 2016; McCullough, Lugo & Stokkum 2019; Pedroso & Aldred 2023; Lam 2020; Lam 2022; Goel et al. 2021). In the UK, men make over twice as many cycling trips as women (Department for Transport 2024). Just 1.5% of trips in England are by cycle, falling to 0.9% for white women and 0.5% for women of colour, compared to 2.4% for white men and 1.3% for men of colour.[1] Surveys indicate high unmet demand for cycling among people of colour, women and people on low or no incomes, which underscores the need to diversify cycling to realise its potential to decarbonise urban transport (Arup & Sustrans 2020; Transport for London 2023; Goel et al. 2021; Lam 2020; Lam 2022).

This PhD by publication brings together the research I have conducted on inclusive cycling over the past ten years. The bulk of this thesis comprises of three academic papers on inclusive city cycling, three policy papers on gender and sustainable urban mobility and planning and two practitioner papers on embedding equity in active travel (see Appendix 1). These papers make two novel contributions. Firstly, I have advanced analysis of cycling inequalities through the novel application of intersectionality to sustainable urbanism and transport research. Secondly, my work has had a practical impact by informing the development of more equitable and inclusive cycling policies and environments through a decade of working with city officials, policymakers and practitioners globally.

Conducting this PhD by publication has provided me with an opportunity to critically reflect on my experiences of attempting to translate theory into practice and the structures, cultures and practices that limit the ability of intersectionality to impact cycling policy and planning. As such, my thesis also includes a critical discussion of my publications, which draws on contemporary autoethnographic reflections on my previous experiences working with UK transport professionals to promote equitable and inclusive cycling. It makes a novel contribution by critically reflecting on the institutional barriers to understanding and operationalising intersectionality in cycling policy and planning. I argue that the neoliberalisation of cycling and the de-politicisation of intersectionality inhibits the potential of intersectionality to make cycling more equitable and inclusive.

My work has aimed to advance cycling justice, which Golub et al. (2016, p. 9) define as:

[1] Data from the National Travel Survey via the Impacts of Cycling Tool https://www.pct.bike/ict/.

> an inclusionary social movement and practice based on furthering material equity and recognising that a diverse range of qualitative experiences should influence public investment in transportation. Bicycle justice transforms oppressive, exclusionary transportation planning practices into inclusive equity initiatives. It creates emancipatory outcomes that support safe and affordable access to resources such as social services, education, employment, urban amenities, housing, and connections to other modes of transportation such as buses and light rail.

Cycling justice considers how power influences cycling policy and initiatives along demographic and socioeconomic lines. It recognises that while some people cycle because they like it and enjoy the benefits of active travel and being outdoors, for others, their choice to cycle reflects their social and economic marginalisation rather than their lifestyle and travel preferences. The latter group is typically ignored by cycling policymakers, practitioners and mainstream advocates. Cycling justice, therefore, aims to centre the voices and experiences of those who are underrepresented in cycling and those for whom cycling may be unenjoyable but a necessary way to get around.

However, I have found it more pragmatic to refer to 'cycling equity' rather than 'cycling justice' when working with transport policymakers and professionals. Cycling equity focuses on distribution and recognises that there are differences in people's abilities to participate in cycling and benefit from cycling policies and infrastructure investments. Therefore, different groups require different resources to participate in and benefit from cycling. Equity is necessary to further justice. The concept of equity has gained traction in transport policy and planning, and so policymakers and professionals are more comfortable and familiar with 'equity,' whereas they find 'justice' too abstract and radical. Some may argue that capitulating to the demands of powerful institutions and prioritising their comfort reinforces unequal power relations. In my experience, working with and for institutions to try and transform them requires compromise. Compromising the language that you use and adopting institutional language can be a necessity to get your foot in the door to try and effect change, as I discuss further in Chapter 5 (section 5.2.2).

The structure of this critical discussion is as follows. Chapter 2 synthesises the literature on cycling equity. Chapter 3 describes my research, including my research approach, methods and research questions. Chapter 4 explores three barriers to policymakers' and practitioners' ability to understand and meaningfully engage with intersectionality to make cycling more equitable and inclusive: i) tensions between critical social science and policy-practice, ii) the technocratic paradigm in transport, and iii) the dominance of UK Equalities legislation. Chapter 5 focuses on the impacts of and responsiveness to the recommendations from my research, which fall into two categories: i) increasing diversity and inclusion in the built environment and transport sectors and ii) increasing institutional capacity for intersectional

analysis. I conclude by summarising the answers to my original and new research questions and discussing three implications for active travel research, policy and practice.

2. Overview of cycling equity

Technocratic neoliberal policies have led to increased investment in cycling in the UK, justified by environmental, economic, health and liveability benefits. However, these benefits are not distributed equitably and cycling policy, planning and practice have perpetuated fundamental processes of marginalisation associated with neoliberal urbanism. Why have stark cycling inequalities persisted despite increased growth and investment in cycling and widespread 'cycling for everyone' rhetoric? How can cycling be a more diverse and inclusive mode of transport? This chapter provides a brief overview of the literature on cycling equity as a more thorough literature review appears in Papers 1, 2, 3 and 8.

Academic research on transport equity and justice has influenced transport policy and planning since the early 2000s, mostly focusing on accessibility or transport poverty in relation to public transport services (Agyeman & Doran 2021; Mindell et al. 2024; Lucas 2012; Lucas et al. 2016). However, transport research, policy and planning remain highly technocratic pursuits that marginalise 'social' issues, like gender and inclusion (Polk 2009; Kronsell 2013; Levy 2013; Sheller 2018; Lam 2020). Furthermore, there has been less research on active travel equity (Agyeman & Doran 2021).

Historical accounts of cycling suggest that participation in cycling was always gendered, classed and racialised (Spinney 2020). Cycling exploded in England between the late 1860s and 1890s, initially as an elite pastime for Victorian men, as it was not socially acceptable for 'respectable' women to cycle until the 1890s (Spinney 2020). However, even then women were still excluded from competitive cycling (Spinney 2020). By 1900, the cycling craze ended as the novelty wore off and cars gained popularity, especially after World War I (Spinney 2020). Bicycles got cheaper and therefore more accessible for working class Brits who became reliant on it as a mode of transport by the 1930s, giving rise to associations between cycling and poverty (Spinney 2020).

Despite these historic inequalities in cycling, the bicycle has also been a symbol of emancipation. American suffragettes, like Frances Willard, praised the bicycle as integral to feminism because of the mobility and physical prowess it granted women (Hanson 2010). In the UK, Victorian women invented and patented convertible costumes that enabled them to safely cycle whilst appearing 'respectably' dressed off their bicycles, therefore expanding possibilities for how women inhabited and moved around in public space (Jungnickel 2018).

In the 1920s and 1930s, cycling facilitated political education and organising on the left among working class Brits, particularly young British Jewish people (Dee 2014). The Clarion Cycling Club (CCC), named after Robert Blatchford's socialist newspaper, was founded in 1895

and used cycling to spread socialism, with meetings combining cycling, leaflet distribution and political debate (Dee 2014). During the interwar years, the CCC attracted many working class British Jewish young people who wanted to pursue outdoor recreation, socialise and cycle with like-minded people, disengage from traditional Jewish culture and get involved in left-wing politics (Dee 2014). The Youth Communist League was founded in 1921 and used cycling, camping and rambles to recruit Jewish youth to the Communist movement (Dee 2014). British Jews later became prominent in broader campaigns for countryside access, trade unionism and British Communism (Dee 2014).

As history shows, issues around equity and justice have been central to cycling since its inception. This chapter will now contextualise cycling policy and promotion within neoliberalism. It will then discuss how the neoliberalisation of cycling contributes to three dimensions of inequalities in cycling, which structure the rest of the chapter: demographic inequalities in cycling participation, spatial inequalities in the provision of cycling infrastructure and inequalities in cycling practices. It will conclude by describing how my research has evolved the body of work on cycling equity.

2.1 Cycling and neoliberalism

Most initial research on cycling focused on factors influencing people's decision to cycle, the sensory and embodied experience of cycling, cycling subcultures, as well as the type of infrastructure needed to encourage more cycling (Aldred 2010; Jones 2012; Spinney 2006; Spinney 2016; Nixon 2012; Lam 2020). There has been less engagement with the political economy of cycling (Spinney 2016). Aldred (2012) theorised UK cycling policy and promotion as affected by neoliberalism. Cycling only became a national policy issue in the 1990s, after the 'hollow state' paradigm was established and the 'responsible individual' paradigm was emerging (Aldred 2012). The mobilisation of responsible individuals was key to cycling promotion in the hollow state, as cycling policy and planning had been variously outsourced to quangos, charities, local authorities and volunteers (Aldred 2012). The discourse of cycling as a 'win-win solution' for public health, the environment and the economy, combined with the outsourcing of cycling, further marginalised it as a niche lifestyle choice rather than a strategic government priority (Aldred 2012).

Spinney (2016) builds on Aldred's work but argues that cycling policy is not just affected by neoliberalism, rather, it is a principle mode of neoliberal government. Encouraging active travel has been a primary goal of UK transport policy since 2010 to minimise the health, economic and productivity costs of sedentary transport and associated poor health (Spinney 2016). The health benefits of cycling and time savings from reduced congestion create a

healthier and more productive workforce that can more readily fuel economic growth (Spinney 2016). Early cycling strategy and policy documents positioned cycling as a way to discipline and invest in oneself, therefore shifting the onus onto individual entrepreneurs to cycle in car-centric urban environments (Spinney 2016). Investment in cycling infrastructure was a direct response to the hostile physical environment within which people were encouraged to cycle (Spinney et al. 2015; Spinney 2016).

Research from the US has argued that cycling infrastructure is an agent of capital accumulation, fuelling displacement and gentrification (Hoffmann & Lugo 2014; Stehlin 2014; Stehlin 2015). Although cycling infrastructure itself is not a form of gentrification, some low-income communities and communities of colour worry that new cycle lanes will 'foster gentrification and further diminish their rights and roles in the community' (Agyeman 2013, p. 120). In US cities, most cycling has occurred in gentrifying areas (Pucher & Buehler 2011) and cycling investments are skewed towards wealthier, whiter populations (Hoffmann & Lugo 2014; Stehlin 2014; Stehlin 2015; Hoffmann 2016). Cycling has played a critical role in the social production of progressive, environmentally minded gentrifying subjects, as the bicycle has been framed as an individualised, flexible mode of transport that epitomises cosmopolitan living, and cycling infrastructure signals that a city is hip, liveable and sustainable (Stehlin 2015; Lugo 2013; Hoffmann & Lugo 2014; Lubitow & Miller 2013).

Hoffmann & Lugo (2014) argued that cycling infrastructure has been formulated as 'creative class carrot' to attract newer, more desirable residents who are white, more educated and more affluent, whilst displacing low-income families and communities of colour. The prominence of cycling infrastructure in urban policy agendas reflects 'progressive—neoliberal hybridisation' (Stehlin 2015, p. 128), in which cycling advocates and city politicians embrace cycling infrastructure as a universal good that brings economic, sustainability, health and liveability benefits for everyone (Hoffmann & Lugo 2014; Stehlin 2015). These 'world-class' discourses of cycling ignore people cycling out of economic or spatial necessity, mostly people of colour and people with low incomes (Hoffmann & Lugo 2014; Lubitow & Miller 2013; Stehlin 2015). This underscores the need for 'just sustainabilities' in urban green initiatives, such that the benefits accrue to marginalised communities and not just upwardly mobile people with more capital (Hoffmann & Lugo 2014; Lubitow & Miller, 2013; Agyeman 2013).

Inequalities in cycling are a consequence of the neoliberalisation of cycling (Spinney 2016). Firstly, there are inherent inequalities in the abilities of different demographic and socioeconomic groups to respond to cycling promotion and engage in cycling (Spinney 2016; Aldred 2012). Secondly, the production of space to support cycling (e.g. cycling infrastructure)

has resulted in uneven urban geographies (Spinney 2016; Stehlin 2015; Hoffmann 2016; Hoffmann & Lugo 2014). Finally, linking cycling with improving economic productivity creates inequalities in cycling practices, as commuter cycling is privileged in policy and planning (Spinney 2016; Stehlin 2014; Hoffmann & Lugo 2014).

2.2 Demographic inequalities in cycling

Initial research on cycling equity focused on demographic inequalities in cycling participation, discussing barriers to cycling for underrepresented groups and ways to increase their cycling levels. The gender gap in cycling in English-speaking, low cycling contexts has received the most attention (Goel et al. 2021; Aldred, Woodcock & Goodman 2016; Pucher & Buehler 2008), which reflects how gender is the most studied demographic category in transport research (McCullough, Lugo & Stokkum 2019). There is a growing body of literature on race and cycling from the US that unpacks how transport policy and planning, particularly car-centric development, have systematically harmed communities of colour and low-income communities (Barajas 2021; Brown, Rose & Kling 2023). However, there is less research on other axes of identity and cycling. This section provides an overview of the literature on demographic inequalities in cycling.

2.2.1 Gender

Most research on gender and transport tends to be overly descriptive, focusing on gender differences in travel behaviour without analysing how they are shaped by gendered power relations and structural inequalities (Law 1999; Hanson 2010; Levy 2013). Law (1999) called for more analysis of gender as a social category that structures social relations and daily mobility. Hanson (2010) observed two strands of gender and mobility research and argued for their integration: (i) how gender shapes mobility and (ii) how mobility shapes gender. The former identifies gender differences in travel patterns without analysing the gendered processes driving them; the latter engages with gender but not travel behaviour (Hanson 2010). Levy (2013) argued that 'a paradigm shift in transport [research, policy and] planning is way overdue' (p. 61), given that gender and issues around access and inclusion are still marginalised as 'social' issues, separate from the mainstream focus on economics and environmental issues.

Law's (1999), Hanson's (2010) and Levy's (2013) calls have yet to be heeded in cycling research. Most research on gender and cycling tends to essentialise gender differences in cycling and focus on individual women's choices instead of systemic barriers to cycling (Hanson 2010; Ravensbergen, Buliung & Laliberté 2019). For example, the literature attributes women's lower cycling rates to greater safety concerns and more complex travel patterns but

fails to analyse the gendered processes producing these differences (Ravensbergen, Buliung & Laliberté 2019). There needs to be more structural and intersectional analysis of the gender gap in cycling (Hanson 2010; Ravensbergen Buliung & Laliberté 2019; Lam 2020). My research fills this gap through the novel application of intersectionality to understand and analyse the structural drivers of cycling inequalities. Papers 1-3 argue that implicit white male bias is built into cycling policy and infrastructure. Steinbach et al. (2011), Ravensbergen (2020) and Pedroso & Aldred (2023) consider how cycling is racialised, classed and gendered, but there needs to be more intersectional cycling research.

2.2.2 Race

The small but growing body of research on race and transport emerged in the US and engages with how structural racism proscribes mobility for people of colour. This builds on a long history of activism to end transportation discrimination against communities of colour and low-income communities in the US. Issues discussed include police racial profiling and harassment of Black drivers and cyclists (Barajas 2021; McCullough, Lugo & Stokkum 2019; Osei & Aldred 2023; Agyeman & Doran 2021), dangerous street environments experienced by people of colour and people with low incomes due to racial and socioeconomic disparities in infrastructure investments (Barajas 2021; McCullough, Lugo & Stokkum 2019), as well as fear of crime as a barrier to active travel and public transport for people of colour and people with low incomes (Lusk et al. 2019; Barajas 2021; Lubitow, Rainer & Bassett 2017; Banerjee, Uhm & Bahl 2014; Jamme, Bahl & Banerjee 2018; Brown, Harvey & Sinclair 2022). The scarce research on race and cycling in the UK and Europe discusses barriers to cycling for people of colour, such as financial precarity, poor access to cycling infrastructure and fear of stop and search (Steinbach et al. 2011; Goodman & Aldred 2018; Bednarowska-Michaiel 2023; Osei & Aldred 2023; Vietinghoff 2021).

2.2.3 Invisible cyclists

Research on ‘invisible cyclists’ links cycling and wider structural inequalities by exploring the intersection of structural racism as well as precarious work and immigration statuses. The term ‘invisible cyclists’ emerged in the US to describe low-income cyclists of colour who rely on cycling as an economic or spatial necessity but may not self-identify as cyclists and are overlooked in cycling policy, research and advocacy (McCullough, Lugo & Stokkum 2019; Stehlin 2014; Lee et al. 2016). Far from being invisible, they are hyper-visible and overpoliced for being ‘bad cyclists’ who cycle on the pavement, for example (McCullough, Lugo & Stokkum 2019; Lee et al. 2016; Stehlin 2019). Furthermore, people of colour and immigrants

cycle as much as, if not more, than white people in the US (Smart 2010; Barajas 2023). For many immigrants, especially those without documentation, cycling is a necessary but unsafe and unenjoyable mode of transport (Reid-Musson 2017; Smart 2010; Barajas 2023; Lee et al. 2016). The term 'invisible cyclists' marks them as other than 'good,' 'visible' cyclists – affluent white people for whom cycling is a lifestyle choice – while ignoring the exclusionary structures that render them invisible (Lee et al. 2016).

2.2.4 Summary

Research on demographic inequalities in cycling has evidenced how increased growth and investment in cycling have failed to increase diversity in cycling. However, it typically focuses on one or two characteristics (mainly gender), rather than adopting an intersectional perspective that considers how multiple characteristics – and structural inequalities that give these characteristics meaning – interact. This results in overly descriptive narratives about demographic differences in cycling and insufficient analysis of the structural drivers of those differences. This falsely insinuates that inequalities in cycling are attributable to individual choice instead of systemic barriers that constrain choice, and that solutions are individual rather than structural (Ravensbergen, Buliung & Laliberté 2019; Lam 2020). The pursuit of individualistic solutions aligns with the ways in which cycling promotion under neoliberalism have been framed around individual choice.

2.3 Spatial inequalities in cycling infrastructure

Research on spatial inequalities in cycling infrastructure engages more explicitly with socioeconomic inequalities in cycling, an under-researched area. While there is consensus that leisure cycling is more prevalent among middle- and high- income populations compared to low-income populations, the relationship between socioeconomic background and utility cycling is unclear (Torres-Barragan, Cottrill & Beecroft 2020; Tortosa et al. 2020). Spatial analysis has demonstrated that socioeconomically deprived communities and communities of colour are disproportionately harmed by traffic-related air pollution (Barnes et al. 2019; Fecht et al. 2015; Fairburn et al. 2019). Its application to cycling infrastructure provision is relatively new and has mostly been done in North American contexts (Torres-Barragan, Cottrill & Beecroft 2020). Spatial analysis of bikeshare systems in US and UK cities has found that they reinforce existing patterns of residential, employment and public transport density, rather than improving accessibility in less well-connected areas (Wachsmuth et al. 2019; Stehlin 2019; Clark & Curl 2016; Goodman & Cheshire 2014).

In US cities, cycling infrastructure is concentrated in affluent, white areas (Braun Rodriguez & Gordon-Larsen 2019; Prelog 2015; Wang & Lindsey 2017). However, in Canadian cities, low-income communities have better access to cycling infrastructure than their wealthier counterparts (Fuller & Winters 2017; Houde, Apparicio & Séguin 2018). In England, there is more cycling infrastructure in areas of high deprivation, likely because they tend to be in or around city centres with better transport infrastructure (Tortosa et al. 2021). Despite the more enabling physical environment (in terms of cycling infrastructure density, population density and hilliness) cycling levels are lower in areas of high deprivation, whereas cycling levels are greater in less deprived areas with less enabling physical environments (Tortosa et al. 2021). This suggests that enabling spatial conditions alone cannot increase cycling among more deprived communities (Tortosa et al. 2021). Interventions like low-traffic neighbourhoods could potentially improve equity in access to active travel infrastructure, but this is not automatic because of devolved governance and the absence of equity criteria at the local authority level (Aldred et al. 2021).

2.3.1 Summary

Spatial analysis of cycling infrastructure complements the literature on demographic inequalities in cycling with a place-based analysis of where cycling infrastructure is concentrated, who benefits and who loses out. However, it has mostly been conducted in North American contexts and should be done in other contexts. A sole focus on spatial analysis could be misleading because it risks assuming that enabling physical environments and equitable provision of cycling infrastructure are sufficient to diversify cycling while ignoring the need for social infrastructure, such as targeted outreach to marginalised groups (Doran, El-Geneidy & Manaugh 2021; Lam 2017; Lam 2020; Tortosa et al. 2021).

2.4 Inequalities in cycling practices

In addition to inequalities in cycling participation and cycling infrastructure provision, there are inequalities in which cycling practices are prioritised in policy and planning. Dominant urban and transport policy discourses have linked cycling to improving individuals' health and saving travel time, therefore improving economic productivity (Spinney 2016). This has privileged cycle commuting while excluding alternative cycling practices, such as BMX cultures and cycling for protest (Spinney 2016). This section discusses cycling as work (e.g. delivery cyclists' journeys) and cycling for care-related purposes ('mobilities of care'), both of which have gained traction in cycling research and policy.

2.4.1 Cycling as work

Despite comprising a sizeable proportion of overall people cycling in cities, delivery cyclists are invisible in cycling policy, planning and advocacy (Lee et al. 2016; Lee 2018; Popan & Anaya 2021; Couve, Lam & Verlinghieri 2023). There has been more research on gig economy food delivery cyclists since 2018, which mainly focuses on safety risks associated with exploitative working conditions and cycling on car-centric streets, platforms' usage of algorithmic management techniques and delivery cyclists' collective action against exploitative platforms (Popan & Anaya 2021; Christie & Ward 2018; Gregory 2021; van Doorn & Chen 2021; Veen, Barratt & Goods 2019; Popan 2021; Gregory & Maldonado 2020; Tassinari & Maccarone 2020; van Doorn 2020; Cant & Woodcock 2021; Woodcock 2021). My novel research on the experiences of cargo bike couriers in London highlighted that despite distancing themselves from gig economy delivery platforms, cargo bike logistics companies replicate their exploitative labour practices (Couve, Lam & Verlinghieri 2023). The precariousness of cycling for work on car-centric streets is compounded by neoliberalism and the growth of flexible gig work, especially for women, gender minorities, people of colour and migrants (Popan & Anaya 2021). Ignoring the experiences of delivery cyclists results in transport policies and laws that vilify riders while ignoring the inherent danger of cycling on car-centric streets and the structural labour conditions that make delivery cycling unsafe, such as poor wages and time pressure (Lee 2018; Lee et al. 2016).

2.4.2 Cycling mobilities of care

Ines Sanchez de Madariaga (2009) coined 'mobility of care' to describe the systematic gendered bias in travel surveys that undercount travel for care-related purposes. These trips are mostly performed by women due to the gendered nature of care and tend to be short, local journeys that are complex and time-consuming, as they typically involve trip-chaining, or making multiple stops, and routes are poorly served by public transport (Sanchez de Madariaga 2009; Law 1999; Ravensbergen, Buliung & Laliberté 2020). The scarce academic literature on mobilities of care highlights its gendered nature but mostly focuses on driving (Murillo-Munar, Gómez-Varo & Marquet 2023; Sersli et al. 2020). Cycling mobilities of care is a new area of academic and policy research and these journeys must be considered in cycling policy and planning (Sersli et al. 2020; Ravensbergen, Buliung & Laliberté 2020). In 2019, Bogotá became one of the first cities to collect and analyse data on mobilities of care, finding that most care trips are local and done on foot, which underscores the need to improve walking infrastructure (Montoya-Robledo et al. 2020; Murillo-Munar, Gómez-Varo & Marquet 2023). Bogotá also investigated cycling mobilities of care and found that women often experienced gender-based

harassment and road aggression while cycling with children, which highlights the need to tackle patriarchal violence (Montoya-Robledo et al. 2020).

2.4.3 Summary

The burgeoning academic and policy interest in cycling as work and cycling mobilities of care challenges the hegemony of commuter cycling in cycling research, policy and planning. Research on delivery cyclists and cycling mobilities of care encourages more critical engagement with how broader structural inequalities (e.g. labour market inequalities, gendered division of household labour) contour cycling inequalities. It highlights the need to consider the experiences of precarious workers and caregivers in cycling policy and planning. It also calls for wider and bolder policy solutions that address the structural economic inequalities that shape cycling as work and cycling mobilities of care. There needs to be more research in both areas, as well as more research on other types of cycling practices.

2.5 My research

The cycling equity literature explores three dimensions of cycling inequalities: demographic inequalities in cycling participation, spatial inequalities in cycling infrastructure provision and inequalities in cycling practices. Having reviewed the literature, there are three key gaps: i) there is a North American bias, ii) the literature on demographic and spatial inequalities tends to be overly descriptive and insufficiently analytical, and iii) the three research strands are not woven together.

It is important to acknowledge why there is a North American bias in the literature. One reason is that racial segregation in US cities has been more entrenched, visible and visceral compared to other cities in western countries, due to zoning and practices like redlining and reverse redlining. Compared to European cities, US cities have a smaller proportion of social housing, which compounds racial and socioeconomic housing segregation. In the US, transport policy and planning, particularly automobile-centric development, have systematically harmed communities of colour and low-income communities (Barajas 2021). As a result, spatial inequalities in cycling infrastructure provision are more pronounced in US cities.

Another reason is that the US had a Civil Rights movement, which emerged partly in response to transportation injustices (e.g. racial segregation on buses) and fuelled activism to end transportation discrimination against low-income and minority communities (Golub et al. 2016). Between the late 1800s and the 1960s in the US, transportation was ‘at the heart of the struggles for freedom and mobility under the specter of institutional racism and state policing power’ (Barajas 2021, p. 7). To this day, people of colour in the US are disproportionately

stopped by police across all modes of transport (Barajas 2021). The Civil Rights movement created an intellectual, legal and policy framework that enabled and inspired future scholars, lawyers, policymakers and activists to address how transportation systems, including cycling, are social justice issues (Golub et al. 2016).

Adopting intersectionality can address these gaps in the cycling equity literature. Firstly, intersectionality compels us to consider how oppression manifests for different groups at different times in different contexts. Therefore, a new research agenda should problematise the prominence of North American sources and explore how the neoliberalisation of cycling manifests in different contexts. Secondly, intersectionality entails 'consciously directing the research towards systemic interrogations by design' (Rainard et al. 2025, p. 6) to move beyond documentation and description and instead focus on the root causes of cycling inequalities. Finally, as a theoretical and analytical framework that studies complex, interlocking and mutually constitutive power structures and systems, intersectionality can weave these strands together.

My research evolves the body of work on cycling equity through the novel application of intersectionality to address the following research questions:

1. What are the structural drivers of cycling inequalities?
2. What are the key issues policymakers and practitioners must understand to create more equitable, inclusive and sustainable cities and transport systems?
3. What methodologies, practices, cultures and paradigms in the built environment and transport sectors need to change, and how, so that active travel investments are more equitable and inclusive?
4. How can intersectionality be operationalised in sustainable transport policies and projects to enhance equity and inclusion?

My research falls under three themes: i) inclusive cycling in cities, ii) gender and sustainable urban mobility and planning, and iii) embedding equity in active travel. Table 2.1 illustrates how my papers address the research questions. Papers 1, 4 and 6 provide a deeper analysis of structural barriers to sustainable transport. Papers 2 and 3 make the novel argument that implicit white male bias is built into London's cycling policy and infrastructure, therefore perpetuating gender and other inequalities in cycling. Paper 5 analyses the structural barriers to women's safety in public space. Paper 7 is the first EDI strategic document published by an active travel organisation that articulates its approach to embedding equity in its work. Paper 8 is the first paper to apply gender budgeting to active travel investments. The following chapter discusses my research approach and methods.

Table 2.1: My papers

Theme	Paper	Key audience	RQ 1: What are the structural drivers of cycling inequalities?	RQ2: What are the key issues policymakers and practitioners must understand to create more equitable, inclusive and sustainable cities and transport systems?	RQ3: 3.What methodologies, practices, cultures and paradigms in the built environment and transport sectors need to change, and how, so that active travel investments are more equitable and inclusive?	RQ4: 4.How can intersectionality be operationalised in sustainable transport policies and projects to enhance equity and inclusion?
Inclusive cycling in cities	**1.** Lam, T. (2022). 'Towards an Intersectional Perspective in Cycling', *Active Travel Studies: An Interdisciplinary Journal*, 1(1): 4, pp. 1-11. https://doi.org/10.16997/ats.1264.	Academics	X	X	X	X
	2. Lam, T. (2020). 'Cycling London: An intersectional feminist perspective', in Uteng, T.P., Christensen, H.R. and Levin, L. (eds.), *Gendering Smart Mobilities*, Abingdon, Oxfordshire: Routledge, pp. 109–126.		X		X	X
	3. Lam, T. (2017). 'Hackney: A cycling borough for whom?', *Applied Mobilities*, 3(2), pp. 115-132. https://doi.org/10.1080/23800127.2017.1305151.		X		X	X
Gender and sustainable urban	**4.** Lam, T. and Cosgrave, E. (2019). *Gender Inclusive Climate Action in Cities*. C40 Cities' Women4Climate. Available at: https://www.c40.org/women4climate/resources/	Policymakers		X	X	X

mobility and planning	women4climate-report-gender-inclusive-climate-action-in-cities/ (Accessed: 18 February 2025).					
	5. Cosgrave, E., Lam, T. and Henderson, Z. (2020). *Scoping Study – London's participation in UN Women's Safer Cities and Safe Public Spaces Programme*. UCL Urban Lab. Available at: https://www.ucl.ac.uk/urban-lab/sites/urban-lab/files/scoping_study-_londons_participation_in_un_womens_safer_cities_and_safe_public_spaces_programme.pdf (Accessed: 18 February 2025).			X	X	X
	6. Lam, T. (2021). *Towards Gender-Inclusive and Sustainable Transport Systems*. UK Women's Budget Group. Available at: https://wbg.org.uk/wp-content/uploads/2021/06/Gender-inclusive-transport-systems-V3.pdf (Accessed: 18 February 2025).			X	X	X
Embedding equity in active travel	**7.** Lam, T. (2023). *For Everyone Strategic Framework*. Sustrans. Available at: https://www.sustrans.org.uk/media/13420/for-everyone-strategic-framework-public-facing-version.docx (Accessed: 18 February 2025).	Practitioners		X	X	X
	8. Lam, T. (2022). *Gender budgeting in active travel in Scotland*. Sustrans and Transport Scotland. Available at: https://www.sustrans.org.uk/media/13355/gender-budgeting-in-active-travel-in-scotland.pdf (Accessed: 18 February 2025).		X	X	X	X

3. My research: Approach and methods

Intersectionality demands participatory, interdisciplinary and reflexive action research that critiques dominant neoliberal structures and technocratic approaches (Mikulewicz et al. 2023; Rainard et al. 2025). As such, I have conducted predominantly qualitative, action research that aims to centre the lived experiences of marginalised communities, unpack the root causes of complex and intersecting injustices and develop radical recommendations to facilitate just and inclusive transport decarbonisation processes. Transport and mobility research has typically involved detached technocratic approaches, such as large surveys and modelling, to identify travel patterns and predict behaviour (Lucas 2013). However, qualitative methods are necessary to understand and expose the disconnect between how policymakers, practitioners and marginalised communities perceive and experience cycling. Furthermore, action research is needed in transport to empower local communities to participate in transport policy and planning decisions and make transport systems more responsive to diverse people's needs (Lucas 2013; Lee 2018). Action research is rooted in political activism and aims to cultivate researcher reflexivity and generate knowledge both for and through action to name, understand and tackle structural oppression and enact more just futures (Cornish et al. 2023; Lee 2018; Lucas 2013).

Action research is especially relevant for cycling research. Cycling is an embodied experience, and we produce knowledge through the embodied, experiential practice of cycling in car-centric environments (Lee 2018; Lam 2020). As a non-UK woman of colour, I have been the minority in city cycling and transport institutions that are predominantly white and male. This has led to feelings of being 'out of place' and tokenisation – in addition to embodying diversity that is absent from cycling and the transport sector, I have been tasked with diversity work in active travel organisations that lack diversity. Intersectionality compels us to reflect on our positionality (Mikulewicz et al. 2023) and my experiences of being 'out of place' personally, on my cycle, and professionally, in active travel institutions, enrich my research and autoethnographic reflections by providing unique insights on how power dynamics shape the knowledge produced, acted on and disseminated by neoliberal institutions.

3.1 Methods

Table 3.1 illustrates the research methods involved in my original research.

Table 3.1: Methods

Paper	Methods
1. Lam, T. (2022). 'Towards an Intersectional Perspective in Cycling', *Active Travel Studies: An Interdisciplinary Journal*, 1(1): 4, pp. 1-11. https://doi.org/10.16997/ats.1264.	• Synthesis + analysis of my earlier research • 3x stakeholder interviews
2. Lam, T. (2020). 'Cycling London: An intersectional feminist perspective', in Uteng, T.P., Christensen, H.R. and Levin, L. (eds.), *Gendering Smart Mobilities*, Abingdon, Oxfordshire: Routledge, pp. 109–126. https://doi.org/10.4324/9780429466601-7.	• Review of London cycling strategies + policy documents • Ethnography at London cycling events • Autoethnography based on my cycling experiences in London • 25x interviews with female cyclists (aged 21-55) • 30x stakeholder interviews • Creation of two issues of the *Mind the Cycling Gender Gap* zine
3. Lam, T. (2017). 'Hackney: A cycling borough for whom?' *Applied Mobilities*, 3(2), pp. 115-132. https://doi.org/10.1080/23800127.2017.1305151.	• Analysis of London + Hackney cycling strategies + policy documents • Ethnography at 2016 Hackney Cycling Conference • 10x stakeholder interviews
4. Lam, T. and Cosgrave, E. (2019). *Gender Inclusive Climate Action in Cities*. C40 Cities' Women4Climate.	• Analysis of relevant urban policy documents • 4x case studies • 12x stakeholder interviews
5. Cosgrave, E., Lam, T. and Henderson, Z. (2020). *Scoping Study – London's participation in UN Women's Safer Cities and Safe Public Spaces Programme*. UCL Urban Lab.	• Analysis of London's Violence Against Women strategy + policy documents • Ethnography at Night Safety Summit workshop • 12-16x stakeholder interviews
6. Lam, T. (2021). *Towards Gender-Inclusive and Sustainable Transport Systems*. UK Women's Budget Group.	• Synthesis + analysis of my earlier research • 4-6x stakeholder interviews
7. Lam, T. (2023). *For Everyone Strategic Framework*. Sustrans.	• 10-12x stakeholder interviews • 5x focus groups
8. Lam, T. (2022). *Gender budgeting in active travel in Scotland*. Sustrans and Transport Scotland.	• Analysis of Scotland's gender budgeting policy documents • 3x case studies • 8x stakeholder interviews • 2x workshops with the Scottish Women's Budget Group

My publications span both academic and policy/practice research and it is important to note that there are significant differences in standards of methodological rigour between these two research worlds. Accordingly, at times I encountered methodological limitations, particularly in my policy and practitioner papers (Papers 4-8). For example, budgetary constraints meant that I was often unable to do fieldwork. This was difficult when studying new active travel infrastructure, as I could not always observe who used the new infrastructure and how, strike up informal conversations with people using the new infrastructure or conduct semi-structured interviews and/or walk-along's or ride-along's with people to understand how they experienced the infrastructure. In addition, I was not always free to recruit a diverse and representative sample of interviewees. On one occasion, I was given a list of stakeholders to interview, who were all senior politicians and policymakers. Another time, I was given a list of community members to interview comprised almost entirely of middle-aged and older white men. This resulted in tightly managed and one-sided research that privileged certain voices and helped to uphold the 'official' narrative sanctioned by the institution.

Despite these constraints, I aimed to ensure methodological rigour in three ways. First, I had academic supervision where possible (Papers 4 and 5). In its absence, I implemented peer review processes with academics to ensure I had a 'critical friend' perspective (Papers 6, 7 and 8). Second, I always did an academic literature review, even when this was not required and even actively discouraged by the funder. Finally, where I had more control over the research design, I ensured that I recruited diverse stakeholders for interviews and/or focus groups.

I have pioneered new methods of doing intersectional action research, such as creating zines to capture diverse women's experiences of cycling and drawing on autoethnographic experiences of cycling and working with cycling policymakers and practitioners. The wealth of material I gathered from interviewing female cyclists for papers 2 and 3 led me to create the *Mind the Cycling Gender Gap* zine (see Appendix 2). I was inundated with requests from women around the world to share their experiences of cycling, which led to a second issue (see Appendix 3). These zines democratise the right to research by empowering ordinary women and gender-diverse people with the capacity to conduct research and approach their experiences of city cycling as objects of study (Appadurai 2006). It also centres voices that are typically overlooked in cycling policy and planning to inspire bottom-up, collective action to make cycling more inclusive. Apart from the zines, my work has not engaged extensively with activist voices and how they circumvent institutional channels to try and make cycling more inclusive because I have focused on working with institutions and trying to transform them from within.

Most of these papers have led to consultancy work with transport and active travel institutions. For example, my work on Paper 4 resulted in consultancy work with the City of Bogota on their 50/50 More Women on Bicycles programme, the first urban policy initiative focusing on gender equity in cycling. Paper 6 directly led to Paper 8, as it piqued policymakers' and practitioners' interest in gender budgeting in active travel. Ongoing engagement with policymakers and practitioners is essential to advancing intersectional cycling research because it has practical applications to cycling policy and planning. Furthermore, intersectionality is a critical praxis that intends to inform social justice work and influence policy and decision-making processes (Hill Collins 2015; Rainard et al. 2025).

3.2 New research

Through my work with active travel policymakers and practitioners, a new research agenda has emerged that pursues two research questions:

1. What are the barriers and institutional constraints that prevent the application and impact of intersectionality in cycling policy and planning?
2. What prevents my research and recommendations on how to promote equitable and inclusive cycling from having a greater influence and impact on how active travel institutions design and deliver cycling policies and projects?

Initially, I was excited that transport institutions wanted to understand and engage with intersectionality. I relished the opportunity to do intersectional research that would impact cycling policy and planning. However, I got frustrated because my research and recommendations were not having the impact I hoped they would have. I often found myself constrained and compromised by institutional requirements, as if I were perpetuating the injustices I was critiquing and hoping to dismantle. This reflects how there is a high risk of co-option when intersectional action research occurs within powerful institutions (Cornish et al. 2023).

This critical discussion explores these new research questions using contemporary autoethnographic reflections on my previous experiences working with UK transport professionals and policymakers to increase equity and inclusion in cycling. My autoethnography protocol is in Appendix 4. I received ethical approval to conduct autoethnography, which has enabled me to draw on my experiences working in the UK active travel sector in chapters 4 and 5 while preserving the anonymity of the institutions and senior leaders involved.

This critical discussion is heavily inspired by Sara Ahmed's critiques of diversity initiatives in higher education and her autoethnographic account in *Complaint!* of her

experience supporting academics and students with sexual harassment and assault complaints at Goldsmith University. Ahmed's insights on how diversity workers and those who complain about abuses of power generate knowledge of how power operates and reproduces itself in attempting to transform institutions are relevant to my critical reflections on my experiences of trying to transform active travel institutions. Although *Complaint!* focuses on sexual violence, Ahmed's analysis of what confronting institutional power can teach us about power resonates with my experiences of trying to challenge the institutional structures, processes and cultures that create and perpetuate inequalities in active travel. This critical discussion is also informed by Science and Technology Studies (STS) literature. STS insights on the tensions between critical social science research and policy-practice, as well as the instrumental imperative underlying policy-practice are particularly useful in unpacking resistance to my research and recommendations.

4. Intersectionality

This chapter draws on how my papers engage with intersectionality and explores the barriers to policymakers' and practitioners' understanding of and ability to meaningfully engage with intersectionality. 'Intersectionality' refers to the ways in which overlapping and mutually reinforcing systems of oppression shape differential lived experiences and complex social inequalities (Crenshaw 1989; Rainard et al. 2025). It has expanded from its initial focus on race, class and gender to include other systems of oppression, such as colonialism and ableism (Davis 2008; Mehrotra 2010). It has also been applied to issues around climate justice, including transport, energy and waste (Mikulewicz et al. 2023; Agyeman & Doran 2021; Lam 2022; Lam 2020; Lam 2017; Rainard et al. 2025; Acheson et al. 2024). Although intersectionality has gained traction in cycling policy and practice, it is dubious whether, or to what extent, this has made cycling more equitable and inclusive. I argue that intersectionality has been de-politicised by neoliberal institutions, resulting in 'ornamental intersectionality' (Bilge 2011, p. 3), the superficial and opportunistic deployment of intersectionality that neutralises its radical politics and transformative potential.

Table 4.1 illustrates how I define and use intersectionality in my publications, which vary depending on the setting and institutional parameters. My papers, especially 1-6, reinforce three points about intersectionality. Firstly, different axes of identity intersect with each other, which shapes our lived experiences and vulnerabilities. Secondly, different types of structural inequalities intersect and compound each other. Those with marginalised identities experience multiple, interconnected forms of inequalities. Thirdly, single-issue analysis is limiting, given the multidimensional nature of our lives and structural inequalities. In my experience, policymakers and practitioners easily grasp the first two points but struggle with the third.

Table 4.1: Intersectionality across my publications

Key audience	Paper	Definition of intersectionality	Usage of intersectionality
Academics	1	'A useful analytical framework that can help promote more equitable and inclusive cycling' (p. 1), as it acknowledges 'the ways in which multiple systems of oppression interact and compound each other' (p. 2) and can 'shine a light on power dynamics and the ways in which structural and spatial inequalities contour urban cycling' (p. 2).	• Provides an intersectional analysis of two structural factors that create gender and other inequalities in cycling: i) inequalities in access to economic resources and free time and ii) differential perceptions and experiences of safety. • Demonstrates how intersectionality 'can enable a robust distributional analysis to make explicit who benefits and who is excluded from cycling investments to devise transformative solutions' (p. 2).
	2	An analysis of 'gender as a complex category that intersects with other socially constructed categories (i.e. race, class, sexuality, migrant status, ability/disability, etc.) to compound inequalities and produce uneven urban cycling experiences' (p. 110). Emphasises that the analysis should focus on 'multiple kinds of systemic, structural inequalities (i.e. racism, sexism, classism) which interact in complex ways to compound inequalities and reinforce certain power dynamics' (p. 111).	• Uses London as a case study to show how integrating intersectionality to cycling projects 'would entail interrogating the cycling subjects for whom policies and infrastructures are designed, making implicit assumptions explicit, and addressing discriminatory impacts of cycling policies and infrastructure' (p. 124).
	3	N/A – mentions equity and social justice instead of intersectionality.	• Stealthily integrates intersectionality to demonstrate its relevance to an unsuspecting audience. Since Hackney has been heralded as a case study of best practice for achieving high rates of cycling, Paper 3 will likely surface in searches for papers about Hackney's alleged cycling success. Therefore, Paper 3 covertly walks the audience through an intersectional analysis of Hackney's approach to cycling, by interrogating the ideologies and normative assumptions underpinning cycling projects and exposing how they are premised on 'white male subjectivity masquerading as non-racial, non-gendered objectivity' (Crenshaw 1989, p. 154). As a result, Hackney's cycling projects reflect an implicit white, middle-class, male bias.
Policymakers	4	'An understanding that there are multiple aspects of identity (such as sex, sexual orientation, racial or ethnic origin, religion, age and physical ability) that interact in complex ways to impact how people experience the world. An intersectional perspective also acknowledges that there are multiple kinds of discrimination and inequalities that are interconnected and therefore cannot be analysed separately' (p. 9).	• Applies intersectionality to climate change and action to consider how gender and other factors contribute to differential vulnerabilities to climate impacts and abilities to engage in climate action. • Urges 'a shift away from individuals or groups of women and men' (p. 21) and essentialist narratives, which are in present dominant discourses about vulnerability to climate impacts, and towards greater

			focus on 'the role of structural inequalities in producing these differential vulnerabilities' (p. 21). • Invokes the right to the city and links it with UN Sustainable Development goals 5 (gender equality), 11 (inclusive, safe, resilient and sustainable human settlements) and 13 (climate action) to amplify a call to action for urban policymakers.
	5	'An understanding that the various aspects of one's identity (i.e. gender, sexual orientation, race, religion, age, physical ability/disability, etc.) interact in complex ways to shape how one experiences and moves around in the world… [and that] there are also multiple types of [interconnected] discrimination and inequalities that people can experience' (p. 20).	• Applies intersectionality to women's safety and illustrates how public safety is nuanced and complex, especially for those who experience multiple forms of discrimination. • Centres the experiences of 'those living at the intersections of different marginalised identities' (p. 21), which are typically overlooked in policy and planning.
	6	No mention of intersectionality, but as one of the Feminist Green New Deal policy papers, the implication is that intersectionality is integrated, given that the Feminist Green New Deal 'is bringing a gendered and intersectional approach/perspective to the Green economy/Green Recovery – ensuring that the voices of women, people of colour and other marginalised groups are heard during environmental and political debates' (p. 16).	• Interrogates for whom and for what our transport systems serve. • Discusses structural factors that create gender and other inequalities in transport: i) access to economic resources and free time, ii) car-centric policy and planning, iii) safety and accessibility, and iv) the technocratic paradigm in transport. • Focuses the critique on structures, rather than individuals or groups of people, and reinforces the inadequacy of single-issue analysis by illustrating how multiple inequalities compound each other.
Practitioners	7	'An analytical framework to understand, analyse and ultimately dismantle interconnected and mutually reinforcing inequalities in society… [and a way] to acknowledge the ways in which multiple systems of oppression interact and compound each other' (p. 4).	• References equity instead of intersectionality because transport equity has gained more traction in transport policy and practice. • Intersectionality is used to discuss the three priorities for the organisation's delivery work: i) safety and wellbeing, ii) accessibility, and iii) economic inclusion.
	8	Using 'gender as an inroad to consider the ways in which multiple inequalities interact and compound each other' (p. 3).	• Assumes that the audience understands and supports intersectionality in principle and explains gender budgeting as a tool to operationalise intersectionality in active travel. • Highlights the importance of intersectional data – 'data disaggregated by sociodemographic characteristics' (p. 8) – to build institutional capacity for intersectional analysis to inform policy and budget decisions.

4.1 ‘We’re not a social justice organisation’

When I have tried to explain how intersectionality can help us understand and dismantle ‘interlocking systems of oppression’ (Combahee River Collective 1977), two consistent comments I have received from senior leaders at transport government bodies and active travel organisations are, ‘that’s too academic’ and ‘we do transport, we’re not a social justice organisation.’ The first comment illustrates how practitioners dismiss critical and analytical social science perspectives when they challenge the status quo (Chilvers 2012). It delegitimises my research, discursively widens the gap between research and policy-practice and shuts down further discussion on how intersectionality can make cycling more equitable and inclusive. The tension between the instrumental imperatives in policy-practice and the critical perspectives of social scientists, as well as the tension between longer academic research timescales and the short-term needs of practitioners can make practitioners averse to critical social science research (Chilvers 2012).

There also seems to be a widespread perception among active travel practitioners that research is not ‘practical’ and detracts from ‘doing’ things. For example, an active travel organisation emphasised that they were a ‘do tank’ and not a ‘think tank.’ Most of the senior leadership team said the organisation should stop ‘sitting around doing research’ and instead ‘do’ and ‘deliver’ projects on the ground. The hostility towards research reflects practitioners’ anxieties that social scientists will be too critical, unconstructive and undermining (Chilvers 2012). It also reflects an unreflexive organisational culture in which practitioners are reluctant to critically reflect on and learn from their work.

Meanwhile, the second comment reflects and reinforces the uncritical embrace of the technocratic paradigm in transport, in which ‘social’ issues are sidelined (Levy 2013). It also reflects a fundamental failure and unwillingness to recognise and address the needs of disadvantaged groups. Policymakers and practitioners must recognise disadvantaged groups, their concerns and the barriers they face to cycling, even if addressing those barriers is beyond their direct control (Agyeman & Doran 2021). Ignoring these barriers, as I state in Paper 7, ‘will result in missed opportunities to improve how communities perceive and experience active travel’ (Lam 2023, p. 31). The failure of recognition stems from the lack of diversity within the cycling and wider transport sector. This is problematic because a team ‘that is representative, that looks like, and thinks like the local community is more likely to be able to recognise and understand community difference and disadvantage and plan accordingly’ (Agyeman & Doran 2021, p. 1491).

4.2 Dominance of UK Equalities legislation

Without an understanding of the third point about the limitations of single-issue analysis, intersectionality gets reduced to singular demographic categories and the focus tends to be on marginalised individuals and groups, instead of the structures that marginalise them. This reflects the dominance of UK Equalities legislation, which encourages a narrow focus on nine protected characteristics and shapes ways of thinking about and addressing discrimination such that struggles are treated as singular issues and there is no space for 'the complexities of compoundedness' (Crenshaw 1989, p. 167). Despite its narrow scope and exclusion of those whose experiences do not fit within its tight parameters, it is the dominant framework that guides how UK institutions understand and address issues around equity, diversity and inclusion (EDI). The irony is that intersectionality intended to 'challenge the complacency that accompanies belief in the effectiveness of this [single-issue] framework' (Crenshaw 1989, p. 167).

In my later publications, I make greater efforts to direct attention to the complex interaction of multiple systems of oppression that give rise to multiple, interconnected inequalities. The discussion of intersectionality in Papers 1, 6 and 7 is framed around structural factors that determine travel behaviour and experiences. This shifts the focus from individuals and groups to structural inequalities and how they intersect. It resonates with policymakers and practitioners because it makes intersectionality more tangible by framing it around concepts they are familiar with, such as safety and accessibility.

However, the hegemonic single-issue approach to discrimination leads to 'whataboutery,' questions like, 'But what about [insert group]?' For example, a practitioner interrupted my discussion of the impact of racial profiling on Black men's cycling experiences with, 'that's less of an issue here because the Black population is very small. There is a massive ageing population, what about ageism?' This mistakenly interprets intersectionality as a 'a shopping list of categories that can be deployed to shut down discussion of specific oppressions' (Bilge 2013, p. 420) and deflects attention away from racism, or whichever structural inequality is being discussed.

4.3 Ornamental intersectionality

The uncritical embrace of and inability to move beyond the hegemony of the single-issue approach to discrimination neutralises intersectionality into 'identity politics minus power relations' (Jibrin & Salem 2015, p. 5). Oppression is personalised and individualised so that the focus is on one's experiences of oppression devoid of analysis of how structures of oppression condition lived experiences (Jibrin & Salem 2015). This is a neoliberal perversion of a

radical concept that was designed to inspire collective action. Neoliberalism has mutated the state into a firm, recast citizens as responsible, entrepreneurial and self-governing individuals, and reframed social life as the interaction of individual entrepreneurs (Bilge 2013). It denies power relations, histories of oppression and preconditions leading to structural inequalities, and therefore disallows the salience of collective experience of systemic issues to inspire collective action for systemic change or repackages it as a commodity for consumption (Bilge 2013; Mohanty 2013).

As such, neoliberalism has created the conditions that dilute, domesticate and depoliticise intersectionality, translating its structural critiques into palatable and unthreatening narratives that can be circulated in neoliberal landscapes (Jibrin & Salem 2015; Mohanty 2013; Bilge 2013; Ahmed 2016). The result is 'ornamental intersectionality' (Bilge 2011, p. 3), the appropriation and superficial deployment of intersectionality that improves institutions' public image by making them seem more progressive and inclusive while barring action to address inequalities (Bilge 2013). Ornamental intersectionality is how intersectionality becomes a non-performative – 'intersectionality can be said in order not to be done, as if saying it is doing it' (Ahmed 2016, p. 4). Non-performatives are speech acts – spoken words, writing, visuals – that fail to bring about the effects they name (Ahmed 2012). This is not a failure of intent or circumstance, but exactly what the speech act does (Ahmed 2012; Ahmed 2006).

Claims or commitments to intersectionality 'are taken up *as if* they are performatives (as if they have brought about the effects they name), such that the names come to stand in for the effects. As a result, naming can be a way of not bringing something into effect' (Ahmed 2012, p. 117). Paradoxically, institutions' self-representations of having adopted intersectionality insulates them from accusations of being institutionally racist, classist, sexist, etc., which makes it more difficult to redress, and therefore reproduces, institutional inequalities (Dhawan & Varela 2016; Ahmed 2006). Ornamental intersectionality, or intersectionality as a non-performative, undermines intersectionality's credibility (Bilge 2013). If the neoliberal conditions that give rise to ornamental intersectionality can be overcome, then its radical and transformative potential can be restored (Dhawan & Varela 2016).

4.4 Summary

This chapter has discussed how tensions between critical social science and policy-practice, the technocratic paradigm in transport and the dominance of UK Equalities legislation are barriers to policymakers' and practitioners' ability to meaningfully engage with intersectionality. This raises a complex question: Are these barriers conditions of neoliberalism that depoliticise intersectionality, or are they compounded by neoliberalism to further dilute,

domesticate and depoliticise intersectionality? Either way, the result is that neoliberal institutions deploy ornamental intersectionality to signal their progressiveness and commitment to EDI whilst failing to materially address and therefore perpetuating structural inequalities. The next chapter discusses how the neoliberal capture of intersectionality affects how my recommendations on how to increase cycling equity have landed.

5. Impacts & responsiveness

This chapter offers autoethnographic reflections on the impacts of and responsiveness to the recommendations on how to increase equity and inclusion in active travel across my publications, based on feedback from funders and the intended audiences (policymakers and/or practitioners). My recommendations broadly fall into two categories: (i) increasing diversity and inclusion and (ii) increasing institutional capacity for intersectional analysis (see Table 5.1).

Table 5.1: Recommendations to increase equity and inclusion in active travel

Recommendation category	**Examples**
Increase diversity and inclusion in the transport and built environment sector	Establish an Equity, Diversity & Inclusion (EDI) Office to institutionally embed a commitment to EDI. (See Papers 2, 3).
	Invest in mentoring programmes to support women's leadership in the transport sector. (See Papers 4, 6).
	Invest in and increase training on gender issues. (See Papers 4, 5).
Increase capacity for intersectional analysis and decision-making.	Improve cycling diversity data collection and analysis. (See Papers 1, 2, 4, 5, 6, 7, 8).
	Increase and sustain investment in social infrastructure (e.g. targeted education, outreach and peer support programmes for underrepresented groups) to diversify cycling. (See Papers 2, 3, 4, 7, 8).
	Conduct more research on and intersectional analysis of cycling inequalities (e.g. research on delivery cyclists, LGBTQ+ experiences of cycling). (See Papers 1, 4).
	Integrate gender budgeting in cycling infrastructure investments. (See Papers 4, 6, 8).
	Engage meaningfully with diverse communities through creative and participatory methods (e.g. gender safety audits, accessibility audits, Equalities Impact Assessments). (See Papers 2, 4, 5, 6, 7, 8).

There are two parts to my argument in this chapter. Firstly, I discuss the impacts and responsiveness to the recommendations in the former category. Although they typically land well, I argue that the consensus that the built environment and transport sectors need to diversify is a non-performative, as what is named (the need to diversify) does not bring it into effect and instead blocks action to materially address inequalities. Next, I explore why recommendations in the latter category have not landed as well. I argue that the "ingrained 'unreflexive institutional culture'" (Chilvers 2012, p. 303) and the instrumental imperative in policy-practice closes down critical discussion on equitable and inclusive cities and transport systems.

5.1 Diversity & inclusion

In my experience, policymakers' and practitioners' support for my recommendations to increase diversity and inclusion in the transport and built environment sectors is non-performative because it does not bring into effect what it names. The consensus that the sectors need to be more diverse and inclusive constructs their institutions as already committed to EDI, which blocks meaningful action to become more diverse and inclusive. Agreeing that more diversity and inclusion is necessary signals an institutional commitment to EDI, which helps institutions manufacture the illusion that they are diverse and inclusive whilst failing to combat inequalities (Ahmed 2016; Ahmed 2012; Ahmed 2006). This section argues that the confluence of 'identity politics minus power relations' (Jibrin & Salem 2015, p. 5) and 'neoliberal corporate diversity and inclusion culture' (Bilge 2013, p. 408) has enabled the proliferation of non-performative EDI work.

'Identity politics minus power relations' (Jibrin & Salem 2015, p. 5) reduces the political to the personal, which results in a politics of representation disconnected from power analysis that 'can thus be consumed more easily in institutional spaces' (Mohanty 2013, p. 972). Neoliberal corporate diversity and inclusion culture describes an imperative to manage or value diversity for its economic and productivity benefits whilst ignoring structural barriers caused by unequal power relations (Ahmed 2006; Ahmed 2012; Bourabain 2023). EDI initiatives focus on image management, creating and circulating the correct image of the institution – The task is to change perceptions of institutions as elite, white and male, rather than to tackle the elitism, white supremacy and male dominance within institutions (Ahmed 2006).

5.1.1 EDI as non-performative

To be seen to be doing EDI, institutions introduce EDI strategies and action plans, hire EDI practitioners and organise awareness campaigns on issues like sexual harassment (Bourabain 2023). However, most of these measures are a smokescreen that obscure and perpetuate institutional inequalities (Bourabain 2023; Ahmed 2012; Ahmed 2006). One of many paradoxes of the non-performativity of EDI is the greater the focus on diversity management in institutions, the less diverse they seem to be (Ahmed 2006). This appears to be the case in the UK active travel and climate sectors, which remain predominantly middle-class and white despite the growth in recent years in EDI practitioners and organisational EDI strategies (RACE Report 2024). EDI practitioners in these sectors have shared frustrations with me that their organisations act as if employing them is sufficient.

For example, one practitioner told me they were the only person of colour in the senior leadership team and their presence reassured senior leaders that the organisation was not racist. Although the organisation failed to meet its target for employees of colour, having a target and a senior leader of colour gave them a sense of organisational pride, as if both evidenced how diverse and inclusive they were. This illustrates how EDI work allows individuals and institutions "to feel good, creating the impression that we have 'solved it'" (Ahmed 2012, p. 71) despite inaction. However, organisational pride and self-perception of being good conceal the recognition of and action to combat racism (Ahmed 2006).

Another paradox is that an organisation's recognition of their lack of diversity can be taken up as a sign of their commitment to EDI, which insulates them from criticism and inhibits action to diversify (Ahmed 2006). For example, senior leaders in an active travel organisation admitted to me that they struggled to retain women, people of colour and disabled people, especially at senior levels. However, the CEO said there was a lot of 'diversity of thought,' which was 'equally important but often overlooked.' It was as if 'diversity of thought' justified promoting more middle-aged white men who 'may look alike but think differently.' The celebration of 'diversity of thought' deflects attention from the institutional sexism, racism and ableism that create the organisation's retention problem. This shows how institutions exercise power and avoid acknowledging and challenging inequalities by framing EDI as positive, happy and something we have 'solved' (Bourabain 2023; Ahmed 2012).

5.1.2 The political is personal

The reduction of the political to the personal is another way in which EDI work is non-performative. Consider Employee Resource Groups (ERGs), a key feature of neoliberal corporate diversity and inclusion culture. ERGs are voluntary, employee-led groups of employees sharing the same or similar backgrounds that aim to make their workplace more diverse and inclusive (e.g. Women's Group, People of Colour Group). They encourage and perpetuate a single-issue approach that focuses on individuals or groups and the individualisation of experiences of oppression. The hyper-fixation on individual actions disables collective action to enact material organisational change, such as improving pay, conditions and policies. By promoting a politics of representation minus power analysis, ERGs mainly help institutions appear to be committed to EDI and sustain the status quo.

I observed meetings of an active travel organisation's ERGs. In one instance, members of the organisation's LGBTQ+ network shared frustrations about being misgendered at work. In response, the network bought lanyards, pens and mugs for Pride month. The organisation's women's network discussed gendered barriers to progression and pursued 'solutions' like

organising webinars on overcoming imposter syndrome. Privately, senior leaders admitted that the ERGs were ineffective 'talking shops' and a 'waste of colleagues' time,' but necessary because 'they show we are committed to EDI.' Publicly, they praised both networks for their contributions to the organisation's inclusive culture.

The situation of EDI work within Human Resources (HR) also makes it non-performative. HR functions to ensure legal compliance and protect institutions, including by obstructing complaints about abuses of power and institutional inequalities (Ahmed 2021). HR processes encourage the personalisation and individualisation of structural oppression, in which systemic inequalities are supplanted by discrete cases of microaggressions, bullying or harassment (Jibrin & Salem 2015; Ahmed 2021). Individuals can file complaints about sexism or racism, but the focus will be on 'the sexist' or 'the racist,' rather than systemic inequalities within the institution (Ahmed 2012; Ahmed 2021; Mohanty 2013; Jibrin & Salem 2015). This substitutes unequal power relations with "individual prejudice and psychological dispositions or expressions of 'hate'" (Mohanty 2013, p. 971).

Moreover, complaints processes are offered as solutions but create new problems because they are bureaucratic and time-consuming, and in complaining, individuals confront the full force of the institution bent on self-preservation (Ahmed 2012; Ahmed 2021). An EDI practitioner at an active travel organisation told me they often discouraged colleagues from filing complaints about institutional inequalities because the process would be too arduous and unlikely to yield a positive outcome for the complainant. They said that HR would deal with the complaint as interpersonal conflict and not recognise the systemic nature of the problem. While their advice was well-intentioned, they felt conflicted because the organisation used the number of complaints as an indicator of workplace culture and EDI. Therefore, discouraging people from complaining perpetuated the organisation's positive self-image as a diverse and inclusive workplace.

5.1.3 Internal vs. external

As I discuss in Paper 7, there is growing recognition that to increase equity in active travel, EDI must be pursued both externally through the delivery of programmes, projects and/or services, as well as internally through institutional operations, structures and systems. However, transport institutions are not currently structured in a way that enables them to embed EDI in their ways of working and therefore prevents them from delivering more equitable outcomes (TransitCenter 2021). The framing of 'internal' vs. 'external' EDI as competing and mutually exclusive priorities creates a false dichotomy because both are necessary and require different skills, strategies and approaches (TransitCenter 2021).

Despite this, the few active travel and climate organisations that pursue both internal and external EDI typically conflate responsibilities into one HR post, with no dedicated team or resources. By default, these organisations privilege 'internal' over 'external' EDI. Consequently, EDI practitioners focus on supporting ERGs, organising EDI training on topics like anti-bullying and inclusive leadership, curating EDI calendars, planning events for awareness dates and weeks, and collaborating with HR on tasks like improving recruitment practices. In my experience, these initiatives are non-performatives that contribute to organisations' self-image of being committed to and good at EDI whilst failing to challenge or dismantle unequal power relations within organisations.

5.1.4 Summary

This section has shown how it does not matter that policymakers and practitioners agree with my recommendations to increase diversity and inclusion in the transport and built environment sectors because their agreement is non-performative. Since EDI is non-performative, active travel institutions remain middle-class, white and male. Since the political gets reduced to the personal, the single-issue approach remains the dominant framework to understand and address discrimination. This perpetuates the tendency of active travel researchers, policymakers and practitioners to provide overly descriptive accounts of demographic differences in cycling without analysing the structural drivers of cycling inequalities. This, in turn, makes it difficult to address cycling inequalities. Finally, the false dichotomy between 'internal' and 'external' EDI and the privileging of the former gives active travel institutions a get-out-of-jail-free card for not delivering more equitable and inclusive cycling policies and environments. As a result, active travel institutions present themselves as committed to diversifying both their institutions and cycling, while the institutions perpetuate cycling inequalities – inequalities in cycling participation and decision making.

5.2 Institutional capacity for intersectional analysis

Unlike the support I have received for the recommendations to increase diversity and inclusion in the transport and built environment sectors, I have encountered more resistance to the recommendations to increase institutional capacity for intersectional analysis. I attribute this to the "ingrained 'unreflexive institutional culture'" (Chilvers 2012, p. 303) and the instrumental imperative in policy-practice, which manifest in three ways. Firstly, policymakers' and practitioners' reliance on case studies of best practice reflects a refusal to understand and address complex problems. Secondly, institutions bypass meaningful efforts to understand and operationalise intersectionality by 'mainstreaming' it. This is another way in which

policymakers and practitioners ignore complex problems. Thirdly, because 'power is knowledge' (Flyvbjerg 1998), institutions have an instrumental imperative to tightly control research and public engagement to maintain control of the narrative. I expand on each argument below.

5.2.1 Best practice

Policymakers and practitioners love case studies of best practice, which is meant to show a willingness to learn and improve. However, their reliance on case studies of best practice reflects a refusal to understand and address complex problems and an "ingrained 'unreflexive institutional culture…'" (Chilvers 2012, p. 303), both of which are symptomatic of an instrumental imperative that closes down wider policy discourses on equitable and inclusive cities and transport systems. Case studies of best practice typically ignore the problems and launch into solutions, almost as if to negate signs of problems (Ahmed 2012). The institutional lack of reflexivity in policy-practice means that policymakers and practitioners are conditioned not to acknowledge, reflect on and make transparent their implicit assumptions or motivations (Chilvers 2012). Instrumental imperatives in policymaking focus on realising and reinforcing the interests of powerful elites, which requires narrowing options and closing down wider discussion, debate and deliberation (Stirling 2008; Leach, Scoones & Stirling 2010).

Ignoring the problems

In an age of neoliberal urbanism when cities are in constant competition for investment and global city status, being a case study of best practice can help cities accrue more status. However, the ability to circulate as a case study of best practice 'might depend on not challenging anything' (Ahmed 2012, p. 96), hence the positive, solutions-oriented nature of case studies that do not challenge power structures or the status quo. In one of my papers, the case studies of best practice in increasing women's leadership and developing gender expertise were sourced from or reviewed and approved by government officials to ensure that the case studies showcased their government in the best light. This left no scope for critique; instead, the case studies functioned as good public relations, 'a way of repackaging and rearranging the organisation, so that it puts on its best display' (Ahmed 2012, p. 107). This instrumentalist approach enables institutions to defend their credibility by manufacturing the illusion that they are progressive and have best practice worth emulating.

Case studies of best practice are premised on the assumption 'that to offer solutions requires not focusing on the problems. The solution can thus become a means of negating the signs of a problem' (Ahmed 2012, p. 107). For example, one place packaged themselves as a case study of best practice by highlighting a new gender equity initiative. The case study

credited government officials for progressive policymaking while obscuring the context of gender-based violence and everyday sexism that gave rise to the initiative, the role of grassroots feminist organisations in shaping it, as well as critiques of its shortcomings. When I have worked with government officials to address gender-based violence in public space, there is always an implicit assumption that more policing will improve women's safety.

This ignores how institutional sexism and racism in police forces contribute to and compound gender-based violence and violence against other marginalised groups. Accepting the police and criminal justice system as part of the solution to gender-based violence reflects a 'carceral feminism' approach, which enables governments to do little to improve women's safety whilst using women's safety to justify policies and practices that target other vulnerable groups and increase their risk of state and street violence (Kim 2018; Richie 2012; Kern 2021). Best practice case studies showcasing how police forces are tackling gender-based violence via training or funding research on women's safety negate how policing is part of the problem and instead generate good publicity for the police.

Neoliberal solutions

Ignoring the problems enables simple, tidy stories that 'make for good sound-bite political marketing and fit well with large-scale bureaucratic organisations' demands for clarity and measurable manageability' (Leeach, Scoones & Stirling 2010, p. 131). In addition to oversimplification, case studies of best practice provide "'unitary and prescriptive' policy advice, which involves highlighting a single course or a very small subset of possible courses of action which appear as preferable" (Stirling 2008, p. 279). This closes down further policy discourse, public debate and institutional self-reflection on equitable and inclusive cities and transport systems. For example, one of my papers included two best practice case studies on supporting women's leadership in the climate sector. Both advocated neoliberal solutions that focused on individual improvement (e.g. increasing women's confidence) and market-centric solutions (e.g. collaborating with the finance sector to support female entrepreneurs in climate innovation). The individualisation of solutions ignores structural barriers to women's leadership, like gender inequalities in the labour market and the technocratic paradigm in climate action, instead locating the entrepreneurial self as the site of improvements.

Meanwhile, the uncritical embrace and advancement of market-led solutions will only retrench inequalities caused and compounded by interconnected systems of oppression, like capitalism and patriarchy. It also illustrates the blurring of roles, responsibilities and interests between public institutions and private actors under neoliberal urbanism. For example, the primacy of technology-led solutions in sustainable transport policy discourses, such as ride-

hailing and electric vehicles, illustrates how market- and technology-led 'innovations' are presented as self-evident public goods and climate solutions, whilst ignoring their negative social and climate impacts. One of my papers frames technological innovations in transport as effective public-private partnerships and climate solutions that governments should embrace. The funder forced me to delete all critique, including evidence of the congestion and emissions produced by the ride-hailing industry, as well as references to lawsuits about sexual assault and labour violations. This exemplifies how '…power is knowledge. Power determines what counts as knowledge… Power procures the knowledge which supports its purposes, while it ignores or suppresses that knowledge which does not serve it' (Flyvbjerg 1998, p. 319).

Dismantling the will to critique

On another occasion, the government body funding my research on inclusive active travel initially refused to publish the paper because they said it was too critical and did not highlight their existing best practice. This illustrates how neoliberalism 'systematically dismantles the will to critique' (Davies & Bansel 2010, p. 5). The request to tone down the critique reflects instrumental concerns about reputation management – The funder needed to be applauded for their work, rather than challenged. Specifically, the funder wanted greater praise and promotion of their active travel framework, programmes and research, particularly one of their strategic objectives around reducing inequalities. The point of my research was to help government officials translate this strategic objective into practice. However, it was almost as if the funder wanted recognition for simply having that objective and assumed that it would automatically translate into better outcomes.

The funder also requested deletion of a section of my paper that critiqued how an active travel project built in gender inequality. A team of retired white men led the community engagement process and decided to minimise lighting on a new walking/cycling path because lighting would interfere with biodiversity and the starry night sky. Gendered perceptions of safety were not raised during the engagement process because women and girls were excluded. After the path opened, women and girls said they did not feel safe using it after dark because it was unlit. In response, stud lights were added to the path. This exemplified the importance of engaging with diverse groups in designing active travel infrastructure. However, the funder said they had already shared this project as a best practice case study in inclusive community engagement, so my paper could not contradict that.

The funder's insistence that the paper needed to highlight their existing best practice, including their own research, illustrates the lack of institutional reflexivity and raises the question, 'better practice in what and why?' (Chilvers 2012, p. 298). Here, again, it seemed that

focusing on best practice was a way to ignore the problem and abandon 'the critical perspective that tells you there is something wrong with this new definition of what will count as good' (Davies & Bansel 2010, p. 8). The funder objected that my paper was too reliant on North American sources for cycling equity evidence and insisted that the paper should include their own research, even though none of it was peer reviewed and not all was publicly available. They pointed to a youth survey they conducted about safety on public transport. Because there were several LGBTQ+ respondents, they said that this survey filled a gap in research on LGBTQ+ experiences of public transport. However, there was a small sample size and LGBTQ+ respondents comprised a small subset with insufficient statistical power to draw meaningful insights. This reflects arrogance and an instrumental need to control what types of evidence are legitimate and admissible.

Summary

This section has argued that policymakers' and practitioners' reliance on case studies of best practice is a way to ignore and negate signs of problems. In doing so, they perpetuate problems and fail to offer genuine solutions. The circulation of case studies of best practice in inclusive cycling makes it difficult for policymakers and practitioners to meaningfully engage with cycling inequalities. It retrenches and reproduces cycling inequalities whilst making it seem like there already are 'solutions' to make cycling more equitable and inclusive. Dampening critique makes it difficult for policymakers and practitioners to learn from their mistakes, like failing to install lights on an active travel path and therefore rendering it unusable after dark for women and girls. Refashioning mistakes that perpetuate cycling inequalities into case studies of best practice only further obscures and perpetuates cycling inequalities.

5.2.2 Mainstreaming

Another way in which institutions negate problems and bypass meaningful efforts to understand and operationalise intersectionality and/or EDI is by 'mainstreaming' it. Neither are mainstream in the built environment and transport sector, so 'to treat them as if they simply are means the message will not get through' (Ahmed 2012, p. 139). Mainstreaming intersectionality and/or EDI is a feature of ornamental intersectionality that undermines intersectionality whilst enabling institutions to act like they have embraced and 'done' it. Organisations also use mainstreaming to avoid giving EDI the necessary support and resources (Ahmed 2012).

For example, I worked on a paper to support the strategy and development of a new programme to promote gender equity in climate action. Shortly after launching my paper, the organisation dismantled the programme, eliminating its dedicated resources (e.g. a budget, staff and expertise). The organisation claimed the programme was no longer needed because

they were going to 'mainstream' gender equity and intersectionality. The programme was founded precisely because the organisation lacked an understanding of gender equity and intersectionality. It was almost as if the paper simply needed to exist so the organisation could 'have a document you can point to' (Ahmed 2012, p. 90) whilst maintaining and justifying the status quo.

'For everyone'

An active travel organisation claimed that EDI was 'baked in their DNA' because they were an organisation 'for everyone,' everything they did made it easier 'for everyone' to engage in active travel and they had mainstreamed EDI. In Papers 2 and 3, I critique the ways in which policymakers, practitioners and mainstream cycling campaigners frame cycling as a universal public good that is 'for everyone.' For example, in Paper 3, I argue that 'for everyone' language begs the question: for whom, exactly? I also argue that the universalist framing of cycling projects precludes structural inequalities and wider neoliberal urban development processes within which cycling projects are situated. However, it has been difficult to challenge, critique and move beyond this universalist framing when working with active travel policymakers and practitioners.

The universalist 'for everyone' language resonates because it is a feel-good, positive term that acts as "a kind of 'yes' politics that encourages people to do something, rather than a 'no' politics that aims to prevent people from doing something" (Ahmed 2012, p. 67). This 'yes' politics can delude policymakers and practitioners into thinking that their work inherently promotes cycling equity because cycling is 'for everyone,' so their work automatically benefits 'everyone.' This also creates the delusion that making cycling more equitable and inclusive does not require different skills or additional resources because it is, as many policymakers and practitioners proudly say, 'embedded in everything we do.' Furthermore, when institutions believe their work benefits 'everyone,' they form, project and need to protect an idealised image of themselves. This generates and reinforces instrumental concerns about reputation management, which makes it harder to constructively challenge institutions about their role in exacerbating cycling inequalities.

I have had to adopt 'for everyone' language to try and influence cycling policy and practice. This can be a 'Trojan horse' (Stirling 2011; Leach, Scoones & Stirling, 2010), an effective entry point to get a seat at the table with decision-makers to then pursue a more radical agenda. I worked on a paper that provided a roadmap for the active travel organisation that 'mainstreamed' EDI to deliver equitable and inclusive active travel projects. By adopting the organisation's universalist framing of cycling 'for everyone,' I seemed aligned with them.

This reassured them that I was working with, not against, them, which was important because 'when you are less friendly, you are more likely to be blocked' (Ahmed 2012, p. 156). I needed to seem friendly, on their side, to have a chance at dispelling their illusion that their work benefited 'everyone' and pushing them to do better.

My seeming friendliness enabled me to engage senior-most leaders in serious discussions about active travel equity. In her research on diversity practitioners in universities, Ahmed writes, 'the documents are not themselves the point; what matters are the groups that are created in the process of writing them' (2012, p. 90). In this case, an oversight group was formed to support the paper's development. The group consisted of four out of seven members of the Executive team, as well as a Board member who was the self-selected 'EDI champion.' The oversight group met monthly for three months to review and discuss drafts of the paper before it went to the Board for approval. This was the first time that senior-most leaders had regular meetings about active travel equity. This created buy-in and a sense of shared ownership over the document. However, the momentum ended once the paper was approved by the Board and then published.

Problematic governance

The fact that the Board had the final say on the paper exhibits a power dynamic in which volunteers with no subject matter expertise or relevant experience exert significant decision-making power within a large UK-wide organisation. None of the Board members were experts in transport or active travel equity, so their feedback was unhelpful. For example, a Board member said that the paper needed to be reread from the perspective of a *Daily Mail* reader and edited to ensure the tone was 'appropriate' and would not entangle the organisation deeper into active travel culture wars. The *Daily Mail* is a right-wing tabloid that has made spurious and disparaging claims about cyclists and cycling interventions. The suggestion to pander to *Daily Mail* readers by making the paper less threatening speaks to how, as with the circulation of case studies of best practice, documents accrue value through their circulation, which depends on being friendly and 'not challenging anything' (Ahmed 2012, p. 96).

The difficulty was that there was not much more I could empty out of the paper. It was already friendly enough for the senior-most leaders in the oversight group who had emphasised that the organisation was not 'political' and certainly 'not a social justice organisation.' They felt that the paper was fine and did not need to be rewritten for *Daily Mail* readers. However, the Board member wanted reassurance that their comment had been taken seriously and addressed. We therefore passed the document to the communications team and asked them to rephrase anything that might offend or inflame *Daily Mail* readers. This created pointless

work and highlighted how organisational governance structures and the undue power of the Board can block organisations from meaningfully engaging with equity.

Organisational inertia

Organisational funding models are another barrier to practitioners' ability to understand and operationalise intersectionality. As discussed in Paper 8, the outsourcing of active travel delivery in the UK to engineering companies, quangos, charities, local authorities and volunteers means that active travel institutions typically chase government funding. This contributes to and perpetuates an unreflexive institutional culture because institutions are always responding to the parameters set by government bodies, rather than reflecting on and learning from their work. Equity has not been and is not part of government funding criteria for active travel projects. Consequently, there is little incentive for active travel institutions to do things differently and embed equity in their work. After my paper was published, the resounding feedback from the senior leadership team was that the funding reality was inconsistent with the ambitions the paper set out. They said it would be great if the organisation could increase active travel equity, but it simply was not possible given the funding environment.

This organisational inertia and lack of imagination was also illustrated in two other recurrent comments from the organisation's workforce. One comment, 'just tell us what to do,' reflects an organisational lack of critical thinking. It could stem from the organisation's funding model of chasing government funding and delivering clearly scoped and defined projects, which can make it difficult and unwelcome for people to consider doing things differently. Another comment was that the paper marked too much of a departure from existing workstreams, which the organisation should just keep building on. These comments exhibit an instrumental imperative that closes down critical discussion and alternative courses of action to advance cycling equity and instead advocates for business as usual.

Summary

This section has discussed how mainstreaming intersectionality and/or EDI enables institutions to avoid understanding, resourcing and operationalising intersectionality and/or EDI whilst appearing to do so. Mainstreaming makes intersectionality and/or EDI everywhere and nowhere at once. It serves instrumental purposes by allowing institutions to maintain control of the narrative (we promote active travel 'for everyone') and manage their reputations by seeming committed to and enacting EDI. Active travel inequalities exist because intersectionality and EDI are not mainstream. Acting as if they are reinscribes and perpetuates these inequalities whilst obscuring the role of active travel institutions in doing so. This curtails the transformative potential of intersectionality in helping us tackle active travel inequalities.

5.2.3 Power is knowledge

Because 'power is knowledge' (Flyvbjerg 1998), institutions have an instrumental imperative to tightly control research and public engagement to maintain control of the narrative. As discussed in earlier sections, institutions commit epistemic violence to tightly control research by ignoring the problems, diluting research findings, focusing on neatly packaged case studies of best practice and disabling critical analysis. This is enabled by and exacerbates the power dynamics between funders and researchers. I wrote most of the policy and practitioner papers as an independent consultant and if I had refused to make requested edits, I would not have gotten paid for my work. This section discusses two case studies of how institutions commit epistemic violence by tightly controlling public engagement.

Despite the consensus that institutions should engage meaningfully with diverse communities, public engagement is often under-resourced and treated as top-down, discrete and extractive exercises, where the onus is on individuals to engage rather than institutions to engage with diverse people in diverse ways (Chilvers, Pallett & Hargreaves 2018). This creates and perpetuates systemic inequalities in public engagement, in which certain forms of participation, particularly forms of public elicitation to gain social approval and acceptance, and certain types of participants, particularly those who are already aware of and have previously engaged with the institutions, are privileged (Chilvers, Pallett & Hargreaves 2018). This distorts public dialogue and narrows public engagement, as power determines whose voices count and get to be heard (Landemore 2022). It helps institutions justify their intended course of action whilst being seen to engage with the public despite the absence of genuine efforts to engage inclusively and meaningfully.

Case 1: Active travel organisation

An active travel organisation enlisted me to lead a youth panel and a community panel (comprising of 10 people aged 16-21 and 10 representatives of community groups, respectively) to support the development of and mainstreaming of EDI in their new strategy. However, the rushed timescales, small budget, limited advertising of the panel opportunities and the scheduling of meetings during the summer months constrained the engagement process and outcomes. Senior leaders only wanted panel members who were already familiar with and supportive of the organisation, so the call for panel members was only advertised on LinkedIn and via staff networks. The deliberate narrowing of the pool of potential participants reflects the exclusionary and elitist nature of the engagement.

The applications were underwhelming, as fewer than 10 people applied for the community panel. The organisation appointed the remaining panel members from an internal

database of community organisations they had awarded small grants to, as this was most expedient. This exacerbated power dynamics between the organisation and the community groups that may have felt less able to be critical, as former grant recipients hopeful about future grant opportunities. Three youth panel members aged 16-17 said panel meetings clashed with exams, and the organisation decided that it would be easier to carry on without them rather than try to reschedule or enable them to participate in alternative ways. By setting strict parameters about who could participate, how and when, and by doing what was most convenient for them, the organisation designed the panels not to challenge them and instead tick the engagement box.

One senior leader admitted that the point was not to get the public's input on the new organisational strategy because what did they know? Rather, the panels were meant to demonstrate best practice and show that the organisation was involving young people and diverse communities. This reflects "entrenched institutional imaginaries of publics as possessing 'deficits' of knowledge and action when it comes to low carbon transitions" (Chilvers, Pallett & Hargreaves 2018). It is yet another example of institutions' reliance on best practice to negate signs of problems – the absence of inclusive, meaningful community engagement would be repackaged as a case study of best practice. Moreover, it reinforces how institutions must be seen to be committed to diversity and inclusion even if that commitment is hollow and fails to materialise into tangible actions (Ahmed 2012).

Case 2: Gender safety audits

In another case, I was cautiously optimistic when a government body adopted a recurrent recommendation in my papers to conduct gender safety audits to improve women's safety in public space. Gender safety audits are participatory methods of community engagement that involve bringing women, girls and gender diverse people together to explore a physical environment, identify aspects of the space that make them feel safe or unsafe, develop recommendations to improve safety and organise for change, usually through dialogue and negotiation with local government and other key actors (Whitzman et al. 2009). At best, audits can empower local people as experts with lived experience and political actors who can help transform urban spaces and influence local governments (Whitzman et al. 2009). However, it can be difficult to implement recommendations emerging from audits and at worse, audits can be a tick-the-box exercise for governments to demonstrate their commitment to women's safety (Whitzman et al. 2009).

The government body commissioned an urbanism organisation to lead pilots of gender safety audits in five locations and I was on the advisory board. The locations were selected

because they were owned by public bodies or local authorities. The underlying assumption was that recommendations from the audits would entail built environment changes that the landowners could readily implement. An evaluation of the effectiveness of gender safety audits in cities globally has shown that almost all have led to short- (e.g. increased lighting) and long-term changes (e.g. park redesign) in the built environment, which have enhanced women's feelings of safety (Whitzman et al. 2009). However, built environment changes must be accompanied by wider social, political, economic and cultural changes that challenge patriarchal norms, which are harder to instigate (Whitzman et al. 2009). The police partially funded these audits, which entrenched a carceral feminism approach and uncritical acceptance that policing was integral to women's safety.

There is also a risk that audits may be led by organisations pursuing their own agendas, without truly involving local people and vulnerable groups (Whitzman et al. 2009). The outsourcing, professionalisation and commercialisation of public engagement heightens this risk, as consultants with limited local ties or knowledge typically deliver one-off engagement events then quickly move on (Chilvers 2012). In this case, participant recruitment for the audits relied heavily on the five participating local authorities and the urbanism organisation, which advertised the call for participants through their existing networks and online channels. This restricted the pool to those who were knowledgeable about and had already engaged with those local authorities, as well as those who were aware of the organisation. Differences in the degree to which the five local authorities prioritise women's safety and engage with local people created inconsistencies in the number of applications across the sites. There was overwhelming interest in three sites and insufficient interest in the other two. Although participants were supposed to work, live or have local knowledge of the sites they were auditing, the urbanism organisation simply reallocated participants from the oversubscribed sites to the two undersubscribed sites because that was most efficient.

Summary

Both cases illustrate how powerful institutions create and perpetuate systemic inequalities in public engagement by privileging certain forms of participation and participants. Institutions assert power by tightly controlling public engagement to ensure alignment with their timelines, purposes and desired outcomes. In both cases, participants said they enjoyed having the opportunity to help shape strategy and decision-making but wished they could have an ongoing dialogue with the institutions rather than just a one-off event. Publicly, both institutions agreed but privately, they were dismissive and said ongoing public engagement would be too time- and resource-intensive.

This underscores the need for public engagement that is less instrumental and top-down and more reflexive, pluralistic and inclusive, in terms of participants, issue framings and forms of participation (Chilvers, Pallett & Hargreaves 2018). This is necessary to overcome the failure of recognition, in which cycling policymakers and practitioners fail to recognise and address the needs of disadvantaged groups and therefore perpetuate cycling inequalities. Ideally, public engagement should involve co-production with diverse people, the confrontation of intersecting systems of oppression and the redistribution of power, but neoliberal institutions are not structured to deliver this (Joy & Vogel 2021; Cornish et al. 2023).

5.3 Ways forward

What does it mean when recommendations to increase diversity and inclusion in the transport and built environment sectors are embraced yet recommendations to increase institutional capacity for intersectional analysis are resisted? I have found that the former is a smokescreen, as the consensus that the transport and built environment sectors need to be more diverse and inclusive is non-performative and an example of ornamental intersectionality. In my experience, the consensus that the sectors must diversify manufactures the illusion that institutions are committed to diversity and inclusion and already diverse and inclusive while obscuring their inaction. Meanwhile, the latter illustrates how doing research and gathering evidence to inform policy is instrumental, "more about the establishment of 'facts' within particular networks and in relation to particular framings of the problem and sustainability goals" (Leach, Scoones & Stirling 2010, p. 127). By relying on case studies of best practice, mainstreaming intersectionality or EDI and tightly controlling research and public engagement, active travel institutions bypass efforts to understand and address inequalities in active travel.

Both ornamental intersectionality and the instrumental-imperative underlying policy-practice function in conjunction to retrench and perpetuate inequalities in the active travel sector and participation in active travel. There is an obvious and desperate need for active travel policymakers and practitioners to engage with inequalities in active travel. There is also a need for more analysis of the ecosystem of active travel institutions because the current neoliberal configuration, in which active travel delivery is led by patchwork of public, private and third sector bodies, as well as volunteers, is inequitable and exclusionary. How can we democratise active travel institutions so that they are reflective of and accountable to the diverse, pluralistic populations they are meant to serve? How do ownership, governance and funding structures need to change to deliver equity? What operational policies, processes, practices and cultures need to change so institutions can address the problems?

While my work focuses more on how to effect institutional change, it is also important to consider how grassroots activists are creating more equitable and inclusive cycling cultures, practices and environments without engaging with and trying to influence institutions. Some grassroots cycling groups do not see themselves as political or as activists and are not interested in changing cycling policy and planning. However, they are advancing cycling justice by tackling sociocultural barriers to cycling and engaging with and supporting more diverse groups of people to cycle in ways that institutions cannot.

For example, the Women of Colour Cycling Collective was founded in the UK in 2018 and describe themselves as 'a hub for connecting global majority women and non-binary people across the UK, while reducing barriers in our sport. Our mission is to inspire, empower, and motivate our members to love cycling and challenge themselves (as well as the status quo)' (Women of Colour Cycling Collective, 2018). The WhatsApp group is active, with people asking for information about upcoming long distance rides, sharing tips on bikepacking and how to build endurance for races or long rides, and signposting to events both related (e.g. second-hand cycle sales) and unrelated to cycling (e.g. a talk on fuel poverty and climate issues). The Collective may not work with or confront cycling institutions, but they have built a community that serves as vital social infrastructure to normalise and increase cycling among women of colour.

These lines of inquiry are important because intersectionality can make an important contribution if the conditions that give rise to ornamental intersectionality can be overcome (Dhawan & Varela 2016). Such research – on the ecosystem of active travel institutions as well as the ecosystem of grassroots activists that work outside of institutional channels – can help expose the cracks and create possibilities for transforming the landscape and practice of active travel so that it is more equitable and inclusive. Although 'we cannot always perceive the weakening of structures until they collapse,' (Ahmed 2021, p. 310), the more efforts we make to understand and challenge the structures, cultures, processes and practices that enable active travel institutions to reproduce themselves and perpetuate the middle-class, white male dominance in cycling, the more we can open possibilities for transforming the status quo.

6. Conclusion

This thesis brings together the research I have conducted on inclusive cycling over the past ten years and critically reflects on the institutional constraints that inhibit the ability of intersectional interventions to impact cycling policy and planning. My original research applies intersectionality to understand the root causes of cycling inequalities and develop recommendations to make cycling more equitable and inclusive. This critical discussion for this PhD by publication draws on autoethnographic reflections of my experiences working with UK transport professionals and policymakers to create more equitable and inclusive cycling policies and environments. (See Tables 6.1 and 6.2 for summaries of answers to my original and new research questions, respectively.)

Table 6.1: Original research questions and answers

Research question	Answer
What are the structural drivers of cycling inequalities?	Implicit (middle-class, able-bodied, white) male bias is built into cycling policy and infrastructure. This is largely due to the technocratic paradigm in transport and the lack of diversity in the transport sector.
What are the key issues policymakers and practitioners must understand to create more equitable, inclusive and sustainable cities and transport systems?	Urban mobility is contoured by: i) gender and other inequalities in access to economic resources and free time, ii) differential perceptions and experiences of safety and iii) car-centric policy and planning.
What methodologies, practices, cultures and paradigms in the built environment and transport sectors need to change, and how, so that active travel investments are more equitable and inclusive?	The technocratic paradigm, lack of diversity and patriarchal culture in the built environment and transport sectors must be overcome.
How can intersectionality be operationalised in sustainable transport policies and projects to enhance equity and inclusion?	Institutions must simultaneously increase diversity and inclusion, as well as their capacity for intersectional analysis and decision-making.

