

Investigating contestation around neighbourhood scale active travel infrastructure policy

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ABSTRACT

Active travel infrastructure policy implemented at a neighbourhood scale has generated unexpected levels of socio-political contestation, leading to the removal of some schemes and widespread debates regarding equity and justice. Frequently, such contestation is framed as a discrete transport-centric phenomenon, engendering binary and objective pro-vs. anti-active travel infrastructure narratives, which obfuscate the intersection of policy with wider urban socio-spatial development dynamics. In response, this study adopts a critical urban approach to undertake a detailed investigation of contestation, through analysis of the subjective perspectives shaping contested discourses around neighbourhood scale active travel infrastructure. To achieve this, in-depth semi-structured interviews were conducted with stakeholders, using London as a case study. Our results show that divergent conceptualisations of sustainability, disparate experiences of decision-making processes, and heterogeneous socio-spatial contexts, all play a role in shaping and mediating contestation. Analysis of these themes highlights how processes of contestation are contingent upon the deployment of top-down technocratic policy. These findings reveal how current active travel infrastructure policy can further entrench, and give rise to, novel, uneven development processes. Thus, this study demonstrates the need for more transformative and strategic policy approaches, which offer truly participatory opportunities and consider active travel infrastructure within wider socio-spatial contexts.

1. Introduction

Urban development policy that promotes walking and cycling infrastructure is widely acknowledged as a key planning strategy for social, economic and environmental sustainability (Djanak et al., 2018; Aldred et al., 2021). Increasingly, the implementation of such infrastructure has shifted away from discrete schemes such as segregated cycle lanes, towards a broader range of infrastructure measures frequently delivered across larger spatial scales. These policy approaches are often grouped under the term ‘active travel infrastructure’ (TfL, 2022a; 2022b). Ostensibly, such policy marks a shift away from transport-centric policy goals, towards more holistic and inclusive street space reallocation (Cook et al., 2022).

In this context, schemes adopting a range of active travel infrastructure measures such as modal filters, pedestrianisation, street greenery and Sustainable Urban Drainage systems (SUDs) (Mayor of London, 2018; Bai et al., 2022) are frequently framed as transformative urban development processes (Aldred et al., 2019). Despite this, the

implementation of urban active travel infrastructure has provoked widespread and unexpected levels of socio-political contestation and conflict (Wild et al., 2018; Van Wymeersch et al., 2019; Lawlor et al., 2023). This has had significant implications for the implementation of policy, including: protests, vandalism, the abandonment and removal of schemes, polarised active travel rhetoric during political campaigns, and sporadic policy adherence (e.g., Wall, 2020; Marius, 2021; Shaw, 2021; Bosetti, 2022).

In spite of these dynamics, much of the academic research regarding active travel infrastructure continues to endorse objective policy framings of infrastructure as an inherently transformative and progressive sustainable urban development practice (Davidson, 2021). Consequently, studies evaluating neighbourhood scale infrastructure processes largely avoid explicit consideration of how policy shapes and mediates contestation. Instead, research has favoured evaluation of discrete policy impacts, including: vehicle ownership (Goodman et al., 2020), infrastructure distributional (in)equality (e.g., Aldred et al., 2021; Cunha and Silva, 2023), crime rates (Goodman and Aldred,

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2021), and emergency service response times (Goodman et al., 2021).

Underpinned by sustainable urban development rhetoric, these studies promote an implicit endorsement of pro-infrastructure discourses, and a subsequent de-legitimising of conflicting discourses. Thus, research prescribes, and fuels, a prevalence of abstract and binary pro-vs. anti-active travel infrastructure narratives in the media, professional practice and among the wider public (e.g., Montbiot, 2022). Considering the restrictive impacts of contestation and conflict on the implementation of infrastructure, these abstract narratives represent a barrier to realising effective and robust active travel infrastructure policy approaches (Hickman and Sallo, 2022). Furthermore, by confining the investigation of policy impacts to a discrete range of policy goals, such research approaches obscure how infrastructure intersects with wider urban socio-spatial development dynamics, thereby limiting knowledge and claims of the transformative impacts of policy (Halpern et al., 2020).

Thus, the aim of this research is to provide explicit analysis of contestation around neighbourhood scale active travel infrastructure policy through the adoption of a critical urban approach. This responds to a marginal, but growing, body of research employing critical urban theory to evaluate the transformative potential of active travel infrastructure policy, which refers to the ability of this policy to challenge structural injustices and marginalisation (Huq, 2020). Such literature eschews discrete socio-technical evaluations of policy, in favour of more nuanced intersectional analysis that considers infrastructure approaches in relation to a wide range of socio-spatial development dynamics. In this context, existing research has provided analysis of the intersection between policy, sustainable development discourses, political power structures and entrenched urban socio-economic dynamics (Kębłowski and Bassens, 2018; Kębłowski et al., 2019; Nello-Deakin, 2024), and has undertaken detailed empirical evaluation of how development dynamics and subjective stakeholder positionalities intersect to shape participatory processes (Van Wymeersch et al., 2019; Hickman and Sallo, 2022).

Building upon such literature, this study provides a more detailed empirical investigation of contestation. This is achieved through the adoption of several critical urban approaches to analyse the subjective needs, values and beliefs underpinning contestation around neighbourhood active travel infrastructure in London. In this context, the contribution of this research is threefold: 1) Theoretically, this study synthesises existing literature, mobilising theoretical and empirical approaches for the investigation of socio-spatial contestation around active travel infrastructure; 2) Empirically, the research provides a unique critical analysis of contestation around neighbourhood scale active travel infrastructure in London in order to improve knowledge of contested processes; and 3) Finally, this analysis enables the formulation of policy recommendations that can be adopted in wider urban contexts to promote more robust and transformative urban active travel infrastructure approaches.

The remainder of this paper is structured into five sections. The second section provides an overview of critical urban approaches employed in the literature to evaluate active travel infrastructure and how these link to the London context. The third section introduces London as a case study and outlines the semi-structured interview method that was used to investigate contestation. The fourth section provides detailed analysis of contestation around neighbourhood scale active travel infrastructure in London. Finally, the last section outlines the main research findings, highlights key contributions, and identifies policy implications.

2. Literature review

2.1. Critical urban perspectives

Critical urban theory and research advocates constructivist and holistic research approaches that consider how urban policy intersects with entrenched socio-spatial dynamics to engender and maintain uneven

development processes (Marcuse, 2012). Consideration of socio-political contestation is key to such analyses, as contested processes reveal how entrenched urban power dynamics and socio-spatial inequalities shape, and are subsequently mediated through development policy (Brenner, 2009). Thus, critical investigation of contestation highlights how places are socially constructed through a myriad of subjective lived experiences of urban space, development policy and contextual socio-spatial relationships (Malpas, 2012).

A growing subset of sustainable transport, walking and cycling, and active travel research is adopting critical urban perspectives to analyse policy processes and outcomes beyond the confines of discrete development objectives (Kębłowski et al., 2019). Rather than dismissing contestation and conflict around policy as an existential threat to progressive urban planning practice (McIntyre, 2021), such literature has sought to understand why contestation around active travel infrastructure is so prevalent, and how these dynamics are shaped by policy. In so doing, the literature questions inherently ‘just’ framings of active travel policy, instead advocating more critical understandings of how infrastructure shapes subjective lived experiences of urban space (Verlinghieri and Schwanen, 2020). For balance, it should also be noted that there are examples in the wider literature of case studies that are suggested to demonstrate holistic active travel infrastructure implementation, and the successful maintenance of these post-creation; for instance, the city-wide approach adopted in Seville, Spain (Kirk et al., 2023).

The remainder of this literature review provides an overview of these research approaches. This highlights the importance of critical urban perspectives for investigating and evaluating urban active travel policy processes, and justifies the need for more comprehensive empirical analysis of socio-political contestation around policy. This review is structured into three sections; critiques of urban sustainable development discourse; post-politics and participatory processes; and wider socio-spatial development dynamics.

2.1.1. Critiques of sustainability discourse in planning

Critical urban theory and research frequently question the ostensibly holistic intentions of sustainable urban development policy, instead labelling sustainability as a politically “palatable” (Blühdorn, 2016, p.4) discourse which, through its vagueness, conceals underlying socio-spatial inequalities (Gunder, 2006; Gunder and Hillier, 2009). These dynamics are manifested in development policy through entrenched top-down development practices which champion objectivist and technocratic forms of governance and knowledge (Escobar, 1996; Moore, 2015). Thus, critical urban literature cites the potential for sustainable urban development practices to sit within, maintain and legitimise, rather than challenge or transform, uneven urban development (Brenner, 2009; Cowell, 2013; Baeten, 2017).

In both policy and the academic literature, transformative or progressive framings of urban active travel infrastructure are frequently based on empirical data demonstrating the ability of schemes to simultaneously tackle a range of sustainable urban development objectives linked to climate change, public health, and socio-economic equality. Evidence includes examples of infrastructure interventions designed to reduce air pollution (Dajnak et al., 2018), promote physical exercise (Aldred et al., 2019) and improve access to affordable modes of transport (Mullen, 2021).

However, whilst such research evaluates a range of social and environmental policy outcomes, a focus on technocratic or “discrete sociotechnical” (Scoones et al., 2015, p.5) sustainability objectives circumvents analysis of how infrastructure intersects with urban socio-spatial challenges beyond the regulatory scope of policy (Swyngedouw, 2007). This highlights a failure to investigate whether existing infrastructure policy processes provide an integrated development approach that tackles wider, yet converging, mobility, land-use and socio-economic dynamics (Kębłowski and Bassens, 2018).

In this context, critical literature has explored how a heterogeneous

top-down sustainability agenda shapes socio-political contestation around pedestrianisation schemes, highlighting the propensity for such policy to preserve uneven urban power dynamics in participatory processes, and to obfuscate existing socio-spatial inequalities (Kęblowski et al., 2019). Frequently, oppositional neighbourhood scale active travel infrastructure discourses in the London context appear to highlight such concerns, by accusing policy of privileging the needs and demands of wealthier socio-economic groups (e.g., Miah, 2022). Despite this, the adoption of critical sustainability perspectives in urban active travel infrastructure research remains limited. This highlights the need for greater analysis of how sustainable urban development rhetoric intersects with active travel policy to shape contestation.

