

Anna Bray Sharpin

Julian Castro

Gonzalo Peón Carballo

Julia Caroline Thayne

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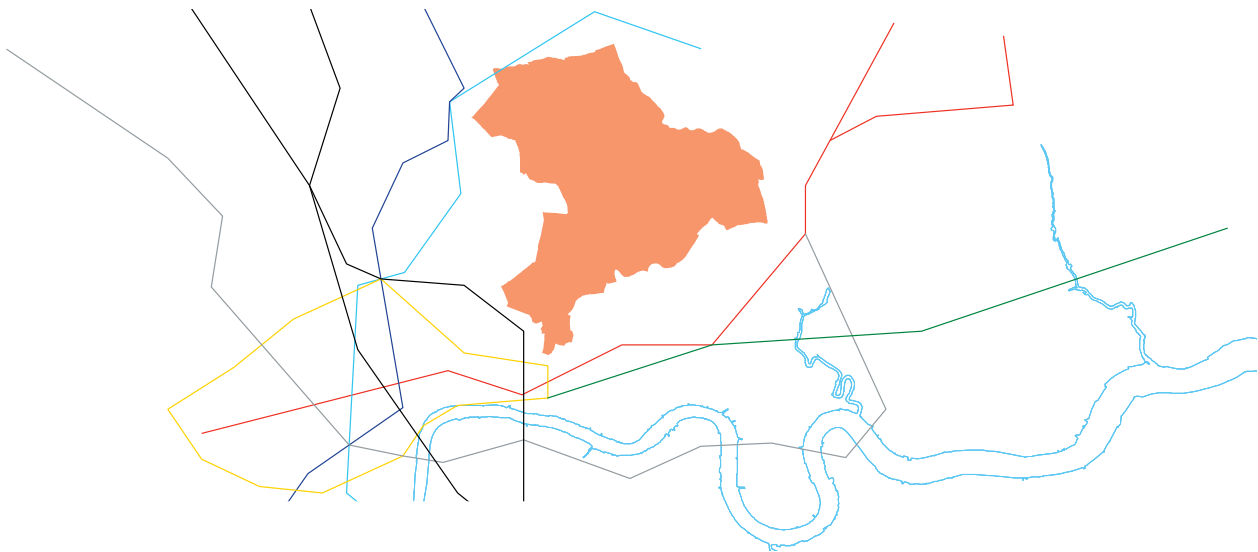
INTRODUCTION

Traditional governmental measurements of accessibility tend to focus on distance or time to services. This project has sought a more comprehensive approach. We define accessibility as 'the ability to reach a range of social, leisure and employment destinations from home and therefore access to pedestrian and transport systems' (Evans, 2009: 366). This definition is oriented to the person's home, and therefore implicitly relates to local residents. As it refers to pedestrian pathways and public transport systems, it also embraces the 'whole journey environment', the journey from door to door (Evans, 2009). It acknowledges each person's ability to navigate their environment, as influenced by experience, information, perception and the built environment. This implies that 'local' accessibility is not only the presence of services within a physical radius, but also the personal components involved. Our guiding definition thus recognises accessibility's powerful relationship with social inclusion (Litman, 2012), and treats safety and affordability as integral parts of any accessibility discourse and intervention.

Harvey's (2003: 939) notion that 'we individually and collectively make the city through our daily actions' relates directly to accessibility in terms of both individual travel needs and the collective travel norms they create and perpetuate. Conversely, "the city [also] makes us:" our perceptions of what is 'normal' on streets, in neighbourhoods, and in cities generally can have a strong impact on accessibility, its provision, and uptake of transport modes (Pooley, 2011). Differing from mobility, accessibility offers a more holistic framework than the pure presence of infrastructure.

Our project seeks to reduce inequalities in local accessibility through an innovative cycling system that addresses travel needs of local residents of Hackney in East London. To inform our work, we considered travel modes, distances, frequencies, trip length, demographics, and the way these related to existing transport infrastructure and policy. We assert that every person has a "right to the city" (Harvey, 2003). Socioeconomic status, age, gender, and other characteristics should not impede people from accessing resources. This approach to the pluralistic spectrum of accessibility led us to develop a project based on three strategies. Firstly, in order to address social exclusion, the public bikescheme, London Cycle Hire (LCH), will be expanded into Hackney as a powerful message of inclusion and as a generator of opportunity. Secondly, adaptations to street management policies will enhance the current physical network, reducing real and perceived risk. Thirdly, strategically placed Cycle Hubs will create local 'landmarks' for our intervention. The three strategies draw on local governments' and organizations' abilities to support the right to the city by providing new travel options, engendering broader and more accessible mobility 'norms'.

This essay first explains the context for which this project was developed, justifying our theme of accessibility and our intervention as a cycling system. It then details our project, and uses the case study of one neighbourhood in Hackney, Homerton, to describe the project further.



△ 01 Hackney in Relation to the Underground
Geographical Position

CONTEXT

Physical Exclusion, Social Isolation, and Accessibility Perceptions in Hackney

Hackney is the only borough in inner London with no Underground stations. This apparent accessibility gap is compensated for by six National Rail stations running north to south, seven Overground stations concentrated in southern Hackney, and 14 bus routes, including 9 of the 20 most heavily used in London (Hackney Council, 2009). This is evident in statistics—17% of working age residents commute by bus, 18% by rail and 9% by vehicle (ONS, 2011). Public Transport Accessibility Levels (PTAL) in Hackney reflect these connections. They indicate length and time between residences and public transport, as well as reliability (TfL, 2010). In much of Hackney, PTALs are good or acceptable; however, areas near Hackney's borders suffer from poor accessibility. The uneven distribution of public transport accessibility throughout the borough may therefore result in issues of physical isolation for some Hackney residents.