Table 6.2: New research questions and answers

Research question	Answer
What are the barriers and institutional constraints that prevent the application and impact of intersectionality in cycling policy and planning?	Intersectionality has been de-politicised by neoliberal institutions, resulting in 'ornamental intersectionality' (Bilge 2011, p. 3), the superficial and opportunistic deployment of intersectionality that neutralises its transformative and radical potential. Three key barriers to the application of intersectionality are: i) tensions between critical social science and policy-practice, ii) the technocratic paradigm in transport, and iii) the dominance of UK Equalities legislation and its single-issue approach to discrimination. It is unclear whether these barriers are a symptom or feature of neoliberalism.
What prevents my research and recommendations on how to promote equitable and inclusive cycling from having a greater influence and impact on how active travel institutions design and deliver cycling policies and projects?	Ornamental intersectionality and the instrumental imperative underlying policy-practice disable meaningful efforts to tackle cycling inequalities. Active travel institutions agree that they need to be more diverse and inclusive, but this is non-performative. It manufactures the illusion that they are committed to diversity and inclusion while inhibiting action to tackle institutional inequalities. Moreover, these institutions bypass efforts to address cycling inequalities by: i) relying on case studies of best practice that ignore the problems, ii) mainstreaming intersectionality or EDI to signal their commitment while failing to genuinely engage with the concepts, and iii) tightly controlling research and public engagement. Together, ornamental intersectionality and the instrumental imperative retrench and perpetuate inequalities in active travel and the active travel sector.

This leads to three implications for active travel research. Firstly, all research on active travel must focus on equity and involve action research. Active travel equity is not and cannot continue to be treated as niche, given the persistence of active travel inequalities and the urgent need to decarbonise transport in a just and inclusive way. Future research on active travel equity must move beyond descriptive narratives of inequalities in active travel and unpack how these inequalities manifest for different people in different contexts to understand their root causes and wide-reaching impacts. As I discuss in Chapter 2, active travel equity research must have an intersectional approach that weaves together analyses of demographic inequalities in cycling, spatial inequalities in cycling and inequalities in cycling practices. This entails more action research to amplify the voices of marginalised communities and democratise active travel.

For example, action research could shine a light on the work of grassroots activists in enabling more diverse people feel like cycling *is* for 'people like me' and therefore breaking down sociocultural barriers to cycling that institutions cannot address. Cycling researchers, policymakers and practitioners could learn a lot about the diverse ways in which grassroots activists are engaging with underrepresented groups in cycling and pursuing alternative visions of cycling. Engaging with grassroots activists could challenge institutional ideas about who and what cycling is for and help us reimagine how cycling is practiced and promoted.

Secondly, active travel equity research must do more to challenge the neoliberalisation of cycling. This includes challenging the productivist framing of cycling and shining a light on the diverse array of non-commuter cycling, beyond cycling as work and cycling mobilities of care, such as cycling as protest, for example. Furthermore, future research should reimagine what an urban cycling network *not* in the service of extractive capitalism would look like. As I discuss in Papers 1-8, transport systems have historically served capital's needs, as demonstrated by the dominance of radial planning, which facilitates the stereotypical male breadwinner's journey from his suburban home to his city centre office and back. Papers 1, 2, 6 and 8 call for challenging the radial planning fallacy and prioritising care-related trips in cycling policy and planning. What if our transport systems were in service of an economic system that pursued human and planetary wellbeing instead of growth and capital accumulation? There is a huge opportunity for governments to embed active travel and sustainable transport policies and plans within broader strategies to tackle deepening economic inequalities, such as Wellbeing Economy or Community Wealth Building strategies. Future active travel equity research could explore how cycling infrastructure would be designed and delivered differently if wellbeing and care were at the core of the economy.

Finally, this critical discussion highlights the need to challenge, reimagine and transform active travel institutions to achieve more equitable and inclusive cycling policies and environments. As I discuss in Paper 8, active travel policies and projects in the UK under neoliberalism are delivered by a constellation of public, quasi-public, private, charity and voluntary actors. This inevitably leads to patchy and inequitable outcomes. The next frontier for intersectional interventions in cycling should be to reimagine and transform active travel institutions so that they are structured to operationalise intersectionality. Therefore, future research should investigate the ecosystem of active travel institutions and how they can be structured differently to engage with the problems underlying active travel inequalities and deliver inclusive and equitable active travel policies and environments. This means that policymakers and practitioners must begin "'to engage in an ethical reflexivity that gives us the insight and courage to engage in incisive critique, however dangerous that may seem to be'" (Foucault as cited in Davies & Bansel 2010, p. 18).

In this thesis, I have attempted to interrupt neoliberal narratives that frame cycling promotion around individual choice and tackling cycling inequalities around demand-side solutions, like getting more underrepresented groups to choose to cycle. I now call on cycling researchers, policymakers and practitioners to turn the gaze on active travel institutions and dissect the structures, cultures, processes and practices that create and perpetuate cycling inequalities. For policymakers and practitioners, this means awakening the will to critique and grapple with complex problems. Intersectionality as a theory, political praxis and liberation framework aims to promote social justice and social change (Mehrotra 2010; Mikulewicz et al. 2023; Rainard et al. 2025). Change can begin with and within active travel institutions.

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Appendix 1: Original papers

Paper 1

Lam, T. (2022). 'Towards an Intersectional Perspective in Cycling', *Active Travel Studies: An Interdisciplinary Journal*, 1(1): 4, pp. 1-11. https://doi.org/10.16997/ats.1264.

ACTIVE TRAVEL STUDIES

Lam, T. 2022. Towards an Intersectional Perspective in Cycling. *Active Travel Studies: An Interdisciplinary Journal*, 1(1): 4, 1–11. DOI: https://doi.org/10.16997/ats.1264

VIEWPOINT

Towards an Intersectional Perspective in Cycling

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In recent years, concerns about climate change have elevated cycling on urban policy agendas worldwide. The rapid implementation of temporary cycling infrastructure in cities across the globe during the COVID-19 pandemic has further elevated the importance of cycling in facilitating a green and just recovery. However, if cycling is to be a key part of a green and just recovery for cities, an intersectional perspective is needed to ensure that cycling can be an equitable and inclusive mode of transport. An intersectional perspective acknowledges that there are multiple systems of oppression, which interact in complex ways to compound inequalities and reinforce certain power dynamics. Structural and spatial inequalities contour urban mobility, as evidenced by well-documented gender, racial and socioeconomic disparities in cycling. This paper provides an overview of gender and other inequalities in urban cycling and makes the case for adopting an intersectional perspective to cycling policies and infrastructure projects so that cycling in cities can be more diverse, equitable and inclusive.

Keywords: Intersectionality; Cycling; Inclusive cycling; Equity

Introduction

City leaders across the globe have increasingly prioritised cycling on urban policy agendas to tackle the dual climate and COVID-19 crises. The rapid implementation of temporary cycling infrastructure and the increased cycling in cities worldwide during the COVID-19 pandemic have been promising, raising questions around how to sustain these trends. However, increased cycling does not necessarily translate to more diversity in cycling (Aldred, Woodcock and Goodman, 2016; Lam, 2020; Steinbach et al., 2011; McCullough, Lugo and Stokkum, 2019; Goodman, McDonald and Laverty, 2021). To fulfil the potential of cycling in a green and just recovery for cities, it is important to address inequalities in cycling so that it can be an inclusive mode of transport for diverse urban populations. Intersectionality is a useful analytical framework that can help promote more equitable and inclusive cycling.

Legal scholar Kimberlé Crenshaw coined *intersectionality* in 1989 as an analytical framework to observe, analyse and ultimately dismantle unequal power relations in society. She argued that existing anti-discrimination legal frameworks were limiting in their single-issue analyses, which only considered racism or sexism in isolation. She developed intersectionality

to acknowledge the ways in which multiple systems of oppression interact and compound each other (Crenshaw, 1989). An intersectional perspective in cycling can shine a light on power dynamics and the ways in which structural and spatial inequalities contour urban cycling (Lam, 2020; Daniel and Dolan, 2020). It can enable a robust distributional analysis to make explicit who benefits and who is excluded from cycling investments to devise transformative solutions that address the root causes of inequalities in city cycling.

This paper makes the case for an intersectional perspective in cycling policies and projects to increase equity and inclusion. It primarily draws on research done in North American and European cities to provide an intersectional analysis of two key factors that create gender and other disparities in cycling: (i) structural inequalities in access to economic resources and free time and (ii) differential perceptions and experiences of safety, which are shaped by identity. To conclude, the paper explores initial steps towards more equitable cycling policies: expanded and spatially equitable orbital route provisioning as well as more robust data collection. Given the Western-centric evidence base in this paper, it is important for future research on cycling and equity to include perspectives from the "Global South" through multilingual references and/or co-authorship with researchers from Global South countries.

Access to economic resources and free time

The gender gap in urban cycling is a well-documented cycling inequality, as women comprise one-third or fewer of adults cycling in countries with low levels of cycling, such as the United Kingdom, United States, Canada, Australia and New Zealand (Shaw et al., 2020; Mitra and Nash, 2019; Uteng, Christensen and Levin, 2020; Lam, 2020; Women4Climate, 2019; Sustrans, 2018; International Transport Forum, 2021; Sustrans, 2019; Transport for London, 2019; Burns, Man Oram and Claris, 2020). The gender gap is compounded by inequalities along the lines of socioeconomic status, ability and ethnicity, for instance, which makes an intersectional perspective relevant (McCullough, Lugo and Stokkum, 2019; Women4Climate, 2019; Andrews, Clement and Aldred, 2018). This section discusses structural inequalities in access to economic resources and free time that create gender differences in urban mobility patterns, male bias in transport systems and spatial inequalities in cycling investments and infrastructure.

Structural inequalities in the labour market create disparities in access to economic resources and free time, which produce differences in how, where, when and why we travel in the city. Compared to men, women have reduced economic resources and free time due to lower rates of participation in the labour market, gender-based discrimination (e.g., the gender pay gap and workplace harassment) and the gendered division of household and caring responsibilities (Law, 1999; Levy, 2013; Hanson, 2010; Lam, 2020; Kern, 2020; Coffey et al., 2020; Cohen and MacGregor, 2020). As such, women, particularly those with lower incomes, are more reliant on walking and public transport than men (Levy, 2013; Kronsell, 2013; Law, 1999; Women4Climate, 2019). The COVID-19 pandemic has exacerbated women's economic insecurity and time poverty, particularly women of colour, heightening their need for low-cost transport (Fortier, 2020; Alon et al., 2020; Women's Budget Group, 2020; Patel et al., 2020; Daniel and Dolan, 2020; TUC, 2020).

Despite women's increased reliance on public transport, transport systems are designed for the default middle-class, white male user. While men are more likely to make less frequent but longer trips during peak hours, often for or related to work, women tend to travel more frequently over shorter distances throughout the day, and their journeys tend to be more encumbered, involving traveling with other people or shopping for domestic and care-related purposes (Law, 1999; Levy, 2013; Kronsell, 2013; Lam, 2020; Women4Climate, 2019). However, transport infrastructure, including cycling infrastructure, is built to optimise radial journeys from urban peripheries into city centres during peak hours (Lam, 2020; Kern, 2020;

Levy, 2013; Kronsell, 2013; Law, 1999). Radial planning reflects a male bias, as it is based on the historic male breadwinner's commute from his suburban home to his office in the city centre and continues to reflect men's travel patterns whilst failing to serve the mobility needs of women, children, the elderly, informal workers and those with more varied journeys (Lam, 2020; Levy, 2013; Kronsell, 2013; Law, 1999).

Cycling may be a spatial and/or economic necessity for people with lower incomes and those who are underserved by public transport, such as immigrant communities and low-paid, precarious workers, but there are spatial inequalities in cycling infrastructure provision. Cycling investments occur within a broader political-economic context of neoliberal urbanism, characterised by the hyper-commodification of public space and the unequal distribution of benefits of sustainable infrastructure investments, skewed towards wealthy elites (Stehlin, 2019; Anguelovski et al., 2019; Anguelovski et al., 2018). US cities have used cycling investments as a "creative class carrot" to attract and benefit those for whom cycling is a lifestyle choice or amenity, while ignoring those for whom cycling is a necessity due to spatial isolation and/or socioeconomic deprivation (Hoffman and Lugo, 2014; Stehlin, 2019). New cycle lanes and cycle hire schemes in North American cities have disproportionately benefited whiter, wealthier and more educated populations with good public transport access (Braun, Rodriguez and Gordon-Larsen, 2018; Wachsmuth et al., 2019; Houde, Apparicio Séguin, 2018; Stehlin, 2019). Consequently, those reliant on cycling tend to cycle in riskier road conditions (Torres-Barragan, Cottrill and Beecroft, 2020; Stehlin, 2019; Bernstein, 2016; Reid-Musson, 2017; Lee et al., 2016).

Moreover, gender and racial disparities in both cycling and perceptions of cycling, coupled with a lack of inclusive representation and community input in infrastructure planning, have led to an inequitable distribution of cycling infrastructure and associations of cycling infrastructure with gentrification (Brown et al., 2021; Hoffman and Lugo, 2014; Hoffman, 2016; Stehlin, 2019; Lugo, 2012). To promote inclusive cycling, investments in cycling must be fair and be seen to be fair. This requires more research and deeper engagement with people who may not identify as "cyclists", such as migrants and precarious workers, including delivery cyclists (Bernstein, 2016; Lee et al., 2016; Lee, 2018; Popan and Anaya-Boig, 2021). Meaningful community engagement can help build trust and reduce perceptions among some communities of colour that cycling infrastructure is a tool for gentrification and displacement (Brown, et al., 2021; Hoffman and Lugo, 2014; Hoffman, 2016; Lubitow, 2016; McCullough, Lugo and Stokkum, 2019; Lugo, 2012).

Perceptions and experiences of safety

Increased engagement with marginalised groups can also illuminate how identity shapes people's perceptions and experiences of safety, which, in turn, affects their urban mobility patterns (McCullough, Lugo and Stokkum, 2019; Reid-Musson, 2017; Lam, 2020; Sheller, 2018; Stehlin, 2019; Hoffman, 2016; Hoffman and Lugo, 2014). After all, streets are not equally safe for all, and safety means more than safety from road traffic (Untokening, 2017). This section discusses how perceptions and experiences of safety are informed by gender, race and socioeconomic status due to factors like street harassment, police racial profiling, hostile environment immigration policies, inequalities in road collisions and traffic-related air pollution and the global expansion of food and grocery delivery platforms.

Gender-based violence in public space, including street harassment, is a barrier to safe mobility for women, girls and LGBTQIA people (Hanson, 2010; Law, 1999; Levy, 2013; Kash, 2019; Kern, 2020; Lam, 2020; Quiñones, 2020). Women's increased dependence on public transport and walking increases their vulnerability to gender-based violence in public since they spend more time waiting in or walking through isolated or poorly lit places (Cosgrave, Lam and Henderson, 2020). In the UK, 86% of women aged 18–24 and 71% of women of all

ages have experienced sexual harassment in public spaces, including public transport (APPG for UN Women, 2021). London has the highest rates of public sexual harassment in the UK, and 40% of sexual assaults occur in public spaces, particularly the public transport network (YouGov, 2020; Cosgrave, Lam and Henderson, 2020). Disabled women disproportionately experience sexual harassment and assault, sometimes by other passengers and staff on public transport (Iudici, Bertoli and Faccio, 2017). Gender non-binary and transgender people are also particularly vulnerable to harassment, discrimination and violence in public spaces and on public transport (Lubitow, Abelson and Carpenter, 2020; Cosgrave, Lam and Henderson, 2020).

There is a need for data disaggregated by gender and other sociodemographic characteristics to enable a more robust and intersectional analysis of sexual harassment in public spaces (APPG for UN Women, 2021). Fear of street harassment can compound concerns about road safety, therefore deterring women and gender minorities from cycling. Female and non-binary delivery cyclists also report routine street harassment, including by fellow couriers (Lee, 2018; Cant, 2020; Popan and Anaya-Boig, 2021). While further research is needed on the cycling and broader urban mobility experiences of LGBTQIA people, US and UK studies demonstrate that female cyclists are at increased risk of near misses and road abuse from drivers (Lubitow, Abelson and Carpenter, 2020; McCullough, Lugo and Stokkum, 2019; Aldred, 2016; Lindsey, 2019). However, gendered perceptions and experiences of both personal and road safety do not adequately enter cycling infrastructure design and decision-making processes (Spinney and Xie, 2018; Lam, 2020; Women4Climate, 2019).

Perceptions and experiences of safety are also racialised. One of the top barriers to cycling for Black and Latinx people in the US is fear of racial profiling by the police (Brown, 2016). Immigrant communities similarly cite fear of being stopped by police and stress about encounters with law enforcement as barriers to cycling, particularly within the context of hostile environment immigration policies (McCullough, Lugo and Stokkum, 2019; Reid-Musson, 2017; Lee et al., 2016; Lee, 2018). In North America and increasingly in the UK, immigrants and people of colour are disproportionately stopped for cycling offences, such as pavement riding or running red lights, which can have disastrous consequences for migrants without documentation (Reid-Musson, 2017; Lee et al., 2016; Lee, 2018; Bernstein, 2016; McCullough, Lugo and Stokkum, 2019; Brown, 2016; Rielly, 2021). This exemplifies how "crimmigration", the convergence of criminal and immigration law to target, criminalise and dispose of migrants through harsh detentions and deportations, manifests in cycling (Lee, 2018).

Although there is less research on racial profiling by police as a barrier to cycling for migrants and people of colour in the UK, racial disparities in stop and search are well documented (Bowling and Phillips, 2007; HMICFRS, 2021). In 2019/20, people of colour across the UK were over four times more likely to be stopped and searched than white people; Black people in particular were nine times more likely to be stopped and searched than white people (HMICFRS, 2021). Under Section 60 of the Criminal Justice and Public Order Act 1994, which grants police officers the power to stop and search people without justification, Black people were 18 times more likely to be searched than white people (HMICFRS, 2021). People of colour were up to seven times more likely to be fined for breaching COVID-19 lockdown regulations than white people in parts of the UK (Gidda and Dodd, 2020). Further research is needed to understand the impact of police racial profiling on people of colour's mobility behaviour and experiences.

In addition to personal safety concerns, socioeconomic status compounds gendered and racialised perceptions and experiences of road safety. In the US, immigrants, people of colour, people with lower incomes and people with disabilities are disproportionately represented in pedestrian deaths (Schmitt, 2020). Black and Latinx people are also overrepresented in cycling fatalities, with the fatality rate for Latinx cyclists 23% higher than for white cyclists

and the fatality rate for Black cyclists 30% higher than for white cyclists (Goddard, 2016). Similarly, in Europe and the UK, people with lower incomes are disproportionately harmed by road collisions and traffic-related air pollution despite lower levels of car ownership and usage (Fosdick, 2015; Barnes, Chatterton and Longhurst, 2019; Fairburn et al., 2019). Children in the most deprived areas, particularly males, are at greatest risk of road traffic injury across all modes of transport (O'Toole and Christie, 2018). In England, air pollution is higher in neighbourhoods experiencing high deprivation, particularly those where people of colour constitute over 20% of the population (Fecht et al., 2015).

Inequalities in personal and road safety as well as air pollution exposure highlight the need to democratise the right to safe, sustainable urban mobility. This could include more research on delivery cyclists, who are at the intersection of precarious streets, precarious labour and sometimes precarious migration status (Lee et al., 2016; Lee, 2018; Popan and Anaya-Boig, 2021; Woodcock, 2021; Tassinari and Maccarrone, 2020; van Doorn, Ferrari and Graham, 2020). Most cycling research focuses on cycling as transport rather than cycling as work (Popan and Anaya-Boig, 2021; Lee, 2018). This leaves out delivery cyclists, a grave omission, given the recent explosion of on-demand food and grocery delivery platforms (e.g., Deliveroo, Weezy) in cities worldwide (Popan and Anaya-Boig, 2021; Gregory, 2021; Gregory and Maldonado, 2020; Christie and Ward, 2018; Cant, 2020). Despite comprising a class of key workers and a sizeable proportion of overall people cycling in cities, delivery cyclists are marginalised in cycling policy, planning and advocacy (Lee et al., 2016).

Towards equitable cycling policies

Cycling does not occur in a vacuum, and structural inequalities in society are reproduced in city cycling, therefore creating uneven experiences of city streets, public spaces and cycling (Lam, 2020; McCullough, Lugo and Stokkum, 2019; Lee et al., 2016; Bernstein, 2016; Reid-Musson, 2017; Stehlin, 2019). Policymakers, planners and advocates must understand and take into account these differential experiences of cycling to create more equitable and inclusive cycling policies and environments. This section explores two initial steps towards more equitable cycling policies: challenging the radial planning fallacy and improving data collection and disaggregation. Our urban mobility systems need to enable a wider range of journeys beyond the radial commute, especially local and orbital journeys related to caring responsibilities (e.g., the school run) (Ravensbergen, Buliung and Sersli, 2020). Creating more orbital cycle routes that support care-related trips could make cycling more inclusive, and, importantly, new cycling infrastructure must be provided in a spatially equitable manner (Lam, 2020).

Improving data collection and disaggregation to gain a better understanding of who cycles when, where and why is another crucial step towards more equitable and inclusive cycling policies. City planners use cycle counts to guide decisions on where to install cycling infrastructure (Golub et al., 2016). However, cycle counts typically rely on methods like automatic traffic counters and camera sensors, which only capture quantitative data about the total numbers of cyclists and not socioeconomic demographics, like age, ethnicity or gender (Goodman, McDonald and Laverty, 2021; Golub et al., 2016). Although some city cycle counts record a cyclist's gender as a concession to monitoring the gender gap in cycling, it assumes that gender can be ascertained visually, which can marginalise gender minorities (Golub et al., 2016). Furthermore, cycle counts usually take place in commuter corridors and around city centres or busy areas and not urban peripheries, where more people may cycle due to socioeconomic deprivation and/or spatial isolation (Golub et al., 2016; Stehlin, 2019). This further skews cycling investments towards already visible and privileged cyclists, while continuing to systematically render other cyclists invisible in official planning processes (Golub et al., 2016; Lee, 2018; Lam, 2017).

Disaggregated data is also important to understand how and why cycling is changing in particular areas as well as who is using and benefitting from new infrastructure (Goodman, McDonald and Laverty, 2021; Women4Climate, 2019; Lam, 2017). For example, a study of the impact of new low-traffic neighbourhoods (LTNs) on cycling volume and diversity in South London found that one LTN in Walworth had the highest proportion of food delivery cyclists (37%), which contributed to a 237% increase in total cycling numbers (Goodman, McDonald and Laverty, 2021). Meanwhile, cycling increased by 71% in another LTN in Dulwich, largely driven by increased women's and children's cycling to and from school (Goodman, McDonald and Laverty, 2021). While cycling increased in both areas, in Walworth, there was no increase in cycling diversity in terms of age and gender, as nearly all delivery cyclists were men (Goodman, McDonald and Laverty, 2021). Though the study did not note the change in ethnic diversity among cyclists, it illustrates the value of disaggregated data capturing cycling diversity to guide more equitable investments.

Conclusion

The gains in cycling and cycling infrastructure during the COVID-19 pandemic exemplify our ability to imagine and enact alternatives. But for cycling to play a role in a green and just recovery, it is not enough to prioritise cycling; cities must prioritise inclusive cycling. We cannot continue planning our cities and transport systems for the "default" cisgender, heterosexual, able-bodied, middle-class, white male user. We cannot continue to privilege the voices and experiences of those for whom cycling is a lifestyle choice, whilst ignoring those for whom cycling is an economic or spatial necessity. We cannot continue to ignore how our identities and structural inequalities contour our perceptions and experiences of city streets and public spaces.

This paper has demonstrated that incorporating an intersectional perspective in cycling policies and projects can help urban policymakers and planners ensure that growth in cycling not only continues but is equitable and inclusive. This paper started with an explanation of intersectionality and its utility in understanding and tackling inequalities in cycling. It then applied an intersectional perspective to examine two key structural factors that contribute to gender and other inequalities in urban cycling: access to economic resources and free time as well as perceptions and experiences of safety in public space. To conclude, the paper put forth two suggestions towards equitable cycling policies: increased provision of, and spatial equity in, orbital cycle routes and improved data collection and disaggregation. These steps are necessary to increase equity and inclusion in cycling, along with more research on and intersectional analysis of cycling inequalities, such as research focusing on delivery cyclists, LGBTQIA people and immigrant populations.

Competing Interests

The author has no competing interests to declare.

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Paper 2

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7 Cycling London

An intersectional feminist perspective

Tiffany F. Lam

Introduction: London's 'cycling revolution'

Chapter 7 looks at London's 'cycling revolution', highlighting how London's cycling paradigm reflects an implicit androcentric bias in the design, delivery, and discourses of cycling infrastructure in the city. London's cycling interventions raise the profile of already visible privileged cyclists (white middle-class men) for whom cycling is a lifestyle choice while erasing 'invisible cyclists' for whom cycling is an economic necessity.

Cycling became my main mode of transportation in 2013, and inspired feelings of independence and empowerment by liberating me from street harassment. I was never still enough to be approached by a potential harasser and, if I were, I could escape more quickly on two wheels than on foot. However, cycling increased my vulnerability to motorised traffic. This unfair trade-off underscores the importance of the right to safe urban mobility. Everyone deserves to be able to move around the city freely without fear of sexual harassment, sexual violence, and road traffic danger.

The articulation and safeguarding of this right is increasingly relevant as cycling continues to rise on urban policy agendas worldwide. In the United Kingdom, former Mayor of London Boris Johnson's self-proclaimed 'cycling revolution' (Greater London Authority 2013), characterised by Johnson's unprecedented investment in cycling infrastructure, garnered ubiquitous international media attention. Johnson's successor, Sadiq Khan, pledged to continue that legacy and stated that he wants London to be a 'byword for cycling'. Leading up to London's next mayoral election, cycling advocates have criticised Khan for failing to deliver on cycling promises.

In an age when cities are in constant competition for investment, jobs, tourism, quality of life, and global city status, London's 'cycling revolution' can augment its clout as a global city. Cycling projects are situated within broader ecosystems of policy circulation. The future of cycling in London will shape the future of cycling in the United Kingdom and in other cities that look to London, particularly in other English-speaking, low-cycling countries. But first, it is important to deconstruct the populist narrative surrounding the highly publicised 'cycling revolution'.

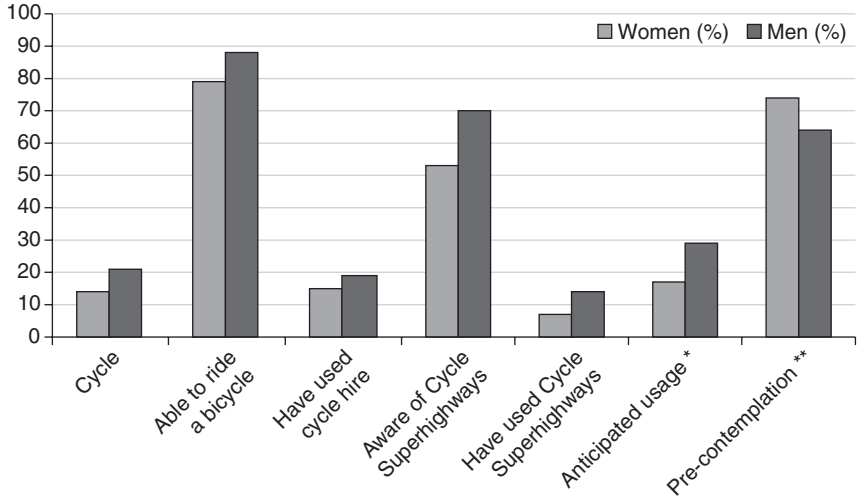


Figure 7.1 The gender gap in cycling in London.

Source: Transport for London (2015: 84–86).

Notes
* Anticipated usage: have not yet used a cycle superhighway but anticipate using one in the future.
** Pre-contemplation: have previously never considered cycling but could be open to it in the future.

Despite the significant rise in cycling over the past two decades, a gender gap persists whereby men make 63 per cent of cycling trips (Transport for London 2018). This begs the questions: For whom has there been a cycling revolution in London? How will successive mayoral administrations help achieve inclusive growth in cycling? Furthermore, there are multiple dimensions of the gender gap in cycling, as shown in Figure 7.1. Therefore, addressing the gender gap in cycling will require a complex, multi-pronged approach.

In this chapter, I challenge cycling policy and infrastructure practice in London from an intersectional feminist perspective which analyses gender as a complex category that intersects with other socially constructed categories (i.e. race, class, sexuality, migrant status, ability/disability, etc.) to compound inequalities and produce uneven urban cycling experiences. I critique London's overarching cycling framework, which is foregrounded by material infrastructure, particularly infrastructures of mobility that manifest as either Cycle Superhighways or Quietways. This cycling framework privileges spatial fixes (i.e. a new Superhighway or speed hump) and treats spatial interventions as apolitical and value-neutral. This leaves little room to consider sociocultural barriers to cycling, and issues around inclusion and social justice. In order to make London a 'byword for cycling', inclusion and social justice must foreground cycling policy and infrastructure practices.

Research questions and methodology

Central to my analysis is an intersectional feminist perspective, which acknowledges that there are multiple kinds of systemic, structural inequalities (i.e. racism, sexism, classism) which interact in complex ways to compound inequalities and reinforce certain power dynamics (Crenshaw 1991 Frye 1983). Intersectionality is necessary to understand the nuances of power, privilege, and oppression. For example, in the United Kingdom, people with disabilities are more likely to be women aged 65 or above, and of lower income or in poverty. Consequently, they are disproportionately burdened by the costs of public transportation, car ownership, or specialty cycles (Andrews, interview, 22 June 2016).[1] Here, gender, age, class, and disability status intersect to exacerbate barriers to access and mobility in urban space.

Since everyday environments are the product of someone's conscious intention, infrastructure reflects, reinforces, and reproduces various social inequalities (Ehrnberger *et al*. 2012). It is therefore important to interrogate the ideologies and normative assumptions underpinning cycling policy and infrastructure projects. Three avenues of investigation informed my research:

1 **Process**: For whom are cycling policies and infrastructure designed? To what extent do social categories of identity (i.e. race, class, gender, sexuality, migrant status, ability/disability, etc.) enter into design and decision-making processes?
2 **Outcomes**: How do cycling policies and infrastructure produce disparate (raced, classed, gendered, etc.) outcomes on the ground and what are their implications?
3 **Future outlook**: How could an intersectional feminist perspective be integrated and codified into cycling policy and infrastructure practice to enhance inclusion and social justice?

My methodology involved a review of the literature on gender and cycling; policy document analysis; ethnography at cycling conferences and advocacy events; semi-structured interviews with relevant stakeholders;[2] and interviews with everyday female cyclists (women aged 21 to 55 in London who cycle commute on a daily or almost daily basis), recruited through word-of-mouth requests and posts on cycling forums.[3] In what follows, I briefly review the literature on gender and cycling, outline London's approach to cycling policy and infrastructure, discuss how London's cycling projects reflect an implicit male bias, and discuss policy implications. I conclude by exploring how to integrate an intersectional feminist perspective in cycling projects to make cycling more inclusive.

Gender and cycling

Urban cycling is a relatively new but growing area of research. Most literature on urban cycling focuses on the material and rational factors influencing people's

choice to cycle in an attempt to standardise movements and 'predict and provide' infrastructure accordingly (Spinney 2009). There is a plethora of research on cycling infrastructure and best practices (Pucher *et al*. 2010; Lugo 2012), which consistently demonstrates that women prefer protected cycle lanes away from motorised traffic because it heightens their perception of safety (Garrard *et al*. 2008; Pucher *et al*. 2010; Aldred and Woodcock 2008; Lam and Cosgrave 2019). Given all the evidence about the necessity of protected cycle lanes in encouraging cycling among under-represented groups, like women, the failure to provide such infrastructure is arguably discriminatory.

That said, the hegemony of material infrastructure within the emerging body of cycling literature is problematic because it reflects a belief that spatial fixes – spatial, material, and technical interventions – are apolitical and value-neutral. The emphasis on 'spatial design implies that urban-cyclists-to-come can be conjured without a direct confrontation with extant land use patterns and transport networks (Stehlin 2014: 29), let alone a direct confrontation with power structures (Angelo and Hentschel 2015). Cycling does not occur in a vacuum, and structural inequalities in society, such as sexism, racism, and classism, will be reproduced in cycling. The disproportionate focus on material infrastructure ignores the historical legacies of institutional inequalities and political disenfranchisement that spatial fixes alone cannot eradicate.

It is also important to destabilise the binary characterisation of infrastructure in cycling advocacy and policy discourse as 'hard' or 'soft', in which hard infrastructure takes precedence. 'Hard' infrastructure is material infrastructure (i.e. cycle lanes, racks) while 'soft' infrastructure, or social infrastructure, includes encouragement, education, and outreach (Gannon, interview, 1 June 2016).[4] Hard infrastructure carries greater political capital, as policy makers tend to privilege it as a magic bullet, which obfuscates injustices endemic in urban mobility (Miciukiewicz and Vigar 2012: 1954).

Instead of positioning hard and soft infrastructure in a hierarchy, it could be helpful to reframe the former as 'supportive environments' and the latter as 'smarter choices' (Cope, interview, 6 July 2016).[5] Material infrastructure creates supportive environments and social infrastructure enables people to make smarter travel choices. Both work in tandem to make cycling more inclusive. The gender gap in cycling cannot be properly addressed without a distinction between the provision of material goods or resources and the actual ability of people to access and utilise them. For instance, while men and women may have the same resources (i.e. a cycle, a cycle lane, ability to cycle, cycle parking), there are 'variations [race, class, gender, age, etc.] in our ability to convert resources into actual freedoms' (Sen 1990: 121).

Most literature on the gender gap in cycling, particularly in low-cycling, English-speaking countries like the United Kingdom, are highly descriptive and focus on women's behaviour without analysing underlying power dynamics (Steinbach *et al*. 2011; Hanson 2010). This falsely insinuates that the gender gap is attributable to individual choice instead of systemic barriers that constrain choice, and that solutions are individual rather than structural. Fortunately, there is burgeoning

interest in and demand for more research on cycling inequalities, such as gender and racial disparities, and broader issues around inclusive cycling (Garrard *et al*. 2008; Aldred *et al*. 2016; Steinbach *et al*. 2011; Lugo 2012; Stehlin 2014).

Both academic literature and policy documents (from the Greater London Authority and Transport for London) could more adequately reflect and engage with a nuanced, pluralistic understanding of socially constructed categories of identity, such as race, class, and gender. Within policy documents, such categories are often treated as independent demographic variables, instead of social constructs that are imbued with power and intersect to contour social, spatial, political, and economic relations. As such, my research contributes a much-needed intersectional feminist analysis of the gender gap in cycling in London by exploring how power relations unfold in city cycling projects.

Cycling, female empowerment, and the right to the city

Cities worldwide are setting ambitious cycling targets which simply cannot be achieved unless more women cycle. Moreover, gender inequalities in cycling emblematise larger social inequalities. Studies increasingly reveal a confidence, not competence, gap between women and men, which begins early and has severe consequences, including occupational segregation, the pay gap, and the under-representation of women in leadership (Kay and Shipman, 2014). This emerges in cycling too, since women are more likely than men to describe themselves as inexperienced cyclists' (Cope, interview, 6 July 2016).

Patriarchy socialises females to minimise their bodily and spatial presence, which constrains their physical range of motion (Young 1980). The way we are socially conditioned to inhabit our bodies and physical (urban) space correlates with our inclusion or exclusion in symbolic (socioeconomic and political) space. Young (1980) argues that changing the ways in which a woman inhabits her body and occupies public space could alter her paradigm of subjectivity. Cycling on roads designed for motorised traffic requires cyclists to constantly claim urban space, which could potentially translate to greater confidence in symbolic space. After all, 'women's appropriation of the city through mobility in public space […] may strengthen women's agency and autonomy' (Levy 2013: 58).

The role of cycling in helping women claim space – physically, on city streets, and symbolically, in other areas of life – surfaced in my interviews with women cyclists. For instance, one woman said:

> The first time I rode a bike in London, all I remember is my boyfriend screaming at me to 'Take the lane! Take the lane!' Unable to do as instructed, I was left behind as he turned right and I was herded forward by the busy traffic. As a woman, I have often felt conditioned to be seen and not heard, to not be a nuisance, to not get in anyone's way. To cycle safely in London, you have to go against impulses that have been drilled into you by society. On that first day, I didn't want to annoy or inconvenience any of the drivers, but in doing so I put myself at risk.

> I've improved since then, but it's a constant internal struggle to remind myself that I have just as much right to the road as anyone else. Interestingly, in overcoming my need to 'remain small,' I have noticed benefits in other areas of life outside of cycling. I'm not going to pretend the changes have been monumental, but I'd like to think I participate more in meetings and stand my ground when my opinion is being questioned. For me, cycling hasn't fixed the problem, but it has started a journey towards full occupation of all the space I deserve.
>
> (Email, 22 January 2018)

Similarly, another woman reaffirms the importance of unapologetically claiming and owning space, especially as a woman:

> Training as a cycling instructor encouraged me and gave me the confidence to physically take up more space on the road. That makes me feel safer on the road, which is very satisfying and empowering. Teaching other women and children to do the same, as I do for my job, is something I find very fulfilling, as more often than not, it is women that I see "'hugging the pavement' as they ride along the road. It is almost like they are physically apologising for being out on the road. This mind-set is what we need to change.
>
> (Email, 24 January 2018)

Another woman echoes the notion that claiming road space as a cyclist helps her overcome deeply ingrained aspects of female socialisation:

> On public transportation or just walking down the street, men invade my personal space every day: Men come too close, make comments, or just stare at me. These experiences don't just last for a few seconds. Often they take up a lot of emotional and mental space, even days after the encounter. Cycling, on the other hand, I experience as creating space around me that I don't need to defend. Even though this space gets invaded a lot by cars, buses, taxis, or people on the street verbally harassing me, these incidents feel different because they usually only last for a few seconds (until I cycle past). Sitting on my bicycle, I feel more freedom, safety, and agency compared to any other mode of transport.
>
> When cycling, there is always the possibility to physically distance myself from people when needed. On public transportation that is not always possible. If you are standing on a packed bus or tube, there is no escaping men pressing themselves against you or staring at your legs for 30 minutes. Not feeling 'stuck' in these harassing experiences is important. There is freedom in experiencing/learning it's okay to disengage from people that make you feel uncomfortable for whatever reason. This is something I didn't grow up learning, rather the opposite, actually.
>
> (Email, 31 January 2018)

These anecdotes illustrate how the assertiveness, feelings of control, ownership, and freedom to take up space gained through cycling is especially valuable for

women because it helps change their paradigm of subjectivity. It helps them unravel internalised social conditioning teaching them to be small and out of the way. Laying claims to urban space via cycling also informs one's relationship to the city:

> The freedom and independence that I feel when I am on my bike is intoxicating. Rather than being shuttled around the city's underground network, I am in control of my journey and engaging with my surroundings. In a city like London where you can often feel like you are being swept along in the crowd, that sense of presence, control and freedom is welcome.
>
> (Raphaelle Moor, Email, 28 July 2016)

Urban theorists rally around 'the right to the city', which is '[t]he freedom to make and remake our cities and ourselves' (Harvey 2008: 23). From a gender perspective, the right to the city is having the freedom to enjoy safe access to and passage through the city (Levy 2013). It is having the ability to claim space in cities. Cycling in the city is a way of exercising our 'right to the city'. Women characterise cycling in London as 'a liberating and empowering way to get around' (Emma Illingworth, email, 7 July 2016) and 'the perfect way to engage with the city' (Kathryn Firth, email, 28 June 2016). As such, making cycling more inclusive will help democratise the right to the city.

Cycling London

Approach to cycling policy and infrastructure

London's cycling policy discourse is foregrounded by material infrastructure. London's 'cycling revolution' delivered 'two clear kinds of branded route: high capacity Superhighways [see Figure 7.2], mostly on main roads, for fast commuters,

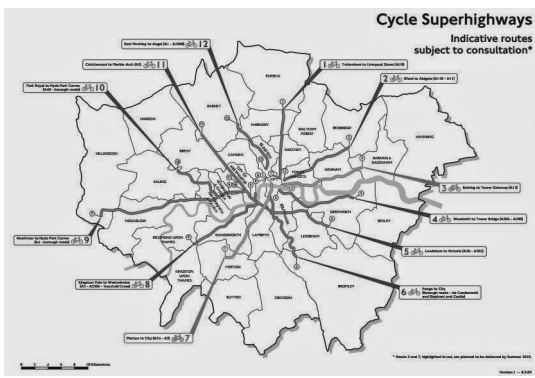


Figure 7.2 Superhighway routes.

Source: Transport for London (2015).

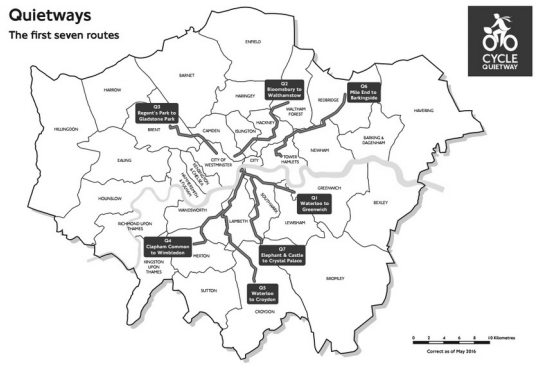


Figure 7.3 Quietway routes.
Source: Transport for London (2015).

and slightly slower but still direct Quietways [see Figure 7.3] on pleasant, low-traffic side streets for those wanting a more relaxed journey' (Greater London Authority 2013: 10). Such dualistic branding of cycle lanes is similar to slow and fast lanes in swimming pools, but less relevant to urban mobility. 'Quietways' suggest leisurely cycling that may appeal more to the elderly, women, children, people with disabilities, and novice or less confident cyclists. Data confirms that women typically prefer Quietways (Councillor Demirci, interview, 7 June 2016).[6] Meanwhile, Superhighways associate cycling with speed, athleticism, aggression, and riskiness, which are implicitly coded as masculine. Moreover, the branding of the Superhighways echoes larger transport planning narratives of speedy connectivity, rooted in the techno-capitalist drive for rapid profit and accumulation (Aldred 2013; Stehlin 2014).

The branding of the Superhighways and the emphasis on speed alienates and penalises women, sometimes costing them their lives. In the first study on near misses in the United Kingdom, the Near Miss Project found that cycling speed is the main factor affecting near-miss rates, which are consistent across London (Aldred 2015). Women tend to cycle more slowly than men do, which increases their risks of near misses, as well as traffic injuries and fatalities (Aldred 2015). Near misses are road incidents that may not result in injuries but induce fear and stress, and significantly impact perceptions and experiences of safety. Therefore, near misses should be treated as seriously as injuries and collisions.

Implicit male bias: infrastructure

London's Superhighways and Quietways reproduce the implicit male bias and overvaluation of economic productivity in transport planning by facilitating radial, longer distance journeys to and from Central London. Public transport optimises the 'typical' journey to work – radial, long-distance journeys into the

city centre, based on the historical male breadwinner's work commute (Levy 2013; Law 1999; Whitzman 2013). This makes public transportation unevenly distributed and deeply gendered, as women have been historically excluded from and still face barriers in the formal labour market. Women also tend to make more frequent, short-distance and encumbered journeys than men do, entailing childcare and domestic responsibilities. Therefore, radial infrastructure planning for cycling perpetuates existing male biases in transport planning and continues to ignore the gendered nature of urban mobility.

The gender disparities in employment status in London (see Figure 7.4) further problematise the male bias in radial cycle infrastructure provisioning. Women comprise 51 per cent of London's population but just 36 per cent are in full-time employment (Transport for London 2015: 75). As such, women are more economically precarious and possess less bargaining power with employers and male partners, which can compound their vulnerability to domestic violence. Men in London make 8 per cent more 'usual workplace' trips and 6 per cent more work-related trips than women do, while women make more trips for shopping, personal business, and education (Transport for London 2015: 88).

The gender differences in economic resources and trip purposes can hinder women's urban mobility. The failure of public transport and cycle routes to account for gender inequalities in urban mobility is detrimental to women's personal and professional development, economic status, leisure time, and overall well-being. Furthermore, the increasing flexibility in the labour market and the growth of the gig economy call into question the relevance of radial route planning, as the nature of work is evolving.

The poor provisioning of Quietways also exhibits an implicit male bias, since Quietways are more targeted to and utilised by women. Although perceptions of danger from motorised traffic may be diminished on Quietways, the poor street lighting may aggravate women's perceptions of danger from crime or harassment. Quietways can also seem more dangerous due to the prevalence of speeding. The Superhighways were prioritised and built first, while the Quietways have been severely delayed, with the first opening in summer 2016. Quietways have been criticised for their delayed delivery, poor quality, and ineffective governance (Laker 2016; Walker 2016).

An implicit male bias is present in the governance of the Superhighways and Quietways. A singular body, Transport for London, oversees Superhighways, which results in a more consistent, seamless cycling experience. Meanwhile, Transport for London, Sustrans, and local authorities collaborate to implement Quietways, which creates inconsistencies in signage, ground surface material, width, and street lighting. There are discrepancies among London's 33 local authorities in how they prioritise cycling, the resources they allocate to cycling infrastructure, the influence of cycling advocates, and best practice standards (Laker 2016; Walker 2016). The disjointed experience of traversing different boroughs on Quietways can be confusing for novice and less confident cyclists, and can compound barriers for disabled cyclists (Andrews, interview, 22 June 2016).

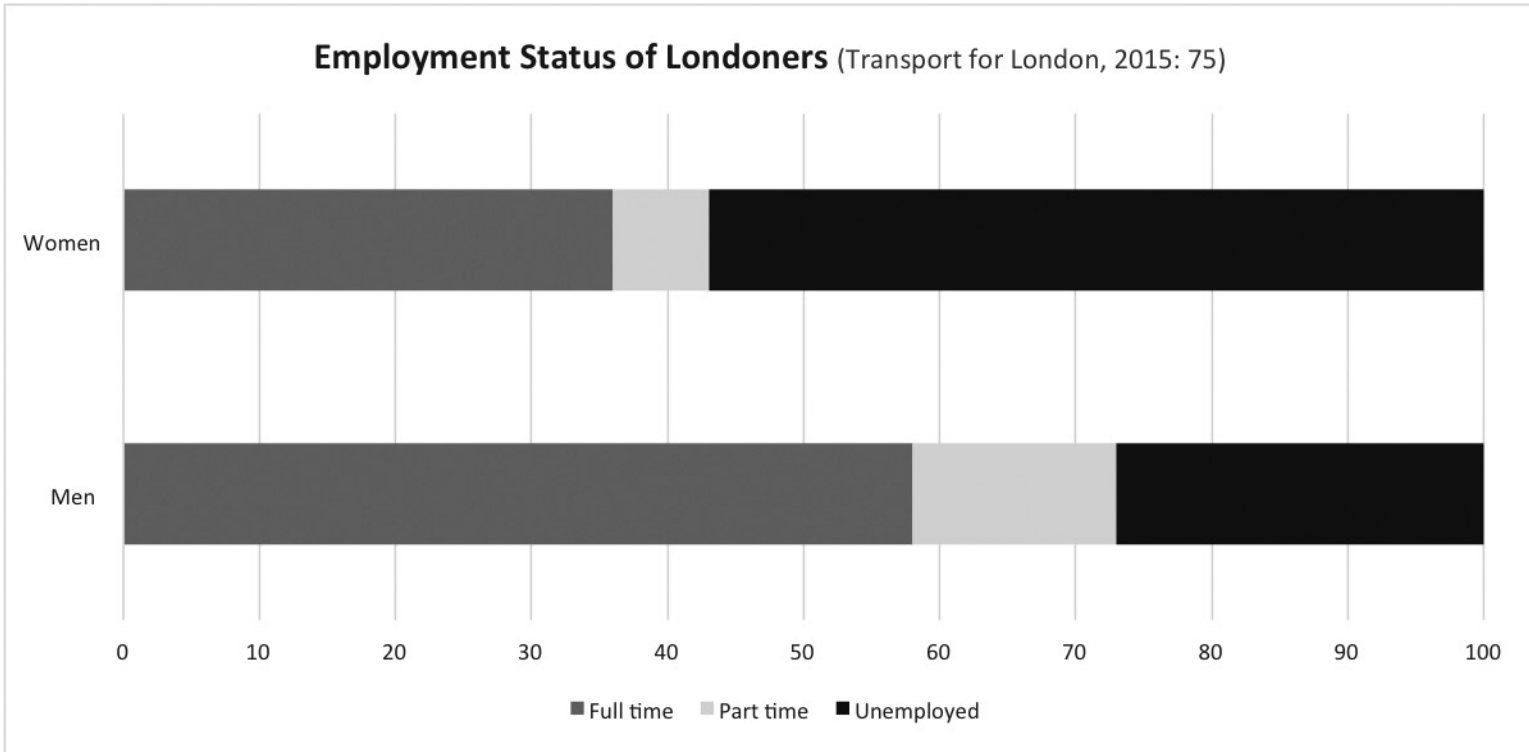


Figure 7.4 Employment status of Londoners.

Source: Transport for London (2015: 75).

Implicit male bias: representation

Although MAMILs (middle-aged-men-in-Lycra) and hipsters may be facetious stereotypes of cyclists, it is no longer funny when they are reinforced in official policy documents (Lam 2017; Aldred *et al*. 2016; Doughty and Murray 2016; Miciukiewicz and Vigar 2012; Steinbach *et al*. 2011). Policy makers must challenge narrow, stereotypical representations of cyclists instead of reinforcing them. In *The Mayor's Vision for Cycling in London*, Johnson praises MAMILs as 'the admirable Lycra-wearers' (Greater London Authority 2013: 5), which propagates the notion that cycling is the 'preserve of a pretty hard-core bunch of people willing to go out of their way to cycle, rather than a very natural and easy everyday thing for everybody to be able to do' (Clarke, interview, 24 June 2016).[7] Johnson also alludes to the 'enviable east Londoners on their fixed-gear bikes' (Greater London Authority 2013: 5), describing how '[i]n the cooler parts of east London, a bike is the fifth limb for everyone under 30' (Greater London Authority 2013: 4). The hipster stereotype is also alienating, because it portrays cycling as youthful, trendy, and alternative.

MAMILs and hipsters are cycling's 'traditional demographic' (Greater London Authority 2016: 9). Both are coded as white, middle class, and male, which reflects how 'cycling in London [has] become attached to a particular White, bourgeois (and to some extent, male) sensibility, such that it is then harder to work to "become a cyclist" if one's identity is differently constituted' (Steinbach *et al*. 2011: 1127). Such exclusionary representations of cycling can compound sociocultural barriers – both cultural stigmas against cycling and sexist ideas that cycling is 'unfeminine' – for racial minorities, which material infrastructure alone cannot resolve. For instance, the dual under-representation of black women cycling in the media and on London streets is a barrier to cycling for black women, and the widespread perception of cycling as child's play within certain Asian communities makes Asian women in London less inclined to cycle (Steinbach *et al*. 2011: 1126).

This accentuates the need to diversify representations of cycling and cyclists in order to achieve inclusive growth in cycling. Forty-nine per cent of Londoners feel that cycling isn't for 'people like me' (Transport for London 2018). In the words of Simone Salmon:

> Cycling still seems to be an elitist pastime, not the domain of women or people of colour. It's also hard to access the culture that comes along with it, like joining a cycle group and having the correct gear. Cycling has to become a common/normal sight for women, so that it feels more doable.
>
> (Email, 26 January 2018)

Transport for London is aware that the branding of Superhighways may resonate more with the stereotypical athletic, white MAMIL, while alienating women and racial minorities (Cannon, interview, 15 July 2016). It is currently rebranding London's cycling infrastructure to eliminate the Superhighways and Quietways nomenclature (Transport for London 2018).[8]

Racial minorities are becoming the most rapidly growing segment of London's population, which means that their transport needs must be met. Racial minorities comprise 40 per cent of London's population, are London's fastest growing demographic, and 41 per cent are under the age of 24 (Transport for London 2015: 22). This demographic data suggests that cycling may be a greater economic necessity for racial minorities because they are likelier to be students, not in full-time employment, and disproportionately burdened by rising public transportation costs. The cost of purchasing a cycle and fear of theft could pose greater barriers, which underscores the need to increase access to cycle hire and safe cycle storage.

Yet, there are racial disparities in awareness of London's cycling infrastructure and road safety. While 65 per cent of white Londoners are aware of Superhighways, only 53 per cent of racial minorities are similarly aware (Transport for London 2015: 41). Furthermore, black adults in London are 1.36 times more likely to be injured on the roads than white adults and 1.32 times more likely to be injured than Asian adults (2015: 52). The data is not disaggregated by transport mode or road user, but the crucial point is that racial inequalities in transport and urban planning must be confronted.

Androcentric male bias: 'smart' interventions

Despite acknowledgements that neither MAMILs nor hipsters are segments that policy makers should concentrate on (Cannon, interview, 15 July 2016), cycling policies and infrastructure – including 'smart' cycling interventions – continue to cater primarily for those demographics. The London Borough of Hackney, considered to be the city's cycling borough, boasts two 'smart' cycling interventions: a cycling app and a digital cycle counter (Lam 2017). In 2014, Hackney became the first London borough to launch a cycling app, which collects data about preferred cycle routes and road defects. The Council also installed a digital display cycle counter on Goldsmith Row, the first of its kind in the United Kingdom, based on existing high cycling traffic flows (Gannon, interview, 1 June 2016). Hackney policy makers acknowledge that both the cycling app and counter are clearly 'designed for one particular segment, and not a segment we [policy makers] absolutely need to concentrate on because that segment has been, already is, cycling' (Gannon, interview, 1 June 2016). Yet, the borough uses data from the cycling app and counter to help inform forthcoming cycling investments.

The datafication of cycling – the vast quantities of data that cycling apps collect – is increasingly informing transport planning decisions, especially since there has historically been less data on cycling and cyclists. Datafication creates asymmetric power relations in ways that are largely invisible and still unknown. It perpetuates a digital divide, which extends beyond access to a smartphone and includes digital literacy: interest, skills, comfort, confidence, and regularity in using the technology, which is lacking in many populations (Cosgrave 2016). Furthermore, data collection is not neutral. Our data-gathering methods and tools, and their underlying assumptions, reflect political decisions about who and

what should be measured, who and what count in the lens of power (Morozov 2013).

Digital exclusion, social exclusion, and spatial exclusion are intricately intertwined. The datafication of cycling can compound existing inequalities by further privileging those who are comfortable, confident, and fluent with new technologies. According to Hackney's cycling app, most cyclists in the borough are male, and 30 per cent of male cyclists are between 45 and 64 years old (Gannon, interview, 1 June 2016). The app users 'are obviously recognised and a sector of the cycling populace, like the Strava generation' (Gannon, interview, 1 June 2016). Strava is a running and cycling app designed for athletes, or people interested in physical fitness and activity who wish to monitor their performance stats (i.e. mileage, time, calories burned, etc.). 'The Strava generation' refers to people who are digitally literate, avid smartphone users.

The focus on health and personal fitness also frames cycling as a lifestyle choice or amenity, which only appeals to a certain segment of the cycling populace while ignoring those for whom cycling is an economic or spatial necessity, who are less likely to want to self-monitor their cycling journeys. These 'smart' cycling innovations appear to be 'formulated as a creative class carrot' (Hoffman and Lugo 2014: 47) to attract a specific group of more desirable new users who are implicitly white, more affluent, and upwardly mobile (Hoffman and Lugo 2014). Cycling projects can result in a capitalisation of benefits in land prices, thereby displacing existing populations and attracting new people and businesses presumed to add more social, cultural, and economic capital. This further frames residents who have been cycling out of economic necessity but rendered invisible by cycling policy makers and advocates as undesirable, unproductive, and irrelevant (Hoffman and Lugo 2014: 58).

Like Hackney's cycling app, the cycle counter skews data collection by increasing the visibility of already visible cyclists – white, middle-class, able-bodied males – instead of tapping into latent demand for cycling among under-represented groups. If only a privileged cohort of cyclists produce cycling data, their cycling routes and journeys are the only ones that get counted and matter. As a result, infrastructure investments will exacerbate and reproduce inequality in both digital, online space, as well as physical, urban space. Therefore, basing forthcoming cycling interventions primarily off data from the app and cycle counter will only serve to continue to support existing cyclists rather than encourage inclusive growth in cycling. Alternative methods of data collection are necessary to ensure that the cycling journeys of under-represented cyclists are counted.

Policy recommendations

If the first stage of London's cycling revolution was to simply get more people cycling, now is the time to prioritise inclusive cycling. Policy recommendations to promote inclusive cycling in London fall into four categories: better material infrastructure provisioning, gender expertise, sustained investment in social infrastructure, and diversifying from within.

Material infrastructure

London should invest in more protected cycle lanes that have consistent and clear signage, and function as a joined-up network, especially given the evidence that people of all genders prefer protected cycle lanes (Lam and Cosgrave 2019). This would help increase perceptions of safety from road traffic danger. Coupled with more secure cycle parking (on streets and at residences, educational institutions, cultural institutions, and businesses), these infrastructure investments would make cycling safer and more inclusive. Second, speed limits must be enforced along the Quietways and other residential, low-traffic side streets. This could occur through a combination of speed cameras and street interventions (i.e. road narrowing). Third, Transport for London should invest in orbital cycle routes, not solely radial routes, in order to support a wider variety of trips for a pluralistic population.

Gender expertise

Developing gender expertise – an understanding of how gender creates structural differences in access to and distribution of resources and power in society – is essential if Transport for London is to challenge implicit male biases in cycling policies and infrastructure projects. One tangible way to develop gender expertise is to look at the data differently. Data-collection methods should be re-examined to ensure that *everyone* is counted, not just existing cyclists, especially important in light of the increasing amount of smart cycling innovations. London could look to the City of San Francisco, which recently – and for the first time – collected gender- and race-disaggregated data about the use of cycling infrastructure in one neighbourhood. Typical cycling counts, conducted during peak commuting hours, reflected that most cyclists were men. However, when the city disaggregated data by gender, they found that more women were using the cycle routes for their commute than previously thought, but were travelling during off-peak hours (Lam and Cosgrave 2019). Basing cycling counts on peak commuting hours omits those less likely to travel then, like women, which underscores the need for more data about off-peak journeys.

Another way to develop gender expertise is to conduct women's safety audits. This enables transport planners and local authorities to broaden notions of cyclists' safety beyond just road traffic safety, and to understand how gendered perceptions of safety impact upon how, when, where, and why people travel. Women and girls are socialised from a young age to worry about their personal safety when in public, and to alter their behaviour, dress, speech, and travel patterns to 'avoid' sexual harassment or violence. It is important to take gendered perceptions of safety (considering safety from street harassment and gender-based violence) just as seriously as road traffic safety. Raced perceptions of safety (i.e. safety from police harassment and racial profiling) are also important considerations. Finally, it is important to note that notions of road traffic safety must also be expanded to account for near misses, in addition to collisions.

Social infrastructure

Another element necessary to promote inclusive cycling is sustained investment in social infrastructure for cycling. This includes targeted education and encouragement to women and racial minorities, given the substantial evidence that informal peer networks are critical in low-cycling contexts, especially among under-represented groups (Aldred 2012; Lugo 2012; Lam and Cosgrave 2019). London Borough of Hackney Councillor Demirci sees the value of mentoring and motivational schemes for cycling, reflecting on how, when she started cycling, her Kurdish relatives frequently disapproved of how 'unfeminine' and low-status cycling is (interview, 7 June 2016).

The higher levels of pre-contemplation of cycling among London women and the gender gap in knowledge of how to cycle (Transport for London 2015: 84) suggest that cycle training could be more targeted to women. Cycling instructors should reflect the diversity of the borough so that under-represented groups can feel that cycling *is* for 'people like me'. While local authorities across London deliver cycle-training programmes, they should be better advertised and networked with community-driven encouragement initiatives to ensure that they are truly accessible. According to Simone Salmon, founder of Bike Freedom, a cycle maintenance project in Southeast London, one of the main barriers to cycle training and maintenance for women of colour is finding time to attend class. This is why Bike Freedom does pop-up workshops in youth centres, community centres, and parks: not only is it more cost-effective, it also meets people where they are at. As Salmon says, 'We need to reach out to masses of women at school gates during the school run, churches, mother and baby groups, libraries, and parks, so that we can find women who are interested in riding bikes' (email, 25 June 2018).

There is no need to reinvent the wheel and, as a public institution with limited resources, Transport for London and policy makers must tap into existing community-driven efforts to increase inclusion in cycling. Transport for London admits to having:

> 'good experience with the kinds of infrastructure that can get reasonably confident cyclists to cycle more, but we're only just starting to learn what we need to do to capture people who do not currently cycle or who are not comfortable cycling in certain kinds of places.'
>
> (Lavelle, Email, 6 June 2016)[9]

One easy way to remedy this is by increasing follow-up with cycling diversity grant winners. Transport for London offers grants of £10,000 over three years for community and non-profit led initiatives to diversify cycling. One previous grant recipient is the London Bike Kitchen, which runs a Women and Gender-Variant (WaG) Night. Founder Jenni Gwiazdowski describes WaG nights as:

> a gateway drug into the world of bicycle mechanics. They're not meant to replace any of our classes, but merely some 'positive discrimination' to provide a sideways experience in a classic bike workshop space. […] There are

> often cries from those who fear having opportunities taken away from them. But we created a new space without taking space away from anyone else.
>
> (Email, 22 February 2018)

To maintain momentum and strengthen civil capacity, Transport for London should increase and maintain communication with grant winners (including follow-up), and create a platform connecting grant winners with each other to build solidarity and leverage peer learning, which could then inform future cycling projects in London.

Diversify

Last but not least, Transport for London and local authorities must dedicate more institutional capacity to explicitly address inequalities in cycling. A good start would be to diversify from within and strengthen cultural competency to represent and respond to the diverse and pluralistic urban populations they serve. After all, an organisation's commitment to diversity, inclusion, and social justice must begin from within. Another inroad would be to establish a Diversity and Inclusion Office to institutionally embed a commitment to inclusion and social justice. Such an office could be responsible for taking proactive measures to prevent implicit bias in cycling projects, training staff on the dynamics of power, privilege, and oppression, and engaging in long-term targeted community outreach (education and encouragement) to strengthen social infrastructure for cycling.

Conclusion

Integrating an intersectional feminist perspective to make cycling more inclusive would entail interrogating the cycling subjects for whom policies and infrastructure are designed, making implicit assumptions explicit, and addressing discriminatory impacts of cycling policies and infrastructure. Cycling policies and infrastructure projects in London have primarily served an elite minority of middle-class white men who cycle out of choice, while further marginalising and ignoring latent demand among under-represented groups, like women, racial minorities, the elderly, youth, and people with disabilities. The implicit male bias in cycling interventions, coupled with poor institutional knowledge on diversity, inclusion, and social justice issues within transport planning and local authorities perpetuates inequalities in city cycling.

There is no roadmap to codify an intersectional feminist perspective to cycling policy and infrastructure practice, but four actions that Transport for London could start with are: (1) providing better material infrastructure, (2) developing gender expertise to understand the gendered nature of urban mobility and the differential nature of women's journeys, (3) making and sustaining investment in social infrastructure for cycling, and (4) diversifying the organisation from within to reflect the diversity of London. After all, London's cycling revolution has to be inclusive. A true cycling revolution is not about cycling. It

is about democratising the right to the city and the right to safe, sustainable urban mobility.

Notes

1 Neil Andrews is the Campaigns and Policy Officer at Wheels for Wellbeing, the premier advocacy organisation for disabled cyclists in the United Kingdom.
2 I interviewed 30 relevant stakeholders, comprising policy makers, urban designers and planners, engineers, cycle shop owners, and cycling advocates.
3 I created a *Mind the Cycling Gender Gap* zine (there are two issues) based on my interviews with everyday female cyclists, published by Microcosm Publishing.
4 Pat Gannon is the Cycle Training Manager for the London Borough of Hackney.
5 Andy Cope is the Director of Insight at Sustrans, a charity organisation in the United Kingdom dedicated to making it easier for people to walk and cycle.
6 Feryal Demirci is the Councillor of Neighbourhoods and Sustainability in the London Borough of Hackney and plays a key role in the Borough's cycling projects.
7 Andy Clarke is the Director of Strategy at the US-based Toole Design Group and the former Director of the League of American Bicyclists.
8 Russell Cannon is the Principal Strategy Planner, Cycling at Transport for London.
9 Paul Lavelle is the Principal Urban Design Advisor, City Planning at Transport for London, and revised the London Cycling Design Standards (published in 2014).

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Paper 3

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Hackney: a cycling borough for whom?

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ABSTRACT

London's internationally acclaimed "cycling revolution" was characterised by an unprecedented investment in cycling infrastructure, particularly cycle lanes manifesting as Cycle Superhighways or Quietways. Despite the hegemony of cycle lanes in London's overarching cycling paradigm, the London Borough of Hackney has historically achieved the city's highest rates of cycling and a long-standing reputation as a cycling borough in the absence of cycle lanes. Instead, Hackney has always opted for spatial interventions (such as filtered permeability, a borough-wide 20 mph speed restriction, and speed humps). This paper challenges Hackney's reputation as a cycling borough and the alleged success of its spatial interventions. I argue that Hackney's privileging of spatial fixes treats spatial interventions as apolitical and value-neutral, which ignores inequities entrenched in cycling. I also argue that Hackney has taken for granted its high rates of cycling, therefore effectively adopting a cycle-blind (akin to race-blind) and cycle mainstreaming (akin to gender mainstreaming) approach to cycling policy and interventions. Consequently, Hackney's spatial interventions for cycling raise the profile of already-visible privileged cyclists (white, middle-class men – the middle-aged men in Lycra, or MAMILs, and the hipsters) for whom cycling is a lifestyle choice while further erasing "invisible cyclists" for whom cycling is an economic necessity. In order to be a relevant and sustainable mode of transportation for Hackney residents, equity and social justice must foreground the borough's approach to cycling.

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Cycling; cycling revolution; invisible cyclists; spatial interventions; London; Hackney

1. Introduction | London's cycling revolution

Former London Mayor Boris Johnson's self-proclaimed "cycling revolution" (Greater London Authority (GLA) 2013) was characterised by unprecedented investment in cycling infrastructure and promises of "a proper network of cycle routes throughout the city, a substantial increase in cycling" (GLA 2013, 4). Indeed, infrastructure foregrounds London's cycling policy discourse, particularly infrastructures of mobility that manifest as either Cycle Superhighways or Quietways. Johnson envisioned "two clear kinds of branded route: high capacity Superhighways, mostly on main roads, for fast commuters, and slightly slower but still direct

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Quietways on pleasant, low-traffic side streets for those wanting a more relaxed journey" (2013, 10). Upon the culmination of Johnson's mayoral term in May 2016, there were 38 miles of protected cycle lanes in London (Blunden 2016) and cycling remains politically salient.

Given the dominance of infrastructure in London's overarching cycling paradigm, the London borough of Hackney is an anomaly because it has always had high cycling rates and a reputation for being a cycling borough, which have occurred and persisted in of the absence of cycling-specific infrastructure. Hackney has historically been and remains staunchly against cycling-specific infrastructure, like segregated cycle lanes, instead relying on road interventions more broadly, such as filtered permeability and a borough-wide 20mph speed limit. Certainly, cycle lanes are a type of spatial and road intervention, but Hackney's high cycling rates seem peculiar given the lack of spatial interventions specifically designed to encourage and enable cycling. Rather, its spatial interventions seem geared towards road users in general, which fails to challenge the dominant infrastructural settlement that characterises the road as a functional space of movement for motorised traffic. Cycling accounts for 15.4% of all commuter journeys in Hackney, which is the highest in London, and between 2001 and 2011 the borough's population cycling to work increased by 125%, which established a national record (Hackney Council 2015c, Section 4.5).

Despite Hackney's reputation as a cycling borough, there is a gender gap, in cycling, as just 37% of Hackney's cyclists are women (Stops 2014). This is smaller than London's overall gender gap, in which men continue to make 74% of cycling trips despite the significant rise of cycling in London between 2001 and 2011 (Aldred 2015a, 46). If Hackney boasts a reputation of being a cycling borough, why is there a gender gap in cycling and what is being done to address it? For whom is Hackney a cycling borough?

This paper challenges Hackney's reputation as a cycling borough, arguing that Hackney's privileging of spatial fixes (such as a speed hump or filtering a road to enable cycle traffic) treats spatial interventions as apolitical and value-neutral. This consequently erases sociocultural barriers, marginalises equity and social justice issues, and de-politicises cycling. In order to make cycling an equitable and relevant mode of transportation, equity and social justice must be at the heart of Hackney's cycling policies and interventions.

2. Methodology

To challenge Hackney's reputation as a cycling borough and the "success" of its spatial interventions for cycling, I interrogate the ideologies and normative assumptions that underpin its cycling projects.

My research questions were:

(1) *PROCESS*: For whom and for what are cycling policies and spatial interventions in Hackney designed? To what extent do Hackney policy-makers and transport planners consider social categories of identity, such as race, class, gender, sexuality and ability/disability, when conceptualising cycling projects?
(2) *OUTCOMES*: How do cycling policies and spatial interventions produce disparate raced, classed, gendered, etc. outcomes on the ground and what are their implications?
(3) *FUTURE OUTLOOK*: How could Hackney's cycling projects enhance equity and social justice?

My data collection involved:

(1) An analysis of cycling policy documents from the GLA, Transport for London (TfL) and Hackney Council;
(2) Semi-structured in-person and Skype interviews with relevant stakeholders, some of which I transcribed;
(3) Ethnography at the Hackney Cycling Conference in June 2016 where I observed and participated in conversations with cycling policy-makers and advocates on the current cycling landscape in Hackney and Hackney's vision and future plans for cycling.

The relevant stakeholders I interviewed included decision-makers at Hackney Council, a Hackney Cycling Campaign (HCC) member, and employees at cycle shops in Hackney. I interviewed Hackney Councillor Feryal Demirci, colloquially referred to as Hackney's "Cycling Boss", and Hackney Cycle Training Director Pat Gannon for their expertise on Hackney's cycling projects. My interviews with an HCC member enabled me to understand the extent to which equity and social justice issues are understood and incorporated in mainstream cycling advocacy in Hackney. In addition to interviewing employees at second-hand cycle shops in Hackney, I interviewed the London Bike Kitchen, a community cycle workshop that has a Women and Gender (WAG) Variant Night targeting women, LGBTQ and gender variant cyclists. In addition, I spoke to Andy Clarke, a speaker at the 2015 Hackney Cycling Conference and the former Director of the League of American Bicyclists, who provided a valuable cross-cultural comparison between US/UK cycling advocacy.

3. Why is Hackney a vanguard for cycling?

Cycling has always been an economic and practical necessity for many Hackney residents due to the borough's historically poor public transportation connectivity, significant economic deprivation and low levels of car ownership. Hackney has only two Underground stations: Manor House at the extreme north and Old Street at the extreme south-west (Aldred 2012, 13). While the relatively recent addition of seven Overground stations and an expanded bus network has helped the uneven distribution of public transportation across the borough compounds spatial and social isolation (Sharpin et al. 2013, 121). Hackney's vibrant artist community, abundant green space and canal network also contribute to the pervasiveness of cycling (Aldred 2012, 13). The towpaths along Hackney's canals provide a direct, scenic cycle route to central London free of motorised traffic. Many residential boaters in Hackney's canals rely on cycling for greater flexibility in where they moor their boats and more efficiency in getting around the city.

3.1. Hackney's focus on spatial interventions

Both Hackney Council and the borough's influential cycling advocacy group, the HCC have historically opposed cycle lanes and there still are no cycle lanes in the borough (Wood, email, 6 July 2016). The opposition partly stems from beliefs that segregated cycle lanes undermine cyclists' right to be on the road, weaken their abilities to cope with motor traffic and are inappropriate in Hackney due to spatial and financial constraints (Aldred 2012, 31; Stone 2014a). Hackney has taken a vehicular approach to cycling by prioritising filtered

permeability, implementing a borough-wide a 20mph speed limit and reducing car parking spots (Hackney Council 2015c; Section 4.10), which are measures that Johnson has commended (Greater London Authority 2013, 15). Hackney's Cycling Plan boasts of how proactive, committed and innovative the Council has been in promoting cycling and that Hackney's measures are regarded as best practice in London (2015, Section 4.9). Although some of Hackney's spatial interventions have benefitted cyclists, much of the rhetoric has been self-congratulatory and misleading since the borough has achieved high rates of cycling without taking any serious measures to promote cycling (Wood, email, 6 July 2016).

Hackney's focus on road interventions may appear as a departure from London's overarching cycling framework that prioritises cycling infrastructure (the Superhighways and Quietways), but both subscribe to and reinforce the hegemony of a spatial fix that treats spatial, material technical interventions as apolitical and value-neutral. The focus on "spatial design implies that urban-cyclists-to-come can be conjured without a direct confrontation with extant land use patterns and transport networks" (Stehlin 2013, 29), let alone a direct confrontation with hegemonic power structures. Cycling does not occur in a vacuum and structural inequalities in society, such as sexism, racism and classism, will inevitably be reproduced in cycling. The seemingly populist intentions in Hackney's cycling interventions do not generate equitable outcomes since they ignore the historical legacies of institutional inequality, spatial isolation and political disenfranchisement that spatial fixes alone cannot eradicate.

4. Cycle blindness and cycle mainstreaming

Hackney Council seems to have taken for granted the borough's high rates of cycling. This is reflected in self-promotional rhetoric in cycling policy documents and prideful statements by Councillor Demirci and Cycle Training Director Pat Gannon on how Hackney's prioritisation of and investment in cycling predates London's "cycling revolution". This lends itself to a "cycle blind" and "cycle mainstreaming" approach to cycling policy, which further entrenches the borough's apolitical approach to cycling and generates inertia that stagnates equitable and inclusive growth in cycling.

4.1. "Cycle blindness"

"Cycle blindness" is akin to race blindness, the deliberate disregard of a person's race, culture or ethnicity. Race blindness seems positive because it suggests that all people should be treated equally regardless of race. However, it is depoliticising because it ignores historical legacies of racism, invalidates people's differential experiences based on race and racism and detracts from the necessity to confront and dismantle systemic racist oppression. Certainly, Hackney Council's cycling interventions overlook structural racism as a barrier to cycling, but its cycle blindness ignores the inherent vulnerability of cyclists on roads designed for motorised traffic. It disregards the borough's road user hierarchy, which identifies pedestrians and cyclists as the most vulnerable road users, and makes interventions "for all", irrespective of fundamental differences in speed, acceleration and braking capacities, vulnerability and ability to inflict damage.

Hackney Council's cycle blindness echoes a populist narrative that universalises cycling interventions as indisputable public goods and obscures the neoliberal urbanism within

which cycling interventions occur. Statements like, "it was about how do we make our borough a more attractive place for all, so it was about making roads and parks more attractive, more easy to use for everyone" (Cllr. Demirci, interview, 7 June 2016) and "it wasn't just about a specific cycling scheme. It was about how do we make our borough nicer and pleasant for everyone?" (Cllr. Demirci, interview, 7 June 2016), beg the question: *For whom*? They also falsely homogenise the population by assuming that everyone has the same priorities, necessities and definitions of what more attractive, easy to use, nicer and more pleasant mean.

More insidiously, these claims preclude structural inequalities and the broader urban development processes within which cycling projects are situated. Such processes can reproduce urban transportation injustices, especially when formulated to attract a more affluent, upwardly mobile demographic (Hoffman and Lugo 2014). Cycling projects can result in a capitalisation of benefits in land prices, thereby displacing existing populations and attracting new people and businesses presumed to add more cultural capital. This further frames residents who have been cycling out of economic necessity but rendered invisible by cycling policy-makers and advocates as undesirable, unproductive and irrelevant (Hoffman and Lugo 2014, 58).

The premium on place attractiveness "for all" and "for everyone" suggests that interventions are tailored towards those who have the privilege, social mobility and capital to choose where to live based on neighbourhood aesthetics. While an elite minority may be able to relocate based on place attractiveness, it may not be a factor for others for whom affordability, public transit connectivity and proximity to jobs, schools and services constrain their choices. The emphasis in Hackney's Cycling Plan (2015) on forthcoming economic benefits of spatial interventions and the Council's insistence on future developments being car-free and equipped with safe cycle storage facilities (Cllr. Demirci, interview, 7 June 2016) reify how cycling projects are formulated to appeal to and attract a specific group of more desirable new users.

4.2. "Cycle mainstreaming"

Meanwhile, Hackney's "cycle mainstreaming" parallels gender mainstreaming, "the integration of the gender perspective into every stage of policy processes – design, implementation, monitoring and evaluation – with a view to promoting equality between women and men" (European Commission 2011). This is exemplified by comments like, "cycling is very integrated into everything that we do" (Gannon, interview, 1 June 2016), "cycling is a major plank of the mayor's strategy, so there are people who build it into every level" (Gannon, interview, 1 June 2016), and "cycling is part of every decision we take" (Cllr. Demirci, interview, 7 June 2016). Ingraining gender issues into all dimensions of political and public life sounds beneficial but risks the subordination or co-optation of feminist goals by potentially conflicting, overarching institutional goals.

The same critiques of gender mainstreaming apply to Hackney's cycle mainstreaming. Political will and effective infrastructure, especially education and accountability mechanisms, are requisites for success; too often these are absent, thereby creating a weak translation from rhetoric to action (Rubery 2005, 6). Another critique of gender mainstreaming is that it values quantity over quality, such as an overall increase in women's employment instead of quality full-time employment with generous benefits (Rubery 2005, 13). Similarly, establishing cycling targets, like 15% of Hackney residents' weekly journeys are by cycle

(Hackney Council 2015c; Section 6.6), encourages a focus on overall growth while ignoring re-distributional measures necessary for equitable growth. It reduces cyclists to numbers, which keeps them "embedded in statistical enumeration and spatial administration" (Stehlin 2013, 27) and obscures how the built environment is shaped by capital (Lugo 2012, 52), among other systemic, structural forces.

The establishment of cycling targets reflects a technocratic, utilitarian approach to urban mobility and transport that is associated with the dominant "predict and provide" paradigm in UK and US transport planning (Doughty and Murray 2016, 308). This paradigm privileges that which is quantifiable, resulting in often-narrow, technical, single-technology fixes that are readily packaged and sold to policy-makers (Miciukiewicz and Vigar 2012, 1946). Hackney's focus on establishing and meeting cycling targets depolicitises the domain of urban mobility and transport by immediately jumping into problem-solving mode without fully understanding the problem. If growth in cycling is prioritised to meet targets then growth in cycling is treated as inherently positive, which leaves little room for examining gaps in growth and prioritising inclusive growth in cycling.

Disparities in cycling "cannot be properly addressed if advantage and disadvantage are seen merely in terms of holdings of primary goods, rather than the actual freedoms…that women and men respectively enjoy" (Sen 1990, 116). While men and women may have the same resources – a cycle, access to a cycle lane, ability to cycle and secure cycle parking – there are "variations [race, class, gender, age, etc.] in our ability to convert resources into actual freedoms" (Sen 1990, 121). In Hackney, and in London more broadly, middle-class white men have been accounting for majority of the growth in cycling. Unless quantitative data are contextualised within qualitative analysis and efforts are made to re-distribute growth, cycling in Hackney and in London may continue to grow but not diversify. Cycling cannot remain the purview of middle-class white men, given London's rapidly diversifying population and claims to be an open city for immigrants and refugees.

Hackney's cycle blindness and mainstreaming function in conjunction to blind policy-makers "to rampant reductive understandings of what facilitates a vibrant urban cycling culture, symptomatic of unresolved problems in how cycling is framed within bicycle advocacy itself: as an individual, rational choice of responsible consumption" (Stehlin 2013, 36). Hackney Council credits the HCC as pivotal to the borough's cycling achievements over the past two decades, especially by identifying and reporting problematic junctions and road conditions (Cllr. Demirci, interview, 7 June 2016). The HCC is predominantly comprised of white, middle-class men (Cllr. Demirci, interview, 7 June 2016) for whom their "race (white), class (middle to upper), and gender (male) have exempted them from structural marginalisation" (Lugo 2012, 52). Until a year ago, the HCC has been aligned with the borough's opposition to cycling lanes (Wood, email, 6 July 2016). Although concurrence between local authorities and cycling advocates appears ideal, the HCC's political clout and lack of diversity "accounts for the reproduction of powerful dominant interests in the transport system but also in the spatial structure and land uses of the city, creating a framework of inequality in which decisions about travel are made" (Levy 2013, 51).

4.3. Myopic fetishisation of spatial interventions

Hackney's focus on spatial solutions reduces the complexities of social inequalities, ignores the political nature of urban mobility and dismisses "soft" social infrastructure integral to

making cycling more equitable. While policy-makers claim that "hard" and "soft" infrastructure must work in tandem (Gannon, interview, 1 June 2016), the translation to practice is absent. Councillor Demirci states that the Council is aware of and addressing cultural barriers to cycling through speed restrictions, road closures, putting in parking controls and other traffic calming measures (interview, 7 June 2016). The Council has mapped the population of the borough that doesn't cycle, "always pinpointing certain areas, spaces, blocs where there are lower levels of cycling" and targets those areas with interventions like increasing cycle storage in estates (Cllr. Demirci, interview, 7 June 2016). However, applying spatial interventions "to eliminate barriers to bicycling limits the politics of mobility to being about disciplined *uses* of streets when the discipline experienced by *users* should also be taken into account" (Lugo 2012, 52). Instead of challenging the "structure and coherency of the current [infrastructural] settlement" (Latham and Wood 2015, 316), the myopic fetishisation of spatial interventions fortifies it.

5. Implicit androcentric bias

5.1. The MAMILs and the hipsters

Though inadvertent, the HCC's implicit white, middle-class male bias inevitably produces unequal raced, classed and gendered cycling outcomes. The absence of intentionality to discriminate does not preclude discriminatory impact. When advocates demand particular cycling policies and infrastructure, they unconsciously consider themselves and their experiences as representative of all (Oudshoorn, Rommes, and Stienstra 2004, 41). Like many mainstream cycling advocacy groups, the HCC fails to include the voices of invisible cyclists – immigrants, Black, Asian and minority ethnic groups (BAMEs), and working-class people (Lugo 2013, 205). Invisible cyclists may often be unaware of or unable to attend HCC meetings, or they may not even identify as cyclists, especially in Hackney where cycling is largely associated with affluence (Aldred 2012, 26).

As such, Hackney policy-makers implicitly conceptualise cyclists as a monolithic group of white, middle-class men who neither need nor desire infrastructure. Established practice becomes increasingly entrenched and oriented around these "typical" users, thereby reproducing exclusion (Lavelle, email, 6 June 2016). These "typical" users, cycling's "traditional demographic" (Greater London Authority 2016, 9) include the stereotypical athletic, white, "middle-aged man in lycra", or *MAMIL*, which Johnson praises as "the admirable Lycra-wearers" (Greater London Authority 2013, 5), which perpetuates the notion that cycling is the "preserve of a pretty hard-core bunch of people willing to go out of their way to cycle, rather than a very natural and easy everyday thing for everybody to be able to do" (Clarke, interview, 24 June 2016).

In addition to the *MAMIL* stereotype, Johnson alludes to the "enviable east Londoners on their fixed-gear bikes" (2013, 5), citing how "[i]n the cooler parts of east London, a bike is the fifth limb for everyone under 30" (2013, 4). The hipster stereotype is also alienating because it portrays cycling as youthful and trendy. *MAMIL*s and hipsters are both are coded as white, middle-class and male, which reflects how "cycling in London [has] become attached to a particular White, bourgeois (and to some extent, male) sensibility, such that it is then harder to work to "become a cyclist" if one's identity is differently constituted" (Steinbach et al. 2011, 1127). Despite acknowledging that neither *MAMIL*s nor hipsters are segments that

policy-makers should concentrate on (Gannon, interview, 1 June 2016; Cannon, interview, 15 July 2016), cycling advocacy, policies and interventions in Hackney continue to primarily serve that demographic.

Instead of reinforcing such narrow, stereotypical representations of cyclists, Hackney policy-makers must challenge them. The "*invisibility* of some social bodies among London's cyclists is perhaps the most obvious factor contributing to cycling's ineligibility as a candidate mode of transport for many in London's minority ethnic communities" (Steinbach et al. 2011, 1126). Exclusionary representations of cycling, like the *MAMIL*s and hipsters, can compound sociocultural barriers – both cultural stigmas against cycling and sexist ideas that cycling is "unfeminine" – for female BAMEs, which spatial interventions alone cannot resolve. The dual underrepresentation of black women cycling in the media and on London streets is a barrier to cycling for black women, and the widespread perception of cycling as child's play within certain Asian communities makes cycling unpalatable to Asian women in London (Steinbach et al. 2011, 1126). This underscores the relevance of diversifying representations of cycling and cyclists in order to catalyse a greater and more inclusive modal shift to cycling.

5.2. Androcentric bias in technological interventions

Hackney's additional "cycle-friendly" measures – the installation of three public cycle pumps and the UK's first-ever digital display cycle counter on Goldsmith Row – reinforce the dominant paradigm of cycling policy and infrastructure where the default cyclist is white, middle-class and male. The pump and cycle counter locations were determined by existing high cycling traffic flows (Gannon, interview, 1 June 2016) and consequently increase the visibility of already highly visible cyclists, instead of identifying and serving invisible cyclists and meeting latent demand. The cycle pumps were installed at London Fields Cycles, Lock 7 Cycle Café and Clissold Leisure Centre. As Figure 1 shows, the cycle pumps and counter were installed in areas of relatively low deprivation in the borough. London Fields Cycles is near and Lock 7 Cycle Café is on Broadway Market, which was "in decline" 15 years ago but has since been gentrified to become a "better neighbourhood for everyone…thanks in part to car restrictions and a busy cycle route" (Greater London Authority 2013, 30). Clissold Leisure Centre is in Clissold Ward, Hackney's least deprived ward with proportionately more white British people and more people in full-time employment than the Hackney average (Hackney Council 2015c).

> Hackney is the only borough to have a cycling app, launched in 2014, but it is clearly designed for one particular segment, and not a segment we [policy-makers] absolutely need to concentrate on because that segment has been, already is, cycling, so it might be a bit of a stereotype, but the Shoreditch hipster doesn't need any more encouragement. (Gannon, interview, 1 June 2016)

The app gathers data about preferred cycle routes and road defects to inform the Council's future spatial interventions. It creates a digital divide and skews data collection since the users "are obviously recognised and a sector of a cycling populace, like the Strava generation" (Gannon, interview, 1 June 2016). In spite of this, data from the app accentuate that even among highly visible cyclists, women would benefit from segregated cycle lanes. In Hackney, most female cyclists are between the ages of 25 and 44 and are more likely to cycle on quieter routes, whereas men tend to cycle on main roads and continue cycling later on in life, as

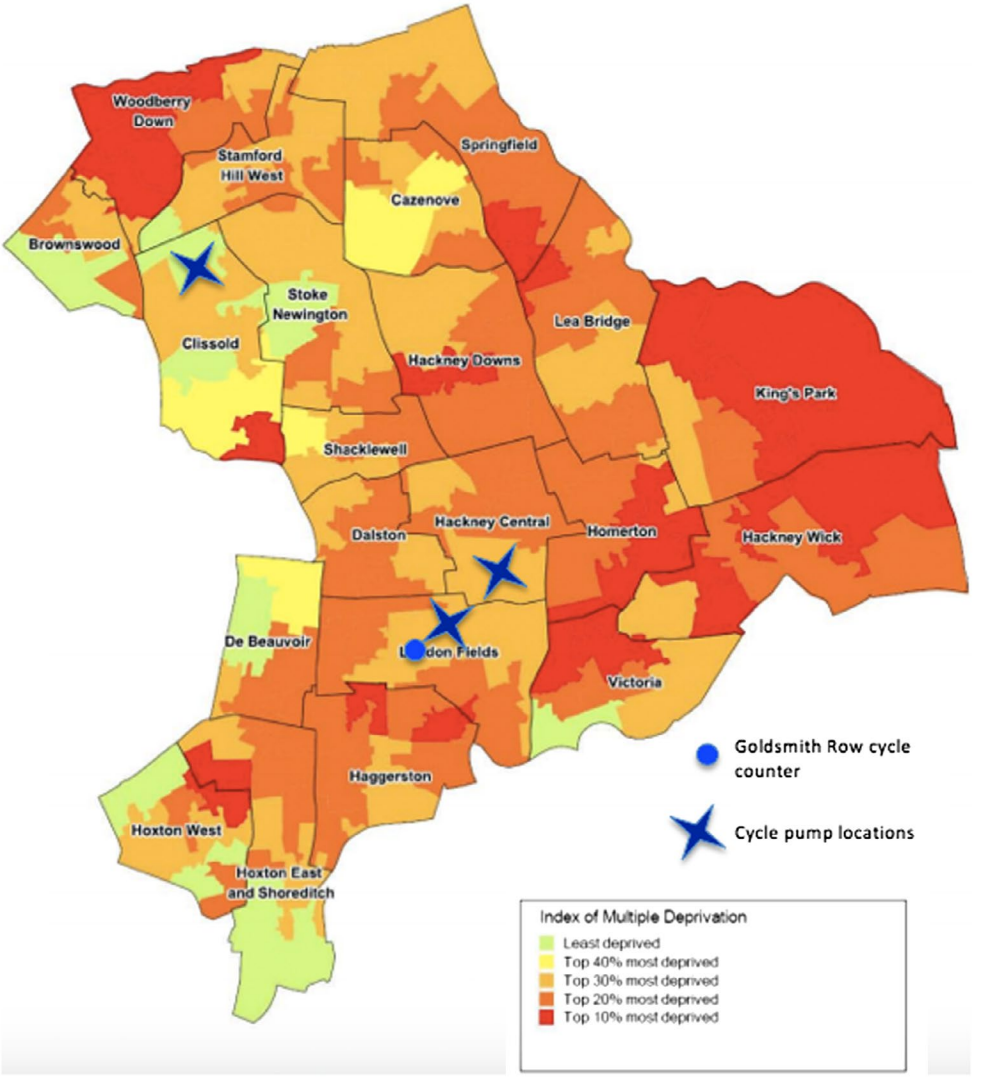


Figure 1. Map of cycle pumps and cycle counter in Hackney. Source: Hackney Council, 2015d.

30% of male cyclists are between the ages of 45 and 64 (Gannon, interview, 1 June 2016). Unless cycling interventions are redistributive, cycling will become increasingly inequitable.