2.1.2. Post-politics and participatory processes

Building upon the theme of uneven power dynamics in development processes, this literature review now considers the post-political condition (Mouffe, 1993; Rancière, 1998), a critical urban theory employed to describe consensus decision-making in development practices (Swyngedouw, 2010; Allmendinger, 2016). Post-politics refers to the marginalisation of socio-political contestation in development processes, relegating citizen participatory input to a range of “superficial technicalities” (Legacy et al., 2019, p.274) based on pre-determined engagement and consultation briefs (Olesen, 2013; Fox-Rogers and Murphy, 2014; Raco, 2014). Indeed, discourses opposing active travel infrastructure in London regularly cite certain engagement and consultation strategies as evidence of a hegemonic top-down development agenda, highlighting the perceived pre-eminence of post-politics in current policy approaches.

Moving beyond binary conceptualisations of state-citizen power, post-political literature has increasingly explored a dialectical consensus-conflict relationship in development decision-making, examining how this shapes realities for political contestation in development processes (Bylund, 2012; Legacy et al., 2019; McClymont, 2019). Recent research has highlighted how contextual urban dynamics shape non-linear processes of state led (de)politicisation around the sustainable urban development agenda (Bossuyt and Savini, 2018), and drawn attention to new forms of informal citizen-led politics in order to contest formal transport planning practices (Legacy, 2016). This approach has been adopted in the sustainable transport literature by Van Wymeersch et al. (2019) to highlight how oppositional infrastructure discourses can arise in response to a failure of (re-politicised) participatory processes to account for subjective conceptualisations of egalitarian politics.

Such literature highlights opportunities for a nuanced analysis of how decision-making processes intersect with entrenched urban power dynamics and actor positionalities to shape contestation around active travel infrastructure. Despite this, research into various schemes in London has provided only cursory critical analysis of how power and inequality shape subjective participatory experiences (Hickman and Sallo, 2022). Furthermore, in the London context, policy continues to favour abstract top-down participatory processes, demonstrated by the employment of vague, poorly-defined terms such as ‘collaborative’ and ‘co-design’ in best-practice documents (e.g., Mayor of London, 2018), the evaluation of consultation processes through quantitative participation statistics (e.g., Hackney Council, 2022), and cursory recommendations for more comprehensive or iterative public engagement processes (Bosetti et al., 2022).

These policy approaches, which fail to engage with the fundamental distribution of socio-political power in decision-making processes, bring into question claims regarding the transformative potential of policy (Chatterton, 2016; Verlinghieri and Venturini, 2018). In this context, procedural justice literature has considered how existing forms of vague collaborative and co-design rhetoric operate to conceal underlying power imbalances (Verlinghieri and Schwanen, 2020). Such theory calls for new forms of socio-politics in development processes, and the rejection of top-down discrete practices in favour of holistic bottom-up

knowledge that subsumes sustainable transport practices within wider socio-spatial development dynamics (Nikolaeva et al., 2019). This highlights a knowledge gap regarding how participatory processes shape active travel infrastructure policy outcomes, and draws attention to the intersection between power and policy scope.

2.1.3. Active travel infrastructure and wider socio-spatial development dynamics

Critical urban literature highlights a tendency for urban development policy to overlook how sustainability objectives intersect with wider urban socio-spatial dynamics to maintain existing, and engender new, unequal urban development dynamics (Gössling and Cohen, 2014). Such criticism is evident in contested discourses around active travel infrastructure processes, most notably in oppositional discourses citing a “minimalist” Low Traffic Neighbourhood (LTN) delivery approach which was adopted in the UK during 2020 (Bosetti et al., 2022, p.10).¹ In London, these schemes have been accused of generating new zones of exclusion, further entrenching existing socio-spatial inequalities such as disparities in house prices, uneven accessibility to high-quality local services, and reduced transport options for accessing peripheral working locations (Angelovski, 2021; Miah, 2022).

Beyond emergency LTN delivery, more comprehensive and “holistic” active travel infrastructure policy (e.g., TfL, 2022a, p.30) demonstrates a commitment to the principles of ‘regenerative urbanism’ (Thomson and Newman, 2020). Such approaches utilise infrastructure such as SUDs and parklets to tackle multiple socio-ecological issues beyond the conventional realm of transport planning including urban flooding, green space accessibility, ecological diversity and community cohesion (Camrass, 2022). However, critical discourses have framed such policy outcomes as discrete co-benefits which are unable to assist in resolving, and may even intensify, the precarious housing and ownership rights that underpin exclusion and inequality in cities (Kęblowski et al., 2019; Nello-Deakin, 2024).

Despite this, LTNs and other neighbourhood scale active travel infrastructure interventions are frequently associated with the emerging development ideology of X-minute cities or X-minute neighbourhoods, often referred to as 20-min neighbourhoods or 15-min cities in the UK (e.g., Calafiore et al., 2022; TCPA, 2022a). Such policy, which seeks to provide equitable access to a wide range of physical infrastructure such as green space and grocery shops, alongside wider transformative socio-spatial processes including housing affordability and local economic resilience, indicates a growing interest in integrated planning approaches to challenge a broad range of uneven urban development dynamics at a neighbourhood scale (Gower and Grodach, 2022; TCPA, 2022b). However, beyond quantitative investigation of discrete policy goals (e.g., Goodman and Aldred, 2021; Goodman et al., 2021) and distributional (in)equality (e.g., Aldred et al., 2021), existing neighbourhood scale active travel infrastructure research has rarely engaged with contested discourses regarding wider, yet contingent socio-spatial development outcomes.

In this context, X-minute neighbourhoods have become subject to criticism regarding gentrifying processes, while conspiracy theories have spread misinformation about social engineering, highlighting a need for neighbourhood scale planning policy to adopt more holistic, transparent and contextually sympathetic approaches to improve public acceptability (Marquet et al., 2024a, 2024b). Themes of distributive justice, which consider the allocation of resources across society, prescribe more reflexive analysis of who wins and who loses as a result of road space reallocation (Verlinghieri and Venturini, 2018). This promotes consideration of the intersection between transport policy and wider socio-spatial dynamics and practices such as property ownership,

¹ The delivery of LTNs during spring 2020 largely employed a normative design strategy consisting of a series of modal filters on minor or residential roads to reduce rat-running between main roads.

land ownership, education, employment and service distribution (Enright, 2019). Such analysis moves beyond sustainability rhetoric citing abstract environmental and social-wellbeing benefits, towards a more integrated and transparent evaluation of the transformative potential of transport infrastructure (Kębłowski et al., 2019). This highlights a need for more critical perspectives of contestation to extend knowledge of how infrastructure intersects with wider development landscapes, and thus inform the advancement of more holistic and strategic neighbourhood scale development policy.

3. Case study

Increasingly, development policy in London has advocated for a modal shift towards active travel and other forms of sustainable transport (TfL, 2010). In 2013, the Mayor of London launched the £100 million Mini Holland scheme (Mayor of London, 2022), marking a shift in active travel policy away from cycle-centric infrastructure, to encompass a more holistic range of neighbourhood street space reallocation schemes. These are exemplified by Transport for London's (TfL) Healthy Streets and Streetspace programmes, which outline strategies to increase walking and cycling in pursuit of “greener, healthier and more attractive places” (TfL, 2022a; TfL, 2022b)².

In the Spring of 2020, during the UK's first Covid-19 lockdown, the arrival of emergency LTN funding facilitated more rapid and extensive infrastructure delivery across London aiming to sustain a reduction in traffic resulting from lockdown measures (Department for Transport, 2020). Broadly, LTNs consist of traffic filters implemented at a neighbourhood scale to prevent vehicular traffic from using certain streets as through roads. However, policy definitions are constantly evolving, meaning that previous TfL neighbourhood scale active travel infrastructure policy, including Mini Hollands and Liveable Neighbourhoods, are regularly subsumed by or used interchangeably with LTN terminology.

Between 2020 and 2021, 101 LTN schemes were introduced by London borough councils. Whilst contestation around neighbourhood scale infrastructure has been evident in London since the unveiling of the Waltham Forest Mini Holland scheme in 2015 (e.g., Davis, 2015), LTNs triggered a significant increase in oppositional discourses and an emergence of new pro- and anti-infrastructure grassroots groups. Considering that only 3.7% of Londoners live within an LTN, the prevalence of this contestation has been surprising (Bosetti et al., 2022).

Evidence from media and social media sources demonstrates that contestation around neighbourhood scale active travel infrastructure in London is shaped by divergent beliefs and values linked to sustainability discourse (e.g., Iqbal, 2020), urban socio-economic development dynamics (e.g., Ellson and Greenwood, 2021) and participatory political power dynamics. These discourses have had considerable impacts on infrastructure, most notably a sporadic uptake in policy by local authorities, and the removal of schemes following implementation. So far, these impacts, and the contested discourses driving them, have received limited attention in the academic literature, highlighting London as a pertinent case study for investigating contestation around active travel infrastructure policy.

4. Methods

Subjective perceptions of contestation around neighbourhood scale active travel infrastructure were explored using semi-structured interviews. Interview question prompts were organised under the three key critical themes identified in the literature review; sustainable development discourses; power dynamics within participatory

processes; and wider socio-spatial development contexts. This approach was adopted with reference to previous critical studies that have made use of open-ended interviews to encourage deeper insights into subjective values and beliefs regarding street space reallocation processes (e.g., Van Wymeersch et al., 2019; Hickman and Sallo, 2022; Pritchett et al., 2024). The use of semi-structured interviews was crucial for understanding how subjective experiences influence contestation and thus policy outcomes, particularly in the context of power dynamics and participatory processes. Ethical approval was sought and granted by the ethics approval committee at University College London.

4.1. Sampling

15 interviews were conducted between May and August 2022 with actors from a range of backgrounds, both professional and non-professional, representing a spectrum of opinions regarding neighbourhood scale active travel infrastructure (Table 1). Interviews were undertaken by the authors in person, and lasted between 45 and 90 min each. A purposive sampling method was utilised to identify interview participants, with a snowball approach applied in light of suitable recommendations. Interviewees were encouraged to speak about their experiences linked to any neighbourhood scale active travel policy in London, including LTNs, Streetspace, Liveable Neighbourhoods, and Mini Hollands. A list of prompts is included in Appendix A. Each of these omits overly academic or policy-heavy terminology in favour of teasing out lived experiences of neighbourhood scale active travel infrastructure associated with the three key critical themes.

4.2. Thematic Analysis

Following data collection, the interview transcripts were coded using the Computer Assisted Qualitative Data Analysis Software (CAQDAS) NVivo for significant themes, following an adapted version of Bryman's (2016) thematic approach to qualitative data analysis (Fig. 1). Subsequently, evaluation of these themes was undertaken with reference to

Table 1
List of interviewees.