A map of the Index of Multiple Deprivation (IMD) in Hackney's wards shows that areas with issues of accessibility and physical isolation correlate with those suffering from social exclusion, measured by high deprivation rates compared to London and United Kingdom (ONS, 2011). Because public transport is relatively more expensive for lower income people, the geographical correlation between lack of physical accessibility and social deprivation may generate areas of compounded social exclusion where the people paying the largest proportion of their income for public transport receive the lowest quality of service

In Hackney Council's policy documents, the Council recognises this correlation, identifying how worklessness, health, and accessibility are linked to deprivation in the borough (Hackney Council, 2006a; 2009; 2010; 2012).

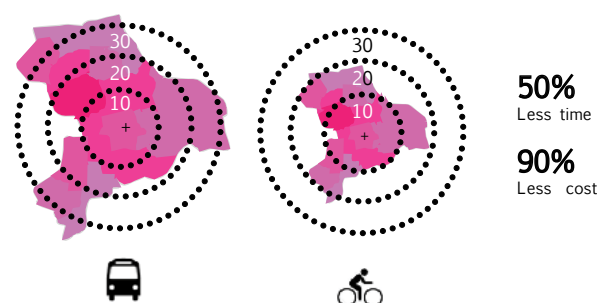
Surveys and interviews with more than 30 residents led us to a better understanding of local perceptions of accessibility. Interviewees revealed a range of accessibility identities. Some people felt comfortable cycling and walking, and stated that recent improvements to Overground and bus services facilitated mobility. In contrast, the delivery staff at Mare Street's Pizza Hut, for example, had poor views of accessibility in Hackney due to theft and attacks experienced while making deliveries (Sadhik, 2012). These results reinforced our hypothesis that people's perceptions of accessibility in Hackney vary widely by modes and patterns of travel, purpose, personal experience, and experience of friends and neighbours.

Challenges and Opportunities: Why Cycling is Hackney's Best Option for Accessibility

Through this research base, we identified three key problematics. Firstly, access to public transport in Hackney varies, creating issues of physical isolation. Secondly, the interaction between areas of low public transport accessibility and high deprivation in the borough may be creating areas of compounded social exclusion. Finally, there exists a gap between perceptions of accessibility and actual provision of services and infrastructure.



△ 02 Public Transport Affordability Index
Source: ONS, 2011

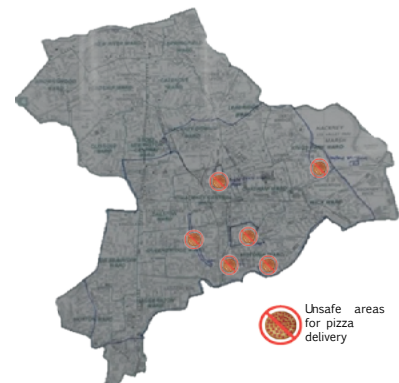
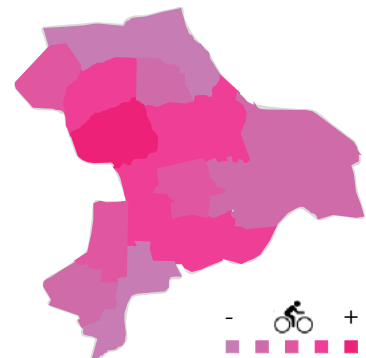
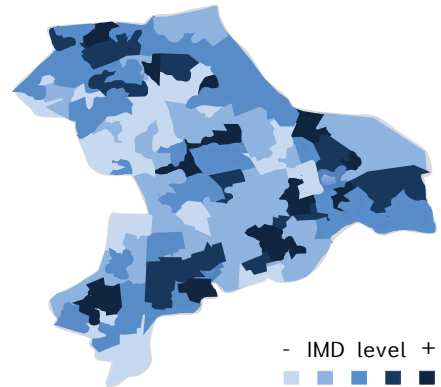
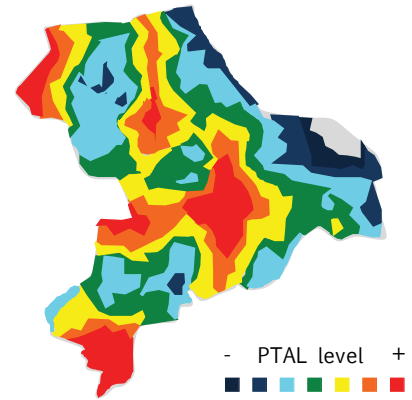


△ 03 Cost and Time of Bus and Bicycle Travel in Hackney
Data source: TfL, 2013

The challenges of accessibility in Hackney require an intervention that provides more than increased mobility or public transport. New rail connections risk inviting gentrification, while increasing bus services negatively impacts congestion and air pollution (Gibbons and Machin, 2005; Atkinson 2000).

Cycling can address accessibility issues beyond increased transport efficiency. It tackles physical isolation by broadening the range of travel options for residents, creating a faster link to rail and an alternative to short bus trips. It confronts issues of social exclusion by offering a comparatively cheaper option than a bus or rail pass. Reducing vehicles use lowers air pollution (Pooley, 2011; Midgley, 2011), and cycling generates mental and physical health benefits (Macdonald, 2006; Midgley, 2011; Goodman & Ogilvie, 2012). Cost-benefit analysis quantifies the ‘disproportional economic benefits’ from cycling’s effects on the environment and health as £137.28 per new cyclist from reduced congestion and £28.12 in direct NHS savings (Macdonald, 2006).

For these reasons, encouraging cycling in Hackney has historically been a priority for local government. In interviews, Council Officers and Councillors explained the ‘Hackney Approach’ as placing pedestrians and cyclists at the top of the mobility hierarchy (Stops, 2012; Linton 2012). Taking inspiration from famous cycling cities, such as Copenhagen and Amsterdam, the Hackney Approach prefers shared streets for pedestrians, cyclists, cars and public transport over segregated ways. This negotiation of space makes the streets safer for all users. The borough imposes speed limits of 20 mph on all Council-managed streets, and manages flows using ‘filtered permeability’ infrastructure so that selected streets are open only to cyclists and pedestrians. These measures have positively affected experienced cyclists’ perceptions that the borough’s streets are relatively safer for them than other London streets (Alexi, 2012; Hackney LCC, 2013). The Hackney Approach includes cycling lessons in schools and develops personalised travel plans for residents, estates,



04 Public Transport Accessibility Levels

Source: TfL, 2011

05 Index of Multiple Deprivation

Source: ONS, 2011

06 Cycling Intensity by Ward

Source: ONS, 2011

07 Unsafe Areas for Pizza Delivery

Source: Sidhik, 2012

08 Elements of the Integrated Cycling System

workplaces, and schools as part of its social policy. The Council's actions to promote cycling have had palpable effects. The proportion ('travel mode-share') of Hackney residents commuting to work by cycling has grown faster than any other mode in recent years, reaching 15.4% (Hackney LCC, 2013).