5.3. Androcentric bias in cycle parking provisioning

Considering that more women are likely to cycle on quieter routes, the concentration of cycle parking along the A10, a busy main road in Hackney, reflects an androcentric bias by disproportionately supporting men's cycling journeys. The A10 is heavily trafficked by cyclists and motorists since it provides an efficient and direct north/south-bound route that connects Hackney to the City of London. As illustrated in Figure 2 (red line identifying the A10 is my



Figure 2. Hackney council's map of cycle routes in Hackney. Source: Hackney Council.

annotation), Hackney Council fails to designate the A10 as a cycle route. It instead demarcates indirect side streets (the blue, yellow, green and brown lines), despite repeatedly recognising that cyclists will continue using the A10 (Hackney Council 2015c). This implicitly privileges

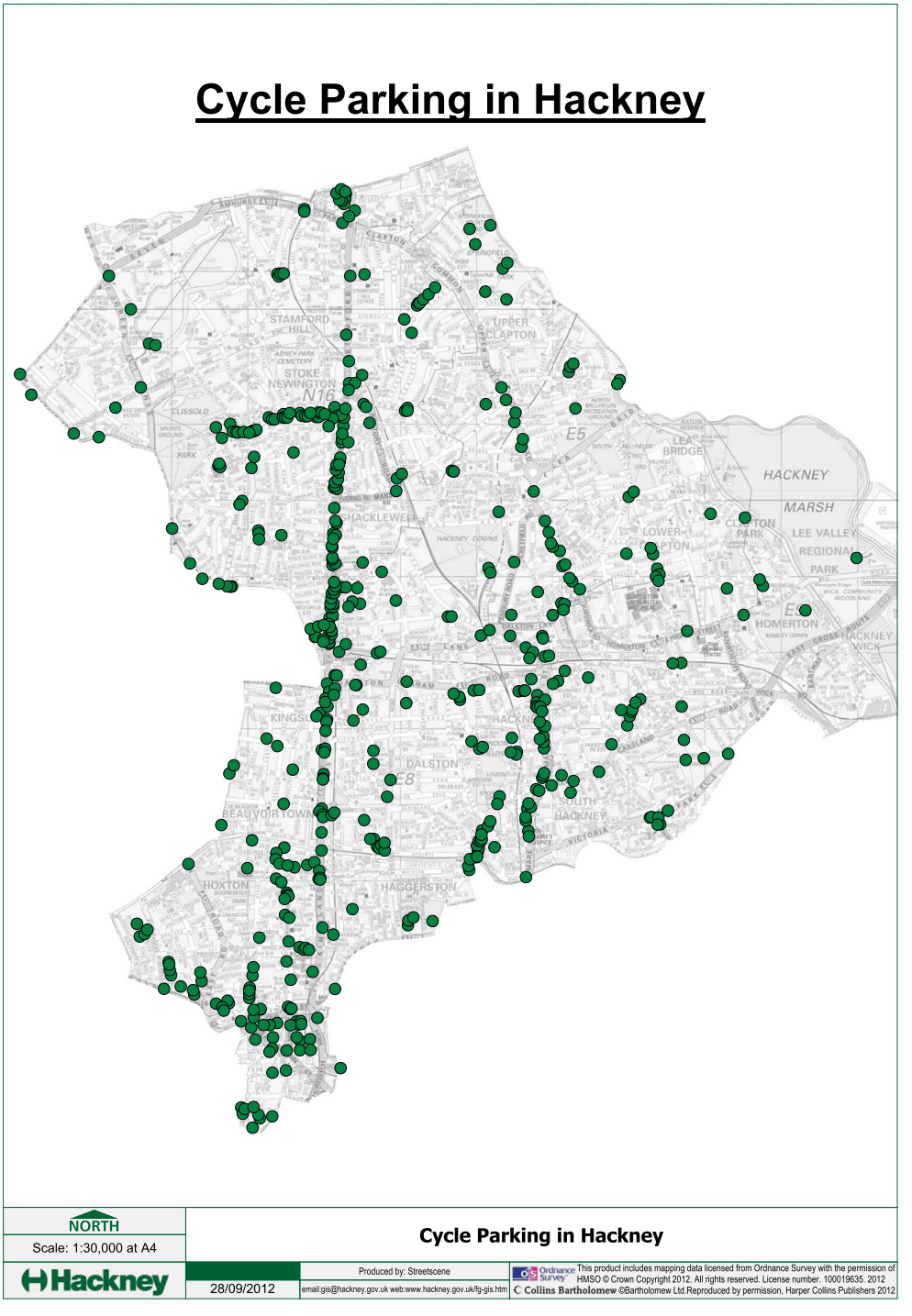


Figure 3. Hackney council's map of cycle parking in Hackney. Source: Hackney Council.

motorised traffic by reserving direct routes like the A10 for motorised traffic while funnelling cyclists to less efficient routes. However, Figure 3 shows that cycle parking in the borough is clustered along the A10, which entices cyclists to access the A10 to lock their cycles.

The dissonance between the dense concentration of cycle parking along the A10 and the routes the Council maps exposes fallacies in the Council's thought process and execution of cycling interventions. "[A] government must adopt a vision and promote it … it must not only envision but enact the city" (Peñalosa 2007, 307). Cycle routes and parking must be integrated in order for either type of infrastructure to be feasible. The incongruity in the Council's cycling provisioning undermines its alleged commitment to cycling. These blind spots may largely result from the Council's cycle blindness and mainstreaming that stunts its ability to challenge the embedded, underlying assumption that the default cyclist in Hackney is a middle-class white male who will cycle regardless.

6. Poor understanding of equity and social justice

6.1. Hackney's opposition to cycle superhighway 1 on the A10

The raced, classed and gendered outcomes of Hackney Council's cycle blindness and mainstreaming are epitomised in its blockage of Cycle Superhighway 1 (CS1) along the A10. Hackney Council objected to TfL's proposal to construct CS1, a segregated cycle lane, on the A10, primarily because it could entail narrowing footpaths or removing bus lanes (Stone 2014b). The Council opted instead for CS1 to follow parallel quieter residential routes (Hackney Council 2015c; Section 7.41), even though Figure 2 shows the absence of such alternatives. Again, this implicitly privileges motorised traffic, as "[a] protected bicycle lane along every street is not a cute architectural fixture, but a basic democratic right – unless one believes that only those with access to a car have the right to [efficient and] safe mobility" (Peñalosa 2007, 313). CS1 is indirect and is "a complete failure, at a cost of £17 m" (Wood, email, 6 July 2016). Despite Hackney Council's "desire to see fundamental improvements for cycling on the A10 itself" (Hackney Council 2015c, Section 7.41), there has been insubstantial action (Wood, email, 6 July 2016).

Moreover, Hackney Council's blockage of CS1 along the A10 ignores the evidence that women prefer segregated cycle lanes, disadvantages women and invisible cyclists who have greater time poverty, and inadequately addresses safety concerns. The plethora of research on cycling infrastructure best practices demonstrates that women prefer protected cycle lanes segregated from motorised traffic because it heightens their perceptions of safety (Aldred, Woodcock, and Goodman 2016; Garrard, Rose, and Lo 2008; Pucher, Dill, and Handy 2010;). Arguably, the failure to provide such infrastructure is discriminatory against women cyclists.

As Figure 2 shows, the quieter routes are indirect, which can be confusing for novice and less confident cyclists and compound barriers for disabled cyclists. Given the gendered division of household labour and the fact that women make more trips for child and/or elderly care, shopping, personal business and education (TfL 2015, 88), women experience greater time poverty. Invisible cyclists similarly experience greater time poverty as they may work multiple part-time jobs and at odd hours. As such, cycling on indirect, more time-consuming routes may be more burdensome for women and invisible cyclists.

Furthermore, though perceptions of danger from motorised traffic may be diminished on quieter routes, poor street lighting may aggravate women's perceptions of danger from crime or harassment. Quieter routes may also seem more dangerous due to the prevalence of rat running – motorists speeding on quiet residential roads despite speed restrictions – especially in Hackney (Cllr. Demirci, interview, 7 June 2016; Laker 2016).

Hackney opposed CS1 on the A10 and segregated cycle lanes overall on the bases that:

(1) Buses are the only feasible way of moving large quantities of people around the city,
(2) Cycle lanes would only benefit middle-class white men at the expense of women, working class people and BAMEs who would be delayed on buses,
(3) All cyclists should receive cycle training and everyone should try to respectfully share the roads (Wood, email, 6 July 2016).

The first rationale perpetuates the exclusion of cycling from transportation justice by failing to recognise cycling as a legitimate mode of transportation that requires provisioning, not an individual choice (Hoffman and Lugo 2014, 48). Is cycling marginalised because it is a mode of transport for an elite minority that cycles regardless of infrastructure provisioning and adequate enforcement, or because working-class people and BAMEs who have been cycling out of necessity have been invisible and ignored in mainstream cycling advocacy and policy?

The second argument is premised on the faulty assumption that public transportation is single modal when a robust public transportation system should be multi-modal for heterogeneous users. Hackney's historically poor public transport connectivity underscores the significance of cycling *and* buses in enabling residents' urban mobility. Framing cycle lanes, pedestrian footpaths and reliable bus service as mutually exclusive "manufactures scarcity in what should be a public resource: urban streets" (Hoffman and Lugo 2014, 45). The commuting patterns to work for Hackney residents cycling and taking the bus are similar (Hackney Council 2015a, 22), which suggests that safe, quality cycling infrastructure could induce a greater modal shift to cycling, especially given the evidence that safety concerns are the main deterrent to cycling (TfL 2015). Equitable access to quality and safe infrastructure supports those who already cycle and reduces barriers for those who don't cycle but are interested. A protected, segregated cycle lane visually and spatially conveys "that a citizen on a US$30 bicycle is as important as one in a US$30,000 car" (Peñalosa 2007, 313).

On the surface, the second argument appears democratising and sensitive to race, class and gender issues. Hackney Council recognises that white, middle-class men are overrepresented in cycling. However, it merely bolsters that status quo by accepting it as a given. This further marginalises invisible cyclists and re-inscribes cycle lanes as elite, white, middle-class and male spaces (Steinback et al. 2011, 1127). It ignores evidence that without separation from motor vehicles on dangerous main roads like the A10, women, children, the elderly and people with disabilities will continue to be excluded from cycling (Hackney People on Bikes 2014). As such, cycling in Hackney remains "the preserve of a pretty hardcore bunch of people willing to go out of their way to cycle, rather than a natural and easy everyday thing for everybody to be able to do" (Clarke, interview, 24 June 2016).

Hackney Council's third rationale for opposing CS1 on the A10 reflects its overreliance on Cycle Training as a "principal 'soft' measure" (Gannon, interview, 1 June 2016), which reinforces the notion that cycling is an individual choice fraught with liability. Alleging that cycling is "one of the greatest things people can do to keep themselves safe on the road, it's not relying necessarily on infrastructure" (Gannon, interview, 1 June 2016) justifies the Council's sustained failure to provide safe, quality infrastructure. It lends itself to victim-blaming narratives that place the onus on cyclists to ensure their safety. Even with cycle training, novice and vulnerable cyclists may continue avoiding main routes like the A10 or stop cycling altogether

(Hackney Council 2015c, Section 7.52). Cycle training cannot replace quality, safe infrastructure; both must be mutually reinforcing.

6.2. A missed opportunity to mitigate gender and race disparities in cycling

The Council's blockage of CS1 on the A10 is more problematic considering that the A10 is the most dangerous road in Hackney for cyclists (see Figure 4). The most serious and fatal cyclist collisions in Hackney in the past seven years have occurred on the A10 (Hackney Cyclist 2014). Hackney's opposition to CS1 on the A10 is a missed opportunity to mitigate gender disparities in cycling. The Near Miss Project (Aldred 2015b), the first study to calculate the rate of near misses – road incidents that may not result in injuries but induce fear and stress – for cyclists in the UK, found that cycling speed is the main factor affecting near miss rates, which are consistent across London. Women tend to cycle more slowly than men do, which increases their risks of close passes, near misses, traffic injuries and fatalities (Aldred 2015b). The Near Miss findings further problematise the branding of Superhighways: Not only does the narrative of speedy cycling alienate women, it also penalises them, sometimes costing them their lives.

Hackney's blockage of CS1 on the A10 is also a missed opportunity to ameliorate the racial gap in road safety. TfL reports that black adults in London are 1.36 times more likely

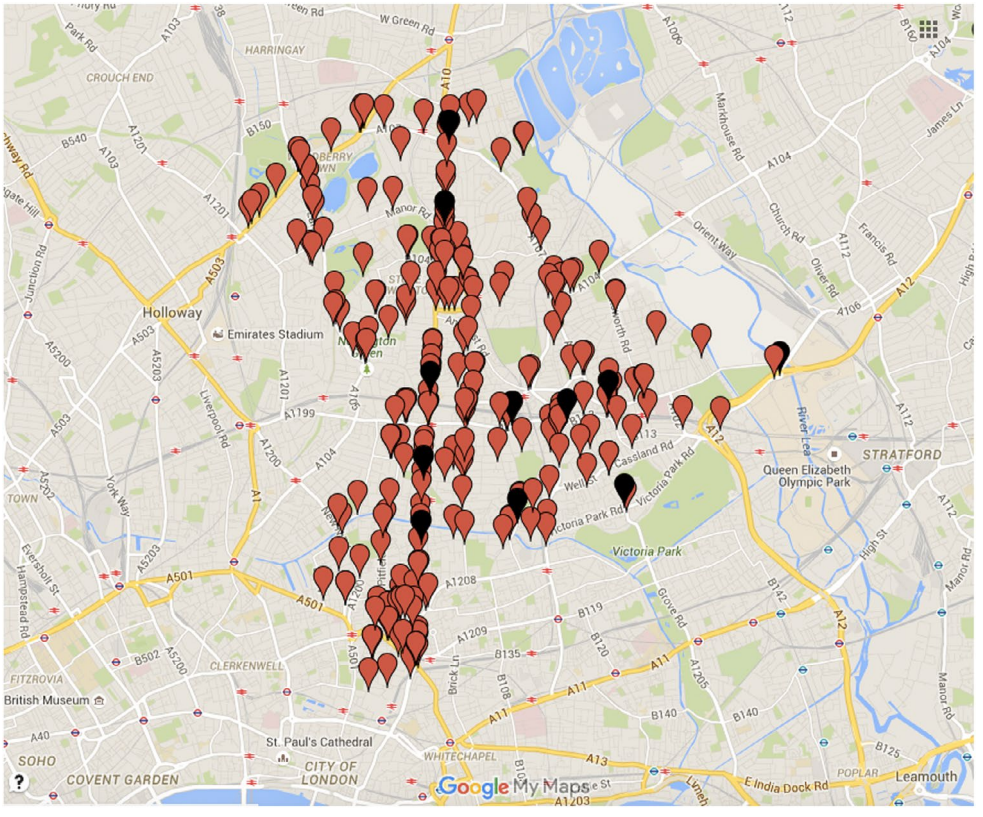


Figure 4. Serious and fatal cyclist collisions in Hackney 2009–2014. Source: Hackney Cyclist 2014.

to be injured on the roads than white adults and 1.32 times more likely to be injured than Asian adults (2015, 52). Although this data is not disaggregated by transport mode or road user, one could conjecture that cycling injuries and fatalities along the A10 have a disproportionate adverse impact on black Londoners, given the increased uptake of cycling among BAMEs, the fact that BAMEs are London's fastest growing demographic, and Hackney's high levels of ethnic diversity.

7. Conclusion | policy implications

To prioritise equity and social justice, Hackney Council must take cyclists' safety seriously by enforcing the borough-wide 20mph speed limit and penalising rat running. The HCC has repeatedly flagged this with the Council to no avail (Wood, email, 6 July 2016). Hackney Council's enforcement failures shatter the borough's cycle-friendly façade since in practice it privileges motorised traffic, particularly buses (Stone 2014b). The lack of enforcement also nullifies the effectiveness of road interventions to improve cycling. Given the gendered differences in perceptions and experiences of safety and the latent demand for cycling among women and BAMEs, the failures to enforce the speed limit and penalise rat running produces discriminatory impact and preserves cycling as the domain of middle-class white males. Given that BAMEs comprise 40% of London's population, are London's fastest growing demographic, and 41% are under the age of 24 (TfL 2015, 22), it is crucial to ensure that their transport needs will be met. Cycling may be a greater economic necessity for BAMEs because they are likelier to be students, not in full-time employment, and disproportionately burdened by rising public transportation costs.

Considering Hackney's ethnic diversity and the substantial evidence that informal peer networks are critical in low-cycling contexts, especially among underrepresented groups (Aldred 2012, 33; Lugo 2012), targeted education and encouragement to women and BAMEs could promote equitable growth in cycling. The higher levels of pre-contemplation of cycling among London women and the gender gap in knowledge of how to cycle (TfL 2015, 84) suggest that cycle training, which Hackney Council prides itself on, could be more targeted to women. To optimise effectiveness, cycle training should be better advertised and networked with grassroots encouragement schemes. Educators should also reflect the diversity of the borough.

Community-driven encouragement initiatives could be instrumental for women after completing cycle training to help them sustain cycling. Councillor Demirci sees the value of such mentoring and motivational schemes, reflecting on how when she started cycling her Kurdish relatives frequently disapproved of how "unfeminine" and low-status cycling is (interview, 7 June 2016). She commends a women's cycling initiative at a Muslim women's community centre, but the Council hasn't reached out to them (interview, 7 June 2016). Policy-makers must identify, support and strengthen social infrastructure for cycling.

Cycling policies and projects in Hackney primarily serve an elite minority of middle-class white men who cycle out of choice while further marginalising invisible cyclists and ignoring latent demand among underrepresented groups, like women, BAMEs, the elderly, youth, and people with disabilities. The implicit androcentric bias in Hackney's cycling interventions and the poor institutional knowledge of equity and social justice issues within Hackney Council perpetuates inequalities in cycling. In order to make cycling relevant for London's rapidly increasing and diversifying population, Hackney Council must "'diversify and develop

a cultural competency that they do not have at the moment'" (Agyeman, quoted in Cohen 2016).

To prioritise equity and social justice, Hackney Council could begin by:

(1) Heeding evidence that quality cycling lanes are necessary (but not sufficient) for those interested in cycling but concerned about safety,
(2) Recognising and validating the experiences and needs of invisible cyclists who have been cycling out of necessity long before London's "Cycling Revolution" in order to ensure that cycling truly is an accessible, convenient and safe mode of transportation for Hackney's diverse communities,
(3) Establishing a Diversity and Inclusion Office to institutionally embed and demonstrate a symbolic commitment to equity and social justice. This would dedicate staff and organisational capacity to explicitly address cycling inequalities. Such an office could take proactive measures to prevent implicit bias in cycling projects, training staff on the dynamics of power, privilege and oppression, and engage in sustained targeted community outreach (education and encouragement) to strengthen social infrastructure for cycling.

After all, in order to truly live up to its reputation as a cycling borough, Hackney's "cycle-friendliness" must be equitable and inclusive.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

Tiffany F Lam is an everyday cyclist and a lifelong feminist who is passionate about socially just and environmentally sustainable urbanism. She has an MSc in City Design & Social Science from the London School of Economics and a BA in Women's Studies from Tufts University. Her interest in and research on equity/inclusion in cycling is informed by her prior experience as a cycling advocate and educator with the Washington Area Bicyclist Association in Washington, DC.

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Paper 4

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WOMEN4CLIMATE

GENDER INCLUSIVE CLIMATE ACTION IN CITIES

HOW WOMEN'S LEADERSHIP AND EXPERTISE CAN SHAPE SUSTAINABLE AND INCLUSIVE CITIES

FEBRUARY 2019

C40 CITIES

ABOUT THE C40 INCLUSIVE CLIMATE ACTION PROGRAMME

The C40 Inclusive Climate Action programme is designed to help ensure that responses to climate change are fair, that benefits are distributed equitably, and that climate action developed in cities is inclusive of, and accountable to, the diversity of urban populations.

It is inspired by mayors and cutting-edge urban practice from around the world, giving mayors tailored support to deliver climate plans and actions that are inclusive of all communities (beyond those who are already aware and active), and to find equitable policy solutions.

The programme supports mayors to deliver accessible, affordable and well-communicated services in transport, energy, waste and resilience. In doing so it helps citizens to understand and experience the benefits of low-carbon transition.

ABOUT THE WOMEN4CLIMATE INITIATIVE

Under the leadership of Mayor Hidalgo of Paris, C40 developed the Women4Climate initiative in 2017. The Initiative aims to:

1.
Empower and inspire the next generation of climate leaders by developing a global mentorship scheme in participating cities.

2.
Raise awareness of the disproportionate impacts of climate change-induced disasters on women and on their key role for the effectiveness of climate policies and the resilience of urban communities.

3.
Drive action through research and tangible urban policy recommendations to guide gender-responsive urban climate action in cities.

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C40 CITIES CLIMATE LEADERSHIP GROUP

The C40 Cities Climate Leadership Group, now in its 13th year, connects 90+ of the world's greatest cities which have committed to tackling climate change. We bring mayors from around the world together to learn from each other in reducing greenhouse gas emissions and creating resilient, sustainable and inclusive cities. C40 cities represent more than 700 million urban citizens and their economies account for 25% of global GDP. Our 'Deadline 2020' report sets out the critical role that the world's major cities have to play in delivering the historic Paris Agreement to prevent catastrophic climate change.

This research report was led by C40 Cities, Climate Leadership Group, under the Women4Climate Initiative and funded by L'Oréal & Michelin Corporate Foundation

L'ORÉAL

With its unique portfolio of 36 brands, L'Oréal aims to meet beauty aspirations all over the world. Its sustainability program sets out ambitious objectives by 2020 across its entire value chain. "Being a founding partner of Women4Climate reflects two of L'Oréal's core values: gender equality and climate protection. Women will play a critical role in tackling climate change. It is our responsibility to empower them", Alexandra Palt, L'Oréal's Chief Corporate Responsibility Officer.

MICHELIN FOUNDATION

Created in 2014, the Michelin Corporate Foundation seeks to promote projects of general interest in five areas: Sustainable Mobility, Protecting the environment, Sport and Health, Education and the community and Heritage and the arts. The Michelin Corporate Foundation's purpose rests on its philanthropic actions which always aim at helping more towards the communities and at fulfilling its societal responsibility. The Foundation contributes to carry the values of respect and solidarity the Michelin group holds.

C40 TEAM

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TABLE OF CONTENTS

TABLE OF CONTENTS 6
LIST OF TOOLS, CASE STUDIES AND BOXES 8
GLOSSARY OF TERMS 9
FOREWORD BY ANNE HIDALGO, MAYOR OF PARIS AND CHAIR OF C40 CITIES 10
EXECUTIVE SUMMARY 12

1. THE CASE FOR GENDER INCLUSIVE CLIMATE ACTION 14
WHY INCLUSIVITY MATTERS 15
WHY GENDER MATTERS 15
WHY CITIES MATTER 16

2. HOW CLIMATE CHANGE IS GENDERED 17
THE UNDERREPRESENTATION OF WOMEN IN CLIMATE ACTION 18
GENDER AND VULNERABILITY TO CLIMATE IMPACTS 20
GENDER AND CLIMATE CHANGE IN CITIES 22

3. A SECTORIAL EXAMPLE: GENDER EXPERTISE IN URBAN MOBILITY PLANNING 28
GENDER AND PERCEPTIONS OF SAFETY 30
INCLUSIVE TRANSPORT PLANNING 31
GENDER AND INTELLIGENT MOBILITY 32
TOOLS FOR CITIES TO DEVELOP GENDER EXPERTISE IN CLIMATE ACTION 34
CASE STUDIES ON HOW CITIES ARE DEVELOPING GENDER EXPERTISE 42

TABLE OF CONTENTS

4. WOMEN'S LEADERSHIP IN CLIMATE ACTION 45

REFRAMING CLIMATE ACTION 47

WOMEN'S GRASSROOTS ENVIRONMENTAL ACTIVISM 49

WOMEN IN TECHNOLOGY AND INNOVATION 50

TOOLS FOR CITIES TO STRENGTHEN WOMEN'S LEADERSHIP 52

CASE STUDIES ON HOW CITIES ARE INCREASING WOMEN'S LEADERSHIP IN CLIMATE ACTION 55

5. CONCLUSION AND RECOMMENDATIONS 60

REFERENCES 63

LIST OF TOOLS, CASE STUDIES AND BOXES



TOOLS TO INCREASE GENDER EXPERTISE IN CITY CLIMATE ACTION

TOOL 1: WOMEN'S SAFETY AUDITS 34

TOOL 2: GENDER-DISAGGREGATED DATA COLLECTION 35

TOOL 3: GENDER BUDGETING AND GENDER-RESPONSIVE PARTICIPATORY PLANNING 39



TOOLS TO INCREASE WOMEN'S LEADERSHIP IN CITY CLIMATE ACTION

TOOL 4: MENTORING PROGRAMMES 52

TOOL 5: GENDER ASSESSMENT AND MONITORING OF MITIGATION AND ADAPTATION (GAMMA) METHODOLOGY 53



CASE STUDY

CASE STUDY 1: BARCELONA: GENDER JUSTICE - A BETTER CITY FOR EVERYONE 42

CASE STUDY 2: SAN FRANCISCO: CLOSING THE DATA GAP FOR A CYCLING SCHEME 44

CASE STUDY 3: PARIS: WOMEN'S LEADERSHIP IN ENVIRONMENTAL ORGANISATIONS 55

CASE STUDY 4: LONDON: WOMEN IN CLEANTECH 58



BOX

BOX 1: HOW DISASTERS ARE GENDERED 23

BOX 2: HOW FOOD SECURITY IS GENDERED 25

BOX 3: HOW ENERGY IS GENDERED 26

BOX 4: HOW TRANSPORT IS GENDERED 27

BOX 5: HOW TRANSPORTATION NETWORK COMPANIES ARE GENDERED 33

BOX 6: UN WOMEN INSIGHTS AND THE CASE FOR WOMEN'S SAFETY AUDITS 35

BOX 7: INTERVIEW WITH UNFCCC GENDER AFFAIRS OFFICER, MS FLEUR NEWMAN 36

BOX 8: INTERVIEW WITH UN UNDER-SECRETARY-GENERAL AND EXECUTIVE DIRECTOR, UN-HABITAT, MS MAIMUNAH MOHD SHARIF 40

GLOSSARY OF TERMS

CLIMATE ACTION
Proactively taking actions to reduce greenhouse gas emissions, promote sustainability and strengthen resilience and adaptive capacity to climate-induced impacts. Climate action can take many forms, ranging from incorporating climate change measures into national and urban policies, to increasing education and awareness-raising campaigns on climate change.

GENDER BUDGETING
Analysis of how public spending and resource allocation impact men and women differently. This is a tool to help ensure a more even (re)distribution of public resources.

GENDER-DISAGGREGATED DATA
Data that is broken down by gender and therefore can reveal differences between women and men in terms of social, political, economic, and environmental preferences, behaviours and actions.

GENDER EXPERTISE
An understanding of how gender is a socially constructed category of identity that shapes social, political, economic, and spatial relationships.

GENDER PERSPECTIVE
An understanding that women and men have different needs, experiences, access to resources, and powers, and a consideration of the differential nature of women's lives, experiences, and needs in design and decision-making processes.

GENDER POWER RELATIONS
The ways in which gender creates differences in access to resources and the distribution of power in society.

GENDER SAFETY AUDITS
A practical tool for cities to understand how women and men perceive and experience the city differently. It helps increase awareness of gender-based harassment and violence in public space.

INTERSECTIONAL PERSPECTIVE
An understanding that there are multiple aspects of identity (such as sex, sexual orientation, racial or ethnic origin, religion, age and physical ability) that interact in complex ways to impact how people experience the world. An intersectional perspective also acknowledges that there are multiple kinds of discrimination and inequalities that are interconnected and therefore cannot be analysed separately.

INTELLIGENT MOBILITY
Technological innovations that are transforming how people and goods move around.

MOBILITY AS A SERVICE (MAAS)
A new model that frames transport in a business-like way, in which transport is a service and transport users are customers. Examples of MaaS include shared mobility options delivered by companies like Uber, Lyft, Zipcar and Mobike.

SOCIO-CULTURAL INFRASTRUCTURE
Foundational services and facilities in society that support health, wellbeing and quality of life. Examples of socio-cultural infrastructure include education, community, arts and culture, and recreation and sports facilities.

STRUCTURAL INEQUALITIES
Discrimination based on aspects of one's identity (such as sex, sexual orientation, racial or ethnic origin, religion, age and physical ability) that gets embedded in social, political and economic structures (i.e. by laws and policies).

TECHNOCRATIC
A viewpoint that heavily favours quantitative data and emphasises science and technology.

FOREWORD BY ANNE HIDALGO, MAYOR OF PARIS AND CHAIR OF C40 CITIES

THE SEVERITY OF CLIMATE IMPACTS IS INEXTRICABLY LINKED TO ECONOMICS, PUBLIC HEALTH, INEQUALITY AND GENDER. AROUND THE WORLD, CLIMATE CHANGE-INDUCED DISASTERS AFFECT WOMEN DISPROPORTIONATELY, THROWING INTO SHARP RELIEF THE EXISTING SOCIETAL INEQUALITIES BETWEEN MEN AND WOMEN.

CLIMATE CHANGE DOES NOT AFFECT ALL PEOPLE EQUALLY. CERTAIN POPULATIONS ARE ESPECIALLY VULNERABLE – INCLUDING THE YOUNG, THE ELDERLY AND WOMEN.

The severity of climate impacts is inextricably linked to economics, public health, inequality and gender. Around the world, climate change-induced disasters affect women disproportionately, throwing into sharp relief the existing societal inequalities between men and women.

The devastating impacts of these events can be measured in both lives lost and economic opportunities destroyed. But as we look to address the greatest challenge humankind has ever faced, we do so with one of the greatest possible resources: womankind. Empowering women is key to creating cities and communities that are clean, safe and economically vibrant. This is true not only because women make up 50 per cent of the global population, but also because women are powerful advocates for solutions to long-term problems like climate change.

Time is running out to deliver on the ambition of the Paris Agreement and keep global temperature rise to 1.5°C above pre-industrial levels – as the science makes clear we must to avoid catastrophic climate change. Because the majority of people are now urbanised, our collective future depends on a radical transformation of life in our great cities. We will only succeed by harnessing the full potential of both men and women and by ensuring that the benefits of the transformation are realised by all citizens, rich and poor, young and old, male and female.

I am delighted to welcome this new research report, a product of the C40 Women4Climate initiative. The findings and recommendations provide invaluable insights to how the effects of climate change, and the responses of climate action are experienced by women in cities. Only by understanding the gendered nature of climate change, policies and programmes, can we deliver action that will benefit all citizens equally. With concrete examples from Paris, Barcelona, San Francisco and London, the evidence is clear that this important work is already well underway.

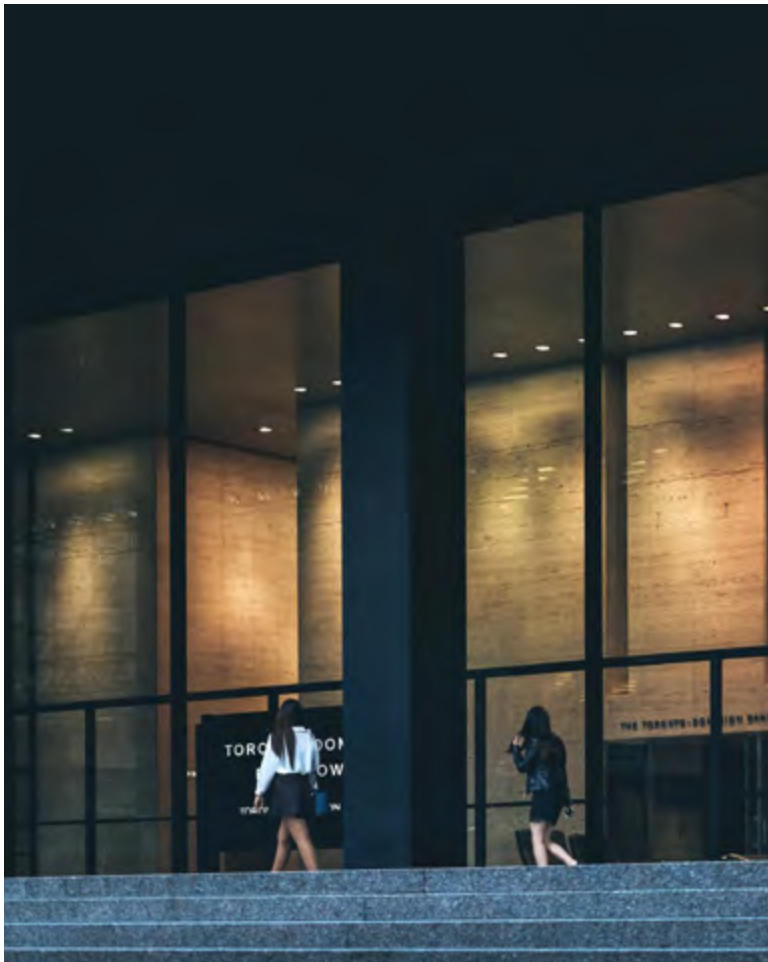
Women possess the ability to surpass great obstacles to make our world a better place. As women, we know we must work ten times as hard to attain the same opportunities as men. As women, we know that we will face discrimination and dismissiveness in any arena we enter. But we also know that responsibility for the future rests on our shoulders and we are prepared to rise to that challenge.

We know that women will shape the future. In order to build the most liveable, equal and economically empowered cities, we need women to lead. Unfortunately, women remain underrepresented in positions of power. That must change and this research provides concrete examples and inspiration to accelerate that trend.

Under the Women4Climate initiative, C40 has supported eight cities to set up mentoring schemes to empower the climate heroines who are building the world of tomorrow. In the future, we need to extend the influence and implementation of this unstoppable movement, supporting women to take the lead. We will work to launch more mentorship programmes in more cities. We will keep supporting women working in technology to enhance climate action through the next editions of our tech challenge and we will develop more research for our cities to keep addressing gender inequalities through a data-driven approach.

We must show courage, creativity and solidarity as we endow more young women with the skills and opportunities they need to lead the fight against climate change. We must remove obstacles for the next generation of women leaders. We must give them the tools they need to carry forward the work we have started. We must inspire a new generation of men and women to help tackle climate change. **I call on all C40 mayors to adopt the recommendations of this research and take action.** Women face different barriers all over the world, and cities are spaces where we want women to feel safe and to thrive. It's time to consider gender-sensitive urban climate approaches, actions and policies. Really, it's simple: we won't achieve climate justice without developing actions that include, at every level, half of the world's population.

> **WE MUST INSPIRE A NEW GENERATION OF MEN AND WOMEN TO HELP TACKLE CLIMATE CHANGE. I CALL ON ALL C40 MAYORS TO ADOPT THE RECOMMENDATIONS OF THIS RESEARCH AND TAKE ACTION.**



EXECUTIVE SUMMARY



IN RECENT YEARS, A SMALL NUMBER OF EXTRAORDINARY WOMEN HAVE EMERGED AS KEY LEADERS ON GLOBAL ACTION TO TACKLE CLIMATE CHANGE.

However, more generally, women are grossly under-represented in high-level climate negotiations; tend to be disproportionately vulnerable to climate impacts; and climate solutions tend to ignore gender-specific issues, perpetuating a general bias of infrastructure and services designed predominantly for men. This report sets out proposals for how to correct these imbalances and, through focusing on an inclusive climate action approach, to ensure that investment to cut emissions and improve resilience will benefit the full diversity of urban citizens, rich and poor, men and women.

Gender is an important factor that influences people's lived experiences within a city, as well as their vulnerability to, and ability to mitigate, climate impacts. The design and planning of transport systems in cities provides an excellent example. Bus and metro networks tend to prioritise routes that bring commuters from the suburbs and outer boroughs into the city centre. These routes are assumed to offer the greatest economic benefit to the city, and they are statistically more likely to be used by men, travelling to and from workplaces. Yet research shows that the majority of journeys on public transport in cities are made by women, taking shorter trips, with multiple stops and at different times of the day to the traditional commuter hours. Women's journeys are often more encumbered, for example with pushchairs or small children; women also face more safety concerns on public transport, which are often factors in their decision-making about what modes to use, and when.

Women's organisations and grass roots activism have played critical roles in increasing women's representation in, and elevating gender issues at, international climate negotiations, as well as empowering women, building capacity, raising awareness and mobilising collective action. However, these activities are often undervalued in discussions about how cities can deliver on what the science says we need and avoid catastrophic climate change.

To achieve gender-inclusive climate action we need more women in leadership positions, bringing their perspectives and experiences into the decision-making processes, greater consultation with women during policy making, and better analysis of the differentiated gendered needs within cities.

Strategies to increase women's leadership in climate action and improve consultation detailed in this report include:

INVESTING IN MENTORING PROGRAMMES FOR WOMEN.

These have huge potential to strengthen female leadership in climate action, especially at the local level. Cities should invest in mentoring programmes and monitor and evaluate them regularly to improve, scale and replicate.

APPLYING THE GAMMA METHODOLOGY.

This methodology can be applied collectively by local governments with grassroots organisations and citizens. It allows cities to examine the gender responsiveness of local policies, and to identify entry points to integrate a gender perspective/gender-informed recommendations.

GENDER RESPONSIVE PARTICIPATORY PLANNING.

Participatory processes enable local government to harness local knowledge and local priorities to maximise resource effectiveness in climate planning.

Strategies to improve analysis of differentiated gender needs detailed in this report include:

COLLECTING GENDER-DISAGGREGATED DATA.

This provides city leaders and other stakeholders with common data, indicators and vocabulary to devise strategies to increase women's inclusion in climate action.

GENDER-RESPONSIVE BUDGETING – PARTICULARLY IN INFRASTRUCTURE INVESTMENTS.

Thisenables policymakers to assess the gendered impacts of public spending. In climate finance it would also help to identify how investment in technological innovation to address climate change may disparately impact women.

CONDUCTING WOMEN'S SAFETY AUDITS.

Safety concerns impact women's travel around a city, and can inhibit their participation in low-carbon mobility solutions. Audits can improve safety for women and girls, and provide robust indicators for systematic safety assessments.



To implement the 1.5°C Paris Agreement target and achieve climate action, cities need to include all citizens. These recommendations and tools can guide cities to achieve inclusive climate action.

1. THE CASE FOR GENDER INCLUSIVE CLIMATE ACTION



This report makes the explicit connection between gender and climate action. It argues that one of the best inroads for cities to integrate a gender perspective into their climate action plans – and ultimately to achieve more inclusive climate action – is through a focus on inclusive and sustainable urban mobility.

1 WHY INCLUSIVITY MATTERS

Climate change does not impact all people equally. The poorest and most vulnerable in our societies are disproportionately at risk from rising sea levels, unprecedented droughts and climate related disasters. Climate action plans, policies and programmes, therefore, must be inclusive of all citizens.

Equally, people's lived experiences and needs within a city are diverse. As cities design and implement infrastructure, policies and plans to increase sustainability and meet environmental targets, citizen uptake depends on these plans meeting their diverse needs.

70%

OF THE 15,000 PEOPLE IN FRANCE WHO DIED DURING THE 2003 HEATWAVE WERE WOMEN

4x

AS MANY WOMEN THAN MEN WERE KILLED IN THE TSUNAMI-AFFECTED AREAS OF INDONESIA, SRI LANKA AND INDIA IN 2004

2 WHY GENDER MATTERS

Gender is an important factor in determining people's vulnerability to, and ability to mitigate, climate impacts. And research shows that women are disproportionately vulnerable to disasters. For example, women are far more likely than men to die in a natural disaster: 70% of the 15,000 people in France who died during the 2003 heatwave were women (Ogg, 2005) and four times as many women than men were killed in the tsunami-affected areas of Indonesia, Sri Lanka and India in 2004 (Oxfam, 2005). In the aftermath of a disaster, women tend to be more susceptible to stress-related disorders, depression and gender-based violence (Sellers, 2016; World Health Organization, 2011; Buckingham, 2015).

These gender-related differences are the result of systemic and structural inequalities, not biological differences. It is only by better understanding and planning for these differentiated experiences that these socio-cultural factors and structural inequalities can be addressed to deliver inclusive climate action.

Furthermore, women are still starkly underrepresented in climate action leadership and participation, which means that their perspectives and experiences are not being sufficiently incorporated into climate action decision-making.

Of course, gender is one aspect of our identity that combines with other aspects – such as race, age, sexuality, physical ability, economic resources, migrant status and so on – to shape our lives, opportunities and experiences. An intersectional perspective, therefore, is central to addressing gender. Considering wider issues around diversity, equality and inclusion, we can account for the nuances and variability in how people experience and respond to climate change, and in turn to develop inclusive climate change solutions.

3 WHY CITIES MATTER

Although cities account for less than 2% of the earth's surface, they consume 78% of the world's energy and are responsible for over 70% of greenhouse gas emissions (UN Habitat, 2012; Aguilar et al., 2015). As such, it is in cities that there is the greatest urgency for climate action.

'The right to the city' as a concept was introduced by French philosopher and sociologist Henri Lefebvre in 1968. It has since been embraced by urban theorists and activists as '[t]he freedom to make and remake our cities and ourselves' (Harvey, 2008, p.23).

More recently, academic discourse on 'the right to the city' has entered into urban policy. In October 2017, at the United Nations (UN) Conference on Housing and Sustainable Urban Development, the New Urban Agenda invoked 'the right to the city' as:

> **...A VISION OF CITIES FOR ALL, REFERRING TO THE EQUAL USE AND ENJOYMENT OF CITIES AND HUMAN SETTLEMENTS, SEEKING TO PROMOTE INCLUSIVITY AND ENSURE THAT ALL INHABITANTS, OF PRESENT AND FUTURE GENERATIONS, WITHOUT DISCRIMINATION OF ANY KIND, ARE ABLE TO INHABIT AND PRODUCE JUST, SAFE, HEALTHY, ACCESSIBLE, AFFORDABLE, RESILIENT AND SUSTAINABLE CITIES AND HUMAN SETTLEMENTS TO FOSTER PROSPERITY AND QUALITY OF LIFE FOR ALL.' (UNITED NATIONS 2017, P.5)**

The fact that urban policymakers are thinking about what 'the right to the city' means and how that translates into practice is a milestone in inclusive climate action. This report seeks to make the connection between gender, climate action and the right to the city explicit.

The United Nations Sustainable Development Goals (SDGs) enshrine gender equality, reduced inequalities, sustainable cities and climate action as pillars of sustainable urban development:

- **SDG 5: Achieve gender equality and empower all women and girls.**
- **SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.**
- **SDG 13: Take urgent action to combat climate change and its impacts.**

The SDGs have established the link between achieving gender equality, reducing inequality, promoting inclusive and sustainable cities and engaging in climate action. However, the link between these goals and the 'right to the city' needs to be more clearly articulated. How do we ensure sustainable urban development and gender equality, to deliver and safeguard the right to the city for women and girls? What does it mean to codify a gender perspective to sustainable cities and climate action? How might city strategies to tackle climate change inadvertently marginalise women? How might the ways that city leaders think about and discuss climate change exclude women's experiences, perspectives and input? This report seeks to start addressing these questions.

2. HOW CLIMATE CHANGE IS GENDERED

The rallying call to action at the United Nations Climate Change Conference in Bali, December 2007, 'No climate justice without gender justice' continues to resonate (Terry, 2009).

A decade later, in March 2017 at the inaugural C40 Women4Climate Conference in New York City, women leaders representing city governments, businesses and civil society organisations around the world affirmed their commitment to address gender inequality and climate change.

This chapter outlines the three key themes in existing literature linking gender, climate change and cities:

- the underrepresentation of women in climate action,
- gender and vulnerability to climate impacts, and
- gender and climate change in cities.

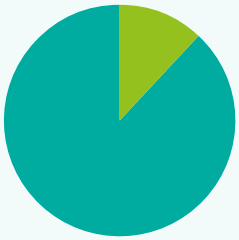
1 THE UNDERREPRESENTATION OF WOMEN IN CLIMATE ACTION

Women leadership in climate governance and negotiations has been increasing since 2008, with women leaders playing a pivotal role in negotiating the Paris Agreement (2015) and instigating ambitious city climate action plans worldwide.

However, women are still underrepresented in high-level climate negotiations (Kronsell, 2013; Sellers, 2016; Burns and Andre, 2013). As of 2015, women headed just 12% of federal environment ministries worldwide (Sellers, 2016). And while the number of women representing national delegations to United Nations climate change conferences has steadily increased from 33% in 2008 to 38% in 2014, women from Africa and the Asia-Pacific region remain disproportionately underrepresented (Burns and Andre, 2013).

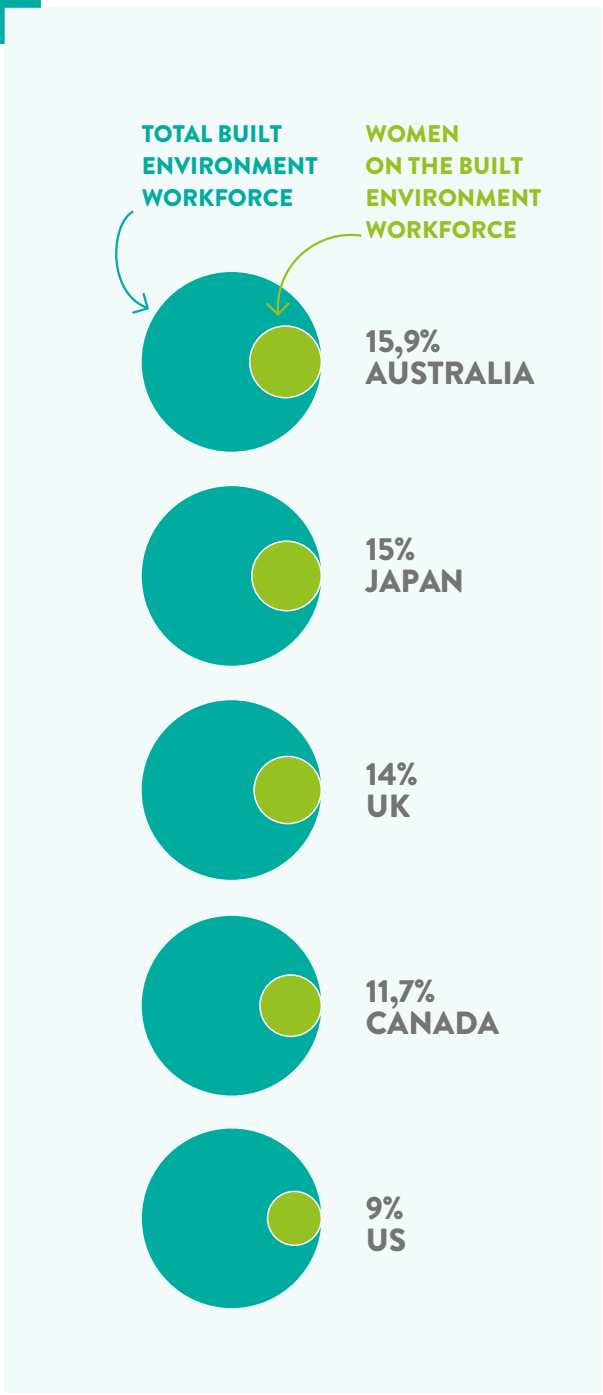
These figures underscore the need to build and support women's leadership in the planning, implementation and evaluation of climate policies (Alber, 2016; Sellers, 2016; Burns and Andre, 2013).

At the same time, it is crucial to note that women's leadership and participation in climate action extend beyond politics. Built environment sectors – such as urban planning, architecture, housing, energy, transport, infrastructure and waste and water management – also contribute to, and are impacted by, climate change (Aguilar et al., 2015; UN-Habitat, 2012). Unfortunately, as with politics, women are underrepresented across these sectors (Buckingham, 2015; Aguilar et al., 2015). In the UK, women make up only approximately 14% of the built environment workforce, and the numbers are similar in Australia, Japan, Canada and the US: 15.9%, 15%, 11.7% and 9% respectively (Clear, 2017).



IN 2015, WOMEN HEADED JUST **12%** OF FEDERAL ENVIRONMENT MINISTRIES WORLDWIDE





Climate change is predominantly framed as a technical problem that requires scientific, technological, engineering and/or economic solutions. Since these are male-dominated fields, this can be a barrier to women's entry and leadership in climate action (Buckingham, 2015; Nelson, 2015; Detraz, 2016; MacGregor, 2010; Polk, 2009; Djoudi et al., 2016; Krosnell, 2013; Seager, 2009; Röhr, 2009; Terry, 2009).

Furthermore, this framing ignores the social, cultural and political dimensions of climate change. It suggests that wider issues around social inclusion are irrelevant and further alienates women who are underrepresented in these fields (MacGregor, 2010; Polk, 2009; Krosnell; 2013; Aguilar et al., 2015; Röhr, 2009; Gaard, 2015).

Ulrike Röhr, Director of the German gender and environment project Genanet, attributes the underrepresentation of women in climate action to the scientific and technical approach to climate change that makes 'women feel like they can't enter the discussions' (quoted in Stoparic, 2006). In many cultures, women are socialised from an early age to avoid technical and quantitative sciences like engineering and economics, which leads to a gender gap in these professional sectors (Röhr, 2009; MacGregor, 2010; Zecharia et al., 2014). This is reflected in survey data collected in the UK, which indicates that men are better informed about, and more responsive to, discussions on climate change science than women (MacGregor, 2010).

Increasing gender parity in climate leadership is an important first step to achieve gender inclusive climate action. However, it is also necessary to have gender expertise – that is a knowledge about the ways in which design and investment decisions contribute to gender inequality. There is often insufficient expertise to ensure that the decision-making processes are accessible to, and inclusive of, women (MacGregor, 2010; Sellers, 2016; Polk, 2009; Kronsell, 2013).

Consider transport, for instance. Transport facilitates people's access to and participation in public life. Yet it is largely framed as a technocratic issue that falls within the purview of engineering, economics and technology (Polk, 2009; Kronsell, 2013; Aguilar et al., 2015). This technocratic framing of transport leaves little room for considerations of gender and social inclusion, and perpetuates female exclusion in the industry, starting in education. Ultimately, if infrastructure aspires to fulfil societal needs, gendered experiences and broader issues around social inclusion must be integrated alongside technical components of transport infrastructure projects.

2 GENDER AND VULNERABILITY TO CLIMATE IMPACTS

Vulnerability to climate impacts refers to how likely an individual is to be exposed to, and able to mitigate, climate change impacts. Gender is one factor that contributes to differential vulnerabilities to climate impacts. Other factors include geographic location, race, socio-economic background, migrant status and age, for instance. Further research and analysis are needed to better understand how cultural norms, gendered power relations and structural inequalities (such as income, racism or homophobia) create variability in people's experience of, and capacities to respond to, climate change impacts (Nelson, 2015; Kronsell, 2013; Polk, 2009; MacGregor, 2010; Demetriades and Esplen, 2008; Buckingham, 2015; Aguilar et al., 2015).

Dominant discourses on how gender affects vulnerability to climate impacts typically refer to women and girls. However, gender includes men and boys (MacGregor, 2010; Sellers, 2016; Demetriades and Esplen, 2008). For example, there are gendered health disparities that get compounded by climate shocks, such as disasters. Men are more likely to commit suicide as a result of disasters, for instance (Sellers, 2016; World Health Organization, 2011; Buckingham, 2015). Prevalent gender inequalities also tend to get exacerbated in the wake of disasters, for example women and girls become more vulnerable to gender-based violence (Demetriades and Espien, 2008; World Health Organization, 2011; Buckingham, 2015). In some locations, women may lack access to necessary health care due to patriarchal societal norms that restrict them from traveling alone, poverty or spatial isolation (World Health Organization, 2011). And patriarchal norms about masculinity may prevent men from receiving necessary health care as they feel less inclined to seek help (Ibid.).

A popular narrative in discourses about gender and vulnerability to climate impacts is that women are more vulnerable, but that they are also more active agents in adaptation and mitigation strategies (Gonda, 2016; MacGregor, 2010; Sellers, 2016; Demetriades and Esplen, 2008; Röhr, 2009). This 'women-are-vulnerable-but-also-agents' narrative gained traction following the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, Brazil. Feminist activists applauded the discussion of gender in international climate change negotiations, but they also critiqued this narrative as being overly simplistic (Gonda, 2016). The narrative falsely insinuates that women have a greater capacity and impetus to act (MacGregor, 2010; Buckingham, 2015; Detraz, 2016; Demetriades and Esplen, 2008, p.24).

VULNERABILITY TO CLIMATE IMPACTS REFERS TO HOW LIKELY AN INDIVIDUAL IS TO BE EXPOSED TO, AND ABLE TO MITIGATE, CLIMATE CHANGE IMPACTS. GENDER IS ONE FACTOR THAT CONTRIBUTES TO DIFFERENTIAL VULNERABILITIES TO CLIMATE IMPACTS

This narrative is also often founded on unsubstantiated stereotypes that women are natural caregivers and therefore intrinsically more inclined to be environmentalists. While it is important to acknowledge women's agency in driving climate action, it is equally important to acknowledge that their agency is constrained by patriarchal social norms, socio-economic inequalities and underrepresentation in politics, among others. Moreover, suggesting that women are more active agents ignores the male dominance in decision-making processes regarding climate change and sustainable development.

In reality, it is the broader systemic and structural inequalities (such as the underrepresentation of women in politics, employment discrimination and the gendered division of labour) that creates differences in people's vulnerability to climate impacts. It is unhelpful to make sweeping generalisations that homogenise women or men. Women and men's experiences can vary greatly based on factors, like physical ability, sexual orientation, race and religion. Disparities in the labour market and unequal access to knowledge and resources (such as income, capital, land or technology) are more examples of structural factors relating to gender that affect vulnerability to climate impacts (Djoudi et al., 2016; Bernier et al., 2015; Demetriades and Espien, 2008).

Therefore, a more productive dialogue about gendered vulnerability to climate impacts would shift away from individuals or groups of women and men, and instead address the role of structural inequalities in producing these differential vulnerabilities (Djoudi et al., 2016; Seager, 2009; Alaimo, 2009; Gonda, 2016).

> **IT IS THE BROADER SYSTEMIC AND STRUCTURAL INEQUALITIES (SUCH AS THE UNDERREPRESENTATION OF WOMEN IN POLITICS, EMPLOYMENT DISCRIMINATION AND THE GENDERED DIVISION OF LABOUR) THAT CREATES DIFFERENCES IN PEOPLE'S VULNERABILITY TO CLIMATE IMPACTS**



3 GENDER AND CLIMATE CHANGE IN CITIES

54% of the world's population now lives in cities. By 2050, that figure will rise to 68% (UN DESA, 2018). Although cities account for less than 2% of the earth's surface, they consume 78% of the world's energy and are responsible for over 70% of greenhouse gas emissions (UN-Habitat, 2012; Aguilar et al., 2015). As such, it is in cities that there is the greatest urgency for climate action.

While gender issues have gained traction in climate change research and policy over the last decade, existing literature focuses heavily on low-income women in rural areas in the Global South – not on cities (MacGregor, 2010; Soper, 2009; Kronsell, 2013; Aguilar et al., 2015). Within the sparse literature that exists on climate change, gender and cities, it tends to focus on disasters and food security (Sellers, 2016: 20; MacGregor, 2010).

Thus, more research is needed to better understand the gendered impacts of climate change in cities and the Global North, extending into climate-related issues beyond disasters and urban agriculture (MacGregor, 2010; Hannan, 2009; Djoudi et al., 2016; UN-Habitat, 2012; Röhr, 2009). Further research is also needed that incorporates the diverse lives and experiences of people who may share gender in common, but who have vastly different experiences of the world based on other aspects of their identity (Sellers, 2016; Djoudi et al., 2016; MacGregor, 2010; Resurreccion, 2013; Demetriades and Esplen, 2008; CARE International, 2010).



BOX 1

HOW DISASTERS ARE GENDERED

Natural disasters are an important area for climate action. Here we demonstrate some of the ways in which the impacts of natural disasters can be gendered.

HEALTH

In the aftermath of a disaster, men have higher suicide rates, while women tend to me more susceptible to stress-related disorders depression and gender-based violence (Sellers, 2016; World Health Organisation, 2011; Buckingham, 2015). More women than men die in natural disasters: 70% of the 15,000 people in France who died during the 2003 heatwave were women (Ogg, 2005); four times as many women than men were killed in the tsunami-affected areas of Indonesia, Sri Lanka and India in 2004 (Oxfam, 2005); and 90% of the 14,000 people killed during the 1991 Bangladesh cyclone were women (Aguilar, 2004 cited in World Health Organization, 2011). These figures illustrate instances where women are disproportionately vulnerable to disasters. Therefore, is important to keep in mind that disasters create differential health outcomes among populations and attention to gendered differences is needed.

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90%

OF THE 14,000 PEOPLE KILLED DURING THE 1991 BANGLADESH CYCLONE WERE WOMEN





ACCESS TO WORK

Take flooding as an example. Flooding affects access to transport within a city, which in turn affects people's ability to work. In some cities in the Global South, men may be more likely to work outside in jobs such as construction workers, or as rickshaw drivers and flooding would prevent them from being able to work. Women, however, may be more likely to work inside, such as in restaurants or in houses, and may be more likely to be able to continue to work (Jabeen, 2014; Alam et al., 2015; Demetriades and Esplen, 2008). This could temporarily alter the household dynamics, with women becoming the primary earners. This may give them more bargaining power within the household, but it may also make them more vulnerable to partner-violence, particularly in patriarchal contexts where traditional gender roles are more rigidly enforced (Sellers, 2016; World Health Organisation, 2011; Alam et al., 2015; Buckingham, 2015; Metcalf, 2015; Alston, 2014; Demetriades and Esplen, 2008. They may also be more vulnerable to harassment or violence in public spaces, as they are having to take different transport routes and modes to move through the city to work.

The example of flooding illustrates how climate impacts are gendered in complex and nuanced ways. It underscores the need for climate action to address both structural factors, like socioeconomic activity, as well as cultural factors, like gender roles and ideas about masculinity and femininity.

GENDER-BASED VIOLENCE

In fact, it is well evidenced that gender-based violence tends to spike in the aftermath of disasters. Based on this evidence, organisations like the World Health Organization and CARE International strongly recommend investing in resources for victims of gender-based violence following disasters (Sellers, 2016; World Health Organisation, 2011; CARE International, 2010).

SOCIO-ECONOMIC STATUS AND RACE

In addition to gender, socio-economic status and race can compound people's vulnerability to disasters. For example, Hurricane Katrina exacerbated the wage gap between women and men and among women of different ethnicities (Le Masson and Langston, 2014). When Hurricane Katrina hit, 26% of women in New Orleans were living in poverty, compared to 20% of men (Henrici et al., 2010). Three years later, in 2008, there were fewer women and girls living in poverty: 15%, which was just slightly over the national rate of 14.4% (Ibid.). However, according to the Institute for Women's Policy Research, this does not reflect a decline in female poverty, but rather it reflects a reduction in the overall female population in New Orleans since Hurricane Katrina. Many poorer women never returned (Ibid.).

BOX 2

HOW FOOD SECURITY IS GENDERED

Globally, women produce half of the world's food, but are up to 11 percentage points more likely than men to report food insecurity (UN Women, 2018). 60% of the world's hungriest people are women (World Food Programme, 2013). When poor households experience food shortages, women tend to go without food so that their family members may eat, which results in malnutrition and other health problems (UN Women, 2018 and MacGregor, 2010).



Socio-economic disparities intersect with gender to increase women's vulnerability to food insecurity. For example, there are gendered differences in ownership of land and assets, decision-making powers regarding the purchase, sale and transfer of land and assets, as well access to financial capital (Bernier et al., 2015; Hannan, 2009; Djoudi et al., 2016; and Gaard, 2015). A recently released World Bank working paper explores female property ownership across Africa. Using data from 28 sub-Saharan African countries, the paper finds that there is a gender gap in property (land and housing) ownership whereby 20 million fewer women than men have sole or joint ownership of some housing (Gandhi, 2018).

Therefore, although traditional gender roles assign women much of the labour associated with food production, structural inequalities deny them ownership and decision-making powers, which renders them more vulnerable to food insecurity. According to Neven Mimica, European Commissioner for International Cooperation and Development, if women in agricultural food production had access to the same amount of resources (i.e., access to financial resources and new technologies, land ownership and rights, decision-making power, and so on.) as men, there would be up to 150 million fewer hungry people in the world due to productivity gains (Food and Agriculture Organization of the United Nations, 2016).

BOX 3

HOW ENERGY IS GENDERED

Energy accounts for 71-76% of greenhouse gas emissions in cities (Aguilar et al., 2015). In some European countries, up to 30% of the population cannot afford sufficient fuel for indoor heating (Aguilar et al., 2015). Women, especially single mothers and elderly women, constitute the majority of this 30% population segment, as they are more socioeconomically deprived than men are.

Over 12% of urban populations globally still use solid fuels for cooking and heating needs, which generates indoor air pollution (Aguilar et al., 2015). This disparately impacts women and girls because they spend more time indoors performing household labour (Ibid.). In fact, in 2012, 4.3 million people died from indoor air pollution from using solid fuels for household energy, with women and girls disproportionately accounting for 60% of these deaths (UN Women, 2018).

With regard to household energy consumption, women who work within the household may consume more energy than men who work outside the home. Without access to affordable, clean energy, women may disproportionately suffer negative health consequences from increased exposure to indoor air pollutants (UN Women, 2018). It is important for clean energy programmes targeting households to take gendered energy consumption and intra-household dynamics into consideration (Terry, 2009; Aguilar et al., 2015; and UN-Habitat, 2012). Gathering gender-disaggregated data on energy consumption can help maximise the efficacy of clean energy programmes.

At the World Energy Council, only 4% of chairs and 18% of secretariats are female (Sellers, 2016). Out of 464 energy companies in Spain, Sweden and Germany – three similarly industrialised, Western European nations – 64% had no women on their boards and only 5% achieved gender parity on the boards (Kronsell, 2013). There is clearly a lack of female representation in the energy sector. Where this is compounded by a lack of gender expertise in decision-making – that is an understanding of gender-differentiated consumption patterns – the benefits of clean energy innovations will not be evenly distributed among populations.

4%
OF CHAIRS
&
18%
OF SECRETARIATS ARE FEMALE AT THE WORLD ENERGY COUNCIL.





BOX 4

HOW TRANSPORT IS GENDERED

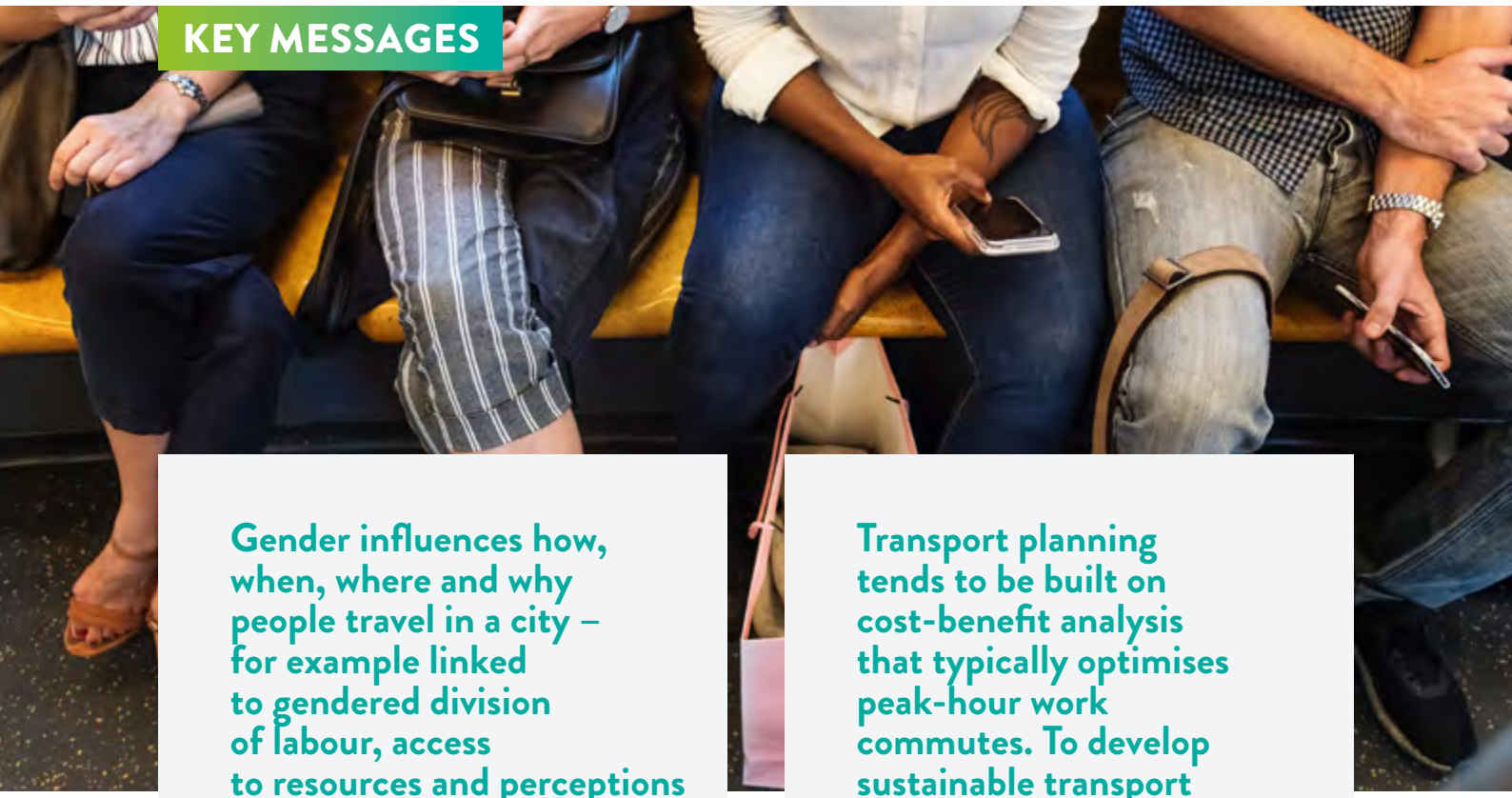
With transport being one of the leading contributors to greenhouse gas emissions in cities (Blomstrom et al., 2018) and air polluters (C40 Cities, 2017), investing in sustainable urban transport systems is a key way for cities to reduce emissions and create healthy streets.

Gender is an important factor in how people experience and benefit from transport systems. For example, a World Bank study showed that in Lima, women are more likely to make transport decisions based on safety, whereas men choose their mode of transport based on speed (Gomez, 2000).

Women tend to take public transport to a higher extent than men in many cities – and this has been the case for a long time. Therefore, transport systems themselves would benefit by taking their main customers in consideration. In short, by integrating a gender perspective into sustainable urban mobility systems (such as cycling, public transport and shared-mobility), they become more suitable for – and therefore more likely to be adopted by – more people. And this will help cities to achieve their sustainable transport targets.

3. A SECTORIAL EXAMPLE: GENDER EXPERTISE IN URBAN MOBILITY PLANNING





KEY MESSAGES

Gender influences how, when, where and why people travel in a city – for example linked to gendered division of labour, access to resources and perceptions of safety. To support women to adopt low carbon and non-motorised transport, it is necessary to understand and plan for their differentiated transport needs.

Transport planning tends to be built on cost-benefit analysis that typically optimises peak-hour work commutes. To develop sustainable transport solutions, cities must also apply non-economic value analysis of the benefits for cities and all citizens.

Intelligent mobility is transforming urban transport. We are now at a tipping point where intelligent mobility infrastructure could either lock in high-carbon, unsustainable growth and exacerbate inequalities, or facilitate change to more sustainable and inclusive urban cities.

Practical tools for cities to develop gender expertise include conducting women's safety audits, collecting gender-disaggregated data, gender budgeting and gender-responsive participatory planning.

One third of greenhouse gas emissions in C40 cities come from transport. Globally, traffic is the biggest source of air pollution, responsible for up to one quarter of particulate matter in the air.

As of January 2019, 26 global mayors have signed the C40 **Green and Healthy Streets Declaration** outlining a vision for greener, healthier, and more prosperous cities, where streets are accessible and safe for everybody. The Declaration sets out a future where walking, cycling and shared transport are the way the majority of citizens move around cities, with the goal of reducing emissions, traffic and improving quality of life for everyone (C40 Cities, 2018).

Through the Green and Healthy Streets Declaration, C40 mayors are committed to improving the quality of life for all citizens and helping to tackle the global threat of climate change. In addition to reducing greenhouse gas emissions, sustainable urban mobility is also a strong example because improved air quality measures have major health benefits (C40 Cities, 2018). However, the shift towards zero emission mobility won't be achievable without including all segments of the population.

As new urban transport solutions are being developed and implemented across the world as part of the sustainability agenda, it is important that the gendered implications of these designs are taken into account. This chapter outlines how gender expertise can help cities to achieve more inclusive and sustainable urban mobility systems. It provides four practical tools and approaches for cities to develop gender expertise: women's safety audits; gender-disaggregated data; gender budgeting; and gender-responsive participatory planning. It also features two case studies illustrating how the cities of Barcelona and San Francisco are developing gender expertise to inform sustainable mobility projects.

1 GENDER AND PERCEPTIONS OF SAFETY

Gendered perceptions of safety are one of many systemic factors that impact where, when, how and why people travel (Shah et al., 2017; Allen et al., 2017; Gomez, 2000; and Diaz and Rojas, 2017). In many places, there is a resounding fact that public space is not safe for women and girls. As such, women and girls are socialised to be more concerned about their personal safety and to modify their speech, behaviour, dress and travel patterns to protect themselves (Law, 1999; Levy, 2013; Plan International UK, 2018). In fact, 66% of girls in the United Kingdom have experienced sexual harassment in public and adopt tactics to 'avoid' street harassment, such as crossing the road to avoid someone, taking longer routes to circumvent dangerous areas, pretending to be on the phone, avoiding empty train carriages, changing their outfits and stopping going out at night (Plan International UK, 2018).

66%

OF GIRLS IN THE UNITED KINGDOM HAVE EXPERIENCED SEXUAL HARASSMENT IN PUBLIC AND ADOPT TACTICS TO 'AVOID' STREET HARASSMENT



Other systemic factors that constrain women's freedom and mobility in cities include violence against women, employment discrimination, the gendered division of household labour, and gender disparities in access to resources (such as time, money, education, skills and technology). This produces gendered variations in mobility choices (for example travel demand and transport mode), mobility behaviour (such as timing, distance, duration, route and purpose) and perceptions and experiences of mobility (Law, 1999).

The failure to incorporate gendered experiences in the way we design, plan and build cities disparately impacts women and girls and denies them the 'right to the city' (Law, 1999; Levy, 2013; Whitzman, 2012; Ehrnberger et al., 2012; Faulkner, 2000; Gomez, 2000; Shah et al., 2017). If the 'right to the city' is 'freedom to make and remake our cities and ourselves' (Harvey, 2008), women and girls cannot enjoy this until they have the freedom to traverse public space without physical or verbal threats (Levy, 2013). In order for women and girls to truly access and take advantage of all the opportunities the city has to offer, they must be included in urban design, planning and governance processes.

2 INCLUSIVE TRANSPORT PLANNING

Transport planning tends to be built on cost-benefit analyses that typically optimise peak-hour work commutes and long-distance radial journeys (those to the city/business centre) (Levy, 2013; Kronsell, 2013; Polk, 2009; Whitzman, 2012; and Law, 1999). This disadvantages those working outside of formal labour markets and/or traveling at non-peak hour times for other purposes – such as care-, social-, or leisure-related travel. Statistically and historically women are more likely to be included in this group. Women are also more likely to make more frequent, short journeys within a city, and those journeys may be more encumbered – for example, travelling with pushchairs or shopping trolleys (ibid.).

In fact, despite transport planning privileging peak-hour radial journeys, in many cities most travel is actually not work-related (American Association of State Highway and Transportation Officials, 2013; and Transport for London, 2017). More people travel to go to school, visit friends, visit family, go shopping, go to the gym, run errands, go to museums and so on, than to go to work. Moreover, the changing nature of work and the labour market (the rise of the on-demand economy, start-ups, co-working and remote working) further call into question transport planning that prioritises radial and traditional commuter journeys.



Increased driving among women is in part the result of inadequate public transport planning, particularly for journeys relating to care responsibilities (Smart et al., 2014). Arguably, some of these journeys could be shifted to more sustainable modes of transport, such as cycling. However, cycling infrastructure often also privileges the radial routes (Lam, 2017). Therefore, cities seeking to promote more sustainable modes of transport – such as cycling and walking – must plan safe and inclusive infrastructure for both radial and orbital journeys.

In order to plan and develop transport solutions that enable cities to achieve their sustainable transport targets, decisions-makers should not evaluate their performance exclusively against cost-effectiveness. The value analysis of sustainable transport systems should consider the benefits provided to all populations in terms of emissions avoided and well-being. In order to do so, alternative policy tools and measurement systems need to be included in the policy-making dashboard. C40's current research focuses on consumption emissions in cities and includes alternative measures (not only economic) of valuing policy benefits for cities that wish to recover the cost of over-consumption and move away from consumerism by transforming urban lifestyles and generating better quality of living for all its urban stakeholders.



WE ARE NOW AT A TIPPING POINT WHERE INTELLIGENT MOBILITY INFRASTRUCTURE COULD EITHER LOCK IN HIGH-CARBON, UNSUSTAINABLE GROWTH AND EXACERBATE INEQUALITIES FOR FUTURE GENERATIONS, OR IT COULD FACILITATE CHANGING COURSE TO MORE SUSTAINABLE AND INCLUSIVE URBAN FUTURES

3 GENDER AND INTELLIGENT MOBILITY

'Smart' or 'intelligent' mobility describes how technology is transforming how we move within cities. Intelligent mobility innovations can be leveraged in climate action. But these innovations must be designed, developed and deployed to be inclusive. In other words, they must respond to the needs of diverse and pluralistic urban populations. Current literature on gender and sustainability does not adequately engage with the intelligent dimension of mobility, and literature on intelligent mobility fails to engage sufficiently with gender and social inclusion.

An example of how technological innovation has changed urban mobility is the birth of Transportation Network Companies (TNCs). TNCs are private sector shared mobility companies, such as Uber or Lyft. Car-share examples include ZipCar; bikeshare schemes include Ofo and Mobike; and scooter-share schemes include Bird and Lime. TNCs initially caused tensions with local authorities and inhabitants, but they have fast become important mobility options in cities worldwide. These innovations offer cities an opportunity to redress some of the existing transport inequalities and enable a broader range of people to participate in sustainable mobility solutions.

We are now at a tipping point where intelligent mobility infrastructure could either lock in high-carbon, unsustainable growth and exacerbate inequalities for future generations, or it could facilitate changing course to more sustainable and inclusive urban futures. Cities must take proactive measures to encourage more diverse and inclusive intelligent mobility, as well as technology and innovation more broadly. Moving forward, it is important for cities to be open to and partner with TNCs to provide safe, accessible and inclusive mobility services.

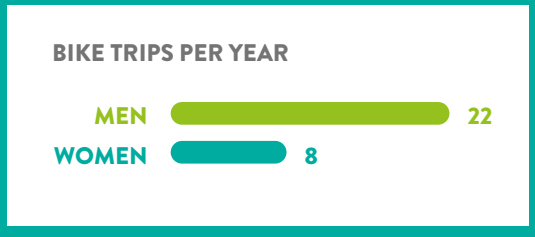
BOX 5

HOW TRANSPORTATION NETWORK COMPANIES ARE GENDERED

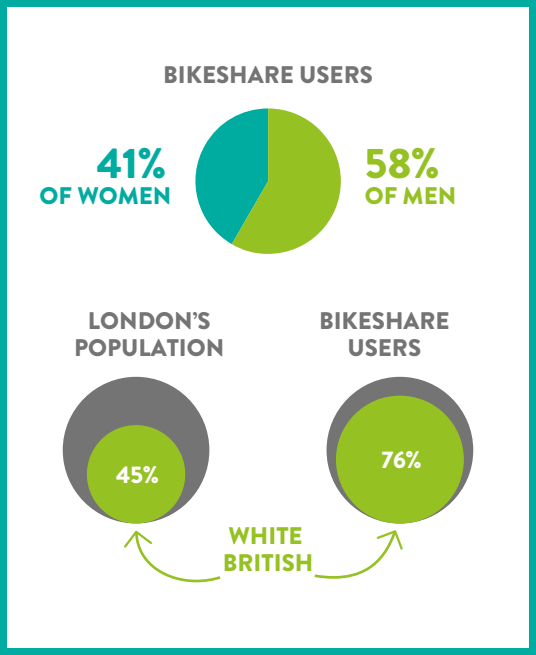
BIKESHARE

Research from the United Kingdom shows that despite an overall gender gap in men and women cycling (an average of 22 versus 8 trips per year), there is slightly more gender balance among bikeshare users: 58% are male, 41% are female (Bikeplus, 2017). However, there are racial disparities in bikeshare usage: while 2011 Census figures report that just 45% of London's population is white British, they represent 76% of the city's bikeshare users (Ibid.). Research from the United States also highlights vast socio-economic and racial disparities in bikeshare usage, partially due to inadequate information about how to use bikeshare among people of colour, people with less education and people with lower incomes (McNeil et al., 2017).

Cities can take a lead in steering bikeshare innovations to be more equitable and inclusive. For example, many cities, including Washington DC, Chicago and New York City, are requesting that dockless bikeshare companies operate in underserved areas to bridge public transport 'deserts' (Surico, 2018). Anecdotal evidence on the impact of these decisions demonstrates that dockless bikeshare has the potential to bridge gender, racial and socio-economic gaps in usage (Sturdivant-Sani, 2018). Therefore, in order to minimise inequalities, cities could continue to work with dockless bikeshare providers, and in bikeshare and cycling more broadly. To monitor these efforts, cites should gather data on dockless bikeshare users and disaggregate it by gender, race and socio-economic status to get a full picture of who is using, and who is not using, dockless bikeshare schemes.



Source: Bikeplus, 2017



CAR-SHARE

Car-share has potential to significantly reduce car ownership and emissions in cities. To maximise this potential, car-share schemes need to be designed in an inclusive manner to meet a diverse array of travel needs. A recent study of car-share usage in Germany found that the predominant users of car-share schemes are men with at least a university-level education (Kawgan-Kagan and Popp, 2018).

Since women tend to do more 'trip-chaining' – that is making multiple stops for different purposes on one trip, such as dropping off children at school on their way to work in the mornings – car-share is less feasible. The absence of child seats in car-share vehicles is another barrier for women, especially those travelling with children. Therefore, to promote more equitable participation in car-share schemes, more family-friendly measures could be adopted, such as increasing locations to pick up/drop off vehicles and providing child seats in more vehicles.

4

TOOLS FOR CITIES TO DEVELOP GENDER EXPERTISE IN CLIMATE ACTION

WOMEN'S SAFETY AUDITS, GENDER-DISAGGREGATED DATA, GENDER BUDGETING AND GENDER-RESPONSIVE PARTICIPATORY PLANNING ARE PRACTICAL TOOLS THAT CITIES CAN ADOPT IN ORDER TO IMPROVE ANALYSIS OF DIFFERENTIATED GENDER NEEDS.



TOOL 1 WOMEN'S SAFETY AUDITS

Women's safety audits are a tool for cities to incorporate a gender perspective into transport investments.

The World Economic Forum suggests that women should be consulted on urban design and transport policies through focus groups, and that safety audits be conducted to understand gendered impacts (Sur, 2015). The United Nations Women's Global Flagship Initiative, Safe Cities and Safe Public Spaces, further recommends women's safety audits as a way for cities to address the pandemic of gender-based violence on public transport and in cities.

Conducting women's safety audits could help develop robust indicators to evaluate female safety on public transport systems and in public spaces, as well as improving women's and girls' safety in urban and transport policy and planning. A 2014 poll by the Thomson Reuters Foundation and YouGov identified the 16 cities with the most dangerous public transport systems for women. The top three cities were Bogota, Mexico City and Lima. Cities in the Global North – Paris, London and New York – also made the list (Thomson Reuters, 2014).



The ranking was based on five indicators:

1. How safe women feel traveling alone at night
2. Risk of being verbally or physically harassed
3. Likelihood that other passengers would come to their assistance
4. Trust in authorities to investigate reports of harassment or violence
5. Availability of safe public transport

These indicators provide a useful foundation for (and could be expanded to create a more comprehensive set of) indicators to evaluate female safety on public transport systems and in public spaces.

BOX 6

UN WOMEN INSIGHTS ON THE CASE FOR WOMEN'S SAFETY AUDITS

'Women's safety audits are a participatory tool that enable women users of a space to identify the elements in the built environment that contribute to or limit their sense of safety. It provides detailed information on issues related to women's safety, mobility, accessibility, and relationship with a given public space with the objective to generate concrete recommendations for the short-, intermediate- and long-term to enhance women's safety within a given space.

Source : Laura Capobianco, Advisor – Safe Public Spaces & Lizzette Soria, Technical Specialist. Ending Violence Against Women Section. UN Women.

This tool values the everyday lived experience as a distinct expertise where women are uniquely positioned to speak out about their safety concern and fosters women's active participation in the planning process.

The women safety audit has been adapted in multiple settings and groups, carried out jointly with local government representatives, and evaluated, such that this tool is now recognised internationally as a best practice.'

TOOL 2 GENDER-DISAGGREGATED DATA COLLECTION

Gender-disaggregated data is a tangible way for policymakers to capture and assess differences in the gendered, social, political, economic and environmental preferences, behaviours and actions of individuals across diverse populations.

This gender analysis could then direct gender-informed policy interventions and investments, which helps create more gender-inclusive outcomes. For example, gender-disaggregated data on commuting patterns (i.e., purposes, modes, timings, routes) could help better account for gender differences in how, where, when and why we travel in the city. This data could help ensure that public transport, walking and cycling networks accommodate a diverse array of trips for diverse populations.



BOX 7

INTERVIEW WITH UNFCCC GENDER AFFAIRS OFFICER, MS FLEUR NEWMAN

Why is gender-disaggregated data important for cities?

You cannot assume that people use transport in the same way. In fact, we know that women, men and children use transport differently, based on their roles and responsibilities within their families and societies. Cities need to understand who is using transport, when and why – as well as who is not using transport and why – to be able to improve its services. We need to acknowledge that there are gendered differences and work to better understand those differences.

Collecting gender-disaggregated data is important. But equally important is how that data is interpreted and applied to policy – checking what assumptions cities are making when designing policy, because that impacts the policy outcomes. And so, cities need to not only gather gender-disaggregated data, but also develop policy mechanisms, including engaging gender experts, to understand and apply it.

Cities can be pioneers in gathering gender disaggregated data – especially if it is not happening at the state or national level. Cities can share their data and research with local and national governments who would benefit from the information. The strength of cities is their agility and ability to do things that other levels of government or policymaking can't, because cities are closer to the community.

How does gender-disaggregated data impact how cities are governed, and what are some practical applications of it in improving transport?

Big questions! I would start by looking at how you invest and where. By this I mean understanding if you are prioritising infrastructure that will benefit just one segment of your city population and what that means from an economic perspective and a rights perspective.

From a rights-based perspective, cities want to ensure that their policies are not institutionalising – or systematically creating – barriers to people's mobility. For example, gender-disaggregated data can help cities to ensure that they are not inadvertently creating barriers to women participating in formal work. At the same time, as a minimum, cities should ensure that their policies are not exacerbating people's unpaid care burdens, which now predominantly fall on women – for example, that they can get to schools and hospitals easily and safely.

From a design perspective, understanding who is using transport infrastructure, when and why, is useful for cities to facilitate more journeys. Also, to be able to support citizens with the least capacity to travel – such as a lack of financial resource, time or physical ability.

What barriers are there to gathering and applying gender-disaggregated data in policymaking?

It is harder to track who is not there – who is not using transport because there are barriers preventing them from using it, or because it doesn't meet their needs. It is therefore not sufficient to just gather gender-disaggregated data.

To gather more inclusive data at the household level and beyond, it's important to pay attention to how you gather the data, or you may not reach the people you actually want to reach. Those people may not be participating in public meetings or in the spaces you go to gather data.

The challenge, therefore, is not what's obvious, it's what's not obvious. There are ways to reach broader groups, such as engaging local groups, but this takes time and costs. So, it is really about whether or not it is treated as a priority.

It is important to have a holistic perspective – particularly because some of the people you want to include may have subsidised transport fares that may impact a decision to spend time and money to gather the data. There is undoubtedly tension between the not-mutually-exclusive motivations of creating a society we want to live in and applying a purely economic, profit-driven perspective.

How do you make the case for this kind of research and investment?

It is helpful to find good examples in other cities, to be able to show the kind of holistic outcomes that you can get from good design, rather than just based on cost. For example, studies that show that communities are more satisfied and engaged as a result of holistic policies.

Looking at community or city outcomes from rights-based and effectiveness perspectives is not simple. You need to consider many things. For example, a city might run more efficiently than another just because it has safer streets and is not having to deploy extra police. The city is a system, so it pays to look at it from a systems perspective.



Do you have any best practice examples or tips for mayors interested in gathering and using gender-disaggregated data?

One good practice example came up at a recent event in Bangkok, relating to the Philippines and climate change policy. One of the challenges of climate policy is that it covers lots of different sectors within government, but those sectors are often working in silos. One of the good practices for mainstreaming climate change therefore is bringing everyone together who needs to be at the table. This involves thinking outside the box about who could contribute to the conversation to bring in new ideas and fill the gaps you didn't even know you had. An example of this can be found in the Philippines Office of the President, where a broad cross-section of government is represented through the advisory board of the Climate Change Commission, which is the sole policymaking body of the government. To this end, the advisory board includes a representative of the Philippines's Commission on Women as well as community associations. It seeks to create a policy space that is informed collectively and through the exchange of information. Such a coordinated approach creates opportunities for conversations about why gender matters in the context of climate change across all sectors.

Therefore, the good practice is bringing in people who you may not think need to be there, but who could have something to contribute. That includes local communities. In different cities this would be done in different ways. For example, you may not think that an NGO, or even government body, dealing with violence against women would need to be included in a conversation about transport. They may not even think that they need to either. But they absolutely do. And so, it is important to understand the context and to create an environment in which people can contribute their information in a way that makes them want to come back and do it again.

It may be helpful for cities to have a list of organisations that they could reach out to. Although this runs the risk of excluding some organisations. Maybe they could consider sector by sector in city planning – for example, any organisation working on budgeting issues, then safety and security and so on.

What potential does data have to help us better create cities that work for everyone?

The dream is that data gives us cities that work for everyone, shedding light on areas that are being underserved. It can also shed light on opportunity for innovation to increase gender equality through accessibility. Gender-disaggregated data can translate into more inclusive and liveable cities.

Is there anything else you would like to add?

My sense is that with gender, a more nuanced and detail-oriented approach is needed, because there are so many systemic issues. Systemic biases and barriers will influence data and, in turn, will influence outcomes if they are not factored in. So, when doing research and gathering gender-disaggregated data, it should be assumed that there will be barriers and data gathering methodologies should be designed to overcome these barriers.



TOOL 3
GENDER BUDGETING AND GENDER-RESPONSIVE PARTICIPATORY PLANNING

Gender budgeting and gender-responsive participatory planning are tools that cities can employ to develop gender expertise and address gender inequalities.

Both gender budgeting and gender-responsive participatory planning stem from the recognition that there are variations between women and men – and among different groups of women and men – in terms of their needs, access to resources, access to opportunities and constraints (Aguilar et al., 2015; Alston, 2014; Alber, 2016; Hannan, 2009; and Terry, 2009). Both tools aim to address the underlying structural inequalities that cause these variations by taking into account and responding to the differential needs of women and men (Ibid.).

Gender-responsive participatory planning enables governments to involve a wider range of citizens in decision-making processes, and therefore increase transparency and accountability. Meanwhile, gender budgeting is a tangible way to inject gender into policymaking by enabling policymakers to assess the gendered impacts of public spending. By focusing on the allocation and spending of public resources, gender budgeting allows policymakers to understand how fiscal decisions have a gendered impact, whereby the benefits are not always evenly distributed among society.

The City of Berlin introduced gender budgeting in 2003/2004 to determine whether, and the extent to which, public programmes and services, such as sports facilities, cultural institutions, music school lessons and adult education courses are being used by women and men (Berlin Senate Department of Finance). Another early adopter of gender budgeting is the City of Vienna, which implemented gender budgeting in 2005 as part of a broader gender mainstreaming initiative. All municipal departments must assess who benefits from the public funds and services they deliver, as well as whether and how the distribution of resources impacts existing inequalities between women and men (The City of Vienna).

GENDER-RESPONSIVE PARTICIPATORY PLANNING ENABLES GOVERNMENTS TO INVOLVE A WIDER RANGE OF CITIZENS IN DECISION-MAKING PROCESSES, AND THEREFORE INCREASE TRANSPARENCY AND ACCOUNTABILITY. MEANWHILE, GENDER BUDGETING IS A TANGIBLE WAY TO INJECT GENDER INTO POLICYMAKING BY ENABLING POLICYMAKERS TO ASSESS THE GENDERED IMPACTS OF PUBLIC SPENDING

More recently, the City of Reykjavik introduced gender budgeting as part of the city's Human Rights Policy. According to city officials in Reykjavik, gender budgeting is a tool help ensure the fair distribution of goods, resources and assets according to people's different needs (The City of Reykjavik, 2016). This can lead to better use of public resources and funds, better governance, greater participation in the budget process, a more robust democracy and more efficient goal setting (Ibid.).

BOX 8

INTERVIEW WITH UN UNDER-SECRETARY-GENERAL AND EXECUTIVE DIRECTOR, UN-HABITAT, MS MAIMUNAH MOHD SHARIF

? Why should cities pilot gender-responsive participatory budgeting and planning?

Climate change has a greater impact on those that are more reliant on natural resources for their livelihoods. These same persons also have the least capacity to respond to and cope with natural hazards, such as droughts, landslides, floods and hurricanes, and areas where poor people live often times also lack the supportive infrastructure. Women, who most often are responsible for ensuring their families are fed, generally face higher risks and greater burden due to climate change in situations of poverty. Women are disproportionately represented amongst the world's poor.

Women and men have different opportunities and access to resources that help them adapt to a changing climate, which in turn impacts the availability of food, fuel, water, the integrity of shelter and the immediate living environment. Women, have less assets, income and savings to cope with the loss and damage from extreme weather events, and due to the fact that women's livelihoods are more often home-based, they also face more direct impacts from climate impacts like flooding and shelter damage.

But women are not only vulnerable to climate change, they are effective actors and agents of change in relation to both mitigation and adaptation. Women frequently possess detailed knowledge and expertise in the area of climate change mitigation and response, disaster reduction and adaptation strategies. Women's responsibilities in households and communities, as stewards of natural and household resources, positions them well to contribute to livelihood strategies, adapted to changing environmental realities. Given these numerous responsibilities and tasks, women should, and need to, be actively engaged in participatory planning and decision-making.If policies and plans are implemented without women's meaningful participation, it can significantly increase existing inequalities and decrease the effectiveness of a holistic climate change response and adaptation.

Factors such as gender inequality in access to social and physical goods; gender gaps in education, income, time use and leisure; and gender-differentiated roles and responsibilities in the household, community and labour markets affect the effective channelling of financing to women.

