

The political economy of streetspace reallocation projects: Aldgate Square and Bank Junction, London

Robin Hickman & Katy Huaylla Sallo

To cite this article: Robin Hickman & Katy Huaylla Sallo (2022) The political economy of streetspace reallocation projects: Aldgate Square and Bank Junction, London, *Journal of Urban Design*, 27:4, 397-420, DOI: [10.1080/13574809.2022.2033113](https://doi.org/10.1080/13574809.2022.2033113)

To link to this article: <https://doi.org/10.1080/13574809.2022.2033113>



© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 03 Feb 2022.



[Submit your article to this journal](#)



Article views: 1532




[View related articles](#)



[View Crossmark data](#)

The political economy of streetspace reallocation projects: Aldgate Square and Bank Junction, London

Robin Hickman  and Katy Huaylla Sallo

Bartlett School of Planning, University College London, London, UK

ABSTRACT

Streetspace reallocation projects are often difficult to plan and implement, attracting great controversy with residents and other actors. This paper considers two streetspace reallocation projects, in Aldgate Square and Bank Junction, London. 15 in-depth interviews are used to explore the competing discourses on each project. The analysis covers the different viewpoints on perceived problems and opportunities, project impacts and effectiveness, distribution of benefits, technical assessment, participatory processes and the resulting sanctioned discourse. Using NVivo software, it examines the language used by the different actors in the process.

KEYWORDS

Transport; streetscape; walking; cycling; planning discourse

Transport in support of better cities

Streetspace reallocation projects provide an obvious way to provide more opportunities for walking and cycling. But, they involve reduced space for the private car, there can be much controversy with residents and different actors in the community, projects can be delayed, and often they are difficult to implement or remain unimplemented

Reducing road capacity for the private car allows cities to progress towards ambitious, longer term mode share targets, such as the 80% non-car mode share target adopted in London for 2041, relative to 63% using public transport, walking or cycling in 2015 (Transport For London 2018). Over decades, the street has been given, by a complex set of processes, institutions and actors, to a means of travel that has very large, often adverse, impacts on society (Freund and Martin 1993; Hickman et al. 2017). The growth in the use of the car has gone beyond the capacity of the street and the city, meaning that other users have been forced out. Transport planning has been complicit in this process.

The City of London provides the case studies for the analysis. This is the historic city of London and the contemporary financial centre, one of the world's leading financial districts. 93% of journeys are carried out by public transport, walking or cycling (City of London 2018a). Yet, the City has high levels of traffic for a constrained street network, poor provision for walking and cycling, many traffic-related casualties, and high levels of air pollution. Many of the roads were given increased traffic capacity during the 1960s and 1970s and this has been difficult to remove.

There is a long history, over decades, in attempting to deliver improved streets for pedestrians and cyclists, including the shape of 'good' streets (Whyte 1980; Jacobs 1993; Jacobs, Macdonald, and Rofe 2002) and the design of walking, public space and cycling projects (Gehl 2010; Newman and Kenworthy 2015). There are major benefits to improved public space, including increased active travel and development value uplift (Carmona et al. 2018). Yet, the evidence on how to effectively implement projects is limited, including the mediation of different actor views. Transport and urban planning practitioners admire public spaces in cities such as Amsterdam, Barcelona, Bordeaux, Madrid and Utrecht, yet successful implementation across wider contexts remains scarce (Poiani and Stead 2014). Effective processes of project implementation, beyond the technical assessment of the project, including the wider political and participatory issues, are not well understood.

The aim of this paper is to analyse the process of project delivery, including the technical assessment, but also the wider mediation of different actor views, the debate with politicians and the public, and the process of participation and implementation. The paper discusses the implementation of two innovative streetspace reallocation projects in the City of London: Aldgate Square and Bank Junction. Both of these were innovative and controversial projects, taking years to plan and deliver. A political economy framework (Feitelson and Salomon 2004) is used to illustrate how key actors seek to assist or block project implementation.

The remainder of the paper is structured as follows: [section 2](#) provides the literature review on streetscape reallocation projects and the conceptual framework; [section 3](#) gives the method followed for data collection and analysis; [section 4](#) provides commentary on the language used by different actors; [section 5](#) explores the interviews; finally, [section 6](#) gives the conclusions and reflections from the research.

Innovative streetspace reallocation projects

Streetscape reallocation projects have been conceived as part of wider strategies for more sustainable urban mobility, with origins back at least to the 1980s. Some of the early research in transport planning examined town centre pedestrianization, traffic calming, cycling provision and traffic demand management (Tolley 1990; Pharoah 1992; Pharoah and Apel 1995). The impacts of pedestrianization on retailing (Hass-Klau 1993) and reduced traffic capacity on travel behaviour (Cairns, Atkins, and Goodwin 2002) were also examined. Alongside, the urban design literature examined the different elements of streetscape design practice (Whyte 1980; Jacobs 1993; Carmona 2003; Jacobs, Macdonald, and Rofe 2002; Gehl and Gemzøe 2003; Boujenko, Marshall, and Jones 2007; Gehl 2010), including promotion of shared space (Hamilton-Baillie 2008; Hickman, Hamilton-Baillie, and Purkiss 2009). Some of the street design principles were taken up by government departments and related organizations and subsequently promoted (Department For Transport & Department For Communities And Local Government 2007; Commission For Architecture And The Built Environment 2007, 2008). Some of the early themes have been revisited and further developed, including reductions in traffic capacity (Melia and Shergold 2018), pedestrianization and walkability (Ewing and Handy 2009; Frank et al. 2010; Adkins et al. 2012; Hass-Klau 2015) and streetscape design for reduced car usage (Carmona et al. 2018). Cycling provision has also received increased coverage,

including effective network design (Pucher and Buehler 2008; Forsyth and Krizek 2011; Colville-Anderson 2018). The distribution of streetspace (Nello-Deakin 2019) and value of experimental approaches to street design (Bertolini 2020) are also examined as emerging themes, including issues of social equity and effective processes for implementation. There is some related consideration of transferability of perceived good practice, such as cycling facilities in the Netherlands (Poiani and Stead 2014).

Major research gaps remain in understanding how viewpoints differ relative to projects, different actor views may be effectively incorporated into project planning and design, and controversy mediated and managed. Streetspace reallocation projects are complex to deliver, requiring the management of disparate views and often involving long-term implementation processes. The focus on the technical design of infrastructure underplays the wider contextual processes involved in project planning and implementation.

Within the urban planning literature there is a greater focus on the politicization of the public policy process and the mediation of views (Flyvbjerg 1998; Forester 1989; Healey 1988, 1998). This is less developed in transport planning, with little consideration of the wider institutional, political and cultural factors associated with the planning of projects (with some exceptions, such as Freund and Martin 1993; Paterson 2007; Geels 2011; Curtis and Low 2012; Legacy 2015; Spotswood et al. 2015; Mattioli et al. 2020). The paper draws on a political economy conceptual framework (Figure 1), developed from Feitelson and

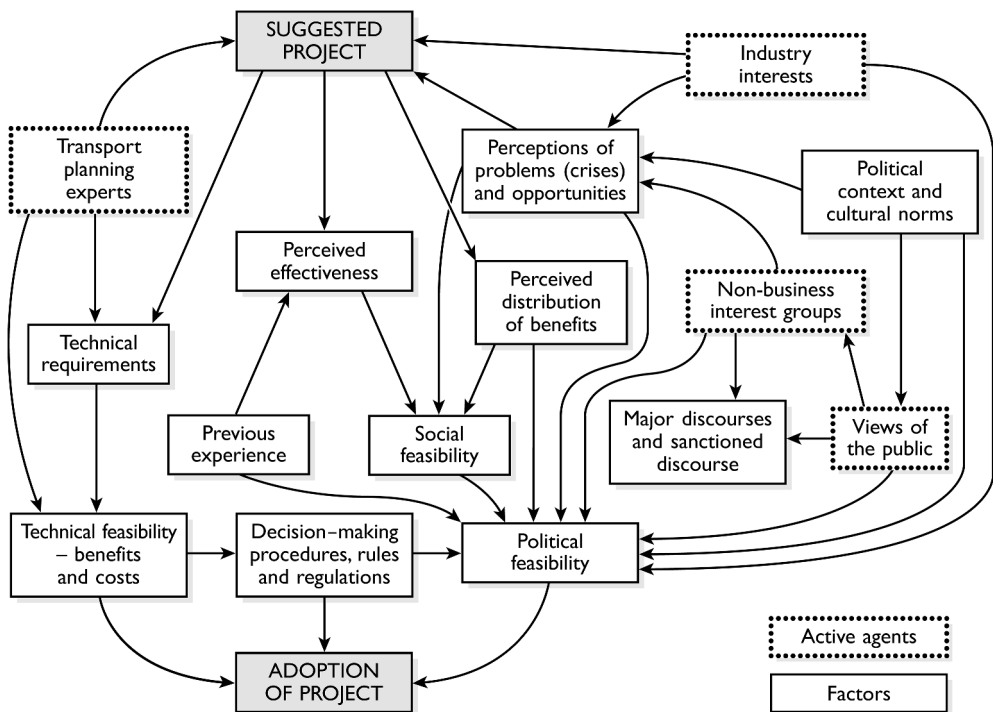


Figure 1. A political economy framework of project implementation.