Providing people with the tools to change their mobility cultures can address inequality, social exclusion and perceptions. Our project draws on the case study of Bogotá, Colombia, where travel behaviour changes and improved mobility have been linked with the 366km of cycling infrastructure connecting deprived areas with job sources and public institutions, implemented between 1996 and 2007 (New York City Global Partners, 2011). Former Mayor of Bogotá Enrique Peñalosa contends that "to try and construct equality is a fundamental [role for government] under democratic rule," and as such, governments should put in place "pavements, bicycle lanes [and other infrastructure that] show respect for human dignity and begin at least to compensate for inequality in other realms" (2007: 310-311).

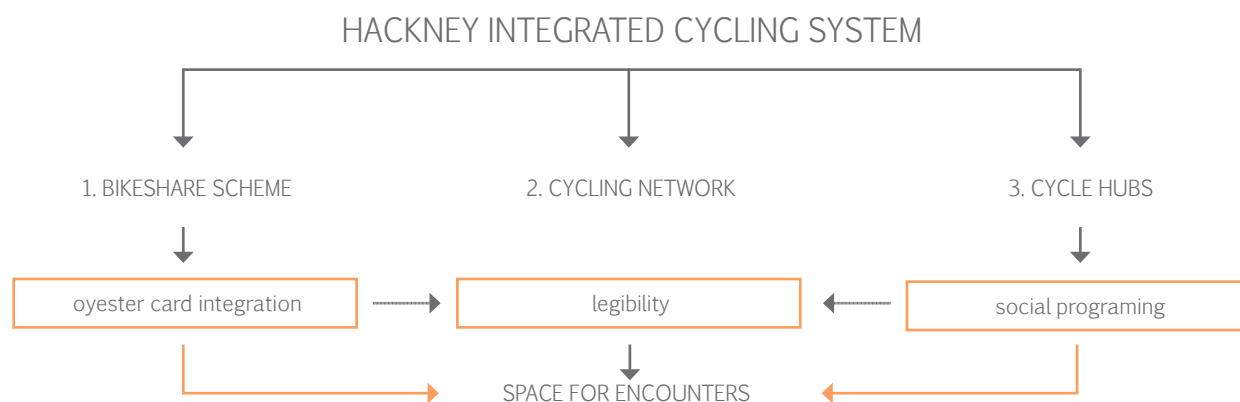
The challenges and constraints, combined with the recognition of Hackney as the cycling capital of London and the opportunity presented by Hackney Council's proactive accessibility policies, led us to focus on a cycling intervention, with our objective stemming from Peñalosa's idea. Our bold aim is to re-envision the discrete urban cycling elements in Hackney as a spatially and socially integrated system, fostering the broadening of Hackney's existing cycling culture across a range of residents. To accomplish this, we propose shifts in the Council's local transport policy and new steps in its cycling promotion strategy to focus on current non-cyclists, the 'uninitiated.'

CONCEPT

An Integrated Cycling System for Hackney

The 'integrated cycling system for Hackney' is built on three interrelated strategies: a public bikeshare scheme, an enhanced cycle network, and Cycle Hubs at significant locations. Considered directly in terms of our three problematics, the project addresses social exclusion with a public bikeshare programme integrated with the public transport payment system, including discounts already utilised by a broad variety of residents. It counters physical isolation with an enhanced cycling network, to support cycling as an independent travel mode connected with bus and rail lines. And it changes negative perceptions about cycling by providing Cycle Hubs, high quality public spaces where people can meet, use cycle facilities, and interact with surrounding institutions and resources. The complex nature of the problematics and the urban system itself require that these measures do not simply complement each other, but are also combined with the larger institutional framework

This section explains the project's scope and elements in detail. It begins with a discussion of the target user groups for the system, those currently under-represented in the London Cycle Hire (LCH) public bikeshare scheme, and in cycling in London more generally. It then uses Homerton, a neighbourhood in northeast Hackney, to demonstrate how the different elements of the borough-wide project, including principles for funding and major actors in the project, would function at the neighbourhood level. The selection of Homerton to test the project's reach is based on the neighbourhood's constraints, potential, and contradictions. It has some of the poorest PTALs of the borough and was perceived as inaccessible due to (in)security issues by some of our interviewees. Like all of Hackney, Homerton has a broad range of income levels, but overall it is one of Hackney's most deprived neighbourhoods. It also has comparatively low rates of cycle-commuters. Despite these drawbacks, Homerton is



rich in institutional and transport infrastructure, as well as in public space, thereby establishing a strong base for our project.

Target User Groups

UK studies consistently identify the same user groups as under-represented in cycling rates: women and low-income people. Urban contexts where cycling is seen as dangerous or inconvenient deter women from cycling, while low-income groups face obstacles, such as lack of storage facilities, maintenance costs, and fear of theft (Pooley, 2011). Low rates of cycling in deprived areas do not necessarily indicate low demand, however. A study of LCH users identified a disproportionately high uptake of the scheme amongst people from deprived areas once the bias of station location had been removed, indicating a latent demand for bikeshare amongst low-income groups (Goodman & Ogilvie, 2012: 43).