For these reasons, gender-responsive participatory budgeting and planning are extremely important tools to ensure that no one is left behind in cities. Women and men have very different experiences in cities, so it is vital that planning and budgeting reflect these different experiences, needs and consequential different priorities. Participatory processes also enable authorities to explain priorities and climate projections to concerned communities, thereby enabling them to plan and cater according to the real needs on the ground, leading to better planning and city development..

? In what circumstances do you recommend to pilot one or the other?

Both planning and budgeting are vital steps in local governance. Therefore, they should be used simultaneously and to support each other.

? How does the piloting of gender-responsive participatory planning impact cities and urban climate action?

Using gender-responsive participatory planning helps local authorities to ensure that their resources are used more effectively and holistically to serve their communities.

It also enables authorities to ensure that climate action planning is not negatively impacting on communities, is inclusive and far reaching and that it harnesses local knowledge and local priorities to maximise effectiveness.

By ensuring that gender is addressed equally, you also ensure that vulnerable populations are adequately addressed and included. Participatory planning should also extend to disaster risk reduction and response planning – to ensure that authorities are able to meet the needs of women and men equally.

How does the piloting of gender-responsive participatory budgeting impact cities and urban climate action?

Gender responsive participatory budgeting is a powerful tool to empower women and men, and to ensure that programmes are using resources effectively. Budgeting should reflect local priorities and be responsive to the needs of all in the community.

In climate action budgeting, cities will become more responsive to those most vulnerable to the impacts of climate change – particularly women. Cities will be able to ensure that there are appropriate resources to respond to the needs of their population and effectively cover possible climate impacts.

What are the barriers to implementation?

If there is no political will, participatory processes will either not exist or not have an impact on decisions that influence policy and response. Authorities need to be convinced that these processes will benefit them, with clear positive effects for the local economy, sustainability, safety and resilience. Fortunately, we know that there are positive effects for all of these – but it still takes time to change the traditional ways of working.

Secondly, participatory processes are more expensive and more time-consuming. Therefore, it is often simpler to plan and budget without consultation. However, we know that ultimately this has proven less effective and costlier. In the long run, if plans and programmes are not supported by the community, or do not target those most in need, the response necessary following a disaster has struck, or the toll of climate change has taken effect, is also more expensive.

What are some tips for cities wishing to implement this?

The first step is open and clear communication. Cities need to provide clear and regular information to their residents – in a language and way that the community will understand. Women often have less access to information, due to lack of access to education or male heads-of-household not passing on information. Therefore, cities should guarantee extra efforts are made to ensure that women are receiving the necessary information, in a way that is appropriate to their context.

The next, more difficult step is to actively listen to communities, and be willing to adapt plans and budgets accordingly. This can be challenging for city authorities and professionals but is vital to ensure the effectiveness and inclusivity of participation.

In the city context of gender and climate change, focus is often laid on women as a particularly vulnerable group that is adversely affected by the impacts of climate change. While this is a highly important issue to address, it should not be neglected that other aspects of climate change and climate policy also have gender dimensions. The implementation of gender-sensitive climate policies can maximise potential co-benefits and synergies.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in collaboration with UN-Habitat and GenderCC-Women for Climate Justice developed a handbook that provides advice on how to successfully take into consideration the full spectrum of challenges and opportunities in the context of urban climate policy: ***Gender and Urban Climate Policy - Gender-Sensitive Policies Make a Difference***

5

CASE STUDIES ON HOW CITIES ARE DEVELOPING GENDER EXPERTISE

THE FOLLOWING TWO CASE STUDIES OF BARCELONA AND SAN FRANCISCO ILLUMINATE SOME ACTIONS THAT CITIES HAVE ALREADY TAKEN TO DEVELOP GENDER EXPERTISE IN URBAN MOBILITY POLICIES AND PROGRAMMES.

CASE STUDY 1 BARCELONA: GENDER JUSTICE - A BETTER CITY FOR EVERYONE

The city of Barcelona has taken a lead in gathering gender-disaggregated data, building its institutional gender expertise and driving gender-inclusive climate action.

In 2016, the city launched a 'Plan for Gender Justice (2016-2020)' – an action plan working towards the elimination of gender inequalities (Ajuntament de Barcelona 2016). The plan has four strategic areas:



1. **INSTITUTIONAL CHANGE**
   Increasing institutional gender expertise via gender training or gender budgeting, for example.
2. **ECONOMY FOR LIFE AND TIME MANAGEMENT**
   Promoting gender equality in employment and entrepreneurial support programmes, as well as promoting a gender-equitable division of domestic work.
3. **CITY OF RIGHTS**
   Addressing structural barriers that infringe upon human and social rights in the city.
4. **LIVEABLE AND INCLUSIVE NEIGHBOURHOODS**
   Ensuring that urban public space is safe for and inclusive of women and girls, which emphasises the need to address gender-based violence.

Under the fourth strategic area, the City of Barcelona developed a new Government Measure: Urban planning with a gender perspective (Ajuntament de Barcelona 2017). The measure puts daily life at the centre of its policies, using an inclusive approach to respond to the needs of all citizens. Daily life is broken down into four areas: productive (paid work), reproductive (carer and domestic work), community, and personal (such as leisure and sport). It recognises that urban planning 'is no neutral matter,' because certain aspects or sectors of society have been favoured at the expense of others over time, and not always consciously. Urban planning with a gender perspective focuses on people's every day experiences – local people are experts and they are consulted to build bottom up collective.

Initiatives provided for under the new Measure include pilot projects for small- and medium-scale urban changes to meet the needs and experiences of daily life, as well as initiatives for institutional change.

Examples of small- and medium-scale urban changes include carrying out safety audits in neighbourhoods; a new bus network; and the integration of gender into a new Superblocks programme that is tackling city challenges such as lack of green space and high levels of air pollution.

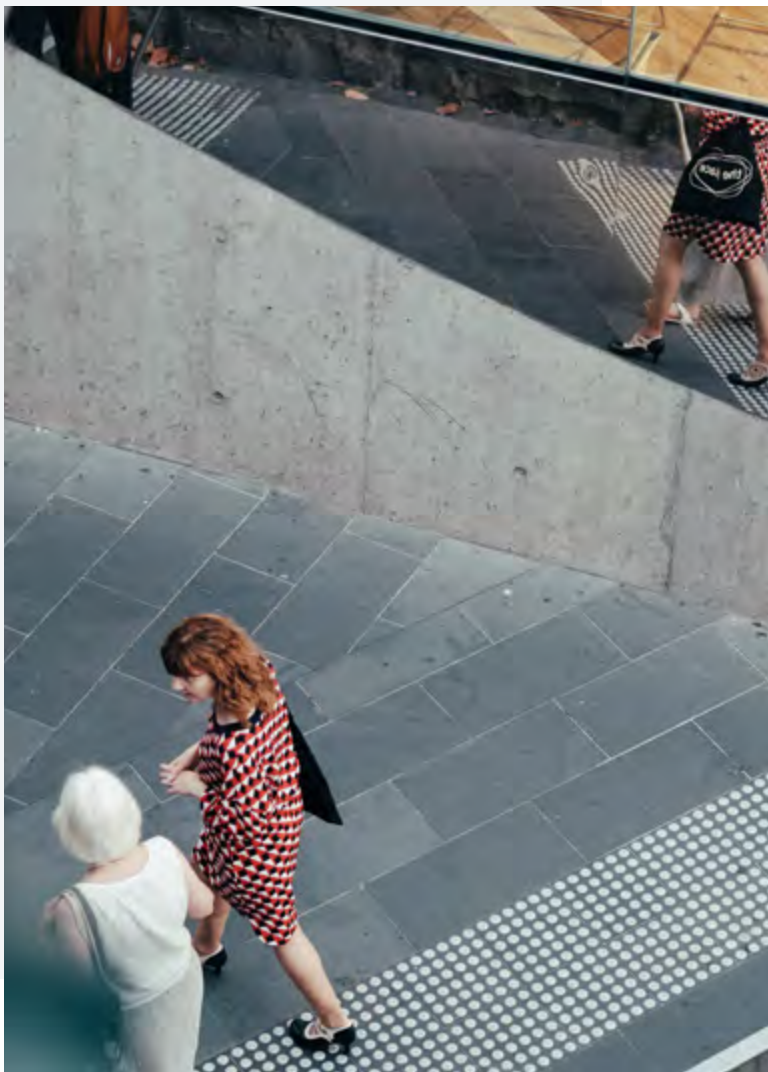
Examples of initiatives to bring about institutional change include: organising skills-acquisition training in gender perspective for technical and executive staff; preparing a manual with gender criteria or experts involved in public-space projects; and drafting gender criteria and indicators for revising projects.

The city is also prioritising sustainable mobility and is gathering gender-disaggregated data to understand women's mobility behaviour, patterns and needs. The data shows gendered differences in journey purposes and times: women primarily travel for family reasons, and then work, whereas men primarily travel above all for work. Women make more short-distance, frequent trips within the city that can be more encumbered, for example travelling with children or prams. Women make more trips throughout the day than men, especially between 11 am – 2 pm and 4 pm – 8 pm, while men make most of their trips between 5 – 8, reflecting gendered distribution of domestic labour. The data also shows that women use public transport more than men do. Therefore, from a gender perspective, it is important to incorporate local connections into public-transport services (Ajuntament de Barcelona 2017, p.7).

Currently, the City and Public Health Agency are evaluating the Superblock programmes in terms of health implications (i.e. noise and air pollution), changes in number of vehicles in the area and use of public space. They are incorporating a gender perspective, gathering data on women's use and experience of the Superblocks, to understand whether the project is improving, exacerbating or not changing existing gender inequalities.

Source: Ajuntament de Barcelona (2017)

Consult the infographic on w4c.org



CASE STUDY 2
SAN FRANCISCO: CLOSING THE DATA GAP FOR A CYCLING SCHEME

The City of San Francisco has collected gender and race-disaggregated data on cycling infrastructure usage in the South of Market District (SoMa) neighbourhood, to better understand cycling as a low-carbon transport solution. The study was conducted by the San Francisco Department of the Environment, with C40 Cities and the University of California, Berkeley.

Increasing biking is a key strategy to achieving San Francisco's ambitious climate and sustainability goals: net zero emissions by 2050 and 80% of all trips by sustainable modes (such as biking, walking or transit) by 2030. Currently, only 3.9% of all trips are by bike, significantly less than the 10% projected for 2030 to help the City to achieve the 80% goal.

Consistent with other studies conducted in the US, the study found that white men are disproportionately represented in city cycling. Women make up just 29% of the people using the new lanes, despite representing 49% of the population. Women, and especially women of colour, cycle less and are more likely to cycle during off-peak hours and for non-work purposes than men. While fear of injury and theft were deterrents for both men and women, older women, expressed concern about cycling safety and risk of falling or collision.

With this knowledge, the City of San Francisco can build a more inclusive urban cycling infrastructure that serves the people's diverse mobility needs. In turn, this will help it to achieve its transport mode shift goals and, ultimately, reduce city emissions.

In the case of San Francisco, physical infrastructure, mainly in the form of protected cycle lanes, secure cycle parking, and adequate street lighting along cycle routes is needed to support existing cyclists, encourage novice or less confident cyclists and to take gendered perceptions of safety into account. Since women are also more likely to use cycle lanes during off-peak hours for non-work trips, both orbital and radial safe cycling routes should be provided to facilitate all types of journeys.

Socio-cultural infrastructure is also necessary to challenge biases that prevent women and ethnic minorities from cycling. This can take the form of partnerships, targeted outreach and education in underrepresented communities. Cultural and social factors largely contribute to the underrepresentation of women, Asian and Hispanic/Latino people in city cycling. Overcoming gender and ethnic biases will require investment in partnerships with these communities to complement investments in protected cycle lanes and secure cycle parking. Therefore, cities must approach infrastructure from a holistic perspective and invest in both physical and sociocultural infrastructure to facilitate more sustainable livelihoods.

Source: C40 Cities (2018).

29%

OF THE PEOPLE USING THE NEW LANES ARE WOMEN, DESPITE REPRESENTING 49% OF THE POPULATION

4. WOMEN'S LEADERSHIP IN CLIMATE ACTION



KEY MESSAGES



The rise in women-led grassroots organisations has elevated gender issues and women's representation at international climate negotiations. They have also empowered women on the ground, by raising awareness, building capacity and driving collective action.

Yet this work often goes unrecognised. Climate solutions can be conceptualised as consumerist and technology-oriented (e.g., renewable energy and autonomous vehicles). We must reframe climate action to include and value grassroots activism that has been spearheaded by women-led organisations.

Women's mentorship programmes and the Gender Assessment and Monitoring of Mitigation and Adaptation (GAMMA) methodology are two practical tools that cities can invest in to increase women's participation, as well as strengthening gender expertise.

Education programmes for girls at school and university are necessary to build leadership skills and increase future generations of women's participation in science, technology and engineering fields.

THIS CHAPTER EMPHASISES THE IMPORTANCE OF STRENGTHENING AND INCREASING WOMEN'S LEADERSHIP AND PARTICIPATION IN URBAN CLIMATE ACTION, PARTICULARLY IN GRASSROOTS ENVIRONMENTAL ACTIVISM AS WELL AS TECHNOLOGY AND INNOVATION.

It provides two tools:

- **investing in mentoring programmes, and**
- **the GAMMA methodology.**

Finally, it includes case studies from Paris and London showcasing the steps cities have taken to increase women's leadership in climate action.

STRUCTURAL FORCES IN SOCIETY, SUCH AS THE GENDERED DIVISION OF LABOUR AND INCOME INEQUALITY, CAN INFLUENCE PEOPLE'S ABILITIES TO ENGAGE IN CLIMATE ACTION (...). IT HAS BEEN ARGUED THAT CLIMATE PARTICIPATION IS A REFLECTION OF PRIVILEGE (...). FOR EXAMPLE, WOMEN WHO HAVE THE RESOURCES TO HIRE DOMESTIC HELP MAY HAVE MORE SPARE TIME TO EDUCATE THEMSELVES ABOUT CLIMATE CHANGE AND ATTEND ENVIRONMENTAL ADVOCACY MEETINGS

1 REFRAMING CLIMATE ACTION

Structural forces in society, such as the gendered division of labour and income inequality, can influence people's abilities to engage in climate action (MacGregor, 2010; Alber, 2015; Alston, 2014; Demetriades and Esplen, 2008; Detraz, 2016; Gaard, 2015; and Kronsell, 2013). It has been argued that climate participation is a reflection of privilege (MacGregor, 2010; Bernier et al., 2015; Hannan, 2009; Djoudi et al., 2016; Demetriades; and Esplen, 2008). For example, women who have the resources to hire domestic help may have more spare time to educate themselves about climate change and attend environmental advocacy meetings. Through their engagement, they gain access to knowledge, resources, decision-makers and networks that they can leverage to elevate themselves in climate leadership (for example by organising campaigns and lobbying governments).

Meanwhile, people who may work multiple part-time jobs on top of childcare and domestic work may be too overburdened to engage in climate change. They may lack the time to attend advocacy meetings, participate in marches, or otherwise engage in collective climate action or community politics. A new study from Boston found that participants in community meetings about housing and development policy predominantly tend to be older, white men who are long-term residents and homeowners in the neighbourhood (Einstein et al., 2018). For example, while women represent 51% of the population that is registered to vote, they comprise just 43% of commenters at community meetings (Ibid.).

The underrepresentation of people from lower socio-economic status in local governing processes also has implications for sustainable transport. People on lower-incomes may unintentionally have lower carbon footprints than their wealthier counterparts because they primarily walk, cycle, or rely on public transport and cannot afford high-consumerist habits such as air travel (Polk, 2009; Kronsell, 2013; and Gaard, 2015). However, their economic precariousness and underrepresentation in local politics makes it less likely for them to have influence and involvement in decision-making (MacGregor, 2010 and Gaard, 2015). This, in turn, may prevent their more sustainable transport behaviours from translating into policy outcomes (Polk, 2009; Kronsell, 2013 and MacGregor, 2010).

In the Global North, climate participation tends to be framed in a highly individualised way that conflates it with consumerism (Alaimo, 2009; Soper, 2009, MacGregor, 2010 and Gaard, 2015). In other words, the emphasis is placed on sustainable consumption, buying 'green' products, such as environmentally friendly household cleaning products, rather than making bigger lifestyle changes to reduce one's environmental impact. This is problematic because aggressive consumption increases carbon emissions, in turn exacerbating climate change. Moreover, market-based responses to climate change detract from grassroots collective action and alienate people with fewer financial resources (MacGregor, 2010). This framework of climate participation suggests that climate action is predicated on sustainable consumption, which means that women and poor people are less able to participate. Women's historical exclusion from, and sustained barriers in, the paid labour market (occupational segregation, the gender pay gap, sexual harassment) diminishes their access to disposable income and capital. Similarly, people with lower incomes have less purchasing power and financial resources to divert to sustainable consumption choices.

Last but not least, the technocratic framing of climate change and climate action results in a myopic focus on technological innovations as climate change solutions. This downplays the relevance of non-technological forms of participation in climate action, such as local grassroots efforts (MacGregor, 2010 and Metcalf, 2015). However, women's grassroots activism has played – and continues to play – a critical role in climate action, especially in raising awareness, building local capacity to act and elevating issues on policy agendas. These efforts often do not receive the recognition they deserve and the support they need to scale up because they are not 'hard' technological solutions. It is important, therefore, to broaden our conceptualisation of climate action beyond consumerist and technology-oriented solutions, and reframe it to include and value the role of grassroots activism.

IN THE GLOBAL NORTH (...) THE EMPHASIS IS PLACED ON SUSTAINABLE CONSUMPTION, BUYING 'GREEN' PRODUCTS, SUCH AS ENVIRONMENTALLY FRIENDLY HOUSEHOLD CLEANING PRODUCTS, RATHER THAN MAKING BIGGER LIFESTYLE CHANGES TO REDUCE ONE'S ENVIRONMENTAL IMPACT. THIS IS PROBLEMATIC BECAUSE AGGRESSIVE CONSUMPTION INCREASES CARBON EMISSIONS, IN TURN EXACERBATING CLIMATE CHANGE



2 WOMEN'S GRASSROOTS ENVIRONMENTAL ACTIVISM

Non-governmental organisations focusing on climate change and women – particularly GenderCC, the Global Gender and Climate Alliance, Women in Cities International (WICI) and the Women's Environment and Development Organisation (WEDO) – have been instrumental in incorporating gender in the international climate agenda and amplifying women's voices at United Nations climate change meetings and negotiations. An example of a successful initiative enhancing women's inclusion and gender issues in local, regional, national and international climate decision-making is the Women's Development Fund (WDF), which was created in 2009 through a partnership between the Government of Finland and the Global Gender and Climate Alliance, with support from WEDO, the United Nations Development Programme, and the Government of Iceland. WDF provides travel support, capacity building, networking, outreach and advocacy for women in politics addressing climate change (Burns and Andre, 2014).

Another example of the strength of women's grassroots activism in driving climate action is the Women's Environmental Network (WEN), formed in 1988. WEN has led multiple campaigns on issues relating to women, gender and the environment, such as the environmental causes of breast cancer and the detrimental environmental and health impacts of sanitary products (Metcalf, 2015). These campaigns have been successful in raising awareness over important environmental issues and brought about powerful collective actions. Unfortunately, these examples of grassroots, participatory climate action are often overlooked, with technology-oriented solutions being prioritised.

Mentoring and capacity building programmes, like WDF and the Women4Climate initiative, help to increase, support, and retain female leadership in climate action. The **C40 Women4Climate initiative** offers a unique mentorship platform where young women and successful climate heroines from C40 cities can develop and implement actions inspired by the 'think local, act global' philosophy. The programme matches mayors, city officials, and committed leaders from the business sector, international organisations and civil society with emerging women leaders developing local projects to tackle climate change. Mentors share their knowledge and experiences, supporting the mentees to develop their projects and become powerful leaders in their chosen field, including politics, non-governmental organisations, business, media, and community groups.

Investing in mentoring programmes for professional women and education programmes for girls is necessary to cultivate and support female leaders in driving climate action. Investments in education programmes for schoolgirls can encourage participation in science, technology and engineering fields and ensure the future generation of women have the skills and confidence to enter this space. Investments in mentoring programmes for professional women can help with retention and promotion in these male-dominated sectors. Moreover, there must be a recognition that gender representation is necessary in prominent decision-making bodies, whether at the local, state, national or international level.

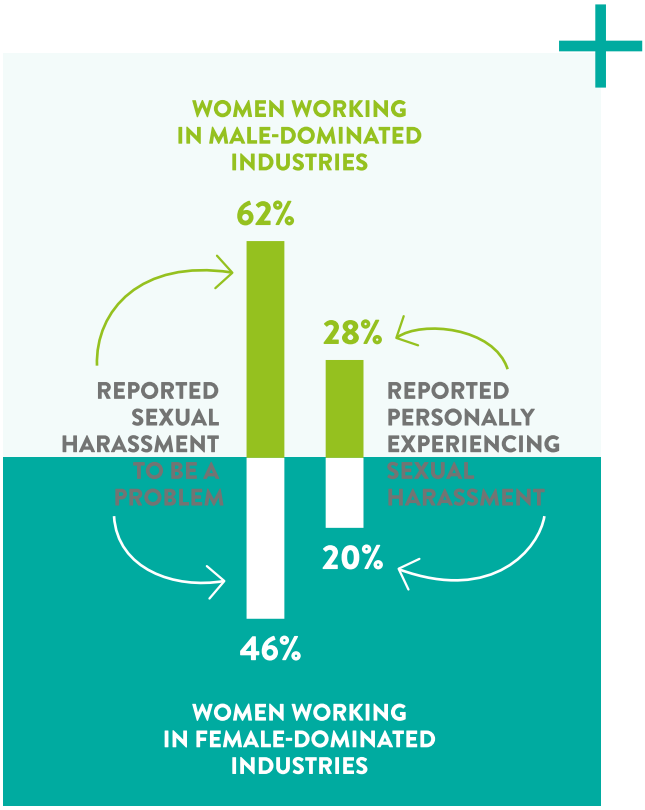
3 WOMEN IN TECHNOLOGY AND INNOVATION

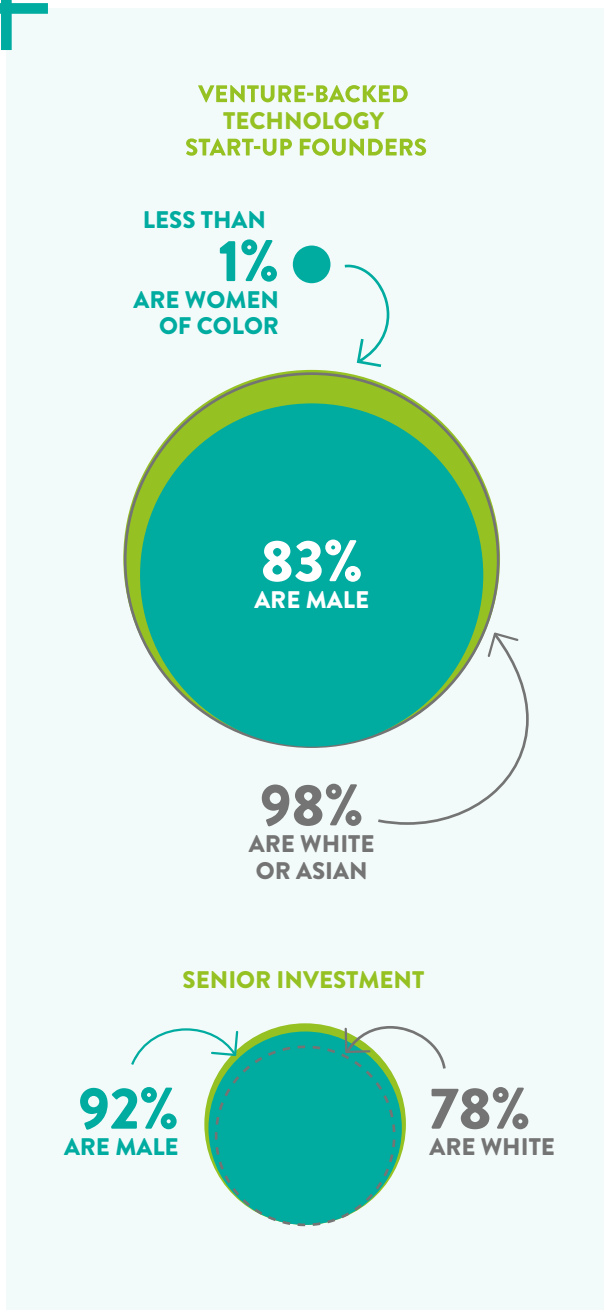
In 2015, women held just 26% of computer and mathematical occupations and 36% of high-tech occupations (Scott et al., 2018). Women – and especially women of colour – are underrepresented, and face challenges, in the technology and innovation sector (Catalyst, 2018). In Silicon Valley technology companies, women of colour comprise 1% or less of all workers (Scott et al., 2018). Among mid-level women in technology, Asian women make up 43%, black women make up less than 3% and Hispanic women make up 3% (Simard et al., 2013). As cities invest more in sustainable transport and energy efficiency, they will need to steer technological innovation to support sustainability goals. This presents an opportunity for cities to work with stakeholders within the sector to increase gender parity.

Studies of women's experiences in male-dominated industries reveal that gender bias and sexual harassment are two of the most pervasive challenges faced by women in the technology industry (Daley et al., 2018; Williams et al., 2016; and McLaughlin et al., 2017). A 2017 survey of women working in the United States found that 62% of women who worked in male-dominated industries reported sexual harassment to be a problem, compared to 46% of women working in female-dominated industries (Pew Research Centre, 2018). 28% of women working in male-dominated industries reported personally experiencing sexual harassment, compared to 20% of women in other industries (Ibid.). This problem begins before women even enter the workforce; women in universities pursuing degrees in male-dominated subject areas experienced more harassment than women pursuing other degrees (Dresden et al., 2017).

< 1%

OF WORKERS IN SILICON VALLEY TECHNOLOGY COMPAGNIES ARE WOMEN OF COLOUR





There is also a lack of diversity in venture capital. Among venture-backed technology start-up founders, 83% are male; nearly 98% are white or Asian; and less than 1% are women of colour (Scott et al., 2018). Venture capitalists hugely influence start-ups by deciding which ones to fund and steering the selection of senior management and board members. However, according to the 2015 Future List survey, 92% of senior investment teams were male and 78% were white (The Information Staff, 2016). If venture capitalists lack diversity, they have a limited ability to help their portfolio companies create diverse and inclusive cultures.

The intelligent mobility sector has received generous injections of venture capital, but women entrepreneurs are underrepresented, and face significant barriers, within venture capital and start-ups (London Sustainable Development Commission, 2018). Furthermore, the power dynamics between investors and entrepreneurs can compound existing sexist attitudes and behaviours (Martineau, 2018). In a recent survey of female founders, 19 out of 88 respondents experienced some form of sexually inappropriate behaviour (i.e., harassment or coercion) from angel or venture capital investors (Ibid.). Women who reported these incidents primarily did so to protect others, while those who did not cited fear of jeopardising their company's funding prospects and fear of retaliation as their main reasons (Ibid.). This shows that gender inequalities intersect with unequal power relations between investors and entrepreneurs to uniquely disadvantage women in the innovation space.



4

TOOLS FOR CITIES TO STRENGTHEN WOMEN'S LEADERSHIP IN CLIMATE ACTION

INVESTING IN MENTORING PROGRAMMES AND USING THE GENDER ASSESSMENT AND MONITORING OF MITIGATION AND ADAPTATION (GAMMA) METHODOLOGY ARE PRACTICAL TOOLS THAT CITIES CAN ADOPT IN ORDER TO STRENGTHEN WOMEN'S LEADERSHIP IN URBAN CLIMATE ACTION.



TOOL 4 MENTORING PROGRAMMES

The **Women4Climate mentoring programme** aims to educate and empower young women in climate action. It is a decentralised programme matching mayors, deputy mayors, committed leaders from the business sector, international organisations and civil society, with emerging women leaders from different sectors, who are developing projects aimed at providing urban climate solutions. Projects range from tech and civic initiatives and research, to awareness raising and community mobilisation. Mentors share their knowledge and experience, supporting mentees to become powerful leaders. Through their mentors, mentees also have access to a larger pool of networks and contacts.

Each mentee selected for the programme receives training that aims to enhance skills development, address gender barriers to women's leadership, and inspire deeper engagement in the climate change arena. The programme also enables mentees/young women from different cities and countries to connect with each other through gatherings and events.

The programme model in each city differs depending on the city's focus. The programme works with local partners to provide training for the mentees in desired skills, such communications and media training. Women4Climate worked with leading communications enterprises such as Facebook and Instagram to provide communications training.

Another pillar of the programme is the **Women4Climate tech challenge**. This is a global competition designed to spark innovation and accelerate climate solutions from women in the tech community to a wide range of urban sustainability issues, such as mobility, food, waste, water, buildings, urban farming and air quality. The contest is open to any woman carrying out an innovative, concrete solution with a measurable impact. Finalists pitch their projects to a jury of mayors at the annual Women4Climate conference. The winner's solution is piloted in cities whose mayor has committed to test the solution.

Source: C40 Cities



TOOL 5 GENDER ASSESSMENT AND MONITORING OF MITIGATION AND ADAPTATION (GAMMA) METHODOLOGY

The Gender into Urban Climate Change Initiative (GUCCI) is an innovative project that strengthens women's leadership and participation in urban climate action, whilst simultaneously developing gender expertise. The GUCCI project was launched in 2015 by GenderCC – Women for Climate Justice, a global network of organisations, experts and activists that work to advance both gender and climate justice. It aims to integrate gender into urban climate policies in cities building capacity at the local level and developing gender-responsive policy recommendations. Currently there are 14 participating pilot cities in South Africa, India, Indonesia and Mexico.

In each pilot city, issues and priorities are systematically identified and local strategies are developed to ensure that climate policies are more inclusive and responsive to the needs of all – particularly women, poor people and other marginalised groups.

Partnering with women's organisations that work on climate change and environmental issues helps build capacity at the local level. It also empowers citizens to learn about, and participate in, urban planning and governance processes. This is an effective way to build and sustain momentum for long-term gender inclusive climate action amidst short-term political cycles.

The GUCCI project consists of five work stages (GenderCC, 2018):

1. **Conduct a gender assessment of each pilot city's institutional setting and climate policy.**
2. **Develop recommendations for gender-responsive urban policies in consultation with local stakeholders and communities.**
3. **Advocate for gender-responsive adaptation and mitigation.**
4. **Identify and implement a model action or campaign for gender-responsive local climate policy in each pilot city.**
5. **Collaborate for peer learning, international exchange and outreach.**



To conduct gender assessments, the GUCCI project uses the Gender Assessment and Monitoring of Mitigation and Adaptation (GAMMA) methodology, which consists of the following three stages (Alber, 2016 and GenderCC, 2018):

1 GAMMA I: ASSESSMENT OF THE INSTITUTIONAL AND PROCEDURAL FRAMEWORK.

- Are institutions able, and procedures in place, to address climate change and integrate gender dimensions?
- Method: Interview urban officials and relevant stakeholders based on scorecards to determine a quantitative score from qualitative questions.

2 GAMMA II: GENDER SCREENING OF CLIMATE ACTION PROGRAMMES.

- Does the mitigation and adaptation action programme cover policies that can address priority issues from a gender perspective and contribute to gender equality?
- Method: Screen the entire portfolio of mitigation and adaptation actions for their potential benefits on gender equality.

3 GAMMA III: GENDER ASSESSMENT OF PRIORITY POLICIES AND MEASURES.

- Estimate the effects of the implementation of a certain policy on gender equality and gender relations, and then identify options to improve the policy.
- Method: Collect information on the policy's aims, activities, outputs and impacts (both intended and unintended); ask the right questions and develop options on how to improve the policy.

The GAMMA methodology provides a robust way to examine the gender responsiveness of local adaptation and mitigation policies. It helps identify possible entry points to incorporate a gender perspective and develop recommendations for interventions needed to address gender gaps in policies and procedures.

The results of the assessment can guide citizens and local policymakers towards more sustainable, inclusive and low-carbon cities. Not only is the GAMMA methodology applicable at the urban level, but also it is adapted to the national level to enable a gender analysis of national climate policies. Therefore, both urban and national leaders globally could benefit from adopting the GAMMA methodology to drive more gender inclusive climate action.

Source: GenderCC 2018.



5

CASE STUDIES ON HOW CITIES ARE INCREASING WOMEN'S LEADERSHIP IN CLIMATE ACTION

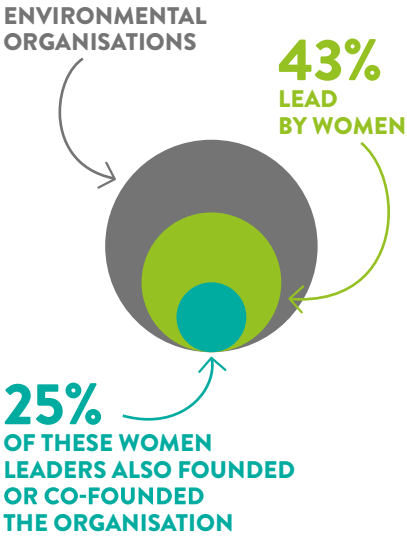
THE FOLLOWING CASE STUDIES OF PARIS AND LONDON HIGHLIGHT SOME BARRIERS TO WOMEN'S LEADERSHIP IN CLIMATE ACTION, AND MAKE RECOMMENDATIONS TO HELP INCREASE THEIR PARTICIPATION.

CASE STUDY 3
PARIS: WOMEN'S LEADERSHIP IN ENVIRONMENTAL ORGANISATIONS

Researchers mapped 104 civil society organisations that engage in climate action in Paris, interviewed female leaders and conducted focus-groups with citizens to investigate the role of women within these organisations.

Organisations range from large environmental NGOs to small grassroots organisations. The mapping revealed that women lead 43% of environmental organisations and 25% of these women leaders also founded or co-founded the organisation. Some of them felt that founding an organisation was the only route to leadership positions, which they were denied in their prior/other workplaces.

Although women's leadership in environmental organisations is considerably higher than that of other civil society organisations, only 20% of the organisations surveyed included a gender perspective in their activities. Where a gender perspective was present, it tended to focus on the role of women in sustainable agriculture or gendered vulnerabilities to climate change impacts in the Global South. Most organisational leaders felt that gender inequalities were less present within their organisations and in civil society more broadly, and are less relevant to climate action.



The exception was organisations that promoted cycling. They were more interested in explicitly addressing gender in their work, viewing cycling as a tool for female empowerment – especially for migrant women without driving licenses – and advocated for more cycling infrastructure. From their perspective, the absence of safe cycle lanes was discriminatory against women and getting more women cycling was a necessary condition for cities to be truly 'bike friendly.' Moreover, they saw the value of increasing women's participation in urban design and planning decisions, as they credited women with raising awareness about built environment issues that men often overlook, such as adequate street lighting.

While organisational leaders interviewed did not feel a need to integrate a gender perspective into their work, all-female focus groups of ordinary citizens expressed that a gender perspective is critical to climate action. Some women felt that sexism and the oppression of women were rooted in the same causes as environmental degradation and the exploitation of nature, and therefore one could not address gender equality without addressing climate action. Many women in the focus group felt that women's engagement in climate action was increasing, especially in developing countries, and getting even more women engaged in climate action would be a game-changer.

The three biggest challenges women leaders of environmental organisations face are public speaking, managing donor relations and having enough time to do it all. Most women cited public speaking as a significant barrier to their leadership development. Some women attributed this to low levels of self-confidence; others felt that public speaking came more naturally to men than women; and others felt that women face more scrutiny and judgment based on their appearances, which makes them more reluctant to be exposed, especially in the media. Meanwhile, many women felt they had to work harder than men to justify their project(s) to donors, who are mostly men. Furthermore, some women were told to tone down their 'girl power' rhetoric to avoid scaring off donors.

Not having enough time was another barrier to women's leadership in environmental organisations. The study found that women leaders were more likely to be involved in their community in other ways, such as in the parent-teacher association at school or the neighbourhood council. In addition to their professional responsibilities and various community commitments, women also had to juggle their childcare and domestic responsibilities. Single mothers, especially, felt that they would be able to be more engaged in climate action if they had more time.



Based on these findings, the researchers recommend the following actions to increase women's leadership in climate action:

PAY ATTENTION TO STEREOTYPES IN PUBLIC DEBATES ON CLIMATE CHANGE.

Stereotypes confine women to certain sectors of climate action (such as food and health) and exclude them from others (such as energy and innovation). Public outreach and discussion at climate events can help change this discourse.

RAISE AWARENESS ABOUT THE IMPORTANCE OF A GENDER DIMENSION IN CLIMATE ACTION IN INDUSTRIALISED COUNTRIES.

Gender-related climate action tends to focus on women in the rural Global South, ignoring industrialised cities in the Global North, including Paris.

MAKE WOMEN LEADERS AS VISIBLE AS POSSIBLE.

Women leaders inspire other women to seek leadership positions. Mentoring schemes therefore should be amplified.

SUPPORT WOMEN TO ASSUME LEADERSHIPPOSITIONS.

More programmes like the former Leadership pour elles are needed. The programme launched in 2014, but is no longer available. It should be reactivated or a similar programme initiated.

COLLECT GENDER-DISAGGREGATED DATA AND INTEGRATE A GENDER DIMENSION IN KEY OFFICIAL DOCUMENTS AND CLIMATE POLICIES.

This provides city leaders and other stakeholders with data, indicators and vocabulary to devise strategies that increase women's inclusion in climate action. The integration of a gender dimension in official documents can provide a key leverage for civil society organisations to take action.

SUPPORT WOMEN WITH DOMESTIC RESPONSIBILITIES TO FACILITATE THEIR PARTICIPATION.

Lack of time remains one of the biggest obstacles to women's involvement in climate leadership. Supporting women with domestic responsibilities – such as providing child care and organising meetings and activities in the evening and weekends – would help women to participate.

Source: C40 Cities (2019).



CASE STUDY 4 LONDON: WOMEN IN CLEANTECH

The London Sustainable Development Commission's (LSDC) Cleantech and Innovation work is designed to support the Mayor of London's commitment to grow the city's green economy and reduce its carbon emissions to zero by 2050. It is advising on ways to make London a world-leading location for low-carbon, cleantech innovation businesses.

'Cleantech' describes those products and services that avoid or repair harmful effects on the environment caused by human activity. These products and services are central to a low-carbon economy and will need to be the norm in a zero-carbon London.

In 2016, the LSDC published **Better Future: A Route Map to Creating a Cleantech Cluster in London.** This seminal report recognised the scale of the challenge set at the COP21 Paris Climate talks, but also the opportunity for London to develop new businesses and technologies to meet the climate challenge.

Since then the LSDC has been providing recommendations for actions that would attract **more women into the sector,** and keep them there.

Businesses with women at strategic and senior management levels have been shown generally to outperform those without. To help London's large and growing cleantech sector reach its full potential, it must therefore draw from the talents and ideas of women as entrepreneurs, innovators and leaders.

THE GENDER-GAP

Anecdotal evidence suggests that the percentage of women in cleantech exceeds that of tech more generally, but that women are underrepresented in leadership positions. Unfortunately, there is not much statistical data available on gender in cleantech to support this anecdotal evidence. One of the few statistics available comes from early stage cleantech start-ups receiving UK grant-funding: 74% have no female founder, 6% had no male founder and only 20% had a mixed gender board. In 2017, only 7% of patents for 'clean' or 'green' inventions filed in the UK were by a team with at least one female.

In the absence of data, looking at comparative studies from technology, innovation and start-ups may provide insight into gender disparities in cleantech. In technology, women represent just 17% of employees, 4% of software engineers and 1% of leadership positions in the combined science, technology, engineering and mathematics (STEM) sector. Furthermore, one in three female innovators report feeling that gender has negatively impacted their career.

BARRIERS TO WOMEN'S PARTICIPATION

One of the biggest barriers to female leadership in these sectors is that venture capital and finance remain male dominated. Only 3% of venture capital partners are women and only 14% of start-up investors (also known as Business Angels) are women. Research shows that start-ups led by men received over 16 times more funding than those led by women. Survey data suggests that men and women calibrate risk differently, with women providing a more balanced assessment of risk, which is more likely to lead to longer-term stability. However, research shows that venture capitalists prefer pitches with more overt confidence, which is more typical of male approaches.

Research also shows that venture capitalists tend to frame questions differently based on the gender of the pitcher. For example, men are more likely to get asked promotion questions that focus on potential gains, whereas women are more likely to get asked prevention questions, which focus on potential losses. Venture capitalists tend to direct more technical questions to men than women, irrespective of their level of expertise. This can impact on women's confidence and indeed, 43% of women surveyed cited lack of confidence as a barrier to success in cleantech; 32% felt it was difficult to be heard in their organisations and 30% felt that investors did not take them seriously. Women also often felt excluded from male-dominated networking events, which tended not to be family-friendly and oriented around perceived male interests, like sports.

LONDON'S WOMEN IN CLEANTECH AGENDA

Based on this research, the London Sustainable Development Commission has developed an action plan to increase women's leadership in cleantech entrepreneurship in London. The Commission is working with the local cleantech community and industry partners, and will convene a steering group to be responsible for the 'Women in Cleantech Agenda' and take forward the commitments made in the action plan by the cleantech community. A number of stakeholders have made commitments which include: exploring setting up a Cleantech fund for women in cleantech; developing best practice guidance for incubators and accelerators; developing an award scheme to showcase women in cleantech.

The six work streams are:

- **Connecting existing networks.**
- **Working with the finance community** to improve gender parity in the companies receiving financing.
- **Strengthening the existing ecosystem,** amplifying activity and developing best practice.
- **Cohesive, strategic and targeted communications** to inspire the next wave of female cleantech entrepreneurs.
- **Working with schools and education institutes** to encourage girls and young women into the field.
- **Addressing unconscious biases and giving women the tools and skills** to succeed in cleantech entrepreneurship.

Source: London Sustainable Development Commission (2018).

Consult the infographic on w4c.org

5. CONCLUSION AND RECOMMENDATIONS



To drive gender inclusive climate action, cities must simultaneously develop gender expertise and increase women's leadership in politics, built environment sectors, and technology and innovation.

CITIES CAN INCREASE GENDER EXPERTISE BY:

CONDUCTING WOMEN'S SAFETY AUDITS.

Sexual harassment and violence inhibit women's and girls' mobility, and thus their agency, social, political and economic inclusion in society. It also inhibits their participation in low carbon mobility solutions. Women's safety audits can improve safety for women and girls in the city, and provide data for robust indicators to systematically assess safety.

COLLECTING GENDER-DISAGGREGATED DATA IN CITIES.

Gender-disaggregated data is required for improved analysis of the differentiated needs of the people within a city. It provides city leaders and other stakeholders with common data, indicators and vocabulary to devise strategies to increase women's inclusion in climate action and address gender inequalities within cities.

INTEGRATING GENDER BUDGETING – PARTICULARLY IN INFRASTRUCTURE INVESTMENTS – AND EVALUATION SCHEMES.

Gender budgeting enables policymakers to assess the gendered impacts of public spending. Adopting gender budgeting in climate finance would also help to identify how investment in technological innovation (and other programmes) to address climate change may disparately impact women and other marginalised populations.

INTEGRATING GENDER-RESPONSIVE PARTICIPATORY PLANNING.

This tool for local governance ensures that their resources serve their community effectively and holistically. Participatory processes enable authorities to explain the different experiences, priorities and needs to men and women, enabling them to cater to their needs. Harnessing local knowledge and local priorities to maximise resource effectiveness in climate planning.

CITIES CAN INCREASE WOMEN LEADERSHIP IN CLIMATE ACTION BY:

INVESTING IN MENTORING PROGRAMMES.

Women's mentoring programmes have huge potential to strengthen female leadership in climate action. They support existing efforts to address gender inequality and climate change at the local level, which can then inform broader efforts at the national, regional and international level. Cities should not only invest in mentoring schemes, but also monitor and evaluate them regularly to improve, scale and replicate them.

USE THE GAMMA METHODOLOGY TO EXAMINE THE GENDER RESPONSIVENESS OF LOCAL ADAPTATION AND MITIGATION POLICIES, IDENTIFY ENTRY POINTS TO INTEGRATE A GENDER PERSPECTIVE AND DEVELOP GENDER-INFORMED RECOMMENDATIONS.

Grassroots women's organisations, local governments and citizens can go through the assessment together to collectively work towards more sustainable and inclusive cities.

RECOMMENDATIONS FOR CITIES, BUILT ENVIRONMENT, CLIMATE AND TECHNOLOGY SECTORS

INVEST IN RESEARCH ON GENDER, CLIMATE CHANGE AND CITIES.

Current research on gender, climate and cities focuses on poor women in rural areas in the Global South. There is a vacuum of knowledge in urban contexts. The suggested direction for future research includes:

- Case study analysis of cities that have conducted women's safety audits.
- Case study analysis of industry-led attempts to increase gender expertise and inclusion (such as technology or transport).
- Research into gendered vulnerabilities to health impacts of climate change in cities, in particular in relation to disasters.

INVEST IN AND INCREASE EDUCATION AND TRAINING ON GENDER ISSUES.

Organisations and companies can demonstrate an institutional commitment to gender equality and inclusion by ensuring that all staff members receive training on gender issues.

SUPPORT DIVERSITY AND INCLUSION IN TECHNOLOGY AND INNOVATION.

Women and people of racial and ethnic minority backgrounds are largely underrepresented, and face significant barriers, in venture capital and start-ups. Cities can support women entrepreneurs by establishing platforms to share knowledge, skills, resources and networks. Cities can also strengthen the existing innovation ecosystem by partnering with the finance community to improve gender parity in companies that are successful in receiving funding.

ADOPT A HOLISTIC APPROACH TO INFRASTRUCTURE – INVESTING IN BOTH PHYSICAL AND SOCIO-CULTURAL INFRASTRUCTURE.

For example, cycling infrastructure requires investment in the physical infrastructure (i.e., cycle lanes and parking) and socio-cultural infrastructure (i.e., education and outreach programmes). It is also essential to ensure that women are included in, and consulted on, physical infrastructure to ensure that their experiences and needs are met.

BE PROACTIVE IN STEERING THE ROLLOUT OF TECHNOLOGICAL INNOVATIONS TO BE INCLUSIVE, ESPECIALLY IN THE URBAN MOBILITY SECTOR.

Technology is disrupting urban mobility in unprecedented ways, and urban policymakers must be open to and plan accordingly for technological innovations in transport whilst simultaneously investing in public transport. New technologies alone will not induce a shift to more sustainable modes of transport and risk perpetuating existing biases in transport planning, unless concerns about social inclusion are at the fore.

To implement the 1.5°C Paris Agreement target and achieve climate action, cities need to include all citizens. These recommendations and tools can guide cities to achieve inclusive climate action.

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Paper 5

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Scoping Study-London's participation in UN Women's Safer Cities and Safe Public Spaces Programme

URBAN LAB







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Scoping Study-London's participation in UN Women's Safer Cities and Safe Public Spaces Programme

We know that people flock to cities like London for opportunity; for work, education, culture, nightlife, and social connectedness. We know that these can be a liberation and freedom to those people who are able to access it. However, we also know that public spaces are used and experienced differently by men and women.

Simply presenting as female in public space increases vulnerability to violence and this is exacerbated at certain times of night in certain locations of the city. This is especially relevant in London, where 40 per cent of sexual assaults take place in public spaces, particularly on the transport network.[1] A survey of 8,000 Londoners also found that 74 per cent of female respondents feel worried about their safety some, or even all of the time, and 68 per cent worry about harassment on public transport.[2]

A Thomson Reuters Foundation report, which studied women on the move in five global cities found that only 65 per cent of women surveyed in London felt confident that they could travel on public transport without sexual harassment or abuse, and just 51 per cent felt confident that a fellow traveller would come to their assistance if they were being harassed.[3] An earlier 2014 YouGov poll revealed that 32 per cent of women in London have been verbally harassed on public transport, and that 19 per cent have been groped or physically harassed.[4]

On top of this, the gendered division of labour means that women are more likely to adopt caring responsibilities where they will be pushing a pram, carrying shopping and making multi-stop journeys. Yet the city is predominantly designed to facilitate linear direct routes into the centre, privileging the young, economically productive male. Furthermore, access to basic infrastructure services that ensure dignity—such as toilets—is highly gendered.

Evidence shows that women and girls are less likely than men to use parks and canal towpaths after dark because of perceived danger. Paths that are poorly paved and insufficiently lit at night also increase both perceptions of and actual danger for cyclists. Step-free access in housing developments, as well as transport stations, is essential to ensure women's safe entry and passage inside, outside and around buildings.
These are just a few ways that public spaces are gendered, but to divide urban experience only into binary categories of sex is insufficient. We know that gender identity, sexual identity, race, class, and physical ability combine in ways that lead to an unequal experience of safety in the city. For example, the London Sexual Violence Needs Assessment found that a criminal case is more likely to be 'nocrimed'—meaning no further action will be taken—if the accuser is BAME, has mental health problems or has learning disabilities. It also found that there are lower levels of reporting from Asian victims and that illegal or uncertain immigration status can also lead to lower levels of reporting.[5]

UN Women founded The Safe Cities and Safe Public Spaces programme in recognition of the discrepancy between how violence in the private domain is largely regarded as a human rights violation, yet violence against women and girls (VAWG) (especially sexual harassment) in public spaces remains neglected and is accepted as normal or inevitable.[6] Respondents

1 MOPAC. *Sexual Violence: The London Sexual Violence Needs Assessment 2016 For MOPAC & NHS England (London).* London; 2016. https://www.london.gov.uk/sites/default/files/sexual_violence_needs_assessment_report_2016.pdf. Accessed 16 November 2018.

2 Greater London Authority. *A Safer City For Women And Girls: The London Tackling Violence Against Women And Girls Strategy 2018—2021.* London: Greater London Authority; 2018. https://www.london.gov.uk/sites/default/files/vawg_strategy_2018-21.pdf. Accessed 12 October 2018.

3 Thompson Reuters Foundation. Women on the Move; 2018. http://2018transportpoll.trust.org/. Accessed 8 April 2019.

4 Villa M, Bates L. The right to feel safe: women should be able to use public transport without fear. *New Statesman.* https://www.newstatesman.com/politics/2014/10/right-feel-safe-women-should-be-able-use-public-transport-without-fear. Published 2014. Accessed November 16, 2018.

5 MOPAC. *Sexual Violence: The London Sexual Violence Needs Assessment 2016 For MOPAC & NHS England (London).* London; 2016.

6 UN Women. *Safe Cities Global Initiative.* New York: UN Women; 2018. http://www.unwomen.org/en/what-we-do/ending-violence-against-women/~/media/44F28561B84548FE82E24E38E825ABEA.ashx. Accessed 8 November 2018.

to the consultation process for London's VAWG strategy, felt that unwanted attention from strangers was the most accepted form of VAWG (e.g. a two thirds felt 'inappropriate staring', 'wolf-whistling or cat calling' were always or often or sometimes accepted).

While it is indisputable that there is a huge amount of work to be done tackling VAWG in the domestic realm—and that we cannot hope to make London safe for women if we do not address what happens in the home—we must also recognise that public spaces are hostile to women. If we fail to take action in the public sphere, we feed into a narrative that these spaces are not spaces for women, fostering their abandonment and a retreat into the "protected" area of the home, representing greater insecurity for many women. In that sense, the public and private spheres are intricately intertwined.

When it comes to tackling these issues, London is not starting from scratch and has an existing programme of activities across different policy areas to build upon. For example, the Mayor developed a Violence Against Women and Girls Strategy which outlines a vision "of a city where every woman and every girl can live in safety—where men and boys don't think violence against women and girls is acceptable and where women and girls don't feel it is inevitable."

London has also invested in the Women's Night Safety Charter, in which 340 signatories have made commitments based on the pillars of reporting, responding, taking responsibility and redesigning public spaces. There have been successful campaigns like 'Project Guardian' and 'Report It To Stop It', which have increased reporting of sexual offences on the transport network, as well as the Transport for London (TfL) Healthy Streets Approach which bridges the public health, urban planning and transport sectors to make London a healthier, safer, more sustainable and more liveable city.

As a signatory to UN Women's Safe Cities and Safe Public Spaces Programme, London has committed to further this work by ensuring that women and girls are socially, economically and politically empowered in public spaces and that they are free from sexual harassment and other forms of sexual violence. In order to support London in achieving these ambitious aims, this independent scoping report:

1 Offers a guide to the fundamentals of gender inclusive public space design;
2 Highlights tools for investing in gender-informed public spaces;
3 Presents examples of existing action in the capital;
4 Lays out a set of recommendations for action.

Recommendations

The following recommendations borrow from the insights in this report to create a suite of options for continuing to make London safer for women and girls.

1 RE-INSTATE THE WOMEN'S DESIGN SERVICE (OR A BODY LIKE IT)

The Women's Design Service played a pivotal role in making urban public space more inclusive of women, both in terms of professional practice and actual use of public space. With long term secure funding, groups like these are able to act as a focal point for local organisations, maintain the issue high on all policy agendas and ensure that gender expertise is captured, disseminated and capitalised upon. If the Women's Design Service were reinstated it could:

a. Lead and collate in-depth participatory research on best practice with respect to making London safer for women and girls
b. Design and deliver gender mainstreaming training for built environment professionals in London to equip them with practical actions to incorporate a gender lens in design
c. Create and maintain partnerships with women's organisations, research institutions and the Mayor's Design Advocates to strengthen interest in making London safer for women and girls
d. Maintain London's priority on women and girls' safety as a core policy agenda as well as lobby for its inclusion in non-government projects and initiatives across the capital (i.e. through developers, Business Improvement Districts, housing associations etc.)

2 IMPLEMENT GENDER MAINSTREAMING PILOT PROJECTS USING GENDER-DISAGGREGATED DATA

There are a wide range of interventions across public transport, cycling, public space, housing and toilet provision that could make London work better for women. But if the impacts of these projects are to be understood and scaled across London, an evidence base of impact needs to be built up. Therefore, the pilot projects suggested below must collect, analyse and report on gender-disaggregated data from before and after the intervention. Such pilot projects include, but are not limited to:

1 Cycling: Identify scheduled cycling infrastructure upgrade plans across London and ensure women's needs are taken into account by including protected cycle lanes, adequate and safe space for storage as well as local imagery around diversity of cyclists
2 Lighting: Conduct small scale interventions to explore the impact of innovative and creative lighting schemes on the feeling of safety in less populated parts of the city
3 Housing: work with housing associations and residents to review the provision of adequately lit lifts, as well as accessible and secure pram and cycle parking and other needs
4 Toilets: Partner with universities and local authorities to create and implement innovative designs for inclusive and affordable public toilets. This could be supported by a campaign to open up more privately owned toilets (e.g. in bars and restaurants) to non-paying customers

3 CAPITALISE ON THE WOMEN'S NIGHT SAFETY CHARTER TO CONDUCT NIGHT SAFETY AUDITS

Women's safety audits can help provide spatial and quantitative data about women's perceptions and experiences of safety in the city. This can guide data-driven approaches to systematically assess and improve female safety in public. By working with the existing 340 signatories of the Women's Night Safety Charter, local MPS teams could work together to:

1 Conduct localised women's night safety audits
2 Use these audits to collaborate with local Business Innovation Districts, TfL and the Metropolitan Police Service to create Local Women's Safety Action Plans

4 BUILD ON EXISTING PUBLIC AWARENESS CAMPAIGNS AND CREATE POSITIVE IMAGERY IN THE PUBLIC REALM

Campaigns like 'Project Guardian' and 'Report It To Stop It' have been effective in increasing reporting of unwanted sexual behaviour on public transport. Building on this success, new campaigns could focus on the responsibilities of bystanders and perpetrators and thereby aspire to minimise the impacts and prevalence of these assaults. Furthermore, there is an opportunity to take a lead in providing more progressive images of women in advertising in public space. Recommendations towards achieving this include:

1 Partner with organisations like Hollaback! to include bystander awareness tips and tricks into public campaigns on unwanted sexual behaviour
2 Crowdsource ideas for campaigns that would target potential perpetrators of unwanted sexual behaviour
3 Ensure adverts across the London transport network do not perpetuate harmful female stereotypes
4 Showcase feminist murals and public art by women

5 INTEGRATE A GENDER PERSPECTIVE INTO TFL'S HEALTHY STREETS APPROACH

The Healthy Streets Approach is an excellent way to start reframing street and public space design, and it would benefit from a gender perspective. For instance, the indicators could explicitly mention safety from gender-based harassment and violence as another a key criterion of healthy, liveable streets. The "places to stop and rest" and "shade and shelter" indicators could also reference how adequate street lighting and visibility are necessary for women and girls to feel safe. As such, TfL could:

1 Conduct a review of the indicators in the Healthy Streets Approach to integrate an explicit gender perspective


ZONE 1
FIRST AID

CONTENTS

1 BACKGROUND

1.1 UN Women: Safe Cities and Safe Public Spaces Programme 13
1.2 London context 15
1.3 Purpose 16

2 UNDERSTANDING GENDER AND URBAN PLANNING

2.1 Overarching Principles 20
2.2 Public Transport 21
2.3 Cycling Infrastructure 22
2.4 Public Toilets 24
2.5 Public Spaces and Parks 25
2.6 Housing 27
2.7 Gender expertise in built environment design 27

3 TOOLS FOR GENDER-INFORMED URBAN PLANNING: GLOBAL EXEMPLARS

3.1 Gender-responsive participatory planning 31
3.2 Gender mainstreaming 31
3.3 Gender-disaggregated data 32
3.4 Women's safety audits 33
3.5 Public awareness campaigns 34

4 LONDON POLICIES AND PROJECTS

4.1 Women's Night Safety Charter 37
4.2 Women's Design Service 38
4.3 Project Guardian 39
4.4 Healthy Streets Approach 39
4.5 Other Organisations 41

5 CONCLUSION AND RECOMMENDATIONS

1.1 UN Women: Safe Cities and Safe Public Spaces Programme

Cities worldwide are rising to the challenges posed by increasing inequality, political polarisation, climate impacts, crumbling infrastructure, inadequate housing and population growth. In order to tackle these complex and interconnected problems, inclusivity must be at the core. The New Urban Agenda, adopted by world leaders at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in October 2017, declares:

> We share a vision of cities for all, referring to the equal use and enjoyment of cities and human settlements, seeking to promote inclusivity and ensure that all inhabitants, of present and future generations, without discrimination of any kind, are able to inhabit and produce just, safe, healthy, accessible, affordable, resilient and sustainable cities and human settlements to foster prosperity and quality of life for all.[7]

This bold vision of "cities for all" invokes "the right to the city," which is "[t]he freedom to make and remake our cities and ourselves."[8] That this right is on the international urban policy agenda is a milestone. However, the challenge remains for cities across the world to implement this ambition with an appropriate degree of urgency and ambition. In particular, cities must incorporate an understanding of how they are experienced differently depending on categories of identity such as gender, race, sexuality and physical ability. Given that cities and urban infrastructure are mostly designed by men, how can we ensure that cities are truly inclusive for all? If half the population are absent from design, decision-making and planning processes, how can we safeguard everyone's right to the city?

Not only are women underrepresented in politics and leadership roles across sectors, but structural inequalities in society and violence against women and girls (VAWG) also constrain women's right to the city. Gender disparities in the labour market, the gendered division of household labour, and gendered differences in access to resources (i.e. time, money, education, land, capital, technology, etc.) disadvantage women economically and put them at a higher risk of poverty. In the UK nine out of ten lone parents are women and while the median gross weekly pay for male single parents is £346, for female single parents it is £194.40.[9] In London, women are more likely to be in low paid work than men, with 55% of low paid jobs done by women.[10] This economic precariousness can compound vulnerability to gender-based violence.

While gender-based violence in the home, workplace and educational institutions is largely considered illegal and wrong, gender-based violence in public space is often accepted as normal or inevitable. As part of the consultation process for London's VAWG strategy, 416 people were interviewed from five London boroughs. It was found that in general, respondents felt that unwanted attention from strangers was the

7 UN Habitat III Secretariat. *The New Urban Agenda.* The United Nations; 2016: 5. http://habitat3.org/the-new-urban-agenda/. Accessed 16 November 2018.

8 Harvey D. The right to the city. *New Left Review.* 2008; 52: 23—40.

9 National Education Union. *Women and Poverty.* https://neu.org.uk/advice/women-and-poverty. London; 2019 Accessed 17th February 2019

10 Trust for London. *London's Poverty Profile: Women.* https://www.trustforlondon.org.uk/data/populations/women/. London; 2016/ Accessed 17th February 2020

most accepted form of VAWG (e.g. a third felt 'inappropriate staring', 'wolf-whistling or cat calling' were always or often accepted with almost another third stating it was sometimes accepted) whereas 'hitting a partner' or 'following someone around' were least accepted.

There are laws against domestic violence but almost no laws against sexual harassment and violence in public space. In the UK the practice of "upskirting" (taking a sexually intrusive photograph up someone's skirt without their permission, usually in a public space) has historically been difficult to prosecute as there was no law that made it a specific criminal offence. After years of campaigning by activists, spearheaded by Gina Martin, the practice was finally made criminal in April 2019.[11] However, despite more research on the prevalence and impact of Intimate Partner Violence in recent years, there is insufficient research on sexual harassment and violence that occurs in the public realm. This is especially relevant in London, where 40 per cent of sexual assaults take place in public spaces, particularly on the transport network. The findings of a YouGov poll reported that two thirds of women in London have experienced sexual harassment on the transport network or in public spaces, and 40% have experienced sexual contact.[12]

UN Women founded The Safe Cities and Safe Public Spaces programme in recognition of the discrepancy between how violence in the private domain is largely regarded as a human rights violation, yet violence against women and girls—especially sexual harassment in public spaces—remains neglected.[13] The is one of UN Women's flagship initiatives, which builds on its "Safe Cities Free of Violence against Women and Girls" global programme. It launched in November 2010, with leading women's organisations, UN agencies, and more than 70 global and local partners. The founding cities were Quito, Ecuador; Cairo, Egypt; New Delhi, India; Port Moresby, Papua New Guinea; and Kigali, Rwanda, and it now spans over 20 cities, including London.

Participating cities commit to identifying evidence-based and context-appropriate initiatives to end violence against women and girls and support women's political participation and economic empowerment.[14] Specifically, they are expected to deliver on four interrelated outcomes:

1 Gender-responsive locally relevant and owned interventions: Cities will create partnerships with local stakeholders and provide the evidence-base to drive the design and delivery of solutions.
2 Comprehensive legislation and policies: Cities will implement appropriate policies, strategies and legislation to prevent and respond to sexual harassment and violence against women and girls in public spaces.
3 Investments in the safety of public spaces: Cities will build the capacity of local governments to invest in gender mainstreaming in urban planning and public infrastructure investments (i.e. street lighting, social services, sanitation, etc.) that provide safety, and economic empowerment for women and girls.
4 Social and cultural transformation: Cities will proactively work to change sexist attitudes and behaviours to promote women's and girls' rights to access, use and enjoy public spaces, free of sexual violence.

11 Ministry of Justice. *'Upskirting' law comes into force.* London; 2019. https://www.gov.uk/government/news/upskirting-law-comes-into-force Accessed 17th February 2020.

12 MOPAC. *Sexual Violence: The London Sexual Violence Needs Assessment 2016 For MOPAC & NHS England (London).* London; 2016. https://www.london.gov.uk/sites/default/files/sexual_violence_needs_assessment_report_2016.pdf. Accessed 16 November 2018.

13 UN Women. *Safe Cities Global Initiative.* New York: UN Women; 2018. http://www.unwomen.org/en/what-we-do/ending-violence-against-women/~/media/44F28561B84548FE82E24E38E825ABEA.ashx. Accessed 8 November 2018.

14 *Ending violence against women: Creating safe public spaces.* UN Women. http://www.unwomen.org/en/what-we-do/ending-violence-against-women/creating-safe-public-spaces. Published 2018. Accessed 8 November 2018.

1.2 London context

The Mayor envisions London as "a city of freedoms, opportunities and rights for all" which echoes the declaration in the UN's New Urban Agenda.[15] This is particularly pertinent in light of the gender based violence issues that Londoners contend with on a daily basis. A survey of 8,000 Londoners found that 74 per cent of female respondents feel worried about their safety some, or even all of the time, and 68 per cent worry about harassment on public transport.[16] Clearly, London cannot be "a city of freedoms, opportunities and rights for all" if half the population is too scared for their safety to take advantage of what the city has to offer. This fact has spurred City Hall into action across a variety of policy areas, including as a signatory to the Safe Cities and Safe Public Spaces programme.

To begin tackling the pervasive nature of violence against women and girls in the city, the Mayor developed a Violence Against Women and Girls Strategy. This strategy outlines a vision "of a city where every woman and every girl can live in safety—where men and boys don't think violence against women and girls is acceptable and where women and girls don't feel it is inevitable." The Strategy notes that sexual assault, rape, domestic abuse and "honour"-based violence are more likely to occur within the privacy of the home, while other forms of VAWG, especially sexual harassment, are more prevalent in public spaces.[17] It also finds that sexual harassment in public space is ubiquitous and normalised. This contributes to the systematic under-reporting of and limited data about such incidents.

Many women and girls experience low-level harassment on a daily basis, to the point where they feel it is just a fact of city living. In the UK, 64 per cent of women have experienced some kind of sexual harassment in a public space, with this figure increasing to 85 per cent for those between the ages of 18—24.[18] The problem starts earlier: 66 per cent of girls in the UK have experienced sexual harassment in public and adopt "avoidance" strategies, such as crossing the road, taking longer routes, pretending to be on the phone, avoiding empty train or tube carriages, changing outfits and ceasing to go out at night.[19]

If the right to the city is "[t]he freedom to make and remake our cities and ourselves," then women and girls cannot enjoy this until they have safe passage through public space. To truly access, enjoy and engage in public life in London, women and girls must be included in urban design, planning and governance processes.

The Mayor's Violence Against Women and Girls Strategy addresses some of the issues surrounding the under-reporting of VAWG, including the everyday nature and extreme normalisation of harassment in public spaces. The Mayor's strategy also references the first summit on women's safety at night, hosted by Night Czar Amy Lamé, which resulted in the creation of London's first-ever Women's Night Safety Charter. The charter acknowledges that the design of the urban built environment has a role to play in addressing gender-based violence.[20]

15 Greater London Authority. *A Safer City For Women And Girls: The London Tackling Violence Against Women And Girls Strategy 2018–2021.* London: Greater London Authority; 2018. https://www.london.gov.uk/sites/default/files/vawg_strategy_2018-21.pdf. Accessed 12 October 2018.

16 Ibid.

17 Ibid.

18 Ibid.

19 Plan International UK. *Street Harassment.* London: Plan International; 2018. https://plan-uk.org/act-for-girls/street-harassment. Accessed 4 April 2019.

20 Mayor of London. Pledge To Improve Women's Safety At Night In London; 2018. https://www.london.gov.uk/press-releases/mayoral/pledge-to-improve-womens-safety-at-night. Accessed 8 November 2018.

London's participation in UN Women's Safe Cities and Safe Public Spaces Programme is a step towards enacting the Mayor's vision for London to be "a city of freedoms, opportunities and rights for all."[21]

1.3 Purpose

Through desk research, including a review of academic and policy literature; a workshop held as part of the Night Safety Summit hosted by the Greater London Authority (GLA); and a series of interviews with key individuals, including NGOs, the GLA, women's services, campaign groups and the Mayor's Office for Policing and Crime (MOPAC), this report identifies key issues related to women's safety in public spaces in London and outlines eight evidence-based opportunities for action. The opportunities for action will require further investigation and reflection from key stakeholders across the GLA, who should develop further actions, partners and pilot projects in order to carry out a more detailed analysis.

In order to support this process, this report first provides an overview of the key issues associated with gender and urban planning. It then highlights global examples of how cities have integrated a gender perspective in urban planning, before focusing on relevant policies and projects in London. Finally, it concludes with recommended actions to make London safer for women and girls.

21 Greater London Authority. A Safer City For Women And Girls: The London Tackling Violence Against Women And Girls Strategy 2018–2021. London: Greater London Authority; 2018. https://www.london.gov.uk/sites/default/files/vawg_strategy_2018-21.pdf. Accessed 12 October 2018.



Imagine how much more confident and comfortable women would be if they did not grow up being told that cities are dangerous places for them, especially after dark. Imagine how much livelier public spaces would be if women and girls felt safe enough to use, linger in and pass through them, regardless of what they were wearing, whether they were alone or not, and the time of day. Imagine how much freer women would be if they were not taught from a young age that they had a responsibility to protect themselves from harassment and violence by avoiding certain neighbourhoods, dressing a certain way, or traveling in groups whenever possible. Imagine how much more time and energy women could devote to friendships and relationships, exploring the city, learning and developing new skills if they did not have to worry so much about their safety.

With more gender expertise and women's leadership in urban design, planning and decision-making processes, cities that are more inclusive and safer for women and girls can become a reality.

Gender expertise is an understanding of the ways in which gender, as a social construct, shapes political, economic, social and spatial relationships. This includes an understanding of how gender creates differential access to and distribution of opportunities, resources and power across society. Increasing women's leadership is important alongside the development of gender expertise. Women are underrepresented across urban sectors in the UK, comprising just 14 per cent of the built environment workforce.[22] It is hardly surprising, then, that women's life experiences are omitted from urban design and planning processes.

Developing both gender expertise to understand the complexity of gender-based violence in public space, and increasing women's leadership to create more space for women's subjective experiences of the city to impact policy are integral to tackling gender-based violence in cities. Given the work already carried out at City Hall on increasing equality, diversity and inclusion in the built environment sector (for example through the Supporting Diversity Handbook)[23] as well as extensive studies on increasing access to STEM careers from organisations like ScienceGrrl[24] and Girlguiding,[25] this chapter will focus on the development of gender expertise within the built environment sector. It will do this firstly by explaining two overarching principles (gendered perceptions of safety and intersectionality) and then by exploring how key aspects of built environment design are gendered, including:

- Public Transport
- Cycling Infrastructure
- Public Toilets
- Public Spaces and Parks
- Housing

22 Clear C. An evening reception for women (and men) within the built environment looking to uncover the secrets of international success. BRE Buzz. Published 2017. Available at: http://brebuzz.net/2017/10/05/beglobal-insights-from-our-world-leading-women/ Accessed 11 December 2018.

23 Mayor of London. *Good Growth By Design: Supporting Diversity Handbook.* Available at: https://www.london.gov.uk/sites/default/files/supporting_diversity_handbook_web.pdf Accessed 4th March 2020

24 ScienceGrrl (2013) *Through Both Eyes: The Case for a Gender Lens in STEM.* London: ScienceGrrl.

25 Girlguiding (2013) *What girls say about... equality for girls: Girls Attitudes survey.* London: Girlguiding

2.1 Overarching Principles

Gendered perceptions of safety

From an early age, girls are told to avoid being alone in certain neighbourhoods, to dress modestly when they go out and to walk home with their keys in hand and their phones readily accessible. This drills in the message that public space is not safe for women and girls. As such, they are socially conditioned to be more worried about their personal safety and to change their behaviour—including their speech, dress and travel patterns—in order to be safe. Society puts the onus on women and girls to protect themselves. Some protection mechanisms that females adopt early on include crossing the road to avoid someone, taking longer routes to circumvent dangerous areas and spending more money on taxis because it feels safer than taking public transport.

Gendered perceptions of safety are one of many structural factors that impact how, where, when and why people travel in the city. Other structural factors that contribute to gender differences in urban mobility include gender disparities in economic resources (i.e. time, money, education, skills, technology) and the gendered division of household labour. These structural inequalities produce gendered variations in mobility choices (i.e. mode of transport and travel demand), mobility behaviour (i.e. route, timing, distance, duration, purpose) and perceptions and experiences of mobility. As such, urban mobility is gendered. The omission of gendered urban experiences in the way our cities are designed, planned and built disparately impacts women and girls, jeopardises their safety and denies them of their "right to the city."

An intersectional perspective

An intersectional perspective must foreground efforts to understand the ways in which the public realm could be redesigned to enhance women's perceptions and experiences of safety. An intersectional perspective is an understanding that the various aspects of one's identity (i.e. gender, sexual orientation, race, religion, age, physical ability/disability, etc.) interact in complex ways to shape how one experiences and moves around in the world.[26] Given the multifaceted nature of identity, it follows that there are also multiple types of discrimination and inequalities that people can experience. Such inequalities are interconnected and cannot be analysed in isolation.

For example, if a woman of colour is harassed while walking down the street, it may not be evident if the abuse stems from her gender or her race. If a woman cycling is shouted at and closely passed by a male driver, she might not know if it is because she is a woman or because she is cycling on car-dominated roads. Similarly, if a woman in a wheelchair gets lewd stares and comments while waiting for the bus, it may not be clear whether it's because she is a woman or because she has a disability.

The London Sexual Violence Needs Assessment illustrated the need to take an intersectional perspective when addressing VAWG, finding that a criminal case is more likely to be 'nocrimed'—meaning no further action will be taken—if the accuser is BAME, has mental health problems or has learning disabilities. It also found that there are lower levels of reporting from Asian victims and that illegal or uncertain immigration status can also lead to lower levels of reporting.[27]

In all these cases, it is clear that gender is linked to other aspects of identity, which impacts how different women experience public space. Urban designers, planners

26 Crenshaw K. Mapping the margins: Intersectionality, identity politics, and violence against women of colour. *Stanford Law Review.* 1991; 43(6): 1241—1299.

27 MOPAC. *Sexual Violence: The London Sexual Violence Needs Assessment 2016 For MOPAC & NHS England (London).* London; 2016.

and policymakers must have an understanding of and empathy towards those living at the intersections of different marginalised identities in order to make cities safer and more inclusive for all. An exploration of the issues surrounding a diverse workforce are outside the scope of this report but continues to be explored by many organisations within London (e.g. The Supporting Diversity Handbook,[28] ScienceGrrl Through Both Eyes report,[29] Black Females in Architecture, Royal Institute of British Architecture's "Close the Gap" Toolkit[30] amongst many others).

2.2 Public Transport

Globally, transport planning tends to optimise the flow of peak-hour work commutes, which is based on the assumption that the default traveller is the traditional male breadwinner, commuting from the suburbs into the city centre for work.[31] This reflects an implicit male bias because women were historically excluded from the labour market and continue to face various kinds of employment discrimination.

Women also tend to make more complex, varied and encumbered journeys than men do, usually including multiple trips a day using different modes of transport in order to combine formal and informal work, as well as domestic and caregiving responsibilities.[32] However, public transport systems tend to privilege radial, long distance journeys, as opposed to orbital, short distance ones that women are likelier to make.[33]

Women are more likely to commute sustainably (i.e. walk or take public transport) because it is cheaper.[34] The differential nature of women's urban mobility patterns increases their vulnerability to gender-based violence, as they may end up spending more time walking through or waiting in isolated places to access public transport.[35] This underscores the need for safe public transport that caters to women's journey types.

Despite women's reliance on public transport systems, too often they are a locus of sexual violence, preventing women's safe passage through the city and access to economic, political and social opportunities. In 2016, MOPAC and NHS England commissioned an assessment of the level of sexual violence in London, which found that 40 per cent of assaults take place in public spaces, particularly on the transport network. Furthermore, the findings of a YouGov poll reported that two thirds of women in London have experienced sexual harassment on the transport network or in public spaces, and 40% have experienced sexual contact. This is particularly marked during peak times, where there are higher levels of sexual offences.

28 Mayor of London. *Good Growth By Design: Supporting Diversity Handbook.* Available at: https://www.london.gov.uk/sites/default/files/supporting_diversity_handbook_web.pdf Accessed 4th March 2020

29 ScienceGrrl (2013) *Through Both Eyes: The Case for a Gender Lens in STEM.* London: ScienceGrrl. For more information visit: https://www.blackfemarc.com/

30 RIBA. *Close the Gap: Improving Gender Equality in Practice* Available at https://www.architecture.com/knowledge-and-resources/resources-landing-page/gender-pay-gap-guidance Accessed 4th March 2020

31 Law R. Beyond 'Women and Transport': Towards New Geographies of Gender and Daily Mobility. *Progress in Human Geography.* 1999; 23(4): 567—588.

32 Blomstrom E., Gauthier A. & Jang C. *Access for All: Policies for Inclusive TOD.* New York City; The Institute for Transportation and Development Policy (ITDP); 2018. https://www.itdp.org/2018/05/21/access-for-all/. Accessed 8 April 2019.

33 Levy C. Travel Choice Reframed: 'Deep Distribution' and Gender in Urban Transport. *Environment and Urbanisation.* 2013; 25(1): 47—63.

34 *Ibid.*

35 Safe Public Transit for Women and Girls. Endvawnow.org. http://www.endvawnow.org/en/articles/252-safe-public-transit-for-women-and-girls-.html. Accessed 16 November 2018.

A Thomson Reuters Foundation report, which studied women on the move in five global cities found that only 65 per cent of women surveyed in London felt confident that they could travel on public transport without sexual harassment or abuse, and just 51 per cent felt confident that a fellow traveller would come to their assistance if they were being harassed. An earlier 2014 YouGov poll revealed that 32 per cent of women in London have been verbally harassed on public transport, and that 19 per cent have been groped or physically harassed.

There are aspects of the built environment and design features that contribute to women's perceptions of safety. For instance, poor lighting at bus stops, tube platforms and train stations can make women feel less safe. Spaces that are enclosed in nature, such as train carriages, alleyways, and multi-storey car parks, can also heighten women's perceptions of danger due to the limited amount or lack of clear exits. Tall hedges, overgrown vegetation or large bins around or at bus stops or train stations can limit visibility and therefore seem threatening. At the same time, spaces that seem too open and deserted, such as parks and canal towpaths can also seem risky. Signs of neglect or abandonment, such as vandalism and litter, can also make places feel more dangerous.[36]

2.3 Cycling Infrastructure

To realise the Mayor's ambition to make London "a byword for cycling," and to maximise the environmental and public health benefits of cycling, cycling in London must be inclusive. However, there is a gender gap in cycling, as men make 63 per cent of cycling journeys in London.[37] Despite unprecedented investments in cycling infrastructure and an overall growth in cycling in London over the past two decades, a gender gap in cycling has persisted. The reasons for this are complex but implicit male bias in cycling infrastructure design and provisioning has certainly contributed to unequal and uneven urban cycling experiences.[38]

Under Former Mayor Boris Johnson, London delivered two kinds of branded cycle routes: Superhighways, mostly on main roads and offering greater separation from motorised traffic, and Quietways, mostly on low-traffic, residential side streets. Transport for London is now developing an orbital cycle route which helps address concerns around implicit male bias inherent in its focus primarily on routes into and out of the city.[39]

The branding of London's cycling infrastructure has been criticised for being gendered, as 'Superhighway' connotes speed, athleticism, aggression and riskiness, which are implicitly coded as masculine characteristics. This emphasis on speed can make women feel alienated, and sometimes even costs them their lives. A key finding from the first study of cycling near misses (road incidents that may not result in injuries but nonetheless induce fear and stress) in the UK was that cycling speed is the main factor impacting near miss rates, which are consistent across London, and female cyclists disproportionately experience near misses.[40] On average, women tend to cycle more slowly than men do, which increases their risk of near misses, traffic injuries and fatalities. While there may be no perceptible physical impact, near

36 Valentine G. The Geography of Women's Fear. Area. 1989; 21(4): 385—390.

37 Transport for London. Cycling Action Plan. London: Transport for London; 2018. http://content.tfl.gov.uk/cycling-action-plan.pdf. Accessed 8 April 2019.

38 Lam T. Hackney: A Cycling Borough for Whom? Applied Mobilities. 2018; 3(2): 115—132.

39 Transport for London. *Cycling Action Plan.* London: Transport for London; 2018. http://content.tfl.gov.uk/cycling-action-plan.pdf. Accessed 8 April 2019.

40 Aldred R. Cycling Near Misses: Findings from Year One of the Near Miss Project. London: University of Westminster; 2015. Available at: http://www.cyclo.co.uk/wp-content/uploads/2015/09/Near-Miss-Project-Cycling-Near-Misses.pdf. Accessed 8 April 2019.

misses increase people's perceptions of danger—especially novice cyclists—and may be a significant enough deterrent from ever cycling again.

Transport for London is moving in the right direction by rebranding the Superhighways and Quietways.[41] This positive action could be supported by increasing investment in material infrastructure to create safer environments. As stated in MOPAC's Police and Crime Plan, efforts are already underway to "be more effective in tackling the places, behaviours and vehicles that pose the greatest risk to pedestrians and cyclists."[42]

Evidence shows that people of all genders prefer protected cycle lanes, but the demand is greater among women.[43] Given the gendered nature of cycling near misses, they must be treated as seriously as traffic injuries and collisions. Furthermore, gendered and raced perceptions of safety must enter into the design and delivery of cycling projects. For a more diverse array of Londoners to feel like cycling is for "people like me," there must be social and cultural interventions to address the various forms of street harassment that marginalised communities may experience.

For some women, the high costs of and increased vulnerability to sexual harassment or violence on public transport makes cycling their preferred mode of transport. When cycling, one is often not still enough to be approached by a potential harasser, and even if one is, it is quicker to escape on two wheels than on foot. According to one woman in her early thirties living in London:

> On public transportation or just walking down the street, men invade my personal space every day: Men come too close, make comments, or just stare at me. These experiences don't just last for a few seconds. Often they take up a lot of emotional and mental space, even days after the encounter. Cycling, on the other hand, I experience as creating space around me that I don't need to defend. Even though this space gets invaded a lot by cars, buses, taxis, or people on the street verbally harassing me, these incidents feel different because they usually only last for a few seconds (until I cycle past). Sitting on my bicycle, I feel more freedom, safety, and agency compared to any other mode of transport.[44]

This anecdote illustrates how cycling can offer women liberation from sexual harassment and violence on city streets or public transport, but increase their vulnerability to road traffic dangers.

At the same time, it is important to note that for other women, increased vulnerability to road traffic danger can compound existing concerns about gender-based harassment and violence, therefore making cycling a less feasible mode of transport. Anecdotally, some women also experience more harassment while cycling, such as being catcalled at with cycling-specific remarks, and even being grabbed by men driving past.

Sometimes the harassment women cyclists experience is subtler but still makes them feel out of place and uncomfortable. Cycling can make some people, especially those underrepresented in cycling, feel more visible and exposed, and therefore more vulnerable. They may be subject to verbal harassment that is inflected by gender, race, class and nationality. In the words of a woman from south London in her thirties:

41 Transport for London. *Cycling Action Plan.* London: Transport for London; 2018.

42 MOPAC, *A Safer City For All Londoners: Police and Crime Plan 2017—2021* MOPAC, London; 2017.

43 C40 Cities. *Gender Inclusive Climate Action in Cities.* London: C40 Cities; 2019. https://w4c.org/full-study/women4climate-report-gender-inclusive-climate-action-cities. Accessed 8 April 2019.

44 Meier I in Lam T. *Mind the Cycling Gender Gap, Issue 1.* Portland: Microcosm Publishing; 2018.

> Once I was riding a Brompton bike, the epitome of British-ness, and the MAMIL [middle-aged man in lycra] next to me at the traffic light refused to make eye contact with me. Usually cyclists make eye contact with each other and/or smile, but for some reason he didn't even look at me. It was like hateration but silent. He seemed to resent that I was riding a Brompton. I felt it was because I, as a woman of colour, wasn't supposed to be on a bike, especially not a Brompton.[45]

The idea that women of colour are not "supposed" to be cycling reflects how the lack of diversity in cycling in London can make marginalised groups feel like cycling is not for them.[46] In fact, 49 per cent of Londoners feel that cycling is not for "people like me."[47] Research shows that the underrepresentation of Black women cycling in the media and on London streets is a barrier to cycling for Black women, and the widespread perception held by certain Asian communities that cycling is child's play is a barrier to cycling for Asian women.[48]

Perceptions of safety are nuanced, as they are shaped by race, gender, socioeconomic class, etc., and impact how people move around in cities. Perceptions of safety are raced, too—there is evidence that fear of racial profiling is the third biggest barrier to cycling for Black and Hispanic communities in the US, after fears of traffic collisions and robbery or assault.[49] While addressing systemic racism and racial profiling may seem to fall outside the purview of transportation planning and engineering, it is relevant to built environment practitioners who care about making cities safer and more inclusive for all.

2.4 Public Toilets

The notoriously long queues for women's public toilets compared to men's may seem like a trivial problem, but it is another example of designing women out of public space. The historical relegation of women to the private sphere of the home meant that the public realm in the city remained male-dominated. The adequate provision of public toilets is necessary to make cities more inclusive for women. Public toilets generally are under threat. In the UK, 50 per cent of public toilets have been closed since 1995, while many of those that remain have been privatised.[50] In London, there has been a one-fifth decline in the provision of public toilets in the past decade, with some boroughs no longer directly providing public facilities.[51]

45 Salmon S in Lam T. *Mind the Cycling Gender Gap, Issue 1.* Portland: Microcosm Publishing; 2018.

46 Steinbach R, Green J, Datta J & Edwards P. Cycling and the City: A Case Study of How Gendered, Ethnic and Class Identities Can Shape Healthy Transport Choices. *Social Science & Medicine.* 2011; 72(7): 1123—1130.; Stehlin J. Regulating Inclusion: Spatial Form, Social Process, and the Normalisation of Cycling Practice in the USA. *Mobilities.* 2014; 9(1): Aldred R, Woodcock J & Goodman A. Does More Cycling Mean More Diversity in Cycling? *Transport Reviews.* 2016; 36(1): 28—44.; Lam T. Hackney: A Cycling Borough for Whom? *Applied Mobilities.* 2018; 3(2): 115—132.

47 Transport for London. *Cycling Action Plan.* London: Transport for London; 2018. http://content.tfl.gov.uk/cycling-action-plan.pdf. Accessed 8 April 2019.

48 Steinbach R, Green J, Datta J & Edwards P. Cycling and the City: A Case Study of How Gendered, Ethnic and Class Identities Can Shape Healthy Transport Choices. *Social Science & Medicine.* 2011; 72(7): 1123—1130.

49 Brown C. Fear: A Silent Barrier to Bicycling in Black and Hispanic Communities. Washington, DC: Institute of Transport Engineers Journal; 2016. http://njbikeped.org/wp-content/uploads/2016/09/Fear_A-Silent-Barrier-to-Bicycling-in-Black-and-Hispanic-Communities_Sept2016.pdf. Accessed 9 April 2019.

50 Penner B. Toilets, Gender and Urbanism. UCLoo Festival 2013. 2013. https://blogs.ucl.ac.uk/ucloo-festival-2013/2013/09/17/toilets-gender-and-urbanism/. Accessed 16 November 2018.

51 London Assembly Health and Public Services Committee. *Public Toilets In London.* London: Greater London Authority; 2011. https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/FINAL%20HPS%20public%20toilets%20update%20report.pdf. Accessed 16 November 2018.

The decline in public toilets is gendered because women need more toilets than men. Women urinate more frequently than men do and take longer to do so for various reasons: women's clothing often takes longer to unfasten; women tend to carry more stuff when they are out (i.e. a purse or rucksack, shopping bags, prams, etc.), which means that toilet trips in public can be very cumbersome and stressful; women tend to shoulder greater childcare responsibilities, which means they are more likely to frequent public toilets with children in tow; and when menstruating, women have to place new and dispose of old sanitary products.[52]

This has implications on the design of public facilities. Typically, equal floor space is given to men's and women's bathrooms. While the spatial area may be the same, a urinal requires less space than a cubicle, resulting in an imbalance of actual provision. This can create gendered health disparities, too. For example, women may drink less water when outside the home to reduce the need to urinate, therefore risking dehydration, or women may get accustomed to postponing using the toilet for too long, which can lead to urinary tract infections.[53]

While some local authorities have taken action to provide innovative solutions for men's toilets in public spaces through the provision of 'pop up urinals', little has been done to ensure adequate and safe provision for women. These urinals have also come under some scrutiny from campaign groups who highlight how the provision of these urinals in prominent public spaces at night time make women feel unsafe and perpetuates the message that public space at night is not for them.[54]

Thus, not only must there be more gender equitable provision of public toilets, but public toilets must also be designed to ensure that women feel safe and comfortable enough to use them. Public toilets need to provide adjoining public, semi-public and private spaces, which can pose a design challenge. In particular, the semi-public area that contains partitioned cubicles tends to be windowless, but spaces that are too enclosed, without sufficient lines of sight might feel less safe.[55] Standalone toilet facilities, in which people go directly from a thoroughly public space into a very private space, offer a better alternative. Apart from reducing the risk of unsafe semi-public spaces, they are also gender-neutral and more inclusive of the LGBTQ community.

2.5 Public Spaces and Parks

Public spaces and parks set the stage for people to gather and breathe life into the city, whether that is through play, exercise, relaxation, protest, music or other forms of solitary or social activity. In global cities with widening gaps between the rich and the poor, public space can be an equaliser, a means to a more inclusive society. Public space is where "people meet as equals, stripped bare of their social hierarchies."[56] However, the increasing privatisation of public spaces is endangering the very public-ness of public spaces.

52 O'Dwyer L. Why queues for women's toilets are longer than men's. *The Conversation.* 2018. https://theconversation.com/why-queues-for-womens-toilets-are-longer-than-mens-99763. Accessed 16 November 2018.

53 Phadke, S, Khan, S & Ranade S. *Why Loiter? Women & Risk on Mumbai Streets.* Guragon: Penguin Randomhouse India; 2011.

54 CityMetric. *Toilets are Popping Up on City Streets at Night.* CityMetric, 2014 Available at https://www.citymetric.com/horizons/toilets-are-popping-city-streets-night-534 Accessed 20th February 2020.

55 McCreary C. *Building Safe Toilet Design Into Shared Urban Space.* Public Hygiene Lets Us Stay Human (PHLUSH) https://www.yumpu.com/en/document/view/35281903/building-safe-toilet-design-into-shared-urban-space-phlush. Accessed November 16, 2018.

56 Peñalosa E, *Politics, Power, Cities.* In Burdett R & Sudjic D. The Endless City. London: Phaidon; 2007: 307—319.

The right to the city means not just a right to access, use and pass through urban public spaces, but also a right to participate in city life through on-going processes of creation and negotiation.[57] Privately owned public spaces can sometimes limit the possibilities for people to participate in shaping public space (POPS) and public life because they are essentially private property. This can diminish people's feelings that they belong to the city and that the city belongs to them.