Salomon (2004). This helps to consider a project's implementation process in relation to the different actor views and political process of project development. The approach has been examined in Huaylla Sallo and Hickman (2021).

The views and interests of a variety of actors are foregrounded, showing how transport planning follows a contested process. Different 'active agents' are involved in supporting or objecting to a project and eventually a leading position becomes more widely accepted, i.e., the 'sanctioned discourse'. This is useful when considering projects with a high level of controversy, for example, where the project is high profile and there is much debate. It helps us to understand the factors that contribute to a project's success or failure. The strength of the concept is in understanding the different groups' interests and views, suggesting that the coalitions adopting or opposing new infrastructure will determine its success. This can be viewed against different themes, including the perceived problems and opportunities, project impacts and effectiveness, distribution of benefits, technical assessment and participatory processes. The sanctioned discourse can be seen as the leading and 'mainstream' view on the project, often that promoted by the project promoter.

Method

The planning of streetscape reallocation projects is examined using two case studies, with the different actor views as the unit of analysis. There is some desktop analysis of project documentation from the City of London, including reports and consultation and promotional material. This information is an important complement to the interview data and helps to provide an understanding of the context to the analysis.

The main empirical element involves 15 in-depth, semi-structured interviews, using a carefully selected sample of interviewees. These included transport planners, urban planners and politicians who were involved with the planning and implementation of the project or on associated projects in the borough (from the City of London), motor organizations (taxi and motorcyclist trade), and wider actors (environmental campaigners, civil society, academics, local business and the community). Each interview explored the different viewpoints on the projects, mainly focusing on the process of planning and implementation, but also with some consideration of perception of impacts. Interviews were primarily face-to-face, audio recorded, and varied in length from 45–60 minutes. Each interviewee was informed of the research context, aims, objectives and method and sent the interview guide in advance of the interview. Voluntary permission for recording of the interviews was given in each case, and analysis carried out following the interviews. The interviews help to provide a deep understanding of the situation in practice and the underlying issues (Silverman 2013), revealing different viewpoints and experiences. The analysis is primarily inductive, grounding the examination of the projects and the inferences drawn in the interview data. However, there is use of a deductive approach in applying the political economy framework (Feitelson and Salomon 2004) to frame the questions and content analysis. Interview questions were asked on perceived problems and opportunities, project impacts and effectiveness, distribution of benefit, technical assessment, participatory process and sanctioned discourse. Factors that support or block policy implementation were also identified. Each interview was audio-recorded and professionally transcribed. The interview content was analysed using a coding scheme

(Table 1) with NVivo software. Within each theme, the transcripts are marked with codes or signifiers, which are deemed as important elements in the debate. These were summarized into sub-themes, which describe the main arguments used in the text (Erlingsson and Brysiewicz 2017). This includes the obvious, visible components (manifest content) and interpretation of the underlying meaning (latent content) and also linkages between sub-themes (Graneheim and Lundman 2004). The content analysis helps to uncover the underlying elements within the text, as well as interpretations of meaning. Content analysis hence contributes to the identification of the non-obvious factors that might explain the factors in project implementation. The assumption is that a text often involves multiple meanings and there is some degree of interpretation when examining a text.

Table 1. Coding scheme.

Theme	Code/Signifier	Sub theme
Perceived problems and opportunities	Poor public space, pedestrian and vehicle conflict, poor footway provision, poor cycling facilities, unsafe subways; too much or too little traffic capacity, traffic congestion and journey time delay, traffic as economically important; traffic casualties, poor pedestrian safety, severance; poor cycling safety, fatal cyclist collision; pollution and poor air quality, noise	Poor quality of public space Ineffective distribution of streetspace Inefficient traffic flow, congestion Pedestrian and cyclist safety Air pollution, noise
Project impacts and effectiveness	Desired outcomes; time and cost overrun, too expensive; safer for pedestrians; improved schoolchildren's play space, better access to school; improved public space, seating area, landscaping, lunchtime space, social interaction; access to church; improved walking environment; cyclist provision; increased traffic congestion, damaging to economy; increased footfall and business activity; increased rental and land value; negative impact on taxi users, disability groups, motorcyclists, tourism; stress on infrastructure	Project on scope, but lengthy in time and costly Safer for pedestrians; improved space for schoolchildren, church goers, office workers; for social interaction Improved business, land and property values Reduced space for motorists, motorcyclists; improved bus flow Disputed negative impact on disability groups, elderly, tourists (whilst using taxis)
Distribution of benefits	Beneficial for schoolchildren, teachers church goers; beneficial for City office staff, pedestrians, cyclists; businesses; property owners; public policy goals (sustainability) achieved; negative impacts on taxi users, disability groups, car drivers and passengers, motorcyclists; lower income groups	Beneficial for active travel and for quality of public realm, land values; bus users; City office workers, higher income groups Negative for vehicle users (cars, taxis, freight); disadvantaged groups
Technical assessment	Effective street design, traffic engineering, well planned process; positive CBA (Aldgate); CBA and economic case not required (Bank), unused economic case; traffic reduction; increased congestion; political and participatory process important; iterative scheme design; experimental design; adequate resource and funding, complex funding	Economic case not important to project delivery; traffic reduction difficult to justify Actor mediation and public participation shapes the project and implementation Funding availability
Participatory processes	Lengthy participation, extensive consultation material, stakeholder engagement; dedicated consultation resource, project champions; citizen protest; negative emotion and viewpoints	Extensive participatory process, dedicated resource Project champions; citizen protest
Sanctioned discourse	Need to improve public space; safer and reclaimed public spaces, pedestrian provision; cyclist death important; concern and opposition mostly from motorist and taxi groups; implausible taxi group arguments, tenuous argument, violence and threat; pragmatic policymaking	Broad consensus developed on the need for public space improvements, and the priority to give space to people rather than vehicles Some voices overlooked, tenuous argument; pragmatic policymaking

However, there is also a mutual understanding and agreement between researcher and interviewee on interpretation, with transcripts and interpretations being made available for the interviewees as requested.

Case studies

The two case studies, Aldgate Square and Bank Junction, are located in the City of London, one of the 33 local authority districts of London (Figure 2). This is the historical, walking district of London, the main financial district and also known as the Square Mile. The wider Greater London has a population of 9 million (Greater London Authority 2021); whereas the City has 8,000 residents, a usual working population of 480,000 people and 10 million tourists visiting the area each year. Travel to the City is very dominated by public transport: 93% of commuter travel is by the Underground, rail or bus. Walking accounts for 5% and cycling for 4% of commuter trips; and only 5% of commuter trips are by car. Walking is by far the most frequent mode of travel within the City, with over 750,000 pedestrian journeys per day (City of London 2018a). Hence, this is a highly compact central business district, with much potential to take away space from the private car and to improve the quality of public space for pedestrians and cyclists.