Number	Relationship to active travel infrastructure	Professional Position	Institution/Location
1	Built environment professional	Senior Project Officer	Built environment sustainability consultancy ^a
2	Built environment professional	Project Officer	TCPA
3	Campaigner	Campaigns Manager	London Cycling Campaign
4	Politician	Councillor	London Borough ^a
5	Spatial Planner	City Planner	TfL
6	Resident	N/A	London ^a
7	Resident	N/A	London Borough of Hackney
8	Resident	N/A	London Borough of Lambeth
9	Resident	N/A	London Borough of Lewisham
10	Resident	N/A	London Borough of Waltham Forest
11	Sustainable transport professional	Senior Project Manager	London Borough of Newham
12	Sustainable transport professional	Sustainable Transport Manager	London Borough of Waltham Forest
13	Sustainable transport professional	Senior Behaviour Change Officer	Sustrans
14	Sustainable transport professional	Head of Consulting	Sustainable Travel Consultancy ^a
15	Self-employed builder	Self-employed	London Borough of Wandsworth

^a Anonymised on request of the interviewee.

² Transport for London is a local government organisation that implements London's transport strategy and manages the majority of London's transportation systems.

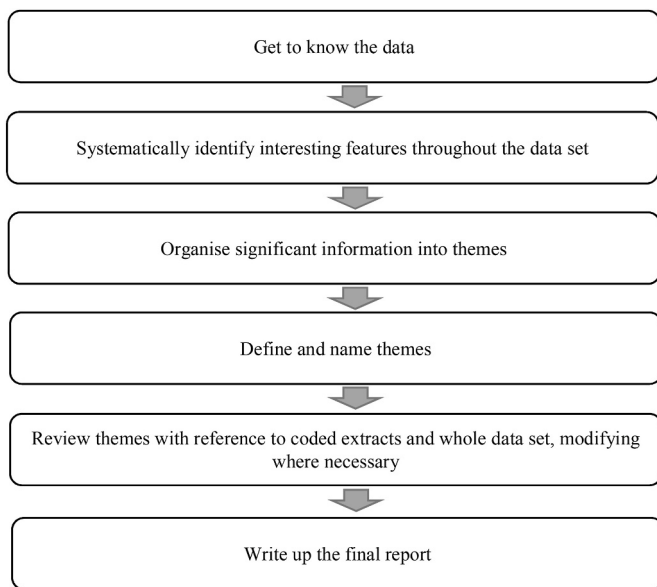


Fig. 1. Six-phase framework for thematic analysis (Source: Authors, adapted from Bryman, 2016).

key critical urban perspectives, the results of which are outlined in the Discussion section.

4.3. Limitations

In order to recruit participants embodying different views and opinions it was necessary to undertake interviews with stakeholders across London. Whilst this sampling approach limited opportunities for context-specific analysis of discrete schemes and power dynamics, it allowed the study to draw out a broader range of socio-spatial dynamics influencing contestation. Some stakeholder groups often associated with clear oppositional views, such as traders and businesses, were more difficult to recruit and are therefore under-represented in comparison to policy makers and professionals. This is a clear limitation with regards to the balance of voices given a platform by this study. However, the interviewees' individual perspectives frequently diverged from binary pro-vs. anti-active travel infrastructure narratives, meaning that a diverse and intersecting range of views and opinions driving contestation were nonetheless uncovered.

5. Discussion

5.1. Investigating contestation and conflict

The interviews revealed a range of contextual subjective needs, values and beliefs shaping contested discourses. These were seen to derive from the intersection between socio-spatial development dynamics and actor positionalities, demonstrating a failure of abstract policy-centric pro-vs. anti-active travel infrastructure narratives to adequately describe processes of contestation. This first section of the discussion employs critical urban perspectives to provide a more holistic investigation of how and why contestation arises in response to neighbourhood scale active travel infrastructure. This analysis is presented in three sections: the first evaluates the impact of a sustainable urban development agenda on policy processes and outcomes, the second examines the role of politics and power in decision-making processes, and the third considers the scope of policy in relation to wider socio-spatial development dynamics.

5.1.1. Disparate conceptualisations of sustainability

Sustainability, or themes encapsulated by sustainability discourse

including public health, pollution and climate change, arose regularly during the interviews. Whilst this highlighted a ubiquitous association between sustainability and active travel infrastructure (e.g., Tfl, 2018; GLA, 2021; Sustrans, 2022), conceptualisations of what this relationship should entail varied considerably, underlining the concept's "essentially contested" nature (Connelly, 2007, p.259; Voss et al., 2007). Generally, broad inter-subjective perceptions of sustainability emerged; these ranged from more to less critical opinions of the capability, and intentions of, sustainable urban development policy to provide genuinely transformative outcomes.

Less critical conceptualisations expressed by advocates of active travel infrastructure firmly endorsed existing sustainability rhetoric in policy, reiterating an urgent need to create infrastructure in response to scientifically evidencable socio-ecological challenges (Swyngedouw, 2010). These discourses frequently asserted the effectiveness of infrastructure in providing a holistic range of socio-ecological co-benefits, indicating a belief in the effectiveness of regenerative urbanism for achieving transformative development processes (Thomson and Newman, 2020). For example, a similar narrative was replicated by several Sustainable Transport Professionals, evidencing the success of these co-benefits in meeting a discrete range of sustainability criteria defined in policy documents or agenda (Mayor of London, 2018). Whilst these narratives employed distinct stories, the infrastructure processes described were frequently framed as objectivist best-practice examples that could be achieved in any context, demonstrating a tendency to legitimise policy through a body of largely abstract evidence.

"We now have a monthly gardening club where people maintain the rain gardens ... they bring cake along and talk, and that wouldn't have happened before, it's really nice, it wouldn't have happened because it was just a car park."

(Interviewee 12, Sustainable Transport Professional)

"... so that's economic sustainability for businesses, social sustainability and then I think environmental from the reduction of emissions and fuel use that come from like fewer cars on the roads."

(Interviewee 14, Sustainable Transport Professional)

In contrast, more critical conceptualisations referred to a range of lived experiences beyond the scope of existing policy, demonstrating a perceived marginalisation of certain positionalities during infrastructure processes (Davidson, 2021). Whilst none of these interviewees questioned the need for sustainable urban development to tackle socio-ecological challenges, their ostensibly contradictory discourses, which embodied disparate opinions regarding the fundamental suitability of infrastructure policy, were seen to converge around "discrete sociotechnical" (Scoones et al., 2015, p.5) critiques of sustainable development approaches. For example, a built environment professional closely linked to active travel infrastructure delivery, a resident who has actively protested against LTNs, and a self-employed builder who uses a van for work, were found to share similar critiques of the sustainability agenda adopted by policymakers. In these instances, the use of a private motorised vehicle was associated with themes of social sustainability including the ability to maintain close family connections and ensure employment.

"You might have ticked all these sustainability boxes, but that doesn't mean it's actually sustainable, you know, that it's actually good for everyone."

(Interviewee 1, Built Environment Professional)

"Cars can offer opportunities for employment ... [sometimes] it's the only way to connect with family or friends ... how is ripping these apart without alternatives sustainable?"

(Interviewee 9, Resident)

In this case, the sustainability agenda was framed as underpinning

the failure of recent neighbourhood scale active travel infrastructure to adequately account for the variety of everyday socio-economic experiences and challenges faced by Londoners. Implicit in this was the view that sustainability is mobilised and co-opted by the state to legitimise active travel infrastructure regardless of its wider socio-spatial impacts (Kębliński et al., 2019). As a result, policy was seen to de-legitimise claims about urban space that fall beyond the scope of transport-centric sustainable urban development goals. Prevalent was a feeling that sustainability is used to justify abstract stigmatisation of those embodying oppositional discourses, leading to polarisation around the purported benefits of sustainability.

“... it gets portrayed as you are ‘anti-sustainability’, I mean I’m pro-sustainability, but I don’t fancy being shat on by bad schemes ... if you question them, you become a denier.”

(Interviewee 15, Self-employed builder)

This first section of analysis has demonstrated how conflicting discourses arise in response to the intersection between the sustainable development agenda and subjective positionalities. Whilst endorsed as a holistic policy by supporters of infrastructure, sustainability was also critiqued for engendering isolated development processes, neglecting the lived experiences of certain individuals, and thus legitimising uneven urban development dynamics (Cowell, 2013). This highlights the socio-political power dynamics which underpin sustainable urban development processes (Wachsmuth and Angelo, 2018), a theme that this discussion now addresses.

5.1.2. Socio-political power in decision-making

In accordance with online discussions and the literature (e.g., Montbiot, 2022; Aldwinckle et al., 2022), the interviewees demonstrated a diverse range of opinions regarding the extent to which infrastructure could, and should, be politically contested by different stakeholders. Notably, more critical views of infrastructure drew attention to claims of a post-political consensus in formal decision-making practices (Allmendinger, 2016). Interviewees expressed doubts about the authenticity of council efforts to engage and consult with residents, framing these as top-down strategies employed to marginalise oppositional discourses. Contrary to the evidence about the role of emerging informal citizen-led politics in confronting these processes (Legacy, 2016), these interviewees frequently expressed resignation in the face of consensus politics, emphasising the challenges posed by uneven power dynamics in decision-making processes.

“It’s been going on for a long time, you get it a lot in political things, stuff like [the policy response to] climate change, the people who come up with them don’t want to debate them.”

(Interviewee 15, Self-employed builder)

In this context, oppositional discourses frequently de-personified sustainable transport professionals, framing them as an abstract group of homogeneous and amorphous actors uncritically executing a state agenda. This agenda was portrayed as one of control (Escobar, 1996), with criticism aimed at the employment of top-down managerialism and objective forms of knowledge at the expense of local expertise and experiences. Indeed, on more than one occasion both sustainable transport and built environment professionals emphasised the importance of political will in pushing through schemes irrespective of opposition, suggesting a conscious application of top-down power to suppress genuine political contestation (Olesen, 2013).

Despite this, most of these professionals also simultaneously raised subjective moral concerns regarding truncated consultation and engagement practices during the implementation of LTNs in 2020 (Lewis, 2020). Actors pointed to a subsequent delivery of more comprehensive and iterative co-design practices as evidence of a commitment to politicised decision-making processes prioritising local forms of knowledge (Bosetti et al., 2022; Hickman and Sallo, 2022).

However, these discourses demonstrated ambivalence regarding the fundamental distribution of power in development processes (Chatterton, 2016). When pushed to elaborate on the socio-political role of the public in infrastructure delivery, the interviewees regularly re-affirmed a preference for top-down forms of technocratic knowledge that limited the public’s role to peripheral design concerns (Legacy et al., 2019)

“The powers that we’re using under the Road Traffic Regulation Act, very clearly define who can make a decision and that it is delegated within the council, within the authority. So, I think it’s important we don’t raise expectations ... You don’t want to give the illusion of power where it doesn’t exist.”