The privatisation of public spaces raises serious issues around inclusivity and the accountability of private owners to their public obligations. The ubiquitous surveillance in privately owned public spaces reflects an exclusionary intent that keeps people out, rather than inviting them in. This inherently limits the accessibility, diversity and vivacity of the space. Furthermore, for communities of colour, increased surveillance may not be desirable and can make people feel less, rather than more, safe.

Moreover, there is a lack of transparency about what the rules and regulations are in privately owned public spaces, how exactly they are governed and the actual incidences of crimes, including gender-based violence. The high levels of secrecy mean that women and girls who experience gender-based violence there may have little recourse, especially without clear information about whom the private security guards are accountable to, or the protocol for addressing and reporting grievances or crimes that occur in those spaces.

In response to this challenge in London, the regeneration team are delivering a Public London Charter as part of the Mayor's commitment in the new London Plan. This charter will set out the rights and responsibilities for the users, owners and managers of public spaces irrespective of land ownership, to maximise public access and minimise rules governing the space, particularly in the increasing number of POPS.[58] They have also commissioned a researcher to produce design guidance for public spaces such as sky gardens, station concourses and museums that ensure these spaces remain inclusive and accessible to all Londoners, the results of which are forthcoming.

Access to public space relies on the availability of truly public spaces and people feeling that they have permission to be there, that they will be reasonably safe and comfortable. A gender perspective is needed in the design of public spaces and parks so that they are more inclusive of women and girls. For example, anecdotal evidence shows that women and girls are less likely to use parks and canal towpaths after dark because of perceived danger. Paths that are poorly paved and insufficiently lit at night also increase perceptions of and actual danger for cyclists. Adequate street lighting, therefore, "presents a significant opportunity to fundamentally improve the quality of life of urban citizens"[59] by making public spaces feel safer, more welcoming and cared for, especially after dark.

Media images and representations of women in urban public space also play a key role in making cities feel safer and more gender inclusive. In Barcelona, Collective Point 6, a cooperative of feminist architects, sociologists and urban planners, works towards building gender equality into the city streets. One priority area is tackling sexist advertisements at bus stops, on trains and on billboards.[60] For women,

57 Phadke, S, Khan, S & Ranade S. *Why Loiter? Women & Risk on Mumbai Streets.* Guragon: Penguin Randomhouse India; 2011.

58 Shenker, J. *London mayor to draw up charter regulating pseudo-public space.* The Guardian. Available at https://www.theguardian.com/cities/2017/nov/23/london-mayor-charter-pseudo-public-space-sadiq-khan accessed 20 February 2020

59 Lam F. Cities alive—Lighting the urban night-time. *ICE Thinks.* 2017. https://www.ice.org.uk/news-and-insight/ice-thinks/growing-cities-and-building-resilience/cities-alive-lighting-the-urban-night-time. Accessed 16 November 2018.

60 Fleming A. What would a city that is safe for women look like? *The Guardian.* https://www.theguardian.com/cities/2018/dec/13/what-would-a-city-that-is-safe-for-women-look-like. Published 2018. Accessed 8 April 2019.

walking alone past a sexist advertisement under a railway arch can make the city feel like an alienating and hostile environment, especially if one has recently experienced street harassment.

As such, providing better representations of women in street advertisements, as well as showcasing more feminist murals or public art by women are positive actions that cities can take. English Heritage's "plaques for women" campaign to increase the number of women commemorated on blue plaques in London is also a good example of initiatives that increase women's visibility and inclusion in urban public space.[61]

2.6 Housing

Gender-inclusive design in housing is another important built environment element that can increase women's perceptions and experiences of safety in the city. Interviews with residents of two temporary accommodations in the London Borough of Camden revealed that women—mostly from racial and ethnic minority groups, some of whom had entered the UK as asylum seekers—overwhelmingly expressed greater safety concerns when discussing their current living situation.[62]

Women were disproportionately more likely to cite safety from crime as a key criterion to their ideal future long-term homes. When asked how they envisioned a safe environment to look like, they mentioned adequate street lighting; some police presence; the presence of other people on the street; some commercial activity (i.e. restaurants, stores, supermarkets, etc.) and easy public transport access (i.e. bus and tube stops).

Step-free access in housing developments, as well as transport stations, is also essential to ensure women's safe entry and passage inside, outside and around buildings. Female temporary accommodation residents in Camden frequently experienced mobility constraints entering and exiting their buildings because they often had to carry children, prams, laundry and shopping up and down several flights of stairs. Some buildings either had no lifts at all, or the lifts were frequently out of service.[63] The Greater London Authority have started to address these issues through both the new 'Housing Design Guide', which calls for a more inclusive approach to design and the 'Making London Child Friendly' report.[64]

Functional and adequately lit lifts, as well as accessible and secure pram and cycle parking, ideally on the ground floor, should be mandatory in housing developments. After all, as a typical point of departure or return for most people's journeys, housing must facilitate the encumbered journeys that women disproportionately make.

2.7 Gender expertise in built environment design

Integrating more gender expertise in the design of public transport, cycling infrastructure, public toilets, public spaces, parks and housing is not just about

61 English Heritage. English Heritage Want More Blue Plaques for Women. https://www.english-heritage.org.uk/about-us/search-news/more-blue-plaques-for-women/. Accessed 11 April 2019.

62 In February 2019, LSE London conducted a series of interviews with residents in temporary accommodation in Camden on the "Barriers to acceptance of housing offers by families in temporary accommodation" research project, funded by the London Borough of Camden.

63 Ibid.

64 Good Growth by Design. "Making London Child Friendly: Designing Places and Streets for Children and Young People" Mayor of London Available at: https://www.london.gov.uk/sites/default/files/ggbd_making_london_child-friendly.pdf Accessed 4th March 2020.

adding or altering infrastructural fixtures in the urban built environment. It is about paying attention to women's safety concerns, taking seriously sexual harassment and violence in public space and challenging the patriarchal exclusion of women from the public realm.

More gender-aware built environment interventions could set in motion a cultural paradigm shift by beginning with the tangible: The public spaces we share. Unlike societal attitudes and cultural norms—which also influence gendered perceptions of safety, but are intangible and cannot be transformed overnight—the built environment can be used as a medium for more tangible and immediate change.



Cities across the globe have taken bold action to incorporate gender expertise and increase women's leadership in urban design, planning and governance processes in order to make cities safer and more inclusive. In what follows are examples of five innovative methods (gender-responsive participatory planning, gender mainstreaming, gender-disaggregated data, women's safety audits and public awareness campaigns) that cities have adopted that can serve as inspiration.

3.1 Gender-responsive participatory planning

Gender-responsive participatory planning enables governments to involve a broader range of citizens in local planning and decision-making processes, thereby ensuring that public resources are used more effectively and holistically.[65] This increases citizen engagement, accountability and transparency in policy and planning processes. An innovative approach to gender-responsive participatory planning in cities is the 'Gender Into Urban Climate Change Initiative' (GUCCI) project.

The GUCCI project was launched in 2015 by GenderCC—Women for Climate Justice, a global network of organisations, experts and activists, with the aim of elevating both gender and climate justice in cities. It engages more women in urban climate policymaking processes, therefore building local capacity, and using their input to develop gender-responsive policy recommendations. There are currently 14 participating pilot cities in South Africa, India, Indonesia and Mexico.

In each pilot city, key issues are systematically identified in partnership with women's organisations, and in consultation with women, poor people and other marginalised groups. Subsequently, local strategies are developed to ensure that urban climate policies are inclusive and responsive to the needs of all, especially the most vulnerable segments of society. Partnering with existing women's organisations that work on issues around climate change helps build local capacity. It also empowers citizens to be informed, active agents in urban planning and governance processes. This is an effective way to build and sustain momentum for long-term goals of gender inclusivity amidst short-term political cycles.

3.2 Gender mainstreaming

Gender mainstreaming is the integration of a gender perspective into the design, implementation, monitoring and evaluation of policies, regulatory measures and spending programmes, in order to promote gender equality.[66] The City of Vienna was an early adopter of gender mainstreaming in urban planning and has conducted over sixty pilot projects since the early 1990s. Under gender mainstreaming, the city has

65 C40 Cities. *Gender Inclusive Climate Action in Cities.* London: C40 Cities; 2019. https://w4c.org/full-study/women4climate-report-gender-inclusive-climate-action-cities. Accessed 8 April 2019.

66 European Institute for Gender Equality. What is Gender Mainstreaming. https://eige.europa.eu/gender-mainstreaming/what-is-gender-mainstreaming. Accessed 9 April 2019.

a data-driven urban planning and design process, starting with collecting data at the very beginning of a project to understand how different groups of people use public space. Specifically, the aims are to learn about who is using the space and what for, analyse patterns of public space usage, define the needs and interests of people using the space, then plan accordingly to meet those needs.

One example of the measurable impacts of gender mainstreaming is the redesign of public parks. City planners in Vienna included girls in their original scoping and data collection exercises, and then redesigned two parks to be more inclusive of people across gender, age groups, racial groups and socioeconomic backgrounds. They added footpaths to improve accessibility, particularly beneficial for children, older people, women and people with disabilities; volleyball and badminton courts to provide a wider variety of activities; and landscaping that divided large open areas into semi-enclosed spaces to enable more mixed use.[67]

3.3 Gender-disaggregated data

Gender-disaggregated data is a tool that allows policymakers to capture and assess differences in the social, political, economic, spatial and environmental behaviours and actions among individuals across diverse populations. This gender analysis can then lead to gender-informed public investments and policies, thereby promoting more gender inclusive outcomes. For example, gender-disaggregated data on urban transport could help cities better see and understand gendered differences in how, where, when and why people travel in the city. The City of Barcelona has been a trailblazer in gathering gender-disaggregated data to ensure that the public transport system meets the needs of women and girls.

In 2016 the Department for Feminisms and LGTBI produced the city's Plan for Gender Justice 2016—2020, after data collection and citizen engagement. The Plan identifies four strategic areas:[68]

1 **Institutional Change:** Increasing institutional gender expertise, i.e. through gender training or gender budgeting.
2 **Economy for Life and Time Management:** Promoting gender equality in employment and entrepreneurial support programmes, in addition to promoting a gender equitable division of domestic labour.
3 **City of Rights:** Addressing structural barriers that impede people's human rights.
4 **Liveable and Inclusive Neighbourhoods:** Ensuring that urban public space is safe for and inclusive of women and girls. Crucially, this means addressing gender-based violence in public and private space.

Collecting gender-disaggregated data on urban transport is pivotal in order to deliver on the fourth strategic area, Liveable and Inclusive Neighbourhoods.[69] The city uses this data to ensure that the public transport, walking and cycling networks accommodate female mobility patterns.

67 Foran C. How to Design a City for Women. *CityLab.* https://www.citylab.com/transportation/2013/09/how-design-city-women/6739/. Published 2013. Accessed 15 October 2018.

68 Barcelona Department for Feminisms and LGTBI. *Plan for Gender Justice 2016—2020.* Barcelona: Department for Feminisms and LGTBI; 2016. https://ajuntament.barcelona.cat/feminismes-lgtbi/sites/default/files/documentacio/p_4.2_plan-for-gender-justice-2016-2020_ang.pdf. Accessed 8 April 2019.

69 C40 Cities. *Gender Inclusive Climate Action in Cities.* London: C40 Cities; 2019. https://w4c.org/full-study/women4climate-report-gender-inclusive-climate-action-cities. Accessed 8 April 2019.

Similarly, for the first time, the City of San Francisco collected gender- and race-disaggregated data on usage of new cycle lanes in the South of Market District to better understand how gender, race and socioeconomic class impact city cycling.[70] Increasing cycling is essential for the city to achieve its ambitious climate and sustainability targets, but women comprise only 29 per cent of the cyclists in San Francisco, despite being 49 per cent of the population. The gender gap in cycling is nuanced, as women of Asian and Hispanic descent are underrepresented in cycling.

One key takeaway from this study is that a paradigm shift in transport data collection is necessary so that everyone gets counted. Typical cycling studies only report peak-period commuting journeys to and from work, but women, especially women of colour, are more likely to cycle during off-peak hours for purposes other than work. As a result, their cycling journeys do not get counted. Through gathering gender- and race-disaggregated data, cities can help ensure that sustainable transport modes reflect and serve the heterogeneous travel patterns of diverse urban populations.

3.4 Women's safety audits

Under the leadership of Ángela Anzola, the Secretary for Women and Gender Equality in the City of Bogotá, women's safety on streets and on public transport systems has been a key priority. Anzola partnered with Safetipin, an app-based women's safety audit developed by Dr. Kalpana VIswanath in India, to collect data about women's perceptions and experiences of safety in Bogotá during the daytime and at night. The UN Women Safe Cities and Safe Public Spaces Programme recommends women's safety audits as a tool for cities to address the pandemic of gender-based violence in urban public space and on public transport. The results of women's safety audits empower cities with data and enable the development of robust indicators to assess female safety in cities. This makes women's and girls' safety "count" in urban and transport policy and planning processes.

The Safetipin audit is based on nine parameters: street lighting; openness (the availability of open sight lines in all directions); visibility (based on the "eyes on the street" principle, evaluating the commercial, retail and residential activity nearby); people (the number of people around); security (the presence of police officers and private security guards); walkpath (the quality of the pavement or road space); public transport (measured in terms of distance to the nearest mode of transport); and gender usage.[71] On the Safetipin app, women can drop pins on specific locations in the city, which maps the city according to where women feel safe or unsafe.

Two unique outputs from Bogotá's Safetipin audits were cycle route audits and an index of women's night-time safety. In a first, mobile phones were mounted on cycles to photograph the city's 294 kilometre cycling network, which revealed a greater need for street lighting and visibility along cycle routes and pinpointed where exactly interventions were necessary.[72] Meanwhile, the creation of an index of women's safety at night was particularly relevant because 30 per cent of women in Bogotá avoid going out at night because they feel unsafe on the city's streets and public transport systems.[73] Both the night-time safety index and cycle route audits

70 *Ibid.*

71 Safetipin. *Bogotá: A Safety Analysis Report*. Gurgaon: Safetipin; 2018. https://use.metropolis.org/case-studies/using-safetipin-to-build-safer-cities-for-women. Accessed 9 April 2019.

72 *Ibid.*

73 Anzola A in Lamble L. Capital offence: tackling harassment on public transport in Bogotá—podcast. *The Guardian.* https://www.theguardian.com/global-development/audio/2018/oct/24/listen-to-women-designing-safe-spaces-in-a-city-where-harassment-is-rife-podcast. Produced 2018. Accessed 9 April 2019.

are illuminating for policymakers, who do not always understand the extent, impact and spatial nature of gender-based harassment and violence, and will help drive policy and public space interventions to make the city safer for women and girls.

In Bogotá, each borough in the city has a Local Security Council, specifically designated to address gender issues and integrate gender mainstreaming in policymaking.[74] The Local Security Councils comprise of the local Mayor, police officers and women living in the area, therefore providing women with a platform to input their perspectives and experiences into local policy and planning decisions. The Safetipin audits have been used at Local Security Council meetings to amplify the voices of women to help the city tackle gender-based harassment or violence in public space.[75]

3.5 Public awareness campaigns

Alongside implementing policy and programming to address public sexual harassment and violence, public awareness campaigns can be instrumental in challenging cultural attitudes and norms. Mexico City, a participant in the UN Women Safe City and Safe Public Spaces for Women and Girls programme since 2015, has been tackling sexual harassment and violence on public transport. 75 per cent of women who travel daily in Mexico City use public transport,[76] but the city's public transport system is notoriously dangerous for women.[77] In a creative attempt to address gender-based violence on public transport, UN Women and the Mexico City government launched a #NoEsDeHombres (It's not manly) campaign in March 2017 to target male public transport commuters between the ages of 20 and 50.

The #NoEsDeHombres campaign puts the onus on men and men's behaviour, which counters typical victim-blaming messages directed at women. The campaign contained filmed social experiments, such as "Experimento Asiento" (experiment with a seat), which went viral online. This video showed people's reactions to subway seats that were changed to look like the bottom half of a naked male body, including the penis, with signs beneath the seats reading, "It is annoying to travel this way, but not compared to the sexual violence women suffer in their daily commutes."[78]

The Washington Metropolitan Area Transit Authority (WMATA) in Washington, DC, also launched an effective public awareness campaign addressing sexual harassment and violence on public transport in 2012. In partnership with Collective Action for Safe Spaces and Stop Street Harassment, WMATA launched its first-ever anti-sexual harassment campaign, consisting of advertisements in English and Spanish at metro stations to raise awareness about sexual harassment in public and encourage victims to report incidents to the police. This included an online portal for people to report incidents to Metro Transit Police, improved data tracking of incidents and an email address to allow victims to send photos or video files to assist an investigation.[79]

74 *Ibid.*

75 Dekovic A. Bogotá's Fight for Gender Equality and Safe Public Transport. *Impakter.* Published 2019. https://impakter.com/bogotas-fight-for-gender-equality-and-safe-public-transport/. Accessed 11 April 2019.

76 UN Women. Safe Cities and Safe Public Spaces: Global Results Report. http://www.unwomen.org/en/digital-library/publications/2017/10/safe-cities-and-safe-public-spaces-global-results-report. Published 2017. Accessed 8 April 2019.

77 Thompson Reuters Foundation. Women on the Move; 2018. http://2018transportpoll.trust.org/. Accessed 8 April 2019.

78 Debs S & Franco M. 'Penis Seat' Causes Double Take on Mexico City Subway. *The New York Times.* Published 2017. https://www.nytimes.com/2017/03/31/world/americas/penis-seat-mexico-city-harassment.html. Accessed 8 April 2019.

79 Collective Action for Safe Spaces. WMATA Campaign. https://www.collectiveactiondc.org/our-work/wmata-anti-sexual-harassment-campaign/. Accessed 9 April 2019.

The second phase of WMATA's campaign launched in 2015; key distinguishing features were the use of gender-neutral language and the addition of messages targeting perpetrators of sexual harassment, rather than just victims of harassment.[80] The advertisements in this second round had more diverse and inclusive imagery, such as ones featuring transgender women of colour and Muslim women.[81] Most recently, WMATA announced the launch of a new public awareness campaign, STOP harassment, geared towards empowering public transport riders to report and intervene if they witness or experience harassment. The key message is, "You can help STOP harassment" with STOP as a mnemonic for four strategies to intervene: Sidetrack, Tell, Observe and Postpone.[82]

There are notable aspects of both public awareness campaigns that helped maximise their impact. The #NoEsDeHombres campaign crowd-sourced ideas from the public for an effective campaign to target a male audience and to change men's behaviour. It also involved well-known public figures, like bloggers, wrestlers and actors, as an endorsement that sexual harassment is unacceptable. Perhaps, most importantly, the messages exclusively targeted men, which helps shift away from victim-blaming mentalities and narratives and towards more scrutiny of toxic masculinity.

Meanwhile, the WMATA campaign engaged two local activist organisations with expertise in addressing street harassment. It also monitored and evaluated key campaign messages and images, and updated them as necessary. Critically, it included more inclusive imagery of transgender women of colour, which reflects an intersectional perspective and helps draw attention to the disproportionately high rates of violence against transgender women.

80 *Ibid.*

81 Raven J. Sexual violence isn't uncommon to Metro. Here's what WMATA is doing to fix that. *Greater Greater Washington.* Published 2016. https://ggwash.org/view/43487/sexual-violence-isnt-uncommon-on-metro-heres-what-wmata-is-doing-to-fix-that. Accessed 9 April 2019.

82 Washington Metropolitan Area Transit Authority. News Release: New Metro Campaign Aims to Stop Harassment. Published 2019. https://dccommutetimes.com/news_releases/article/new-metro-campaign-aims-to-stop-harassment. Accessed 9 April 2019.

This section describes existing policies and projects in London that work towards making the city safer and more inclusive for women and girls: the Women's Night Safety Charter, the Women's Design Service, Project Guardian, the Healthy Streets Approach, the Women in Clean-Tech Agenda and various other organisations.

4.1 Women's Night Safety Charter

The London at Night report found that Disabled people, people in low-income households, and women do not feel as safe in London at night as other Londoners.[83] The report also found:

- Actions like more visible policing, or better street lighting, are more likely to be favoured by those who might feel more at risk of crime. This includes women, and people over 50. These are also groups who have less interest in going out at night
- These findings are not replicated for ethnic minorities. They are more likely to go out at night as they're more likely to be working then
- Secure transport and well-used streets can help people feel that the streets are safer, as this is more clearly linked to experiences

Night Czar Amy Lamé organised the Night Safety Summit in the summer of 2018, at which she hosted the first-ever workshop on women's safety at night. The women's safety at night workshop convened delegates from women's groups, charities, businesses, councils, transport organisations and the police with the aim of understanding how public spaces in London could be safer for women and girls at night. To that end, delegates were broken up into small groups for a facilitated discussion about the public spaces most in need of action; the key safety issues in those spaces; existing actions in London to address these issues and their strengths; and key opportunities for action.

The workshop led to the creation of the Women's Night Safety Charter, which includes seven commitments based on the pillars of reporting, responding, taking responsibility and redesigning public spaces:

- Nominate a champion in your organisation who actively promotes women's night safety.
- Demonstrate to staff and customers that your organisation takes women's safety at night seriously, i.e. through a communications campaign.
- Tell staff what to do if they experience harassment when working, going out, or travelling.
- Encourage reporting by victims and bystanders as part of your communications campaign.
- Train staff to ensure that all women who report are believed.
- Train staff to ensure that all reports are recorded and responded to.
- Design your public spaces and work places to make them safer for women at night.[84]

83 Greater London Authority, *London at Night: An Evidence Base for a 24-Hour City,* London, 2018.

84 Mayor of London. *Pledge to Improve Women's Safety At Night In London;* 2018. https://www.london.gov.uk/press-releases/mayoral/pledge-to-improve-womens-safety-at-night. Accessed 8 November 2018.

To support this implementation of the charter's commitments, the Greater London Authority created the Women's Night Safety Toolkit which outlines key actions and approaches that can be taken to support the aims of the charter.

The workshop highlighted some of the contributing factors and enabling conditions for gender-based harassment and violence in public space in London; how the built environment facilitates and enables such behaviour; temporal patterns to the problem; and recommended actions to improve women's and girls' safety.

Recommended actions to make London safer for women and girls that emerged from the workshop included: tackling the normalisation of sexual harassment; increasing the visibility of women in built environment professions and processes; increasing bystander intervention so people feel supported by others if they experience harassment in public; and collecting and mapping data. For example, one method of data collection could be working with local communities to identify and map the perceived danger spots in their area. Challenging cultural norms is also necessary so that women feel empowered to claim and occupy public space without experiencing harassment.

4.2 Women's Design Service

The Women's Design Service was founded in 1984 to increase women's participation in urban design and planning.[85] Through a holistic approach that treated design as dynamic, both social and technical, the Women's Design Service advised community groups, performed feasibility studies, assisted with funding applications, conducted research and participated in lobbying. It brought together diverse networks, including architects, planners, government officers, tenants and residents, therefore rapidly establishing itself as a resource for all those interested in women, gender and the built environment.

Initially funded by the former Greater London Council (GLC), the Women's Design Service maintained a precarious existence after the GLC restructured, relying mostly on government funding and grants. Sadly, as of 2012, the Women's Design Service remained dormant whilst the Trustees consider future options, including possibly closing it down.[86] This would be a shame because of the legacy of the Women's Design Service on the UK's built environment. The Women's Design Service is to thank for introducing the legal requirement for toilets to include baby-changing facilities, and for conducting significant research on women's safety in public space, through surveys and women's safety audits, to name two examples.

The Women's Design Service conducted a three-year pilot project called Making Safer Places, which entailed women's safety audits in Bristol, Wolverhampton, London and Manchester. Working with women in those cities, they did a "fearometer" exercise to explore how and which aspects of the built environment caused women to feel unsafe, and how contextual factors, like time of day, contributed to perceptions of safety. The women's safety audit results informed recommendations to improve the localities, including moving or removing vegetation, rerouting paths or installing fences.[87] Their research adopted an intersectional perspective, acknowledging the multiplicities of women's experiences

85 Spatial Agency: Women's Design Service. Spatialagency.net. http://www.spatialagency.net/database/where/knowledge/womens.design.service. Published 2018. Accessed 16 October 2018.

86 WDS—Women's Design Service. Wds.org.uk. https://www.wds.org.uk. Published 2018. Accessed 16 October 2018.

87 WDS Projects. Wds.org.uk. http://www.wds.org.uk/projects_msp.html. Published 2018. Accessed 16 October 2018.

of the urban environment, and underscored the need to treat buildings and spaces not as mere design objects or spatial fixtures, but as actual and possible experiences.[88]

4.3 Project Guardian

In April 2013, Transport for London (TfL), the British Transport Police, the Metropolitan Police Service, and City of London Police joined forces to launch Project Guardian, a campaign to make public transport safer for women and girls, and to encourage reporting of unwanted sexual behaviour on the transport network. Project Guardian formed after a TfL survey reported widespread fear of sexual harassment on public transport among women and girls. The survey found that 15 per cent of women and girls had experienced sexual harassment or violence while on public transport, but 90 per cent had not reported it.[89]

Similar to the WMATA anti-public sexual harassment campaigns in Washington, DC, TfL tapped into the expertise of London-based women's organisations that address gender-based violence. The Everyday Sexism Project, the End Violence Against Women coalition and Hollaback! London trained and advised the police on the project. The Everyday Sexism project collects and shares stories about women's experiences with sexism in everyday life. The End Violence Against Women Coalition comprises of specialist women's support services, researchers, activists, survivors and NGOs working to end violence against women and girls. Hollaback! is a global grassroots movement to end harassment in both digital and virtual public spaces.

Just seven months after the launch of Project Guardian, there was a 20 per cent increase in the reporting of sexual offences on public transport.[90] The number of annual reports of sexual harassment on London's public transport network has doubled from 1,023 in 2012/13, since Project Guardian launched, to 2,087 in 2015/16.[91] Additionally, TfL reported a 36 per cent increase in arrests for sexual offences on the transport network between 2014/15 and 2015/16.[92] TfL also launched a "Report It To Stop It"[93] campaign, including a short film that went viral on YouTube in 2015 to raise awareness about sexual harassment on public transport and encourage the reporting of such crimes.

4.4 Healthy Streets Approach

The Healthy Streets Approach adopts a public health perspective on the urban street environment and bridges the public health, urban design/planning and transport sectors to create a healthier, safer, more sustainable and more liveable city. It is an integral component of the Mayor's Transport Strategy and sustainable

88 Berglund E. Building a Real Alternative: Women's Design Service. *Field: A Free Journal for Architecture 2.* 2008; 2(1): 44—59. http://field-journal.org/wp-content/uploads/2016/07/Building-a-Real-Alternative_Berglund.pdf. Accessed 16 October 2018.

89 Bates L. Project Guardian: making public transport safer for women. *The Guardian.* Published 2013. Available at: https://www.theguardian.com/lifeandstyle/the-womens-blog-with-jane-martinson/2013/oct/01/project-guardian-public-transport-safer-women. Accessed 10 April 2019.

90 *Ibid.*

91 Transport for London. Press Release: Powerful new campaign highlights the importance of reporting unwanted sexual behaviour. Published 2017. https://tfl.gov.uk/info-for/media/press-releases/2017/march/powerful-new-campaign-highlights-the-importance-of-reporting-unwanted-sexual-behaviour. Accessed 10 April 2019.

92 *Ibid.*

93 Report it to stop it. Transport for London. https://tfl.gov.uk/travel-information/safety/report-it-to-stop-it. Accessed 8 November 2018.

transport goals for 80 per cent of trips in London to be made by foot, cycle or public transport.[94] It uses 10 evidence-based indicators of what makes streets attractive and healthier:

- **Pedestrians from all walks of life:** Streets should be welcoming for everyone to walk, spend time in and engage in public life.
- **People choose to walk, cycle and use public transport:** A successful transport system encourages and enables walking and cycling to be more viable and preferred ways to travel. To achieve this, London must reduce the volume and dominance of motor traffic and improve people's experience of being on streets.
- **Clean air:** Improving air quality benefits everyone and reduces health inequalities.
- **People feel safe:** Everyone should feel comfortable and safe on London streets at all times, in terms of road danger and personal safety.
- **Not too noisy:** Reducing noise pollution from motor traffic will directly enhance public health, active travel and human interaction.
- **Easy to cross:** Safe, direct and comfortable streets that enable people to cross at their convenience are necessary to encourage more cycling and connect communities.
- **Places to stop and rest:** Ensuring that there are enough places to stop and rest will benefit everyone, including local businesses.
- **Shade and shelter:** Providing shade and shelter from the elements is necessary for people to use, enjoy and feel they can linger in public space.
- **People feel relaxed:** There is an emphasis on reducing motorised traffic and investing in quality pavements and cycle lanes.
- **Things to see and do:** Lively public spaces depend on having interesting, stimulating, attractive streets, buildings and street art.[95]

Typically transport appraisals are premised on economic productivity and congestion reduction. The Healthy Streets Approach turns this on its head by prioritising people over motorised traffic, and health and wellbeing over economic productivity or the monetary value of travel time savings. The "pedestrians from all walks of life," "people feel safe" and "places to stop and rest" Healthy Streets indicators are also noteworthy.

The explicit acknowledgment that healthy, attractive and liveable streets are ones where people from all walks of life feel welcome and able to spend time in and pass through puts diversity and inclusion at the forefront. This underscores the need for truly public spaces where everyone is welcome, as opposed to privately owned public spaces that are premised on exclusion. The "places to stop and rest" indicator is significant because it reframes city streets as not just spaces for functional movement, but also for rest and stillness. As such, transport planners must think about city streets as public spaces that serve purposes beyond merely funnelling people and goods. Similarly, urban designers and planners must think about the connectivity between various public spaces to ensure safe passage through the city for people from all walks of life.

The fact that people's feelings of safety and comfort on city streets are an indicator of healthy streets is important, especially since typical assessments of road safety do not consider perceptions and feelings of safety. They also typically privilege safety from motorised traffic over personal safety, including safety from harassment. By defining safety as both personal and road safety, the Healthy Streets indicators represent a paradigmatic shift that values people's subjective, lived experiences in transport and public space investments.

94 Greater London Authority. *The Mayor's Transport Strategy.* London: Greater London Authority; 2018. https://www.london.gov.uk/sites/default/files/mayors-transport-strategy-2018.pdf. Accessed 11 April 2019.

95 Transport for London. *Healthy Streets for London.* London: Transport for London; 2017. http://content.tfl.gov.uk/healthy-streets-for-london.pdf. Accessed 10 April 2019.

The Healthy Streets Approach is an excellent way to start reframing street and public space design, and it could benefit from a gender perspective. For instance, the indicators could explicitly mention safety from gender-based harassment and violence as another key criterion of healthy, liveable streets. The "places to stop and rest" and "shade and shelter" indicators could also reference how adequate street lighting and visibility are necessary for women and girls to feel safe. Finally, greater consideration of temporal transitions of public spaces and city streets throughout 24-hour cycles could make the Healthy Streets Approach more robust for a healthy, liveable and safe 24-hour city.

4.5 Other Organisations

In addition to the aforementioned London-wide initiatives led by the Mayor's Office, there is a plethora of organisations that are working towards making the urban built environment more inclusive and safer for women and girls. Examples include:

- **Urbanistas:** A network that amplifies the voices and ideas of women to make cities better for everyone by connecting women working on various urban issues to share knowledge, build support and inspire so that women are empowered to kick-start projects.[96]
- **Part W:** An action group of women working across architecture and design, infrastructure and construction and campaigning for gender parity across the built environment. [97]
- Women in Science and Engineering (WISE): A Community Interest Company that provides Business to Business services to employers, educators and training providers seeking to increase the participation, contribution and success of women in science, technology, engineering and mathematics (STEM).[98]
- **Women's Engineering Society (WES):** A charity and professional network of women engineers, scientists and technologists working to support and inspire women in the field; encourage engineering education; and support companies with gender diversity and inclusion. [99]
- **Hollaback London!** A movement to end harassment in public spaces powered by local activists. They run particular campaigns and training around bystander intervention. [100]
- **Good Night Out Campaign:** An organisation that helps nightlife spaces and organisations to better understand, respond to, and prevent sexual harassment and assault, through specialist training, policy support and an accreditation programme. [101]
- **Secured by Design:** A police organisation seeking to achieve sustainable reductions in crime through design. [102]
- **Black Females in Architecture:** a network and enterprise founded to increase the visibility of black and black mixed heritage females within architectural industry and other built environment fields. In so doing, BFA actively addresses issues of inequality and diversity within the industry.
- **Architects for Change:** the RIBA's expert advisory group for equality, diversity and inclusion.

96 Women's Network | Urbanistas. Urbanistas. https://www.urbanistas.org.uk. Accessed 16 October 2018.

97 Manifesto. Part W. https://www.part-w.com/ Accessed 20th February 2020

98 About Us. Women in Science and Engineering. https://www.wisecampaign.org.uk/about-us/. Accessed 10 April 2019.

99 About WES—who we are. Women's Engineering Society. https://www.wes.org.uk/content/about-wes-who-we-are. Accessed 10 April 2019.

100 You have the power to end street harassment. Hollaback London! https://ldn.ihollaback.org/ Accessed 20 February 2020

101 Good Night Out Campaign https://www.goodnightoutcampaign.org/info/ Accessed 10 April 2019.

102 Secured by Design. Who we are. https://www.securedbydesign.com/about-us/who-we-are-what-we-do Accessed 20 February 2020

- InterEngineering: a free and inclusive organisation for everyone who believes that LGBT diversity and inclusion within engineering is important.
- **The DisOrdinary Architecture Project:** has been working with architectural and built environment practitioners for over a decade. It aims to open practices to more creative and critical engagement with disability, ability, access and inclusion through collaboration.



Meeting the Mayor's aspiration to make London "a city of freedoms, opportunities and rights for all" is an ongoing endeavour that requires sustained and concerted action across all policy areas in City Hall as well as from the wider London community of businesses, NGOs and citizen groups. By becoming a signatory to the UN Women's Safe Cities and Safe Public Spaces Programme, the Mayor has underlined his commitment to tackling violence against women and girls in London in all of its forms.

This report has provided guidance as to the role of built environment interventions in making public spaces more inclusive, has looked internationally at specific tools adopted, and has outlined the existing work being undertaken by London towards this aim. The following recommendations borrow from the insights in this report to create a suite of options for continuing to make London safer for women and girls.

1 RE-INSTATE THE WOMEN'S DESIGN SERVICE (OR A BODY LIKE IT)

The Women's Design Service played a pivotal role in making urban public space more inclusive of women, both in terms of professional practice and actual use of public space. With long term secure funding, groups like these are able to act as a focal point for local organisations, maintain the issue high on all policy agendas and ensure that gender expertise is captured, disseminated and capitalised upon. If the Women's Design Service were reinstated it could:

a. Lead and collate in-depth participatory research on best practice with respect to making London safer for women and girls
b. Design and deliver gender mainstreaming training for built environment professionals in London to equip them with practical actions to incorporate a gender lens in design
c. Create and maintain partnerships with women's organisations, research institutions and the Mayor's Design Advocates to strengthen interest in making London safer for women and girls
d. Maintain London's priority on women and girls' safety as a core policy agenda as well as lobby for its inclusion in non-government projects and initiatives across the capital (i.e. through developers, Business Improvement Districts, housing associations etc.)

2 IMPLEMENT GENDER MAINSTREAMING PILOT PROJECTS USING GENDER DISAGGREGATED DATA

There are a wide range of interventions across public transport, cycling, public space, housing and toilet provision that could make London work better for women. But if the impacts of these projects are to be understood and scaled across London, an evidence base of impact needs to be built up. Therefore, the pilot projects suggested below must collect, analyse and report on gender-disaggregated data from before and after the intervention. Such pilot projects include, but are not limited to:

- Cycling: Identify scheduled cycling infrastructure upgrade plans across London and ensure women's needs are taken into account by including protected cycle lanes, adequate and safe space for storage as well as local imagery around diversity of cyclists
- Lighting: Conduct small scale interventions to explore the impact of innovative and creative lighting schemes on the feeling of safety in less populated parts of the city
- Housing: work with housing associations and residents to review the provision of adequately lit lifts, as well as accessible and secure pram and cycle parking and other needs
- Toilets: Partner with universities and local authorities to create and implement innovative designs for inclusive and affordable public toilets. This could be supported by a campaign to open up more privately owned toilets (e.g. in bars and restaurants) to non-paying customers

3 CAPITALISE ON THE WOMEN'S NIGHT SAFETY CHARTER TOCONDUCT NIGHT SAFETY AUDITS

Women's safety audits can help provide spatial and quantitative data about women's perceptions and experiences of safety in the city. This can guide data-driven approaches to systematically assess and improve female

safety in public. By working with the existing 340 signatories of the Women's Night Safety Charter, local teams could work together to:

- Conduct localised women's night safety audits
- Use these audits to collaborate with local Business Innovation Districts, TfL and the Metropolitan Police Service to create Local Women's Safety Action Plans

4 BUILD ON EXISTING PUBLIC AWARENESS CAMPAIGNS AND CREATE POSITIVE IMAGERY IN THE PUBLIC REALM

Campaigns like 'Project Guardian' and 'Report It To Stop It' have been effective in increasing reporting of unwanted sexual behaviour on public transport. Building on this success, new campaigns could focus on the responsibilities of bystanders and perpetrators and thereby aspire to minimise the impacts and prevalence of these assaults. Furthermore, there is an opportunity to take a lead in providing more progressive images of women in advertising in public space. Recommendations towards achieving this include:

- Partner with organisations like Hollaback! to include bystander awareness tips and tricks into public campaigns on unwanted sexual behaviour
- Crowdsource ideas for campaigns that would target potential perpetrators of unwanted sexual behaviour
- Ensure adverts across the London transport network do not perpetuate harmful female stereotypes
- Showcase feminist murals and public art by women

5 INTEGRATE A GENDER PERSPECTIVE INTO TFL'S HEALTHY STREETS APPROACH

The Healthy Streets Approach is an excellent way to start reframing street and public space design, and it would benefit from a gender perspective. For instance, the indicators could explicitly mention safety from gender-based harassment and violence as another a key criterion of healthy, liveable streets. The "places to stop and rest" and "shade and shelter" indicators could also reference how adequate street lighting and visibility are necessary for women and girls to feel safe. As such, TfL could:

- Conduct a review of the indicators in the Healthy Streets Approach to integrate an explicit gender perspective

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Wen.

Feminist Green New Deal Policy Paper

Towards Gender-Inclusive and Sustainable Transport Systems







#GreenCaringEconomy

Towards Gender-Inclusive and Sustainable Transport Systems

UK Feminist Green New Deal Policy Paper

By Tiffany Lam for UK Women's Budget Group

July 2021

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Executive summary

To decarbonise transport and democratise the right to safe mobility, our transport systems must be inclusive and sustainable. This paper discusses four key structural factors that create gender disparities in transport systems and must be addressed to decarbonise transport in a just and inclusive way: access to economic resources and free time, car-centric policy and planning, safety and accessibility, and the technocratic paradigm in transport.

The gendered division of domestic and caring responsibilities means women make more frequent, short journeys throughout the day, whereas men make fewer but longer journeys during peak hours. However, transport systems are designed to optimise peak-hour long distance radial journeys into city centres, which reflects a male bias. Bus deregulation has also disproportionately disadvantaged women, who rely more on buses and walking due to reduced economic resources.

The absence of robust public transport networks and car-centric policy and planning, especially in towns and rural areas, has created 'transport deserts,' where driving is the only practical way to travel. However, women, BAME people, disabled people and people with lower incomes are less likely to own a car, which constrains their ability to participate in public life.

Perceptions and experiences of safety and accessibility are shaped by identity and influence mobility behaviour. Everyday street harassment impedes safe mobility for women and girls. Police racial profiling and hate crimes can make BAME communities feel unsafe in public and deter them from active travel. Inaccessible public transport and streets make sustainable transport unfeasible for disabled people.

Gender and other inequalities in transport stem from the technocratic paradigm that underpins transport, in which 'technical' issues (e.g. engineering, technology) are privileged over 'social' issues (e.g. gender, inclusion). This prioritises top-down, technology-led solutions and produces male bias in transport systems and a male-dominated industry.

This paper offers nine recommendations to achieve gender inclusive and sustainable transport systems:

- **Collect gender-disaggregated data.**
- **Adopt gender-responsive budgeting.**
- **Increase gender-responsive participatory planning.**
- **Strengthen bus networks.**
- **Prioritise active travel for care-related and local journeys to key services.**
- **Conduct gender safety audits and accessibility audits.**
- **Invest in bystander intervention training.**
- **Explicitly prioritise gender equity and inclusion and conduct Equality Impact Assessments.**
- **Invest in mentoring programmes to diversify the transport sector.**

Introduction

Transport facilitates our access to opportunities and participation in public life. Our ability to travel – and where, when, how and why we travel – is contoured by power and privilege. This begs the question: By whom, for whom and for what do our transport systems serve? Gender and other disparities in transport behaviour and usage underscore the need for inclusive and sustainable transport systems that enable *everyone* to move around in a safe, healthy and affordable way. This is essential to democratise the right to safe mobility and decarbonise transport, which is a leading source of carbon emissions in the UK, accounting for one-third of the UK's total carbon output.[1]

Though gender is one of the most robust determinants of journey purpose and mode, it is markedly absent in transport planning processes.[2] [3] For example, women typically make more frequent, shorter journeys throughout the day due to domestic and caring responsibilities, whereas men typically make fewer but longer work-related journeys during peak hours.[4] However, transport systems are built to optimise longer distance, work commutes during peak hours.[5] Without an explicit consideration of issues around gender, diversity, inclusion, governance and ownership, transport innovations (e.g. electric vehicles, e-scooters) risk reproducing and further entrenching gender and other inequalities.

Current debates about decarbonising transport focus heavily on electrification, but electrification is not a panacea. Mining raw materials for batteries, manufacturing and generating electricity for electric vehicles produce emissions. The extraction of raw materials for batteries exacerbates global injustices, as consumers for electric vehicles mostly live in industrialised countries while raw materials are concentrated in countries in the Global South.[6] A just transition to low carbon transport requires shifting from polluting fossil fuels and exploitative extractions towards publicly owned sustainable energy.

Tackling the climate and air pollution crises requires significant and rapid reductions in motorised transport, particularly private cars, which account for nearly two-thirds of road transport emissions.[7] This requires more integrated and gender-informed land use and transport policy and planning, alongside increased investments in public transport and active travel, to enable people across the UK to access essential services and amenities by walking, cycling or public transport. Rethinking public transport governance and ownership can increase affordability, accessibility and accountability to the public.

This paper discusses four key structural factors that gender transport and must be considered to decarbonise transport in a just and inclusive way. It concludes with recommendations, including examples of good practice, to achieve gender inclusive and sustainable transport systems.

1 Department for Business, Energy and Industrial Strategy (BEIS), 2019, 2018 UK Greenhouse Gas Emissions, Provisional figures http://bitly.ws/d8cd
2 International Transport Forum, 2021, Transport Innovation for Sustainable Development: A Gender Perspective http://bitly.ws/ctem
3 Ramboll, 2021, Gender and Mobility, http://bitly.ws/cteo
4 Women4Climate, 2019, Gender Inclusive Climate Action in Cities http://bitly.ws/cteq
5 Ibid.
6 UNCTAD, 2020, Commodities At A Glance: Special issue on strategic battery raw materials, http://bitly.ws/ctfU
7 Department for Transport, 2018, Energy and environment: data tables, ENV0202 http://bitly.ws/d8cb

The gendered nature of transport

To decarbonise transport in a just and inclusive way, it is important to understand and address four key structural factors:

- **Access to economic resources and free time**
- **Car-centric policy and planning**
- **Safety and accessibility**
- **Technocratic paradigm in transport**

Access to economic resources and free time

There are gender inequalities in economic resources and free time due to the gendered division of household and caring responsibilities, women's lower rates of participation and gender discrimination in the labour market (e.g. gender pay gap). Women are more likely than men to have low incomes, be in part-time and/or precarious work and live in poverty. These gender disparities are compounded by race. BAME women are twice as likely as white workers to have insecure work, largely including low-paid health and social care jobs.[8] The Covid-19 pandemic has increased women's economic insecurity and time poverty, especially BAME women.[9] [10]

The gendered division of household labour and caring responsibilities results in women making more encumbered care-related journeys that may require multiple stops.[11] This makes certain transport modes (e.g. cycling, walking or car sharing) unviable and underscores the need for accessible public spaces and transport systems. Narrow or absent pavements, car parking on pavements and the lack of lifts or ramps in transport stations pose barriers for people using wheelchairs and women traveling with a pram, children or older people.

More importantly, transport systems do not adequately enable care-related journeys, as they are built to optimise long distance radial journeys into city centres during peak hours. This exhibits a male bias because it is based on the historic male breadwinner's work commute from the suburbs into the city centre and continues to reflect men's travel patterns.[12] In the UK, men are twice as likely as women to make commutes lasting at least an hour, while women make the majority (55%) of trips lasting less than 15 minutes.[13] In 2019, men in England made 8% fewer overall trips than women but travelled 17% further.[14] Men in England also made 36% more commuting trips and 24% more business trips than women in 2019, whereas women made 36% more education/escort education trips than men.[15]

Radial planning that prioritises peak hour commutes fails to serve the mobility needs of women, children, teenagers, the elderly, informal workers and others with more varied

8 TUC, 2020, BME women and work: TUC equality briefing http://bitly.ws/ctfC

9 Alon, T.M., Doepke, M., Olmstead-Rumsey, J. & Tertilt, M. (2020) The Impact of COVID-19 on Gender Equality, NBER, Working Paper 26947 http://bitly.ws/ctfA

10 Women's Budget Group, 2020, BAME women and Covid-19 – Research evidence http://bitly.ws/ctfD

11 Women4Climate, 2019, Gender Inclusive Climate Action in Cities http://bitly.ws/cteq

12 Ibid.

13 ONS, 2018, Commuting to work by gender, UK country and region http://bitly.ws/cteu

14 Department for Transport, 2020, National Travel Survey: 2019 report http://bitly.ws/ctel

15 Department for Transport, 2020, National Travel Survey Factsheets 2019 http://bitly.ws/cteK

journeys (e.g. shift workers, night-time economy workers), who may experience longer wait times for transport services in emptier train stations and bus stops, which can feel less safe. Changes in work and travel patterns since the Covid-19 pandemic call into question the primacy of radial planning. Even before the pandemic, work commutes comprised a small proportion of overall travel. In England, the three most common trip purposes from 2002-2019 have been leisure (26%), shopping (19%) and commuting (15%).[16] Transport systems must reflect this and enable a wider range of local and orbital journeys. Places also need to be better designed to reduce the distances people have to travel to access leisure, shopping, work and services.

Although women, particularly women with lower incomes, are more dependent on walking and public transport than men, there are gender differences in public transport usage.[17] In the UK, women are more reliant on buses while men are more reliant on trains and tubes.[18] Women in Scotland make 13% more bus journeys than men.[19] Women in England make a third more bus journeys than men.[20] Meanwhile, men in England make 40% more rail trips than women because rail networks better serve longer commutes that men typically make and 47% of rail trips are for commuting purposes.[21] The high cost of rail travel is also prohibitive for people with lower incomes.

Because women rely more on buses than men, they have been disproportionately disadvantaged by bus deregulation in the UK and subsequent cuts to local bus services under austerity. Reductions in national bus ownership since the 1985 Transport Act have led to fare increases, fewer or withdrawn bus routes and poorer quality services outside of London, especially in rural areas.[22] [23] 134 million miles of bus coverage across the UK have been cut between 2008 and 2018.[24] As a result, local bus journeys can be circuitous, making driving or taking a taxi quicker, safer and more attractive. Cuts to bus services intersect with cuts to public services vital to women's safety (e.g. Violence Against Women and Girls services, refuges) and curtail women's access to basic services (e.g. childcare, health care), work opportunities and social activities, particularly older women, disabled women and women in rural areas.[25]

The failure of central and local governments to consider the gendered impacts of cuts to bus services compounds wider gender inequalities in society and increases women's risk of social and spatial isolation.[26] Women typically live longer than men and older people have free access to many public transport services. However, one-third of people over 65 in England never use public transport and 68% of UK households with someone over 70 own a car.[27] Bringing buses into public ownership can improve services by increasing affordability, accessibility, inclusion and public accountability.

16 Department for Transport, 2020, National Travel Survey: 2019 report http://bitly.ws/ctel
17 International Transport Forum, 2021, Transport Innovation for Sustainable Development: A Gender Perspective http://bitly.ws/ctem
18 ONS, 2018, Commuting to work by gender, UK country and region http://bitly.ws/cteu
19 Transport Scotland, 2021, Scottish Transport Statistics No 39 2020 http://bitly.ws/cteS
20 Department for Transport, 2020, Mode of Travel Statistical Data Set, NTS0601 http://bitly.ws/cteT
21 Department for Transport, 2020, National Travel Survey Factsheets 2019 http://bitly.ws/cteK
22 Campaign for Better Transport, 2019, Future of the bus: future funding arrangements http://bitly.ws/ctfE
23 CPRE, 2021, Every village, every hour 2021 buses report http://bitly.ws/d8j2
24 Wilde, C., Lynch, P. & Belcher, A. 'Britain's bus coverage hits 28-year low.' BBC News, 16 February 2018 http://bitly.ws/cthB
25 National Federation of Women's Institutes, 2021, A New Route for Local Bus Services http://bitly.ws/d8iA
26 Ibid.
27 Age UK, 2015, The Future of Transport in an Ageing Society http://bitly.ws/ctfI

Car-centric policy and planning

The lack of robust public transport networks in towns and rural areas increases car dependency. Public transport journeys in rural areas also tend to be more expensive than in urban areas and harder to plan due to inadequate route planning apps. There is high public demand in some rural areas, like South Wales, for improved bus services to reduce car dependency.[28] Part of the problem is the centralisation of transport policymaking in London, which overlooks the transport needs of smaller cities, towns and rural areas. Furthermore, urban and town development has built in car dependency by prioritising car travel and investment in roads.[29]

Car-centric policy and planning has created 'transport deserts,' where driving is the only practical form of transport due to absent or inadequate public transport, pavements and cycling infrastructure, as well as long distances needed to access services, opportunities and amenities.[30] Over one million people in the southwest and northeast of England live in transport deserts.[31] The cost of a car can drive those with lower incomes into poverty.[32] Transport deserts compromise the provision of and access to health and social care, particularly in rural areas with large ageing populations, like Somerset in Southwest England.[33] [34] This has a gendered impact, as women comprise 77% of the NHS workforce and 82% of the social care workforce and women outlive men.[35] [36] [37]

Despite increased car dependency in smaller cities, towns and rural places, access to a car is not equal. Women, BAME people, disabled people and those with lower incomes are less likely to own a car.[38] [39] Men are more likely to hold a driving license than women. In Scotland, 77% of men have a driving license compared to 66% of women.[40] In England, the figures are 80% and 71% respectively.[41] Black people in England are also over twice as likely as white people to live in a household without a car.[42] Similarly, in Scotland 60% of 'African' households and 49% of 'Caribbean or Black' households lack car access.[43] In Wales, 65% of households in the lowest income quintile have access to a car, compared to 89% of households in the top income quintile.[44] Figures in England are 55% and 86% respectively.[45]

People with lower incomes are disproportionately harmed by road collisions and traffic-related air pollution, despite lower levels of car ownership and usage. In areas of higher deprivation in the UK, there are more road collisions and pedestrians are disproportionately

28 IPPR, 2021, South Wales Valleys Climate and Fairness Panel http://bitly.ws/dMjy
29 Common Wealth, 2019, Away with all Cars (Redux) http://bitly.ws/dfIG
30 CPRE, 2021, Every village, every hour 2021 buses report http://bitly.ws/d8j2
31 Ibid.
32 Ibid.
33 Somerset County Council, 2016, State of the Somerset Economy Report http://bitly.ws/d8kK
34 New Economics Foundation, 2020, Community Micro-Enterprise as a Driver of Local Economic Development in Social Care http://bitly.ws/d8nK
35 NHS Employers, 2019, Gender in the NHS infographic http://bitly.ws/dfJh
36 Ibid.
37 Skills for Care, 2020, The state of the adult social care sector and workforce in England http://bitly.ws/db5f
38 Stats Wales, 2014, National Survey for Wales results, 2013-14 http://bitly.ws/ctfG
39 Transport Scotland, 2021, Scottish Transport Statistics No 39 2020 http://bitly.ws/cteS
40 Ibid.
41 Department for Transport, 2020, National Travel Survey: 2019 report http://bitly.ws/ctel
42 Department for Transport, 2019, National Travel Survey NTS0707 http://bitly.ws/ctfJ
43 Transport Scotland, 2021, Scottish Transport Statistics No 39 2020 http://bitly.ws/cteS
44 Stats Wales, 2014, National Survey for Wales results, 2013-14 http://bitly.ws/ctfG
45 Department for Transport, 2020, National Travel Survey: 2019 report http://bitly.ws/ctel

at risk of road traffic injuries.[46] Children, particularly males, in the most deprived areas in England are at greatest risk of road traffic injury across all transport modes.[47] In Scotland, the rate of traffic collisions involving children walking or cycling in the most deprived areas is triple that of the least deprived areas.[48]

Socioeconomic inequalities in traffic-related air pollution exposure have worsened in the UK over the past decade, with households in poverty experiencing the most exposure.[49] In England, air pollution is higher in deprived neighbourhoods, particularly those where BAME people comprise over 20% of the population.[50] This is problematic, given emerging evidence that long-term exposure to air pollution is a key contributor to Covid-19 fatalities and the disproportionate deadly impacts of Covid-19 on BAME populations in the UK and beyond.

To optimise the potential of investments in walking and cycling to create safer streets, improve air quality and democratise public space, they must be fair and seen to be fair. Gender and racial disparities in cycling and perceptions of cycling, coupled with a lack of inclusive representation and community input in planning, lead to an inequitable distribution of cycling infrastructure and associations of cycling infrastructure with gentrification.[51] [52] New active travel projects must be distributed in a spatially just way and meaningfully involve underserved communities in planning processes. Active Travel England, a new government body established in 2020 to implement local authorities' walking and cycling plans, could play a role in ensuring safe, accessible and inclusive active travel infrastructure. Moreover, integrated housing, land use and transport policy and planning can ensure places are designed to enable people safe and easy access to key services and amenities on foot, cycle or public transport.

Safety and accessibility

Identity shapes our perceptions and experiences of safety and accessibility in public space. This influences our decisions about whether, when, where and how to travel. People who experience multiple vectors of discrimination cannot enjoy unfettered access to public space and public transport. This is especially the case when streets and transport systems are designed for the 'default' user – a white, middle-class, able-bodied and younger male.

Gender-based violence in public space (e.g. street harassment) is a barrier to safe mobility and participation in public life for women and girls. The intersection of sexism with racism, ableism, homophobia or transphobia compounds the vulnerability of BAME women, disabled women and LGBT+ people to street harassment. Women's increased dependence on public transport increases their vulnerability to gender-based violence in public since they spend

46 Road Safety Analysis, 2015, The Link Between Deprivation and Road Safety http://bitly.ws/ctfL

47 O, Toole, S. & Christie, N. (2018) 'Deprivation and Road Traffic Injury Comparisons for 4 to 10 and 11 to 15 year-olds' Journal of Transport and Health 11: 221–229.

48 Sustrans Scotland, 2019, Investing in cycling to tackle transport poverty and promote equity http://bitly.ws/ctfP

49 Barnes, J., Chatterton, T. & Longhurst, W.S. (2010) 'Emissions vs. Exposure: Increasing injustice from road traffic-related air pollution in the United Kingdom' *Transportation Research Part D: Transport and Environment* 73: 56–66.

50 Fecht, D., Fischer, P., Fortunato, L., Hoek, G., de Hoogh, K., Marra, M., Kruize, H., Vienneau, D., Beelen, R. & Hansell, A. (2015) 'Associations between air pollution and socioeconomic characteristics, ethnicity and age profile of neighbourhoods in England and the Netherlands' *Environmental Pollution* 198: 201 – 210.

51 People for Bikes, 2021, Where Do We Go From Here? Breaking Down Barriers to Bicycling in the US http://bitly.ws/ctg9

52 Transport for All, 2021, Pave the Way: The impact of Low Traffic Neighbourhoods (LTNs) on disabled people, and the future of active travel http://bitly.ws/ctfs

more time waiting in or walking through poorly lit and isolated places.[53] Violence against bus drivers has increased during the pandemic and staffing cuts have increased the vulnerability of public transport workers to gender-based violence on the job.

In the UK, 86% of women aged 18-24 and 71% of women of all ages have experienced sexual harassment in public spaces, including public transport.[54] 66% of girls in the UK have experienced sexual harassment in public and try 'avoiding' it by taking longer routes and pretending to talk on the phone.[55] London has the highest rates of public sexual harassment in the UK and 40% of sexual assaults occur in public spaces, particularly on public transport.[56] [57] 55% of women in London have experienced sexual harassment on public transport, mainly the tube.[58] Globally, safety concerns can lead women to drive, take a taxi/ private hire vehicle, or not go out at all, especially at night.[59] [60] [61]

Women are more likely to be disabled than men (21% and 17%, respectively) and globally, disabled women are disproportionately victims of sexual harassment and assault, including in public.[62] [63] Disabled people, including those with hidden disabilities (e.g. learning difficulties, hearing impairments), require more assistance from public transport staff to access services, but disabled women often experience intrusive and non-consensual touching by passengers and staff.[64] [65] Safety and accessibility concerns can increase disabled people's dependency on taxis as an alternative to public transport, which can exacerbate socioeconomic deprivation.[66]

Inaccessible public space and transport networks restrict disabled people's autonomy, spontaneity and access to economic and other opportunities. Nearly half of disabled people in England, Scotland and Wales are completely dependent on public transport because they lack car access.[67] Yet 20% of disabled people find public transport inaccessible due to inadequate or absent signage, staff, wheelchair space, priority seating and step-free access.[68] Temporary cycling infrastructure and Low-Traffic Neighbourhoods implemented across UK cities during the pandemic have been critiqued for compounding accessibility barriers for disabled people.[69]

53 UCL Urban Laboratory and UCL STEaPP's Urban Innovation and Policy Laboratory, 2020, Scoping Study: London's participation in UN Women's Safer Cities and Safe Public Spaces Programme http://bitly.ws/dbe8

54 AAPG – UN Women, 2021, Prevalence and reporting of sexual harassment in UK public spaces http://bitly.ws/cteV

55 Plan International UK, 2018, Street Harassment http://bitly.ws/dbbf

56 YouGov, 2020, YouGov Survey Results http://bitly.ws/cteW

57 UCL Urban Laboratory and UCL STEaPP's Urban Innovation and Policy Laboratory, 2020, Scoping Study: London's participation in UN Women's Safer Cities and Safe Public Spaces Programme http://bitly.ws/dbe8

58 YouGov, 2020, YouGov Survey Results http://bitly.ws/cteW

59 Women4Climate, 2019, Gender Inclusive Climate Action in Cities http://bitly.ws/cteq

60 UCL Urban Laboratory and UCL STEaPP's Urban Innovation and Policy Laboratory, 2020, Scoping Study: London's participation in UN Women's Safer Cities and Safe Public Spaces Programme http://bitly.ws/dbe8

61 Plan International UK, 2018, Street Harassment http://bitly.ws/dbbf

62 ONS, 2019, Disability pay gaps in the UK: 2018 http://bitly.ws/ctev

63 Iudici, A., Bertoli, L. & Faccio, E. (2017) 'The 'invisible' needs of women with disabilities in transportation systems' *Crime Prevention Community Safety* 19(304): 264–275.

64 Ibid.

65 Mason-Bish, H., 2019, Private Places, Public Spaces blog http://bitly.ws/cteY

66 Centre for Disability Studies, 2006, Secondary analysis of existing data on disabled people's use and experiences of public transport in Great Britain http://bitly.ws/dfBI

67 Ibid.

68 Radar, 2012, Doing Transport Differently http://bitly.ws/dfxY

69 Transport for All, 2021, Pave the Way: The impact of Low Traffic Neighbourhoods (LTNs) on disabled people, and the future of active travel http://bitly.ws/ctfs

Racism and hostile environment immigration policies can impede safe mobility for BAME people and immigrant communities. Increased hate crimes towards Asian people, especially women, since the pandemic can restrict their mobility by making them too afraid to go out.[70] [71] Fear of being stopped by the police can deter immigrant communities from cycling.[72] Black people in the UK are nine times more likely to be stopped and searched than white people; racial disparities in stop and search and increased police powers during the pandemic heightens their vulnerability in public.[73]

Fear of street harassment and inaccessible cycling infrastructure can exacerbate concerns about road safety and deter underrepresented groups from cycling. In the UK, 85% of people over age 65, 78% of disabled people, 76% of women, 75% of people at risk of deprivation and 74% BAME people do not cycle.[74] In UK cities, men are over twice as likely to cycle as women, with BAME women least likely to cycle.[75] Female cyclists are also at greater risk of near misses and road abuses from drivers.[76] However, gendered perceptions and experiences of safety are omitted in cycling and wider transport planning.[77]

Technocratic paradigm in transport

Despite its social, cultural and political dimensions, transport is largely framed as a technical issue that requires engineering, economic and technological skills and solutions.[78] This reflects a technocratic paradigm, which privileges 'technical' over 'social' considerations.[79] This makes gender and inclusion seem irrelevant, produces male bias in transport systems – as evidenced in the primacy of radial transport planning, and encourages top-down, technology-driven solutions, like electric vehicles, to complex societal problems.[80]

The '15-minute city,' a city where everyone can walk or cycle to essential services within 15 minutes of their home, has gained traction as a way to build back better from the pandemic.[81] However alluring, this concept fits neatly within a technocratic framework that prioritises speed and efficiency over access and inclusion.[82] It also fails to consider how austerity and historic underinvestment in areas experiencing high deprivation have deepened socio-spatial isolation and inequalities in service provision access.[83] [84] Finally, it risks perpetuating the urban/rural divide, in which transport policy and planning revolves around cities.

The technocratic paradigm creates barriers to women's participation and leadership in the transport sector, as STEM (science, technology, engineering and mathematics)

70 Stop AAPI Hate, 2021, National Report http://bitly.ws/dfXf
71 Stop Asian Hate, 2021, Support the ESEA Community Fund http://bitly.ws/dkU5
72 McCullough, S.R., Lugo, A. & Stokkum, R.V. (2019). 'Making Bicycling Equitable: Lessons from Sociocultural Research', UC Davis: Institute of Transportation Studies http://bitly.ws/ctf3
73 Home Office, 2020, Police powers and procedures England and Wales, year ending 31 March 2020 second edition http://bitly.ws/ctf8
74 Arup and Sustrans, 2020, Cycling for everyone http://bitly.ws/ctf9
75 Sustrans, 2019, Bike Life: Cities for people http://bitly.ws/ctfb
76 Aldred, R. (2016) 'Cycling Near Misses: Their frequency, impact, and prevention' *Transportation Research Part A: Policy and Practice* 90: 69–83.
77 Xie, L. & Spinney, J. (2018) "I won't cycle on a route like this; I don't think I fully understood what isolation meant': A critical evaluation of the safety principles in Cycling Level of Service (CLoS) tools from a gender perspective' Travel Behaviour and Society 13: 197–213.
78 Kronsell, A. (2013) 'Gender and Transition in Climate Governance' Environmental Innovation and Societal Transitions, 7: 1–15.
79 Women4Climate, 2019, Gender Inclusive Climate Action in Cities http://bitly.ws/cteq
80 Ibid.
81 C40 Cities, 2020, How to build back better with a 15-minute city http://bitly.ws/dfFc
82 Zivarts, A. 'The '15-Minute City' Isn't Made for Disabled Bodies,' Bloomberg CityLab, 22 April 2021 http://bitly.ws/dfFj
83 Institute of Health Equity, 2020, Health Equity in England: The Marmot Review 10 Years On http://bitly.ws/dkUk
84 New Economics Foundation, 2021, Local Conversations: Final Evaluation Report (forthcoming)

and economics are male-dominated fields. In the UK, only 5% of women work in STEM occupations, compared to 28% of men.[85] Globally, women are underrepresented in the built environment and transport sectors.[86] In the UK, women represent just 14% of the built environment sector and 21% of the transport sector, and BAME people represent just 4% of the transport planning workforce.[87] [88]

Women in the UK transport sector characterise it as a male-dominated industry with a macho culture, in which women experience unconscious bias, sexist behaviour or language and increased barriers to career progression.[89] The transport sector needs to diversify. Expertise on gender and social inclusion is needed alongside increased diversity for transport systems to be more inclusive and responsive to community needs.[90]

85 EIGE, 2019, Gender Equality Index 2019: United Kingdom http://bitly.ws/cteB

86 Women4Climate, 2019, Gender Inclusive Climate Action in Cities http://bitly.ws/cteq

87 European Commission, 2019, EU Transport Scoreboard: United Kingdom http://bitly.ws/cteC

88 Commission for Architecture and the Built Environment, 2005, Black and Minority Ethnic Representation in the Built Environment Profession http://bitly.ws/cteD

89 AAPG – Women in Transport, 2021, Gender Perceptions and Experiences Working in Transport http://bitly.ws/cteF

90 Women4Climate, 2019, Gender Inclusive Climate Action in Cities http://bitly.ws/cteq

Recommendations

Decarbonising transport in a just and inclusive way will require an overhaul of the technocratic paradigm and car-oriented development. Rather than focusing on electric vehicles, investments in active travel and public transport are necessary to redress socioeconomic inequalities in transport systems and air pollution exposure. Investments in cycling are more effective than electric vehicles, as the overall lifecycle emissions from cycling are ten times lower than driving an electric car.[91]

Active travel and public transport must be perceived and treated as essential and universal services. To nurture the gains in walking and cycling during the pandemic, it is important to respond to the safety and accessibility concerns of women and marginalised groups. In the pandemic recovery, substantial and sustained investments in public transport are needed to keep it afloat and generate new green jobs.[92] [93] Investment in electric bus services could generate 12,000 jobs and scaling up rail services could create 129,000 jobs.[94] Rerouting current investments in road building to bus services could ensure hourly bus service from 6am-12pm in every village in England.[95] Public ownership models can also improve public transport routes, service reliability, affordability and accessibility.

Below are nine recommendations to achieve gender inclusive and sustainable transport systems, structured around the four themes discussed.

Addressing socioeconomic inequalities in transport

Collect gender-disaggregated data. This helps identify the differential needs of diverse populations and highlight how different groups experience intersecting inequalities, which can inform public spending decisions.

Example: In 2020, the Scottish government launched a Working Group on Sex and Gender in Data to identify gender gaps in data collection and provide guidance to public bodies on collecting gender-disaggregated data to promote more inclusive policies and services.[96] It continues to clarify guidance on interpreting, presenting and using gender-disaggregated data.[97]

Adopt gender-responsive budgeting, particularly in transport investments. The allocation of public resources and funding has differential impacts across different demographics. Gender-responsive budgeting makes visible the gendered impacts of public spending decisions, including budget cuts, to promote more equitable distribution of public resources.

91 Brand, C., Dons, E., Anaya-Boig, E., Avila-Palencia, I., Clark, A., de Nazelle, A., Gascon, M., Gaupp-Berghausen, M., Gerike, R., Gotschi, T., Iacorossi, F., Kahlmeier, S., Laeremans, M., Nieuwenhuijsen, M., Orjuela, J., Racioppi, F., Raser, E., Rojas-Rueda, D., Panis, L. (2021) 'The climate change mitigation effects of daily active travel in cities' *Transportation Research Part D: Transport and Environment* 93: 102764

92 Marsden, G., Anable, J., Doucherty, I. & Brown, L. (2021) 'At a crossroads: Travel adaptations during Covid-19 restrictions and where next?' Centre for Research into Energy Demand Solutions: Oxford http://bitly.ws/ctfW

93 C40 Cities, 2021, The Future is Public Transport, http://bitly.ws/ctfY

94 IPR, 2020, Transforming the Economy After Covid-19 http://bitly.ws/dMpe

95 CPRE, 2021, Every village, every hour 2021 buses report http://bitly.ws/d8j2

96 Halliday, R. 'Working Group on Data about a Person's Sex and Gender.' Scottish Government Blogs (blog), 20 September 2019 http://bitly.ws/ctgi

97 Halliday, R. 'Working Group on Data in Data – March update.' Scottish Government Blogs (blog), 23 March 2021 http://bitly.ws/ctgr

Example: The City of Vienna was an early adopter of gender-responsive budgeting. Since 2006, all municipal departments and city districts must evaluate the distributional impacts of public spending and service provision to ensure they do not exacerbate gender or other inequalities.[98] Some districts collected gender-disaggregated data on urban mobility and found that women walk and take public transport more than men. Officials then allocated resources for pedestrian safety improvements.

Increase gender-responsive participatory planning. This enables governments to involve diverse women, particularly those whose voices are underrepresented or excluded, in local planning and decision-making processes, which increases public participation, transparency and accountability.[99]

Example: Leeds will become the UK's first women-friendly city, following a successful bid from Women's Lives Leeds, a consortium of 11 local women's and girls' organisations.[100] A women-friendly city is a city where women can access health, education, social services, employment opportunities, high quality and comprehensive infrastructure (e.g. transport, housing) and protection from gender-based violence.[101] Engagement with local women and girls and gender-responsive participatory planning are necessary for a women-friendly Leeds that supports women's full participation in urban life.[102]

Redressing car-centric policy and planning

Strengthen bus networks by increasing public ownership. Currently, only nine bus networks are in public ownership in the UK: Dumfries and Galloway, Newport, Cardiff, Lothian in Edinburgh, Nottingham, Reading, Warrington, Ipswich, Blackpool and Translink in Northern Ireland.[103] Bringing buses under public ownership can enable local authorities to improve service coverage, availability, affordability and accessibility and increase public accountability.

Examples: Nottingham City Transport is the largest local authority-owned operator in England and has one of the highest satisfaction rates, in terms of punctuality, value for money and overall passenger satisfaction.[104] Greater Manchester plans on bringing buses under public control to ensure a more joined-up, affordable and publicly accountable bus network.[105] Campaigners in West Yorkshire are also demanding a public bus system that works for everyone.[106]

Prioritise active travel for care-related and local journeys to key services. Investments in safe, quality active travel infrastructure are needed to enable safe local journeys to key

98 City of Vienna, Gender mainstreaming in Vienna, http://bitly.ws/ctgt
99 Women4Climate, 2019, Gender Inclusive Climate Action in Cities http://bitly.ws/cteq
100 Women's Lives Leeds, 2019, Leeds to Become UK's First Women Friendly City, http://bitly.ws/ctgR
101 Women Friendly Leeds, http://bitly.ws/ctgT
102 Ibid.
103 We Own It, Buses are better in public hands, http://bitly.ws/ctgC
104 Brown, L.G. 'Nottingham's Buses Show that Public Ownership Works.' Tribune (blog), 21 March 2021 http://bitly.ws/ctgE
105 Topham, G. 'Greater Manchester bus services to be brought under public control.' The Guardian, 25 March 2021 http://bitly.ws/ctgK
106 Forest, G. 'Taking Back West Yorkshire's Buses.' Tribune (blog), 29 March 2021 http://bitly.ws/ctgL

services by walking or cycling. Physical infrastructure investments should be accompanied with investments in education, outreach and peer support schemes to promote cycling among underrepresented groups.

Example: The UK School Streets initiative promotes safe walking and cycling routes to school and cleaner air by temporarily restricting vehicular traffic at and around schools at certain times.[107] A comprehensive rollout of School Streets in four major UK cities (London, Birmingham, Bristol and Leeds) can reduce air pollution exposure and road danger for 1.25 million children.[108] School Streets can complement other initiatives, like Low-Traffic Neighbourhoods and Manchester's Bee Network. The Bee Network aims to connect and enable active travel for all communities in Greater Manchester and will be the largest joined-up walking and cycling network in the UK.[109]

Incorporating gendered perceptions of safety and accessibility

Conduct gender safety audits and accessibility audits. Gender safety audits are a participatory tool to understand women's and girls' perceptions and experiences of safety in public space. They involve working with women and girls to identify where they feel unsafe and measures to improve safety. Similarly, accessibility audits are a participatory method to identify barriers to accessibility for disabled people and older people. Both audits engage local people and systematically integrate lived experiences into data collection, design and decision-making processes.

Examples: Although currently dormant, the Women's Design Service was founded in 1984 to increase women's participation in urban design and planning in the UK and promote gender inclusive built environments and transport systems.[110] Between 2002 and 2005 they conducted gender safety audits in London, Manchester and Bristol and developed recommendations to improve women's safety (e.g. rerouting paths, public art).[111]

Sustrans conducted accessibility audits with older people in Tyburn as part of a wider project to reduce social isolation and ensure Tyburn is 'age-friendly.'[112] Ideas to improve accessibility and connectivity identified through the audit will be trialled and evaluated to inform future planning.

Invest in bystander intervention training. We need to build a culture of collective responsibility so that we, as a society, can stand up and stop street harassment and hate crimes in public. The more people call out street harassment, the less normal and acceptable it will become. However, many people do not know how to safely intervene in harassment, which is why bystander intervention training is necessary.

107 School Streets, http://bitly.ws/ctgP

108 Hopkinson, L., Goodman, A., Thomas, A., Aldred, R., & Sloman, L. (2021) School Streets: Reducing children's exposure to toxic air pollution and road danger. Report by Transport for Quality of Life and Active Travel Academy for Possible and Mums for Lungs. http://bitly.ws/ctgf

109 Transport for Greater Manchester, The Bee Network, http://bitly.ws/ctgQ

110 WDS – Women's Design Service, http://bitly.ws/ctgx

111 WDS – Women's Design Service, Making Safer Places, http://bitly.ws/ctgv

112 Sustrans, 2019, Age-Friendly Tyburn: Year 1 Audit Report, http://bitly.ws/ctgy

Example: Hollaback!, a global movement to end street harassment, provide bystander intervention training and online resources to empower people to safely stand up to bias and harassment in public.[113]

Shifting the technocratic paradigm

Explicitly prioritise gender equity and inclusion and conduct Equality Impact Assessments in transport and land use policy and planning. Putting gender equity and inclusion on the agenda enables governments and transport authorities to dedicate time and resources to build institutional expertise and capacity to understand and address issues around gender and inclusion.

Examples: In 2019, the City of Bogota established gender equity in cycling as a public policy goal. This has increased investments in research and gender-disaggregated data collection, including a gender impact analysis of new cycling infrastructure, to build evidence and drive action to promote inclusive cycling.[114] This has also increased collaboration among government departments and engagement with feminist organisations, women's cycling campaigners and local women to make Bogota safer and more inclusive.

In South Yorkshire, the Gender Equality Duty (2007) prompted local authority officers and designers to conduct a 'walkabout' with local women in an area earmarked for development to understand their experiences of the neighbourhood. Findings were added to planning briefs and the local authority now requires proposals for engagement with local women in tenders for new developments.[115]

Invest in mentoring programmes to diversify the transport sector. The lack of role models and peer support networks can impede career progression for women in male-dominated industries, like transport. Women's mentoring programmes can play a vital role in strengthening women's participation and leadership. Monitoring and evaluating mentoring programmes can help improve their efficacy.

Example: Women in Transport, a membership-based organisation to promote gender parity in the UK transport sector, offers professional development, mentoring and networking opportunities. The APPG – Women in Transport also provides a forum to address the underrepresentation of women in the sector. Women in Transport designed a unique mentoring programme for members, Advance, which is in its fourth year and has supported 160 mentors and mentees so far.[116]

113 Hollaback!, Show Up: Your Guide to Bystander Intervention, http://bitly.ws/ctgA

114 C40 Cities Finance Facility, 2021, Gender equality and urban cycling in Bogota, http://bitly.ws/ctga

115 Burgess, G. (2008) 'Planning and the Gender Equality Duty – why does gender matter?' People, Place and Policy Online 2/3: 112–121.

116 Women in Transport, Advance, http://bitly.ws/ctgu

wbg WOMEN'S BUDGET GROUP

Wen.

The Feminist Green New Deal is bringing a gendered and intersectional approach/perspective to the Green economy/Green Recovery - ensuring that the voices of women, people of colour and other marginalised groups are heard during environmental and political debates.

Through a programme of nationwide grassroots workshops and policy roundtables a Feminist Green New Deal Manifesto will be created and launched at COP26 Glasgow Climate Talks.

This Project is a collaboration between Wen (Women's Environmental Network) and the Women's Budget Group (WBG).

Paper 7

Lam, T. (2023). *For Everyone Strategic Framework*. Sustrans. Available at: https://www.sustrans.org.uk/media/13420/for-everyone-strategic-framework-public-facing-version.docx (Accessed: 18 February 2025).

For Everyone

Strategic Framework



29 September 2023

To find out more, please contact: Tiffany Lam
Tiffany.lam@sustrans.org.uk

Photo credit: Jonathan Bewley

We work for and with communities, helping them come to life by walking, wheeling and cycling to create healthier places and happier lives for everyone. www.sustrans.org.uk

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Contents

Contents **1**

Key Concepts **3**

Social category 3
Diversity 3
Intersectionality 4
Inclusion 5
Power 5
Privilege 5
Structural inequalities 6
Equity 6

Foreword **9**

Executive Summary **12**

Introduction **16**

The case for our For Everyone agenda 17
About this For Everyone Strategic Framework 19
Internal: 19
External: 19
Enablers: 20

Internal **22**

Employee Lifecycle 23
Governance & Leadership 24
Learning & Development 25
Policies 26
Culture 26
Communication 27

External 28
Safety & Wellbeing 30
Accessibility 32
Economic inclusion.....34

Enablers 38
Leadership & Accountability 39
Engagement 39
Monitoring, Evaluation & Learning 40
Fundraising.....41

Next steps 42
Our Learning Approach 43

Appendix 1: Sample Indicators (Internal) 45

Appendix 2: Sample Indicators (External) 49

Useful links

Link 1: **Diversity & Inclusion audit of Sustrans**

Link 2: **For Everyone Storymap – 2022 highlights**

Key Concepts

Below are definitions of equity and related concepts. They are ordered logically, as some concepts are building blocks for others.

Social category

A social category is a group of people that have at least one characteristic or experience in common (e.g. ethnicity, disability, caring responsibilities).[1] Social categories are socially constructed mechanisms to organise society, usually centred on dominant perspectives that become the prevailing social norms.[2] These categories are not just about how we understand ourselves, but how others – on an individual and societal level – identify us and the consequences of that. Being part of a social category shapes our access to opportunities and resources because of what society thinks about people 'like us' and how our economic, political and legal systems are organised according to hierarchies of these social categories.

Diversity

Diversity is recognising, understanding and respecting individual identities and differences along social, cultural and economic dimensions. Beyond increasing representation of people from different backgrounds, diversity implies being able to relate to and work with people whose backgrounds, views and experiences are different from our own, without prejudice.

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[1] Scottish Government. (2022). Using intersectionality to understand structural inequality in Scotland: evidence synthesis. https://www.gov.scot/publications/using-intersectionality-understand-structural-inequality-scotland-evidence-synthesis/pages/9/.

[2] Council of European Municipalities and Regions. (2023). An Introduction to Intersectionality for Local and Regional Governments. https://issuu.com/ccre/docs/cemr_intersectionality_en?fr=sMWEzMTU2MjA5MzE.

In the UK, the Equality Act 2010 guides diversity initiatives, with a focus on nine protected characteristics (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation) and preventing discrimination on those grounds.[3] It is important to consider how these protected characteristics intersect with each other, as well as characteristics that are not protected, like socioeconomic status.

Intersectionality

Intersectionality was coined by American law professor Kimberlé Crenshaw in 1989 as an analytical framework to understand, analyse and ultimately dismantle interconnected and mutually reinforcing inequalities in society.[4] She argued that existing anti-discrimination policy and legal frameworks were limiting in their single-issue analyses, which only considered racism or sexism in isolation. She developed intersectionality to acknowledge the ways in which multiple systems of oppression interact and compound each other. There are three core tenets of intersectionality[5]:

1. People are shaped by their simultaneous membership of multiple interconnected social categories.
2. The interaction between multiple social categories takes place within a context of connected systems and structures of power.
3. Structural inequalities are the outcomes of the interaction between social categories, power relations and contexts.

In recent years, intersectionality has gained traction in policy in international and European politics and is a useful tool to

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[3] UK Public General Acts. Equality Act 2010. https://www.legislation.gov.uk/ukpga/2010/15/part/2/chapter/1.

[4] Crenshaw, K. (1989). Demarginalising the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum*, 1(8): 139-167.

[5] Scottish Government. (2022).

enable governments to create more inclusive policies and services.[6]

Inclusion

Inclusion is about embracing and valuing diversity, so that people from all walks of life feel a true sense of belonging and agency in organisations, places and decision-making processes that affect them. Fostering inclusion means creating opportunities for shared leadership, so that everyone feels they can contribute meaningfully to dialogue and decision-making in an authentic and empowered way. This will help strengthen internal commitment to and capacity to deliver equity externally.

Power

Power is the ability or capacity to do something or act in a particular way, and/or the ability or capacity to direct or influence the behaviour of others or the course of events.[7]

Privilege

Privilege refers to the collective benefits and advantages that are readily available to people because of their membership in dominant social groups. Everyone is privileged in different ways and varies in different contexts.[8] People with privilege are able to wield power over those who are less privileged. Sometimes this is intentional, but often people do it unintentionally with little or no awareness of their privilege.

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[6] Council of European Municipalities and Regions. (2023).

[7] New Economy Organisers Network. (2015). Power and Privilege: A handbook for political organisers. https://theedgefund.files.wordpress.com/2013/04/neon-power-and-privilege-intro-guide.pdf.

[8] New Economy Organisers Network. (2015).

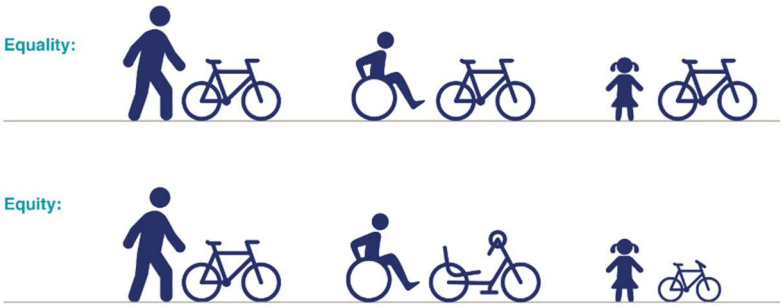
Structural inequalities

Structural inequalities are disparities in wealth, resources and other outcomes that result from discriminatory practices that are embedded in social, political and economic institutions and systems. Structural inequalities result from power imbalances when a dominant social group, consisting of those in positions of political and economic power, has historically set rules that intentionally or unintentionally exclude other groups from accessing wealth and resources.[9] For example, despite car-centric policies and planning, access to a car is highly unequal.[10] Lower income households are less likely to own a car, and women, young people, older people, people of colour and disabled people are more likely to be on lower incomes.[11] The cost of purchasing and maintaining a car can drive those with lower incomes into poverty.[12]

Equity

Whilst equality means providing for everyone in equal terms, equity means tailoring provision based on the different needs of

For an equitable society, people need different levels of support to reach the same outcome



[9] Sørensen, A.B. (1996). The Structural Basis of Social Inequality. *American Journal of Sociology*, 101(5): 1333-1365. https://www.jstor.org/stable/2782357.

[10] Women's Budget Group. (2021). Towards Gender-Inclusive and Sustainable Transport Systems. https://wbg.org.uk/analysis/uk-policy-briefings/towards-gender-inclusive-and-sustainable-transport-systems/.

[11] UKPIA. (2021). The Future of Mobility in the UK. https://online.flippingbook.com/view/609189063/.

[12] CPRE. (2021). Every village, every hour 2021 buses report. https://www.cpre.org.uk/resources/every-village-every-hour-2021-buses-report-full-report/.

different people. Equity is necessary to achieve equal outcomes.

Moving away from the idea of equal provision, equity has been increasingly embraced by progressive transport authorities and organisations across the globe. For example, the Seattle Department of Transport's Transport Equity Framework notes:

> "Equality is the measure of sameness. Equity is a measure of fair treatment, opportunities and outcomes across race, gender, class and other dynamics. This distinction is important. We are told that to be fair we must treat everyone the same (equal); however, when we recognise the legacy of institutionalised and structural racism, we understand that differing people and communities need different resources (equity). In order to be equitable we provide specific, unique resources that will support people and communities getting their basic needs met and reaching their full potential. Sameness is not always fairness if the oppressed group remains disadvantaged."[13]

Similarly, the World Resources Institute defines equity as:

> "…the guarantee of fair treatment, access, opportunity, and advancement while striving to identify and eliminate barriers that have prevented the full participation of some groups…Because some groups won't be able to take advantage of opportunities without additional barriers being broken down, equity also means taking conscious steps to address these unbalanced conditions to ensure that opportunities are provided fairly to all groups."[14]

[13] Seattle Department of Transport. (2022). Transport Equity Framework. https://www.seattle.gov/documents/Departments/SDOT/TransportationEquity/TransportationEquity_Framework_Report_41422.pdf.
[14] World Resources Institute. (2023). Equity Framework to Guide the Electric School Bus Initiative. https://www.wri.org/research/equity-framework-guide-electric-school-bus-initiative.

See also Ryan Martinson's Equity and Mobility comic from the Canadian Institute of Transport Engineers, which illustrates the difference between equality and equity, explains power and privilege, and discusses what these concepts have to do with transport.

Foreword

At Sustrans we believe that how we travel should help create happier lives and healthier places for everyone.

Everyone should be able to breathe clean air, hear birdsong and enjoy trees, grass, and water near where they live. Everyone should be able to experience the simple and important pleasure of walking, wheeling, or cycling to the shops, to visit friends, or just for the joy of it.

But in a car-dependent society not everyone can. And usually, those people that suffer the worst effects of car dependency are those who are already experiencing disadvantage elsewhere in life. For example, if you are poor and/or from an ethnic minority background, your children are more likely to be killed by traffic, you are more likely to have your life shortened from breathing air poisoned by car fumes, and you are more likely to have no local green or blue space.

To be for everyone, we have to redress this inequity. This is one very good reason why the issue of equity sits at the heart of who we are and what we do.

There is a second good reason: inequity can be embedded in the solutions to the problem. For example, good public realm, decent green space, and quality cycle routes are typically found in more affluent areas. And this infrastructure has historically been designed by men, so it will tend to serve the journeys typically made by men, and it can help explain why walking routes might be poorly lit – personal security at night being less of a concern and reality for men than women. Similar and worse inequities are too often experienced by disabled people, older and younger people, and LGBTQ+ communities.

For years we have been determined that Sustrans will be part of the solution. In 2019 the Board of Trustees agreed four ‘For Everyone Principles’, that starting from the issue of inequity Caldicot – speak to the need to embrace diversity and ensure

inclusion in all that we do – from the delivery of our projects externally, our volunteering, and to every aspect of how we operate internally.

We have made progress; from the excellent Disabled Citizens Inquiry, to recruiting more people of colour into our teams across the UK. But we have certainly not done enough, and indeed our third For Everyone Principle warns against complacency. An audit earlier this year by the Employers Network for Equity & Inclusion (ENEI) identified that we still have much to do internally to become a more diverse and inclusive place to work. And we know that there is much we can do to deliver more equitable work externally.

The ENEI report called for a more systematic and strategic approach. This Strategic Framework is just that, setting out nine clear areas of focus – six internal and three external. It has been developed with our organisation and has the full support of the Board and the Executive team. It will guide our day-to-day work and inform our business planning process and our forthcoming Strategy Review.

A big thank you to Tiffany Lam for her excellent work in producing this Framework, and to everyone across Sustrans who has contributed, particularly those who attended the EDI Away Day in July and helped shape early thinking around the Framework. We will keep getting things done together and keep learning as we work to become a charity for everyone.

Moray Macdonald
Sustrans Chair

Xavier Brice
Sustrans CEO

Executive Summary

At Sustrans, our mission is to make it easier for everyone to walk, wheel and cycle. As the largest UK active travel charity, we can play an important role in making active travel more equitable, diverse and inclusive. Our ambition to be an organisation for everyone is reflected in our two external strategic priorities: Paths for Everyone and Liveable Cities and Towns for Everyone.

This For Everyone Strategic Framework is a living document that outlines our strategic approach to For Everyone internally and externally over the next five years. It presents a critical opportunity for us to demonstrate leadership by advancing equity, diversity and inclusion (EDI) in the UK transport sector.

There are three components of the For Everyone Strategic Framework:

1. **Internal:** The internal dimension covers our approach to becoming a more diverse and inclusive organisation.
2. **External:** The external dimension covers our approach to embedding EDI in our external work, which includes delivery and campaigning work.
3. **Enablers:** There are four enablers that underpin both the internal and external sides of the strategic framework to enable implementation:

- Leadership & accountability
- Engagement
- Monitoring, evaluation & learning
- Fundraising

The internal and external dimensions of the strategic framework are structured around areas of focus, each with key outcomes over the next five years. This is illustrated below in Tables 1 and 2. The strategic framework will be accompanied by an internal and external action plan, which will set out our

proposed actions in the next five years to drive our key outcomes.

This For Everyone Strategic Framework will guide the business planning process between October 2023 and January 2024. It will also likely inform and evolve with Sustrans Strategy Review in 2024. The final version of the For Everyone Strategic Framework and action plans will be launched in February 2024. The intention is to review it in two years, although in practice it may be reviewed sooner, alongside Sustrans Strategy Review process.

Table 1. Internal: Areas of focus and key outcomes

Area of focus	Key outcomes
Employee lifecycle	1. Increased diversity data collection and analysis. 2. Increased representation of women, disabled people and people of colour, particularly in senior leadership roles. 3. Increased feelings of inclusion, particularly among women, disabled people and people of colour. 4. Increased trust between senior leadership, HR and colleagues. 5. Increased accessibility and inclusion in recruitment process.
Leadership & Governance	1. Improved senior leadership and oversight of For Everyone agenda. 2. Increased clarity and focus on For Everyone objectives and actions across the organisation. 3. Strengthened governance of EDI groups and colleague networks, including increased synergies between EDI groups, colleague networks and the wider organisation.
Learning & Development	1. Enhanced and more strategic EDI training offer. 2. Increased understanding of EDI issues – both internal and external. 3. Improved accessibility of new Learning Management System (LMS).
Policies	1. Increased consistency across all our policies, in terms of format, style and tone. 2. Improved EDI policies to reflect best practice and commitment to our colleagues. 3. Increased capacity for conducting Equality Impact Assessments of all our policies.
Culture	1. Increased culture of accountability, including increased confidence and capability to have difficult conversations with and between colleagues. 2. Increased culture of mutual respect that embraces diversity. 3. Improved processes for raising concerns. 4. Improved integration of EDI into day-to-day work and culture.