Aldgate square

Aldgate Square is located within the Aldgate area, near to Aldgate underground station. The traffic gyratory was built in the 1960s to increase road traffic capacity and accommodate traffic growth, but surrounded the St Botolph without Aldgate church and was located adjacent to the Aldgate School. The gyratory was perceived as unsafe to use or cross for pedestrians and cyclists, with a confusing and uncomfortable pedestrian subway

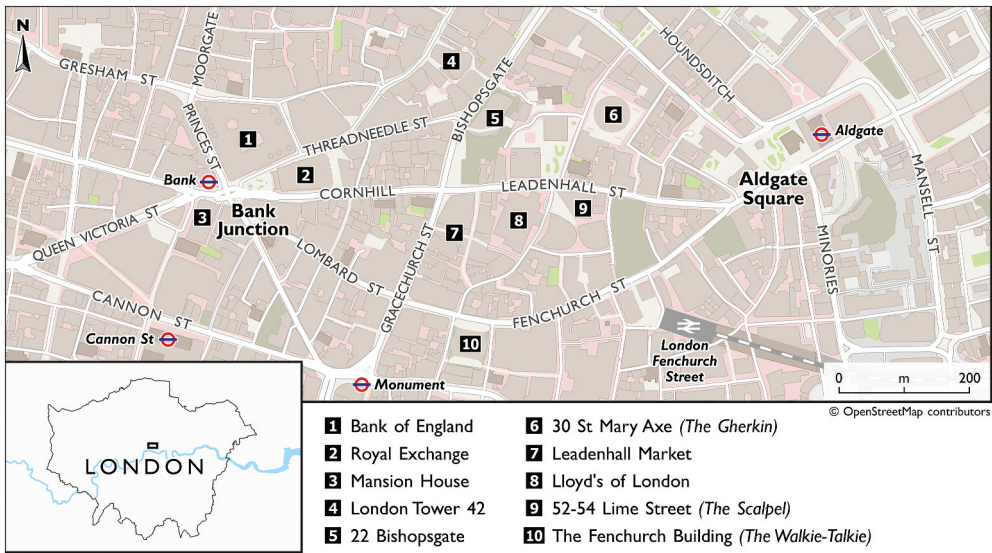


Figure 2. Aldgate Square and Bank Junction.



Figure 3. Aldgate Square.

system (City of London 2018b). The traffic generated significant levels of air pollution in the local neighbourhood, including at the Aldgate School, which experienced high levels of nitrogen dioxide (NO₂) pollution, exceeding EU limits (Interview 5).

Figure 3 shows the rebuilt Aldgate Square, with a new pedestrianized space replacing one link of the gyratory. The project was planned from the early 2000s and taken to an exploratory public consultation in 2008, which resolved that the gyratory should be replaced. Workshops with stakeholders and a public consultation were held in 2011 and 2012, recommending a new public space. Project planning aimed to enhance the area, provide a pleasant space to spend time, reduce accidents and air pollution, and offer a higher quality public space for school children to play (City of London 2018b, 2018c). Aldgate Square took a further 10 years to plan and implement, with construction starting in 2015. The new square opening in June 2018, with a cost of £23.4 million, two years after the initial expected completion date. The project was led by the City of London, with key actors including the Greater London Authority, Transport for London, the local school and church, local community and businesses. Aldgate Square now offers a pedestrianized space over one link of the gyratory, a revised two-way traffic route, new cycling infrastructure, pedestrian crossing routes, 71 new trees, drinking water fountains, improvement of the St Botolph without Aldgate church gardens and a new Portsoken pavilion café. The public space is hence much improved for pedestrians.

Bank junction

Bank Junction lies at the centre of the City. It is a street junction bringing together six roads, including Threadneedle Street, Cornhill, Lombard Street and Poultry, and is surrounded by key historic buildings such as the Bank of England, Mansion House and the Royal Exchange. The junction is also the location of Bank, London's third busiest underground station, serving the Central, Northern and Waterloo & City lines, and the

Docklands Light Railway. Bank station is currently being upgraded, with increased capacity to serve the new Crossrail project and expected significant growth of employment and pedestrian numbers in the City.

In 2015, over 25,000 people passed through Bank Junction (in a single hour during the morning and evening peak periods, mostly on foot). The road junction had been congested with traffic for years and provided a poor pedestrian environment. Pedestrians accounted for 63% of movements through the junction, yet were given little space. The area had become one of the most dangerous points in the City; 34 cyclists and 31 pedestrians were injured at the road junction between 2011 and 2015 (City of London 2015a). The death of cyclist, Ying Tao, killed by a lorry in 2015, led to many protests and requests for improved pedestrian and cyclist safety (Interview 5).

The City of London had attempted to improve Bank Junction for 30 years, and the cyclist death led to a revised approach, with an 18-month trial project, 'Bank on Safety', commencing in May 2017 (Figure 4). This involved banning motor traffic from the junction, apart from buses, between 7am-7pm on weekdays, Monday to Friday. The main objectives were to reduce traffic casualties and improve safety levels, yet the scheme also aimed to improve the quality of the public space over the longer term. The number of vehicles travelling through the junction reduced from 16,000 to just over 500 (now contravening) vehicles a day. Hence, there is a significant change in travel patterns as traffic movements are made more difficult. The penalty notice for vehicles was set at £130, reduced to £65 if paid within 14 days. The junction is much easier to use for pedestrians and cyclists; and traffic volume reductions meant that traffic casualties have reduced by 52%. Bus passenger journey times through Bank improved by up to 5 minutes due to reduced traffic. Air pollution levels (NO₂) fell at the junction and in the surrounding areas (Air Quality News 2018).



Figure 4. Bank Junction.

There was much opposition to the project from the taxi trade, but positive support from the local business and resident community, allowing the project to be made permanent in September 2018. The project is now being taken forward as 'All Change at Bank', seeking to further improve pedestrian space and potentially even completely remove vehicle traffic. The project is led by the City of London, with key actors including the Greater London Authority, Transport for London, the local community and businesses. The current cost is £1.4 million and with an estimated completed project cost of £18 million.

Language by key actor group

The initial analysis examined the language used by each actor group involved or commenting on the projects. This differed quite significantly and was assessed using NVivo (Table 2). Interviewees from the city authorities discussed 'people' (1.91% of interview content) and 'project' (1.35) mostly, alongside 'scheme', 'space' and 'process'. The motor organizations focused on 'people' (1.39) and 'London' (1.14), alongside 'road' (0.96), 'junction' (0.82), 'traffic', 'driver', 'time' and 'business'. The language hence attempted to link the strategic case for road investment to economic growth and London's economic 'future'. The environmental and community groups mostly used 'pedestrian' (0.2), 'borough', 'driver', 'evidence' (0.18) and 'crossing' (0.17). Hence, there are differences in the positions taken and the language used by each group.

Commentary by political economy theme

More detailed analysis at the individual interview level gives the following commentary by political economy theme.

Perceived problems and opportunities

The perceived problems at both Aldgate and Bank Junction included poor public space, pedestrian and vehicle conflict and poor air quality. These are high profile locations in the City, particularly at Bank, with high levels of pedestrian activity despite little footway provision. There was a perceived excessive amount of space allocated for cars, resulting from the priority given to vehicle capacity from the 1960s onwards. The public realm was unattractive for pedestrians and cyclists.

There was too much roadspace at Aldgate compared to the actual traffic flow. (Interview 1)

There was no space for cycling, pedestrians didn't have enough space to move, there were not good connections, barriers were stopping pedestrians from moving the way they wanted to, lots of collisions and accidents. (Interview 14)

Traffic dominated the area around Aldgate and, similarly, vehicles were allowed to dominate Bank Junction with pedestrians given little space. The streetspace given to vehicles was contrasted with private cars passing through Bank Junction being around 10% of total person movements (City of London 2015c).

We challenge the motor traffic dominance in Central London. (Interview 8)

Table 2. Language used by key actor group.