(Interviewee 11, Sustainable Transport Professional)

Such discourse was sometimes justified through narratives emphasising the marginalisation of active travel policy in wider urban development agendas. Several sustainable transport professionals, a campaigner and a councillor, cited marginal funding compared to that allocated for other types of road infrastructure, inconsistent political will (e.g., Tower Hamlets, 2022) and fragmented spatial delivery (Pritchett et al., 2024). Thus, these interviewees saw the employment of top-down political power in decision-making processes as an essential, yet sometimes regrettable, practice deemed necessary to counter the entrenched power of car culture (Mattioli et al., 2020). Interestingly, such rhetoric encouraged the use of formal consensus politics, but also occasionally advocated a surreptitious co-opting of informal socio-political processes.

[there is] a need for councils to align with campaigning groups, to allow perhaps these groups ... who aren’t [publicly] seen to be aligning with you, to say the really difficult things, so then the council can come in and say: ‘well, I’m a bit more moderate than those mad people over there’.”

(Interviewee 4, Councillor)

This analysis reveals a complex relationship between active travel infrastructure practice and socio-political power dynamics. Whilst there is evidence of a state deployment of top-down consensus decision-making, closer inspection of these processes uncovers a dialectic post-political context shaping contestation and conflict (Legacy et al., 2019; Van Wyneersch et al., 2019). Evident is a range of contextualised urban development dynamics and actor positionalities that influence a variety of re-politicising and de-politicising processes in both formal and informal decision-making practices. To better understand why these dynamics arise, this discussion now considers how the scope of active travel infrastructure policy intersects with wider socio-spatial development dynamics.

5.1.3. Wider socio-spatial development concerns

Critics of neighbourhood scale active travel infrastructure frequently perceived a failure of policy to address wider urban socio-spatial dynamics and processes. Narratives questioned the ability of policy to provide equitable outcomes at a neighbourhood scale, with congestion on roads surrounding schemes routinely pointed to as evidence of this (Pritchett et al., 2024). The funnelling of traffic onto these roads was cited as an un-just externality, reinforcing existing socio-spatial divisions in the urban context. Themes of (in)equality were brought to the fore in these discourses, with less privileged residents considered more vulnerable due to existing housing inequalities that force a higher proportion of poorer citizens to live on major roads (Anguelovski, 2021).

Whilst advocates of active travel infrastructure frequently acknowledged the potential for traffic displacement, these interviewees employed quantitative data to challenge claims of uneven socio-spatial distribution (e.g., Aldred et al., 2021), alongside objectivist traffic evaporation rhetoric and data to dismiss these concerns as temporary (Nello-Deakin, 2020; Sustrans, 2021).³ Furthermore, several interviewees including professionals, campaigners and politicians regarded socio-spatial dynamics such as housing precarity as fundamentally beyond the scope of policy, suggesting an underlying prevalence of transport-centric knowledge within these circles (Moore, 2015). A similar discourse was adopted by residents in favour of infrastructure schemes. However, these narratives derived from a seamless integration of infrastructure into everyday lived experiences.

“They put one [an LTN] in on my road, didn’t bother me at all. I already walked to the shops and stuff, it didn’t, you know, change my life in any way ... then I saw people protesting in the square, I never even thought there was an issue before.”

(Interviewee 8, Resident)

Such discourses were contested by oppositional actors who cited lived experiences to emphasise how infrastructure can have significant impacts on people’s lives by intersecting with a broader range of urban dynamics than those currently recognised by policy. These responses, such as those provided by interviewee 15, a self-employed builder who uses a van to carry building materials and equipment, were often candidly framed as deriving from self-interest relating to their experiences. Such narratives accentuated a perceived ostracism of needs and were presented as angry condemnations of infrastructure processes, highlighting how policy can polarise opinions by omitting consideration of wider socio-spatial outcomes.

“[laughs] that’s bollocks quite frankly, as someone who needs a van for work, the only way my traffic will evaporate is if I quit, it’s just another cost for me ... these things always trickle down to the bottom of the pile.”

(Interviewee 15, Self-employed builder)

In this context, several sustainable transport professionals and campaigners referred to more nuanced subjective experiences of infrastructure processes. For example, interviewee 12, a Sustainable Transport Manager, highlighted contradictory opinions arising from their lived experiences of a scheme in the London Borough of Waltham Forest, describing both the positive socio-ecological impacts of their professional role in delivering this infrastructure, alongside their concern as a resident witnessing significant demographic changes following infrastructure delivery. This interviewee, alongside interviewee 3, a Sustainable Transport Campaigner, raised concerns that infrastructure may be driving localised processes of gentrification (Chakelian, 2020), a narrative that challenges more abstract pro-active travel infrastructure discourses that frequently gloss over this relationship (e.g., Aldred and Goodman, 2020; Lewis, 2020; Bosetti et al., 2022).

“The middle classes who have moved into the area and like sourdough bread, they’re very well serviced now ... there is a tension about gentrification, but do we keep poor areas rubbish just so they don’t gentrify?”

(Interviewee 3, Campaigner)

However, as the above excerpt suggests, the complexity of gentrification was often framed as fundamentally beyond the scope of

sustainable transport, demonstrating the essentially transport-centric nature of existing forms of knowledge in policy and practice (Camrass, 2022). This approach was heavily critiqued by both interviewee 1 and 2, two Built Environment Professionals whose work aims to foster more holistic sustainable urban development practices. Both viewed neighbourhood scale active travel infrastructure processes as synonymous with reductionist sustainability ideology. Consequently, their discourses often sided with those embodied by oppositional actors, emphasising how discrete infrastructure policy can work to maintain and further entrench wider forms of urban distributional and procedural injustice (Verlinghieri and Schwanen, 2020).

You can’t just change the roads, the way that people travel, without thinking about the rest of it ... this needs systemic and systematic change, a realisation of the complexity of things.”

(Interviewee 1, Built Environment Professional)

This analysis outlines a complex range of contested discourses derived from subjective opinions of the appropriate scope of active travel infrastructure policy in relation to wider socio-spatial concerns. A critical urban perspective has demonstrated how contested discourses arise in response to different experiences of power and agency to shape and contest the overly discrete transport-centric goals adopted by policy. Thus, despite claims of active travel infrastructure being a transformative urban development process, it is evident that policy and delivery are underpinned and mediated by entrenched technocratic forms of planning knowledge and practice. These factors have been shown to stimulate increasing polarisation, underpinned by a failure of policy to offer more egalitarian and holistic practices that harness lived experiences of the city to challenge socio-spatial and structural injustices.

5.2. Critically evaluating the transformative potential of policy

So far, this discussion has outlined a complex range of discourses that influence contestation around neighbourhood scale active travel infrastructure in London. The analysis has highlighted how technocratic development ideology and socio-political power dynamics shape contested processes within the confines of discrete transport-centric policy objectives, calling into question transformative framings of policy. Continuing to use contestation as a lens, the next section considers how the progressive aims of active travel infrastructure intersect with entrenched development dynamics, and what implications this has for transformative policy approaches. This investigation highlights three key themes: contrasting temporal framings of active travel policy; the role of funding and governance in urban power dynamics, and the prevalence of discrete technocratic policy approaches within urban sustainable development.

5.2.1. Temporal framings of policy

The interviewees referenced a range of temporalities when considering neighbourhood scale active travel infrastructure developments. Narratives emphasised distinct periods of time, accentuating disparate lived experiences and urban development dynamics. These were seen to inform contrasting opinions regarding the transformative potential of policy to deliver just development outcomes. Frequently, actors constructed discourses around recent policy processes, framing active travel rhetoric as a relatively novel and rapidly expanding urban development approach.⁴

These short-term temporalities were mobilised to construct

³ Aldred et al.’s. (2021) data in fact demonstrates a complex socio-spatial distributional pattern, with inequalities seen to vary between boroughs. Similarly, data collated by Sustrans (2021) shows mixed evidence of traffic evaporation following active travel infrastructure implementation.

⁴ These temporalities frequently cited the Walthamstow Village scheme implemented in 2015 (delivered by the London borough of Waltham Forest using Mini Holland funding) as a starting point, or the publishing of the Mayor of London Cycling Campaign, 2022 Cycling Revolution.

conflicting narratives around disparate needs, values and beliefs. For advocates of infrastructure, rapid policy uptake was framed as a logical response to growing concerns regarding climate change and air pollution, mirroring the type of sustainability discourse adopted in policy (Mayor of London, 2018). In contrast, oppositional discourses employed the theme of speed to emphasise a failure of policy to account for wider socio-spatial concerns (Raco et al., 2018). These interviewees cited top-down decision-making processes, which limit the impact of local knowledge to brief consultation periods, and transport-centric practices, which ignore concomitant wider development dynamics, as evidence of hastily conceived policy approaches. Thus, a rapid increase in infrastructure processes was seen to underpin a marginalisation of certain claims to urban space, shaping a perpetuation of existing forms of distributive and procedural injustice (Verlinghieri and Schwanen, 2020).

“They [the council] don’t care what I have to say, or what it [an LTN] does to my life. If they did, they would have asked me [first] ... one day you wake up, and there it is, outside your house”

(Interviewee 10, Resident)

To counter such discourse, advocates of active travel infrastructure outlined three further temporalities; the length of time taken to garner political backing for neighbourhood scale infrastructure⁵; bureaucratic delays and statutory development procedures; and an ongoing evolution of policy knowledge and infrastructure approaches. Rather than a rapidly emerging development ideology, these temporalities situated recent infrastructure processes within an iterative and deep-rooted counter-hegemonic development movement. In this context, the potential for forms of procedural and distributive injustice were framed as unavoidable challenges, to be reviewed and addressed in successive policy iterations.

“We’re still figuring it out, what role do electric vehicles have? how much freight can we get off the roads and into cargo bikes? Where does land use planning come into this? ... none of this is coherently done yet, those procedures are still in process ... [but] we have to get schemes in, we can’t let perfect be the enemy of progress ... move fast, break things and learn.”

(Interviewee 3, Campaigner)

Such discourse was disputed through a final temporality, one that emphasised the continued adoption of entrenched top-down technocratic development ideology in sustainable urban development (Kębłowski and Bassens, 2018). This temporality raises fundamental questions regarding the transformative potential of existing active travel infrastructure processes by situating these within an entrenched planning agenda that functions to maintain uneven socio-spatial dynamics (Escobar, 1996). Demonstrative of this is a consistent framing of active travel infrastructure adopted by transport planning policy as an inherently just development process, thus elevating this agenda above socio-political contestation (Davidson, 2021).