Area of focus	Key outcomes
Communication	1. More regular communication about the For Everyone agenda from senior leaders. 2. Increased credibility and transparency in communications about For Everyone. 3. Increased inclusivity and accessibility across our internal and external communications.

Table 2. External: Areas of focus and key outcomes

Area of focus	Key outcomes
Safety and Wellbeing	1. Improved perceptions and experiences of safety, particularly for women, girls and LGBTQ+ people, on the NCN and in cities and towns across the UK. 2. Improved air quality, particularly in areas with the highest levels of traffic-related air pollution. 3. Healthier streets that increase opportunities for safe outdoor activity by vulnerable communities.
Accessibility	1. Improved accessibility of the NCN, particularly for disabled and neurodivergent people. 2. Increased cultural accessibility of the NCN, particularly for communities of colour. 3. Increased access to everyday services and amenities that help people to live well including jobs, education, shops, green space and public transport. 4. More inclusive walking, wheeling and cycling routes and networks to make these journeys easy, safe and convenient.
Economic Inclusion	1. Increased viability of active travel for people with low or no incomes. 2. Increased visibility and prioritisation of journey purposes that are overlooked in transport planning (e.g. cycling as work, mobilities of care). 3. Uptake of alternative transport appraisal method that factors in equity, public health and environmental goals. 4. Increased integration of active travel into local, regional and national approaches to wider economic issues.

Introduction

At Sustrans, our vision is a society where the way we travel creates healthier places and happier lives for everyone. Our mission is to make it easier for everyone to walk, wheel and cycle. We focus our efforts to help people experiencing the worst impacts of car dependency. We target journeys of less than five miles to deliver evidence-based solutions that inspire people to walk, wheel and cycle.

Our strategic priorities are:

- **Paths for Everyone:** A growing UK network of traffic-free paths for everyone connecting cities, towns and countryside, loved by the communities they serve.
- **Liveable Cities and Towns for Everyone:** Places that connect us to each other and what we need, where everyone can thrive without having to use a car.
- **Improving our Operating Model:** Improving how we work and organise ourselves internally to become a fit and nimble charity for everyone.

In all our strategic priorities, ‘for everyone’ is key. This reflects our ambitious For Everyone agenda that is guided by the following For Everyone principles, which were agreed with our Board of Trustees in 2019 and underpin our work:

- The benefits of walking, cycling, wheeling and healthy places are not experienced equitably, so we prioritise work with people and in places that challenges inequity.
- So that we develop solutions that work for everyone, we involve people with different and seldom-heard voices.
- Being for everyone is not a box we can tick. We cannot be complacent, or merely compliant; we have to keep questioning and asking if we can do more.
- We work with others to include everyone. We cannot do this on our own.

Equity, diversity and inclusion (EDI) are the cornerstones of our For Everyone agenda. To deliver on our For Everyone agenda, EDI must be embedded in our work.

The case for our For Everyone agenda

At Sustrans, we know that car dependency is ruining our environment and driving climate change. As noted in our Strategy Refresh 2023, transport produced 27% of the UK's total emissions in 2019, the majority (91%) of which came from road transport vehicles. This has a disproportionate impact on people from marginalised groups and those living in areas of high deprivation.

To decarbonise transport and achieve net zero, we must get more diverse groups of people walking, wheeling and cycling. If we do not address disparities in active travel, we simply will not be able to deliver Paths for Everyone and Liveable Cities and Towns for Everyone. We will not be able to realise our vision of a society where the way we travel creates healthier places and happier lives for everyone.

As the largest UK active travel charity, we have a critical role to play in making active travel more equitable, diverse and inclusive. We need to ensure that the benefits of our work are more equitably distributed, given that:

- Our 2020 Cycling for Everyone report found that 68% of people never cycle and despite a large appetite from different demographic groups in the UK to start cycling, 85% of people over age 65, 78% of disabled people, 76% of women, 75% of people at risk of deprivation and 74% of people from ethnic minority backgrounds do not cycle.
- Our 2022 Walking for Everyone report found stark variations in the quality of our walking and wheeling environments, in which people experiencing deprivation

are forced to walk or wheel on more dangerous and polluted streets.

- Our 2023 Disabled Citizens' Inquiry found that disabled people take 38% fewer trips across all transport modes than non-disabled people. 41% of disabled people often experience problems reaching their destination due to poor accessibility while walking or wheeling. This is especially the case for disabled women, people of colour and people with lower incomes or not in employment.

We believe that being a more diverse and inclusive place to work enables us to deliver greater impact. We can start from within by improving our operating model and structuring our organisation to deliver equitable and inclusive active travel solutions. The business case for increasing diversity and inclusion in the workplace is stronger than ever – companies with more diverse leadership teams experience higher profits than those with less diversity.[15]

Besides improving the bottom line, diversity and inclusion in the workplace unlock innovation, improve the quality of decision-making, and enable organisations to attract and retain top talent. Multiple studies show that diversity enhances creativity and problem-solving skills, which increases teams' capacity for innovation.[16] Diversity also promotes more diligent and careful information processing, leading more diverse groups to outperform homogeneous ones.[17] A recent study found that 70% of job seekers evaluate prospective employers based on their commitment to diversity and inclusion.[18]

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[15] McKinsey & Company. (2020). Diversity wins: How inclusion matters. https://www.mckinsey.com/featured-insights/diversity-and-inclusion/diversity-wins-how-inclusion-matters.

[16] Phillips, K.W. (2014). How Diversity Works. *Scientific American*, 311(4): 42-47. https://doi:10.1038/scientificamerican1014-42; Hewlett, S.A., Marshall, M. and Sherbin, L. (2013). How Diversity Can Drive Innovation. *Harvard Business Review*. https://hbr.org/2013/12/how-diversity-can-drive-innovation.

[17] Phillips, K.W., Lijenquist, K.A. and Neale, M.A. (2009). Is the pain worth the gain? The advantages and liabilities of agreeing with socially distinct newcomers. *Personality and Psychology Bulletin*, 35: 336-350. https://doi.org/10.1177/0146167208328062.

[18] Deloitte. (2020). The Deloitte Global Millennial Survey 2020. https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/deloitte-2020-millennial-survey.pdf.

At Sustrans, working for and with communities is at the heart of what we do. To do that well, we need to have a more diverse and inclusive workforce. This will give us the credibility we need to engage meaningfully with the diverse communities we serve across the UK. When people from all walks of life are involved in decision-making, and when colleagues can bring their full selves to work, we can more effectively design and deliver better walking, wheeling and cycling solutions that benefit people experiencing the worst impacts of car dependency. This will give us a competitive advantage in the UK transport sector.

About this For Everyone Strategic Framework

This For Everyone Strategic Framework is a living document that sets out our strategic approach to For Everyone internally and externally over the next five years. It presents an exciting business development opportunity as well as an opportunity for Sustrans to demonstrate leadership on advancing equity, diversity and inclusion in the active travel and wider transport sector in the UK and beyond.

This strategic framework document is split into three parts:

Internal: The first part sets out our approach to becoming a more diverse and inclusive organisation. It is informed by the Diversity & Inclusion audit conducted by the Employers' Network for Equality and Inclusion (enei) between November 2022 and March 2023.

External: The second part sets out our approach to embedding equity, diversity and inclusion in our external work, which includes delivery and campaigning (e.g., Policy, Public Affairs and Communications). It is informed by a literature review and comparative analysis of transport equity frameworks and plans that have been adopted by local, regional and national governments and

organisations working on sustainable transport globally between 2020-2023.

Enablers: The third part sets out four factors that underpin both dimensions of the For Everyone Strategic Framework to enable implementation: leadership & accountability; engagement; monitoring, evaluation & learning; and fundraising.

This document concludes with a brief discussion of next steps. This includes instructions for colleagues on how to engage with this document during the business planning period, as well as an outline of how we will measure progress on implementation.

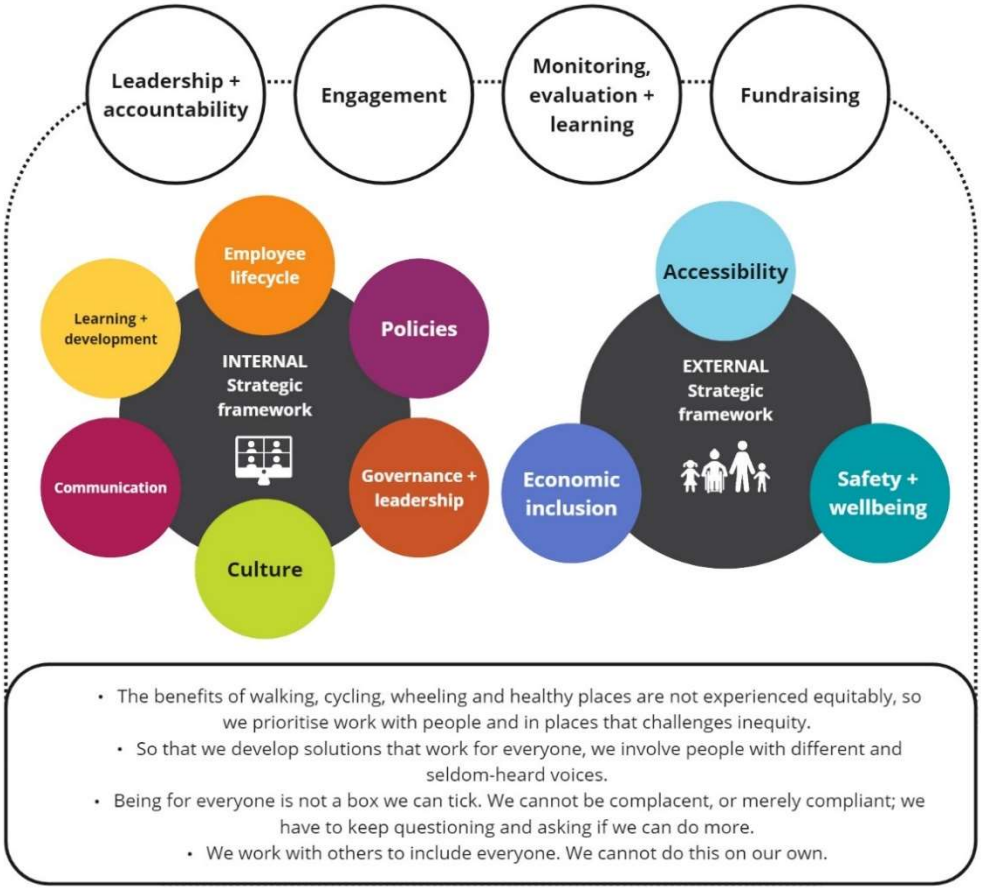
The structure of the For Everyone Strategic Framework is illustrated in Figure 1 overleaf. The internal and external dimensions are structured around several areas of focus, each with key outcomes over the next five years.

This For Everyone Strategic Framework will be accompanied by an internal and external action plan, which will set out our proposed actions in the next 0-2 and 3-5 years to drive our key outcomes. The action plans will be shared with colleagues in October 2023.

The internal action plan will be based on the recommendations in enei's Diversity & Inclusion audit. The external action plan will build on some actions in the 2021 Inclusive Delivery Action Plan as well as our recommendations in the 2023 Disabled Citizens' Inquiry and 2022 Cost of Living paper. Other actions will neatly dovetail into our policy asks and/or be embedded in Sustrans Approaches.

On the external side, we now have three clear areas of focus and actions allocated to them, but nations/regions have the autonomy to make their own decisions about the actions they will prioritise within the framework. This is a pragmatic approach, as what we can deliver will reflect the focus of live projects and the opportunities we can influence within our funding environment(s).

Figure 1. Structure of For Everyone Strategic Framework



There will be structured engagement with the Senior Leadership Team throughout business planning to ensure that appropriate parameters are set around the prioritised actions. The newly formed For Everyone Oversight Group, consisting of four members of Executive and one trustee who is our EDI Board Champion, will also help to set parameters.

We will review and update our For Everyone Strategic Framework in two years (2026), but it is likely that the external dimension will evolve earlier as we begin the Sustrans Strategy Review in 2024. It is also anticipated that this For Everyone Strategic Framework will inform the work of the wider Sustrans Strategy Review.

Internal

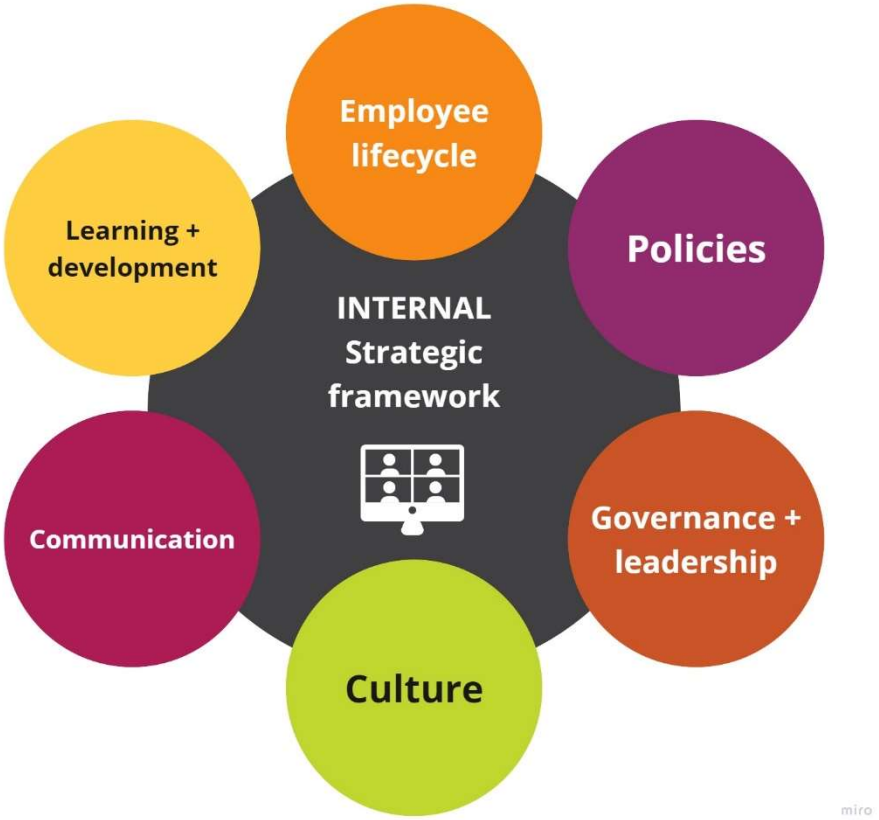
Improving our operating model to be a charity ‘For Everyone’ is one of our strategic priorities. The internal dimension of our For Everyone Strategic Framework speaks to this and is based on findings and recommendations from the Diversity & Inclusion audit that the Employers’ Network for Equality and Inclusion (enei) conducted between November 2022 and March 2023. It is structured around six areas of focus (as illustrated in Figure 2 overleaf):

- Employee Lifecycle
- Leadership & Governance
- Learning & Development
- Policies
- Culture
- Communication

Below is a discussion of each of these six areas, starting with the key outcomes and followed by a summary of enei’s diagnosis of Sustrans’ performance in these areas.

It is important to note that wider improvements, beyond improvements from an EDI lens, are needed across these six areas of focus to lead to our desired outcomes. For example, all our policies, not just the EDI-related policies, could benefit from a holistic review. Similarly, organisational culture change is a larger and ongoing piece of work, of which creating a more inclusive culture is just one part.

Figure 2. Internal: Areas of focus



Employee Lifecycle

Employee Lifecycle refers to our workforce and covers the entirety of the employee lifecycle, or colleagues' experiences of working at Sustrans, beginning with attraction and recruitment, retention, promotion and attrition. We have five key Employee Lifecycle outcomes:

1. Increased diversity data collection and analysis.
2. Increased representation of women, disabled people and people of colour, particularly in senior leadership roles.
3. Increased feelings of inclusion, particularly among women, disabled people and people of colour.
4. Increased trust between senior leadership, HR and colleagues.
5. Increased accessibility and inclusion in recruitment process.

‘Your workforce’ was the area of enei’s Talent Inclusion and Diversity Evaluation (TIDE) benchmarking exercise that Sustrans scored highest on. This reflects how committed our workforce is to Sustrans’ mission, values and For Everyone agenda. At the same time, there is a strong appetite for more action to increase diversity and inclusion at Sustrans.

According to enei’s Diversity and Inclusion audit, Sustrans collects diversity data on colleagues to help identify issues and barriers to inclusion, but this can be improved. The aim should be to put the processes in place to start gathering as much diversity and inclusion monitoring data as soon as possible, increasing the measures and analysis over time. This is necessary to identify pinch points and develop initiatives to address them. In addition, Sustrans should create a more inclusive brand to attract a wider range of people.

Governance & Leadership

Governance & Leadership refers to governance and leadership structures to drive the For Everyone agenda, including a strategic framework and action plan. We have three key Governance & Leadership outcomes:

1. Improved senior leadership and oversight of For Everyone agenda.
2. Increased clarity and focus on For Everyone objectives and actions across the organisation.
3. Strengthened governance of EDI groups and colleague networks, including increased synergies between EDI groups, colleague networks and the wider organisation.

This is an area where enei assessed our performance as poor due to the lack of senior oversight and governance on For Everyone and the absence of a For Everyone strategy. A strategic framework for *For Everyone* is urgently needed to articulate what EDI means to Sustrans, why it is important, how it aligns with the overarching strategy, values, and behaviours and what it means for the employment experience at Sustrans.

Moreover, according to enei, the current bottom-up approach to EDI is not working and more senior leadership is required. The EDI groups and colleague networks feel largely responsible for driving EDI work but do not always feel valued and experience burnout as a result. The senior leadership team – the Board, Executive and Directors – and HR should provide more direction and leverage the strengths of the groups and networks.

Learning & Development

Learning & Development refers to training and other learning and professional development opportunities at Sustrans. We have three key Learning & Development outcomes:

1. Enhanced and more strategic EDI training offer.
2. Increased understanding of EDI issues – both internal and external.
3. Improved accessibility of new Learning Management System (LMS).

This is another area where enei rated our performance as poor. Enei recommended that we strengthen all areas of learning and development to be more inclusive and support diverse people to thrive at Sustrans. This includes offering more training and support for colleagues from marginalised backgrounds so they can progress their careers at Sustrans, and improving training on EDI issues for all colleagues.

In particular, the enei audit indicated a need for more ongoing training to increase awareness on EDI issues, inclusive language, inclusive practices and the implications of exclusion. The employee consultation phase of the audit found that colleagues who had witnessed or experienced inappropriate behaviours at Sustrans attributed those behaviours to poor awareness rather than maliciousness. As such, training can play a pivotal role in making Sustrans a more inclusive workplace.

Policies

Policies refers to our HR policies, particularly ones related to EDI. We have three key Policies outcomes:

1. Increased consistency across all our policies, in terms of format, style and tone.
2. Improved EDI policies to reflect best practice and commitment to our colleagues.
3. Increased capacity for conducting Equality Impact Assessments of all our policies.

The enei audit found our policies to be legally compliant but not best practice. For the most part, our policies were found to do the bare minimum. Even where we have enhanced entitlements above the minimum legal requirements, this has not been communicated or promoted well. The focus of our policies tends to be on procedural guidelines when more could be done to reflect our commitment to our people. This includes softening the tone and using more person-centric language, for instance.

References to EDI should also be updated to demonstrate a more proactive approach, rather than a mere statement that we will not discriminate. Finally, enei pointed out inconsistencies in the presentation and language of policies, which suggests the need for a standard template. Policy documents should also be improved to enhance accessibility for neurodivergent people.

Culture

Culture refers to the organisational culture of Sustrans. We have four key Culture outcomes:

1. Increased culture of accountability, including increased confidence and capability to have difficult conversations with and between colleagues.
2. Increased culture of mutual respect that embraces diversity.

3. Improved processes for raising concerns.
4. Improved integration of EDI into day-to-day work and culture.

In the employee consultation phase of the enei audit, colleagues described Sustrans as a friendly and caring workplace. Colleagues felt supported during challenging times (e.g., ill health, maternity, mental health issues) and enjoyed the flexibility that Sustrans offers. However, colleagues choose not to raise issues related to EDI because they feel that no swift action will be taken. There are also perceptions that the focus on health, fitness and sport creates an ableist and exclusionary culture.

Sustrans needs to make clear the standards of professionalism and behaviour expected from all colleagues and the consequences of not meeting them. There must be a culture of accountability so that exclusionary, discriminatory, or bullying comments and behaviours are not accepted. Colleagues must feel empowered and able to have difficult conversations with each other and respectfully challenge inappropriate behaviours, and trust that the mechanisms and processes are in place to hold people to account.

Communication

Communication refers to the ways in which we communicate and engage with our colleagues on EDI issues. We have three key Communication outcomes:

1. More regular communication about the For Everyone agenda from senior leaders.
2. Increased credibility and transparency in communications about For Everyone.
3. Increased inclusivity and accessibility across our internal and external communications.

Enei reported that colleagues feel that communication around EDI has improved in recent years, with good examples of

messaging and commitment shown in the annual Pay Gap reporting. However, colleagues feel that this has not always been consistent. There is an appetite for more regular, honest and relevant communication on EDI, particularly from senior leadership, to raise awareness and bring it alive for Sustrans. This is important to show an authentic commitment to both EDI and our workforce.

External

In line with our strategic priorities that guide our delivery work, Paths for Everyone and Liveable Cities and Towns for Everyone, we want our work at Sustrans to contribute to a more equitable transport system, in particular active travel, in the UK. This includes the projects we deliver across the UK and our work to influence and support greater political commitment to walking, wheeling and cycling locally and nationally.

The external dimension of the For Everyone Strategic Framework is informed by a comparative analysis of global transport equity frameworks and plans that have been widely adopted at the local, regional and national levels within the past three years. It is worth noting that approaches to transport equity are weaker in the UK compared to other English-speaking countries (US, Canada and Australia). As such, this For Everyone Strategic Framework presents a critical opportunity for Sustrans to lead the way in raising ambition and making active travel more equitable and inclusive in the UK.

These transport equity frameworks and plans use different language and imagery to describe what an equitable transport system looks like and how to create one. Beneath these differences lies a growing consensus on what we need to prioritise so that the way we travel creates healthier places and happier lives for everyone. These priorities can be distilled into

three areas of focus, which structure the external dimension of the For Everyone Strategic Framework (as illustrated in Figure 3 overleaf):

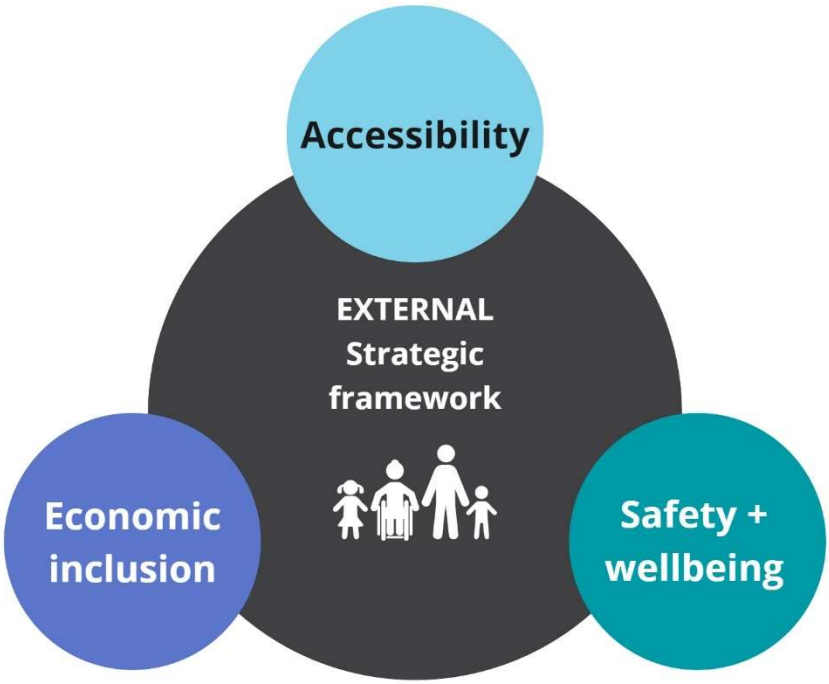
- Safety & Wellbeing
- Accessibility
- Economic inclusion

These areas of focus are discussed below, starting with the key outcomes and followed by a supporting narrative explaining the relevance of this area of focus to Sustrans. Orienting our delivery and campaigning work around these areas of focus and key outcomes will enable us to embed equity in our work at scale. Some of this will involve building on and scaling up existing good work at Sustrans, including delivery projects, campaigns and policy asks. Some of this will require doing things differently.

To implement the external side of the For Everyone Strategic Framework, it is important to recognise the strengths and limitations of our actions. Our actions will directly contribute to some outcomes (e.g. improved accessibility of the NCN for disabled and neurodivergent people). However, there are other outcomes, particularly those under the economic inclusion area of focus, that are wider, longer-term and beyond our direct control. As such, we will need to use our voice and work in partnership with other organisations to influence wider systemic changes. This is consistent with our fourth For Everyone principle –

> We work with others to include everyone. We cannot do this on our own.

Figure 3. External: Areas of focus



Safety & Wellbeing

We are working towards the following three safety & wellbeing outcomes. Our engagement and delivery work, coupled with using our voice to influence change, will help us deliver the first and third outcomes. The second outcome is one where our contribution will be more indirect, given the variables that affect air quality.

1. Improved perceptions and experiences of safety, particularly for women, girls and LGBTQ+ people, on the NCN and in cities and towns across the UK.
2. Improved air quality, particularly in areas with the highest levels of traffic-related air pollution.
3. Healthier streets that increase opportunities for safe outdoor activity by vulnerable communities.

Transport is a social determinant of health and transport equity recognises the need to “reduce economic and health disparities

by addressing social determinants [of health], historical and current day."[19] For example, despite lower levels of car ownership and usage, people experiencing or at risk of deprivation are disproportionately exposed to traffic dangers, including air pollution.

At Sustrans, we will prioritise active travel investments in areas where people experience high levels of deprivation, poor physical and mental health, as well as exposure to traffic dangers. In doing so, we will help to create healthier and safer streets for vulnerable communities that experience greater economic deprivation and dangerous street environments. Because safety is more than safety from traffic, we will also have a more consistent, systematic way to integrate personal safety issues in our work.

Perceptions and experiences of safety are influenced by our identities and experiences of the world. This, in turn, impacts our mobility behaviours and patterns. For example, the prevalence of gender-based harassment and violence in public space can make women and girls feel less safe, leading to changes in when, where and how they travel – or whether they travel at all.[20] Similarly, fear of police racial profiling is a barrier to cycling for Black people, particularly men.[21] These barriers to active travel can compound health inequalities by reducing opportunities for safe physical activity for these demographics.

There is no spatial, design or engineering fix for gender-based violence or racial profiling. However, the failure to consider these realities will result in missed opportunities to improve how communities perceive and experience active travel, as

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[19] Bedford Stuyvesant Restoration Corporation. (2021). Cementing an Equity Framework for Micromobility. https://acrobat.adobe.com/link/review?uri=urn%3Aaaid%3Ascds%3AUS%3Acdef00e5-a376-4223-ad27-4d242abcbee8.

[20] Los Angeles Department of Transportation. (2021). Changing Lanes: A Gender Equity Transport Study. https://ladot.lacity.org/sites/default/files/documents/changing-lanes-report.pdf.

[21] Brown, C., Rose, J. and Kling, S. (2023). Arrested Mobility. https://arrestedmobility.com/wp-content/uploads/2023/03/Arrested-Mobility-Report_web.pdf; Osei, A. and Aldred, R. (2023). "You always think about what other people be thinking": Black men and barriers to cycling London. *Journal of Transport Geography*, 108: 103576. https://doi.org/10.1016/j.jtrangeo.2023.103576.

well as how they perceive and interact with Sustrans.[22] While we at Sustrans do not have the sole responsibility or power to address wider systems of inequities, we will use our voice and work in partnership with others to amplify and address these issues.

Accessibility

Accessibility is an area of focus where our work will achieve more of our desired outcomes, particularly the first, second and fourth ones. We can build on the good work we have already done to make walking, wheeling and cycling more accessible by working towards the following four outcomes:

1. Improved accessibility of the NCN, particularly for disabled and neurodivergent people.
2. Increased cultural accessibility of the NCN, particularly for communities of colour.
3. Increased access to everyday services and amenities that help people to live well, including jobs, education, shops, green space and public transport.
4. More inclusive walking, wheeling and cycling routes and networks to make these journeys easy, safe and convenient.

Accessibility is a core component of transport policy, planning and delivery. It is typically pursued through two questions: To whom is this mode of transport (or transport service) accessible? And what does it make accessible?

For the most part, accessibility is conceptualised and addressed in terms of physical barriers to travel for disabled people. Increasingly, however, there is a recognition that there needs to be greater focus on non-physical barriers. There is also a growing consensus to focus more on another dimension

[22] Transit Centre. (2021). Equity in Practice: A Guidebook for Transit Agencies. https://transitcenter.org/publication/equity-in-practice-a-guidebook-for-transit-agencies/.

of accessibility, access to key services, especially to deliver inclusive 15-minute cities or 20-minute neighbourhoods.[23]

At Sustrans, we have a good track record of promoting accessible walking, wheeling and cycling. As part of our Paths for Everyone work, we have been auditing, removing and/or redesigning barriers on the National Cycle Network. Through our Disabled Citizens' Inquiry and ongoing partnership with Transport for All, we have amplified the voices of disabled people. In our Liveable Cities and Towns work, we are also a strong voice for enabling people to easily access everyday needs by walking, wheeling and cycling.

We will continue to improve physical aspects of accessibility for disabled people. We will also do more to address non-physical barriers to disabled people by implementing the recommendations in the recently completed 'Beyond the Barriers' research report from Transport for All. By engaging with our internal Neurodiversity Network and external partners, we will better understand barriers on the NCN – both physical and non-physical – for neurodivergent people and co-design solutions.

To address wider social and cultural barriers, particularly for communities of colour, we will work in partnership with race equity organisations and organisations embedded in communities of colour. We will also learn from what transport authorities with a more sophisticated understanding of and approach to equity are doing to increase cultural accessibility.

For example, the Seattle Department of Transport identified signage and wayfinding, as well as having route or service information available in multiple languages as ways to make public transport and active travel culturally relevant to diverse communities, such as migrants and new residents.[24] Similarly,

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[23] Transformative Urban Mobility Initiative (TUMI) and Women Mobilize Women. (2022). The 15-Minute City: A Feminist Utopia? https://www.transformative-mobility.org/assets/publications/TUMI_WMW_Feminism_and_the15min_City.pdf.

[24] Seattle Department of Transportation. (2022). Transportation Equity Framework, Part I: Values & Strategies. https://www.seattle.gov/documents/Departments/SDOT/TransportationEquity/TransportationEquity_Framework_Report_41422.pdf.

the Oakland Bike Plan noted the need to ensure that new cycling infrastructure reflects existing cycling cultures among communities of colour.[25] As such, city officials have been working with communities to collaboratively design signage and wayfinding to reflect culturally relevant landmarks or destinations.

We will also focus more on the access to key services dimension of accessibility. This means we will use our voice to influence change, as increasing access to everyday services and amenities requires broader changes to urban and land use planning, as well as more investment in public services. We will also build on our spatial equity analysis of the NCN to analyse the extent to which our active travel infrastructure increases access to key services. This is consistent with global good practice, as there are increasingly more tools at the urban and national levels in the US and Europe to direct transport investment to increase access to opportunity and key services in areas that have experienced historic underinvestment.[26]

Economic inclusion

Compared to the previous two areas of focus, economic inclusion is a longer-term, wider impact beyond the outcomes we are likely to achieve ourselves. Most of our work in this area will therefore be more indirect, via influence. However, there are existing projects in the nations/regions that have potential to directly contribute to some of these outcomes (e.g. the E-Move project in Wales, which is one of the Welsh Government's gender budgeting pilots, can more directly contribute to the fourth outcome).

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[25] Oakland Department of Transportation. (2019). Let's Bike Oakland: 2019 Oakland Bike Plan. https://www.oaklandca.gov/resources/bicycle-plan.

[26] Victoria Transport Policy Institute. (2023). Evaluating Transport Equity. https://www.vtpi.org/equity.pdf; US Department of Transportation. (2023). USDOT Equitable Transport Community (ETC) Explorer. https://experience.arcgis.com/experience/0920984aa80a4362b8778d779b090723/page/Homepage/.

The four economic inclusion outcomes we are working towards are:

1. Increased viability of active travel for people with low or no incomes.
2. Increased visibility and prioritisation of journey purposes that are overlooked in transport planning (e.g. cycling as work, mobilities of care).
3. Uptake of alternative transport appraisal method that factors in equity, public health and environmental goals.
4. Increased integration of active travel into local, regional and national approaches to wider economic issues.

While economic inclusion is much broader than transport or active travel, transport equity frameworks recognise the role of inclusive public transport and active travel systems in delivering a fairer economy and society. Although transport policy and planning has historically reinforced and exacerbated economic, gender and racial inequalities, adopting equity and intersectionality can 'help level the playing field. It can transform economies, connect people to opportunity, and empower underserved communities to build generational wealth for the future.'[27]

There is widening consensus that we need to reorient our transport systems so that they serve people and the planet.[28] This parallels new economic thinking that calls for a Wellbeing Economy, an economy that puts our human and planetary needs front and centre, rather than pursuing growth at all costs.[29] Active travel can contribute to a Wellbeing Economy that promotes thriving, fair and sustainable people, places and planet, but three conditions must be met.

Firstly, active travel infrastructure and the (health, social, environmental, economic) benefits of increased active travel

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[27] US Department of Transportation. (2022). Equity Action Plan. https://www.transportation.gov/priorities/equity/equity-action-plan.

[28] Victoria Transport Policy Institute (2023).

[29] Wellbeing Economy Alliance. (2022). What Is a Wellbeing Economy? https://weall.org/what-is-wellbeing-economy; Centre for Thriving Places. (2023). The Shared Ingredients for a Wellbeing Economy. https://www.centreforthrivingplaces.org/wp-content/uploads/2023/02/Shared-Ingredients-for-a-Wellbeing-Economy-Paper_Publication-Copy.pdf.

must be distributed equitably. For example, people experiencing deprivation and people who are underserved by public transport may be more reliant on cycling as a cheap and practical way to get around.[30] However, cycling infrastructure investments are skewed towards affluent white communities with good public transport access.[31] As a result, vulnerable communities who may be more reliant on cycling due to socioeconomic deprivation and spatial isolation tend to cycle in more dangerous road environments.[32]

An equitable cycling network must therefore prioritise the needs of those who stand to benefit more from increased cycling investment. At Sustrans, we will routinely conduct spatial equity analysis in our work. We will complement it with meaningful community engagement to understand and address barriers for underrepresented groups who face more economic and sociocultural barriers to active travel.

Secondly, active travel systems must reflect and respond to more diverse travel needs. Transport, including active travel systems, have typically prioritised peak-hour radial commutes to/from city centres, which exhibits a male bias and ignores many types of journeys that people make.[33] For example, care-related journeys account for one-third of the total trips taken by adults globally but are underserved by transport systems.[34]

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[30] Lam, T. (2022). Towards an Intersectional Perspective in Cycling. *Active Travel Studies: An Interdisciplinary Journal*, 1(1): 1-12. https://doi.org/10.16997/ats.1264; McCullough, S.R., Lugo, A. and Stokkum, R.V. (2019). Making bicycling equitable: Lessons from sociocultural research. UC Davis: Institute of Transportation Studies. http://doi.org/10.7922/G22R3PWK.

[31] Stehlin, J. (2019). *Cyclescapes of the Unequal City: Bicycle Infrastructure and Uneven Development*. Minneapolis, University of Minnesota Press; Hoffman, M. and Lugo, A.E. (2014). Who is 'world class'? Transportation justice and bicycle policy. *Urbanites*, 4(1): 45-61; Braun, L., Rodriguez, D. and Gordon-Larsen, P. (2018). Social (in)equity in access to cycling infrastructure: Examining the distribution of bike lanes with respect to area-level sociodemographic characteristics in 23 large US cities. *Journal of Transport and Health*, 9 Supplement, S28. https://doi.org/10.1016/j.jth.2018.05.086.

[32] Torres-Barragan, C.A., Cottrill, C.D. and Beecroft, M. (2020). Spatial inequalities and media representation of cycling safety in Bogota, Colombia. *Transportation Research Interdisciplinary Perspectives*, 7: 100208. https://doi.org/10.1016/j.trip.2020.100208; Reid-Musson, E. (2017). Shadow mobilities: Regulating migrant bicyclists in rural Ontario, Canada. *Mobilities*, 13(3): 308-324. https://doi.org/10.1080/17450101.2017.1375397.

[33] Women's Budget Group. (2021).

[34] BYCS. (2023). Guide & Toolkit: Increasing Access to Cycling Mobilities of Care. https://bycs.org/wp-content/uploads/2023/07/MobCare_Toolkit_2.4.pdf.

This has a gendered impact, as women perform the majority of both paid and unpaid care work.[35]

There is a lot we can learn from Latin American cities, particularly Bogotá, that have been at the forefront of designing active travel systems that support care-related journeys, also known as 'mobilities of care.'[36] At Sustrans, we will amplify our gender budgeting in active travel work in Wales and Scotland to support both nations in creating more gender inclusive active travel systems. We will also scope opportunities for a mobility of care pilot in the UK.

Delivery cyclists provide another example, underscoring the need for active travel systems to reflect and respond to more diverse travel needs. Delivery cyclists make up a sizeable and growing proportion of overall people cycling in cities but are also overlooked in transport planning.[37] At Sustrans, we will disseminate the research our Research and Monitoring Unit (RMU) did on gig economy delivery cyclists in Scotland. We will also amplify the policy asks in our 2022 Cost of Living paper to unlock the potential of active travel investment to help reduce travel costs and travel time for those in poverty.[38]

Finally, transport appraisal processes must properly value the economic, public health and environmental benefits of active travel. We will develop an alternative to the Cost Benefit Analysis (CBA) typically used in transport appraisal processes. While CBA has been widely critiqued for its narrow considerations of traditional and efficiency-oriented evaluation fields, which omits intangible goals (e.g., equity, public health

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[35] Women's Budget Group. (2021).

[36] Despacio. (2023). Caring for Caregivers: The Apples of Care and Female Mobility in Bogotá. https://www.despacio.org/portfolio/cuidando-a-las-cuidadoras-las-manzanas-del-cuidado-y-la-movilidad-femenina-en-bogota/; Pipicano, W., Pena, A.J., Pipicano, C., Fernandez, M.A., Porras, I., Arias, N. and Miranda, L. (2021). Bicycle care trips in four locations in Bogotá. http://dx.doi.org/10.18235/0003771.

[37] Couve, C., Lam, T. and Verlinghieri, E. (2023). Delivering Good Work: Labour, employment and wellbeing in London's cargo bike sector. https://blog.westminster.ac.uk/ata/wp-content/uploads/sites/60/2023/01/221222_Delivering-good-work_Londons-Cargo-Bike-secton_V5-1.pdf.

[38] Vidal Tortosa, E., Heinen, E. and Lovelace, R. (2022). Cycling and socioeconomic (dis)advantage. In: Cao, X.J., Ding, C., and Yang, J. (eds.) *Advances in Transport Policy and Planning*. Elsevier, Oxford.

and environmental ones), there are no established alternative appraisal models.[39] We will develop an alternative model that accounts for equity, public health and environmental considerations and use our influence and networks to get Government to adopt it.

We will also amplify our policy ask for fair financing for active travel. We need increased and sustained investment in active travel infrastructure – both physical and behavioural measures – to increase equity. Behavioural interventions (e.g., education, mentoring, peer support) are necessary to increase diversity in active travel, as they address skills gaps and deeply ingrained sociocultural barriers to cycling among marginalised groups (e.g., perceptions that cycling is not for 'people like me').[40]

Enablers

Four key enablers underpin the implementation of both dimensions of the For Everyone Strategic Framework:

- Leadership & Accountability
- Engagement
- Monitoring, Evaluation & Learning
- Fundraising

[39] Buzzone et al. (2023); Institute for Transport and Development Policy (ITDP). (2023). Joint Letter re: US DOT Equity Action Plan. https://www.itdp.org/wp-content/uploads/2023/07/2306-30-Letter-re-USDOT-Equity-Action-Plan-FINAL-ITDP-et-al.pdf; Victoria Transport Policy Institute. (2023).

[40] BYCS. (2019). Strengthening the Human Infrastructure of Cycling. https://bycs.org/wp-content/uploads/2021/09/SFGelderland_210929web-2.pdf; C40 Cities. (2019). Gender Inclusive Climate Action in Cities. https://www.c40.org/women4climate/wp-content/uploads/sites/2/2023/05/W4C_REPORT_Gender-Inclusive-Climate-Action-in-Cities_BD.pdf; Oakland Department of Transportation. (2019). Let's Bike Oakland: 2019 Oakland Bike Plan. https://www.oaklandca.gov/resources/bicycle-plan.

Leadership & Accountability

We know from the enei report that senior leadership on the For Everyone agenda is essential to signal to colleagues, stakeholders and the wider public that Sustrans is committed to equity, diversity and inclusion. The For Everyone Strategy Oversight Group, comprised of four members of Executive and an EDI Board Champion, have overseen the development of the For Everyone Strategic Framework. The group will oversee its implementation and the Board will be more involved with the For Everyone agenda, especially as we start Sustrans Strategy Reset. The Senior Leadership Team will also play a key role in operationalising the For Everyone Strategic Framework via their business plans.

We will hold ourselves accountable for implementing the strategic framework through various mechanisms. One mechanism is the For Everyone Oversight Group. Another way to increase accountability is through visible and vocal senior leadership commitment to the For Everyone Strategic Framework, which will help keep it alive for colleagues. We will also regularly report our progress on implementation to Executive, the Board and colleagues.

Engagement

Engagement is essential to implementing the For Everyone Strategic Framework. Engagement helps to increase accountability and trust. At best, it can also strengthen our organisational culture as well as the communities we work with by building a sense of collective control and ownership. Internally, we will engage meaningfully with colleagues – and not just the EDI groups and colleague networks – to enable us to implement the For Everyone Strategic Framework and keep it alive. We will also diversify Sustrans, so that our engagement teams better reflect the diversity of the communities that we serve.

Externally, we will have a more rigorous, consistent and evidence-based approach to inclusive engagement with diverse communities. We will collect and analyse diversity data on those we engage with, so that we can understand whether and the extent to which we are engaging with diverse communities. Finally, we will use our voice to engage with key stakeholders (e.g. policymakers) to build partnerships and influence change.

Monitoring, Evaluation & Learning

Our approach to For Everyone must be evidence based. Robust diversity data collection and analysis is key to understanding sociodemographic differences in how people experience Sustrans as a place to work and how people benefit – or do not benefit – from our work. Diversity data is data disaggregated by sociodemographic characteristics (e.g., gender, ethnicity).

The internal dimension of the For Everyone Strategic Framework has an outcome around increased diversity data collection and analysis. The recent introduction of Power BI, an interactive dashboard that is updated quarterly with colleague diversity data, should enable Executive, HR and the Senior Leadership Team to routinely review and analyse workforce diversity and inclusion. These quantitative measures will be complemented by EDI surveys so that we can understand how colleagues perceive and experience EDI at Sustrans.

Externally, we need more consistent and robust methods of diversity data collection and analysis, including mixed methods (qualitative, quantitative and spatial), as well as both person- and place-focused measures, to understand the equity impacts our work.[41] The former focuses on how people experience active travel and can be measured absolutely (e.g. overall perceptions of safety on the NCN) and relatively (perceptions

[41] Aldred, R., Woodcock, J. and Goodman, A. (2015). Does More Cycling Mean More Diversity in Cycling? *Transport Reviews*. http://dx.doi.org/10.1080/01441647.2015.1014451.

of safety by gender on the NCN). The lack of consensus on how to measure transport equity[42] indicates a role for RMU in developing appropriate and relevant equity metrics.

RMU will lead work to improve our diversity data collection and analysis (internally and externally). This requires progress on the data strategy and upgrading our data infrastructure, otherwise the manual effort required from RMU to collate and analyse the data would be too onerous. RMU will also develop a learning process for us to understand our progress on implementing the For Everyone Strategic Framework and learn from the process, as discussed under 'Our Learning Approach' overleaf. This learning process will help us refine our People and Impact KPIs as part of the Strategy Reset, so that we are better able to measure our organisational progress on delivering on the For Everyone agenda.

Fundraising

Fundraising and Business Development teams will help secure funding for external programmes of work that intersect with the For Everyone Strategic Framework and Sustrans' Case for Support. Our Case for Support identifies five areas of delivery work that we will proactively seek funding for:

- Protecting the environment and making space for nature
- Community support through travel hubs
- Inspiring the next generation
- Advocating for inclusion and equity in policymaking
- The National Cycle Network: The backbone of our country

Some elements of the external dimension of the For Everyone Strategic Framework align with and can help frame these areas of delivery work. For example:

[42] Buzzone et al. (2023); ITDP. (2023); Victoria Transport Policy Institute. (2023).

The delivery of travel hubs will directly increase the viability of active travel for people with low or no incomes.

Our research and policy work will highlight inequalities in active travel and make recommendations for them to be addressed.

Other elements of the For Everyone Strategic Framework present opportunities to diversify our funding sources and develop new work streams. Fundraising and Business Development teams will also support the implementation of the internal side by identifying and acting on relevant opportunities. For example, several foundations have launched initiatives to support EDI in the environmental sector.[43] Given our limited resources, all opportunities will be considered in terms of their impact, donor motivation and likelihood of success.

Next steps

This For Everyone Strategic Framework is intended to guide the business planning process between October 2023 and January 2024. Not all areas of focus will be relevant to all directorates. For example, People and Organisation Development (POD) will lead the implementation of the internal dimension. RMU will lead the development of a learning process to measure our progress on implementation, as well as improve our diversity data collection and analysis.

The next steps for all other directorates are to:

- Prioritise two areas of focus, one from the internal and one from the external dimension of the For Everyone Strategic Framework.

[43] Esmée Fairbairn Foundation. (n.d.). Working towards a more diverse, inclusive and equitable environment sector. https://esmeefairbairn.org.uk/latest-news/working-towards-more-diverse-inclusive-and-equitable-environment-sector/.

- Review the draft internal and external action plans to identify:
  - relevant actions to incorporate into your business plans
  - additional actions for the external action plan that your directorate can own
- Report progress and participate in structured engagement sessions during business planning, including periodic checkpoints with the Strategy Lead – Equity, Diversity and Inclusion and the For Everyone Oversight Group (e.g. Senior Leadership Team meetings).

The final For Everyone Strategic Framework will be launched in February 2024 after colleagues have engaged and aligned their business plans with this strategic framework. It will continue to be a living document, evolving with Sustrans Strategy Review in 2024.

Our Learning Approach

We will understand our progress on implementing the For Everyone Strategic Framework in an iterative and reflective way, with support from RMU. This is consistent with our *always learning* Sustrans value and our third For Everyone principle,

> Being for everyone is not a box we can tick. We cannot be complacent, or merely compliant; we have to keep questioning and asking if we can do more.

The implementation of the For Everyone Strategic Framework will require changes in our ways of working. Measuring how processes change does not lend itself to easily quantifiable metrics. Furthermore, achieving the outcomes for the external side will require wider systems change, including things beyond Sustrans' control or remit. This creates challenges around attribution and measuring our impact.

Therefore, all directorates will keep an action log and review it every 6 months to assess:

- Did we do what we said we would do?
- Did what we do lead to our desired outcome(s)?
- What can we do better or differently?
- What will we not do?

Directorates will report their progress to the For Everyone Oversight Group. This learning approach will enable us to:

- Ensure that we are delivering activities to drive our desired outcomes.
- Create mechanisms and structures to monitor and learn from our work to ensure we are not perpetuating inequities.
- Make any corrective intervention as and when necessary.

RMU's measurement will focus on outputs to ensure that internal activities and external projects are being delivered in line with both expectations of what we want to achieve and best practice. For example, RMU can focus on an output to evaluate our progress on implementing best practice and use case studies to illustrate what has worked and should be replicated and/or scaled up. For delivery projects, this can be combined with analytics, such as spatial analysis, to help us understand the local context.

Appendices 1 and 2 contain sample indicators for the internal and external sides of the For Everyone Strategic Framework. These indicators remain a work in progress.

Appendix 1: Sample Indicators (Internal)

Table 1. Sample Indicators: Internal side of For Everyone Strategic Framework

Area of focus	Outcomes	Sample indicators
Employee Lifecycle	Increased diversity data collection and analysis.	Increased annual completion rate of demographic information on Cascade; increased number of areas we report on diversity (e.g. pay and benefits, absence and sickness)
	Increased representation of women, disabled people and people of colour, particularly in senior leadership roles.	% women, people of colour and disabled people at L grades or above
	Increased feelings of inclusion, particularly among women, disabled people and people of colour.	Increased self-reported feelings of inclusion via annual colleague survey or EDI survey

Area of focus	Outcomes	Sample indicators
	Increased trust between senior leadership, HR and colleagues.	HR attendance at quarterly EDI group/colleague network lead meetings
	Increased accessibility and inclusion in recruitment process.	Increase in applications from underrepresented groups
Leadership & Governance	Improved senior leadership and oversight of For Everyone agenda.	Formal launch of For Everyone Strategic Framework at One Sustrans webinar; regular meetings of For Everyone Board to track progress
	Increased clarity and focus on For Everyone objectives and actions across the organisation.	Integration of For Everyone Strategic Framework in directorates' business plans
	Strengthened governance of EDI groups and colleague networks, including increased synergies between EDI groups, colleague networks and the wider organisation.	Revised Terms of Reference for EDI groups and colleague networks, oriented around For Everyone Strategic Framework
Learning & Development	Enhanced and more strategic EDI training offer.	Increased annual completion rate of new/enhanced EDI training offer

Area of focus	Outcomes	Sample indicators
	Increased understanding of EDI issues – both internal and external.	Feedback from colleagues via evaluation forms of EDI-related L&D courses, annual colleague survey or EDI survey
	Improved accessibility of new Learning Management System (LMS).	Feedback from colleagues via LMS user testing
Policies	Increased consistency across all our policies, in terms of format, style and tone.	Launch of new (or revised) EDI policies
	Improved EDI policies to reflect best practice and commitment to our colleagues.	Launch of new (or revised) EDI policies
	Increased capacity for conducting Equality Impact Assessments (EQIAs) of all our policies.	Number of EQIAs conducted for our policies launched annually or increased proportion of policies that that have EQIAs completed annually; launch of training on conducting EQIAs on policies
Culture	Increased culture of accountability, including increased confidence and capability to have difficult conversations with and between colleagues.	Feedback from colleagues via annual colleague survey or EDI survey

Area of focus	Outcomes	Sample indicators
	Increased culture of mutual respect that embraces diversity.	Feedback from colleagues via annual colleague survey or EDI survey
	Improved processes for raising concerns.	Presence of alternatives to grievance process
	Improved integration of EDI into day-to-day work and culture.	Feedback from colleagues via annual colleague survey or EDI survey
Communication	More regular communication about the For Everyone agenda from senior leaders.	Recurring agenda item at One Sustrans webinars on For Everyone progress updates
	Increased credibility and transparency in communications about For Everyone.	Feedback from colleagues via annual colleague survey or EDI survey
	Increased inclusivity and accessibility across our internal and external communications.	Feedback from colleagues via annual colleague survey or EDI survey

Appendix 2: Sample Indicators (External)

Table 2. Sample Indicators: External side of For Everyone Strategic Framework

Area of focus	Key outcomes	Sample indicators
Safety & Wellbeing	Improved perceptions and experiences of safety, particularly for women, girls and LGBTQ+ people, on the NCN and in cities and towns across the UK.	Increased % of women and LGBTQ+ survey respondents who report feeling safe on the NCN (RUIS) during the day and after dark; # of recommendations in gender safety audits included in final designs; increased % of women and LGBTQ+ survey respondents who reported that their decision to use the NCN was because it felt safe (RUIS)
	Improved air quality, particularly in areas with the highest levels of traffic-related air pollution.	Air Quality Index (DEFRA DAQI); % of people who feel the air is clean (WACI)
	Healthier streets that increase opportunities for safe outdoor activity by vulnerable communities.	% of delivery work in disadvantaged neighbourhoods; # of new partnerships made to

Area of focus	Key outcomes	Sample indicators
		campaign on traffic reduction; # of projects directly focused on traffic reduction; % of people who feel that their streets are not dominated by motor vehicles (WACI); % reduction in KSIs in low income communities
Accessibility	Improved accessibility of the NCN, particularly for disabled and neurodivergent people.	% and # of NCN barriers removed or redesigned; % of NCN users who agree that the route can be accessed and used by people of all abilities (RUIS); # of changes made based on accessibility audits; increased # of trips made by other cycles, wheelchair users and those who walk with an aid (RUIS); # of recommendations from the Disabled Citizens' Inquiry that we have progressed; # of recommendations from Beyond the Barriers that we have progressed
	Increased cultural accessibility of the NCN, particularly for communities of colour.	Increased % of NCN users who are people of colour (RUIS); # of new partnerships with

Area of focus	Key outcomes	Sample indicators
		community organisations made to increase ethnic diversity of NCN users
	Increased access to everyday services and amenities that help people to live well including jobs, education, shops, green space and public transport.	Existence of prioritisation tool that enables us to focus on enhancing access to everyday services; existence of data/analysis on key services within easy reach of active travel infrastructure; increased % of survey respondents who have used the route to access various amenities (RUIS); # of projects that include a public transport focus; # of new partnerships with public transport providers or organisations; # of projects that include a public transport focus; # of new partnerships with public transport providers or organisations
	More inclusive walking, wheeling and cycling routes and networks to make these journeys easy, safe and convenient.	Increased % of survey respondents who agree their decision to use the route was because they can go straight to their destination / it is the most convenient route (RUIS); increased % of survey

Area of focus	Key outcomes	Sample indicators
		respondents who have used the route to access various amenities (RUIS)
Economic Inclusion	Increased viability of active travel for people with low or no incomes.	Increased % of survey respondents who have low or no incomes (RUIS); % of projects in areas with high levels of deprivation (and/or low levels of car ownership, as the two are correlated); % of individuals/households reporting reduced transport costs because of active travel routes; increased % of survey respondents who reported that their decision to use the NCN was because they save money using this route
	Increased visibility and prioritisation of journey purposes that are overlooked in transport planning (e.g. cycling as work, mobilities of care).	% of survey respondents whose journey purposes are work or caring responsibilities (RUIS); increased % of survey respondents who are making a journey which is one in a series of consecutive journeys for different purposes (RUIS)

Area of focus	Key outcomes	Sample indicators
	Uptake of alternative transport appraisal method that factors in equity, public health and environmental goals.	Existence of alternative appraisal method; number of policymakers or government officials that we promote this method to
	Increased integration of active travel into local, regional and national approaches to wider economic issues.	% or # of projects with local or combined authorities with existing community wealth building initiatives or strategies; % or # of projects with local or combined authorities with existing gender budgeting initiatives; # of new partnerships made to facilitate this outcome

Paper 8

Lam, T. (2022). *Gender budgeting in active travel in Scotland*. Sustrans and Transport Scotland. Available at: https://www.sustrans.org.uk/media/13355/gender-budgeting-in-active-travel-in-scotland.pdf (Accessed: 18 February 2025).

Gender budgeting in active travel in Scotland

Report by Tiffany Lam for Sustrans and Transport Scotland, with support from the UK Women's Budget Group and the Scottish Women's Budget Group.

Contents

Executive Summary 3

Introduction 6

Gender budgeting 8

- Three preconditions for gender budgeting 9
- Three key elements of gender budgeting 11
- Gender budgeting in Scotland 14

A framework for gender budgeting in Places for Everyone investment 15

1. Engagement 16
2. Infrastructure 18
3. Health and safety 20
4. Accessibility 21
5. Affordability 22
6. Monitoring and Evaluation 23

Synthesis of findings and analysis across case studies 25

- Preconditions for gender budgeting 26
- Intersectional data 28
- Engagement 30
- Infrastructure 31
- Health and safety 31
- Accessibility 32
- Affordability 32
- Monitoring and evaluation 33

Recommendations 34

Appendix I: Case Study 1 39

Appendix II: Case Study 2 51

Appendix III: Case Study 3 68

References 80

Executive Summary

The Scottish Government has committed 10% of Scotland's transport budget (£320 million) for active travel by 2024/25. This represents a significant uplift in active travel spending in Scotland. Investment in infrastructure for walking and cycling is the largest active travel investment thread in Scotland. Places for Everyone is the major active travel infrastructure investment fund. Places for Everyone is currently administered by Sustrans. It is important to ensure that infrastructure investment is distributed fairly to promote inclusive walking, wheeling and cycling.

This report explores how gender budgeting could be applied to active travel investments in Scotland to promote more gender equal funding distribution and outcomes, and therefore help deliver on all five active travel outcomes in Transport Scotland's Active Travel Framework. Adopting an intersectional gender perspective, which uses gender as an inroad to consider the ways in which multiple inequalities interact and compound each other, can help tackle gender and other inequalities in active travel.

Gender budgeting is an effective tool to put an intersectional gender perspective into practice. It enables an analysis of the differential and gendered impacts of government policies, investments and budgets on different groups of women and men, girls and boys, depending on other socioeconomic and demographic factors (e.g. income, ethnicity, age).

To implement gender budgeting, there are three preconditions that governments, public bodies and organisations must meet:

— An explicit commitment to gender equality goals in policy, planning and budgeting processes;

— Gender expertise (internally or externally) within the decision-making team;

— Diverse leadership within the decision-making team.

These should be present throughout the process of gender budgeting. Then, three key elements contribute to effective gender budgeting:

— Gender-based analysis (using intersectional data, or data disaggregated by sex and other sociodemographic characteristics, such as income, ethnicity, age, disability, gender identity and sexual orientation);

— Implementing changes based on gender analysis;

— Working with relevant actors within and outside of government (e.g. local women's or disabled people's organisations).

Where governments, public bodies and organisations can develop a plan to meet the preconditions for gender budgeting, they can gradually work towards implementing effective gender budgeting.

The framework for gender budgeting in active travel infrastructure investment, which was developed to accompany this report, is a tool that Transport Scotland and Sustrans can use to work towards more gender equal active travel funding distribution and drive the active travel outcomes identified in the Active Travel Framework (e.g. walking, cycling and wheeling is safer for all).

There are six criteria in the gender budgeting in active travel infrastructure investment framework: (i) engagement, (ii) infrastructure, (iii) health and safety, (iv) accessibility, (v) affordability and (vi) monitoring and evaluation. The hope is that the discussion questions in the framework will serve as a starting point for Transport Scotland and Sustrans to explicitly consider issues around gender equality in active travel when reviewing funding applications, designing and delivering projects, as well as evaluating and monitoring the progress of projects.

Active travel infrastructure projects are not currently required to include gender budgeting. Projects delivered by local authorities should include Equality Impact Assessments (EQIAs), which will have an element of gender analysis, but there tend to be inconsistencies in the quality of EQIAs. The three case studies of recent active travel projects in Scotland are used to illustrate how and why gender analysis and gender budgeting would be beneficial. The case studies are anonymised and included in the appendix.

To conclude, this report offers nine recommendations for Transport Scotland, Sustrans, local authorities and community organisations to work towards implementing gender budgeting in future active travel investments:

— Establish an explicit gender equality goal to promote equality of outcomes.

— Require funding applicants to address how their project will contribute to this gender equality goal.

— Develop gender expertise, through access to training or toolkits, and support community groups and local authorities applying for funding to do the same.

— Use the framework for gender budgeting in active travel investment.

— Collect and analyse intersectional data.

— Embed Equality Impact Assessments, gender safety audits and accessibility audits in design and decision-making processes.

— Partner with community organisations to do meaningful engagement with local people.

— Work towards diversifying the team making decisions about funding allocation. At a minimum, require funding applicants to develop a strategy to ensure that diverse perspectives are considered in active travel projects.

— Fund both physical and social infrastructure for cycling.

Introduction

Transport Scotland has an Active Travel Framework that sets out a vision for Scotland's communities to be 'shaped around people, with walking or cycling the most popular choice for shorter everyday journeys' by 2030 (Transport Scotland, 2019). To that end, 10% of Scotland's transport budget (£320 million) has been committed for active travel by 2024/25, a marked uplift in active travel spending (Transport Scotland, 2022). Places for Everyone is the major active travel investment thread in Scotland and is administered by Sustrans on behalf of Transport Scotland. To ensure a fair distribution of investment, it is important to adopt an intersectional gender perspective to address inequalities in active travel (Lam, 2022; Aldred, Woodcock and Goodman, 2016).

An intersectional gender perspective uses gender as an inroad to consider the ways in which multiple inequalities interact and compound each other (Crenshaw, 1989). An understanding of power dynamics and the ways in which structural and spatial inequalities contour walking, wheeling and cycling can equip policymakers and practitioners to promote more inclusive active travel systems (Lam, 2022). As Transport Scotland's Active Travel Framework highlights, gender, age, health status, disability and socioeconomic circumstance influence levels of walking and cycling, and 'activity needs to be focused around all of these issues' (Transport Scotland, 2019).

Gender is a useful entry point to analyse and address inequalities in transport because despite being one of the most robust determinants of travel purpose and mode, it is often ignored in transport planning (Women's Budget Group, 2021; Lam, 2022; Sustrans, 2018). For example, due to the gendered division of household labour, women tend to make more care-related journeys, often requiring travelling with other people (e.g. children, older people) and making multiple stops (trip chaining).

Yet transport systems prioritise radial journeys that serve the 'typical' work commute, which disproportionately benefit men at the expense of women and those with more varied journeys, such as older people, children and shift workers (Women's Budget Group, 2021; Lam, 2022). This is often replicated in cycling infrastructure planning, which prioritises east-west and north-south corridors leading in and out of city centres (Lam, 2022; Sustrans, 2018).

In the UK, 85% of people over age 65, 78% of disabled people, 76% of women, 75% of people at risk of deprivation and 74% of people from ethnic minority backgrounds do not cycle (Sustrans and Arup, 2020). 74% of people cycling on the National Cycle Network are men and 98.5% are white (Sustrans, 2018). Men in Scotland are over twice as likely (29%) as women (13%) to cycle at least once a week and more likely to think cycling is safe (45% vs.

39%, respectively) (Sustrans, 2022a). In addition to street harassment, women in the UK are at increased risk of near misses and road abuse from drivers (Aldred, 2016).

There are disparities in the quality and safety of walking environments, which reflect and reproduce broader socioeconomic inequalities in society (Sustrans & Arup, 2022). Across the UK, people from ethnic minority backgrounds tend to make more walking journeys (29-35%) than white people (25%) (Sustrans, Living Streets and Arup, 2022). Despite lower levels of car ownership and usage, people with lower incomes are disproportionately injured or killed by road collisions and traffic-related air pollution (Fosdick, 2015; Barnes, Chatterton and Longhurst, 2019; Fairburn et al., 2019). People from ethnic minority backgrounds from socioeconomically deprived backgrounds are over three times more likely to be pedestrian casualties on Britain's roads than pedestrians who are white and not from deprived backgrounds (Living Streets, 2021). In Scotland, the rate of traffic collisions involving children walking or cycling in the 20% most deprived areas is more than triple that of the 20% least deprived areas (Quayle, 2019).

These inequalities in active travel underscore the need to democratise the right to safe and sustainable mobility. This is reflected in Transport Scotland's Active Travel Framework, as one of the strategic objectives is reduced inequalities – widening access to jobs, services and leisure for all, including children, older people, people with disabilities and people on low incomes (Transport Scotland, 2019). The five outcomes in the Active Travel Framework also demonstrate a commitment to promoting inclusive walking, wheeling and cycling (Transport Scotland, 2019):

— Increase the number of people choosing walking, cycling and wheeling in Scotland;

— High quality walking, cycling and wheeling infrastructure is available to all;

— Walking, cycling and wheeling is safer for all;

— Walking, cycling and wheeling is available to all;

— Delivery of walking, cycling and wheeling is promoted and supported by a range of partners.

Gender budgeting is an effective tool to put an intersectional gender perspective into practice and ensure fairer distribution of public spending to deliver on these Active Travel Outcomes. The budget process in Scotland includes the Equality and Fairer Scotland Budget Statement, which requires an assessment of the impact of proposed public spending on different groups of people and how it may help reduce inequalities (Scottish Government, 2021). This is an important statement of intent and commitment to equality analysis within the Budget process, which can be replicated in other public policy processes.

This report explores how gender budgeting could be applied to active travel investments in Scotland to promote more inclusive walking, wheeling and cycling. It begins with a discussion of gender budgeting, introduces a framework to apply gender budgeting to active travel infrastructure investments and concludes with recommendations for Sustrans and Transport Scotland on how to drive more gender equal investments and outcomes in active travel. The appendix contains three anonymised case studies of recent active travel projects to illustrate how gender budgeting could be adopted to increase gender equal outcomes in active travel.

Gender budgeting

Gender budgeting enables an analysis of the differential and gendered impacts of government policies, investments and budgets on different groups of women and men, girls and boys, depending on other socioeconomic and demographic factors, like income, ethnicity, age and disability (Women's Budget Group, 2018). Applying gender budgeting to active travel investments can enable a distributional analysis that makes explicit who benefits from new active travel infrastructure and who is left out (Lam, 2022). This process can guide the restructuring of budgets to promote fairer and more inclusive distribution of public resources (Women's Budget Group, 2018; Women's Budget Group, 2021). For example, gender budgeting can help Transport Scotland in 'delivering places that are happier, more inclusive and equal, and more prosperous' (Transport Scotland, 2019).

There are three preconditions that must be met before governments, public bodies and organisations can begin to work towards implementing gender budgeting:

— An explicit commitment to gender equality goals in policy, planning and budgeting processes;

— Gender expertise (internally or externally) within the decision-making team;

— Diverse leadership within the decision-making team.

These must remain present throughout the process of gender budgeting, which in turn requires three key elements:

— Gender-based analysis (to the extent possible using intersectional data, or data disaggregated by sex and other sociodemographic characteristics, such as socioeconomic status, race/ethnicity, age, disability, gender identity and sexual orientation);

— Implementing changes based on gender analysis;

— Working with relevant actors within and outside of government.

Ultimately, gender budgeting aspires to make the process and outcomes of policymaking and budgeting more transparent, equal and participatory.

Three preconditions for gender budgeting

Explicit commitment to gender equality goals

The first precondition for gender budgeting is having an explicit commitment to gender equality goals in policy, planning and budgeting processes. This is necessary to set a strategic vision, convene relevant stakeholders and direct resources to promote equality of outcomes.

For example, in 2019 the City of Bogota became the first city in the world to establish a public policy goal to achieve gender equality in city cycling. Setting this goal enabled city officials across departments to work together to build their capacity to understand and address structural drivers of the gender gap in cycling, as well as fund a range of projects, including ones involving community organisations, to help get more women cycling (Sustainable Urban Transport Project, 2020). Bogota also hosted the '50/50 More Women on Bicycles' International Congress in September 2019, which brought together stakeholders across sectors from Colombia and beyond to share good practice on how to promote gender equality in cycling and other areas of urban life.

Another example is the 2019 Oakland Bike Plan, which includes an Equity Framework and is the only city cycling policy document to date that has an explicit focus on equity. According to the Plan, 'equity means that your identity as an Oaklander has no detrimental effect on the distribution of resources, opportunities and outcomes for you as a resident' (OakDOT, 2019). The Equity Framework considers who the most vulnerable groups are in Oakland, what the desired condition of wellbeing is for Oakland's most vulnerable communities, as well as how the implementation of the Bike Plan can help achieve those conditions (OakDOT, 2019).

It pays particular attention to the intersection of gender, race and socioeconomic background, and identifies women, gender nonconforming individuals, people from ethnic minority backgrounds and people on low or no incomes as among the most vulnerable communities who would benefit the most from new cycling investments. As such, communities that experience higher levels of socioeconomic disadvantage and are underserved by cycling infrastructure are prioritised for new cycling infrastructure (OakDOT, 2019; OakDOT, 2022).

Gender expertise

The second precondition for gender budgeting is that there must be gender expertise within the team (internally or externally) making decisions about public policies and spending. Gender expertise is an understanding of gender as a socially constructed category of identity that interacts with other aspects of identity (e.g. sexual orientation, socioeconomic status) and shapes our lived experiences, as well as social, political, economic and spatial relationships (Women4Climate, 2019a). Gender expertise means focusing on collective action and systemic changes, not individualising structural problems. Rather than placing the onus on women to simply 'lean in' or change their individual behaviours or attitudes, an individual or team with gender expertise would assess how systems are failing women and other marginalised groups, and therefore need to change.

The application of gender expertise is currently lacking in the transport sector. A survey of 353 UK transport professionals found that just 13% report always considering gender in their day-to-day work, whereas 46% never consider it and 41% somewhat consider it (GET IT, n.d.). When asked what would help transport professionals better incorporate gender considerations in their work, the top two responses were to attract more women into the industry and increase awareness and education (GET IT, n.d.).

The City of Barcelona offers an example of how to develop gender expertise internally. In 2016 the City of Barcelona launched a Plan for Gender Justice, with four strategic areas: institutional change; economy for life and time management; city of rights; and liveable and inclusive neighbourhoods (Women4Climate, 2019a). Under the first strategic area, institutional change, city officials have increased institutional gender expertise through training, collecting and analysing sex-disaggregated data, as well as gender budgeting (Women4Climate, 2019a). In the UK, the burgeoning feminist city work in Glasgow and the Women-Friendly Leeds initiative in Leeds are examples to watch as both cities progress their efforts to build and act on gender expertise.

To deliver on the fourth strategic area, liveable and inclusive neighbourhoods, city officials have embedded a gender perspective in urban and transport planning, as documented in The Manual of Urban Planning for Everyday Life (Barcelona City Council, 2019). This included conducting gender safety audits in different neighbourhoods, gathering sex-disaggregated data to understand women's mobility patterns and developing projects to make public spaces safer and more inclusive for women and girls (Barcelona City Council, 2019).

Meanwhile the Los Angeles Department of Transportation (LADOT) offers an example of how to build gender expertise by working with external partners. LADOT commissioned the Kounkuey Design Initiative (KDI) to produce a report with data and recommendations to

make transportation in Los Angeles more gender inclusive and equitable. Changing Lanes: A gender equality transportation study was published in 2021 and fills an important data gap by focusing on the travel patterns and experiences of women of colour with low incomes and from households without car access (LADOT, 2021). KDI is building on this report to develop a Gender Equality Action Plan (forthcoming, 2023) to help LADOT create a more gender inclusive and sustainable transport network.

Diverse leadership

The third precondition for implementing gender budgeting is diverse leadership within the decision-making team. This means having more women, gender minorities, people from ethnic minority backgrounds, disabled people, LGBTQIA people and people from lower socioeconomic groups represented in decision-making processes. In the UK, women represent just 14% of the built environment sector and 21% of the transport sector (Women4Climate, 2019a; European Commission, 2019). In Scotland, transport has the fourth lowest proportion of women (25%) represented in senior positions within the public sector (Engender, 2023). Although there is little data on racial diversity in the built environment and transport sectors, a 2005 CABE figure showed that people from ethnic minority backgrounds comprise just 4% of the transport planning workforce (CABE, 2005).

Women in the transport sector describe it as a male-dominated industry with a macho culture where sexual harassment is ‘part of the job’ (AAPG for Women in Transport, 2021; ETF, 2017). The dual lack of gender expertise and diversity within the transport sector, particularly at the leadership level, can result in transport systems that fail to meet the needs of diverse and pluralistic populations (Women4Climate, 2019a). Mentoring programmes for women and underrepresented groups, as well as participatory engagement methods with diverse communities have been evidenced as ways to help increase diversity in leadership and decision-making teams (Women4Climate, 2019a).

Three key elements of gender budgeting

These preconditions – an explicit commitment to gender equality goals, gender expertise and diverse leadership within the decision-making team – must continue to feature in the process of gender budgeting. As a first step, governments, public bodies and organisations can try to develop a plan to meet the preconditions for gender budgeting. This can set the stage to gradually adopt gender budgeting.

Gender-based analysis

The first key element of gender budgeting is gender-based analysis using intersectional data, that is, sex-disaggregated data and data disaggregated by other sociodemographic

characteristics, such as socioeconomic status, ethnicity, age, disability, gender identity and sexual orientation (Women's Budget Group, 2018; Wales Centre for Public Policy, 2019). Intersectional data is important to understand how diverse populations use services and facilities differently, according to their needs and experiences. It can be analysed to identify intervention points that can lead to more inclusive infrastructure and service provision.

The Scottish government launched a Working Group on Sex and Gender in Data to identify gender gaps in data collection and provide guidance to public bodies on collecting and analysing sex-disaggregated data to enable more inclusive policies and services (Women's Budget Group, 2021). This is a positive step to increase capacity for more widespread adoption of gender budgeting.

Intersectional data analysis entails the crosstabulation of different variables (e.g. age + sex, disability + sex, etc.). This may be challenging in small and/or relatively homogeneous samples because there will be very few, if any, respondents in certain categories. In these cases, an alternative would be conducting ethnographic and qualitative research (e.g. interviews and focus groups) with underrepresented groups, or groups in the local area that are currently not being seen in the data (e.g. LGBTQIA people, disabled people). While these methods require more time and resources, they enable meaningful engagement with diverse communities. Partnering with local women's and/or equalities organisations from project inception can also help ensure more diverse engagement, intersectional data collection and gender expertise.

At a minimum, sex-disaggregated data should be collected – Women comprise half the population, and so it will be more straightforward to see whether active travel infrastructure benefits women and men equally. For example, analysis of sex-disaggregated data from a Sustrans Route User Intercept Survey (RUIS) could identify gender differences in feelings of safety on (and therefore usage of) a new active travel route. Looking at the gender breakdown in responses to questions about safety makes it possible to compare how feelings of safety vary between women and men, and how that impacts usage of the route. If disproportionately more women report feeling unsafe, Sustrans can follow up by conducting a gender safety audit with a group of local women and girls to understand where and why they feel unsafe and what would make them feel safer, which can lead to route improvements.

A gender safety audit was conducted by engineering and design company Atkins, as part of Edinburgh's city centre transformation. Atkins led a gender safety audit of George Street at different times of day and night (4pm, 9pm and 5am) with local women and men (Sustrans, 2022). The gender safety audit was based on the Get Home Safe toolkit that Atkins developed, which features six areas to increase women's and girls' safety in public space: landscape, human presence, digital, infrastructure, community/social and the appearance, or

'look and feel' aspects of a street (Atkins, 2021). The hope is that participants' feelings and experiences of safety, as well as recommendations on how to improve safety will feed into the final scheme.

An example of good practice in gender-based analysis is from the City of San Francisco. In 2018, city officials collected and analysed data disaggregated by sex, race and socioeconomic status to understand who was benefiting from new cycling infrastructure and who was being left out (Women4Climate, 2019). While people using new cycle lanes came from households with incomes ranging from under $20K to over $250K, there were stark gender and racial disparities. Consistent with findings from studies in other US cities, this study found that white men were the predominant users of new cycle lanes and just 29% of people using the new cycle lanes were women (Women4Climate, 2019). Although women of colour represent 34% of the San Francisco population, they represented just 13% of people using the new cycle lanes (Women4Climate, 2019). The intersectional analysis guided the development of targeted recommendations and initiatives to increase cycling among women of colour in San Francisco.

Implementing changes based on gender analysis

Another key element of gender budgeting is the implementation of changes based on gender analysis. It is not enough to merely collect and disaggregate data by sex and other sociodemographic characteristics. This data needs to be meaningfully interpreted and applied to policy and budgeting processes.

In Scotland, the Equality and Fairer Scotland Budget Statement 2022-2023 accompanies the Scottish Budget and sets out how public spending will mitigate inequalities for protected groups (Scottish Government, 2021). However, the Equalities Budget Advisory Group have made recommendations to the Scottish Government to improve the equalities and human rights analysis used within this statement and wider budget processes. Improving capacity on equalities and human rights analysis is highlighted as one of the main organisational developments required (Scottish Government, 2021a).

The City of Vienna offers a useful example of how gender analysis led to substantive improvements in urban and transport planning. Vienna was an early adopter of gender budgeting, implementing it in 2005 as part of a broader citywide gender mainstreaming initiative (Women4Climate, 2019a). All municipal departments are required to assess who benefits from public spending and services, as well as how the distribution of public resources affects gender inequalities and make any corrective changes based on that analysis (TInnGO, n.d.).

As part of a gender mainstreaming pilot in Vienna's Mariahilf District, city officials studied gendered mobility patterns and found that women were more reliant on walking and public transport than men. Based on these findings, city officials introduced a series of urban realm improvements between 2003 and 2005, including widening 1,000 metres of pavement, 40 new street crossings, 26 street lighting projects, removing barriers from five pavements, putting in a lift in public space and adding seating in 9 locations (TInnGO, n.d.). All these improvements increased accessibility and safety for women and girls in Mariahilf and this pilot served as a template for future citywide gender inclusive transport and urban planning projects (TInnGO, n.d.).

The increasing attention that transport policymakers and planners in Latin America are paying to the 'mobility of care' offers another example of how gender analysis can lead to more gender inclusive transport systems. Care work and care-related travel are highly gendered, disproportionately falling on women (Oxfam, 2020; Women's Budget Group, 2021). The 'mobility of care' refers to all travel related to domestic and caring responsibilities, both paid and unpaid (Sánchez de Madariaga, 2013).

The City of Bogota has launched several 'mobility of care' initiatives to better support care-related journeys that women disproportionately make. Firstly, as of 2019 care has been included as a reason for travel to the Household Mobility Survey to collect more data on care-related trips. This has enabled an intersectional analysis that has exposed stark differences in the total number, distance and duration of care trips, based on gender and socioeconomic status (Murillo-Munar, J. et al., 2022). Secondly, Bogota also introduced a 'mobility of care' pilot with a focus on safe walking and cycling routes to school for children in select neighbourhoods (C40 CFF, 2020). Thirdly, city officials commissioned a study of female essential workers' cycle commutes during the COVID-19 pandemic to better understand how well existing cycling infrastructure facilitated safe cycling journeys for key workers (C40 CFF, 2020).

Working with relevant actors within and outside government

The third key element of gender budgeting is working with key actors within and outside government. This is consistent with the fifth outcome in Transport Scotland's Active Travel Framework – delivery of walking, cycling and wheeling is promoted and supported by a range of partners (Transport Scotland, 2019). Examples of relevant actors outside government include women's and equalities organisations.

Gender budgeting in Scotland

In Scotland, there have been favourable conditions for gender budgeting due to the early advocacy of the Scottish Women's Budget Group (SWBG) and its engagement with key

political actors, such as the chair of the Scottish Parliament's Finance Committee (O'Hagan, 2017). An example of how gender budget analysis has been useful has been in identifying and addressing gender disparities in the beneficiaries and outcomes of Scotland's Modern Apprenticeship Programme (Campbell and Gillespie, 2017).

Since the inception of Scottish Parliament in 1999/2000, Scotland has adopted and implemented a wider equalities budgeting approach, which seeks to incorporate analysis across legally protected characteristics, such as sex, race, age, disability and sexual orientation (Wales Centre for Public Policy, 2019). In theory, this seems like it would enable an intersectional analysis of public policy and budget decisions, but in practice this has been hampered by the lack of intersectional data (First Minister's National Advisory Council on Women and Girls, 2020). Recent Scottish Government efforts, such as the creation of the Centre of Expertise in Equality and Human Rights within the Economy division of Scottish Government, recognise the need to build capacity, expertise and skills among policy officials to address cross-cutting injustices (Scottish Government, 2022a).

To date, the focus of equalities budgeting in Scotland has been at a national level, yet a large amount of budget commitments is spent by other public bodies and local authorities. While there is visionary and ambitious leadership at the national level, public bodies and local authorities can struggle with a lack of capacity, expertise and resources to implement gender analysis and gender budgeting. This is why working with partners, like SWGB, is important. SWGB have developed projects, such as Gender Budgeting Theory to Action, to provide training and support to build gender budgeting capacity at the local authority level.

A framework for gender budgeting in Places for Everyone investment

A literature review informed the development of an evaluation framework to guide the case study analysis of whether and the extent to which active travel funding allocations and outcomes have been equitable in Scotland. The literature review covered four themes:

— Active travel;

— Gender and sustainable transport;

— Gender budgeting;

— Global examples of transport policies and plans that have integrated a gender perspective.

The framework for gender budgeting in active travel infrastructure investment focuses on six criteria:

1 Engagement;

2 Infrastructure;

3 Health and safety;

4 Accessibility;

5 Affordability;

6 Monitoring and evaluation.

There are a set of discussion questions and sample indicators for each of these six criteria. At a minimum, the discussion questions in the framework can help initiate conversations around gender equality in active travel funding decisions. It can be used as an internal document for Sustrans and Transport Scotland to use when drafting tenders and reviewing funding applications. It can also be used to structure discussions with shortlisted or successful applicants to ensure that issues around gender, equality and inclusion are prioritised from the start of active travel projects.

The framework can be used to hold the project delivery team to account throughout the course of project delivery. For example, it can remind the delivery team to conduct an accessibility audit or gender safety audit at an earlier stage, so the final path will be more accessible and safer for all users. It can also inform the monitoring and evaluation process by ensuring that efforts are made to measure the different equality criteria. Ultimately, the framework is a living document that can and should evolve as it gets used more routinely, so that it can be most useful to practitioners and decision-makers.

1. Engagement

To promote equitable and inclusive active travel, investments in active travel must be fair and seen to be fair. To be seen to be fair, more meaningful engagement with marginalised communities is needed (IPPR Scotland, 2022; People for Bikes, 2021; Women4Climate, 2019). Most people from low-income households in Scotland feel that their needs are not considered in transport decision-making processes and 76% want more of a say in transport decisions (IPPR Scotland, 2022). Similarly, disabled people in the UK feel ignored, or only considered as an afterthought, in decisions made about transport and would like to be engaged more throughout all stages of planning (Possible, 2022; Sustrans, Living Streets and Arup, 2022; Sustrans and Arup, 2020).

While marginalised groups broadly understand and support measures to reduce car usage, they are concerned that their voices and experiences are omitted from decision-making processes (IPPR Scotland, 2022; Possible, 2022). They also feel the burden should fall more heavily on groups with more privilege (e.g. non-disabled people, more affluent households), who have larger carbon footprints and more resources to reduce them (IPPR Scotland, 2022; Possible, 2022). Since households with low or no incomes are lower carbon emitters who are not driving most of the cars in Scottish cities, they feel they should not be asked to do more than they can afford (IPPR Scotland, 2022; Living Streets, 2021).

Evidence from the US shows that gender, racial and socioeconomic disparities in both cycling and perceptions of cycling, coupled with a lack of inclusive representation and community input in cycling infrastructure planning, have led to an inequitable distribution of cycling infrastructure, perceptions among communities of colour that cycling is not for 'people like me,' as well as associations of cycling infrastructure with gentrification (People for Bikes, 2021; Hoffman and Lugo, 2014; Hoffman, 2016; Stehlin, 2019; Lam, 2022).

A London study of low-traffic neighbourhoods (LTNs) implemented during the COVID-19 pandemic has found that overall, new LTNs were equitably distributed across London, with people in deprived areas, people from ethnic minority backgrounds and car-free households more likely to live in or near a new LTN (Possible, 2020). Still, the strong backlash to LTNs evidences widespread perceptions that LTNs are not fair, reflecting the need to build a greater sense of trust and community ownership with local people.

Meaningful community engagement can help build trust and reduce perceptions among underserved groups that active travel projects will not benefit them, including people who may not identify as 'cyclists' (IPPR, 2022; Lam, 2022; Possible, 2022; LADOT, 2021; People for Bikes, 2021; OakDOT, 2019). A key recommendation in The Active Nation Commissioner's Final Report was the creation of a permanent People's Panel to guide the next Active Travel Commissioner and ensure that active travel can help reduce social inequalities (Transport Scotland, 2022a). The People's Panel should consist of 30-40 randomly selected, diverse and proportionally representative cross-section of the Scottish public who would be remunerated for the time they spend preparing for and attending four virtual panels a year (Transport Scotland, 2022a).

Transport Scotland ran a National Transport Strategy People's Panel Pilot, which comprised of 19 participants who took part in four online sessions between October 2021 and January 2022 (Transport Scotland, 2022c). Participants shared concerns that those with protected characteristics face a range of barriers to achieving equal access to transport (Transport Scotland, 2022c). These concerns underscore the importance of the strategic objective in Transport Scotland's Active Travel Framework around reducing inequalities.

In addition to a national People's Panel to consider strategic transport projects, more in-depth and creative engagement processes at the local level could be an effective way to involve a wider range of people in transport planning processes in Scotland. It can also help instil a greater sense of community agency and ownership in active travel and other transport projects.

2. Infrastructure

Infrastructure investments tend to focus on physical infrastructure projects, such as cycle lanes. Physical infrastructure is important but focusing exclusively on it reflects a male bias and technocratic paradigm in transport planning, in which transport and infrastructure are framed predominantly as technical issues that require engineering, economic and technological skills and solutions (Women's Budget Group, 2021; Women4Climate, 2019a). While physical infrastructure is necessary to enable more people to walk, wheel and cycle, it is not sufficient to increase diversity in active travel (Lam, 2022; Sustrans, 2022a; Sustrans and Arup, 2020; Women4Climate, 2019; Women4Climate, 2019a).

Social infrastructure, such as community-based education, encouragement, outreach and peer support programmes, is necessary to enable a more diverse range of people to overcome sociocultural barriers to cycling and feel that cycling is for 'people like me' (Sustrans and Arup, 2020; Women4Climate 2019). Active travel investments must approach infrastructure from a holistic perspective and account for both physical and social infrastructure. Transport Scotland's Active Travel Framework recognises this and states, 'As well as infrastructure, this means…continuing to drive education and behaviour change programmes through literature, training and opportunities to try walking and cycling' (Transport Scotland, 2019).

The Oakland Department of Transport is the first transport authority in the world to explicitly state that cycling infrastructure investment means funding both physical infrastructure as well as cycling programmes (OakDOT, 2019). OakDOT acknowledges that it has principally been engaged in delivering physical cycling infrastructure, while leaving funding and delivery of cycling programmes to other individuals or organisations on a volunteer basis (OakDOT, 2019). As a result, the delivery of cycling education and outreach programmes has been patchy (OakDOT, 2019). The 2019 Oakland Bike Plan demarcates a shift by recognising cycling programmes as a vital component of cycling infrastructure requiring funding (OakDOT, 2019).

In the UK, active travel has largely not been a strategic priority until relatively recently. As a result, active travel policy and planning has been variously outsourced to quangos, charities, local authorities and low-cost or volunteer labour (Aldred, 2012). Active travel delivery in the

'hollow state' relies on mobilising the 'active citizen' – in the form of civil society groups and/or volunteers – to deliver active travel projects, in conjunction with local authorities and other organisations (Aldred, 2012). This leads to patchy and inequitable outcomes in active travel, as only those with the privilege of time, knowledge, skills and connections can fundraise for and deliver active travel projects. When the cohort leading active travel projects – whether on a paid or voluntary basis – is a well-intentioned but relatively privileged and homogenous group (e.g. older and middle-aged, middle-class, able-bodied white men), there is a risk that diverse perspectives and issues around gender equality and inclusion may be overlooked (Women4Climate, 2019; People for Bikes, 2021).

Strategically prioritising and investing in physical and social infrastructure for active travel can help create more green jobs. This aligns with the strategic objective in Transport Scotland's Active Travel Framework around supporting sustainable economic growth. As outlined in the Oakland Bike Plan, investment in social infrastructure for cycling can help not only diversify cycling, but also complement and contribute to inclusive local economic development (OakDOT, 2019). OakDOT aims for the benefits of new local jobs and spaces created to support active travel to stay in local communities (OakDOT, 2019).

For example, education and outreach programmes can provide employment and apprenticeship opportunities for local people with low or no incomes (OakDOT, 2019). New worker-owned cooperatives that employ local people can be formed to support local cycle deliveries and cycling programmes (OakDOT, 2019). Glasgow's Women on Wheels project is an example of an initially volunteer led project that recently accessed funds to support its work to engage women in cycling. Women on Wheels designs and delivers a service led by and for women that aims to tackle existing barriers to cycling for women, especially women from ethnic minority backgrounds (Women on Wheels, n.d.).

In addition to investment in both physical and social infrastructure, it is important that physical infrastructure is inclusive of all ages and abilities. This means facilitating orbital routes, and not just radial routes (Lam, 2022; Women's Budget Group, 2021; Women4Climate, 2019; Sustrans, 2018). It also means ensuring that there is infrastructure to support movement (e.g. pavements and cycle lanes) and stillness (e.g. benches and water fountains), which is particularly important for delivery cyclists, people with restricted mobility (due to physical and/or respiratory issues) and those performing care-related journeys (Lam, 2021). Finally, a socio-spatial analysis of the provision of new active travel infrastructure is important to ensure that communities currently underserved by active travel infrastructure and public transport are prioritised for new infrastructure (Lam, 2022; Possible, 2020; OakDOT, 2019; LADOT, 2021; Sustrans and Arup, 2020).

3. Health and safety

Despite the focus on the physical activity and health benefits of cycling in policy and planning, places with high levels of poor health and health inequalities are often not prioritised for new cycling projects (Sustrans and Arup, 2020). This includes lower income neighbourhoods where residents are disproportionately exposed to more traffic dangers and traffic-related air pollution (Sustrans and Arup, 2020; Sustrans, Living Streets and Arup, 2022; Living Streets, 2021). As such, it is important to ensure that new active travel infrastructure reduces pedestrian and cyclist road injuries and fatalities, while increasing opportunities for safe physical activity for vulnerable populations.

For example, the City of Oakland has configured a hotline for people to report non-emergency cycling collisions and near misses (OakDOT, 2019). In addition, pilots of new road signs in Scotland (near Longniddry in East Lothian and Strathaven in South Lanarkshire) educating drivers to give cyclists safe space when passing showed that new signage led to a reduction in dangerous close passes from 50% to 29% (Transport Scotland, 2022).

Safety measures must include a gender perspective, given the gendered nature of road safety (e.g. near misses and close passes), as well as the prevalence of gender-based harassment and violence in public space (Aldred, 2016; Women4Climate, 2019; Women's Budget Group, 2021; Sustrans, 2022). However, gendered perceptions and experiences of both personal and road safety are often omitted in cycling infrastructure design and decision-making processes (Spinney and Xie, 2018; Women4Climate, 2019). A combination of physical design interventions, like adequate lighting and clear sightlines, and social interventions, like gender safety audits and bystander intervention training, are needed to improve feelings of safety for women and girls (Sustrans, 2022; UCL Urban Lab, 2020; Women's Budget Group, 2021). Anecdotal evidence shows that street harassment is also a particular concern among LGBTQIA people, but there needs to be more research on their perceptions and experiences of safety in public space (Lam, 2022; McCullough et al., 2019).