City Authority			Motor Organizations			Environmental Groups, Local Community, Academic		
Word	Count	Weighted %	Word	Count	Weighted %	Word	Count	Weighted %
People	269	1.91	People	83	1.39	Pedestrian	34	0.2
						Pedestrianization		
Project	191	1.35	London	68	1.14	Pedestrianize	34	0.2
Projects						Positive		
						Positively		
Scheme	99	0.70	Cycling	65	1.09	Positives		
			Cycle			Borough	33	0.19
			Cycles			Boroughs		
Change	90	0.64	Road	57	0.96	Group	33	0.19
Changed			Roads			Groups		
Changes								
Changing								
Junction	90	0.64	Junction	49	0.82	Open	31	0.18
Junctions			Junctions			Openness		
London	62	0.44	Traffic	42	0.71	Driver	31	0.18
						Drivers		
Pedestrian	60	0.43	Driver	36	0.50	Evidence	31	0.18
Pedestrians			Drivers					
Space	58	0.41	Time	35	0.59	Motor	31	0.18
Transport	56	0.40	Cyclist	32	0.54	Crossing	30	0.17
Transportation			Cyclists			Cross		
						Crosses		
						Crossings		
Public	55	0.39	Work	32	0.54	Politician	30	0.17
Publicity			Working			Politicians		
Process	54	0.38	Business	30	0.50	Cars	30	0.17
Processes			Businesses					
Differ	51	0.36	Problem	28	0.47	Studies	26	0.15
Different			Problems			Study		
Difference								
Differently								
Benefit	50	0.35	Taxi	24	0.40	Access	25	0.15
Benefits			Taxis			Accessibility		
Benefitted						Accessible		
Vehicle	49	0.35	Pollution	24	0.40	Pollution	23	0.13
Vehicles			Pollutants			Polluted		
Political	49	0.35	Cost	23	0.39	Safety	23	0.13
Politics								
Politically								
Feasibility	47	0.33	Journey	20	0.34	Planning	22	0.13
Feasible			Journeys			Plan		
Feasibly						Plans		
Viewpoint	47	0.33	Harm	18	0.30	Information	21	0.12
View			Harmed			Inform		
Views			Harmful			Informed		
Business	46	0.33	Motorcycle	17	0.29	Gyratory	20	0.12
Businesses								
Engage	46	0.33	Congestion	15	0.25	Accident	19	0.11
Engagement						Accidents		
Communicate	43	0.30	Delivery	15	0.25	Health	19	0.11
Communication			Deliveries					
Communications								

Note. Most frequently used words, including stemmed words and synonyms, are given by actor group. 'Count' refers to number of uses of the word in interviews and 'weighted %' refers to proportion of use of the word in the interview content.

These problems have led to high levels of conflict between pedestrians and vehicles, in particular adversely affecting the most vulnerable groups. Practitioners were aware of these issues, and movements such as Complete Streets, Shared Space and other aspirations for street redesign were well known. However, the difficulty was in getting new streetscape designs approved and implemented (Interview 4).

The high level of casualties and safety issues has become evident at both locations, but particularly at Bank Junction. High volumes of pedestrians meant that formal pedestrian crossings were not always used (City of London 2015b). In particular, the cyclist fatality in 2015 at Bank Junction became a critical event that led to implementation of the new project.

The 1960's gyratory had completely severed residents, business and school communities [...] people were taking their life in their hands when crossing the road. (Interview 5)

Bank was dangerous, dysfunctional and dirty – the most dangerous junction in the City [...] the reason why people wanted a change at Bank was the high number of accidents, but in particular there was a fatal cycling collision that occurred in 2015, which resonated with the cycling community and generated huge protests with die-in demonstrations. (Interview 5)

The Bank scheme is a direct reaction to the death of the cyclist, although it is part of a broader strategy. It's not much about quality of space, but more targeted to address road safety. (Interview 13)

Alongside, poor levels of air quality were evident at both locations, adversely affecting the attractiveness of the public spaces, particularly at Aldgate. The primary school located next to the gyratory had the worst pollution levels among schools in the City (Interview 5). The gyratory provided a large amount of space for vehicles at surface level, while pedestrians were meant to use the subways to cross the traffic lanes. Pedestrians often avoided using these as they were unpleasant, increasing the number of informal crossings and the risk of accidents (Interview 3).

People only could cross the gyratory by pedestrian subways. These were very unpleasant and dangerous for pedestrians and cyclists. An absolute horrible place to be. (Interview 11)

Crossing roads in Aldgate was very difficult for children, very noisy. [...] and the pollution that it used to create, it went above the legal limits here. Definitely pollution was a main concern. (Interview 7)

Conversely, the motor organizations suggested that safety is not the critical issue at either location. Instead, they argued that congestion needs to be tackled and that roadspace should be maintained for traffic. Safety is perceived only as an argument used by the environmental organizations to advocate their particular interests. Hence, there is much difference in viewpoint depending on the particular actor or group concerned.

The biggest issue is congestion, which leads to pollution. I don't think it's about safety. Safety is used now as a political weapon, mainly by the cycling lobby. Cycling is not economically important to the city, but the other traffic is [...] the main challenges, in my view, are to improve the flow of the commercially significant traffic in those areas and take a proportionate approach towards safety [...] the main opportunity is to open up the road space to private vehicles and reduce the allocated road space for cycling. (Interview 10)

Perceived impacts and effectiveness

Both projects are mostly seen as having positive impacts for pedestrians, particularly at Aldgate Square with the new public space. Bank Junction is perceived as having additional benefits for cyclists and bus users.

Children now use the space, they play in the square, in the fountains. They sit on the grass after school. It takes us two minutes to go to church, this just wasn't a possibility before [...] children like the square. I get the impression that there are more children going home by themselves than there were previously. There are certainly more children hanging around with their friends than going straight home. Definitely it's much safer. (Interview 7)

If you go to Aldgate at 6am you can see a mass of traffic in Aldgate High Street; but in the square, you can see children playing, people sitting having breakfast, you can see all sorts of social life [...] this is a massive win in social terms. (Interview 8)

In the square, we had golden finches start to nest, they were never known to be in the area because there was nowhere for them to be, but through the project, we've planted 71 trees. (Interview 3)

One of our surveys showed us that, after Bank Junction was closed, people felt safer and they were willing to spend more time there. (Interview 5)

If you compare what Bank Junction was like before, when all the vehicles were coming through all the time, to now, it's much quieter, there's more breathing space. If you stand on the junction, you're not surrounded by vehicles, it gives a lot more priority to pedestrians. (Interview 11)

Bank is a good project, I am quite satisfied. Customers come to my business more often, the impact is positive in general. (Interview 6)

There is potential for future improvement at Bank with a view that the project is only partly completed and could become a much more impressive public space, reflecting the buildings surrounding the junction, including the Bank of England, Royal Exchange and Mansion House.

Bank still looks like a horrible junction. The experiment and its impacts are temporary. Now the City is dealing with what to put in place. This is called 'All Change at Bank' and will deliver a world-class public space that might be fully pedestrianised, as opposed to the scheme that is in place now. (Interview 13)

Both projects are seen as expensive and have taken much time to implement.

The project cost overrun is crazy. We shouldn't build these projects, they are too expensive. It took too long as well. (Interview 12)

Not everyone sees positive impacts. There are views from the taxi and motorist lobby, in particular, that the projects are generating more problems and are damaging. The term 'common sense' is used to try to persuade others that the position put forward is one that any clear-thinking person will agree with, i.e., to 'naturalise' the discourse given.

Everything looks wonderful on the plan until you actually implement it and you see the amount of traffic coming in [...]. It's slow, it's very, very slow, especially in rush hours, you just sit there in traffic and if you've got someone in the back, they're sitting there and saying, 'hold on, it's cost me nearly £7 to go round the one way system.' Well, what can you say to them? There's nothing you can do; you can't get out of it. (Interview 12)

No-one wants to see a cyclist being killed or hurt. I do support safer cycling, I really do, but it's got to be common sense applied when doing these schemes. (Interview 9)

They are ineffective; they are damaging the city particularly in economic and pollution terms. They reduce road speeds and increase congestion [...] ask anybody who runs a courier service or a delivery service and they tell you that there is no upside to blocking off those areas for anybody who depends on a motor vehicle [...] the utilitarian cost of over-promoting cycling is enormous because it harms the economy of the City and the cycle schemes in London steal millions of hours of time from everybody else who uses the roads. (Interview 10)

The wider area is affected, the people who work in the City, people who rely on taxi services daily, a door-to-door service, disabled people, wheelchairs, blind people. These are people affected, car drivers and residents too. Bank is not successful for black cab drivers [...] this is not generating any positive impacts. A black cab is a door-to-door service, we cannot be restricted in some roads; this is not acceptable. (Interview 12)

They should re-open to private vehicles, particularly in Bank. The restrictions are causing enormous additional stress on the transport infrastructure [...] this ties into the idea, the false belief, that we should reclaim the streets for pedestrians and cyclists. They never belonged to pedestrians and cyclists in the first place, not in their current form. (Interview 10)

Perceived distribution of benefits

Views on the specification and impacts of projects are not uniform. The main benefits at Aldgate are mostly perceived for the schoolchildren and the church visitors, and for people walking, sitting and cycling in the area. At Bank, the major benefits are for the pedestrians and cyclists who have improved space, safety, air quality and lower noise levels. Bus users are seen as being positively impacted with reduced journey times, indeed this was an important element in achieving support from Transport for London (Interview 5).