“It’s just what’s always happens you know [the implementation of LTNs] ... so I mean, the council make their mind up about something, and then everyone just has to live with that.”

(Interviewee 9, Resident)

Analysis of these temporal framings of contestation highlights that whilst active travel infrastructure remains a relatively small-scale

counter-car development process, both in the UK and globally, its increasing incorporation into state-led policy is seen to threaten the progressive potential of infrastructure approaches. From this case study, it is clear that to differing extents, entrenched development processes limit the rights of different stakeholders to advocate for or develop transformative active travel infrastructure processes, either by continuing to favour car-centric development, or by failing to account for the intersection of infrastructure with wider socio-spatial dynamics. This demonstrates an urgent need for active travel infrastructure policy to challenge underlying development paradigms, rather than accepting the incorporation of active travel infrastructure into existing urban policy processes. However, opportunities to achieve this are limited by the power and agency granted by governance and funding structures, a topic that this discussion now turns to.

5.2.2. Power, funding and governance

Oppositional discourses frequently perceived active travel as a vapid state co-opted sustainability agenda, employed to conceal and maintain underlying socio-economic urban inequalities in development practices (Gunder and Hillier, 2009). These discourses emphasised how road space reallocation processes engender individual costs and negative externalities that are currently neglected by policy. Such costs were seen to derive from a lack of local state accountability for individual lived experiences. In this context, councils were perceived as incapable of using their hegemony in regard to active travel processes to implement successful and just development outcomes. This was regularly attributed to a lack of investment, which was seen to underpin a dependency on ineffective abstract best-practice design, alongside a reliance on individual agency to change transport behaviours (Spinney, 2016).

“Someone from the council came and stood at the corner of the road for an hour maybe, so, you know [laughs], how could they? ... I mean I don’t think they actually understand the area, they couldn’t possibly understand what’s going on or what people need ...”

(Interviewee 6, Resident)

“Where’s the benefit for me? I’m a cyclist, I cycle most places, but now everyone’s just stuck in traffic ... they’ve [the council] just put these things [LTNs] in with no incentive. You know, electric vehicles or something. It needs to be properly incentivised.”

(Interviewee 7, Resident)

Professionals, politicians, and campaigners regularly emphasised a desire to address such concerns to improve policy resilience in light of oppositional discourses (Bosetti et al., 2022). However, these interviewees outlined how efforts to do so are fundamentally constrained by insufficient funding. This reveals how in the UK context, austerity politics has forced local government employees to adopt an entrepreneurial mindset to achieve sustainable urban development goals. Furthermore, it highlights the role of funding streams and governance structures in shaping power dynamics within state bodies (Hickman and Sallo, 2022). Consequently, the power of professionals to convey contextualised and subjective forms of knowledge in formal decision-making processes was frequently perceived as fruitless due to the political influence of stakeholders higher in the chain of command.

“It is all stick and no carrot ... our constraints to deliver this stuff after 12 years of austerity is really serious ... because LTNs shouldn’t be the be all and end all, they should be just one part of a mix ... maybe 10% of the mix, and my cynicism is that central government can ‘devolve-the-shit’ and then stand back and say: ‘not our problem’.”

(Interviewee 4, Councillor)

“I think that primarily [name of councillor] was a factor in that, being from [that area] ... and also, TfL had said you’re more likely to get the funding if you do [this area]”

⁵ Interviewees cited the prolonged efforts of individuals and campaign groups such as the London Cycling Campaign, evidence of early LTNs dating back to the 1970s and slow contemporary policy development since the announcement of Mini Holland funding almost a decade ago (TfL, 2017; Mayor of London, 2018).

(Interviewee 12, Sustainable Transport Professional)

At a regional level, the harnessing of such power to enforce and control local policy application was legitimised as necessary for achieving strategic neighbourhood scale active travel infrastructure delivery. Responses from interviewee 5, a City Planner working for TfL, emphasised the transport-centric underpinnings of policy, suggesting a downwards diffusion of objectivist forms of knowledge, culminating in widespread technocratic policy practices (Moore, 2015). This indicates a fundamental uncoupling of policy from contextualised subjective lived experiences of infrastructure processes, undermining the potential for active travel infrastructure policy to translate into transformative urban development processes (Kębłowski et al., 2019).

“... effectively the transport policy principle needs to be set out at each level of transport and planning policy [such as] Local Plans ... However, a key constraint ... is that changes to streets are a highways matter rather than a planning matter.”

(Interviewee 5, Spatial Planner)

These findings are particularly interesting given that London has received significantly more funding for active travel over the past 15 years and is granted greater strategic control than other UK urban areas through the devolved powers of the Greater London Authority. Despite this, there appears to be a shared perception, irrespective of pro- or anti-discourses, that active travel infrastructure remains a relatively peripheral planning concern that is incapable of tackling, and in some cases actually worsens, existing inequalities and challenges associated with urban living. At all levels of the decision-making process, stakeholders shared a sense of powerlessness which partly derives from a failure to sufficiently fund, and thus strategically implement, active travel infrastructure to meet the needs of local people.

5.2.3. Discrete technocratic policy approaches

Despite professionals, campaigners and politicians often citing how a lack of power, time and resources constrains the efficacy and justice of their work, such opinions were nearly always caveated with descriptions of existing policy benefits. Such discourse was most prominent in the belief that oppositional views could be challenged through improved communication of the environmental, health and well-being benefits of infrastructure (Verkade and Brömmelstroet, 2022). These contradictory narratives emphasise the ability of policy to eclipse and relegate subjective experiences of procedural and distributive injustice, through an endorsement of inherently just framings of sustainable development practices (Davidson, 2021).

“The importance of communication [of the environmental and health benefits] can’t be understated, and I think that it could go a long way to counteracting backlash.”

(Interviewee 4, Councillor)

“You know how these people think, they just see it as transport objectives.”

(Interviewee 15, Self-employed builder)

Thus, policy approaches, and the actors embodying these, were seen to underpin a prevalence of abstract and objectivist rhetoric associated with infrastructure processes, which in turn, legitimises and maintains existing uneven development processes (Cowell, 2013; Baeten, 2017). This issue was raised by interviewees 1 and 2, two built environment professionals working for NGOs, both of whom stressed a need to subsume active travel infrastructure processes into a more integrated and comprehensive sustainable urban development agenda, one which explicitly challenges uneven urban power dynamics and socio-spatial inequalities. 20-minute neighbourhoods were endorsed as a potential method for achieving this, moving away from discrete top-down socio-technical development approaches, towards iterative bottom-up

practices encompassing a broad range of socio-spatial development concerns (TCPA, 2022b).

“The concept [of 20-minute neighbourhoods] is nothing new, it comes from the garden city principles really ... it’s just recapturing planning as a form of common good ... something that I think has been lost in the [planning] system.”

(Interviewee 2, Built environment professional)

The difficulty of achieving such a fundamental shift in development ideology was not understated, with both interviewees highlighting the challenges posed by embedded interests, understandings and practices (Goode, 2021). Furthermore, it was emphasised that more integrated, intersectional and bottom-up planning approaches would not eradicate contested dynamics from urban development processes. Instead, they suggested that a progressive adoption of X-minute neighbourhood ideology could act as a non-discriminatory medium through which a diverse range of subjective needs, values and beliefs could be platformed and debated.

Based on the critical analysis of contestation undertaken by this study, such an approach offers a possible solution for mediating and de-escalating increasingly polarised discourses around neighbourhood scale active travel infrastructure. Resituating active travel infrastructure practices as one element of a more holistic and strategic urban development approach that empowers lived experiences at all levels of decision-making could have the potential to significantly improve the popularity and efficacy of policy. Whilst entrenched technocratic planning ideology and top-down power dynamics pose significant challenges, both interviewees 1 and 2 were keen to highlight how learning from polarisation around existing practices offered powerful opportunities to enact transformative changes within existing development systems.

“The term sustainability is in flux ... Obviously you’ve got a lot of people, residents and stuff questioning it ... but also there’s momentum for change at the top, within policy and government, for a fundamental shift. So hopefully this is really the start of change”

(Interviewee 1, Built environment professional)

6. Conclusions

This study has sought to challenge a prevalence of abstract pro-vs. anti-active travel infrastructure narratives frequently employed to explain processes of contestation around active travel infrastructure policy. These simplified narratives have restrictive impacts on the efficacy of policy, demonstrated by a failure of existing practices to effectively mediate contestation leading to sporadic and uneven infrastructure implementation (Hickman and Sallo, 2022), and concerns regarding the equity and justice of policy outcomes (Halpern et al., 2020). Thus, this research has sought to extend knowledge of how and why active travel infrastructure policy is contested. This has been achieved through the adoption of critical urban perspectives that encourage explicit analysis of how subjective lived experiences of policy shape and mediate contestation (Brenner, 2009; Malpas, 2012).

This research builds upon a growing body of literature employing critical urban perspectives to analyse sustainable transport, walking and cycling, and active travel infrastructure policy (e.g., Kębłowski et al., 2019; Van Wymeersch et al., 2019; Hickman and Sallo, 2022). Specifically, this study has contributed to the existing literature by providing novel critical analysis of how subjective perspectives shape contestation around neighbourhood scale active travel infrastructure. Through empirical investigation in London, this study has demonstrated how contested processes are mediated by wider development ideology and socio-political power dynamics. A summary of the main contestation points that this study has elucidated is provided shown in Appendix B. These findings highlight the importance of moving away from abstract

transport-centric framings of contestation, to consider how policy intersects with wider socio-spatial dynamics to shape lived experiences of active travel infrastructure processes.

Contestation has been shown to arise in response to divergent perspectives regarding the ability of sustainability ideology to promote transformative and just development outcomes. This highlights various interactions between different positionalities and a discrete range of sustainability goals adopted by policy (Scoones et al., 2015), demonstrating how a sustainability agenda can favour certain lived experiences of urban space over others. In this context, there is evidence of a post-political condition in active travel infrastructure processes, indicated by a restriction of citizen input to curtailed participatory processes, and the application of top-down power by state actors to quash contested discourses (Raco, 2014).

However, alongside these post-political processes, a more complex range of power dynamics emerges, highlighting power imbalances between different development ideologies, within state bodies, and across successive policy approaches (Legacy et al., 2019). This reveals how the intersecting of socio-political power dynamics and subjective experiences of wider socio-spatial policy outcomes shapes contested discourses (Kębłowski et al., 2019). Specifically, such analysis highlights how entrenched uneven policy dynamics can engender divergent and even contradictory perceptions of policy both between and within different stakeholder positionalities.