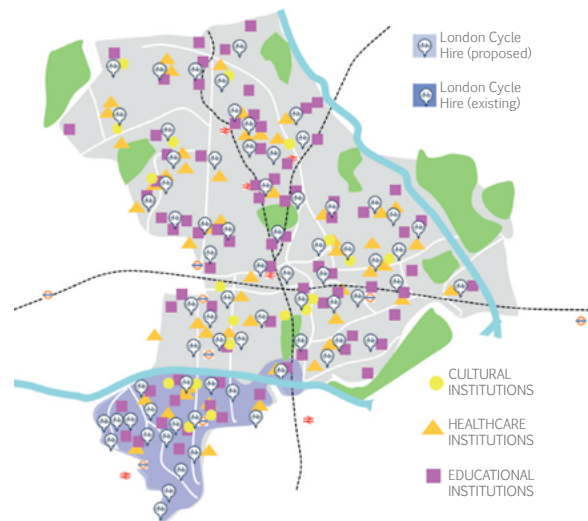
In Hackney, which has a population of 250,000, 40% of households suffer income deprivation, 34% of the working age population are in low-income occupations and 7% of the working age population is unemployed (ONS, 2011; Mayhew, Harper and Waples, 2011: 16). Although the borough has the largest share of bicycle commuting in London, its intensity is unevenly distributed (Hackney LCC, 2013; ONS, 2011). High rates of commuting by cycling are concentrated in central and western areas of Hackney, while lower rates exist at the boundaries, correlating with the most deprived parts of the borough. Furthermore, 33% of commute trips are within Hackney's borders and 35% are to neighbouring boroughs. This implies that nearly

70% of trips are less than five miles, an easily cycle-able distance, even for novice cyclists (Hackney Council, 2011). On both supply and demand sides, there is potential for more Hackney residents to take advantage of cycling as a travel mode.

Our intervention will provide access to bikeshare stations, cycle parking and maintenance facilities, and outreach such as education, training and events. Through these elements we will address many of these barriers, converting latent demand into active use of Hackney's bikeshare and cycle network.

Bikeshare Scheme

The first element of our intervention is expanding the LCH into Hackney. It will be compatible with the existing LCH technology, but differs from the current scheme in a few important ways. Firstly, the spatial context of the scheme will be more urban residential than urban commercial, as LCH's context currently is. Secondly, the logic behind where stations are installed will be adapted to this new spatial context. Thirdly and crucially, a new aim of social equity will be introduced to the scheme. Taken together, the components of this 'fourth-generation bikeshare' as we have renamed it, will provide a new, efficient, affordable transport option for the borough, better connecting it to the rest of London, as well as to different areas within Hackney.



Moving to a 'Fourth-Generation Bikeshare'

The LCH, implemented in 2010, is a third-generation bikeshare. First-generation bikeshares appeared in European cities in the 1960s as a response to congested roads and public transit systems. Characterised by their informal placement around the city and by their free use, the bicycles were stolen or misused. Second-generation, coin-operated schemes did little better. The third-generation, incorporating heavier bikes, electronic docking stations, and bankcard payments, found the right combination of cycle, station and system, and led to rapid implementation of such systems internationally (Midgley, 2011: 3-4).

London implemented bikeshare to address the same urban transport pressures as other cities, as well as to fulfil demand from residents and tourists who wished to cycle without concerns for maintenance, storage, or theft. The LCH covers a 65km² area of central London, including the southernmost part of Hackney. Users can purchase a weekly (£10) or annual (£90) membership online or a 24-hour membership (£2) at an LCH console using their bankcard. They can then withdraw a bike for no further cost for up to 30 minutes, paying an incrementally increasing rate if they wish to keep it longer (TfL, 2013). Following initial installation investment by Transport for London (TfL) the London's metropolitan transport planning agency, and major sponsor Barclays Bank PLC, the system is designed to cover operational costs through user payments (Beecham, Wood and Bowerman, 2012).

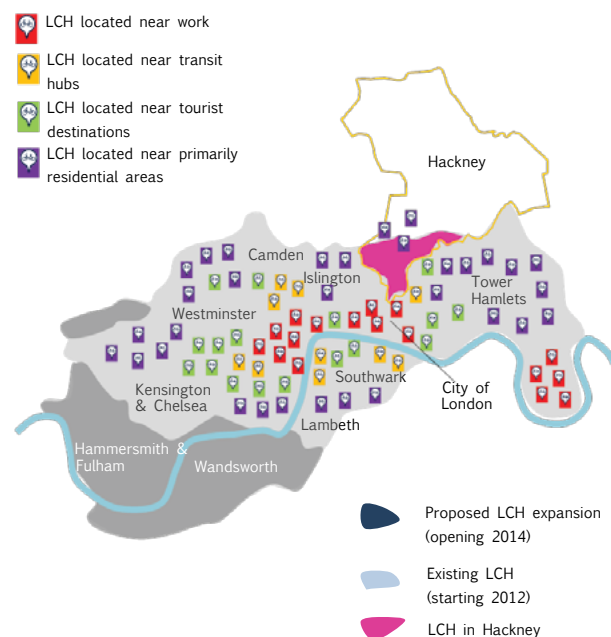


△ 10 LCH in Southern Hackney

Thus, LCH stations are primarily located in areas of high income, employment density, and tourism. Although the system has proven popular, the combination of station placement, payment system, and perceptions of personal danger while cycling has led to unequal uptake of the LCH, with a disproportionate rate of use by higher-income, educated, professional males (Goodman & Ogilvie, 2012: 40).

For successful integration, LCH stations in Hackney must share the basic attributes of the existing scheme (the bicycles, docking stations, and payment consoles) however our project proposes to incorporate additional features, supporting links between stations, cycle pathways, and surrounding areas.

For example, a larger-than-standard payment console at an LCH station on Homerton High Street will include not only the payment system and a Legible London map, but also space for local advertising for businesses and events. Legible London maps reinforce accessibility at a local level by building on personal 'Mental Maps' of routes and landmarks that determine how we perceive our surroundings (Spiekermann, 2013; AIG, 2006). Local advertising positively affects the local economy by alerting potential consumers to what is available to them in the



△ 11 LCH map

area. Air pumps attached to the console will enable cyclists with their own bicycles to use the station for another purpose—bicycle maintenance. This will promote encounters between experienced and novice cyclists. These improvements deliberately lack complexity to avoid being expensive to implement system-wide; in fact, they could be funded simply by revenues from local advertising on payment consoles and jointly managed by Hackney Council and local businesses.