Because perceptions and experiences of safety are also racialised, there must be measures to improve safety for ethnic minority communities. Evidence from the US shows that fear of police racial profiling is a key barrier to cycling among people from ethnic minority backgrounds, particularly Black and Latinx men (People for Bikes, 2021). A London study of barriers to cycling for Black men found that racism and fear of being stopped and searched by police were among the top deterrents from cycling (Aldred and Osei, forthcoming). Hostile environment immigration policies can deter communities of colour, particularly immigrants, from walking, wheeling or cycling (Women's Budget Group, 2021).

The increased presence of delivery cyclists in cities and the business models of on-demand food and grocery delivery platforms create a 'perfect storm' that increases road dangers for all road users (Christie and Ward, 2018; Lam, 2021). While democratising platforms and improving working conditions for riders is a long-term aim, there are more immediate public space interventions that can increase riders' health and safety. For example, riders have suggested couriers' hubs in public spaces, "'somewhere to call base'" with public toilets, water fountains and benches (Lam, 2021). Those for whom cycling is work, such as delivery cyclists and cargo bike couriers, would benefit more from such measures that contribute to healthier and safer active travel environments.

4. Accessibility

In the UK, disabled people experience greater barriers to travel and take 38% fewer trips than non-disabled people across all modes of transport (Motability, 2022). Across the UK, pavement parking and barriers on streets or in parks can create hostile walking and wheeling environments for disabled people and women with prams (Sustrans, Living Streets and Arup, 2022). Conducting accessibility audits with disabled people and older people, as well as engaging with organisations representing those groups, is an effective way to identify and address barriers to walking, wheeling and cycling (Women's Budget Group, 2021; Sustrans, 2023).

Several design improvements that would create more inclusive active travel environments for disabled people, like widening pavements and park entrances, would also benefit delivery cyclists, particularly cargo bike couriers (Lam, 2021; Couve et al., 2023). Delivery cyclists in London suggested improved signage and wayfinding to make cycling safer, as it would enable them to keep their eyes on the road instead of Google Maps or other mapping apps on their phones (Lam, 2021). Better signage and wayfinding could make walking, wheeling and cycling more accessible by giving people a better sense of distance/scale and mitigate fears of getting lost, particularly for recently arrived immigrants or refugees (Yazici, 2022).

Another important dimension of accessibility is access to key services, which are priorities in the 2019 Oakland Bike Plan and LADOT's forthcoming Gender Equality Action Plan. The 2019 Oakland Bike Plan asks what proportion of residents, particularly those living in socioeconomically deprived neighbourhoods, can access essential needs (e.g. grocery stores, schools, libraries, public transport) within a ten minute ride on a low-stress cycle route (OakDOT, 2019). In addition to considering how accessible everyday needs are by cycle, a recommendation in LADOT's Changing Lanes report is to bring mobile resources (e.g. mobile health clinics, mobile grocery stands with healthy and affordable food) to low-income, low-density, rural communities to reduce travel burdens for women. This can be an effective way to reach groups that struggle or may be reluctant to access services.

In the medium and long term, the 15-minute city or 20-minute neighbourhood, in which everyone can walk, wheel or cycle to essential services within 15 or 20 minutes of their homes, would ensure greater access to key services while reducing travel burden on women and lower income households (LADOT, 2021; Sustrans, 2022a). As such, 15-minute cities or 20-minute neighbourhoods can only succeed if they are accompanied by equitable housing, land use and planning policies, greater investment in public services, as well as inclusive community engagement (TUMI and Women Mobilize Women, 2022; Women's Budget Group, 2021; Women's Budget Group, 2018; Women's Budget Group and Wen, 2020). However, the hollowing out of public services under austerity, along with historic underinvestment in areas experiencing higher socioeconomic deprivation can jeopardise successful delivery of 15-minute cities and/or 20-minute neighbourhoods (Women's Budget Group, 2021; IPPR Scotland, 2022).

5. Affordability

Scotland is the only UK nation to establish a target to reduce distance travelled by cars, aiming for a 20% reduction in private car kilometres travelled by 2030, but considerations of affordability are central to achieving this in a fair way (IPPR Scotland, 2022). Despite broad support for reducing car usage, including road space reallocation measures, among low-income households in Scotland, support for policies with an explicit aim to restrict demand for car use was contingent on making public transport more convenient and affordable (IPPR Scotland, 2022). The majority (70%) of low-income households in Scotland felt that reducing the cost of travel should be a priority for transport decision-makers, especially as those with the least amount of resources who contribute the least to climate change should not be expected to do more than they can afford (IPPR Scotland, 2022).

Active travel investment has the potential to help reduce travel costs and time spent travelling for those with low or no incomes, if they reflect and respond to the needs of the most socioeconomically disadvantaged groups. In the UK and the US, most active travel investment has benefited a more privileged cohort for whom cycling is a lifestyle choice, due to health or environmental concerns (Lam, 2022; Hoffman and Lugo, 2014; Stehlin, 2019; Lee, 2018; Sustrans and Arup, 2020). This ignores vulnerable, economically marginalised populations who may be more reliant on walking and cycling as cheaper modes of transport.

Therefore, an equalities perspective is necessary, such that policies and plans focus on those with the greatest need who could benefit the most (Sustrans and Arup, 2020). For example, OakDOT will prioritise new cycling projects in areas with a higher proportion of disadvantaged communities (OakDOT, 2019). LADOT is exploring community cycling programmes to expand cycle access and education in low-income communities of colour, such as cycle lending libraries (LADOT, 2021).

In Glasgow, the Bikes For All project helps those with very low or no incomes, including refugees and asylum seekers, access cycles (Bikes for All, n.d.). A 2018-2020 evaluation of the Bikes for All project found that it increased cycling participation among underrepresented groups and ethnic minority population groups across Greater Glasgow (Glasgow Centre for Population Health, 2020). In the second year (2019), the percentage of participants experiencing unemployment doubled (28% to 57%) and there was also an increase in participants experiencing homelessness (9% to 26%) and asylum seekers (26% to 46%) (Glasgow Centre for Population Health, 2020).

6. Monitoring and Evaluation

Monitoring and evaluating the gender impacts of active travel investments requires asking the right questions and developing appropriate indicators to measure and follow up on goals, which requires intersectional data collection and analysis (EIGE, 2022; Swedish Women's Lobby, 2018; Women's Budget Group, 2018). However, the collection and analysis of intersectional data, data disaggregated by sex and other sociodemographic characteristics, is not a widespread and consistent practice, which poses a barrier to gender analysis and gender budgeting (EIGE, 2022; First Minister's National Advisory Council on Women and Girls, 2020; Sustrans, 2018; UK Women's Budget Group, 2018). Without collecting sex-disaggregated data or other intersectional data, it is difficult to make assessments and to monitor the gender impacts of policies, plans and projects (Swedish Women's Lobby, 2018; Women's Budget Group, 2018). Moreover, where sex-disaggregated data is collected, it must be analysed to feed into research design and evaluation processes to improve policy outcomes.

As part of the current review of the Public Sector Equality Duty regulations in Scotland, the First Minister's National Advisory Council on Women and Girls calls for the Scottish Government to place additional specific duties on listed public bodies to gather and analyse intersectional data, as well as integrate an intersectional gender budget analysis into budget setting procedures (First Minister's National Advisory Council on Women and Girls, 2020). Transport Scotland has clear expectations of delivery partners in active travel to collect and analyse sex-disaggregated and other intersectional data, if possible, through the Active Travel Framework. This expectation should be reflected in active travel budgets, with adequate time, expertise and resources dedicated to enable and support organisations with robust collection and analysis of intersectional data (EIGE, 2022; First Minister's National Advisory Council on Women and Girls, 2020; Swedish Women's Lobby, 2018).

Equality Impact Assessments (EQIAs) should also be conducted before and after the implementation of active travel projects to determine the differential impacts on different groups of women and men, as well as whether and the extent to which underserved groups

are better off because of the project. EQIAs should be an integral part of the design and decision-making process from the very beginning and not retrofitted to projects once decisions have been made (SWBG, 2022). Although this is a legal obligation, many local and public authorities lack the resources and expertise to do so. The dual lack of intersectional data and capacity for intersectional analysis in public bodies can often be a barrier to routinely and robustly conducting EQIAs (Engender, 2023).

Most Local Authority Active Travel Plans do not address gender and other inequalities in active travel (Sustrans, 2018). While EQIAs have been conducted in some cases, they have not been analysed in a way that has led to meaningful attempts to address the needs of and barriers for diverse groups of people (Sustrans, 2018). Building capacity to routinely conduct and make changes based on EQIAs, as well as collecting and analysing sex-disaggregated and other intersectional data, to the extent possible, can support more rigorous monitoring, evaluation, accountability and learning processes (Women's Budget Group, 2018; LADOT, 2021). Moreover, data collection at the national level is important to reflect high level trends but must be complemented by data collection at the local and neighbourhood levels to demonstrate more subtle changes in active travel infrastructure and participation (Transport Scotland, 2022b).

Monitoring and evaluating the gender impacts of active travel projects is important but cannot lead to change without a long-term strategy to influence government. Partnerships with civil society organisations, like local women's and equalities organisations, can help transform gender analysis into meaningful and progressive political change that advances gender equality (Women's Budget Group, 2018).

There should ideally be a feedback mechanism in the monitoring and evaluation of active travel projects, whereby new design and service standards or guidelines can be introduced in response to the needs of marginalised groups, like people with low or no incomes, women, girls and gender minorities, disabled people and people from ethnic minority backgrounds (LADOT, 2021). This can help keep local communities, particularly more vulnerable groups, engaged in active travel projects, which, in turn, can encourage more community ownership and inclusive growth in active travel. Transport Scotland's Active Travel Outcomes Framework can be this feedback mechanism, but there should be further thought on how feedback can inform learning and improvements to future projects.

Synthesis of findings and analysis across case studies

Three active travel projects in Scotland were selected as case studies to illustrate the relevance of gender budgeting in active travel. Case studies were selected based on two criteria:

— The availability of sex-disaggregated baseline and follow-up monitoring data;

— Existing contacts with local stakeholders who could readily participate in interviews in July 2022 at the time of this research.

The lack of follow-up data (given the recent completion of these schemes) and the lack of sex-disaggregated data and other intersectional data narrowed down the list of potential case studies. The COVID-19 pandemic also delayed projects, which, in turn, delayed follow-up monitoring data collection and analysis and further narrowed the pool of potential case studies. The condensed time scale of this research also meant that the projects prioritised were ones where Sustrans had local contacts from stakeholder engagement.

Case study research consisted of a review of available baseline and follow-up monitoring data from Sustrans, desk research on the local area and interviews with one to four local stakeholders in each area, ideally at least one stakeholder involved in the project design and decision-making process and at least one stakeholder from the local community who was involved in engagement processes. Two limitations were the absence of comprehensive intersectional baseline and follow-up monitoring data, as well as the small number of stakeholders interviewed in each case study.

Case studies are anonymised in this report. Table 1 below provides a brief description of the case studies.

Table 1: Description of case studies

Case Study	About the project	Date of completion	Approx. investment (including design phase)
Project 1	An all-abilities walking, wheeling and cycling path linking two villages on an island.	Summer 2021	£765k
Project 2	The first phase of a key piece of active travel infrastructure between a town	Late 2019	£382k

	experiencing high levels of deprivation and a large development site.		
Project 3	A fully accessible park and pathway linking a canal towpath and the National Cycle Network route towards a national park.	September 2021	£3.6m

Preconditions for gender budgeting

Gender budgeting is currently not a part of active travel infrastructure investments. The three preconditions for gender budgeting – an explicit commitment to gender equality goals, gender expertise and diversity within the decision-making, design and delivery team – were not set as criteria for the active travel funding award. The three case studies were not successful in meeting the three preconditions, but this not to suggest any shortcomings in the case studies. Rather, the case studies illustrate how gender budgeting can help improve gender equality in active travel and therefore contribute to the strategic objective around reducing inequalities in Transport Scotland's Active Travel Framework. The case studies act as 'a baseline' for future integration of gender budgeting methods that may be underway.

Across all case studies, new active travel infrastructure was framed as a universal public good that was 'for everyone' and would therefore benefit 'everyone.' Some commentators argue that this is a de-politicising view that obscures inequalities in active travel, as well as broader structural inequalities within which active travel projects are situated and reproduce (People for Bikes, 2021; Lam, 2022; Lee, 2018). For example, in Scotland access to a cycle and cycling for pleasure are skewed towards men and those with higher incomes (Transport Scotland, 2022b). Compared to women, men in Scotland are twice as likely to have access to a cycle and feel safer while cycling. (Transport Scotland, 2022b). Treating active travel infrastructure as a universal public good may risk ignoring the need for targeted measures to reduce inequalities in active travel based on gender, income and other dynamics.

Stakeholders interviewed indicated that there was little engagement with gender issues in project design and delivery:

> '…gender equality has not been a problem at all. We haven't recognised it, but it's not been ever flagged up as a problem for the community. It's a very friendly community, you know. So, I would say it's not irrelevant, but it's not been a priority for us at all' (interview, Project 1 stakeholder, 19/07/2022).

> ‘I am a mere engineer. I have to say that those sorts of things [gender, diversity and inclusion] are not things that come across my desk on a daily basis’ (interview, Project 3 stakeholder, 21/07/2022).

As a case-in-point, there may have been a missed opportunity to meaningfully engage with women and girls and consider their needs in Project 2. The first phase of Project 2 is an active travel link that leads to a pump track. Local stakeholders interviewed acknowledged that the pump track is mostly used by boys and young men, and the path better fulfils their needs to access and use the pump track . Therefore, the active travel link will disproportionately serve boys and men.

One mechanism that is designed to support local authorities, transport and built environment professionals to develop gender expertise and ensure that issues around equality, diversity and inclusion are raised is the Equality Impact Assessment (EQIA). EQIAs were not available at point of research for any of the case studies.

A stakeholder in one of the case studies felt that EQIAs tend to be done infrequently or only as a ‘tick-the-box exercise’ and said: ‘it’s not a process that’s seen as having any value… It’s just about building a road, a path… It’s a culture, it’s, there’s no impact on the equality here’ (interview, 22/07/2022). This is surprising, given that there are specific equality duties, in Scotland that require an equalities assessment of policies by public bodies on top of the UK-wide Public Sector Equality Duty. But it could be argued that this reflects the technocratic paradigm in transport planning, which privileges technical issues (e.g. physical infrastructure) at the expense of ‘social’ issues, like gender.

Seven of the eight local stakeholders interviewed in this research were white men. All stakeholders characterised the decision-making, design and delivery teams as mostly able-bodied, middle-aged, or older white men. Some expressed more awareness of and interest in gender issues, such as concerns around women’s and girls’ safety in public space. It may not be realistic to have diverse representation in project teams, particularly if they are small, but at a minimum it is important to have a strategy to engage with diverse communities within the local area throughout the project design and delivery.

Project 1 highlights the need to ensure that diverse perspectives are included, particularly when there is a relatively homogenous group leading active travel projects. The active travel funding application was led by a small voluntary group comprised of retired professional white men. The risk with homogenous decision-making bodies is that they will make decisions primarily based on their own lived experiences – as middle-class, able-bodied, white men – that have implications for a wide range of people. Despite good intentions, they may simply not be aware of the diverse lived experiences of others, such as women and people with

lower incomes. For example, one stakeholder said, ‘perhaps the lower socioeconomic groups of people do not use those things [the countryside, active travel paths] anyway’ (interview, 22/07/2022).

While the three preconditions for gender budgeting were not present in any of the case studies, there are two positive takeaways. Firstly, funders can play a role in ensuring that decision-making, design and delivery teams incorporate a gender perspective in their work. Stakeholder interviews demonstrate how influential Sustrans has been in ensuring inclusive, accessible design of new active travel infrastructure. For example, according to a stakeholder who worked on Project 3, accessibility was prioritised from the start because ‘Sustrans obviously insist on that…Sustrans certainly will have been very influential on that because they were the major funder’ (interview, 21/07/2022). This demonstrates the power that Sustrans, as a funder, has on creating parameters and stipulations for funding applications and awards. There is an opportunity for Sustrans to put gender on the agenda by mandating a gender perspective in future active travel funding applications.

The second positive takeaway is that there is an appetite for developing gender expertise within local authorities and community groups, so that active travel projects can be fairer and more inclusive. A stakeholder said, ‘You know, I certainly, I’m no expert on impact assessments of gender inequality, but I would like to learn, you know, there’s nothing wrong with listening and thinking, okay, okay, that’s a new perspective, I’ll take that on board, let’s think about that’ (interview, 27/07/2022). The responsible local authority in that case study is also engaged in gender budgeting work with the Scottish Women’s Budget Group to build capacity and expertise on gender budgeting, with departments across a wide variety of policy areas engaging with the training. The political appetite for developing gender expertise and adopting gender budgeting is promising because it demonstrates recognition and ambition to improve policy outcomes and needs to be nurtured.

Intersectional data

The collection and analysis of intersectional data is a critical component of gender budgeting Although Sustrans collects intersectional data in some cases, it typically does not get further analysed. Route User Intercept Surveys (RUIS), which were available two case studies, collect the following demographic data: gender, gender identity, age group, working status, disability, general health and ethnicity.

However, in the analysis and reporting of findings, demographic data is stated as facts rather than analysed to understand and respond to gender differences. For example, the proportion of male vs. female respondents, or the breakdown of the ethnicity of respondents get

reported, but there is no further analysis of how respondents from different demographic groups felt differently (e.g. gender or age differences in self-reported feelings of safety).

In the absence of intersectional data analysis of path users, further intersectional analysis was attempted using unweighted but cleaned RUIS data for these two case studies. However, there were two challenges. The first challenge was the relatively small sample size. This was more of a problem in one of the case studies, where there were 39 respondents for the baseline RUIS and 48 respondents for the follow-up. In the other case study, there were 63 respondents for the RUIS carried out at one point of the path and 138 respondents for the RUIS carried out at another point of the path.

The second issue was the relatively homogenous group of respondents, in terms of gender, gender identity, ethnicity, disability, general health. All respondents in both sites were white, which likely reflects the local population, as people from ethnic minority backgrounds comprise just 4% of Scotland's population. In one case study, all respondents identified as White British, except for one respondent who identified as White Romanian and two who identified as White Polish. In the other case study, all respondents identified as White British except for four who identified as White Irish and one who identified as White Polish.

In both sites, most respondents were non-disabled white men between the ages of 25-64 and in good, very good or excellent health. This seems like a skewed sample, as women comprise half the UK population. One of the sites also has one of the highest rates of adults with long-term health conditions in the local authority, but few of them were represented in the RUIS data. In both sites, there was more gender balance in the follow-up RUIS (46% women and 54% men, and 40% women and 60% men), compared to the baselines (35% women and 63% men, and 21% women and 79% men, respectively). There was little diversity in gender identity, with <1% non-binary or transgender respondents in both sites.

It is important to note that homogenous samples may sometimes reflect the local population. Furthermore, homogeneity in small samples may be difficult to avoid because certain subgroups, like people from ethnic minority backgrounds or transgender people, may comprise a small percentage of the general population and therefore not show up in samples. Sex disparities are easy to spot, as it is just a matter of identifying whether there is a 50/50 split between women and men. However, it may be less straightforward to identify whether there is proportionate representation of other subgroups. This is why authorities and public bodies should at least collect sex-disaggregated data.

Intersectional analysis is problematic when there is a small sample size and homogenous sample for two reasons. Firstly, disaggregating data by demographic categories in these instances can compromise participant anonymity and confidentiality. For example, in the

baseline RUIS for one of the case studies, there was only one female respondent between the ages of 55-64, and so reporting on responses by women aged 55-64 could make it obvious who the respondent is. The second problem is that there may not be sufficient statistical power to analyse subgroup data with a small and homogenous sample. It is impossible to detect differences between or trends among subgroups (e.g. women aged 55-64 vs. men aged 55-64) if those subgroups are underrepresented in the dataset.

When there are not enough respondents in a given subgroup to achieve statistical power, descriptive statistics (e.g. percentages and averages) can still be computed and reported, with the caveat that there are at least 10 respondents in the subgroup (Frederick, 2021). In analysing RUIS data, it was not always possible to have 10 respondents in a subgroup, and so the bar was lowered to five. For example, only three respondents in one case study were unemployed/on sick leave, and so that subgroup was excluded from analysis.

This has wider implications for collecting data on diversity in active travel. Typical methods of data collection, like pedestrian and cycle counters and RUIS, only capture who is already using the path. Even where intersectional data is collected, the homogeneity of the sample may make it impossible to identify trends among subgroups. It seems more important but more challenging to identify who is not using the path. This suggests the need to employ creative and participatory methods of data collection at a local and neighbourhood level that target underrepresented groups, such as doing walk-alongs or ride-alongs with people from ethnic minority backgrounds.

In addition, it would be good practice to match respondents against their proportion in the local area and/or wider society (e.g. regional or national level) when analysing data from counters and RUIS to spot who is missing. Investing the time, resources and skills needed for robust data collection, involving both quantitative and qualitative methods, is important to understand how equitable current investments are and future areas for improvement.

Engagement

Across all case studies, stakeholders interviewed emphasised the need for meaningful and in-depth community engagement, so that local people can have a sense of ownership over new active travel infrastructure in their area. However, in two case studies, stakeholders expressed disappointment about the community engagement process. Community engagement in one case study was described as a rushed tick-the-box exercise and a missed opportunity to engage more thoroughly with residents experiencing poverty to ensure that new active travel infrastructure would be relevant to them. Meanwhile, in the other case study, local business owners felt there needed to be more open and ongoing lines of

communication between the active travel project delivery team and local people, including business owners.

The community engagement appeared to be most effective in the island case study, Project 1. Part of this is because island residents describe the island as a close-knit community. Another reason is that members of the voluntary group that spearheaded the active travel project were already known by and active in the local community. They secured a sponsorship from a local distillery early on and worked closely with them, a local church and a local primary school to ensure that local people were involved every step of the way. According to members of the voluntary group, engaging with the local church and school enabled women, older people and children to contribute their views.

Infrastructure

In all three case studies, active travel infrastructure was primarily conceptualised as physical infrastructure, the walking, wheeling and cycling paths themselves. Across case studies, stakeholders described the active travel paths as well-built, wide enough and smoothly surfaced. However, it was noted that the active travel project on the island could benefit from more circular routes along the coast to enable more scenic leisure routes, rather than just a direct line connecting two villages. Similarly, there was high demand for the active travel link in Project 2, which connects a town and a development site, to be extended and facilitate journeys to a wider range of services and destinations, rather than just the pump track.

Social infrastructure for cycling, in the form of cycling education and outreach programmes, is necessary to help underrepresented groups overcome barriers to cycling and therefore increase diversity in cycling. However, the delivery of social infrastructure for cycling has been largely left to local charities that struggle with long-term funding. There is a higher need for programmes that promote cycling in places experiencing high levels of deprivation, given the greater barriers to cycling and higher potential for cycling to help reduce people's transport costs. Stakeholders interviewed in Project 2 reported that many local people spend a high share of their income on taxis due to absent or unreliable public transport and lack of access to cycles or participation in cycling. They felt this highlighted a need for more cycling education and support programmes.

Health and safety

Safety has been largely considered from a road safety perspective. All three case studies provide traffic-free alternatives to busy A roads, therefore creating a safer and more comfortable environment for walking, wheeling and cycling for people of all backgrounds. Traffic-free routes reduce road injuries and collisions, as well as exposure to traffic-related air

pollution. However, there could have been more attention to gendered perceptions and experiences of personal safety in public space. While issues around lighting and women's and girls' safety were raised in all case studies, it is unclear how well they have been addressed.

In Project 1, for example, the active travel path is only lit at the beginning and end of the path because it was felt that there were no safety issues and local people did not want light pollution in the countryside. Lighting was added at certain points of the path in Project 3 in response to concerns raised by disabled people who participated in an accessibility audit, but there is no lighting at night (after 11pm or midnight). Stakeholders interviewed in both sites do not anticipate further needs for lighting, but it is unclear whether or to what extent local women and girls and diverse groups were asked about additional lighting needs. Meanwhile, in Project 2, the Council were aware of issues around women's and girls' safety. They installed solar studs, which are cheaper, instead of more permanent overhead lighting. Concerns around inadequate lighting and women's safety persist.

Accessibility

Accessibility was a key consideration in the design and delivery of all three active travel paths, which stakeholders attributed to Sustrans' requirement that the paths be accessible for all ages and abilities. Only one case study conducted an accessibility audit, which happened when the project was completed and before it officially opened to the public. Two wheelchair users participated in the audit and praised the project. They also pointed out several areas for improvement, which the delivery team acted on. A stakeholder who worked on that project admitted that accessibility and inclusive design issues were relatively new to him, and it was a valuable learning experience to conduct the accessibility audit.

Project 1 was similarly built with accessibility in mind, particularly to enable access to a war memorial along the path, and further improvements are underway. The distillery has volunteered to install benches on the path so that there are places for people to stop, sit and rest. Benches have been donated by local people who are working with the distillery to decide where they should be placed. Accessibility audits are good practice and, in this case, can help identify the number, frequency and location of benches on active travel paths. They should be conducted more routinely before and after active travel projects are completed.

Affordability

All three case studies show that there is high potential of active travel infrastructure to reduce transport costs for people with low or no incomes. In Project 1, distillery staff, some of whom are shift workers, have used the active travel path for their work commutes. Stakeholders

also felt the path could potentially serve as a more affordable way for people working in the tourism industry to commute. To maximise this potential, the voluntary group can engage with low wage workers and people on lower incomes for future active travel projects.

Given the high levels of deprivation and poorer health outcomes in the town where Project 2 is, relative to national averages, there is huge potential for the active travel link to help local people reduce travel time and costs, as well as increase physical activity levels. However, local residents do not feel the path is practical for everyday journeys because in its current stage, the path does not lead to many services or shops. The cost of purchasing a cycle, as well as perceptions that cycling is elitist and not for 'people like me,' are likely to be more significant barriers for local people. This underscores the need for more social infrastructure for cycling, like a cycle lending library that provides low- or no-cost access to cycles.

Considerations of affordability are especially relevant for Projects 2 and 3, as they are situated within wider regeneration projects. Regeneration projects raise questions around who will benefit from new infrastructure, housing and amenities, and at whose expense. In urban areas, increasing evidence highlights the role of active travel infrastructure along with other green space projects in catalysing gentrification by increasing property values in the immediate area, therefore displacing poorer residents to attract more affluent ones (Anguelovski et al., 2019; Black and Richards, 2020; Hoffman, 2016; Stehlin, 2019).

As such, Projects 2 and 3 raise critical questions around for whom is new active travel infrastructure? What assurances are in place so that the benefits of new active travel infrastructure will be distributed fairly and serve the needs of more vulnerable groups? How can new active travel projects be inclusive and support local economic development? This research highlights how gender budgeting is a useful tool to address these issues.

Monitoring and evaluation

The absence of sex-disaggregated data and other intersectional data is a barrier to monitoring the gender impacts of active travel paths. There was no baseline and follow-up monitoring data for Project 1. While there was baseline data for Project 3 and both baseline and follow-up monitoring data for Project 2, the small and relatively homogenous sample of RUIS respondents made it difficult to do any meaningful intersectional analysis. This has three implications for future data collection and monitoring and evaluation processes.

Firstly, as previously mentioned, it is important to invest the necessary time, resources and skills to not only collect intersectional data, but also to analyse it in a meaningful way to understand differences among different groups. Funders must recognise and support this need. Secondly, interviews with stakeholders across case studies suggest a need for the

monitoring and evaluation process to include more community engagement, so that local people can provide input on whether, how and to what extent the paths serve their needs and how they can be improved. This can include partnerships local community organisations to carry out ride-along's and walk-along's with local people, for example.

Finally, EQIAs should be reviewed as part of the monitoring and evaluation process to check for unintended impacts, both positive and negative. Evaluation evidence should also inform EQIAs. While community groups are unlikely to conduct formal EQIAs, all public bodies receiving active travel funding have a duty under the Public Sector Equality Duty to conduct these assessments, proportionate to the scale of the funding. Where assessments have not be conducted, the monitoring and evaluation should consider assumptions about equalities impacts of the project made at the outset and unintended impacts that may have come about, along with gender safety audits and accessibility audits.

Recommendations

The following are nine recommendations for Transport Scotland, Sustrans, local authorities, relevant public bodies and community groups to work towards the implementation of gender budgeting in future Places for Everyone and other active travel investments:

Establish an explicit gender equality goal.

Sustrans and Transport Scotland should discuss, agree and establish a clear gender equality goal to explain why it is important to tackle gender and other inequalities in active travel. This would build on the Active Travel Framework's strategic objective to reduce inequalities by establishing gender equality as a strategic priority and to raise ambition within the organisation and among partners. As the funder and the administrator of funding, Transport Scotland and Sustrans have the power to put gender on the agenda and influence how local authorities and community groups approach active travel funding applications and projects.

For example, Sustrans and Transport Scotland could also consider a goal to dedicate a certain proportion of active travel infrastructure investment to care-related active travel routes (e.g. to schools, hospitals, GPs, public services, shopping areas), so that new active travel infrastructure can better serve women's travel needs. This could build on existing Transport Scotland projects that funded safer routes to school and NHS workplace projects.

Require funding applicants to address how their project will contribute to this gender equality goal.

Sustrans appears to have been successful in making funding applicants prioritise accessibility issues. It therefore seems plausible that if Sustrans were to require funding applicants to discuss how active travel projects will contribute to gender equality in active travel and broader society, local authorities and community groups would simply have to dedicate time and resources to consider these issues, which would work alongside the existing Active Travel Framework. For example, if the gender equality goal were gender parity in cycling in Scottish cities, then funding applicants would have to discuss how their project would get more women and girls cycling.

Increase capacity to apply gender expertise and support community groups and local authorities applying for funding to do the same.

Gender expertise is both a pre-condition for and essential component of gender budgeting. Sustrans and Transport Scotland should assess current levels of gender expertise within Sustrans, Transport Scotland and Scottish local authorities. This includes identifying gaps in gender expertise and barriers to applying gender expertise to improve policy outcomes. This understanding can inform initiatives to build capacity for gender expertise, for instance through investing in intersectional data collection and analysis; increased training, particularly for staff managing active travel funding; recruiting people with gender expertise; and partnering with expert stakeholder groups, such as the Scottish Women's Budget Group.

If funding applicants will be required to address how their active travel project will contribute to gender equality, it is important that Sustrans and/or Transport Scotland can support applicants to develop gender expertise, again, either through training or partnerships with external experts. Supporting community groups to develop gender expertise could involve a short video output, paper guide or introductory session to gender budgeting to alert them to key questions to consider when developing active travel projects. Local authorities should have internal expertise that should be integrated into active travel projects to consider equalities issues. Teams from local authorities working on bids should also be encouraged to access training either in-house or through support from Sustrans and/or Transport Scotland. Expert stakeholder groups, like the Scottish Women's Budget Group, can also be a resource to draw on.

Use the framework for gender budgeting in active travel infrastructure investment.

The six criteria and questions for consideration set out in the framework should sit alongside the Active Travel Outcomes Framework and serve as a starting point to guide discussion around gender equal active travel funding decisions. It can be used as an internal document to review funding applications. It can also be used to structure discussions with shortlisted or successful applicants to ensure that considerations around gender equality and inclusion are built into the project from the beginning. The gender budgeting framework is a living document that can and should evolve as it gets used more routinely, so that it can be most useful to practitioners and decision-makers.

Collect and analyse intersectional data.

Successful implementation of gender budgeting requires sex-disaggregated data at a minimum and if/where possible, data disaggregated by other sociodemographic categories, like socioeconomic status, ethnicity, age, disability, gender identity and sexual orientation. As such, it is important to invest the necessary time, skills and resources to collect and analyse intersectional data to understand how different groups of people are using or not using active travel infrastructure. Intersectional data is currently collected in the Route User Intercept Surveys (RUIS) but is not routinely analysed.

As a starting point, there should be an analysis of demographic composition of the local area to identify any vulnerable groups that could benefit more from active travel and/or underrepresented groups in active travel. This would help define exactly which groups to focus data collection and analysis on, as it is likely that not every single group would be targeted or relevant in every area or project. The aim of intersectional data collection and analysis should be removing obstacles to active travel for these vulnerable or underrepresented groups and actively engaging with them to encourage more active travel.

Conduct Equality Impact Assessments, gender safety audits and accessibility audits before and after active travel projects are completed.

Equality Impact Assessments, gender safety audits and accessibility audits are participatory ways to understand how diverse groups experience public space and active travel paths. They engage diverse groups of people who may be typically underrepresented in community engagement processes, like women and girls, disabled people, older people and people from ethnic minority backgrounds, and amplify their voices and experiences in data collection, design and decision-making processes. In addition to being a proactive way to ensure that

new active travel infrastructure is safe, accessible and inclusive, the process of doing and the insights yielded from Equality Impact Assessments, gender safety audits and accessibility audits can help Transport Scotland and Sustrans continue to develop and apply gender expertise.

Partner with community organisations to do meaningful engagement with local people.

This recommendation echoes one of the five outcomes in the Active Travel Outcomes Framework – delivery of walking, cycling and wheeling is promoted and supported by a range of partners. It is important to partner with local organisations that are already known and trusted by, as well as embedded in communities where active travel infrastructure will be built. This will enable engagement with a wider range of people, particularly those who are underrepresented in typical engagement processes. Partnerships with community organisations can also involve creative and mobile methods of engagement, such as walk-along's and ride-along's, which can also provide valuable data on people's experiences of walking, wheeling and cycling. Partnerships with local Citizens Advice Bureaus and other local service providers can be a way to explore the potential of using active travel infrastructure to bring mobile services to people.

Develop a strategy to ensure inclusive community engagement with diverse groups.

Ideally, the decision-making, design and delivery team for active travel projects should be diverse, with more women, LGBTQIA people, people from ethnic minority backgrounds and disabled people represented. However, this may be difficult and take time to achieve. In the meantime, Sustrans can require funding applicants to describe the diversity of the team applying for funding and leading active travel projects and discuss their strategy to ensure that diverse perspectives are considered. This may include, for example, partnerships with local women's and equalities organisations.

Fund both physical and social infrastructure for cycling.

Social infrastructure for cycling – education, outreach and peer support programmes – complements physical infrastructure for cycling and plays a vital role in encouraging more diverse people to cycle. Sustrans and Transport Scotland should commit active travel funding for both physical and social infrastructure, given that the Active Travel Framework acknowledges the need for educational and behaviour change programmes alongside physical infrastructure. This would make local authorities and community groups applying for

funding to consider the types of cycle programmes they will provide and partner organisations that they will need to deliver them.

Appendix I: Case Study 1

This scheme opened in October 2021 and offers a safe 2.54-kilometre active travel path between two villages on an island. Previously, the only link between the two villages was a busy 60mph A road heavily used by HGVs, without any walking, wheeling, or cycling facilities. One village is a picturesque village that attracts a lot of tourism. The other village has a distillery, which is the largest private employer on the island, with over 70 employees. A local network of volunteers advocating for safe access to the countryside, led the fundraising for and design/planning of the project.

Local context

The total population of the island is around 3,000 and tens of thousands of tourists come every year. The top sources of economic activity are agriculture, the whisky industry, fishing and tourism. Relative to other inhabited islands in Scotland, a higher proportion of people on this island are employed in the manufacturing sector, which reflects the significance of the whisky industry (National Records of Scotland, 2015). The island's geographic profile and population dispersion can make connectivity and access to key services challenging.

Depopulation is an issue across Scotland's islands, largely driven by the lack of employment, training and higher education opportunities, childcare options that fit with residents' working patterns, as well as affordable housing (Scottish Government, 2021b). The cost of transport on Scottish islands is much higher, relative to income, compared to the rest of Scotland and public transport is often inadequate to meet people's needs (Jacobs and Aecom, 2021). Just over a third of island residents agree that their local roads, paths and pavements are in good condition, and a quarter of island residents agree that their local roads and paths are safe for cycling, and safe and accessible for wheelchairs and prams (Scottish Government, 2021b).

Data sources

Baseline data provided by Sustrans included:

— Volume, speed and class of vehicles on the A road, March 2019;

— Pedestrian and cyclist counts (average daily number, highest daily number, maximum number per hour) on the A road, 23-28, March 2019.

As this data was not disaggregated by sex or other sociodemographic characteristics, it was of limited use for gender analysis. The follow-up monitoring data had not yet been analysed at the time of this research.

Three local stakeholders, all white men who were involved to various degrees in designing and delivering the active travel project, were interviewed.

Engagement

A group of 6-8 retired male professionals led the community engagement, fundraising and design process for the active travel project. They started the community engagement process by sharing proposed plans in the fortnightly local newspaper and inviting feedback. The community engagement was 'quite extensive a few years ago, with public meetings, visiting schools and talking to people en route, visiting shops and so on' (interview, 19/07/2022). This also involved working with two local walking groups, one for the elderly, and another led by the church.

Primary school children in one of the villages were actively engaged, as they made posters about the path, suggested the name for the path and were at the opening ceremony. This was felt to be important, so that children would be interested in and have a sense of ownership over the path:

> 'We made sure that on the day of the opening ceremonies the local primary school kids came, they walked past, they cut the ribbon and then they were the first people to officially walk the path. And because you can then take an interest in it, invested interest in the path and yeah, you know, they're the next generation who will hopefully, you know, adopt the path' (interview, 28/07/2022).

The community engagement was very thorough, largely because the members of the voluntary group have more free time, are very active in community affairs and understand the importance of engaging with local people. They felt that local people:

> 'bring real value to the group because of their local knowledge, and it helps networking with the local population since they know the local topography and they can help the planners who are essentially mainland people who come over to take drone views and so on. We're building the plans and the detailed design and construction plans. Local people are very important' (interview, 19/07/2022).

Another contributing factor to the thorough community engagement was that the distillery sponsored the project early on because of its perceived benefit to the distillery and the local community. As one stakeholder explained:

> 'So, I myself, along with some other locals, had been discussing the opportunity or the potential opportunity to do something to link up the two villages. We knew

> there's a lot of people walking on the road and people cycling between the villages and because the formation of the road is, you know, deemed as dangerous, you know, people are walking when it's either dark or rounding the corners. And so, I live in the village…I work for the distillery, so it was obviously a project close to the village I live in and it was something that was helping the distillery as well because we get a lot of visitors…they'll often walk or cycle along to the distillery to visit. So, from early on, the distillery got behind it and supported it' (interview, 28/07/2022).

This stakeholder described the project as a community-led project in an already closely knit community, which made it relatively easy to engage with local people and get them to 'buy into it and feel a sense of ownership of the path' (interview, 28/07/2022). The voluntary group 'keep local people informed and kept local people involved and had public sessions in the village hall' (interview, 26/07/2022) and have a good working relationship with Council.

One member of the group described it as:

> '...interested, retired professionals who got more time, and all the time and effort is voluntary. And we all bring different skills and experience to the fore. We have two solicitors, distillery manager, community centre manager, a retired naval captain and an IT consultant. We don't have any ladies on… So, it's a matter of just a small group punching way above its weight to get things done' (interview, 19/07/2022).

The tremendous efforts and success of the group in increasing active travel infrastructure on the island are admirable. At the same time, it is important to note that the voluntary group represent a more privileged cohort of residents who have the free time, knowledge and skills to lead active travel projects on the island. The lack of diversity (in terms of age, gender, ethnicity, employment status and socioeconomic status) within the group suggests the need for a strategy to ensure diverse perspectives are considered.

For example, a member of the group said, 'gender equality has not been a problem at all. We haven't recognised it, but it's not been ever flagged up as a problem for the community. It's a very friendly community, you know' (interview, 19/07/2022). While a group of 6-8 men may feel that gender equality is not a problem, it is possible that women on the island may feel differently. This is why a strategy for engagement with diverse groups is important, to help ensure that diverse perspectives are considered.

Engagement with diverse groups may be particularly challenging on islands. For instance, island residents may not feel safe or supported to disclose their gender identity within a small

community. A stakeholder said, ‘We have had contact with a transgender person to ask their opinion about it [the path]. Uh, I just welcomed it. We didn’t take it any further. They said it’s great, just like anybody else, that it’s good it's there’ (interview, 19/07/2022). Given the dearth of research on LGBTQIA people’s active travel behaviour and experiences, it is likely that LGBTQIA people have different experiences and needs that are not met by current active travel infrastructure (Lam, 2022; McCullough et al., 2019). Those leading active travel projects should be open to this possibility and consider different groups’ needs.

It is unknown if an EQIA had been conducted at any stage of the project. There was no duty to conduct an EQIA because the project was led by a community group, but a stakeholder said it was not necessary because the path is:

> ‘...all inclusive. It’s been a tremendous success. And it’s evidenced by the people, the number of people using it…Since it’s been completed, it’s extremely well used both by locals and visitors alike. When I say locals and visitors, I mean, people of all ages and gender and ability. So, yeah, it’s opened there for all and is used by all, by all’ (interview, 26/07/2022).

While it is great that many people use the path, it may not necessarily be the case that there is a diverse range of people walking, wheeling and cycling. Collecting sex- and other disaggregated data on path users would be an effective way to understand not just the volumes of people using the path, but also the types of people using the path. Funders can make collecting diversity data and conducting EQIAs explicit requirements for projects led by community groups and support them to do so.

Infrastructure

Stakeholders interviewed were confident that the project serves tourists and local people alike. Tourists benefit from a traffic-free active travel route and more local people use the path for leisure and other reasons. The distillery has seen more footfall since the path has opened. One stakeholder said:

> ‘Because I stay local, I can see that the path is well used. You know, there’s a lot of local people either walking their dogs, or when I walk my dog, I pass a lot of people walking the dog. You see children cycling between the villages. And you see people commuting to work. And at this time of year, there’s a lot of tourists using the path every day, walking back and forth between the villages’ (interview, 28/07/2022).

There have been more people using the path to walk to and from the church and children use it to get to and from school. Previously, the village primary school had to do a risk assessment before they could take children out along the road and down to the shore, but the active travel path enables them to get out and walk safely without having to do a risk assessment. One stakeholder said:

> 'What is a great delight to me is you do see local people, all ages, grandmas, mums and children now going out as groups and using the paths walking. And you also see young ones on the bicycle going in a family group now, before they couldn't do that. So that was a great help during COVID because people have easy access to getting out for a safe walk' (interview, 19/07/2022).

Another stakeholder suspected that there are a sizeable number of commuting journeys:

> 'I'm aware that people who do use it go to work. I mean, the employers in the area… there's a distillery, so a number of people cycle to work using that path whereas before they would have used their car or something. Probably that's the biggest use, for people commuting to work' (interview, 26/07/2022).

Some staff at distillery use the path for their work commutes – 'There is a number of staff on our cycle to work scheme, they obviously will come along that route. We also know people who will walk to work and certainly in the summer months when the days are longer and the weather's more pleasant, it's easier to walk' (interview, 28/07/2022). Since the path has opened, the distillery has been helping to solicit donations for benches and install them along the path, so that people can stop and sit down at various points:

> 'Since the path's been completed, there's been a number of people wanting to, saying we need like benches, picnic benches or just, you know, seating benches at a viewpoint and then on the path to try and allow, you know, rest points. And we worked with [the voluntary group] to try and work on a plan that we would only use like recyclable plastic benches and stuff that was low maintenance and putting them in certain places. A lot of the benches were delivered to the distillery and then we distribute them onto the path and set them up and look after them… This is again in consultation with some of the people who were donating it [the benches], so consultation with them where they thought they could go and with people thinking where the ideal spot would be for the benches' (interview, 28/07/2022).

Benches are a welcome addition and it is impressive that the distillery were able to mobilise successfully and quickly to respond to requests for benches. The only suggestion to improve the path was to create more circular routes:

> '…obviously the path gets you from one village to the next but if you're walking you don't always need to go from one to the next. So, if it was almost like a circular route right around the coast, you know, so you could walk it, but it would also then link up back around to the coastline or something that would be something that would benefit people, you know, so it would be more of a circular route rather than just a straight line' (interview, 28/07/2022).

This is an interesting point that echoes critiques of radial transport planning in cities, which facilitate longer and linear journeys from suburbs into the city centre while ignoring local, orbital journeys. It also highlights a need for active travel infrastructure to be more joined up and function as a holistic network. Part of the impetus for the active travel path was to increase active travel on the north side of the island, especially as there is an active travel path on the south side of the island. Those two flagship projects exist in isolation, as they are not joined up and there are no other major active travel routes on the island.

Health and Safety

The distillery introduced a walking challenge to promote staff health and wellbeing during the COVID-19 pandemic, which has encouraged more distillery workers to walk along the path for leisure or exercise:

> 'We knew people were working from home and people were not really doing as much exercise because COVID, so we implemented a kind of walking challenge where we were encouraging staff to go and hit milestones, to do X amount of miles a month and if they reached these milestones we'd donate money to charity, so it was starting to get people more active and we knew a lot of staff were taking their lunch breaks and going to walk along the path, taking the path to get a leisurely walk at lunchtime and stuff' (interview, 28/07/2022).

One of the biggest achievements of the project has been increasing road safety – 'Rather than people walking on the main carriageway between the two villages that make up the road, so that in itself was good safety-wise… Because of the path, people are walking more, it's good for wellbeing and people's health' (interview, 26/07/2022). The road safety benefits are important, it is also important to take into account how feelings of personal safety can vary for different groups.

Under a quarter of island residents in this local authority area report feeling safe using their local paths (Scottish Government, 2021b). This raises questions around how safe women and girls feel on this active travel path. A stakeholder admitted that the path is not well lit:

> ‘At the start and the end of the path, you know, where you start and where you finish is lit, but the middle of the path isn’t, there’s no street lighting. But I think the locals prefer it that way because, you know, you don’t really want light pollution. You know, along that way, if anybody was to use it at night, they would probably just use a torch, a headtorch, and it’d be fine. I’ve done it myself, you know, I’d walk it at night with the dog and I just put a headtorch on and it’s absolutely fine’ (interview, 28/07/2022).

Concerns around light pollution in the countryside may be valid, but some people, like women and girls, disabled people and tourists who are unfamiliar with the area, may feel that more lighting is necessary. One stakeholder reflected that there were lengthy discussions around lighting:

> ‘There has been talk about illuminating the path for safety reasons, particularly around some of the villages for female safety, but we’re in a very rural area, there is no real problem. We didn’t feel that it was appropriate to put in illumination in virgin countryside as it were… This subject has been raised once since 2013. And we had to address that quite a bit for Sustrans. And we also sought advice from a transgender person I mentioned… But we haven’t, we’re not ready to build that on that path, and if we did have to do it, I would have to find funding to do it… But we’re very rural. So, these paths traverse virgin agricultural land. So, we’ve just got open fields…It is not a city or town or anything like that’ (interview, 19/07/2022).

It is unclear whether and the extent to which women and girls were included in discussions and decisions around lighting and safety. Unlit paths in any setting – urban or rural – can make women and girls feel less safe, particularly when traveling alone at night or in the winter months when there are fewer daylight hours. It would be interesting to find out more about how concerns around lighting and women’s safety were addressed or revisited between when they were first raised in 2013 and when the path opened in 2021.

A stakeholder from the local authority was similarly unaware of any issues around women’s safety and stressed that the place ‘…is an island and people, including children, are used to being out on their own after dark and yeah, there’s no, absolutely no safety issues whatsoever’ (interview, 26/07/2022). There seemed to be a widespread perception among the white male stakeholders interviewed that an active travel path in ‘virgin agricultural land’

on an island is inherently safer. This raises questions around whether the path meets the personal safety needs of women and girls.

Gendered perceptions and experiences of safety, as well as other dimensions of personal safety, is an area that active travel planners and policymakers should try to better understand and address in their work. One stakeholder said the voluntary group 'had to address that [lighting and accessibility] quite a bit for Sustrans' (interview, 19/07/2022), although it is unclear what subsequent actions were undertaken. However, this implies that as the funder, Sustrans can place higher expectations and requirements on funding applicants to consider issues around gender and safety.

Accessibility

Accessibility was a key part of the design and planning of the project because the voluntary group had to comply with Sustrans' requirements:

> 'Basically, we were under the guidance of Sustrans. They have very advanced planning demands, regulations for, if you want a dual-purpose pathway and you want funding, you've got to stick to their rules. It has to be wheelchair accessible, so they're built to Sustrans specifications' (interview, 19/07/2022).

Stakeholders were confident that the path is easily accessible for disabled people because the path is well-signed and smoothly surfaced:

> 'It's very well constructed, it's all tarmacked, it's very easy and even crossing the road, it's well marked out and there's warning signs for drivers approaching that there's pedestrians crossing. So, it's well signposted, I think all the safety and accessibility procedures are in place… It's more or less perfect' (interview, 26/07/2022).

Another stakeholder recalled specific efforts made to ensure the war memorial along the path was accessible, especially for the elderly and disabled people who visited the memorial at the remembrance service in November:

> 'It was difficult before the path was built for elderly people to get to the war memorial and on the service day. So, they generally had to stand on the road, on the main road, because there was no access and there was no steps, so it wasn't safe. So that was one of the key features in designing the path, was to make steps and a ramp for wheelchairs so that people can access the war memorial all year round' (interview, 28/07/2022).

He also mentioned that there were bollards on the path to prevent vehicles from driving through, which was a key safety feature, while enabling wheelchairs, cycles and prams to get through. It was observed that disabled people with mobility scooters 'can go quite happily [on the path], whereas they couldn't go along the roads,' and they are 'more active than they've been for years because they've got a safe, safe path to go along. And it's good to see them out and about' (interview, 19/07/2022).

The voluntary group seem to have been made aware that visually impaired people might struggle with access. As a stakeholder explained, 'people with visual problems, you know, can't see the paths and signs and roads and all that, that's just been drawn to my attention. But we haven't had anybody saying there's a problem because we can't see or whatever' (interview, 19/07/2022).

This example demonstrates the relevance of conducting EQIAs before projects are built. EQIAs can help identify and prevent problems before they arise. This can benefit more vulnerable groups by making them feel recognised because they would otherwise have to speak up about barriers they face. Sometimes people do not speak up because they may not feel safe or supported to disclose certain issues and/or they fear they may not be listened to.

Affordability

The project has supported the local economy by increasing tourism. Tourist destinations, like the distillery and a museum, have experienced increased footfall since the path opened. A local resident apparently put camping pods on his land because the path guides more people in that direction.

It is unclear whether or to what extent the path has benefited people in low-income households – 'All I can say is that the people who use the countryside, for rambling or part of the badminton club or the bowling club or whatever it is. Perhaps the lower socioeconomic groups of people do not use those things anyway' (interview, 19/07/2022).

It is also unclear whether the path has reduced transport costs or travel time for distillery workers or other seasonal workers in the tourism industry. To encourage more staff to take advantage of the cycle to work scheme and to promote cycling as an affordable mode of transport, the distillery partnered with a local organisation that did free cycle repair workshops once a year at the distillery:

> 'We haven't done it for two years because COVID for obvious reasons, but they were looking to basically try and encourage people to get cycling, so they would hold the workshop every year where people would take their bikes and get a

> health check, MOT, and part of that was a demonstration, like e-bikes and stuff like that… It's potentially something to be picked up again because it was a good way to get people to think about cycling to work, if they could get their bike serviced, you know' (interview, 28/07/2022).

The cycle to work scheme and free cycle maintenance and/or repair are both ways to reduce cost as a barrier to cycling for distillery workers. However, the cycle to work scheme excludes second-hand cycles that may be more affordable. It is also unclear how many other local employers offer the cycle to work scheme.

The distillery started gathering data on staff commutes two or three years ago, but there are no notable trends in terms of gender, age and commuting patterns. This could be because commuting data is not disaggregated by sex or other sociodemographic characteristics. It could also be because the distillery might not have the capacity or resources to analyse any disaggregated data they collect. A representative from the distillery explained some trends they saw in their staff commuting patterns:

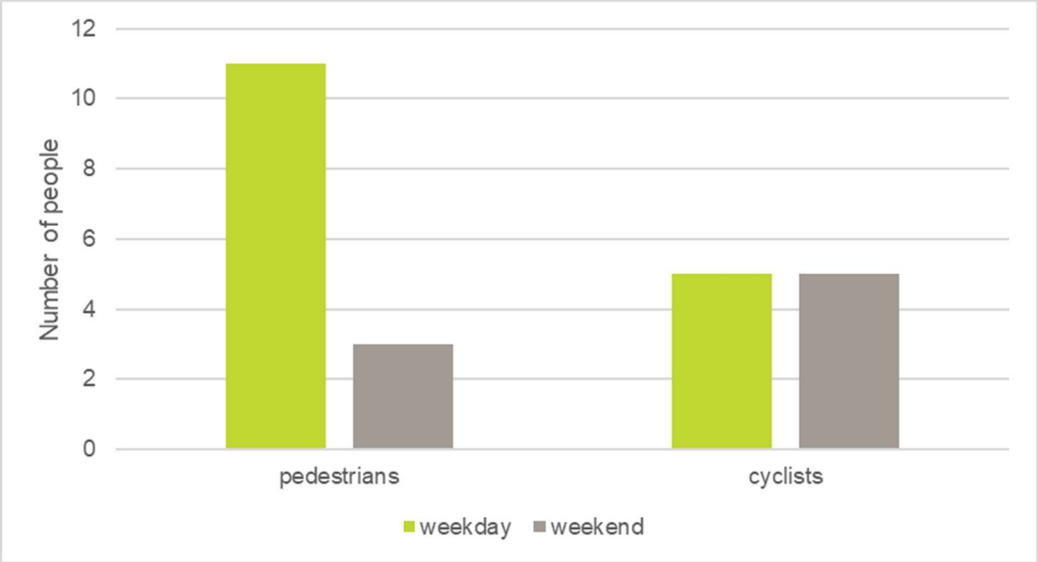
> 'The obvious trends are the people who are driving are people who are farther away and maybe living in more remote places or maybe have children to collect. And I think, you know, people with less commitments where they don't have children, or they have the time to walk to work and walk home from work or they're cycling or cycle to work and stuff. We've had an uptake in the cycle to work scheme, so we've seen more people, you know, the uptick in people purchasing bikes and cycling to work… we have a number of staff who bought e-bikes in the cycle to work scheme. Obviously, the costs of electric bike is more expensive, but with the tax break it is actually, a bit more manageable. So, you know, we have maybe four or five people who bought e-bikes which seem to be quite effective' (interview, 28/07/2022).

The recognition that childcare can be a barrier to active travel reflects a need for transport systems to better serve those with caring responsibilities.

Monitoring and Evaluation

The absence of sex- and other disaggregated baseline data, as well as follow-up monitoring data hindered gender analysis in this case study. Baseline data from Sustrans shows that the highest daily total of pedestrians was 19 and the highest daily total of cyclists was 10. Figure 1, below, illustrates the average daily pedestrians and cyclists on weekdays and weekends in March 2019.

Figure 1: Average daily pedestrians and cyclists



However, this sample is very small and does not give an indication of who exactly walked and cycled. Ideally, there would have been a larger sample and sex-disaggregated data, at a minimum, to inform the monitoring and evaluation process.

In addition, conducting an accessibility audit and gender safety audits should be part of the monitoring and evaluation process. Since benches are a relatively new addition to the path, the number and placement of benches should be monitored to ensure the path can be even more accessible and inclusive, with enough places to stop and rest along the way. The issue of lighting and women's and girls' safety should be revisited, especially because the voluntary group could likely mobilise quickly and effectively to install more lighting if it were requested, as they did with benches.

Finally, there is an opportunity to partner with the distillery and other local businesses to evaluate whether, how and to what extent the path meets the needs of their workers. The distillery is already trying to decarbonise their staff commutes, and the data they have collected on staff commutes could be useful in analysing how well the path serves workers on their daily commutes or lunchtime walks.

Conclusion

One of the strengths of Case Study 1 is how extensive the community engagement has been and the high levels of support from local people. This reflects how known and trusted the

voluntary group is in the local area. At the same time, this is a good case study of the delivery of active travel projects in the 'hollow state,' as the voluntary groups exemplifies a highly successful and mobilised cohort of 'active citizens' to deliver active travel projects in conjunction with local authorities and other organisations (Aldred, 2012). Since the members are a homogenous group of older, middle-class, able-bodied white men, they should develop a strategy to ensure that diverse perspectives will be incorporated in future active travel projects.

Active travel projects delivered in the hollow state also encounter a challenge when it comes to maintenance of paths after completion. In this case, the distillery volunteered to maintain the path by committing a certain number of staff hours to do 'just simple maintenance, light maintenance, like weeding and looking after and keeping it tidy, if there's any, like gates and bridges that maybe need painting or repair' (interview, 28/07/2022). The distillery has also overseen the collection and installation of benches along the path. It is fortunate that there is a dedicated group of local people who are very much invested in the path. However, this may not necessarily be the case across all Scottish islands. Again, when communities are left to fill in the gaps in transport or other public service provision, the results can be patchy, with success largely dependent on the presence of a privileged cohort.

Appendix II: Case Study 2

Project 2 is a key piece of active travel infrastructure between a town and a significant regeneration site. The first phase of the active travel link has been completed, displacing journeys from a busy A road and connecting communities with several local destinations, including a community centre and a pump track. It includes a new multi-user safe and functional path through the woods. The second phase of the link was planned to extend down towards the regeneration site but has been indefinitely postponed.

Local context

The town has a population of about 30,000 and has the highest rates of adults with long-term health conditions in the local authority area. 71% of the town's population live within the first or second most deprived quintiles in Scotland. The active travel link traverses a part of the town that has the highest proportion of income and employment deprived people, and parts of that area rank within the 15% most deprived areas of Scotland. This area also has the highest proportions of young mothers (aged 19 and under), alcohol-related hospital stays and multiple emergency hospitalisations in the town.

Meanwhile, the regeneration site is 1,200 acres and previously was one of the largest derelict sites in Europe. The development started in 2006 and to date there are approximately 1,000 new homes, a sports facility, a college, a pub, as well as a new park. Future phases of development will include more housing, schools, parks, shops and community spaces.

The local authority area has among the highest populations of all 32 local authority areas in Scotland and a rapidly growing ageing population. There are more women than men in the area, consistent with Scotland overall. However, life expectancy for women and men in the council area is lower than the Scotland average (79.2 vs. 81 and 74.5 vs. 76.8, respectively). There is also a smaller proportion of people in managerial and professional occupations, compared to the Scotland average (36% vs. 48%, respectively) (Nomis, n.d.).

Data sources

Baseline data provided by Sustrans included:

— Annual Usage Estimate, 2019;

— Route User Intercept Survey (RUIS) from April/May 2019;

— Travel Network Survey, 2019.

Follow-up monitoring data provided by Sustrans included:

— Annual Usage Estimate, 2022;

— Route User Intercept Survey (RUIS) from April 2022;

— Travel Network Survey, 2022.

— Summary of interviews with 12 stakeholders (nine local residents and three local people who worked on the project);

— Transcripts of interviews with three local people who worked on the project.

Four local stakeholders were interviewed, three white men and a white woman.

Engagement

All three stakeholders who were involved in the project interviewed by Sustrans emphasised the importance of active and meaningful community engagement, with one stakeholder saying:

> '…it's part of my job then to make sure I'm doing what I can to speak to local people about it and get people involved, which is something I've seen in the past maybe doesn't necessarily happen, and I do think it is very important because then that means that if local community are involved in planning it then it's far more likely to be used and not abused, and they'll feel a bit of ownership over it as well.'

Despite the consensus that community engagement is essential, most residents do not feel there has been quality and in-depth engagement. One of the local stakeholders who worked on the project told Sustrans that there was an active community engagement process between 2016-2018, largely through the Community Council. Meanwhile, residents that Sustrans interviewed felt that there was very little public engagement around the path and suggested working more closely with local charities – 'Use the people that are already there,…who are already out there dealing with the community groups.'

A stakeholder described local government consultation as 'usually done as a tick the box exercise' that often fails to make a difference for local people (interview, 27/07/2022). He continued, 'I think the last two years, two and a half years, illustrated that online only consultation is great. But we've also got to go to, you know, seldom heard voices and seldom heard voices usually tend to be the elderly, disabled, BAME, LGBTQ+ and women' (interview, 27/07/2022). Most of the Council's online consultation during the pandemic involved Survey Monkey, Facebook or Twitter. He felt that better approach would be what

residents suggested, more partnership working with local charities who are known and trusted by residents:

> ‘It’s not easy. There’s no one answer. There’s no easy answer. But we have to do it because we see it in society, that people just don’t feel listened to and they feel so disconnected from decision-making and involvement with what’s going on around them…Everybody’s got a voice and it’s important that be they charities or organisations like Sustrans or people in elected office themselves do everything we can to engage the public’ (interview, 27/07/2022).

According to another local stakeholder, the biggest barrier to meaningful community engagement with diverse groups is that it requires more time and effort:

> ‘A lot of the consultations work very much the same way, which ultimately, someone came in from outside, they maybe do a couple of events. And ultimately out of these events, you will get the same faces go to everything. You won’t be getting the people who potentially you actually want to reach… what I’ve noticed over the last 12 years or so is that actually you’ll find people who are going in and trying to find answers quickly, but then what they’ll find is the wrong answers because they just want to get something quick, as opposed to take the time to get the right answers. What I have done in the past, and what I feel works best is, actually, I suppose it’s the old school way of doing it as actually going out and speaking to people… there’s no quick way of doing it. If you really want the results, if you want the correct answers, then you need to actually do the legwork and actually, ultimately go door to door and actually speak to people…’ (interview, 26/07/2022).

He emphasised that in an area of high deprivation, truly inclusive community engagement will necessarily take more time because people, especially young people, lack the confidence and capacity to participate in engagement processes:

> ‘They’re not used to being engaged in that way. If you ask them, what would you like to see in the area? The first thing that comes to their head is only McDonald’s. If you ask them, how would you feel about a new park? They would say, sure, yeah, new park is fine. How would you feel about a football pitch? Yeah, sure, that sounds good. Like, they’re not actually at the point where they’re like, actually, think about it, if you don’t have space to go out, okay, so this is an area, what do I actually really think will work, go out and have a look around, that kind of thing’ (interview, 26/07/2022).

He hopes that the community centre can become a space to help build local people's capacity to participate more in community engagement and decision-making processes, so they feel that they are doing things, rather than just having things done to them.

While EQIAs would be a good way to engage with more diverse groups of people and ensure that projects respond to the needs of marginalised groups, no EQIA for this project was publicly available or made available during the course of this review. A stakeholder explained: 'it's not a process that's seen as having any value. And they're the experts you know, so of course it's just about building a road, a path, and you don't know who to talk to… It's a culture, it's, there's no impact on the equality here' (interview, 22/07/2022).

This reflects the technocratic paradigm in transport planning, in which 'social' issues like gender, diversity and inclusion are perceived as irrelevant since 'it's just about building a road, a path' (interview, 22/07/2022). If infrastructure is to fulfil people's needs, then 'social' issues must be considered as relevant, as this stakeholder elaborates:

> 'I think the approach is always very generic. It's always very general. You know, the people that will be using this path are looked on as a homogenous group…And the people devising these strategies and plans, they don't have an opinion on equality, what's this got to do with equality? It's just tar and you know, machines, what's that got to do with fairness? You know, they just have this completely blinkered view and don't go and ask people' (interview, 22/07/2022).

Infrastructure

Analysis of baseline and follow-up RUIS data shows that since the path has been completed, there has been a slight increase in users who are in part-time employment, looking after the home / family, unemployed / sick leave and retired. There has also been a slight increase in overall people walking and a slight decrease in overall people cycling on the path. The gender gap in cycling has halved since the path's completion, which is a successful outcome. However, men are still four times as likely to cycle as women. There is slightly more gender parity in walking, as shown in Figure 2 below.

Figure 2: Gender split in people walking and cycling

	Baseline RUIS			Follow-up RUIS		
	Modal share	**Women (including transgender women)**	**Men (incl. transgender men)**	**Modal share**	**Women (including transgender women)**	**Men (incl. transgender men)**
Cycling	23%	11%	88%	21%	20%	80%
Walking	77%	23%	77%	79%	45%	55%

Follow-up RUIS data shows that most women using the route are between the ages of 25-54, while the largest proportion of men using the route are between the ages of 45-54 or 65+ (Figure 3).

Figure 3: Gender x Age of path users

Age group	% Women, incl. transgender women	% Men, incl. transgender men
16-24	0%	3%
25-34	26%	14%
35-44	26%	17%
45-54	26%	31%
55-64	5%	7%
65+	16%	28%

Since its completion, there has been an overall decrease in commuting journeys (8% in 2019 to 0% in 2022) and recreation journeys (87% in 2019 to 75% in 2022), but an overall increase in shopping journeys (0% in 2019 to 13% in 2022) and journeys to visit friends and family (3% in 2019 to 10% in 2022). The path is not used for commuting, education, escort to school or other escort journeys. Recreation, including dog walking, is the main trip purpose for all path users, with 84% of female respondents and 69% of male respondents using the path for recreation.

A comparison of baseline and follow-up RUIS data also indicates a huge increase in the proportion of people of all genders strongly agreeing or agreeing that the path: takes them straight to their destination; is the best transport option; the most convenient route; meets the needs of the community; and is fit for purpose. However, men expressed a higher level of

satisfaction with the path. 74% of women strongly agreed that the path meets the needs of the community, compared to 93% of men. Meanwhile, 58% of women strongly agreed that the path is fit for purpose, compared to 69% of men.

The three stakeholders who worked on the project that Sustrans interviewed previously agreed that the current active travel path provides useful connections and local people would benefit from an extension of the path up to the regeneration site. One stakeholder who was involved in the project described it as 'a terrific local project' and at a strategic level, 'obviously where we all want to be aiming for in terms of delivering active travel right across urban Scotland.' Meanwhile, residents interviewed by Sustrans had mixed views on the connectivity of the path, with one person describing it as a path with 'nothing at either end of it apart from a pump track,' and another saying that they would use the path to cycle to work if it joined up with the regeneration site.

It was felt that the path is currently used by many local people for recreational purposes but has more potential to serve people's everyday needs if it were joined up to more places – 'It's much more of a social route rather than a route to get to shops, possibly to get up to the health centre' (interview, 26/07/2022). However, there is also a risk that as the path gets extended and the new development progresses, it may disproportionately benefit middle-class people newer to the area who experience fewer barriers to active travel, unlike many local people experiencing deprivation for whom active travel is a low priority. A stakeholder explained:

> 'As it does get extended…, maybe we'll see that change to more of that typical kind of middle-class use. There's a lot of new housing being developed farther along in the area, and it will be, well, I'm hesitant to say middle class, but it's definitely people who aren't living in poverty, deprivation, who will be in those houses, who will then be more likely to be using the paths...A lot of the families we work with are ultimately just worried about money at the end of the day' (interview, 26/07/2022).

If new housing and active travel infrastructure are being built, what measures are in place to ensure things stay affordable for local people who already live there? How will existing residents benefit from new active travel and other infrastructure and amenities? These questions are crucial and 'have to be the first questions asked before we get to the design stage… and I would like to see a more active push towards people making sure that these questions are answered [by policymakers and planners]' (interview, 27/07/2022).

Issues around affordability need to be at the forefront, especially in an area of high deprivation that is near a massive regeneration site, otherwise there is a risk that things are

only seen ‘through the prism of the middle class’ (interview, 27/07/2022). As a stakeholder elaborated:

> ‘…[This] is a very, very poor area in terms of its outcomes. Just because people don’t have bikes or they don’t walk a lot doesn’t mean that they wouldn’t, you know, they do use the local shops, they’re very local minded. So, if they had that connection, because… [the regeneration site] it’s very linked to middle class people because they’ll use it, you know, if you take the kids out and stuff. So there has to be a discussion about how we help people…helping people with the household costs is critical in this country’ (interview, 27/07/2022).

Given the high levels of deprivation in the local area, access to a cycle and knowledge of how to cycle are more likely to be significant barriers to cycling for local people. This highlights the need for social infrastructure for cycling, such as cycle education programmes, a cycle lending library with different types of cycles and social group rides. Organisations that deliver social infrastructure for cycling are essential because ‘provision needs to be associated with outreach…to actually attract a cross-section of society’ (interview, 29/07/2022). One stakeholder felt that cycling can be perceived as an elitist sport, associated with Tour de France and not a practical, everyday activity, which, again, underscores the importance of social infrastructure for cycling to help more diverse people feel that cycling is ‘for them.’

There are many social and mental barriers that local people need to overcome before they can start to see the relevance of active travel in their daily lives:

> ‘You know, I’m thinking about, how do I get young people to treat the place better. That’s quite far away from, how do I get them on a bike using an active travel route? So, trying to encourage people who that’s so far off their radar, you know, coming in, all guns blazing on this specific thing that’s not even anywhere near where they are. It just doesn’t work, it just doesn’t work’ (interview, 26/07/2022).

This illustrates an important point about ensuring that active travel infrastructure is culturally relevant and can truly benefit local people, rather than assuming it is an inherent asset. Active travel must be seen to be a relevant solution for poorer households, which means that it must be seen to be an affordable and practical way to alleviate their financial and time burdens. Both physical and social active travel infrastructure play a mutually reinforcing role in that.

Health and Safety

Although there has been a slight increase in overall feelings of safety on the route since the path was completed, women are still more likely than men to feel unsafe. Still, it is worth noting that the percentage of women saying the route feels safe has significantly increased. No men disagree or strongly disagree that the path feels safe, whereas 16% of women disagree and 11% strongly disagree, as shown in Figure 5 below.

Figure 4: Gender breakdown of responses to 'This route feels safe'

	Baseline RUIS		Follow-up RUIS	
	Women (including transgender women)	Men (incl. transgender men)	Women (including transgender women)	Men (incl. transgender men)
Strongly agree	13%	26%	16%	28%
Agree	38%	65%	53%	66%
Neutral	13%	6%	5%	7%
Disagree	38%	3%	16%	0%
Strongly disagree	0%	0%	11%	0%

Men are also more likely than women to feel that the path is better maintained now than it was in 2019. There are gender differences in perceptions of how well lit the path is, too, as shown in Figure 6 below. Despite the overall increase in feelings that the path is well lit between 2019 and 2022, women are nearly four times as likely as men to strongly disagree that the completed path is well lit:

Figure 5: Gender breakdown of responses to 'The path is well lit'

	Baseline RUIS		Follow-up RUIS	
	Women (including transgender women)	Men (incl. transgender men)	Women (including transgender women)	Men (incl. transgender men)
Strongly agree	13%	0%	11%	17%
Agree	13%	23%	21%	31%
Neutral	0%	13%	16%	24%
Disagree	0%	23%	26%	21%
Strongly disagree	75%	42%	26%	7%

Inadequate lighting, littering, fly-tipping and anti-social behaviour have been raised as safety concerns on the path in interviews conducted by Sustrans. Residents said that they felt safe during the day but avoid it at night because of notorious anti-social behaviour in the local area, and there have been requests for more CCTV and bins along the path. One resident said the path is 'in a less affluent area so it brings the wrong crowd as such or might have done historically.' In the words of another resident:

> 'Although I'm known in the area and I've worked here for years, I would be reluctant to use it at night, just in case there was any hassle. I'm pretty sure I could cycle faster than they can run, but … yeah, just out of safety. I think sometimes, as well, it is lit, but there's often glass and some debris and stuff, so it might be just a safety thing and a case of you might not see anything and get a puncture, and it's the worst place probably to get a puncture in the dark I would say as well.'

In response to safety concerns, a midway exit point was implemented to enable people to get off the path sooner if they felt unsafe, but there is still a need for more investigation into women's and girls' safety concerns. One stakeholder said he has not spoken to women and girls about how safe they feel on the path but would like to:

> 'That path is quite well built and has lights now, and so from a safety point of view if that was something that would put people off the basis of being afraid of being attacked because of gender, then potentially that is something that supports people to use it. But I haven't, to be fair, I haven't spoken to people specifically about that point. And nobody has brought it up as something that they see as an issue, but that doesn't necessarily mean that it's not… And so, from a gender point of view, it's not something that anyone's come to me about at all, but now that you've brought it up that actually is an interesting point. And I would be interested to know how people feel about it. But people have generally reported they feel safer using it because as a new path, it does have light strips all the way along as well' (interview, 26/07/2022).

It is positive that this stakeholder is interested in learning more about gender and safety issues. One way to do so is to conduct gender safety audits before, during and after active travel infrastructure is delivered. Gender safety audits can help identify and address any safety concerns women and girls might have.

Another stakeholder said that anti-social behaviour and perceptions of safety were identified as 'the ones, for us, that were the greatest risks' when conceptualising the path and both issues were 'certainly considerations, so we cleared vegetation to ensure clear sight lines,

but the Council weren't prepared to sanction streetlights' (interview, 29/07/2022). The Council was hesitant to install more permanent overhead lighting on the path due to the cost and the perceived risk of vandalism, and opted for solar studs instead, which are cheaper.

However, residents interviewed by Sustrans felt this was inadequate. One resident said that they would only walk the first section of the path at night, where the floodlights from the pump track still reached the path, before turning back out of fear. A stakeholder who worked on the project told Sustrans they were aware of 'four or five women concerned about using the path. It did have a really negative image at one time, for drug misuse and stuff like that. So, they weren't really using it.'

The decision to install solar studs rather than more permanent street lighting along the path is an example of how a gender budgeting approach could have led to a different outcome. One could argue that deciding that street lighting was too expensive and opting for a cheaper alternative fails to consider gendered perceptions of safety. If a gender perspective and gender budgeting had been adopted, it is possible that there would have been a different decision. The benefits of permanent street lighting in improving women's and girls' feelings of safety could have been deemed worth spending more money on.

Lighting is not the only issue – public spaces are gendered and this, too, affects feelings of safety and active travel behaviour. A stakeholder mentioned, 'I am aware in the past there has been concern about some of the boys in the area, not necessarily sexual harassment, but their general education levels and how they talk' (interview, 27/07/2022). The presence and behaviour of groups of boys can be intimidating and make women and girls feel uncomfortable and potentially unsafe. More youth outreach programmes and bystander intervention training are examples of community-based approaches to drive culture change and make spaces safer for women and girls.

It is important to note that the pump track at the end of the path is a gendered space. All three male stakeholders interviewed have observed it is mostly used by boys. One said he could count the number of girls on the pump track on one hand. Another elaborated:

> 'That's mainly boys [at the pump track]. I know a lot of the young people I work with go up there. Generally, what you'll find is that the boy, most of the boys will have a shot at the pump track while the girls will hang about, as opposed to actually going on it… However, that is quite a high calibre pump track up there as well, so some of the boys don't actually even use it, you know, because they either come off it or somebody's come off it and, in some cases, got quite a bad injury. That kind of stops them going back on it. So yes, still more boys, I think that's always been the case with extreme sports' (interview, 26/07/2022).

Pump tracks, skateparks and multi-use games areas may be seen as facilities that meet the needs of all young people, but they are typically dominated by boys and young men, which can deter women and girls from visiting and using those spaces (Walker and Clark, 2020). An active travel path that goes to the pump track, therefore, arguably disproportionately benefits boys and young men at the expense of girls and young women.

One stakeholder agreed that cycling overall and usage of the pump track generally tend to be more male dominated, but pointed out, 'many school groups who use this as an activity, there's no reason why there should be any gender bias with the schools' (interview, 29/07/2022). He later noted that pump tracks target male adolescents because 'their disruptive behaviour is evident in schools and the community more generally. So, in that respect, I think there is less emphasis placed on the gender balance in users as any skew towards male adolescents is actually beneficial' (email, 02/08/2022).

This begs the questions: Were all relevant stakeholders, especially women and girls in the local area, involved in the decision-making process? If so, was there unanimous support to focus the project on a pump track to mainly benefit young men and boys? If it, indeed, had been a conscious decision to focus the project on a pump track to mainly benefit young men and boys, then was there an alternative project that focused on the needs of young women and girls in the area?

It was suggested that the local organisation that built the pump track and lead outreach and education programmes to get a wider range of people, especially women and girls, interested in cycling, would likely have sex-disaggregated data on who uses the pump track. Unfortunately, no one at that organisation was available for an interview at the time of this research.

Accessibility

According to 2022 RUIS data, 100% of women and 97% of men strongly agree or agree that the path is easily accessible. One stakeholder characterised the path as very accessible because it is wide, smooth and has no barriers. He thought that the lack of barriers was a refreshing change, as 'the Council's built some paths in the past, but they've put in gates and things, and that stops anyone with not a normal bike who is unable to then pick that bike up' (interview, 26/07/2022).

He also thought the width was an important way to 'future-proof' the path, as it can accommodate cycle rickshaws, cargo bikes and 'more inclusive bikes, tandem bikes and hand-crank bikes and things like that that wouldn't normally be able to sit on some of the cycle paths' (interview, 26/07/2022). He sees potential for a wider range of cycles to be used

on the path, by a more diverse range of people. However, given the high levels of deprivation in the local area, the cost of an adapted cycle or cargo bike would be prohibitive, and so he suggested a cycle lending library with different kinds of cycles for people to try.

The only accessibility issue that has been raised so far is that the incline of the path is too steep. A stakeholder who worked on the project told Sustrans that young people especially struggle with the incline – '…I'd liked to have seen a little bit of a plateau, a wee bit of a winding path up, just to make it a little bit more gentle. We take just one school but it's nearly 50 pupils that you take up and down to the pump track and it's emotional for some of them, that hill.' Residents interviewed by Sustrans agreed that the incline was an issue and that people, mainly frequent cyclists, struggle to cycle up it. It would be worth conducting an accessibility audit to see if there are any other accessibility issues.

Another stakeholder pointed out that the pump track is not accessible:

> 'The pump track, it's still a sport that probably isn't very disability friendly, you know, without the specialised equipment. So, the path may be okay, the pathway itself is good, but the pump track is uneven, you know, the area around the pump track is gravel, so disabled people and elderly people can probably walk up and down the pathway, but then there'd be no destination point' (interview, 27/07/2022).

One stakeholder felt that accessibility issues were important but often overlooked in active travel, transport and built environment projects:

> 'We have a disability access panel…and they are consulted a lot on, you know, things that are going on…I'm not sure about this part of the path you're talking about… that's really disappointing, you know, we ensure that we talk to disabled people because we know that it costs a lot more to fix a problem once it's been built than, you know, to design it in at the very beginning' (interview, 22/07/2022).

She used an example of benches, which are important so that people, particularly disabled people, older people and people in ill health or with mobility problems, can have places to stop and rest. This seems especially relevant, given the town's sizeable population of adults with long-term health conditions. However, she is not aware of any active travel projects led by the Council that have accounted for benches or places to rest along the route.

Another dimension of accessibility is access to key services. Since the path opened, there has been an overall increase in people's ability to access retail, health services, other public

services and family or friends. A slightly higher proportion of women report being able to access retail, health services and public services (e.g. bank and post office), whereas a slightly higher proportion of men report being able to access family or friends since the path has opened, as shown in Figure 6.

Figure 6: Gender breakdown in access to services using the path

	Baseline RUIS		Follow-up RUIS	
	Women (incl. transgender women)	**Men (incl. transgender men)**	**Women (incl. transgender women)**	**Men (incl. transgender men)**
Retail	0%	0%	20%	18%
Health services	0%	0%	17%	14%
Other public services	0%	0%	17%	13%
Family or friends	18%	27%	22%	29%

At the same time, stakeholders interviewed felt there is potential for mobile services to be brought to people via the path. For example, there could be a cargo bike or cycle rickshaw on the path selling healthy, fresh and affordable vegetables, or there could be a mobile Citizens Advice hub that could be stationed along the path. One stakeholder mentioned that Citizens Advice will start doing monthly sessions at the community centre, and a partner organisation nearby just opened a community co-op, both of which local people have very much welcomed. He seemed confident that residents would benefit from having mobile services brought to them – 'I get the impression that yes, absolutely, something like that would work well… from what I've heard from people, yeah, it would be very, very much appreciated' (interview, 26/07/2022).

Another stakeholder agreed that there was huge potential to use active travel infrastructure to bring mobile services to people because 'that's just the way the world works now… People want things at their doorstep, you know, next day delivery' (interview, 27/07/2022). He felt that mobile services would be particularly beneficial to reach groups who may be 'reluctant to engage with services even though they need help. They'll be reluctant because they're suspicious of the council' (interview, 27/07/2022). Bringing mobile services to people, therefore, would help them save time and money on travelling and enable them to access support that they might not necessarily have sought themselves.

He also thought it would be beneficial for organisations like Sustrans to work with local Citizens Advice Bureaus, particularly when building active travel infrastructure in areas of

high deprivation: ‘prove you’ve done the best engagement. Work with the CAB’ (interview, 27/07/2022). For those living in poverty, worries about their next pay check, Universal Credit, rent, feeding their families, or simply making it through the week are urgent priorities that can eclipse any consideration of active travel. There is a greater need to communicate and demonstrate the benefits of active travel to people experiencing poverty in a way that makes sense with their lives and their local context. As this stakeholder suggests, one effective way to do this is by working with local organisations that are embedded in communities and closer to the realities of their daily struggles.

Affordability

The active travel link traverses one of the most deprived areas in Scotland and there has been a dramatic increase in RUIS respondents of all genders who report saving money by using the path (Figure 7). However, men still are more likely to save money using this route. Previously, only 17% of those unemployed or on sick leave strongly agreed that they save money using the path but since completion, that proportion has dramatically increased to 100%. However, only one respondent to the aselyne RUIS said they were unemployed / sick leave, whereas nine respondents in the follow-up RUIS were unemployed / sick leave. Still, it is extremely positive that there has been overall growth in people who strongly agree that they save money using the path.

Figure 7: Gender breakdown in responses to ‘I save money by using this route’

	Baseline RUIS		Follow-up RUIS	
	Women (including transgender women)	**Men (incl. transgender men)**	**Women (including transgender women)**	**Men (incl. transgender men)**
Strongly agree	13%	3%	63%	72%
Agree	25%	48%	0%	14%
Neutral	63%	45%	37%	14%
Disagree	0%	3%	0%	0%
Strongly disagree	0%	0%	0%	0%

Stakeholders felt the path has greater potential to reduce people’s transport costs if it were extended:

> ‘… then you have the potential then for things like cycle rickshaws to support people to travel as opposed to getting a taxi. I mean, I would hope that it would

> be cheaper than to get a taxi company or whoever to run rickshaws up to the college, up to the sports centre... So, in the future, I do see a lot of potential in it to save people money to get people more active, but there's a lot more that would need to be done, I think, to support that' (interview, 26/07/2022).

One stakeholder noticed that a lot of local people take taxis to get around because they do not have a car and local public transport is poor. He gave an example:

> 'My caretaker here gets a taxi all the time and she only lives down the road, which is far enough that it's not a comfortable walk for her and she'll get a taxi up and down a lot of the time, which must be costing her, you know, a good chunk of her wages just to get to and from work… ultimately living in a deprived area means that you have to spend more money for anything' (interview, 26/07/2022).

The crucial point here is that to optimise the potential of active travel to help lower income households reduce their transport costs and enjoy all the other benefits of active travel, it is important to engage with them to be able to build infrastructure that meets their needs. Too often, the perspectives of those on low or no incomes are left out of engagement processes (IPRR Scotland, 2022). Stakeholders interviewed felt that extending the path and making it more of a practical active travel route for people to go to school, work and shops would also help local people save time traveling, which would greatly help those experiencing financial and time poverty. In the words of one stakeholder:

> 'I think there's massive potential there for people, people to feel safe enough to want to use it for one thing, but also to save money, to save time, as opposed to getting in a car and going down that main road, which can be hellish, especially during rush hour' (interview, 26/07/2022).

He was particularly keen to get cycle rickshaws in the area to provide a cheaper and more environmentally friendly alternative to taxis, an idea he has raised with Sustrans, especially as it would also help create jobs in the local area. He also felt that if the path were extended and if cycle rickshaws and cargo bikes became more of the mix, this would create more local, green jobs and get more people interested in active travel:

> 'That's why I'm interested in looking at, making sure that paths have future proofing things, like rickshaws, how you can get companies, like taxi companies interested and involved in these types of things. As I say, to make the spaces usable for commerce, I suppose, really, it's one thing having them there for recreational use but as soon as anyone starts thinking, oh, I can actually make

some money here, that's when people start getting interested and actually use it' (interview, 26/07/2022).

He sees potential for the path to decarbonise local deliveries by using cargo bikes. At the organisation he previously worked at, there was a cargo bike that he used to deliver food packages to people in the local area. He also used the cargo bike to pick up bottles for recycling that children at a local school had collected and drop them off at recycling facilities. He thought of another organisation in another part of the town that delivers food parcels locally that could switch to cargo bike deliveries. Ultimately, he envisions delivering healthy food to local people by cargo bike as a long-term ambition to promote both active travel and healthy eating.

Monitoring and Evaluation

Interviews with stakeholders suggest room for improvement in community engagement. One way to do so is to include ongoing engagement with local people in the monitoring and evaluation process. One stakeholder felt that it was especially important to engage local people properly if or when the path gets extended, so they can use it to save time and money on travelling. He suggested areas to explore more in depth with residents: issues around women's and girls' safety; the types of mobile services people would like to see in the local area; what local deliveries could be done by cargo bike; the types of cycling programmes that would help get more people cycling; as well as what journeys people want to make by walking, wheeling or cycling.

Another important element of monitoring and evaluation of active travel routes highlighted by two stakeholders is the need for a gender perspective at senior levels to promote gender equality in active travel. One stakeholder hopes that the Council will develop more gender competence through its partnership with the Scottish Women's Budget Group to work towards gender budgeting. Despite being in the early stages, this work has been promising so far:

> 'And the next part of that project, as well as more workshops with senior managers, is workshops with elected members who ultimately are the people that make the decisions and approve the decisions, so hopefully by the end of the year the lightbulb will come on' (interview, 22/07/2022).

Another stakeholder was similarly enthusiastic about Council developing more gender competence, doing more gender budgeting work and improving gender equality in active travel and other areas of public service provision. He thought more training to build knowledge and capacity for gender analysis was key:

> ‘It’s something that is by no fault of anyone but it’s something that we all have to consider because we just don’t think of these things, there’s no shame in holding your hands up and saying I never thought of it and I got it wrong, you know. So, I think what you’re doing is just fantastic… Everyone’s responsible and certainly all elected officials, the decision makers usually rubber stamp projects and agree things, they have to, people need to be educated. I suppose that education is the thing that enables us all to be better people’ (interview, 27/07/2022).

There was a consensus that more training was important, so that people working on active travel projects address and help reduce inequalities in active travel. The monitoring and evaluation of active travel infrastructure should explicitly consider who are the most vulnerable groups that could benefit the most from active travel and whether or to what extent they have benefited from new infrastructure.

Conclusion

Case Study 2 stands out for four reasons. Firstly, the follow-up monitoring data shows three major successes of the path: (i) a significant increase in women’s perceptions of safety, (ii) a reduction in transport costs for all and (iii) the halving of the gender gap in cycling. Secondly, there is an opportunity to further optimise the potential of the path to help reduce individuals’ and households’ transport costs. This can be done by extending the path to enable more access to a range of shops, schools and services, as well as strategic investment in social infrastructure for cycling, so that active travel can be perceived as an everyday mode of travel for those experiencing high levels of deprivation.

A third reason why Case Study 2 stands out is because the pump track is a gendered space that is primarily used by boys and young men. Given that the first phase of the active travel link leads to the pump track, one could argue that it reinforces and reproduces gender inequalities in active travel. While there is a local organisation that provides social infrastructure for cycling to encourage more diversity in cycling, it seems that more meaningful community engagement could have taken place.

Finally, it is extremely promising that that the Council is engaged in gender budgeting work with the Scottish Women’s Budget Group. All stakeholders interviewed demonstrated an awareness of inequalities in active travel, particularly around gender, socioeconomic status and disability. Importantly, they also exhibited a keen appetite to develop gender expertise so that they can do more to tackle gender and other inequalities in active travel.

Appendix III: Case Study 3

Case Study 3 was part of a wider £10m regeneration programme and transformed a disused railway viaduct into a fully accessible linear park and pathway. The new route opened in September 2021 and links a canal towpath and the National Cycle Network (NCN) route towards a national park. It redirects the NCN away from two busy road crossings, therefore providing mostly off-road access from a major city to a national park. The wider regeneration programme aims to make the area a vibrant tourism and leisure destination.

Local context

Case Study 3 is in a village that is a half-hour drive from a major city, with an estimated population of 560 (National Records of Scotland, 2022). The local authority area is among the smallest local authorities in Scotland in terms of land area and population. Life expectancy rates, as well as the difference between life expectancy in the least and most deprived areas in the local authority area are significantly worse than the Scottish average.

Compared to the rest of Scotland, the local authority area also has a higher percentage of disabled people (20% vs. 23%, respectively) and a larger employment gap for disabled people (just over 50% vs. 40%, respectively). The proportion of people without degree level qualifications and in elementary occupations (e.g. packing, shelf stacking, cleaning), as well as reliance on the public sector for jobs are higher in the local authority area than the average for Scotland. The gender pay gap is bigger in the local authority area than for Scotland.

The village is one of the least deprived parts of the local authority area. Life expectancy for women and men is higher in the village than the averages for both the local authority area and Scotland. Compared to the average for the local authority area, village residents have substantially higher education, employment and income levels. There is also a much higher proportion of owner-occupied households in the village, relative to the average for the local authority area.

Data sources

Baseline data provided by Sustrans include:

— Annual Usage Estimates from the viaduct, 2021;

— Annual Usage Estimates from the canal towpath, 2019;

— Route User Intercept Surveys (RUIS) from the viaduct (August 2021);

— Route User Intercept Surveys (RUIS) from the canal towpath (August 2019);

— Pedestrian and cycle automatic counts at two locations;

— Notes from Sustrans interviews with two local business owners in October 2021;

— Notes from an accessibility audit, arranged by the delivery partner in September 2021.

The follow-up monitoring data had not yet been analysed at the time of doing this research. Only one local stakeholder was interviewed, a white male who worked on the project. Unfortunately, no other local stakeholders responded to requests for interviews at the time of this research.

Engagement

The stakeholder interviewed described the community engagement process as a series of in-person public information events run by the delivery partner in the village hall prior to the COVID-19 pandemic. During the pandemic, online engagement events took place, which was more challenging, as participants struggled with technology issues (e.g. muting and unmuting their microphone and unreliable wifi connections). The partners also kept the chairman of the local community council informed about project plans and progress.