This complex range of contested discourses illuminates the contextual impacts of uneven development dynamics on policy processes and outcomes. Different temporal framings of active travel development ideology highlight shifts in political power dynamics, but also a persistent adoption of entrenched top-down technocratic practices (Escobar, 1996; Kębłowski and Bassens, 2018). Furthermore, the distribution of power within decision-making processes is seen to be shaped by austerity politics and state governance structures (Kębłowski and Bassens, 2018; Moore, 2015), both of which restrict the influence of lived experiences on policy processes. Consequently, a prevalence of inherently ‘just’ framings of policy limits critical and reflexive analysis of how active travel infrastructure processes impact urban procedural and distributive (in)justice dynamics (Davidson, 2021).

Thus, claims about the transformative potential of existing active travel infrastructure approaches appear overstated. Instead, the analysis presented here evidences a need for a more nuanced and holistic understanding of the subjective and contextual drivers of contestation around policy to ensure more just and progressive outcomes. To achieve this, policy makers must critically evaluate how wider urban development agendas and decision-making processes underpin and intersect with active travel infrastructure policy. Practically, this requires a new holistic bottom-up (re)politicised planning processes, whereby policy makers and sustainable transport professionals would work with wider stakeholders to exchange and assemble localised knowledge and perspectives of contextualised socio-spatial development dynamics. From

this, targeted policy approaches could be formulated to ensure truly transformative, sustainable and integrative active travel infrastructure that meet the needs of local people.

Clearly, such an approach will not be easy to implement as it will require significant adjustments within most planning systems, owing to a global prevalence of technocratic top-down development ideology (Marcuse, 2012). However, as this study has demonstrated, failing to facilitate transformative delivery practices can lead to increasing polarisation around ostensibly progressive urban transport policies, meaning that ensuring truly transformative processes should be considered an essential policy practice. Indeed, curtailed consultation during the 2020 implementation of LTNs may have helped to facilitate a subsequent proliferation of conspiracy theories in the UK citing 20-Minute Neighbourhoods as a tool for social engineering (Marquet et al., 2024a, 2024b). This highlights the need for further reflexive analysis of the contested discourses around active travel infrastructure in all contexts, as this may offer vital opportunities to uncover improved methods for policy to mediate different needs, beliefs and values.

Based on our findings it is clear that a ‘one size fits all’ approach engenders greater polarisation around active travel infrastructure, and that context specificity is required when formulating policy and delivery approaches. Thus, a critical urban approach has demonstrated the importance of challenging pro-vs. anti-active travel infrastructure narratives in order to reflect on the efficacy of policy and pursue more transformative neighbourhood scale planning approaches. It is recommended that further research adopting a critical urban approach should be undertaken to elucidate these processes more thoroughly. This could include: targeting stakeholders associated with oppositional discourses to analyse how views and beliefs vary within these groups; undertaking comparative studies of how policy dynamics in different cities and/or nations impacts contested processes; more localised research that provides detailed analysis of the policy and power dynamics relating to a specific active travel infrastructure scheme; and more detailed investigation of potential future transformative policy approaches, including the role of active travel infrastructure in X-minute neighbourhood policy.

CRediT authorship contribution statement

Ethan Caris: Conceptualization, Data curation, Formal analysis, Investigation, Software, Visualization, Writing – original draft, Writing – review & editing. **Mengqiu Cao:** Conceptualization, Methodology, Project administration, Resources, Supervision, Validation, Writing – original draft, Writing – review & editing.

Data availability

The data that has been used is confidential.

Appendices.

Appendix A

Interview guide adopted during semi-structured interviews.

Theme	Key contested concepts and queries	Stakeholder question prompts
Critiques of sustainability discourse in planning	Sustainable urban development practices are criticised for maintaining and legitimising, rather than challenging, uneven urban development. Active travel infrastructure embodies sustainable development discourse by attempting to simultaneously tackle a range of urban development objectives linked to climate change, public health, and socio-economic equality. Through the adoption of discrete sociotechnical sustainability policy,	What does sustainability mean to you when thinking about how cities are planned and developed? How does the concept of sustainability make you feel in the context of neighbourhood scale active travel infrastructure? Are your views on sustainability accounted for by existing policy and practices? Outside of reduced road traffic and more exercise, what other

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Appendix A (continued)

Theme	Key contested concepts and queries	Stakeholder question prompts
Post-politics and participatory processes	does infrastructure currently fail to tackle, and in some cases worsen wider, yet converging, mobility, land-use and socio-economic challenges? Oppositional discourses in London regularly cite current engagement and consultation processes as evidence of active travel infrastructure adopting hegemonic top-down development techniques. Can more nuanced analysis elucidate how decision-making processes intersect with entrenched urban power dynamics and actor positionalities to shape contestation around active travel infrastructure? Is there room for new forms of social politics in active travel infrastructure development processes, favouring holistic bottom-up knowledge that subsume sustainable transport practices within wider socio-spatial dynamics.	sustainability concepts does neighbourhood scale active travel infrastructure cover/omit? Could neighbourhood scale active travel infrastructure be more sustainable? If so, how could this be achieved? Who had a say in how neighbourhood scale active travel infrastructure was planned and delivered? What do you think the reasons for this are? What was your role in the decision-making process? And how did it make you feel? Who do you think should have a say in these processes? And to what extent? Do certain groups or individuals have a greater or lesser say? How do these stakeholders relate to the local area and socio-political context?
Active travel infrastructure and wider socio-spatial development dynamics	In London, neighbourhood scale active travel infrastructure has been criticised for failing to account for, and even worsening, the precarious housing and ownership rights that underpin exclusion and inequality. 20-min neighbourhoods demonstrate a growing interest in integrated planning approaches to challenge a broad range of uneven urban development dynamics at a neighbourhood scale. What lessons can be learned from contestation around neighbourhood scale active travel infrastructure when thinking about integrating active travel infrastructure with holistic and strategic neighbourhood scale development policy.	What outcomes and impacts have you seen following the implementation of neighbourhood scale active travel infrastructure? How do these relate to transport and road allocation? Do you think that these outcomes were intentional or unintentional? How do these outcomes impact you on a daily basis? And how do you think that they might impact the area as a whole and other people on a daily basis? Do you think that neighbourhood scale active travel infrastructure should tackle any other issues? And how do you think that this could be achieved?

Appendix B

Summary of main contestation points.

Theme	Pro-infrastructure views	Anti-infrastructure views	Critical Urban Commentary
Disparate conceptualisations of sustainability	There is an urgent need to introduce sustainable development principles into urban transport policy in order to respond to environmental challenges. In this context, neighbourhood active travel infrastructure policy is effective at tackling vehicular air pollution and other socio-ecological issues caused by transport in cities. Infrastructure is also designed to have positive social impacts beyond these transport-centric environmental concerns. <i>Proponents of these views include: Sustainable Transport professionals (interviewees 11, 12 and 14), Councillor (interviewee 4), Campaigner (Interviewee 3), Resident (Interviewee 8)</i>	Sustainability policy can fail to account for the wider socio-economic challenges that intersect with environmental crises. Generally, stakeholders agree on the need to tackle environmental challenges. However, the construction of neighbourhood active travel infrastructure based on the sustainability agenda could lead to and legitimise uneven development dynamics. <i>Proponents of these views include: Built environment professionals (interviewees 1 and 2), Sustainable Transport professional (interviewee 13), Resident (interviewee 9), Self-employed builder (interviewee 15)</i>	Contestation arises due to different perceptions of the aims and effectiveness of the sustainability agenda. Neighbourhood scale active travel infrastructure is intrinsically linked to this agenda, meaning that policy processes empower the views and beliefs of certain positionalities over others leading to unequal representation of views and beliefs. This limits opportunities for discussing and evaluating the true impacts of the sustainable development agenda on active travel infrastructure processes and outcomes.
Socio-political power in decision-making	The marginalisation of active travel infrastructure compared to car-centric development practices, alongside an urgent need to tackle environmental crises legitimises the need for top-down decision-making processes. In the future, utilisation of improved co-design processes would be preferred to allow for greater opportunities for people to influence the design of schemes. However, this should not endanger the relatively limited opportunities that currently exist to successfully implement active travel infrastructure. <i>Proponents of these views included: Sustainable Transport professionals (interviewees 11, 13 and 14), Spatial Planner (Interviewee 5), Councillor (interviewee 4), Campaigner (Interviewee 3)</i>	Consultation and engagement strategies are perceived as being designed to legitimise the marginalisation of oppositional views held by stakeholders. Thus, when the state endorses neighbourhood active travel infrastructure policy, oppositional stakeholders argue that their opinions are not being listened to or taken into account during decision-making processes, leading to feelings of anger and alienation towards policy and the state. <i>Proponents of these views included: Built environment professional (interviewee 2), Residents (interviewees 6, 7, 9, 10), Self-employed builder (interviewee 15)</i>	Contestation arises within a variety of re-politicising and de-politicising processes in both formal and informal decision-making practices. Fundamentally, these are all shaped by top-down policy processes that embody technocratic development practices. Within this structure a complex range of experiences exist, relating to temporal framings, power dynamics and subjective beliefs. However, the failure of existing decision-making practices to account for and platform these experiences is fostering increasing polarisation around active travel infrastructure.
Wider socio-spatial development concerns	There are some concerns around who currently benefits from neighbourhood scale active travel infrastructure, arising from a perceived intersection between infrastructure implementation and processes of gentrification. However, there is an overall feeling that the complexity of socio-spatial dynamics such as housing precarity jeopardise progress in relation to active travel infrastructure development, meaning that they should fall beyond the scope of policy. <i>Proponents of these views included: Sustainable</i>	Neighbourhood active travel infrastructure policy fails to fully account for how transport and travel intersect with the contextual cultural and socio-economic dynamics that underpin everyday lived experiences of the city. Similarly to other forms of urban regeneration, this is seen to engender negative outcomes for certain groups, including impacts on livelihoods and housing precarity. <i>Proponents of these views included: Built environment professionals (interviewees 1 and 2), Sustainable Transport professional (interviewee</i>	Contestation arises in response to divergent opinions regarding the appropriate scope of policymakers. The ability of policy and professionals to tackle wider urban challenges that intersect with road allocation practices is dependent on, and frequently limited by; existing governance structures, funding and technocratic objectivist development ideology. Within these constraints there is limited capacity for truly transformative change in transport planning practices. Thus, divergent positionalities can lead to polarised views on the

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Appendix B (continued)

Theme	Pro-infrastructure views	Anti-infrastructure views	Critical Urban Commentary
	Transport professionals (interviewees 11, 12 and 14), Spatial Planner (Interviewee 5), Councillor (interviewee 4), Campaigner (Interviewee 3)	13), Residents (interviewees 6, 7, 9, 10), Self-employed builder (interviewee 15)	ability of neighbourhood scale active travel infrastructure to deliver positive outcomes.