The Cultural Framework

In order to be effective in Hackney’s urban residential context, LCH stations have to connect to, and be supported by, a framework that goes beyond commuter hubs and tourist destinations, as in LCH stations in inner London (Pooley, 2009). Our strategic placement of LCH stations in Hackney will interconnect cultural, healthcare, and educational institutions with homes, and relate them to cycling pathways.

In Homerton, our street-level analysis yielded nine potential locations for LCH stations that fit these criteria—broadly, the library, hospital, Overground station, high street, schools, and public spaces in residential areas. The distribution of institutions forms an ideal grid of stations within 250 to 800m from each other, as required for a successful bikeshare scheme (TfL, 2013b). Although these stations cannot in themselves guarantee the connectivity between

a point of departure and a destination, they demonstrate our view that the station locations’ importance is as much in “who connects to who” (Moody, 2007: citing Simmel) as in “what connects to what.” The grid of stations therefore does not prioritise high streets above ordinary roads or community focal points above neglected areas. Instead, it juxtaposes one layer with another, bringing green spaces into dialogue with institutions and linking ordinary homes to basic needs, enhancing accessibility in the process. Instead of a flat diagram of connections, the LCH station grid in Homerton is designed to improve the existing urban sphere of social capital and exchange, and by locating stations in everyday places, it brings visibility to a new form of public transport for the area. In addition, by creating interaction between the physical (cycling, stations) and the cultural (institutions), it has social, environmental, and economic implications beyond the rather moderate costs of installing stations.

Oyster Card Integration

Integrating TfL’s Oyster Card, the electronic card use for public transport, with the LCH combats issues of social inequity associated with the current LCH scheme. In other contexts, this type of integration has been proven to encourage equitable access to public bikeshare (Buck, 2012). It reduces barriers to bikeshare uptake: it makes bikeshare more convenient for people to use (including people without bankcards), it psychologically



and practically associates bikeshare with other public transport, and it targets particular groups for discounted use. Although initially proposed as part of the LCH, Oyster Card integration was abandoned due to cost concerns (GLA, 2009).

However, enabling the use of an Oyster Card *with a chip* to activate the LCH as a bankcard does is a low-cost alternative to retrofitting LCH payment consoles across London, and accomplishes the same inclusive end. In order to reduce resistance to the costs involved in such an adaptation, we propose to pilot it for Hackney borough residents. The card application process would follow the existing one for discounted Oyster Cards, and the usual rules would apply. Importantly, this includes discounted fares that students, the elderly, job seekers, and disabled people currently enjoy (TfL, 2013a). It is important to our aim of social equity that groups currently under-represented as LCH users or as cyclists more generally are incentivised through Oyster Card integration to use the scheme (Goodman & Ogilvie, 2012).

TfL controls the LCH, making capital investments, and receiving the operating revenues. It contracts the international service company Serco to implement and operate the scheme (TfL, 2013b). This funding system has remained the same as LCH has expanded into nine different London boroughs. We propose to continue this model, with the inclusion of an arrangement whereby



△ 13 Differences in the cycling infrastructure quality in Hackney

Hackney Council would reimburse TfL for user discounts, as already occurs with rail and bus use. Legally, councils can use revenue generated by transport fees to cross-subsidise public transport; in this case we recommend the use of Hackney parking fees to reimburse TfL for subsidised LCH use in the borough (Hackney Council, 2006b; 2006c). TfL could explore other payment options, such as mobile phone payments, to further broaden opportunities for participation in the LCH.

Enhancing the Cycle Network

The second element of our intervention is an enhanced cycle network in Hackney, which is as attractive to novice cyclists as to confident, experienced ones.

The London Cycle Network is extensive: it comprises 900km of different types of cycling lanes, including the old and new London Cycling Lanes, the London Greenways, the Barclays Cycling Superhighways (BCS), and the National Cycling Network (LCN, 2010; Sustrans, 2011). Because there is no explicit budget for cycling routes on a borough scale, their quality varies greatly depending on the authority that manages them and when and where they were implemented. All of these route types are present in Hackney, and Hackney Council uses its budget for street maintenance to manage most of them (Linton, 2012). But Hackney Council does not uniformly maintain or signpost the cycle network under its administration budget, as evidenced by how recently signposted or built infrastructure can only be found in parks, at some intersections, and on one-way streets, and can vary even from block to block. This uneven infrastructure provision, maintenance and signposting originates from the local government street management and transport policy (the Hackney Approach), which prioritises shared spaces over segregated or clearly differentiated lanes for bicycles. Shared streets with faint road markings, small signs, reduced vehicle speeds, and car-slowng corner angles have proven sufficient for confident, experienced cyclists, but have been insufficient to motivate novice cyclists.

This project proposes that Hackney Council use some of its current budget, as well as bid for budgetary provision from the Local Sustainability Travel Fund of the UK Department for Transport (DfT), to enhance the current cycle network through more explicit markings and infrastructure of existing cycle pathways (DfT, 2012). This would make the network legible to the uninitiated, reduce perceptions of risk, and, be strongly related to where LCH stations are installed. This is important, as the support of a strong network has a major impact on the types of user that will take up the bikeshare scheme (Pooley, 2011; Sustrans, 2011). Interventions would take the form of painting cycle routes green, installing more visible cycling signs, installing Legible London navigation maps at intersections where cyclists can read them from the road, and applying more consistency to intersection treatment for cyclists. Furthermore, advancing the concept of enhancing the cycle network to catalyse new cyclists and combining it with the proposed LCH expansion into Hackney implies a new type of network, whereby the physical improvements outlined above are combined with a grid of socio-cultural resources.