At Aldgate Square, they hold all the neighbourhood clubs there, the chess club, various activities, a dining club, they all meet there and the square is now one of the most popular places for the children on the estate to have their birthday parties. Before, they had no outdoor space. So, I think, socially, it's giving people a place that they feel they own [...] the local vicar, the teachers at the school, they've all said that it feels like a small village because you bump into people on the square all the time [...]. We have a social enterprise café in the square – we built a pavilion and they hire local people and they also are a charity, so they don't make any profit, everything goes back into the business or their charity. (Interview 3)

But there are more negative views. Vehicle users are negatively impacted; hence there is a strong perceived (and real) distributional imbalance between users.

Bank excludes the elderly and disabled because they depend on the taxi to go around. So, the project is actually harming some of the most vulnerable and disabled people. It makes central London a no-go area [...] I don't agree with what they've done, because I think we, as the black cab trade and black cab drivers, it has an impact on our living, our families. Cab drivers have lost their houses, they can't earn enough money. (Interview 9)

They did consultation, but we don't get any benefit at all. (Interview 12)

In terms of cost, Aldgate is perceived as an expensive project. For many, the benefits far exceed the costs.

Aldgate was originally an £8 million project and ended at £20 million, so it a lot more than was originally thought. But I think it worth every penny because the square is absolutely packed full of people. (Interview 3)

For others, the investment in pedestrian and cycling projects is disproportionate and misaligned.

The problem is that the cycling agenda has taken on such a priority in the eyes of Transport for London that they are willing to compromise all other forms of transport in order to protect cycling, even though cycling is showing no massive increase and so we have reduced road speeds, increased congestion and increased pollution, in order to try and reduce injury accidents and cycling [...] cycling investment comes to hundreds of millions of pounds a year. I don't think that is the best usage of time and money [...] The focus of road space should be for powered vehicle users, it's so obvious. These are just vanity projects. (Interview 10)

The problem is that the cost is borne by the local authority and the benefits are largely experienced by the people working in the City of London, so the businesses in the City benefit hugely from the scheme [...]. So, essentially, the local authority pays for these projects, but they don't necessarily capture the value in terms of getting the money back from the investment. (Interview 11)

Technical assessment

Ensuring a project is technically well-designed and works in terms of transport planning, traffic engineering, urban planning and urban design is critical to both projects. Much technical work was carried out on the projects, including at the early stages to ensure potential project options were implementable. The City is well resourced for project planning and is perceived as being very effective in project implementation (Interview 5). The project planning process covers an identification of the problems, setting project objectives and success metrics, consultation on project options, refinement of solutions and monitoring of implementation and operational phases.

The City has a very solid team, really good project managers, lots of experience in projects delivery. The City is always looking for best practice around the world because we know we have to be competitive globally [...] both projects were really well done. At Bank, in terms of engagement and analysing data, they have a very thorough approach. Because it was such a sensitive thing, the Bank Junction closure, doing it in a soft way was a good choice [...]. We have several approvals here at the City that schemes have to go through. There are at least 6 or 7 approvals before you can get started. (Interview 4)

Most authorities do well if they actually deliver 20% of the projects they start, most of them will normally deliver 10%. We deliver 95%+ of the projects that we start. (Interview 5)

In terms of the formal project appraisal process, the Department For Transport (2020) stipulates that a cost-benefit assessment (CBA) and strategic multi-criteria assessment (MCA) are undertaken. But, this only applies to projects that need approval at the national level, which are generally the larger cost projects. For smaller projects, the wider management of politician and wider actor views is often more important. This means that the economic assessment, and wider assessments that feed into the MCA, such as an environmental or social impact assessments, are not always so important in practice. There is limited reliance on the technical appraisal process, and it is more that the project is assessed and refined through comments given to the project officers and politicians. There is an iterative process of project refinement as support is gained for a preferred project option.

In the City, a formal CBA is rarely carried out for streetscape projects (Interview 5), and only if an external actor requires this, such as Transport for London. The system of project delivery is more focused on project option refinement and implementation through the political process. Technical design of the project, community and political support and funding availability are the major factors in projects being taken forward. A formal economic case is not seen as being able to handle the complexity of the impacts associated with a streetscape intervention project.

Bank is about politics and not economics – we didn't produce an economic case for Bank. The objective was to make a safer space and a world class public realm. The economic case is not so important here [. . .]. Whereas Aldgate has a 2:1 BCR – most of the estimated benefit comes from improved bus journey times. (Interview 5)

The ability to do anything depends on having the available money and deciding to give political priority in the allocation of funds [. . .] is complex. Quite a lot of the funding will come from TfL and we often don't have any choice. If we want to pursue a scheme like this, we go to TfL and they consider whether they'll give us some money. (Interview 4)

The City is also unique as a local authority for the financial district in London. It has a small resident community and a large employment population. The City includes many wealthy business organizations, hence has its own power and funding.

In the City, these projects are feasible because it's a wealthy local authority [. . .]. If they decide this is a priority, then they'll find money for it, which is not the case for many other places in the UK or around the world. (Interview 5)

There are concerns over delivery times and increasing costs of projects.

Aldgate Square took seven years to build and at a huge cost. The City of London has quite a lot of money and I am sure Aldgate is a high-quality space now. But it just seems it's such a huge project [. . .]. I think you can use a more tactical approach by doing experiments with temporary materials. Maybe that could've speed up delivery cycle and cut costs, which I think is really important. (Interview 11)

The Bank scheme does not cost a great deal of money [. . .] whereas Aldgate is different. The issue was purely about money and a budget that was constantly increasing [. . .]. We had to be able to deal with a very complex project over many years. (Interview 4)

The experimental approach to project delivery was used at Bank, and this seems to have helped in the delivery of a controversial project.

I think the trial is a good method. Maybe it's a bit difficult to get permanent innovative things, but if it's a trial it may be more possible to get approval from stakeholders. A trial makes people to think about the space differently. (Interview 1)

However, there remain problems in delivering good streetscape projects that are difficult to justify through the conventional, economic-dominated transport planning process. In the UK, projects still usually need to be assessed against traffic congestion impacts. If traffic capacity is removed and congestion is estimated to increase, then it is more difficult for a project to be agreed – and this is what many pedestrian and cycling projects will result in. Often transport planners will need to show there are no congestion problems at a wider area level, or there are bus user benefits, to help gain a positive economic case. The choice of project objectives and the process of project appraisal is thus very important to what projects can be developed, and the reducing congestion objective is becoming very outdated.

If the modelling for a scheme shows an increase in traffic, that's the scheme off the table in the UK. Whereas in most of Europe, if that's the case, they'll work out what could be done to stop congestion around the scheme. (Interview 8)

Bank was made permanent after we showed that air quality improved, collisions were down, bus times were cut and traffic didn't increase much in surrounding areas. We measured absolutely everything to show the improvements. (Interview 3)

Both projects went through very extensive and complicated processes of justification. Particularly for Bank Junction, if you look at the officer's report there are hundreds and hundreds of pages of justification. However, if the modelling had shown an increase in congestion, neither any of them would've been implemented. (Interview 8)

This is a critical point for project appraisal, demonstrating that the process of appraisal can affect the projects that can be developed. The process results in very few projects like Aldgate Square and Bank Junction being developed in the UK, i.e., much analysis is required to demonstrate that traffic capacity will not be 'too adversely' affected relative to improving pedestrian and cycling conditions. Broader environmental, social or city planning goals are becoming much more important, and hence traffic congestion reduction should be removed as a transport planning objective (Hickman 2019). The focus on economic objectives in project appraisal has been naturalized over decades in the process of project appraisal, illustrating how the powerful participants control the process and constrain the projects that are implementable. The City, and indeed Transport for London, have managed to move beyond this, to a degree, but many other authorities do not have the resources to do this.