References

- Aldred, R., Croft, J., Goodman, A., 2019. Impacts of an active travel intervention with a cycling focus in a suburban context: one-year findings from an evaluation of London's in-progress mini-Hollands programme. *Transport. Res. Pol. Pract.* 123, 147–169.
- Aldred, R., Goodman, A., 2020. Low traffic Neighbourhoods, car use, and active travel: evidence from the people and places survey of outer London active travel interventions. Findings. <https://doi.org/10.32866/001c.17128>. September.
- Aldred, R., Verlinghieri, E., Sharkey, M., Itova, I., Goodman, A., 2021. Equity in new active travel infrastructure: a spatial analysis of London's new Low Traffic Neighbourhoods. *J. Transport Geogr.* 96. <https://doi.org/10.1016/j.jtrangeo.2021.103194>.
- Aldwinckle, R., Wiggins, R., Dodsworth, J., 2022. Our communities are being blighted by low-traffic neighbourhoods. *The Guardian*, 12 August, Available at: <https://www.theguardian.com/environment/2022/aug/12/our-communities-are-being-blighted-by-low-traffic-neighbourhoods>. (Accessed 1 July 2023).
- Allmendinger, P., 2016. *Neoliberal Spatial Governance*. Routledge, London.
- Angelovski, I., 2021. *Green Cities and Contemporary Climate Planning: Politics and Practices*. Urban Political Podcast [Podcast]. Available from: Spotify. (Accessed 20 June 2023).
- Baeten, G., 2017. Neoliberal planning. In: Gunder, M., Madanipour, A., Watson, V. (Eds.), *The Routledge Handbook of Planning Theory*. Routledge, London, pp. 105–117.
- Bai, Y., Cao, M., Wang, R., Liu, Y., Wang, S., 2022. How street greenery facilitates active travel for university students. *J. Transport Health* 26 (2). <https://doi.org/10.1016/j.jth.2022.101393>.
- Blühdorn, I., 2016. Sustainability, post-sustainability, unsustainability. In: Gabrielson, T., Hall, C., Meyer, J.M., Schlosberg, D. (Eds.), *The Oxford Handbook of Environmental Political Theory*. OUP, Oxford, pp. 259–273.
- Bosetti, N., 2022. What do the local elections mean for Low Traffic Neighbourhoods? Centre for London Blog, 17 May. Available at: <https://www.centreforlondon.org/blog/ltns-local-elections/>. (Accessed 2 June 2023).
- Bosetti, N., Connelly, K., Harding, C., Rowe, D., 2022. Street Shift: the Future of Low-Traffic Neighbourhoods. Centre for London, London. Available at: <https://www.centreforlondon.org/wp-content/uploads/2022/06/CFL-StreetShift-LTNs-Final.pdf>. (Accessed 1 June 2023).
- Bossuyt, D., Savini, F., 2018. Urban sustainability and political parties: eco-development in Stockholm and Amsterdam. *Environ. Plan. C Politics Space* 36 (6), 1006–1026.
- Brenner, N., 2009. What is critical urban theory? *City* 13 (2–3), 198–207.
- Bryman, A., 2016. *Social Research Methods*/Alan Bryman, fifth ed. Oxford University Press, Oxford.
- Bylund, J., 2012. Postpolitical correctness? *Plann. Theor.* 11 (3), 319–327.
- Calafiore, A., Dunning, R., Nurse, A., Singleton, A., 2022. The 20-minute city: an equity analysis of Liverpool City Region. *Transport. Res. Transport Environ.* 102. <https://doi.org/10.1016/j.trd.2021.103111>.
- Camrass, K., 2022. Urban regenerative thinking and practice: a systematic literature review. *Build. Res. Inf.* Int. J. Res. Dev. Demonstr. 50 (3), 339–350.
- Chakelian, A., 2020. Low-traffic neighbourhoods: How the culture wars came to a street near you. Conflict over the government's latest car reduction measures is dividing communities across England'. *The New Statesman*, 6 November. Available at: <https://www.newstatesman.com/world/uk/2020/11/low-traffic-neighbourhoods-LTNs-London-car-street-cycling-walking-culture-war-pollution-gentrification>. (Accessed 4 January 2023).
- Chatterton, P., 2016. Building transitions to post-capitalist urban commons. *Trans. Inst. Br. Geogr.* 41 (4), 403–415.
- Connelly, S., 2007. Mapping sustainable development as a contested concept. *Local Environ.* 12 (3), 259–278.
- Cook, S., Stevenson, L., Aldred, R., Kendall, M., Cohen, T., 2022. More than walking and cycling: what is 'active travel'. *Transport Pol.* 126 (5).
- Cowell, R., 2013. The greenest government ever? Planning and sustainability in England after the may 2010 elections. *Plann. Pract. Res.* 28 (1), 27–44.
- Cunha, I., Silva, C., 2023. Assessing the equity impact of cycling infrastructure allocation: implications for planning practice. *Transport Pol.* 133, 15–26.
- Davis, B., 2015. Grand opening of mini Holland scheme dominated by angry protesters. *Guardian Series* (15 September). Available at: <https://www.guardian-series.co.uk/news/13720251.grand-opening-mini-holland-scheme-dominated-angry-protestors/>. (Accessed 10 January 2022).
- Dajnak, D., Walton, H., Stewart, G., Smith, J., Beevers, S.D., 2018. Air quality: concentrations, exposure and attitudes in Waltham forest. Available: <https://www.walthamforest.gov.uk/sites/default/files/2021-10/Waltham20Forest20Kings20Rport.pdf>. (Accessed 1 June 2023).
- Davidson, A.C., 2021. Radical mobilities. *Prog. Hum. Geogr.* 45 (1), 25–48.
- Department for Transport, 2020. Active travel fund: local transport authority allocations. Available at: <https://www.gov.uk/government/publications/emergency-active-travel-fund-local-transport-authority-allocations>. (Accessed 15 March 2023).
- Ellson, A., Greenwood, G., 2021. 'Low traffic zones force cars into streets where poorer people live', *the Times*, 12 February. Available at: <https://www.thetimes.co.uk/article/low-traffic-zones-force-cars-into-streets-where-poorer-people-live-6svbck3k>. (Accessed 10 January 2023).
- Enright, T., 2019. Transit justice as spatial justice: learning from activists. *Mobilities* 14 (5), 665–680.
- Escobar, A., 1996. Construction nature: elements for a post-structuralist political ecology. *Futures* 28 (4), 325–343.
- Fox-Rogers, L., Murphy, E., 2014. Informal strategies of power in the local planning system. *Plann. Theor.* 13 (3), 244–268.
- Goode, C., 2021. The 20-minute Neighbourhood: Questioning Planning's Emerging Paradigm. RTPI England Blog, 16 April. <https://www.rtpi.org.uk/blog/2021/april/the-20-minute-neighbourhood-questioning-plannings-emerging-paradigm/>. (Accessed 14 April 2023).
- Goodman, A., Aldred, R., 2021. The impact of introducing a low traffic neighbourhood on street crime. In: Waltham Forest. Findings, February, London. <https://doi.org/10.32866/001c.19414>.
- Goodman, A., Urban, S., Aldred, R., 2020. The impact of Low Traffic Neighbourhoods and other active travel interventions on vehicle ownership: findings from the Outer London mini-Holland programme. Findings (September). <https://doi.org/10.32866/001c.18200>.
- Goodman, A., Lavery, A.A., Thomas, A., Aldred, R., 2021. In: The Impact of 2020 Low Traffic Neighbourhoods on Fire Service Emergency Response Times. Findings, London, UK. <https://doi.org/10.32866/001c.23568>. May.
- Gössling, S., Cohen, S., 2014. Why sustainable transport policies will fail: EU climate policy in the light of transport taboos. *J. Transport Geogr.* 39, 197–207.
- Gower, A., Grodach, C., 2022. Planning innovation or city branding? Exploring how cities operationalise the 20-minute neighbourhood concept. *Urban Pol. Res.* 40 (1), 36–52.
- Gunder, M., 2006. Sustainability: planning's saving grace or road to perdition? *J. Plann. Educ. Res.* 26 (2), 208–221.
- Gunder, M., Hillier, J., 2009. Planning in Ten Words or Less: A Lacanian Entanglement with Spatial Planning. Ashgate, England.
- Hackney Council, 2022. Delegated report of London fields low traffic neighbourhood (LTN). <https://hackney.gov.uk/london-fields-ltn>. (Accessed 2 April 2023).
- Halpern, C., Sarti, F., McArthur, J., 2020. Road space re-allocation Streets as contested spaces. Available at: <https://www.roadspace.eu/wp-content/uploads/2020/05/MO-RE-D2.3-WITHOUT-CONFIDENTIAL-ANNEXE.pdf>. (Accessed 10 March 2023).
- Hickman, R., Sallo, K.H., 2022. The Political Economy of Streetspace Reallocation Projects: Aldgate Square and Bank Junction. *Journal of Urban Design*, London. <https://doi.org/10.1080/13574809.2022.2033113>.
- Huq, E., 2020. Seeing the insurgent in transformative planning practices. *Plann. Theor.* 19 (4), 371–391.
- Iqbal, J., 2020. Nimby's are putting the brakes on our cycling revolution. *The Times*, 20 July. Available at: <https://www.thetimes.co.uk/article/nimbys-are-putting-the-brakes-on-our-cycling-revolution-n6fhgrcjw>. (Accessed 10 January 2023).
- Kębłowski, W., Bassens, D., 2018. 'All transport problems are essentially mathematical': the uneven resonance of academic transport and mobility knowledge in Brussels. *Urban Geogr.* 39 (3), 413–437.
- Kębłowski, W., Van Criekingen, M., Bassens, D., 2019. Moving past the sustainable perspectives on transport: an attempt to mobilise critical urban transport studies with the right to the city. *Transport Pol.* 81, 24–34.
- Kirk, S., Cleveland, T., Caldwell, H., Stickland, M., Soucy, A., 2023. A Tale of Two Cities and Cycling: Halifax, Canada versus Seville, Spain. *Active Travel Studies* 3 (2). <https://doi.org/10.16997/ats.1509>.
- Lawlor, E., Ellis, K., Adams, J., Jago, R., Foley, L., Morris, S., Pollard, T.M., Summerbell, C., Cummins, S., Forde, H., Campbell, Foubister, Xiao, C., Panter, J., 2023. Stakeholders' experiences of what works in planning and implementing environmental interventions to promote active travel: a systematic review and qualitative synthesis. *Transport Res.* 43 (3), 478–501. <https://doi.org/10.1080/01441647.2022.2119298>.
- Legacy, C., 2016. Transforming transport planning in the post political era. *Urban Stud.* 53 (14), 108–124.
- Legacy, C., Metzger, J., Steele, W., Gualini, E., 2019. Beyond the post-political: exploring the relational and situated dynamics of consensus and conflict in planning. *Plann. Theor.* 18 (3), 273–281.
- Lewis, T., 2020. Car-free neighbourhoods: the unlikely new frontline in the culture wars. *The Guardian*, 1 November. Available at: <https://www.theguardian.com/lifeandstyle/2020/nov/01/car-free-neighbourhoods-the-unlikely-new-frontline-in-the-culture-wars>. (Accessed 10 January 2023).
- London Cycling Campaign, 2022. How we're run. Available at: <https://lcc.org.uk/how-were-run/>. (Accessed 2 June 2023).