Establishing Cycle Hubs

While our entire proposal aims to combine social and spatial elements of accessibility, this objective comes to the fore through Cycle Hubs. As opposed to small augmentations to each LCH station in Hackney, Cycle Hubs at significant locations in the borough will serve as 'landmarks', highlighting the importance of linking physical infrastructure to everyday activity, as well as to targeted social programming. They will provide the public with space for leisure and learning that contributes to overcoming personal barriers to cycling. They will also focus on targeted outreach to uninitiated cyclists, aiming to elicit greater participation in the scheme from those who could benefit most from it. The Cycle Hubs will be more than just transitory points. Rather, their scale enables them to operate not only as the 'foyer' to whatever institution lies next to them in busier areas, but also as the 'backyard' in

areas devoid of activity. Put more simply, they can serve as departure points or as destinations. Importantly, in either context, they solidify the notion of an integrated social and spatial network by directly and indirectly linking the station grid, cycle network, institutions, and people. By relating both cycle programming and infrastructure to distinct locations, they are also installing cycling as a 'normal' part of the urban landscape, in the mental maps of residents and visitors.

Hackney has a wealth of actors who can take advantage of the Cycle Hubs to integrate their cycle-related activities or develop new ones: already identified bikeshare co-ordinators, such as Hackney Council, TfL and Serco; business and cycling associations; and active Council subsidiaries, such as the Learning Trust and Hackney Homes. The London Legacy Development Corporation, Lee Valley Regional Park Authority, and the Canal and River Trust are active in the borough due to its privileged location amongst recreation and natural networks. These

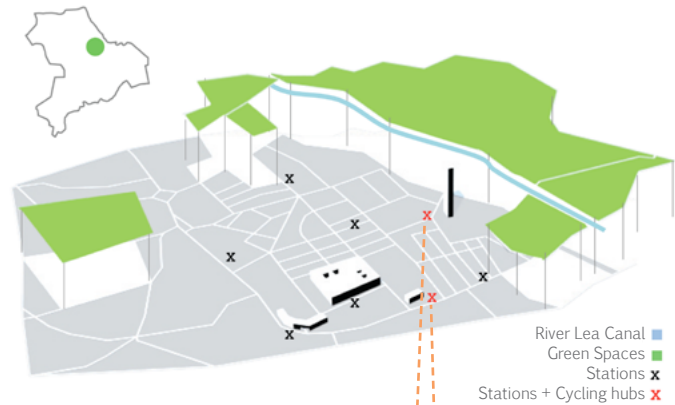
organisations could also take advantage of Cycle Hubs to reorient their existing activities (Hackney Council, 2013). Non-governmental groups with a wider geographical focus such as Sustrans, the London Cycling Campaign, and London Cycling Network can also capitalise on Hackney's innovative approach to cycling to test new programmes.

Financing for the physical and social components of the Cycle Hubs will stem from this comprehensive set of actors. Hackney Council's public realm budget, as well as subsidiary funds for cycling projects from the DfT and the Mayor of London, could support installation and operation of Cycle Hubs. Social programming, on the other hand, should be self-sustained by the actors and stakeholders responsible for each programme, with the Council's Transport Department overseeing Hub scheduling. To understand how this could work, Figure 14 sets out the targeted populations, the types of organisations responsible, and a brief description of potential activities.

| TARGET GROUPS | | LOW INCOME | WOMEN | YOUTH | CHILDREN |
|--|--|-------------|-----------------|-----------------------------|--------------------------|
| A C T I V I T I E S | Onsite chipped Oyster card registration and distribution | | | | |
| | Summertime street closure programmes, to allow cyclists the experience of using the roads without cars. | | | | |
| | Bicycle maintenance workshops & tool sharing | | | | |
| | Affordable bicycle and cycling gear market | | | | |
| | Market bag or larger basket adaptable for LCH bikes | | | | |
| | Apprenticeships and employment in LCH maintenance and management. | | | | |
| | Training and employment opportunities for local cycle events and education | | | | |
| | Art and training programme to paint "green carpet" across network. | | | | |
| | Expanding in-school cycle education to use street cycling courses, involving parents, and youth cycle-tutors | | | | |
| | 'Bike belles', a programme focused on encouraging women. | | | | |
| | | | | | |
| | | | | | |
| ACTORS | | TFL & SERCO | HACKNEY COUNCIL | CYCLING NGOS AND BUSINESSES | OTHER LOCAL STAKEHOLDERS |

HUBS IN HOMERTON

To test the reaches of our Cycle Hub interventions, we chose two diametrically opposed locations in Homerton—the centre (Homerton Library) and the edge (Daubeney Road)—as points of comparison for Cycle Hubs' impact on the community over time.



△ 15 Axonometric of Proposed LCH Stations in Homerton

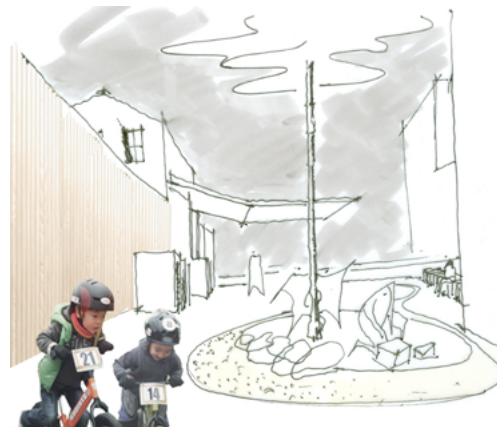
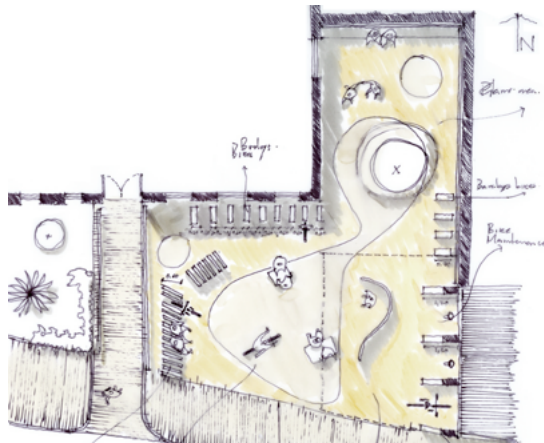
16 Aerial View of Homerton Library
Source: Bing maps, 2013

17 Aerial View of Daubeney Road
Source: Bing maps, 2013

Homerton Library Cycle Hub

Homerton Library is located in a mixed-use, dynamic area on Homerton High Street. It is in close proximity to Homerton Hospital, St. Barnabas Church, Mabley Green, and local shops. These features, as well as the site itself, present the opportunity to install a cycle hub around basic LCH station elements and private cycle parking. Unused open space in front of the Library will be redesigned as a plaza encompassing three sets of spatial characteristics, invoking a town square, a covered pavilion, and a backyard.