One issue raised in the community engagement process was striking the balance between adequately lighting the path, especially the viewing platform, whilst not disturbing or violating the privacy of residents in the neighbouring buildings:

> ‘There was concern because this is an elevated section potentially looking into the windows of the tenement. People were concerned about their privacy. That was dealt with in planning…there’s been planting put to the side...between the footpath and the houses to provide some degree of shelter’ (interview, 21/07/2022).

The stakeholder said that both business owners who run the three businesses under the arches were involved in the engagement process, as ‘they were invited to all the meetings that took place. They’ve equally been spoken to, in terms of informing them what’s been going on’ (interview, 21/07/2022). However, in the interviews Sustrans did with the two business owners, they reported not feeling engaged in the project design and planning. One said that there should have been earlier, more frequent and more thorough engagement with residents, businesses and customers that should have continued throughout and after project delivery: ‘everyone has questions and there was no one there to answer.’

Both business owners were also concerned that people would go over the path without knowing about their businesses under the viaduct and felt there needed to be more signage – 'Yes, it's providing the ramps, but is there going to be signage? Is there going to be tourist signage saying, 'destination point below,' 'pit stop below'?' Another business owner said, 'I expect to lose footfall from the actual footpath that's there at the moment, and we have to have discussions with [the delivery organisation] as to what kind of signage they're going to put up to support the businesses below, because you're diverting traffic from the main harbour.'

Our partner was aware of these concerns, that the path 'has provided a bypass. So, whereas cyclists and walkers would go right past the front door and they [businesses under the viaduct] would get custom, they're now going right over the top and they don't know they exist' (interview, 21/07/2022). However, it is unclear whether or how this has been resolved, as none of the business owners were available for interviews at the time of this research.

Infrastructure

Data from the 2019 and 2021 RUIS's showed similar patterns in users and journey purposes. 63 out of 1410 route users (4.5%) participated in the 2019 RUIS on the canal towpath and a slightly higher proportion, 138 out of 1807 route users (7.6%), participated in the 2021 RUIS on the viaduct. All respondents were white, most respondents were male, most respondents were in full- or part-time employment (59%) or retired (34-35%), most people cycling were experienced cyclists, and the predominant journey purpose was recreation. Compared to 2019, there was a greater proportion of pedestrians, experienced cyclists and respondents who make the trip at least once a week in 2021. This likely reflects the overall increase in walking and cycling during the COVID-19 pandemic.

It is not surprising that baseline RUIS data shows that most users are white men and that most cyclists are experienced, given that the project reroutes part of the NCN route and Sustrans data shows that NCN users are predominantly white men. In 2019, 63% of RUIS respondents were men, with men aged 65+ representing the largest age group (28%), followed by men aged 45-54 (25%). Meanwhile, the 2021 RUIS showed a more even gender split, with men representing 54% of respondents and women representing 46%. In this case, most women and men were between the ages of 55-65+ (55% and 61%, respectively).

The RUIS on the viaduct showed that 88% of respondents strongly agreed or agreed that the path meets the needs of the community and 97% strongly agreed or agreed that the path is fit for purpose, but there was no meaningful gender difference, as shown in Figure 8 below.

Figure 8: Gender breakdown of respondents' satisfaction with path

	The path meets the needs of the community	The path is fit for purpose
Women (incl. transgender women) who strongly agree / agree	47%	53%
Men (incl. transgender men) who strongly agree / agree	48%	52%

Despite representing a smaller proportion of overall respondents, those aged 25-34 were the age group most likely to strongly agree or agree that the path lets them go straight to their destination, is the best transport option and the most convenient route.

Health and Safety

Both local business owners that Sustrans interviewed agreed that the area was attractive, supported the needs of their businesses and felt safe during the day. However, one said it did not feel safe at night. Both business owners also felt there needed to be ongoing maintenance, especially as some of the materials used (e.g. glass) could be easily damaged. Vandalism, littering and anti-social behaviour in the area were other issues they felt needed to be addressed, so that the area continues to be nice and does not revert to its formerly dilapidated state.

The stakeholder who worked on the project was aware of issues people had raised around anti-social behaviour, which he explained happened because:

> '...Youths from not just the local area but from much more of a wider area like to congregate [here]…This is not unique. It just seems to be a congregational spot and things usually start off well and then the substances that are imbibed, be that booze or drugs, start to kick in' (interview, 21/07/2022).

Houseboat residents have complained in the past about anti-social behaviour and the police have been involved on several occasions, but the hope is that the wider regeneration of the area will help reduce anti-social behaviour: 'I think part of the hope of the regeneration works there taking place is that if there are enough people there, then the youth will find it not such a good area to go and move on somewhere else' (interview, 21/07/2022).

The majority of RUIS respondents reported feeling safe on the route (Figure 9), although men were over twice as likely as women to strongly agree that the route felt safe at the canal towpath RUIS. At the other RUIS location on the viaduct, men were slightly more likely than women to strongly agree that the route felt safe.

Figure 9: Gender breakdown of responses to 'This route feels safe'

	Forth and Clyde (2019)		Viaduct, East (2021)	
	Women (incl. transgender women)	Men (incl. transgender men)	Women (incl. transgender women)	Men (incl. transgender men)
Strongly agree	59%	70%	58%	57%
Agree	32%	23%	38%	39%
Neutral	9%	5%	3%	0%
Disagree	0%	3%	2%	3%
Strongly disagree	0%	0%	0%	1%

In the viaduct RUIS in 2021, respondents were asked about the extent to which they agreed that the path was well lit. Only 12% of 2021 RUIS respondents – or 16 people, with an even gender split – agreed the path was well lit. Interestingly, a higher proportion of men than women strongly disagreed or disagreed that the path was well lit (Figure 10). Those aged 25-34 were most likely to agree that the path was well lit, whereas those aged 65+ were least likely to agree.

Figure 10: Gender breakdown of responses to 'The path is well lit' (Viaduct)

	Women (incl. transgender women)	Men (incl. transgender men)
Strongly agree	0%	0%
Agree	13%	11%
Neutral	41%	35%
Disagree	34%	41%
Strongly disagree	13%	14%

While the stakeholder interviewed was aware of concerns around lighting, he admitted a lack of awareness about wider concerns around women's and girls' safety:

> 'I am a mere engineer. I have to say that those sorts of things [gender and wider diversity and inclusion considerations] are not things that come across my desk on a daily basis. I'm not aware of anything specific that's been considered on that front…In terms of whether there's any gender specific stuff, there's not anything I'm aware of' (interview, 21/07/2022).

Lighting issues were raised by both wheelchair users who participated in the accessibility audit with the partner, who felt that the platform viewpoint, which was not lit at night, created a risk that people, both able-bodied and disabled, would be unable to see the edge in the dark and fall off. At least one or two members of the public also emailed with concerns about inadequate lighting on the platform. Improvements were made as a result:

> 'There was an area which I think was aimed to look effectively like a railway platform and act like a railway platform. And a couple of things that came out of that [the accessibility audit] is that that had no fencing on the edge of it. So wheelchair users, whilst in the daylight, they can see what's happening there but if they're visually impaired or if it's getting towards the night time, because there wasn't any lighting there at that point, there was a concern that they would fall off the edge of this platform. So we have put a handrail along the viewing side of that platform. We've also introduced lighting because, again, we when we were commissioning it shortly before opening, we were there late at night one time just to look at the lighting. And that area was pitch black, basically, so people would not be able to see off the edge and potentially fall off. That's the biggest change' (interview, 21/07/2022).

It was felt that there was no further action needed to improve lighting: 'I mean, the entire pathway…is lit and has always been lit. So, we don't anticipate any requests for further lighting on that path, the issue was, as I say, this raised area at the time didn't have any lighting' (interview, 21/07/2022). To minimise the disturbance to residents nearby, he said the lighting switches off at 11pm or midnight and turns back on at or around 6am. It would be worth conducting gender safety audits to identify if there are any aspects of the path make women, girls and gender minorities feel unsafe and how they can be improved.

Another safety issue that the stakeholder previously 'never really had to spend an awful lot of time considering (interview, 21/07/2022' was providing safe recreational opportunities for children:

> ‘This access ramp was quite large, it’s a big, long thing, it’s got a kind of landing platform halfway up and there was an original intention to have a fireman’s pole for children to sort of slide down and get out of there. And that might be quite a fun thing. We had a mock-up building of part of the access ramp. What this showed was this gaping chasm where people would gain access to the fireman’s pole and we all just talked about it and that’s just somewhere for somebody to fall off. So, we took that out. We love to have fun, but it’s got to be safe. So, it’s things like that, learning the lesson that there’s quite a fine balance to strike when you’re talking about children, for example, to make something fun, but to make it safe. Safe fun is quite a difficult thing’ (interview, 21/07/2022).

Efforts have been made to design the path for all ages and abilities, which seem to have challenged some engineers and pushed them out of their comfort zones. This, again, reflects the technocratic paradigm in engineering, in which professionals working on infrastructure projects typically do not consider, and have not been trained to consider, issues around equality, diversity and inclusion. However, the funder can change this, by making equality, diversity and inclusion priorities in all active travel projects.

Accessibility

Findings from the viaduct RUIS in 2021 show that most people feel the path is easily accessible (Figure 11). Men were slightly more likely to strongly agree or agree than women, but there is no significant gender difference. Meanwhile, those aged 65+ were the age group least likely to strongly agree.

Figure 11: Gender breakdown of respondents’ feelings that the path is easily accessible

	Women (incl. transgender women)	Men (incl. transgender men)
Strongly agree	39%	35%
Agree	58%	64%
Neutral	2%	1%
Disagree	2%	0%
Strongly disagree	0%	0%

However, the two local business under the arches that interviewed were divided about how accessible the area was, with one citing inadequate car parking as a barrier for disabled people, especially when more businesses open under the arches.

The stakeholder said that clear signage and accessibility were prioritised since the project's inception because 'Sustrans obviously insist on that…Sustrans certainly will have been very influential on that because they were the major funder' (interview, 21/07/2022). The viewing platform, access ramps, as well as the height of signs and handrails were designed with accessibility in mind, as per Sustrans' requirement. The route signage was done to a high specification because 'we spent a lot of time doing the signage. And as I say, Sustrans often think about signage which I would say is fairly extensive and fairly comprehensive' (interview, 21/07/2022).

To ensure accessibility, an accessibility audit with two wheelchair users was conducted prior to the opening of the path, which found overall satisfaction but several areas in need of improvement. Firstly, it was suggested that the access ramp should have landings at more regular intervals rather than just the change of direction, as it could be a struggle for someone in a wheelchair to push themselves up the ramp without assistance without a halfway point to stop and rest. Another suggestion was to put a visible line at the start and end of the gradients and the staircases (e.g. a yellow line at the start and end of the access ramp) to help visually impaired people. Thirdly, it was felt that visually impaired people could struggle to see the glass at the small viewpoint and would therefore risk walking or wheeling into it, which could be mitigated by putting etched motifs in. Finally, exiting the access ramp from the viewpoint was a tight turn that was just about manageable for wheelchair users.

According to the partner, the recommendations to improve accessibility for visually impaired people had been implemented. However, as the ramp ascending and descending the viewpoint was already built, it was not possible to add more landings or widen the turn on/off the ramp. He reflected that this was a useful exercise because '…from my own point of view in terms of engineering, I've never really had to spend an awful lot of time considering access for all…I'm simply an engineer, so these sorts of things are quite new to me' (interview, 21/07/2022). He felt that conducting accessibility audits was good practice that should be incorporated in future active travel projects because it made him aware of disabled people's experiences and challenges in public space, which he has never had to think about as an able-bodied male:

> 'I'm very lucky I still walk around. And so, it's having that aspect that there's a different thought process to what I go through because of the way that I'm fortunate enough to live my life, you know, that if they're in a wheelchair, we've

got to try and keep things as accessible and as equitable for them as we can. So yeah, it's just learning about the kind of thought process' (interview, 21/07/2022).

In terms of access to services, baseline data shows that the route has not highly enabled people to access retail, health services, other public services and family or friends. However, the canal towpath RUIS findings show that a greater proportion of women were able to access retail, and a greater proportion of men were able to access health services and other public services. Meanwhile, the viaduct RUIS findings show that slightly more women than men were able to access public services and family or friends using the route.

Figure 12: Gender breakdown in access to services using the path

	Canal towpath (2019)		Viaduct (2021)	
	% Women (incl. transgender women)	% Men (incl. transgender men)	% Women (incl. transgender women)	% Men (incl. transgender men)
Retail	30%	20%	18%	18%
Health services	4%	8%	3%	3%
Other public services	4%	8%	5%	2%
Family or friends	22%	14%	27%	25%

In the future, it would be worth exploring the potential for the project to expand people's access to health and other public services.

Affordability

Baseline data shows that 50-56% of total respondents strongly agreed or agreed that they saved money using the route. Men were slightly more likely to strongly agree than women, as shown in Figure 14 below. Because there were very few respondents who were in unemployment or on sick leave, or looking after home or the family, it is not possible to ascertain whether this route has enabled those on low or no incomes to save money.

The delivery partner sees the potential of the project to help reduce transport costs for people with low incomes in the long term by 'allow[ing] people to think about ditching the car and taking an active transport route, [especially] if people decide the car is becoming a bit expensive' (interview, 21/07/2022). To realise that potential, it is important to explore how the project can reduce transport costs for people who work in the area in the leisure or tourism

industry. Moreover, there must be safeguards in the wider regeneration project to ensure that new housing is affordable.

Figure 13: Gender breakdown of respondents' feelings that they save money using this route

	Canal towpath (2019)		Viaduct (2021)	
	% Women (incl. transgender women)	% Men (incl. transgender men)	% Women (incl. transgender women)	% Men (incl. transgender men)
Strongly agree	36%	38%	19%	35%
Agree	18%	10%	30%	27%
Neutral	41%	50%	42%	24%
Disagree	5%	0%	8%	14%
Strongly disagree	0%	3%	2%	0%

Considerations around affordability should be more prominent in Case Study 3, as it is part of a wider, high-profile regeneration project. There is a risk of 'green gentrification' or 'eco-gentrification,' which is the unequal distribution of urban greening and sustainable infrastructure projects, the benefits of which are skewed towards more affluent populations (Anguelovski et al., 2019; Black and Richards, 2020).

For example, the New York High Line is both a global example of high quality urban green space projects, as well as a textbook example of 'green gentrification.' The High Line has catalysed gentrification in New York by dramatically increasing residential property values in the adjacent area, therefore exacerbating the housing crisis and urban inequalities by displacing existing, less wealthy populations to and attracting wealthier ones (Black and Richards, 2020). When discussing the potential risk of Case Study 3 driving green gentrification, the stakeholder remarked:

> 'I don't think it will have significant impact on the value of property in that area, but that's simply my opinion. All it's doing is making it more attractive place for people to visit rather than to live there now…it's becoming effectively a destination…' (interview, 21/07/2022).

Regeneration projects are often couched in language around making places more 'attractive' and more of 'a destination.' The question is, for whom? The village is one of the more affluent

areas in the local authority area, which raises questions around whether the wider regeneration project may increase inequality by attracting more middle-class people as both residents and path users.

Monitoring and Evaluation

There are several issues with the baseline data that have implications for the monitoring and evaluation of Case Study 3. The first issue is that the baseline data from the automatic pedestrian and cycle counters was patchy for unknown reasons out of Sustrans' control, most likely to be faults, vandalism and vegetation. 2019 is the most recent year with sufficient data from the automatic counters to estimate the annual median daily totals of people walking and cycling. Counters can provide the volume of people walking and cycling, but not the diversity of people walking and cycling. While the Annual Usage Estimates include a breakdown of gender, age and mode, the incomplete baseline data from the counters may affect their accuracy. Moreover, the Annual Usage Estimates do not account for other demographic characteristics, like sexual orientation, socioeconomic status, ethnicity or disability.

The second issue with the baseline data is that the homogeneity of the sample makes it difficult to do any intersectional analysis. In this case, the bigger issue is who is not counted in the existing data. To engage with diverse groups who are not captured in existing data collection methods, more participatory methods that would also enable more in-depth community engagement (e.g. EQIAs, gender safety audits and accessibility audits) seem especially pertinent.

Conclusion

Case Study 3 recently won a Scottish Design Award for Public Realm/Landscaping. One of its main strengths is that accessibility considerations were integrated in the design and delivery stages. It is the only case study where an accessibility audit had been conducted and led to changes. It seems that accessibility would have been a more obvious issue to address because it is an elevated path, and so providing step-free access, as well as the presence and incline of ramps would have been key design considerations. However, the stakeholder said that accessibility issues, designing for all ages and abilities, were relatively new to him, and as an engineer, he typically had not encountered this in his previous work.

Two concerns identified in the accessibility audit were around lighting on the viewing platforms and potential problems for visually impaired people, which Scottish Canals took on board and addressed by adding lighting, a handrail and etched motifs in the glass at the viewing panel. However, some issues, such as creating landings at more regular intervals on the access ramp and widening the turn off the ramp from the viewpoint, were too late to

address. This highlights the need to do accessibility audits at an earlier stage well ahead of project completion. Importantly, Scottish Canals felt the accessibility audit was a useful, insightful and valuable process that should be done more routinely to create more accessible and inclusive places.

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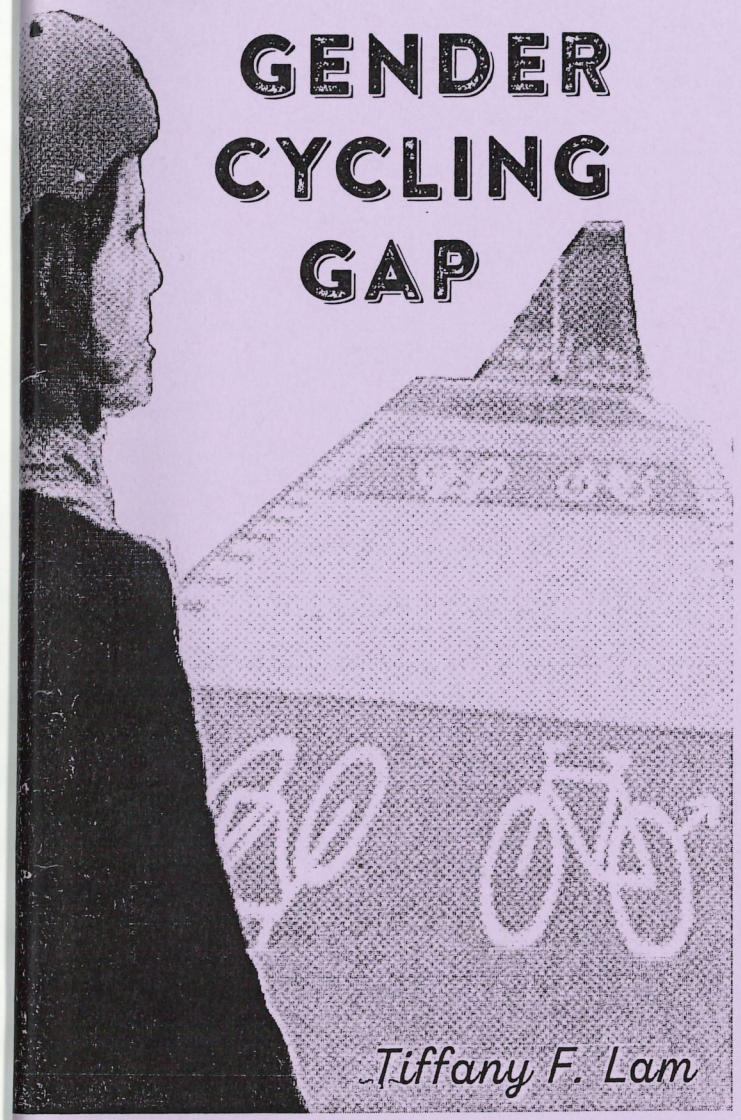
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Appendix 2: Mind the Cycling Gender Gap #1

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MIND THE GENDER CYCLING GAP



Tiffany F. Lam

The gender gap in cycling:

In the U.S., men make **75%** *of cycling trips.*

In the UK, men make **73%** *of cycling trips.*

"These voids are not there due to chance. They are the places of the possible. They contain the floating and dispersed elements of the possible, but not the power which could assemble them. Moreover, structuring actions and the power of the social void tend to prohibit action and the very presence of such a power. The conditions of the possible can only be realized in the course of a radical metamorphosis."

—Henri Lefebvre, urban theorist (1968)

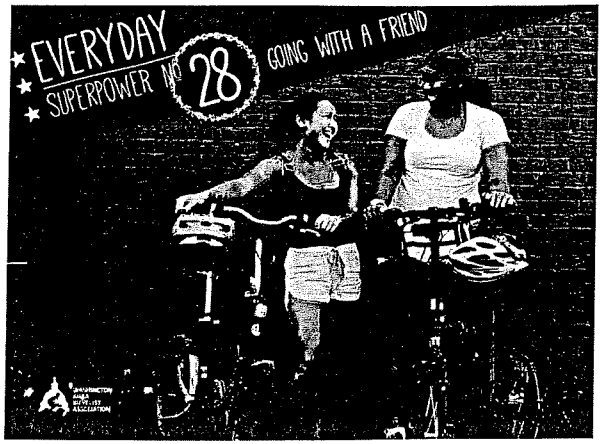
Dedicated to

Ben and Milly

INTRODUCTION

Going with friends. Discovering new parts of the city. Getting involved in local activism and politics. Saving time. Saving money. Feeling better—stronger, healthier, more alert. Unapologetically claiming space on city streets. These are just some of the everyday superpowers of cycling.

In the summer of 2014, the Washington Area Bicyclist Association (WABA) launched an everyday superpowers campaign, which celebrated how cycling could help us unleash our everyday superpowers—things that seem mundane, like getting to work on time and feeling ready to take on the day, saving money by not takisng public transport, enjoying a few more minutes of fresh air and sunshine—but together, accumulate to awesomeness. When I got that email, I immediately thought of and got in touch with my friend and bike mentor, Anica. Funnily enough, she also immediately thought of me when she read that email and suggested that we take a picture together. Our everyday superpower, which we came up with on the spot during the photo shoot, was going with a friend.



Anica was one of the first people I got in touch with to say I wanted to start cycling but didn't know how. I only started cycling in the summer/fall of 2013 when I was living in Washington, DC because my yoga teacher moved to Barcelona. I woke up at 5 every morning to go to yoga before work and used to just walk ten minutes to and from the yoga studio. After my teacher moved, the new studio I went to at her recommendation was difficult to get to, despite being only two-and-a-half miles away from where I lived. It took too long to walk to and there was no direct public transport link. On the metro, it was an inefficient, convoluted forty-minute ride, which entailed going north just to go back south, or south just to go back north. On the bus, it was a silly fifteen-minute walk to the bus stop, a ten-minute

bus ride, then another fifteen-minute walk to the studio.

Meanwhile, it was just a ten to fifteen minute cycling journey. Cycling obviously made the most sense but as someone who had never cycled before, it seemed like the most daunting and least feasible option. I couldn't have done it without help, encouragement, and support from my friends who also cycled. I had a laundry list of reasons why I couldn't cycle and Anica, among others, was nothing but positive, reassuring, and supportive. I practiced cycling alone and with friends in parking lots, on quiet roads, and on side streets until I got tired, discouraged, or too self-conscious; I crashed into quite a few garbage cans and parked cars; I incessantly moaned about my inadequacies to friends before I woke up one morning and just decided, *F*** it, 'm just going to try cycling to yoga today*.

Cycling just took over. Before I knew it, cycling had become my main mode of transportation. I started cycling to and from work, instead of taking the bus. This meant I arrived at the office more awake and energised than before. I bonded with other colleagues who cycle commuted. At the coffee machine and water cooler, we would commiserate about traffic and obnoxious drivers, compare

routes, and recommend bike shops and mechanics. After sitting at a desk for eight hours, I couldn't wait to get back on my bike and be outside again. I cycled to get groceries, to meet up with friends, to go on dates, to run errands, to go to happy hour. I got more tapped into the city's cycling scene. I became a certified cycling instructor by the League of American Bicyclists, which also happened at Anica's encouragement.

I also got involved with WABA's Women & Bicycles Group and became a "Roll Model" to get more women cycling. This is how I first learned about the gender gap in cycling, which was an issue I had previously never thought about. I worked as a Civil Rights Paralegal and routinely worked on sex discrimination cases against large corporations like Wal-Mart, so the notion of sex discrimination in cycling really intrigued me. As a Roll Model, I reached out to friends and friends of friends who didn't cycle to try and get them to start cycling. I organised group rides with my 'mentees,' usually chill weekend rides to a fun brunch spot. It was fun bringing people from different areas of my life together and exploring the city together on bikes. After all, I, of all people, knew first-hand how important friends, support, and encouragement are in getting people cycling.

Cycling made me cultivate a more intimate relationship with Washington, DC. I traversed new streets and developed a newfound appreciation for the row houses and trees dotting my way. I gained a deeper understanding of how the city pieced together. I started noticing cute cafes, bars, shops, and restaurants and recruited friends to cycle there and check them out with. I discovered parts of the city that I previously hadn't explored because they weren't well connected via public transport. I finally started volunteering at a domestic violence shelter I had wanted to volunteer at forever ago but never did since it wasn't metro-accessible. But now it was easily within reach on my bike. Navigating the city on two wheels made me feel more embedded in and connected to the city.

Cycling liberated me from street harassment since I was never still long enough to be approached by anyone and even if I were, I could get away so much more quickly on two wheels than on foot. When my female friends would tell me about harassing situations or sketchy characters on public transport, I was relieved that I didn't really have to deal with that any more. I grew up in New York City and started taking the subway on my own when I was around ten years old. Countless men had hollered at me, exposed themselves to me, masturbated in front

of me, and groped me on the subway long before I could understand what happened and why it was wrong. When I was cycling, I rejoiced in being just me, on my bike. Even when I felt creepy stares or vaguely heard catcalls, I was too busy focusing on the road to care.

Through cycling on roads designed for motorised traffic, I've had to learn and get used to constantly claiming space, mainly because I have no other choice if I want to be safe and stay alive. It's difficult to pinpoint exactly how this has translated to greater confidence in life off the saddle, but cycling has played a part in making me less hesitant in my decisions and myself. How's that for an everyday superpower? Cycling also propelled me forward professionally by leading me to the Cities Programme at the London School of Economics (LSE Cities) to study urbanism and better understand how power relations shape and unfold in urban space.

At LSE Cities, I wrote my masters dissertation on the gender gap in cycling in London. One of my favourite parts of writing my dissertation was interviewing women about their experiences cycling in the city. Doing this zine has been an opportunity for me to circle back to some of the wonderful women who happily talked to me about my research, and an

opportunity for me to meet and talk to even more women about our shared love for cycling. This zine is a collection of stories from women reflecting on how cycling in the city has impacted how they take up space in their bodies, on their bikes, in the city, and in life in general. These stories illustrate the intrinsic benefits of everyday cycling, particularly for women. I hope you enjoy reading them as much as I enjoyed gathering them.

CYCLING & CONFIDENCE

"Let me tell you what I think of bicycling. I think it has done more to emancipate women than anything else in the world. It gives women a feeling of freedom and self-reliance. I stand and rejoice every time I see a woman ride by on a wheel...the picture of free, untrammelled womanhood."

- Susan B. Anthony, American suffragette (1896)

These narratives explore how cycling has inspired feelings of empowerment or confidence on and off the saddle. As I read through the responses I got, one thing that stood out was that a few women prefaced their stories with statements like, 'Sorry, I'm a terrible writer, so it's fine if you don't want to use it' or, 'My writing is a bit shitty but hopefully this is okay.' Of course, none of the writing was terrible or shitty. If anything, this merely reflects how deeply entrenched the gender confidence gap is.

Studies show that there is a confidence, not competence, gap between men and women, which starts early on. Women and girls are socialised to

apologise for speaking up and taking up space. Women and girls are taught to downplay their achievements and capabilities. When you've been trained your whole life to diminish yourself, take up less space, and always put others' feelings before your own, it can be difficult to un-learn these deeply ingrained habits, even if you are well aware of the gender confidence gap. Patriarchy dies hard.

As the following stories illustrate, there is something to be said for how cycling can help cultivate the habit of physically claiming space, which can roll over into other areas of life.

WHO BIKES THE WORLD? GIRLS!

Julia Thayne

I've always liked cycling as a means to explore nature and visit friends, but it wasn't until I started cycling for my commute that I reflected on its relationship to my own sense of female empowerment.

You see, I work at a large corporation—350,000 employees, to be exact—and there's nothing informal about our workplaces: Strict business dress, a predominantly male workforce, and offices mostly in high-rise buildings, which are far more likely to contain parking garages than bike racks. When I started to commute by bike, I would wear workout clothes, maybe not as intense as the MAMIL uniform, but a far-cry from my work clothes, to be sure. As I became more comfortable with cycling, though, I found myself wanting to reclaim those extra 30 minutes in the morning (time changing clothes and showering). And soon enough, I did.

Parisian-style, I'd wear my work clothes as I biked to work—often cycling in dresses, skirts, heels, whatever (the more improbable, the better). People,

even girlfriends, would ask, "Did you really bike in *that*?" I loved being able to say that I did: I felt like I was mainstreaming cycling by, first of all, just being a woman who cycled, and second, being a woman who cycled in whatever-the-f*** she wanted to cycle in. In that way, cycling wasn't just a fashion statement, with the bicycle itself becoming an accessory to my outfits. It was a statement, period. In commuting to work by bike, I was actively showing that I cared about sustainability, that I wasn't afraid to be cycling while female (catcalls and all), that I was willing to take up physical space on roads even if cars got angry, and that I was going to make the cycling experience my own.

The result of all this? I'd walk into work every day feeling like Beyonce—a perfectly put together, badass female who was taking care of mental and physical being, while doing something that was overall positive for the community.

Julia Thayne believes in the ability of cities to effect positive change worldwide, and her work focuses on empowering public and private sectors and the public to shape cities using a community-based, data-driven approach. Formally, she is the Director of Urban Development at Siemens' Center for Cities; less formally, she is active in the urban development of her own city, Los Angeles. In her free time, she also likes to bike—obvi.

THIS IS HOW I ROLL...

Simone Salmon

I got into cycling by accident. I was living on my own and suffering from travel poverty. I was holding down three jobs and already cutting back on so much to keep my head barely above water. For instance, I'd go to bed early and turn off the heating, I'd shop exclusively at the reduced section of supermarkets, I'd walk to work most days and take the bus back to minimise bus trips. But I still wasn't making ends meet.

One day, my cousin mentioned that she was having a clear-out and could give me a bike in her shed, but it needed lots of work. I immediately said yes. The bike was a Godsend, a lifeline that gave me freedom and autonomy. Not having transport or money really limits you geographically. With the bike, I could get to my jobs and spend more money on food or heat, which made such a difference.

I had no road experience and had to get grips with riding on the road. Once I was riding a Brompton

bike, the epitome of British-ness, and the MAMIL[1]* next to me at the traffic light refused to make eye contact with me. Usually cyclists make eye contact with each other and/or smile, but for some reason he didn't even look at me. It was like hateration but silent. He seemed to resent that I was riding a Brompton. I felt it was because I, as a woman of colour, wasn't supposed to be on a bike, especially not a Brompton.

Cycling still seems to be an elitist pastime, not the domain of women or people of colour. It's also hard to access the culture that comes along with it, like joining a cycle group and having the correct gear. Cycling has to become a common/normal sight for wosmen. I seek out and stay in touch with role models, other women who love cycling and do it daily. For me, cycling means getting around for free, on my own steam. It lifts my mood and makes me feel good. This is why I continue to cycle.

Simone Salmon hails from Greenwich in Southeast London. She works part-time and runs a bike maintenance project to encourage different types of riders.

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1 Middle-aged man in lycra

RECLAIMING SAFE MOBILITY: CYCLING AS A REPRIEVE FROM EVERYDAY SEXISM

Isabel Meier

I think the main reason why I love cycling in big cities is because public space feels so contested, particularly in London. On public transportation or just walking down the street, men invade my personal space every day: Men come too close, make comments, or just stare at me. These experiences don't just last for a few seconds. Often they take up a lot of emotional and mental space, even days after the encounter. The discomfort, fear, and anger add to my collection of everyday sexism experiences that impact on how I behave in and move around public space. I'm always looking out for situations that could turn into harassment and discomfort, so my behaviour has become very avoidant. I try to not walk alone in the middle of the night, I try to escape public transportation during rush hour, and I usually read or listen to a podcast so I don't have to manage men staring at me.

Cycling, on the other hand, I experience as creating space around me that I don't need to defend. Even

though this space gets invaded a lot by cars, buses, taxis, or people on the street verbally harassing me, these incidents feel different because they usually only last for a few seconds (until I cycle past). Therefore they feel less impressionable on my body and emotional well-being. Sitting on my bicycle, I feel more freedom, safety, and agency compared to any other mode of transport.

When cycling, there is always the possibility to physically distance myself from people when needed. On public transportation that is not always possible. If you are standing on a packed bus or tube, there is no escaping men pressing themselves against you or staring at your legs for 30 minutes. Not feeling "stuck" in these harassing experiences is important. There is freedom in experiencing/learning it's okay to move away, to disengage from people that make you feel uncomfortable for whatever reason—in harassing situations on the street and elsewhere in my life: activist groups, friendships, and relationships. This is something I didn't grow up learning, rather the opposite, actually.

Public road space is also very male-dominated. Often, when I stop at a traffic light and look around, all I can see are young and middle-aged men in

Lycra. So it feels important to appear there and take up space.

Isabel Meier lives in London and works as a PhD researcher at the University of East London. When she is not cycling around London collecting memories of everyday sexism and harassment, she explores affective dynamics around asylum activism. Drawing on her own activism experience, she investigates how political spaces are affectively experienced by bodies that are controlled and regulated by everyday bordering practises.

"TAKE THE LANE!"

Sarah Murray

The first time I rode a bike in London, all I remember is my boyfriend screaming at me to 'Take the lane! Take the lane!' Unable to do as instructed, I was left behind as he turned right and I was herded forward by the busy traffic. As a woman, I have often felt conditioned to be seen and not heard, to not be a nuisance, to not get in anyone's way. To cycle safely in London, you have to go against impulses that have been drilled into you by society. On that first day, I didn't want to annoy or inconvenience any of the drivers, but in doing so I put myself at risk.

I've improved since then, but it is a constant internal struggle to remind myself that I have just as much right to the road as anyone else. And although it is always nice to be considerate, sometimes you just need to occupy the space you deserve. Interestingly, in overcoming my need to 'remain small,' I have noticed benefits in other areas of life outside of cycling. I'm not going to pretend the changes have been monumental, but I'd like to think I participate more in meetings and stand my ground when my

opinion is being questioned (at least for slightly longer than before). For me, cycling hasn't fixed the problem, but it has started definitely a journey towards full occupation of all the space I deserve.

Sarah Murray, rookie cyclist with an interest in gender disparity. Based in London.

AM I A "CYCLIST" YET?

Ella Morrison

I began cycle commuting in London quite recently (about 10 months ago) because I started going to the gym before work and cycling was the most direct route. The decision to cycle was made easier given that a) the directions there were fairly straightforward; b) it was early in the morning so the number of cars and other cyclists was pretty minimal; and c) we had bike storage facilities and showers at work. Having this "quiet" time to essentially practice my road cycling skills (e.g. road etiquette, speed, dismounts, etc.) in "private" increased my confidence massively. I wasn't in the centre of the city, competing with your average (affluent, white) male cyclist, and there weren't other people walking/driving to witness any potential mishaps.

After this 4-month "trial" period of commuting to work, my life circumstances changed as I began my masters at University College London. This cycle route was substantially longer and more centralised then my previous one. It felt less automatic and I had to engage with the road and route more. If it

weren't for my practice period of cycling to work in the morning, I don't think I would have been confident enough to tackle my new commute.

Doing my dissertation (on increasing cycle commuting among women in London) has made me more comfortable to join new cycling networks. Because I cycle I feel like I can contribute to topics such as, the facilitators/barriers to cycling or what I find annoying/useful about London cycling. However, I think it was also my confidence in other aspects of my life (interpersonal relations, work, sports) that had more of an effect on my willingness to cycle to work. In general, I think I am a confident, competent person and perhaps sometimes quite commanding, so it could be that these qualities made it easier for me to feel comfortable cycling.

Ella Morrison was born and brought up in Hong Kong but now lives and cycles in London. Despite her urban upbringing, she has an undying love for the outdoors and adventure, particularly the two-wheeled kind!

RECLAIMING THE NIGHT

Nikki Ray

Cycling has reclaimed the night for me. This is something that happened by accident really. Cycling is my only mode of transport; therefore this doesn't change when I go out at night. I find using my bike so reliable and convenient that it doesn't cross my mind to take public transport, which of course you have to pay for. Who would do that when you can ride for free? It was only on rare occasions recently when I had to get public transport and walk home alone at night that I started to reflect on how safe and empowered I feel riding my bike at night. Often you are riding alone on the road anyways at night, which I find quite a meditative experience. But the notion that I can speed away on my two wheels from a situation—for example, harassment from a pedestrian—makes me feel really good.

Training as a cycling instructor encouraged me and gave me the confidence to physically take up more space on the road. In turn it makes me feel

safer on the road, which is very satisfying and empowering. Forcing a taxi or a van to wait behind you when a space is too narrow for them to overtake you, because of your road positioning, is a powerful thing. Teaching other women and children to do the same, as I do for my job, is something I find very fulfilling, as more often than not, it is women that I see "hugging the pavement" as they ride along the road. It is almost like they are physically apologising for being out on the road. This mind-set is what we need to change. Some women I teach how to cycle have absolutely no interest in ever riding on the road, for them this is a step too much. The plus side is I would say 95% of adults that I teach are women, so I feel there is a lot of potential to change this culture.

Nikki Ray lives and works as a cycling instructor in London. But she much prefers cycle touring further afield.

CYCLING LONDON: 30 YEARS AND COUNTING

Meg Willett

I've been cycling in London for nearly 30 years. Six months after I moved here I brought my bike down and have never been without a bike since. I regularly commute 12 miles a day, sometimes twice that, five or six times a week. I take direct routes, often sharing main roads with heavy traffic, because I don't think I should be forced to take longer designated cycle routes. The roads are mine, even if I have to share them with bigger vehicles. I generally find other road users to be considerate, especially if you treat them with respect. There is the odd exception. If I have been pushed aside or cut off by another road user I take great delight in catching up with them at the next set of lights, overtaking, and then ignoring them. I often travel at night or very early in the morning and I feel much safer on my bike than on foot or using public transport.

I do feel empowered riding my bike on the busy streets of London, it's the quickest and cheapest way to get around, and I'm not relying on anyone else.

It's hard to know how if this has impacted the rest of my life because I have always ridden. I was lucky to be raised by a biking dad who made sure I had a safe set of wheels, which allowed me independence from an early age. The period of my life when I had the least amount of freedom and control was when I was raising two small children, which was also the time I was unable to ride my bike (they hated going on the back). This was in the days before trailers and the girls hated riding on the back of my bike. Now they're older and they've discovered independence through free local public transport for children. However, as my eldest turns 19, free transport runs out...so she's talking about getting herself a bike.

Meg Willett is a mum, a librarian, and a yoga teacher from the UK. She aims to live her life leaving a small ecological footprint so she's vegan, she doesn't buy much, she shops local, and to get around she rides her bike.

CYCLING & THE CITY

"The right to the city is, therefore, far more than a right of individual access to the resources that the city embodies: It is a right to change ourselves by changing the city more after our heart's desire. It is, moreover, a collective rather than an individual right since changing the city inevitably depends on the exercise of a collective power over the processes of urbanization. The freedom to make and remake ourselves and our cities is, I want to argue, one of the most precious yet most neglected of our human rights."

—David Harvey, urban theorist (2008)

"As we collectively produce our cities, so we collectively produce ourselves."

—David Harvey,

Urbanists love to talk about "the right to the city." But the "right to the city" can seem like such a nebulous concept. How do you exercise your "right to the city?" What exactly does it mean to "change

the city more after our heart's desire?" Or, to have "the freedom to make and remake ourselves and our cities?"

One way to think about "the right to the city" is having the freedom to safely move around in urban space (on two wheels or on foot) without physical or verbal threat. This includes freedom from road traffic danger as well as street harassment. Safe urban mobility enables us to explore the city and enjoy what it has to offer—the people, the nooks and crannies, and the educational, cultural, and professional opportunities to explore and take advantage of. Another way to think about "the right to the city" is having the ability to carve out, claim, create, mould, and play with space in cities. Cities shape us and we, in turn, shape our cities.

The following anecdotes reflect on how cycling impacts the way we experience, learn about, interact with, and find our place in the city. Some of these stories are by architects, women whose jobs require immersion in and engagement with urban spaces, on the value of city cycling on a personal and professional level. All of these stories illustrate and interweave different ways that cycling enables us to positively interact with and evolve in the city. Through cycling in and around the city, we can

exercise our "right to the city," whether that is by finding new and meaningful ways to engage with the city, or by feeling a greater sense of belonging in the city.

THE PERFECT WAY TO ENGAGE WITH THE CITY

Kathryn Firth

Urban cycling is the perfect way to engage with the city. Extensive distances can be covered in a way that is impossible on foot, yet one does not lose the immediacy of the sights, sounds and smells as one does in a car or bus.

One is forced into a heightened awareness of one's environment. An urban cyclist is both a participant in urban life and a voyeur. While the perils of urban cycling are undeniable, as a woman cycling I have always felt somehow safe and removed from the everyday discomfort one might feel walking through the city—in other words, I will cycle down a dark alley but not walk down it.

Coming from a background of living in North American grid cities, London initially felt impenetrable, a maze of streets with little hierarchy. Over time cycling through the city allowed me to make sense of the morass of networks and to piece together the different neighbourhoods. With this

also came great moments of discovery—purposefully or, even better, accidentally.

As an urban cyclist one becomes the member of a sort of club without doing anything more than being out and about on 2 wheels. For the most part there is a camaraderie that encompasses a diverse collection of people who, were they not on bikes, one might have nothing in common with. Of course, within the growing population of urban cyclists, like any club, there are sub-groups—the couriers, the lycra speedsters, the amblers—who may approach the streets in, and with, very different manners. The hope is that ultimately we are all looking out for one another in a way that is rare amongst car drivers. I have happily observed that women, in particular, do look out for one another.

Kathryn Firth is an urban designer with over 25 years of international public- and private-sector experience. She currently is the Director of Urban Design at NBBJ Design based in Boston. Prior to this she was based in London for 20 years, where from 2011-2015 she was chief of design at the London Legacy Development Corporation, directing the transformation of the 2012 Olympic Games site.

MY BIKE, MY CITY

Raphaelle Moor

When I started cycling in London I was very nervous and adamant that I would just follow the one route I knew to my office via the network of small back streets, which I had memorised. These streets came with their fair share of speed bumps. When I hit the slightly terrifying Camden junction I would get off my bike and walk until I was back onto a small road again. A year later and I will happily ride anywhere in London—to meetings, events and nights out—even venturing from my North London haven to cross the river and go southbound. The freedom and independence that I feel when I am on my bike is intoxicating. Rather than being shuttled around the city's underground network, I am in control of my journey and engaging with my surroundings.

London is a city of villages and it is only now that I am cycling that I understand how all these streets and areas connect together, outside the strict limits of the tube network. There is a sense of vulnerability being exposed to the elements and surrounded by fast moving chunks of metal, but it also means that

I need to make my presence known and felt. In a city like London where you can often feel like you are being swept along in the crowd, that sense of presence, control and freedom is welcome. Every neighbourhood I cycle through I feel like I own another part of the city and it starts to feel more and more like home. I have recently started volunteering in my local area, five years after first moving to London and I think that is no small part thanks to cycling.

Raphaelle Moor has lived in some of the world's biggest cities—Bangalore, Jakarta, Bangkok, Kathmandu—and has now settled in London where she works in digital transformation. As a long-suffering commuter she has a keen interest in the impact of infrastructure and mobility on our health and well-being.

CITY CYCLING FOR COMMUTING AND LEISURE

Emma Illingworth

Cycling has been my preferred mode of transport for many years for commuting and leisure. I've cycled in many different cities around the world and have found it to be a liberating and empowering way to get around and learn how to navigate new areas. I like the sense of being in control, that I can go as quickly or slowly as I choose, as well as being able to choose my routes, that it can be solitary or sociable activity. While I've done lots of city cycling, when I moved to London I was initially intimidated about cycling. To gain a bit more confidence, I completed the first level of a free Bikeability course, offered by Bikeworks at Bethnal Green. Doing this confirmed my good practices and gave me some tips on how to improve. In London, I feel safest when I am riding as part of the traffic when it's on busy roads, but I really like the Quietways and the Cycle Superhighway routes. Hopefully London will continue to develop and improve the cycle routes around the city. Cycling in London can be challenging in that I feel like I have to have my eyes in all places at once. I

have felt intimidated by other, somewhat aggressive cyclists at times, but on the whole I continue to gain confidence the more I cycle. I feel I am becoming more assertive, but without that aggression or arrogance I sometimes experience from other cyclists. That's not to say I don't make bad decisions on occasion. I try to cycle with awareness of other people using the space; responding to other cyclists, drivers, pedestrians in a way in which I would like to be treated, with respect. This, I feel, does reflect how I try to be in other aspects of my life, too. I don't know that I'll ever feel 'at home' in London, but cycling is certainly helping me make the most of living here.

Emma Illingworth lives and works in London. She relies on her bicycle, Wallace (a Wild Wind Puch), cycling pretty much every day whether to and from work, to classes and activities, to meet friends for fun times or for general exploring around and beyond the city.

FREE WHEEL

Paola Zanotto

I always loved cycling. My parents bought me a bike when I was 5 and always encouraged me to cycle. When I finished university they gave me my first road bike, which I adored and took it as their way of saying, "Off you go, explore the world!" I had a bike when I lived in Granada, Spain for my Erasmus year abroad. I rode on weekends beyond the city boundaries to the countryside, and I discovered that the city worked because of a wider system in the adjacent valley–the food produced in the agricultural land, the olive trees, the vineyards. I studied architecture and planning, and what I saw cycling around Granada amazed me so much that I presented the regional valley system as a case study.

Then I moved to London. I had no money but commuting by bike gave me the freedom to move around for free. I was amazed by how close certain places are, how they are connected, how nice is to stop along the way somewhere just because you casually meet someone or find something

interesting. I didn't question how many other women were cycling on the road; I just noticed that strangely, none of my female friends had a bike. By the time I was 27 I already had three bikes! In 2015 I started enjoying cycling long loops outside London. Going beyond my commuting routes and exploring Greater London and Southeast England made me discover how people live and move, how the landscape evolves from the Thames to the sea, the beauty of Surrey Hills, the colours of the countryside in Essex. It gave me a powerful feeling: The energy of my legs was the only limit to how far I could go.

I also became aware of how beneficial group riding can be, which is how I came across the gender gap in cycling. I joined a group called Pedelle, the "female branch" of the Club Peloton (a cycling club for people working in the property sector), which creates a friendly, inclusive, and collaborative environment for women in cycling. I loved Pedelle. It improved my confidence and pushed me to go beyond my mental and physical limits. In March I will ride from London to Cannes with Club Peloton: Of our group's 190 cyclists, only 12 are women. I would never have embraced this challenge if it weren't for Pedelle. It is important to ensure that people of all abilities feel able to cycle in and out of the city. The gender gap

is not the only gap: We need to work on the age gap, weight gap, wealth gap, and ability gap, too.

Paola Zanotto is a PhD architect based in London with a passion for urban studies. She studied architecture and urban design at the University IUAV of Venice, Italy, did freelance competitions related to urban regeneration, and then started working at Karakusevic Carson Architects, award winning specialists at the forefront of urban regeneration and housing architecture across London.

SUBCONSCIOUS COMPETITION

Kay Hughes

As a designer my subconscious engages and creative thoughts run free when cycling. I escape self-imposed horizons and play with ideas around movement and place and how they are reconciled. But because I cycle in London, still a dangerous space to be on a frail bike, my mind has to transfer from the subconscious to the conscious, to negotiate the other cars, bikes, and pedestrian road users and survive.

This constant transition between the physical and subconscious dreaming is very real: Seeing, thinking and experiencing, but at the same time self-sufficiently negotiating with other road users. I see this as an allegory for the creative individual in complex multi-stakeholder environments.

It is one that is familiar to me from working on big programmes such as the London 2012 Olympics where rapid decision-making and mediating between cross professional teams is an essential part of the role. Where creatively setting a vision to

draw together landscape, place, infrastructure and homes is an essential response to find solutions to dense, complex problems and achieve continuity and beauty.

Transiting the city by bike allows one to imagine a better world, one that is quieter, calmer, healthier, and truly joined up but at the same time it requires one to mediate actions and decisions. Cycling is an activity for imagining, where the empowerment it brings is useful on or off the saddle.

Kay Hughes is Director of Khaa a consultancy that focuses on design-led project delivery and design team selection processes. From 2006—2012 Kay led the design of the East London Olympic Park for London 2012. Kay Chairs the Otterpool Park Garden Town Design Review Panel, Co-chairs the HS2 Euston Design review panel, and is a member of the ICE awards shortlisting panel and a CABE Building Expert.

SIDEWAYS

Jenni Gwiazdowski

Lately I've been telling people I got into the cycling industry sideways. I didn't do the typical bike shop climb where I'd start out as an unpaid underling, then work my way up the ladder to a manager or mechanic. I was a marketing assistant at a small environmental charity, who somehow decided that I'd open up a bike kitchen in London, regardless of not knowing anything about bicycle mechanics or business. And I'm privileged enough to have the education and experiences to help me figure out how to get London Bike Kitchen off the ground with zero money.

I knew straight away that I wanted a separate women's night to run alongside our regular offerings. I also knew that I was an anomaly, someone who wasn't going to let not knowing how to do something stop her. But I wanted to make sure that I left the gate open for others to follow me into the workshop. I wrote about this in a blog post, even before we opened our doors, and I was contacted by future

volunteer Fenn, who said they'd like to help create this night: And so Women and Gender-variant (WaG) nights were born.

Our WAG nights are a gateway drug into the world of bicycle mechanics. They're not meant to replace any of our classes, but merely some "positive discrimination" to provide a sideways experience in a classic bike workshop space. People can become familiar with tools, ask "stupid" questions, and learn in a safe environment. We have a set programme that repeats, so people can always see what's going on. LBK's been running for 6 years now — I'd say that when we started, our general workshop students were exclusively white/male/millennial — now we're a good 50/50 divide if you want to put people in gender boxes, and we have a generous spread of ages and gender-variant folks as well.

There are often cries from those who fear having opportunities taken away from them. But we created a new space without taking space away from anyone else. A rising tide lifts all boats, and we have seen the benefit of more knowledge being shared. It's time to let go of the notion that our ideas and spaces are finite, and shift sideways into a better bicycle world.

Jenni Gwiazdowski is the director of the London Bike Kitchen, and author of How to Build a Bike. Originally from California, she now lives in London and dreams of a future where she can live in the mountains with a cat and dog that are best friends.

FOOD FOR THOUGHT

"...the right to physically occupy city public spaces is a tangible sign of city-citizenship. We believe that for women to truly claim citizenship, we must be able to claim public spaces with our bodies, by writing our claim through our movements."

—Shilpa Phadke, Sameera Khan & Shilpa Ranade, Authors of Why Loiter? (2011)

73%—75%

Policymakers and local governments have increasingly been recognising the various health, environmental, social, and economic benefits of cycling. But men make approximately three-quarters of all cycling trips across the UK and the US. This gender gap has not changed despite massive investments in cycling infrastructure in cities in both countries over the past decade.

As cycling continues to rise on the policy agenda in cities worldwide, it is imperative to address the gender gap in cycling. The gender gap in cycling

must be treated as a significant policy issue. Cities are setting ambitious cycling targets but these targets will not be achieved unless inclusive growth is on the agenda. After all, cycling cannot be a truly sustainable mode of transportation unless it is inclusive.

This zine breathes life and texture into the 25%—27% statistic. While it's important to understand why women don't cycle, it's equally important to understand and celebrate why they do. The voices in this zine amplify the perspectives of women who cycle on the intrinsic value of cycling, particularly for women. Even if this may not be quantifiable in the same way the environmental, economic, or health benefits of cycling can be, it deserves attention.

One proven effective way to get more women cycling is through targeted outreach, education, and encouragement schemes. The Washington Area Bicyclist Association's Women & Bicycles Group in Washington, DC that I was involved in is just one example. We've heard others, too: In London, Simone runs a bicycle maintenance project to make cycling more accessible and inclusive. Nikki is a cycling instructor whose students are mostly women. Emma is a beneficiary of cycling instruction. As she said, it confirmed her existing good practices and helped

her improve. Jenni launched and runs the London Bike Kitchen, where she started WAG-nights to create a safe, supportive, and inclusive environment for women and gender-variant people to learn about bicycle mechanics.

In addition to these inspiring local, grassroots efforts, there is also growing recognition among academics, policymakers, and planners that we need to better understand and address the gender gap in cycling. Issues around cycling equity are gaining traction among academics, which includes analysis of gendered perceptions of safety in public space and how that impacts women's cycling, as well as how to make cycling an inclusive, everyday thing that *all* people can do. One tangible action for policymakers and planners is to be more mindful of the language and images they use to talk about cycling and cyclists: Is there a diverse representation of cyclists? Is cycling represented as an everyday thing for everyone to do, or as an elitist pastime or an athletic activity? One tangible action for engineers is to broaden the way they think about safety, such that it incorporates gendered perceptions of personal safety (from street harassment and violence), in addition to road traffic danger.

Scaling up to an international level, another reason for hope is that gender equality has been embedded into the United Nations Sustainable Development Goals: Sustainable Development Goal number 5 is to achieve gender equality and empower all women and girls. This international framework is a milestone because it links sustainability to gender equality. The United Nations also recently launched a Safe Cities and Safe Public Spaces flagship program, which was founded on the basis that lawmakers and policymakers must address sexual harassment and violence against women and girls in public spaces. Whereas lawmakers and policymakers recognize sexual harassment and violence in the private sphere (i.e., the home) largely as human rights violations, it remains unaddressed in public spaces, or perceived as just a part of everyday life.

Together, all of these grassroots, academic, urban, national, and international contributions "contain the floating and dispersed elements of the possible." Collectively, we have "the power which could assemble them." Through collective action across multiple scales—the local level, the city level, the national level, the international level—we can coalesce these efforts to close the gender gap in cycling, and shift gears into a more equitable, inclusive cycling world.



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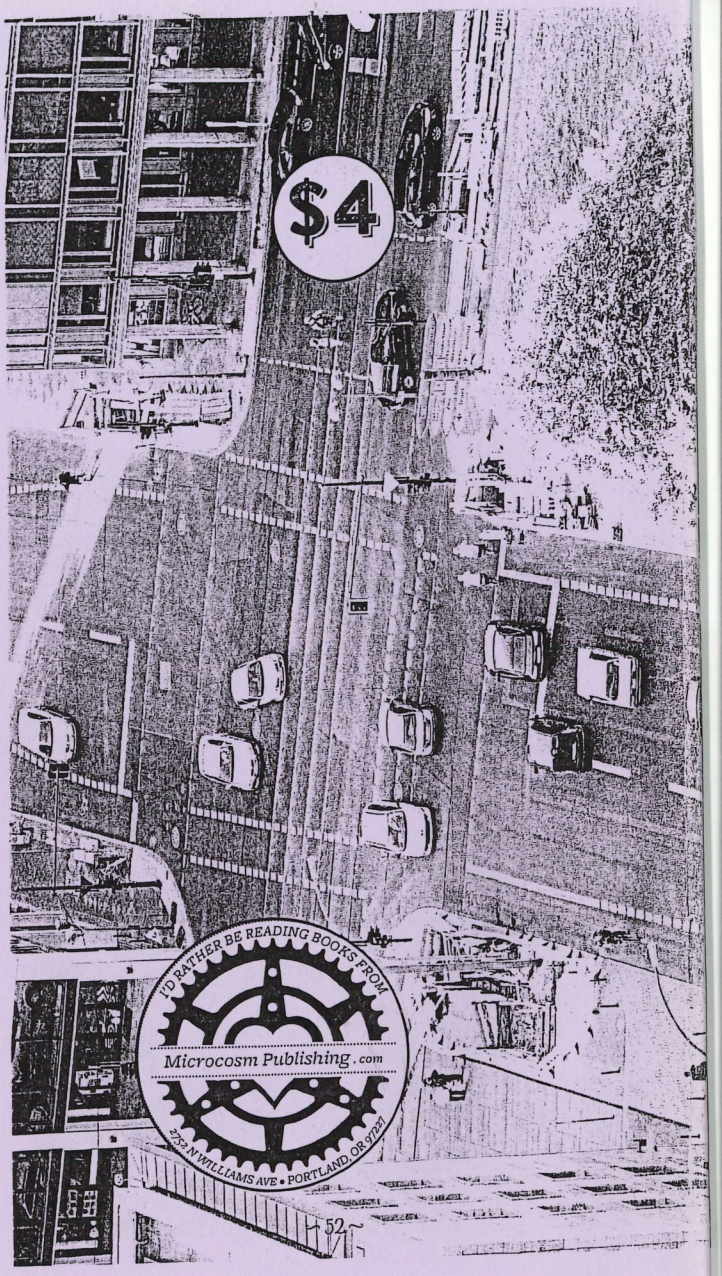
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Appendix 3: Mind the Cycling Gender Gap #2

Lam, T. (2018). *Mind the Cycling Gender Gap #2*. Portland: Microcosm Publishing.

MIND THE CYCLING GENDER GAP #2

FREEDOM TO RIDE



Tiffany F. Lam



My friend Minah texted me the following messages shortly after the first issue of this zine came out:



This is my favourite kind of feedback! Once upon a time, before I was confident enough to bike to work, I dragged Minah to a playground nearby so she could supervise me while I cycled around in circles and make sure I didn't crash and die, which I assured her I would. I remember her standing there, getting kind of bored and telling me, 'I don't see what the problem is. You got this!' It's great to sort of come full circle now and hear about her plans to get a bike and start cycling, too.

Studies consistently show that to get more women and other under-represented groups cycling, in addition to quality cycling infrastructure in the built environment, encouragement is also crucial. Just think about it: If you're about to try something new and you don't know that many other people who are doing it, wouldn't you want to talk to someone who was already doing it? Wouldn't it be helpful to get more information, encouragement, and support from someone who could relate to what you were going through, talk you through some of your concerns, help you build confidence, and reassure you that it was totally possible? For me, having friends who cycled to encourage, support, and inspire me to start cycling and to keep it up despite off-putting experiences and setbacks made all the difference.

Working on this zine has been such a fun and energising process. Not unlike the first issue, I've found the stories in this issue also quite empowering, engaging, and enlightening. It's been delightful connecting with women around the world who share a passion for city cycling and making cycling more gender equitable and inclusive. More importantly, it's been wonderful to provide a platform to amplify the voices and experiences of women cyclists in different parts of the world. This issue features voices from Amsterdam, London, Lahore, Luxembourg, Seattle, New York, and Ottawa.

Without further ado, let's hear from the following women who cycle and love cycling:

Daphné Dupont-Nivet—Dick bike
Marion Sharples—Mobile, free and safe
Fizzah Sajjad—Never too late to learn
Emilia Smeds—London logistics and torn identities
Helena Clarke—Cycling wonders
Clarissa Clarim—Cycling and freedom
Simone Salmon—New cycling era
Barb Chamberlain—Bike/life lessons learned
Leeah Chu—Mostly human and soon-to-be mom
Charlotte Masemann—Any body can bike
Noor Rahman—Pedalling to fight patriarchy in Pakistan

DICK BIKE

Daphné Dupont-Nivet

Here's a dilemma. Would you rather have a woman wear pants so that she could ride her bicycle with ease, or stretch the limits of your creativity to design a skirt-friendly bike?

'But Miss Dupont-Nivet, how could this be a quandary in any way?', wise men would have asked me in the 1870s.

Well guys, you must've never worn a prom dress while cycling? It wasn't my best idea, I have to admit, but I did it, and it made me feel good. Especially afterwards, while bragging about it when living abroad, in less bike-friendly countries than my own. I came of age in the Netherlands, the self-proclaimed centre of the cycling universe. (We ignore that the Danes also claim this title—those usurpers.)

I rode my bike anywhere, anytime, in any outfit.

But back in the day, women were to stand aside in their elaborate dresses while men happily rode



their penny-farthings down the roads. (Say what? You know, those old-timers with a huge wheel in front and a tiny one in the back.) When cycling, the ladies' dresses would get all tangled up in the big wheel. Or worse, inconveniences aside, girls sitting on that high saddle would present unsuspecting

passersby with a glorious upskirt view. Such sass, much horror!

In my early twenties I would whiz around the city in a miniskirt. Every red light posed a challenge. Would they see my underwear when I descended—and would I mind? I couldn't care less. This was my city, my bike, my body—hell, my panties. I was getting places.

Inventive engineers proposed a solution to the penny-farthing problem. They created a phallic-shaped female version of the bike: The female rider, dressed in full, would be modestly seated between two huge wheels, pedalling herself forward whilst conforming to the rules of decency. Win-win: Why question gender norms, when you can also design another way out?

Yet, gender norms would soon change. Right before the turn of the 20th century, the new 'safety bike' (similar to the bikes we ride today) offered women "a steed upon which they rode into a new world." Women now wore puffy pants, their 'bicycle suits'—they may have gotten some dirty looks, and then some, but eventually conquered the right to ride.

These days, I mostly wear pants when cycling. Not because of decency, but because I mostly wear

pants. True? Or have I adapted to society's wishes—those of foreign cities, former eras? Am I a product of history, or is history on my side?

No, let's not take sides, but allow women to ride on any side of the road, and side with women anywhere, anytime, in any outfit.

Daphné Dupont-Nivet is an Amsterdam-based (investigative) journalist, researcher, historian, feminist and avid cyclist, simply by virtue of her mother's roots.

MOBILE, FREE, & SAFE

Marion Sharples

Cycling is empowering because you are in your own little space. You aren't sharing space with others on public transport, where you're at risk of harassment, assault, unwanted attention or conversation, etc. Even if you are harassed at traffic lights or other places where you're stationary, this is time-limited as you can remove yourself quickly from the situation and get away fast—faster than you could on foot, for example, or having to wait for the next train station to change carriage etc. You are mobile and free and safe.

You get to know your city well and this is empowering. This morning I cycled 45 minutes from Kentish Town to Herne Hill and I didn't have to stop and check my phone once for directions. I know the streets, I know the routes, I know how to get home, to get about, and this is powerful—Knowledge is powerful! You are in control, you are the one navigating, you are taking responsibility for your own mobility and you are taking up space in the city.

You are also taking up space in an activity dominated by men. I am proud to be a woman cyclist, I'm proud to take up space in the cycle lane, to cycle in a skirt, even in heels sometimes if I have a big meeting! Challenging stereotypes, making cycling more 'normal' and less scary / foreign / only for men / only for professional cyclists—I love that.

Marion Sharples is a feminist activist and campaigner. She started cycling in cities in 2011 while living in Berlin and has stuck at it since, living in Bogota, Brussels and now commutes by bike every day in London. Last year she stepped things up a notch, bought a pretty road bike that she adores, completed her first triathlon and isn't quite sure how that happened.

NEVER TOO LATE TO LEARN

Fizzah Sajjad

Most people are pleasantly amused to hear that I learnt how to cycle at age 31 in London, and that too, with the help of a cycling instructor! I grew up in Lahore, Pakistan, never learnt how to ride a bicycle, and never really felt the need until I moved away from home to Boston in my mid-20's. I realized then that almost everyone around me knew how to cycle but I didn't. When I asked my parents why they hadn't taught me, they said they couldn't really remember why. But it turned out both my brothers knew how cycle. So how did they learn? My mother suggests that it was probably easier for them to learn since our neighbourhood didn't offer a friendly environment for girls to cycle given the number of men in the streets.

Friends in Boston offered to teach me to bike but I kept putting it off thinking I'd be terrible at it, a slow learner, may just not be able to do it at all. I'd also constantly see bike accidents in the city. Aside from one short lesson where I insisted that

my friend not let go as I peddled, two years passed and I moved back to Lahore. The question of cycling became irrelevant again as women generally do not cycle here due to social norms, climate, the threat of harassment, poor traffic conditions. For that matter, while a high proportion of men cycle, they mostly only do so if they do not have access to motorized transport. Cycling in the city represents a deep gender and class divide, and it is reflective of city design that prioritises car users.

I moved to London a year and a half later, and it took me nearly two years to find the courage to sign up to learn how to cycle. This was when I was just about to move back to Lahore. At first I contacted a private training centre in Bermondsey. They suggested I explore free cycling lessons offered by Councils through Transport for London. My colleagues and friends encouraged me to do it. A friend joked 'you're South Asian, you're a woman, they're definitely going to want you to sign up!'

After a lot of procrastination, encouragement from colleagues, I signed up for my first training session. I was terrified and extremely nervous, didn't think I'd be able to learn. My instructor, however, tried to put me at ease, told me 1 in 10 didn't know how to cycle in London, ran through the basics, and held on

LONDON LOGISTICS & TORN IDENTITIES

Emilia Smeds

I would not call myself a cyclist, I am just a person on a bike. Cycling has nothing to do with how I define myself, other than the fact that I've always been concerned with environmental issues, such as air quality and climate change.

I started cycle commuting in London in February 2016. It's been on and off relationship. I still find it stressful, and I rarely cycle on very rainy days. During some periods I have cycled daily, interspersed by month-long breaks. On a weekend or for very short trips, I still prefer walking, as it is much more relaxing than the inevitable adrenaline rush of being on London's roads. Ain't no Londoner be needing extra stress in their life.

On so many days, though, cycling—seeing the trees and neighbourhoods swoosh by early in the morning or late in the morning—has given me a lot of happiness and affection for my city. I did feel super proud and surprised transitioning from

someone who had barely cycled on urban streets in her entire life, to conquering London's roads.

Deeper down, I think my difficult relationship with cycling comes down to being torn between two identities. One is the Londoner for whom cycling is an effortless thing: who wears practical hipster fashion—sneakers, jeans, normcore—and is organised, who always brings her bike lights and lunch box, who has a daily life grounded in her Stoke Newington neighbourhood that she commutes to and from. Who manages London logistics: sports kit, raingear, food shopping, laptop, all on her bike, in a seamless well-planned 12-hour flow.

The other is the Londoner who regularly cheats on her bike: who likes fashion and wearing heels and long coats, blow-dried hair and short dresses, who likes carrying a handbag, not a backpack. Who always forgets her bike lights, rarely has a lunchbox, who is always at some event in a neighbourhood far away from home, where one drink turns into three.

Most of my life I have been the second person, and even if I morph more and more into an organised adult from the student bohemian I was, to some extent I feel uneasy with that. I have always resisted what I feel modern life and megacities make us: hyper-organised, time-maximising, robotic. To me,

cycling can feel like just another part of tiresome London logistics.

What is the gender dimension of this? As a woman, I guess I enjoy fashion more than many men. I want to feel feminine, sometimes. I don't like having sweaty helmet hair. Most of the female cyclists I see are dressed in lycra, jeans and sneakers, hipster backpacks, practical jackets. They cycle on sporty hybrids and single speeds. They are the girl that most cyclist-identifying dudes will find cool, legit and "hot". But she ain't me, I ain't her. Who I am comes before the fact that I cycle, and I guess I will just have to find a way for the two to get along.

Emilia Smeds is a social scientist who once pretended to be a transport planner, now a PhD student at UCL focusing on how innovation can move us towards cities with sustainable transport systems. She started cycle commuting in London in February 2016, and still proudly identifies as a shit cyclist.



Police are marking bikes at one of our workshops in Summer 2016.



Simone with two local policewomen who marked bikes at that workshop.

CYCLING WONDERS

Helena Clarke

On how cycling can be empowering...

Cycling can be empowering because it makes us equal; equal road users, equal cyclists, equal to our male counterparts. For women this gives us the right to use the road how our male cyclists do too. I believe this gives us a sense of empowerment, that women too can get sweaty, be physical and cycle wherever and whenever we want to. This all matters because it gives us equal rights to men. Cycling perhaps being seen as a more male-dominated sport in the past, now gives way to more of an equally male and female sport, which in turn emanates respect in the cycling community of those who are women.

On the relationship between claiming road space and claiming space in other areas in life...

The relationship between the road space and other areas in life is that we are treated as a cyclist, which is, more often than not, defines us as a road user rather than 'just' a woman. This is different in other areas off the saddle, which may lead to automatic

subconscious bias of us as females. For example if you see a group of female cyclists you may automatically think 'cyclists' and not define them by gender where as if you were to see a group of artists who were all women you would perhaps define them first by their gender secondary to their skill. The reason for this I have not explored yet.

On cycling in and around the city...

Cycling in and around a city is empowering in its own right. It allows the road user to understand the intricacies of the city, which would otherwise not be memorised, learnt or understood when taking public transport. The relationship between the city and a cyclist is one of ownership, I have always felt that I know and understand the roads I frequently ride. I feel it is my city, as I understand the roads, the people, the routes and the habits of timely commuters. I have always found this to be invaluable when finding my way around new places in the city or even new cities themselves, if gives a pure understanding which would otherwise prove to be a huge feat to accomplish through the sole use of public transport.

On barriers to cycling for women...

The barriers I feel to cycling for women is that at times male cyclists can be more aggressive, take more risks on the road and consequently be more intimidating. To overcome these barriers we have to learn to stand our ground, our lane, our road rights, just like the men.

On how she started cycling...
I first started cycling from a few friends who inspired me, I realised the cost of city transportation was extortionate and if I wanted to save time and money then cycling was to be my only option. I then got into road cycling and have never looked back.

Helena Clarke is a linguist, musician, activist and business-woman. She cycles to and from work on a daily basis and has cycled in various cities across the world. She feels that without cycling she would be a very different person than who she is today.

CYCLING AND FREEDOM

Clarissa Carim

Cycling has fundamentally changed the way I interact with my surroundings. Though I started cycling at an early age (it was my main mode of transport until I got a car), I didn't really catch the bug until the first bikesharing system, Vélib, launched in Paris in 2008. Here was a completely new way to explore my favourite city—going farther, seeing more, discovering new areas, getting a real feel for how it all fit together, interacting with it in a way that walking, and certainly public transport, never allowed.

The same magic even worked in London, a city I had grown to hate—a dirty, stressful, crowded, grey moloch. Squeezed into someone's armpit on the tube or having to push your way through masses of slow tourists—London was only ever something to endure while trying to get somewhere. But all that was forgotten once I started exploring it on a bike. What a delightful city! How many corners I had never seen! Its topography changed, as I was able

to put it all into a cohesive whole. Destinations that had seemed nearly impossible to get to (such as the glorious Crossness Victorian pumping station! Go see it if you can!) became a pleasant afternoon out with a ride along the Thames Path.

Cycling is independence, spontaneity, empowerment. Pure joy and delight as you careen past cars stuck in long queues at traffic lights. A quick exploration of an interesting-looking back alley you'd never noticed before. An ambitious push up a hill, and the exhilaration when you get to the top, hot and sweaty, and let the wind dry you off on the way back down. Wheeeeeeee!

Having recently moved back to my (ridiculously car-centric) home country, I am discovering areas not only I, but also most of my friends and family, had never seen. "Do you know what's up that steep hill by that main road you've driven hundreds of times?" Of course they don't. They wouldn't dream of just venturing up there to find out—they have somewhere else to go. But now, I do. I've ridden up the hill, taken the little lane, followed my nose, and found forest paths, buffalo (!), an organic farmer, and tons of things I never knew existed so close to the smelly bustle of the city!

***

Cycling has not only changed my relationship with the world around me, but also with myself. My body used to be an enemy, something to endure—like London—and forget (helped by copious amounts of alcohol). How did it take me until my 30s to discover the miraculous things it could do? And not only that—it does them well, and it gives me pleasure to do them, even the painful bits. Thinking back on how much I hated Physical Education as a kid, how I thought I was *bad* at sports, makes me angry about how we fail our kids, and most often girls. I might have learned better coping mechanisms earlier in life if I'd been shown the joys of exercise, discovered my body's strengths, instead of having to contort it to conform.

How great would it be if women saw their bodies as a versatile and powerful machine, instead of something to be styled and maintained for the viewing pleasure of others! I no longer wear make-up as it would only rub off, and my clothes are practical over pretty. And I don't care! I don't care what people think, I don't care that I don't match our ridiculous beauty ideals, nor even that I may have a smear of grease on my face going into shops! (At the same time, I am very aware of my enormous privilege, working from home and having a flexibility and loose schedule few enjoy.)

Accepting, even loving, my body has only been possible through this change in perspective from what it *looks like* to what it *does*. As a societal shift, that seems an unrealistic target—too much money to be made in the beauty industry—but every single woman can at least try it for herself. My bike (okay, bikes) has been invaluable in breaking free from the constraints imposed by society!

Clarissa Carim has recently moved back to Luxembourg after 15 years in Brighton (in the UK). She works from home as a translator and is stubbornly sticking to pedal power in one of the most car-obsessed countries in the world.

NEW CYCLING ERA

Simone Salmon

We have been running Bike Freedom, a bike maintenance project that started in Deptford (in South London) for over two years. We run pop-up events where we visit different places to teach different types of people bike maintenance. We also gift people free bike paraphernalia to help them stay on two wheels. We also ask the police to attend sessions, as they mark the bikes for free to guard against bike theft, and create a dialogue with young people who are emerging as cyclists and road users.

The last pop-up workshop we ran at a youth centre because we felt that youth have bikes but often do not know how to maintain them. Nor do their parents. Or, even if they know bike maintenance, they may not have the time to do so. In that two hour workshop, we gave a short bike safety talk to discourage young people from doing wheelies in the road with traffic behind them, serviced as many

bikes as we could, and gifted everyone free front and back lights so they could be safe and seen while cycling. It also helped prevent them from being stopped or harassed by the police for not having the correct equipment whilst on the road.

It is important for **all** cyclists to know the basics of bike maintenance so that they are not reliant on bike shops. It is especially important to know how to do the small jobs that often pop up for cyclists, like gears, tyre punctures, and brakes. As more people are using bikes as a mode of transport, it is important for them to have safe, road-worthy bikes that they can fix within reason.

Bike maintenance for women is important and is an area that we would like to explore. We ran a 'Women



in Gear' session in the park for free, where we got women to ride a bike for free around the park. We spoke to women who said that they had not had the opportunity to ride bikes because they had to do chores whilst growing up, so they missed out.

Having to do chores in childhood and adolescence are barriers to cycling for many women of colour. Many women of colour do not know how to cycle or swim since they did not have the opportunity to do so in childhood. We need to reach out to masses of women at school gates during the school run, churches, mother and baby groups, libraries and parks so that we can help find women who are interested in riding bikes. Once they have mastered everyday cycling, i.e., riding to the shops, riding on the school run, riding to run errands before the school run, we can teach them bike maintenance to empower them to cycle and maintain their bikes themselves.

I think one of the main barriers to bike maintenance for women of colour who cycle is finding time to attend classes. There are some classes but they are far and few between. The challenge of running bike maintenance workshops is space and the cost of space. That is one of the reasons why we

do popups in places like youth centres, community centres, and parks—It is cost effective. In the future we would like to have a permanent space where we could offer cycling lessons, road safety lessons (the local councils run on-the-road bike safety sessions), and bike maintenance.

We want to continue working with diverse types of people to empower them to ride bikes and perform basic maintenance. We are making inroads to working with people with mental health issues as well as active seniors who want to explore different ways to keep fit. After all, everyone should be able to enjoy the benefits and freedom of cycling.

Simone hails from Greenwich in Southeast London. She works part-time and runs a bike maintenance project to encourage different types of riders. Follow Bike Freedom on Twitter: @ bikefreedom247.

BIKE/LIFE LESSONS LEARNED

Barb Chamberlain

Many of my stories about who I am and the way I operate in the world start with a story about my mom. This is true about my bicycling although I never saw my mom on a bike.

She raised me as a feminist without ever using the F word. Mom gave me the clear message that I should be able to take care of myself rather than relying on a man to do so, having seen her own mom learn that lesson the hard way when Grandma was widowed in her 50s.

Maybe that's one of the reasons I love being on my bike. I feel capable of taking care of myself in a way I've never felt in a car. I am more in control of—and much more conscious of—my route, my options, my decisions about what makes me feel powerful or weak, safe or threatened, knowledgeable or insecure. I feel stronger for riding even as I recognize and respect my own limitations.

Even when I need to get off and push my bike up a steep hill, I'm still making my own way. This gives me a sense of strength that reaches beyond the bike while I'm proving the point that bikes are practical transportation. When I walk into a meeting carrying my helmet I'm asserting this without saying a word. By being there, as a woman who bicycles in everyday clothing, I am also saying that bicycling is not only for the fit, fast, fearless—and male.

I work in transportation now so this is a particularly salient point to make. But it's a point each of us can make everywhere.

A child of the Depression, Mom also taught me that I was very lucky and had a responsibility to use what I had been given to help others. Our stories about bicycling are the source of both knowledge and power as consumers and as engaged community residents who can join voices to amplify each other.

When we go into a coffee shop, grocery store, or laundromat and ask where their bike parking is, we're saying, "You have customers who bike here to give you their money."

When we call or email to get information about a public meeting and ask where we can park our bikes and if the location is served by transit, we're saying

they need to plan meetings accessible to everyone, not just to people who can drive there.

When we hear our school district is planning a bond vote to build or renovate schools we can ask what provisions they're making so kids can walk and bike on safe routes—and say that we only work on campaigns that create healthy schools.

In all of this I can't help but see parallels to the best of feminism. When women worked together to point out the ways in which the world assumed male power, male privilege, male authority as the default setting and by doing so shut off opportunities, we changed things. When we now point out the ways in which the design of our communities has long assumed car travel as the default setting and shut off opportunities, we are again changing the world with our stories, together.

Barb Chamberlain serves as the first-ever Director of the new Active Transportation Division of the Washington State Dept. of Transportation, a role she took on after heading the state-wide bike advocacy nonprofit Washington Bikes. She maintains a list of women's bike blogs at womenbikeblogs.com and blogs about her bike life (with a good-sized dose of transportation policy) at bikestylelife.com. Once upon a time she was the youngest woman ever elected to the Idaho State House and Senate. She hopes to pass bike life lessons on to her family the way her own mother did.

MOSTLY HUMAN AND SOON-TO-BE MOM

Leeah Chu

On how cycling can be empowering...
Cycling is self-reliant. I can come and go autonomously without having to rely on the schedule or available space, particularly with public transportation. I am vulnerable to the elements, whether it is dust, wind, rain, or snow. I am vulnerable to the movement of vehicles that are typically protected in tons of steel and moving at speeds and with power exponentially greater than me, a cyclist, my bare body on a two-wheeled, human-driven frame; but more importantly, I am vulnerable to the attention (or lack of attention) of those I share the space with.

I have learned to never assume. Never assume that drivers in cars will notice you whether they are driving with you or making a turn in your direction. Never assume that people are looking out for cyclists before opening car doors. Never assume that traffic signs are being followed or even that you are legally protected. As a woman, I find cycling empowering because despite the vulnerabilities, the elements,

and the significance of the physical reality, I can only rely on my own awareness and its relation to what's going on around. So cycling (and especially in a city like New York City) requires cyclists in general to be much more focused and aware in order to basically survive.

On the relationship between claiming road space and claiming space in other areas in life...
Claiming space is an interesting way to put things. I wouldn't necessarily say that space is ours to be claimed in the first place and maybe that perception is actually what creates the tension we often face, especially when it comes to urban road space.

For me, the relationship between road space and symbolic space is like a dance. It's a constant communication of being open to the space, who or what is in it, what goes on, and how I move within it, sometimes setting boundaries such as what I am comfortable with (or not) and what I will allow (or not).

On cycling in and around the city...
You can tell a lot about a city or a particular attitude and culture based on the cycling experience. Having regularly cycled in Amsterdam and New York City, these two experiences are quite different from each other. With Amsterdam having an established

infrastructure with bike lanes, separate traffic lights, cyclists having legal protection and also knowing that drivers are more aware of sharing the road, I felt much more protected and far less stressed. The experience was significantly more enjoyable, which also made for my overall experience in Amsterdam that much more enjoyable.

On the other hand and depending on where you go, cycling in New York City is a rougher and a much more stressful experience, but in general, I am more self-reliant, which is very much similar to how I perceived the city before I was cycling in it.

On barriers to cycling for women...
I would say there are significant barriers for cycling in New York City that begin with the basic infrastructure (or lack thereof) that affects every cyclist, not just women. But having used public transportation for the first 13 years I lived in the city, I find there to be far less barriers to cycling for women compared to the alternative methods of transportation, where women are often subjected to harassment and even assault.

On how she started cycling...
I started cycle commuting when I lived in Amsterdam for a summer. Amsterdam is known to be one of the bicycle capitals of the world; it is synonymous with the Dutch culture. There are more bikes than cars in Amsterdam; nearly 60% of those who live there is reported to cycle commute on a daily basis! Bike paths are part of the roadway system, they even have their own traffic lights, which makes cycle commuting relatively safe, and cyclists have legal rights! I loved that summer riding around town.

After living in New York City for thirteen years at that point, it was a liberating experience to be able to hop on a bike and just go. It was fun and free! I felt like I was seven years old again, on my way over to a friend's house to play.

Coming back to NYC and choosing to cycle as much as I can, it has been a harsher reality in comparison to Amsterdam, but I like the autonomy and self-reliance. And though it can be stressful, it does keep me awake and alive!

In a previous lifetime, Leeah Chu was a corporate-working professional in New York City for nine years. After a short sabbatical where she got a taste of life outside of the grind, she ended up leaving corporate and city life and immersed herself in traveling, photography, yoga, meditation, and basically living life. Five years later, she is back in the city, working as a studio

manager for a yoga school in Brooklyn, and now getting ready for the next chapter of being a mother.

ANY BODY CAN BIKE

Charlotte Masemann

It's May. I just got a new bike for my birthday. It's blue. I ride it down the gentle slope of the street, laughing. I'm six years old. I just learned how to ride my bike and now I can fly.

It's May. I just got a new bike for my birthday. It's blue. I bike to school, to swimming lessons, to a friend's house. I'm twelve years old. I have discovered that things are "wrong" with my body. I'm too short. I'm too fat. My thighs touch each other. I contort my neck in photographs so that no suspicion of a double chin may show. My bike is my refuge. My body is exactly the right shape for biking. I can still fly.

It's May. I just got a new bike for my birthday. It's gold and has a step-through frame. I am thirty-seven years old. I go upstairs and get the toddler out of bed. I strap him into the bike trailer. I start the 4-kilometre ride to the school, to pick up the five-year-old. We bike along the multi-user path by the river. The cars are far away on the road and cannot

hurt us. The sun glints off the river. The toddler hums in the trailer. As I go up an incline, the baby in my tummy kicks.

Now things are really wrong with my body. Of course, my thighs still touch and I still contort my neck in photos. But I mean really wrong, medically wrong. I'm five months into my third pregnancy and so far I have had two months without nausea, total, in those three pregnancies. I used to swim a lot, but I found that the smell of the chlorine and the feel of the water on my face made the nausea worse. I stopped swimming after I found myself seriously considering keeping a yogurt container at each end of the lane for emergency vomiting.

When I'm on my bike, the feel of the wind on my face helps with the nausea. It also helps with the despair that goes along with the nausea, and the guilt. (Remember, ladies, pregnancy is no excuse to stop exercising. If you don't exercise, you might harm your baby.)

My pelvis has separated again. Just like during the previous two pregnancies, this baby is literally splitting my body apart. I have a condition known as diastasis symphysis pubis. The two halves of my pubic bone no longer meet in the front, and in the back, my hips are constantly trying to migrate away

from my sacroiliac joint, to which they are attached. What really hurts is shifting weight from side to side. When I'm putting on trousers, I have to sit and lift up each leg with my hands to put them into the trouser legs. Walking is difficult and I have a disabled sticker for the car. I sit on a stool to teach my classes. Lifting the toddler hurts a lot.

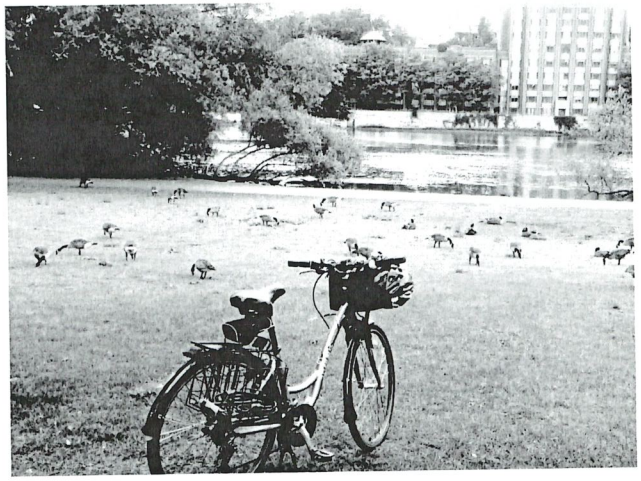
It's different on the bike. The seat keeps my pelvis balanced and I don't have to shift my weight. My legs slip into the old rhythm they learned more than thirty years before. The wind blows on my face. The toddler hums. The baby kicks. I am free from pain and nausea. I am moving. I am me. I can fly.

Charlotte Masemann lives in Ottawa, Ontario, Canada. This is her local bike path. Protected infrastructure means freedom for her, her husband and their three children.

PEDALING TO FIGHT PATRIARCHY IN PAKISTAN

Noor Rahman

In my opinion, riding a bicycle is perhaps the most intimate way to connect with a place because even the simplest experiences become so much more immediate and feel so different. Being inches away from the tarmac with nothing but the sheer power of your legs pedaling you forward is like being a tourist in your own city. My desire to pursue this feeling is what led me to explore most of Lahore on my cycle. From carefully zigzagging between donkey carts and rickshaws in



the narrow streets of the old Walled City to breaking personal records on the wide, newly constructed roads, taking up cycling has been a truly life-changing experience for me.

But for most girls in Pakistan, cycling is deemed inappropriate and unsafe when they reach their early teen years. To put it bluntly, women do not cycle in this country. When I first started biking, my family was very upset and only after seeing that I was not ready to stop did they agree to let me cycle with a group.

Fortunately, small cycling groups are gaining popularity in larger cities. Together, cycling lovers have banded together and are using social media to stay connected and to mobilise. In addition to safety,





these groups also provide a chance to socialise and be a part of the larger movement to promote cycling. That said, representation of females in the cycling community in Pakistan is still alarmingly low. A wide range of obstacles stands between women and two wheelers, including, but not limited to, the lack of availability of good, affordable cycles, unsupportive families and rampant harassment on the streets.

It was one such incident that came as both inspiration and a wake up call, urging me to realise that something needed to be done to increase visibility of women in public spaces. In early 2016, a female cyclist in Lahore was tailed and seriously injured in a hit-and-run by a group of young men in a car. She was very brave and openly wrote about the incident and a few weeks later with support of fellow feminists, I organised a girls cycling rally to raise awareness for harassment of women in public.

It was since that day that the Girls on Bikes collective took root. Girls on Bikes in Lahore is another small group of cycling enthusiasts but it is specifically for women so they may have a safe space to discuss their issues and further female voices in the community. The goal is to support girls who are interested in the activity and to encourage others to take it up. For the last three years, through this group I have organised an annual women's cycle rally to highlight the importance of women's right to public spaces. The initiative has been criticised widely on social media for being vulgar and un-Islamic but my experience with the women who come to cycle with me has been nothing but an exchange of joy, affection and support. Cycling together on busy roads, fighting off the catcallers, taking care of each other is where the sisterhood is strongest.



Noor Rahman is a feminist based in Lahore, Pakistan. Her main interest is women's mobility and she is especially interested in promoting cycling as a means for travel and leisure for women. She runs a small group of female cyclists in Lahore and actively organise rides, rallies and other feminist events to encourage females to reclaim public space.



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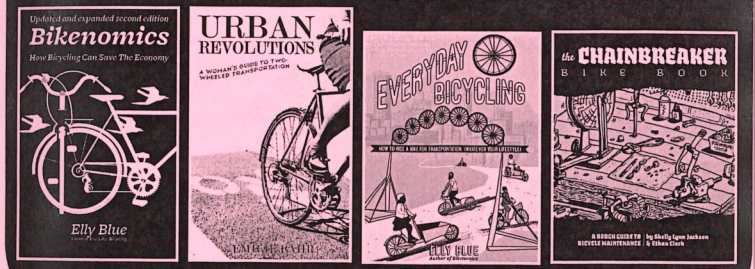
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Appendix 4: Autoethnography protocol

My research involves contemporary autoethnographic reflections on my past experiences working with UK transport professionals and policymakers to increase equity and inclusion in cycling. My original research was done between 2017 and 2023 and received ethical clearance and participant consent at the time. For my PhD by publication, I will reflect on three case studies of doing research on inclusive cycling and trying to influence policy and practice, which took place in 2019, 2022 and 2023. These case studies involve negotiating what I was allowed to say and what I was made to delete or dilute in reports for an active travel organisation, a climate organisation and a government body. I will reflect on how institutional constraints and the neoliberal political economic context impact the production of research and its application to policy and practice. This research poses no harm to participants.

It is not appropriate to seek participants' consent because they would modify their behaviour in response to knowing that they are being observed. The participants in my case studies are senior leaders and decision-makers at powerful neoliberal institutions that shape transport policy and practice. Their knowledge of being observed would influence their behaviour by making them portray their respective organisation or government body in a positive light to discourage any critique. My research aims to get beyond stage-managed official discourse and therefore would be compromised by seeking participants' consent. If consent were to be sought, then we would get a sanitised and inaccurate version of events. As such, covert observation is the only way to do this research, given its focus on how power relations constrain the production of knowledge and its translation to policy and practice.

This research poses no risk to the participants and will yield important insights on how to make cycling more equitable and inclusive. It will also yield important insights on how power shapes research, evidence and policy. My original research publications are in the public domain, and I will work closely with my supervisory team to ensure the anonymity of all individuals, organisations and government bodies in my critical discussion.

The following five questions will structure my autoethnographic reflections:

- What were the key disagreements or sources of conflict in this case study?
- What concessions or compromises did I have to make as a result, and how did they impact the research?
- What have I learned through negotiating what I could and could not say with powerful institutions?

- What are the barriers and institutional constraints that prevent the adoption of evidence-based recommendations to increase equity and inclusion in cycling?
- What have I learned about how power operates from working with and trying to influence powerful transport organisations and government bodies?

In summary, autoethnographic reflections and covert observation of powerful leaders and decision-makers in the UK transport sector are necessary to do this research. Participants will not be at risk or harmed by my research. My supervisory team will help me ensure that individuals, organisations and government bodies are completely anonymised and unidentifiable.