Participatory processes

The participatory processes used at Aldgate and Bank were lengthy and extensive in attempting to involve local residents, community organizations and business populations in the design of project options and to gain support for implementation. Participation is used at different stages to understand the problems and opportunities, potential options, and then to refine the solution and generate support.

We set out a clear process and have no idea what the end product will be. (Interview 5)

We engaged massively for both projects. I was literally meeting with everyone face-to-face, with stakeholder groups, residents, businesses, everyone. We were sending regular updates to their email addresses and phone numbers [...] we also were handing out letters, booklets, flyers, maps, information, we did absolutely everything in thousands so that all could be distributed. (Interview 3)

The children were involved in the planning. The school spent quite a lot of time with the planning office of the City. They come back with the design and the children didn't like it, so they changed again. We had very regular meetings in a huge consultation period. (Interview 7)

The level of engagement carried out by the City was a key factor to build the positive support from key actors.

The City has always done engagement for projects, but in the case of Aldgate and Bank, these were the first two projects where there's been someone specific just to meet with stakeholders [...]. The City now wants to repeat the process with the next projects. (Interview 3)

The participatory process is used to gain consensus over a project, and also to generate supporters and project champions.

With Bank, we only had one business that didn't love it that much, but they've gotten used to it and then all of them absolutely love it. The same with Aldgate, all the businesses were absolutely on board, so from the effectiveness of making the people that use it, love it, I think that's a success. (Interview 3)

It is easy to scare the hell out of the local community and the politicians will shut the project down [...]. Until people own the problem, they will never own the solution [...]. If you work with people they become champions, the supporter's club [...] they can help the politicians support the project in the face of criticism [...]. We use the term emotional capital [...] what happens always, and it happened at Bank with the taxi trade, is that you get a huge input of negative emotion and, inevitably, politicians react. The key to balance is creating not just acceptance in the community, but that emotional capital that they become champions. So, when the negative emotion comes in, as it always will, you've got 10 times the positive emotion to deploy. Your big supporters show up and say that all is alright. (Interview 5)

Some actors still feel their views are not taken into consideration and this is the difficult process of mediation, to consider which views to listen to, but not necessarily follow.

Yeah, we've been consulted by the City of London, but whether it was good, the engagement, is another question. We give our views, how the London black cab trade works and what we need to do our job and people with disabilities and who are blind and these sort of things. But it's not taken into consideration. (Interview 9)

We were engaged, we were opposed to the change, but we were ignored [...]. The environmental cycling lobbies have been very successful at putting forward their agenda and others haven't and so, at the moment, we are in the middle of a pro-cycling, pro-walking fashion and that makes politicians respond. The cycling community, particularly, has been magnificent at promoting their cause, they're a case study in lobbying, they're very effective and the politicians have responded [...]. If you ask somebody, 'do you want to breathe clean air and have a nice environment?' they're going to say yes to that, without necessarily going through the consequences of what that means [...] the legitimate, mainstream road user is being ignored. (Interview 10)

Adequate resources for extensive engagement are critical and help determine the success or failure of a scheme. This is not always available in contexts beyond the large cities and boroughs such as the City of London.

Because we have the resources I think, we do a lot of engagement. (Interview 5)

We had to organise public campaigning groups to support the scheme at various points very heavily, which was a huge amount of political work to get the schemes through. (Interview 8)

If these schemes are going to become more commonplace, there will need to be some innovative processes to speed delivery and reduce costs. (Interview 1)

The participatory process is hence used as a process of participation and deliberation, to improve awareness of the problems, opportunities and options throughout the process, indeed to help overcome any controversy.

What had to be done, there was engagement with local businesses, extensive consultation. The local businesses were almost universally in favour. The opposition has come from taxi drivers who resist anything that takes away what they perceive to be their rights, they always want to be able to go where buses are, on the grounds that they're public transport. Nobody else accepts this, they are carrying small numbers of people who are paying a lot of money, but they are very vociferous in their campaign. They blockaded Bank several times, they made a lot of threats. (Interview 13)

Sanctioned discourse

The sanctioned discourse can be seen as the mainstream view that is developed and most widely held on the project, including views from the project promotor, the resident and business community, politicians and wider key actors. This can cover the different dimensions of the political economy framework, such as the problems and opportunities for an area, the scope of the selected projects and perceived impacts. There may be different views on the issues, but, over the course of time, a discourse becomes accepted and sanctioned. There may be key events that change the understanding on a particular project. For example, at Bank, the cyclist death led to campaigners organizing a campaign for safer streets. This helped the City to speed up the process of project development.

Nonetheless, not all were in support of the delivery of both projects; the taxi trade campaigned heavily against them, particularly against Bank.

The concern and opposition were mostly from taxi drivers. In the survey we carried out, taxi drivers flooded us with negative responses. From 3,000 surveys, 800 responses were from taxi drivers. They were protesting against all of our initiatives. (Interview 5)

People and organisations sometimes have the resources to campaign in support of their vested interests; they are the voices you hear [...]. We campaign for better cycling facilities and we make sure that we work hard to be heard. But we shouldn't need to do that because politicians should be making good decisions – not based on who shout the loudest, but based on genuine concerns. (Interview 8)

Consultations on controversial local projects are often hijacked by particular groups to affect policy making according to their interests. The taxi trade used significant resources to protest against the schemes, particularly at Bank. Yet the cycling lobby were also well organized and helped to counter the taxi trade arguments.

Taxi drivers didn't have a plausible argument. They argued that people rely on black cabs to travel around London, but we know that's not the case. They argued about people with disabilities, which was not an argument, because nowhere was closed to them in Bank. When people use violence and threats as a tactic, it does have an effect in the political debate, but we were quite determined that this did not influence the outcome [...]. Taxi drivers conducted a very nasty campaign against the chair of the committee. We were not influenced by that at all. Some members were either intimidated or for some reason decided to support the taxi drivers; but the majority of the members remained fully in support. (Interview 4)

Politicians have been attacked heavily for what they believe and what they wanted to do, but they stayed strong and they delivered schemes. That's why they'll deliver more schemes and go wider and bigger. (Interview 8)

The implementation of the projects reflects much pragmatism and tenacity.

At any one time, there are a number of areas in the City that could do with improvement. We know about them, they're obvious to everybody, but the ability to do anything depends on having the available money and deciding to give it political priority in the allocation of funds [...]. What is being put in place at both Aldgate and Bank is the art of the possible, something that is acceptable politically, to the community and to all the decision-makers, and delivering that, rather than going to the ultimate solution and not delivering anything. (Interview 13)

There is potential to be more progressive, to reduce streetspace much more significantly away from traffic and car parking uses in the City. The successful delivery of Aldgate Square helped in the approval of Bank Junction, and provided a message to the business and resident community that pedestrians are important in streetscape redesign projects (Interview 5). Yet, the streetspace reallocation projects could be applied over a much greater area and cyclists could be given much more extensive facilities. Project delivery is resource extensive and time consuming, funds are difficult to bring together, and the formal project appraisal process does not always help in the delivery of walking, public space and cycling projects. All of these remain unspoken discourses and could be more thoroughly debated.

The process of mediation between actor views is complex, but the view that 'cities are for people, rather than cars' is mostly accepted. In the City's planning process, politicians use feedback from businesses and residents to help understand whether a project option is worth pursuing. This is more important than use of an economic case to help gain approval. Hence the political process is supported by technical evidence, but this is used to inform the debate and eventual prioritization of projects.

Conclusion

Aldgate Square and Bank Junction are innovative projects in reallocating streetspace away from previously-dominant private vehicular uses, to the pedestrian, cyclist and bus. These types of projects require multi-disciplinary inputs, including from transport planning, traffic modelling and engineering, urban planning, urban design and landscape design. An

important point is that urban designers and landscape designers need to be centrally involved if the resulting spaces are to be enjoyed by pedestrians and cyclists. Aldgate Square has so far been more successful in the streetscape design elements; improvements can be made at Bank Junction as the project is refined. Analysing the different perceptions of key actors helps to understand how different groups view the planning and implementation of projects; that there are different views beyond the 'expert' view. The political economy framework assists in considering these views alongside the more conventional technical assessment of a project.