Through this imaginative design, the new plaza invites the activities of the library to extend outside its walls and amongst the cycling infrastructure, reactivating previously dead space. Taking advantage of the existing features of the site, niches in the adjacent brick wall will house pumps for cyclists and spaces for bike maintenance. Advancing the idea of multi-use infrastructure, and the notion of creating a space both for cyclists and other users, private cycle parking structures will also serve as benches.

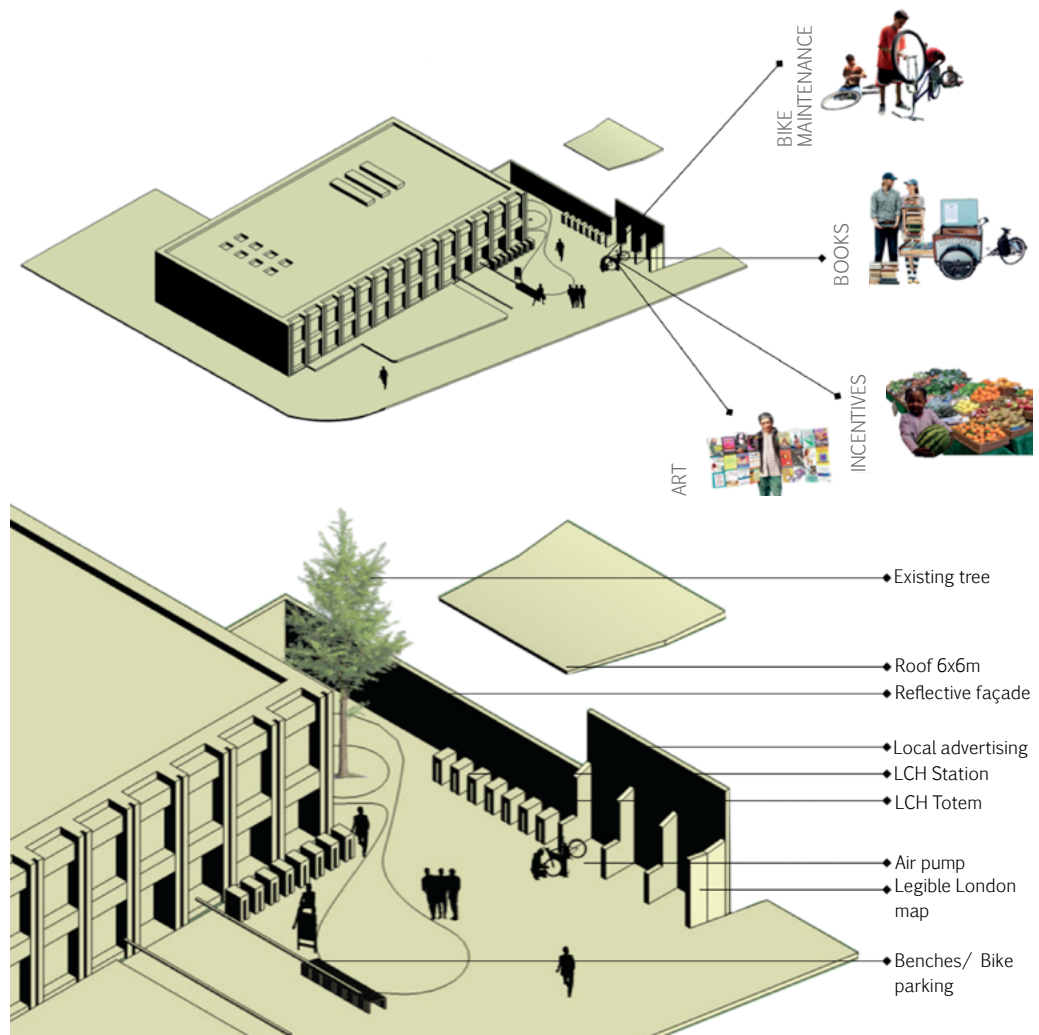


△ 18 Homerton Library Cycle Hub Site
Source: Google maps, 2013

19 Homerton Library Cycle Hub Layout

20 View from 'Backyard'

Meanwhile, the presence of the roof provides for varied uses. As well as space for cycle storage and activities, the library will be able to extend its programme for services and activities such as book sales and children's activities into the open space. As the Hub becomes a local landmark, more ephemeral or informal activities will begin to occur—an affordable bicycle market, cycle maintenance workshops, and cultural events, such as art performances and pop-up exhibitions.

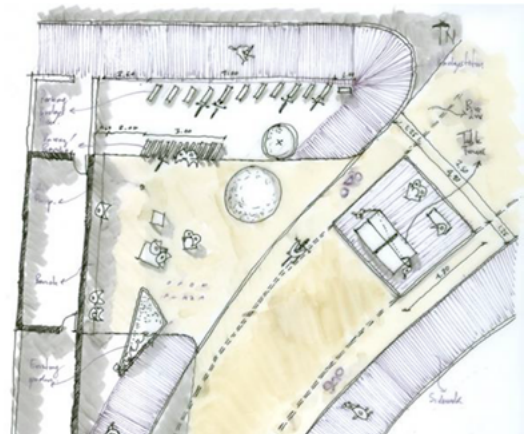




Daubeney Road Cycle Hub

The Daubeney Road Cycle Hub is explicitly a local experiment with urban implications, in contrast to the Homerton Library Hub, which relies on existing flows, institutions, and physical infrastructure. It represents the furthest reach of our conceptualisation. The site is highly residential, but close to schools and the public spaces of Hackney Marsh and Lea River Canal. Importantly, it is also where low levels of transport accessibility and high levels of deprivation converge. This is the perfect site to test how our interventions affect perceptions of accessibility. It avoids the trap of ignoring the potential of more anonymous spots in favour of easier, more central nodes, and responds to latent demand for bikeshare amongst residents of deprived areas (Goodman and Ogilvie, 2012).