- Malpas, J., 2012. Putting space in place: philosophical topography and relational geography. *Environ. Plann. Soc. Space* 30 (2), 226–242.
- Marcuse, P., 2012. Whose right(s) to the city? In: Brenner, N., Marcuse, P., Mayer, M. (Eds.), *Cities for People, Not for Profit*. Routledge, London, pp. 24–41.
- Marius, C., 2021. Lambeth residents lose high court case over low traffic neighbourhoods. *My London News*, 28 June. Available at: <https://www.mylondon.news/news/south-london-news/lambeth-residents-lose-high-court-20779347>. (Accessed 4 January 2023).
- Marquet, O., Anguelovski, I., Nello-Deakin, S., Honey-Rosés, Jordi, 2024a. Decoding the 15-minute city debate: conspiracies, backlash, and dissent in planning for proximity. *J. Am. Plann. Assoc.* 1–9. <https://doi.org/10.1080/01944363.2024.2346596>.
- Marquet, O., Mojica, L., Marta-Beatriz, Fernández-Núñez, Maciejewska, M., 2024b. Pathways to 15-Minute City adoption: can our understanding of climate policies' acceptability explain the backlash towards x-minute city programs? *Cities* 148, 104878. <https://doi.org/10.1016/j.cities.2024.104878>, 104878.
- Mattioli, G., Roberts, C., Steinberger, J.K., Brown, A., 2020. The political economy of car dependence: a systems of provision approach. *Energy Res. Social Sci.* 66, 101486.
- Mayor of London, 2018. Mayors transport strategy. Available at: <https://www.london.gov.uk/sites/default/files/mayors-transport-strategy-2018.pdf>. (Accessed 1 June 2023).
- Mayor of London, 2022. Transforming cycling in outer boroughs: mini-Hollands programme. Available at: <https://www.london.gov.uk/what-we-do/transport/cycling-and-walking/transforming-cycling-outer-boroughs-mini-hollands-programme>. (Accessed 20 May 2023).
- McClymont, K., 2019. Articulating virtue: planning ethics within and beyond post politics. *Plann. Theor.* 18 (3), 282–299.
- Miah, P., 2022. Liveable streets, it's rise & fall in the endz. Whose streets? Blog: All Things Mile End All Things Tower Hamlets Community Democracy, 22 July. Available at: <https://www.purumiah.com/liveable-streets-its-rise-fall-in-the-endz-whose-streets/>. (Accessed 2 June 2023).
- Montbiot, G., 2022. 'Ignore the Culture Warriors – Low Traffic Neighbourhoods Don't Close Streets, They Liberate Them'. *The Guardian*, 03 August. Available at: <https://www.theguardian.com/commentisfree/2022/aug/03/low-traffic-neighbourhoods-streets-drivers-violence-oxford>. (Accessed 3 June 2023).
- Moore, S., 2015. Researching local development cultures: using the qualitative interview as an interpretive lens. *Int. Plann. Stud.* 20 (4), 390–406.
- Mouffe, C., 1993. *The Return of the Political*. Verso Books, London.
- Mullen, C., 2021. Why mobility justice means prioritising accessible walking environments. *Active Travel Studies: An Interdisciplinary J.* 1 (1), 1–9.
- Nello-Deakin, S., 2020. Environmental determinants of cycling: not seeing the forest for the trees? *J. Transport Geogr.* 85, 102704.
- Nello-Deakin, S., 2024. 'Winner' versus 'loser' streets? Pedestrianisation and intra-neighbourhood equity. *J. Urban Mobility* 5, 100074. <https://doi.org/10.1016/j.urbmob.2024.100074>.
- Nikolaeva, A., Adey, P., Cresswell, T., Lee, J.Y., Novoa, A., Temenos, C., 2019. Commoning mobility: towards a new politics of mobility transitions. *Trans. Inst. Br. Geogr.* 44 (2), 346–360.
- Olesen, K., 2013. The neoliberalisation of strategic spatial planning. *Plann. Theor.* 13 (3), 288–303.
- Pritchett, R., Bartington, S., Thomas, G Neil, 2024. Exploring expectations and lived experiences of low traffic neighbourhoods in birmingham, UK. *Travel Behav Soc.* /*Travel Behav Soc.* 36. <https://doi.org/10.1016/j.tbs.2024.100800>.
- Raco, M., 2014. The post-politics of sustainability planning: privatisation and the demise of democratic government. In: Wilson, J., Swyngedouw, E. (Eds.), *The Post-Political and its Discontents*. University Press, Edinburgh, pp. 25–47.
- Raco, M., Durrant, D., Livingstone, N., 2018. Slow cities, urban politics and the temporalities of planning: lessons from London. *Environ. Plan. C Politics Space* 36 (7), 1176–1194.
- Rancière, J., 1998. *Disagreement*. University of Minnesota Press, Minneapolis, MN.
- Scoones, I., Newell, P., Leach, M., 2015. The politics of green transformations. In: Scoones, I., Leach, M., Newell, P. (Eds.), *The Politics of Green Transformations*. Routledge, New York.
- Shaw, A., 2021. More than 1,000 People Sign Anti-roadblock Petition to Brent Council. *My London News*, 22 July. Available at: <https://www.mylondon.news/news/west-london-news/more-1000-people-sign-anti-21118232>. (Accessed 4 January 2023).
- Spinney, J., 2016. Fixing mobility in the neoliberal city: cycling policy and practice in London as a mode of political-economic and biopolitical governance. *Ann. Assoc. Am. Geogr.* 106 (2), 450–458.
- Sustrans, 2021. A guide to the evidence around low traffic neighbourhoods. Available at: <https://www.sustrans.org.uk/for-professionals/infrastructure/an-introductory-guide-to-low-traffic-neighbourhood-design-an-introductory-guide-to-low-traffic-neighbourhood-design-contents/design-guide/all/5-a-guide-to-the-evidence-around-low-traffic-neighbourhoods#trafficroduction>. (Accessed 2 May 2023).
- Sustrans, 2022. Walkable neighbourhoods. Available at: <https://www.sustrans.org.uk/media/10520/walkable-neighbourhoods-report.pdf>. (Accessed 2 June 2023).
- Swyngedouw, E., 2007. Impossible "sustainability" and the postpolitical condition. In: Krueger, R., Gibbs, D. (Eds.), *The Sustainable Development Paradox: Urban Political Economy in the United States and Europe*. The Guilford Press, New York.
- Swyngedouw, E., 2010. Apocalypse forever? Post-Political populism and the spectre of climate change. *Theor. Cult. Soc.* 27 (2), 213–232.
- TCPA, 2022a. Collection: the 20-minute neighbourhood. Available at: <https://tcpa.org.uk/collection/the-20-minute-neighbourhood/>. (Accessed 4 June 2023).
- TCPA, 2022b. 20-Minute Neighbourhoods – Creating Healthier, Active, Prosperous Communities. An Introduction for Council Planners in England. Available from: https://tcpa.org.uk/wp-content/uploads/2021/11/final_20mnguide-compressed.pdf. (Accessed 4 June 2023).
- TfL, 2010. Cycling revolution London. Available at: <https://www.london.gov.uk/sites/default/files/cycling-revolution-london.pdf>. (Accessed 18 December 2022).
- TfL, 2018. Vision zero action plan. Available at: <https://content.tfl.gov.uk/vision-zero-action-plan.pdf>. (Accessed 23 June 2023).
- TfL, 2022a. Healthy streets. Available at: <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets>. (Accessed 3 June 2023).
- TfL, 2022b. Streetspace funding and guidance. Available at: <https://tfl.gov.uk/info-for/boroughs-and-communities/streetspace-funding>. (Accessed 23 June 2022).
- Thomson, G., Newman, P., 2020. Cities and the Anthropocene: urban governance for the new era of regenerative cities. *Urban Stud.* 57 (7), 1502–1519.
- Tower Hamlets, 2022. Let's Talk Tower Hamlets: Liveable Streets. <https://talk.towerhamlets.gov.uk/liveablestreets>. (Accessed 17 June 2023).
- Verkade, T., Brömmelstroet, M.T., 2022. *Movement: How to Take Back Our Streets and Transform Our Lives*. Scribe, London.
- Verlinghieri, E., Venturini, F., 2018. Exploring the right to mobility through the 2013 mobilisations in Rio de Janeiro. *J. Transport Geogr.* 67, 126–136.
- Verlinghieri, E., Schwanen, T., 2020. Transport and mobility justice: evolving discussions. *J. Transport Geogr.* 87, 102798.
- Voss, J.P., Newig, J., Kastens, B., Monstadt, J., Nölting, B., 2007. Steering for sustainable development: a typology of problems and strategies with respect to ambivalence, uncertainty and distributed power. *J. Environ. Pol. Plann.* 9 (3–4), 193–212.
- Wachsmuth, D., Angelo, H., 2018. Green and grey: new ideologies of nature in urban sustainability policy. *Ann. Assoc. Am. Geogr.* 108 (4), 1038–1056.
- Wall, T., 2020. The New Road Rage: Bitter Rows Break Out over UK's Low-Traffic Neighbourhoods. *The Guardian*, UK, 20 September. Available at: <https://www.theguardian.com/world/2020/sep/20/the-new-road-rage-bitter-rows-break-out-over-uks-low-traffic-neighbourhoods>. (Accessed 4 January 2023).
- Wild, K., Woodward, A., Field, A., Macmillan, A., 2018. Beyond 'bikelash': engaging with community opposition to cycle lanes. *Mobilities* 13 (4), 505–519.
- Van Wymeersch, E., Oosterlynck, S., Vanoutrive, T., 2019. The political ambivalences of participatory planning initiatives. *Plann. Theor.* 18 (3), 359–381.