Often the technical assessment is given most priority in the transport planning process, assuming that a good technical case will lead to project implementation. The decision-making process is almost viewed apolitically, overlooking the importance of the different actor views and the subjectivity involved. A preferred project is planned, appraised and put forward for implementation, even defended, by the project promotor. The resulting controversy often seems to be a surprise. As interview 5 suggested:

Think of all the consultancy streetscape projects that are started and aborted – it is by far the majority of projects.

This is often overlooked in practice, and the limited extent of participation in transport planning contributes to this, as a democratic deficit (Legacy 2015). This leads to problems in project implementation when parts of the community may react against the proposals. In addition, there are many innovative projects that are not considered in many cities. These are the 'policy taboos' (Gössling and Cohen 2014), the discourses that remain undiscussed, as some projects are deemed as unimplementable in a particular context.

The process undertaken at Aldgate Square and Bank Junction has attempted to overcome these potential difficulties by including an extensive participatory process throughout the project development process. Both of the projects took years to develop, over 10 years in the case of Aldgate Square. Bank Junction is still being refined and developed after the initial trial project. Both projects had lengthy histories of project planning. There has been much controversy in implementing the streetscape reallocation projects, particularly at Bank, and there still remain some vocal objectors. But this is limited to the very polarized actors, such as the taxi and motorcycle lobbies. The resident and business groups were consulted at the different stages of project planning, including on the problems and opportunities, potential solutions, preferred options and implementation. Hence, support was developed as the project was developed. This has made for very lengthy project implementation processes, but, in the long run, has led to more successful delivery. Wherever possible, the differences in viewpoint are incorporated into the planning process. Negative and tenuous arguments, including threat and violence, have been rejected.

We can draw more general lessons for practice from the specific case studies. Transport planning can become much more collaborative in procedural terms, drawing on disciplines such as urban planning and design. The process of project development can be developed to ensure greater involvement with the local community and related actors. The conventional focus on economic-led project appraisal can be reduced. However, this requires sufficient technical resource and funding within a city authority. Transport can play a much greater role in the placemaking aspirations of city planning and it can be much more participatory and deliberative (Legacy 2012; Hickman 2021). This will involve moving away from a purely technical focus and to embrace the political process that is

central to successful project development. Collaborative project planning can draw on varied viewpoints in society, gradually leading to consensus over projects. The process of discussion and deliberation will make the more tenuous views even more apparent. The coalition of views – the sanctioned discourse – can gradually emerge and the preferred projects be developed. Depending on the types of projects, experimental implementation processes can be useful (Bertolini 2020). These allow options to be tested, viewpoints assessed, and support to be developed. Shared knowledge can be encouraged, with transport planners helping to bring the community together to solve local problems and work towards agreed future visions. But, taking away traffic capacity and more radically reallocating streetspace remains difficult – and much more progress can be made in future years over wider contexts.

Sometimes it is argued (Oosterlynck and Swyngedouw 2010) that the urban development process has reached the postpolitical, whereby the governance framework achieves a key actor-based consensus, largely by not recognizing disagreement and excluding legitimate voices from the debate. In transport and urban planning, this is often the case as the participatory mechanisms are weak. The technical decision-making process and the prioritization of the apparent best projects, through the appraisal process, de-politicizes the different viewpoints. The main lessons from Aldgate Square and Bank Junction are to give time and resource to the participatory process and to gradually develop and refine the streetscape projects over time. This, in effect, is a deliberative planning process and one that will help in creating much improved streets in our cities.

Notes

List of interviews:

- Interview 1: Research Associate, UCL
- Interview 2: Academic, University of Western England
- Interview 3: Transport Planner, City of London
- Interview 4: Transport Planner, City of London
- Interview 5: Traffic Engineer, City of London
- Interview 6: Representative, Starbucks, Bank
- Interview 7: Headteacher, Aldgate Primary School
- Interview 8: Cycle Campaigner, London Cycle Campaign
- Interview 9: Representative, Licensed Taxi Drivers' Association
- Interview 10: Representative, Motorcycle Action Group
- Interview 11: Representative, Living Streets
- Interview 12: Representative, Worshipful Company of Hackney Carriage Drivers
- Interview 13: Politician, City of London
- Interview 14: Representative, Sustrans
- Interview 15: Teacher, Aldgate Primary School

Acknowledgments

Thanks to our interviewees in the Aldgate Square and Bank Junction case studies; to Eileen Crotty for transcription, and Jamie Quinn for the image and mapping. Special thanks to Iain Simmons for showing us the projects and describing the processes of project implementation. Finally, to the paper reviewers who made useful comments and helped improve the paper.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Robin Hickman  <http://orcid.org/0000-0002-5410-6594>

References

- Adkins, A., J. Dill, G. Luhr, and M. Neal. 2012. "Unpacking Walkability: Testing the Influence of Urban Design Features on Perceptions of Walking Environment Attractiveness." *Journal of Urban Design* 17 (4): 499–510. doi:10.1080/13574809.2012.706365.
- Air Quality News. 2018. *Bank Junction Sees Air Quality Improvement*. Accessed 18 January 2021. <https://airqualitynews.com/2018/05/14/bank-junction-sees-air-quality-improvement/>
- Bertolini, L. 2020. "From "Streets for Traffic" to "Streets for People": Can Street Experiments Transform Urban Mobility?" *Transport Reviews* 40 (6): 734–753. doi:10.1080/01441647.2020.1761907.
- Boujenko, N., S. Marshall, and P. Jones. 2007. *Link & Place. A Guide to Street Planning and Design*. London: Landor Publications.
- Cairns, S., S. Atkins, and P. Goodwin. 2002. "Disappearing Traffic: The Story so Far." *Proceedings of the Institution of Civil Engineers - Municipal Engineer* 151 (1): 13–22. doi:10.1680/muen.2002.151.1.13.
- Carmona, M., T. Gabrieli, R. Hickman, T. Laopoulou, and N. Livingstone. 2018. "Street Appeal: The Value of Street Improvements." *Progress in Planning* 126: 1–51. doi:10.1016/j.progress.2017.09.001.
- Carmona, M. 2003. *Public Places-Urban Spaces: The Dimensions of Urban Design*. Oxford: Architectural Press.
- City of London. 2015a. *Bank on Safety*. London: City of London.
- City of London. 2015b. *Bank Junction. Movement Update - Pedestrian Analysis*. London: CH2M for City of London.
- City of London. 2015c. *Bank Junction. Movement Summary*. London: CH2M for City of London.
- City of London. 2018a. *City Streets: Transport for a Changing Square Mile. City of London Transport Strategy: Draft for Consultation*. London: City of London.
- City of London. 2018b. *Game-Changing £23m Regeneration Works at City of London Aldgate Square Completed*. London: City of London. Accessed January 2021. <https://news.cityoflondon.gov.uk/game-changing-23m-regeneration-works-at-city-of-london-aldgate-square-completed/>
- City of London. 2018c. "Urban Design Awards Entrant: Aldgate." *National Urban Design Awards 2018*, 12–13.
- Colville-Anderson, M. 2018. *Copenhagenize. The Definitive Guide to Global Bicycle Urbanism*. Washington: Island Press.
- Commission For Architecture And The Built Environment. 2007. *Paved with Gold. The Real Value of Good Street Design*. London: CABI with Colin Buchanan.
- Commission For Architecture And The Built Environment. 2008. *Designing Streets for People - Not Traffic*. London: CABI.
- Curtis, C., and N. Low. 2012. *Institutional Barriers to Sustainable Transport*. Farnham: Ashgate.
- Department For Transport & Department For Communities And Local Government. 2007. *Manual for Streets*. London: Thomas Telford.
- Department For Transport. 2020. *Website for Transport Analysis Guidance (WebTAG)*, May.
- Erlingsson, C., and P. Brysiewicz. 2017. "A Hands-on Guide to Doing Content Analysis." *African Journal of Emergency Medicine* 7 (3): 93–99. doi:10.1016/j.afjem.2017.08.001.

- Ewing, R., and S. Handy. 2009. "Measuring the Unmeasurable: Urban Design Qualities Related to Walkability." *Journal of Urban Design* 14 (1): 65–84. doi:[10.1080/13574800802451155](https://doi.org/10.1080/13574800802451155).
- Feitelson, E., and I. Salomon. 2004. "The Political Economy of Transport Innovations." In *Transport Developments and Innovations in an Evolving World*, edited by M. Beuthe, V. Himanen, A. Reggiani, and L. Zamparini, 11–26. Berlin: Springer.
- Flyvbjerg, B. 1998. *Rationality and Power: Democracy in Practice*. Chicago; London: University of Chicago Press.
- Forester, J. 1989. *Planning in the Face of Power*. Berkeley: University of California Press.
- Forsyth, A., and K. Krizek. 2011. "Urban Design: Is There a Distinctive View from the Bicycle?" *Journal of Urban Design* 16 (4): 531–549. doi:[10.1080/13574809.2011.586239](https://doi.org/10.1080/13574809.2011.586239).
- Frank, L. D., J. F. Sallis, B. E. Saelens, L. Leary, K. Cain, T. L. Conway, and P. M. Hess. 2010. "The Development of a Walkability Index: Application to the Neighborhood Quality of Life Study." *British Journal of Sports Medicine* 44 (13): 924. doi:[10.1136/bjsm.2009.058701](https://doi.org/10.1136/bjsm.2009.058701).
- Freund, P., and G. Martin. 1993. *The Ecology of the Automobile*. Montreal: Black Rose Books.
- Geels, F. 2011. "The Multi-level Perspective as a New Perspective for Studying Socio-technical Transitions." In *Automobility in Transition? A Socio-Technical Analysis of Sustainable Transport*, edited by F. Geels, R. Kemp, G. Dudley, and G. Lyons, 49–82. Abingdon: Routledge.
- Gehl, J., and L. Gemzøe. 2003. *New City Spaces*. Copenhagen: Danish Architectural Press.
- Gehl, J. 2010. *Cities for People*. Washington: Island Press.
- Gössling, S., and S. Cohen. 2014. "Why Sustainable Transport Policies Will Fail: EU Climate Policy in the Light of Transport Taboos." *Journal of Transport Geography* 39: 197–207. doi:[10.1016/j.jtrangeo.2014.07.010](https://doi.org/10.1016/j.jtrangeo.2014.07.010).
- Graneheim, U. H., and B. Lundman. 2004. "Qualitative Content Analysis in Nursing Research: Concepts, Procedures and Measures to Achieve Trustworthiness." *Nurse Education Today* 24 (2): 105–112. doi:[10.1016/j.nedt.2003.10.001](https://doi.org/10.1016/j.nedt.2003.10.001).
- Greater London Authority. 2021. *London's Population*. London: GLA. <https://data.london.gov.uk/dataset/londons-population>
- Hamilton-Baillie, B. 2008. "Towards Shared Space." *Urban Design International* 13 (2): 130–138. doi:[10.1057/udi.2008.13](https://doi.org/10.1057/udi.2008.13).
- Hass-Klau, C. 1993. "Impact of Pedestrianization and Traffic Calming on Retailing. A Review of the Evidence from Germany and the UK." *Transport Policy* 1 (1): 21–31. doi:[10.1016/0967-070X\(93\)90004-7](https://doi.org/10.1016/0967-070X(93)90004-7).
- Hass-Klau, C. 2015. *The Pedestrian and the City*. London: Routledge.
- Healey, P. 1988. *Land Use Planning and the Mediation of Urban Change: The British Planning System in Practice*. Cambridge: Cambridge University Press.
- Healey, P. 1998. "Collaborative Planning in a Stakeholder Society." *The Town Planning Review* 69 (1): 1–21. doi:[10.3828/tpr.69.1.h651u2327m86326p](https://doi.org/10.3828/tpr.69.1.h651u2327m86326p).
- Hickman, R., B. Hamilton-Baillie, and J. Purkiss. 2009. *Kent Downs. Rural Lanes and Streets Design Guide*. London: Halcrow Group.
- Hickman, R., D. Smith, D. Moser, C. Schaufler, and G. Vecia. 2017. *Why the Automobile Has No Future: A Global Impact Analysis*. Hamburg: Greenpeace Germany.
- Hickman, R. 2019. "The Gentle Tyranny of CBA in Transport Appraisal." In *Transport Matters*, edited by I. Docherty, and J. Shaw, 131–152. Bristol: Policy Press.
- Hickman, R. 2021. *Transforming Urban Mobility: Part II, Components of Transport Planning for Sustainable Cities (Online Course)*. London: UCL, GIZ and Futurelearn.
- Huaylla Sallo, K., and R. Hickman. 2021. "Implementing a Metro Project: A Political Economy Perspective from Lima." In *Transport in Human Scale Cities*, edited by M. Mladenović, T. Toivonen, E. Willberg, and K. Geurs, 231–245. Cheltenham: Edward Elgar.
- Jacobs, A., E. Macdonald, and Y. Rofo. 2002. *The Boulevard Book: History, Evolution, Design of Multiway Boulevards*. Cambridge, Mass: MIT Press.
- Jacobs, A. 1993. *Great Streets*. Cambridge, Mass: MIT Press.
- Legacy, C. 2012. "Achieving Legitimacy through Deliberative Plan-making Processes - Lessons for Metropolitan Strategic Planning." *Planning Theory & Practice* 13 (1): 71–87. doi:[10.1080/14649357.2012.649947](https://doi.org/10.1080/14649357.2012.649947).

- Legacy, C. 2015. "Transforming Transport Planning in the Postpolitical Era." *Urban Studies* 53 (14): 3108–3124. doi:10.1177/0042098015602649.
- Mattioli, G., C. Roberts, J. K. Steinberger, and A. Brown. 2020. "The Political Economy of Car Dependence: A Systems of Provision Approach." *Energy Research & Social Science* 66: 101486. doi:10.1016/j.erss.2020.101486.
- Melia, S., and I. Shergold. 2018. "Pedestrianisation and Politics: A Case Study." *Proceedings of the Institution of Civil Engineers - Transport* 171 (1): 30–41. doi:10.1680/jtran.16.00104.
- Nello-Deakin, S. 2019. "Is There Such a Thing as a 'Fair' Distribution of Road Space?" *Journal of Urban Design* 24 (5): 698–714. doi:10.1080/13574809.2019.1592664.
- Newman, P., and J. Kenworthy. 2015. *The End of Automobile Dependence. How Cities are Moving beyond Car-Based Planning*. Washington DC: Island Press.
- Oosterlynck, S., and E. Swyngedouw. 2010. "Noise Reduction: The Postpolitical Quandary of Night Flights at Brussels Airport." *Environment and Planning A* 42 (7): 1577–1594. doi:10.1068/a42269.
- Paterson, M. 2007. *Automobile Politics: Ecology and Cultural Political Economy*. Cambridge: Cambridge University Press.
- Pharoah, T., and D. Apel. 1995. *Traffic Concepts in European Cities*. Aldershot, Hants: Avebury Publishing.
- Pharoah, T. 1992. *Less Traffic, Better Towns*. London: Friends of the Earth.
- Pojani, D., and D. Stead. 2014. "Going Dutch? The Export of Sustainable Land-use and Transport Planning Concepts from the Netherlands." *Urban Studies* 52 (9): 1558–1576. doi:10.1177/0042098014562326.
- Pucher, J., and R. Buehler. 2008. "Making Cycling Irresistible: Lessons from the Netherlands, Denmark and Germany." *Transport Reviews* 28 (4): 495–528. doi:10.1080/01441640701806612.
- Silverman, D. 2013. *Doing Qualitative Research*. London: Sage.
- Spotswood, F., T. Chatterton, A. Tapp, and D. Williams. 2015. "Analysing Cycling as a Social Practice: An Empirical Grounding for Behaviour Change." *Transportation Research Part F: Traffic Psychology and Behaviour* 29: 22–33. doi:10.1016/j.trf.2014.12.001.
- Tolley, R. 1990. *The Greening of Urban Transport: Planning for Walking and Cycling in Western Cities*. London: Belhaven.
- Transport For London. 2018. *Mayor's Transport Strategy*. London: GLA, TfL.
- Whyte, W. H. 1980. *The Social Life Of Small Urban Spaces*. New York: Project for Public Spaces.