The existing site is defined by a large blank façade extending upwards from a pedestrianised intersection. This lack of imagination has eradicated the dynamism that an active ground floor edge could offer, but presents us with an opportunity to reinforce a message of presence. The newly designed plaza will be reconfigured to contain the basic facilities common to all proposed hubs: the LCH station, benches, maps, bike parking, and air pumps. Taken a step further, it will also be a convergence point for the 'Green Corridor' delineation of cycle network streets, and other cycle friendly streets in the borough.



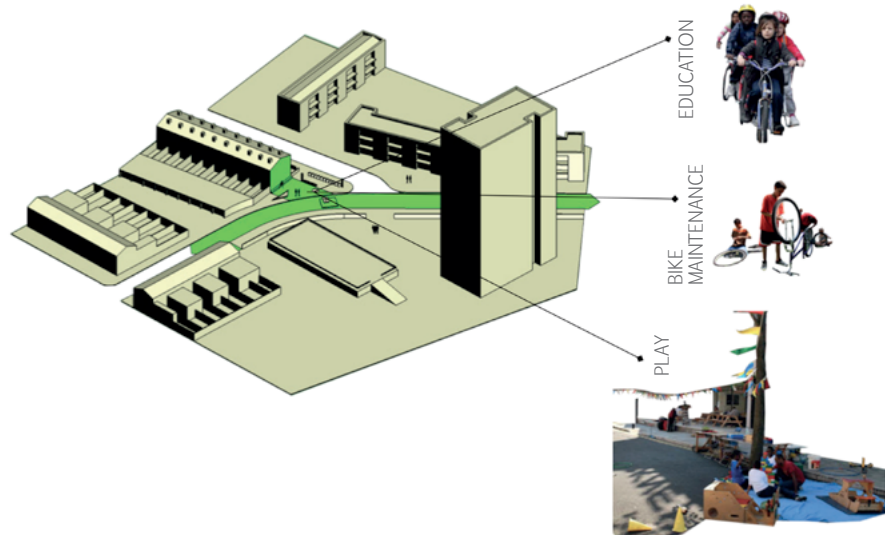
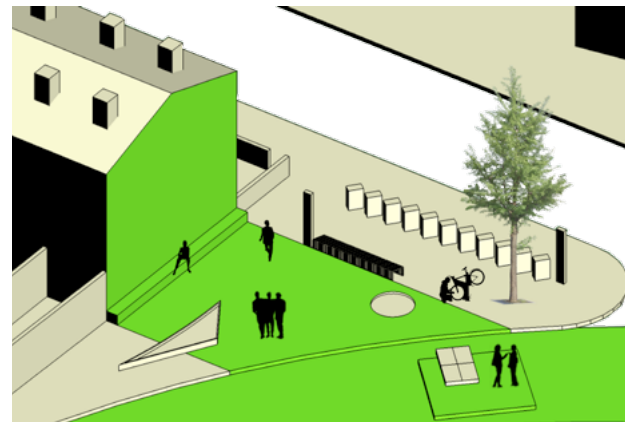
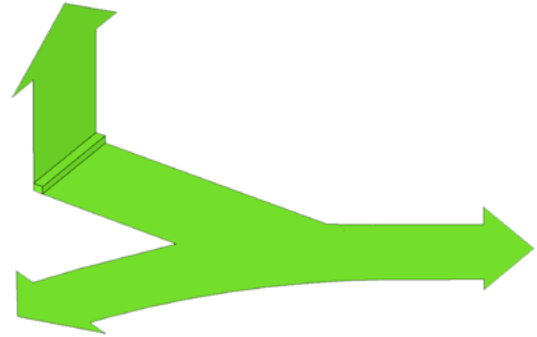
△ 23 Daubeney Road Cycle Hub Layout

24 Daubeney Road Cycle Hub Site
Source: Google maps, 2013

Pavements and streets will be painted green, highlighting the routes towards Homerton High Street, Clapton Park, and Hackney Marshes. Linking site and route, the paint will extend up the blank façade of the adjacent building. Together, these spatial interventions signal to users that LCH is a means of both commuter transport and access to local facilities.

The plaza will also serve as the location or departure point for users and institutions offering cycle programming connected across Homerton and Hackney. Events could be an explicit response to the immediate context, such as the schools on Daubeney Road. A primary example is Hackney Council's cycle training programme, run in conjunction with nearby schools. This could be taken out of the schoolyard and onto the street, thanks to the presence of the Cycle Hub and green corridor. Low car flows and nearby parks and playgrounds make this site very elastic, allowing it to expand or shrink depending on need.

While conducting surveys near the site, we were surprised by how many residents were largely unaware of the public spaces or recreation opportunities close to their homes. By installing a cycling landmark that explicitly links to previously unexplored areas in an otherwise residential landscape, we can perhaps draw even more attention to the new mode of transport than we could at the Library Hub. Our scheme would therefore enhance not only physical connections, but also social cohesion, enticing the immediately local community to try the LCH.



- △ 25 Potential Activities, Daubeney Road
- 26 'Green Corridor' Connections
- 27 Axonometric View of Key Elements

CONCLUSION

The 'local city' is not static, but multi-scalar and constantly evolving. It is defined by contradictions and dichotomies; accessible to some, and inaccessible to others. It requires both political representation and democratic participation, whereby government, institutions and citizens have the opportunity to actively claim their 'right to the city' (Harvey, 2003). This project takes local residents, their needs, the tools that they are given (and those that they lack) into consideration to design a wider accessibility framework for Hackney that transforms this urban discourse. Our adoption of Evans' definition of 'inclusive accessibility' responds specifically to this by linking critical elements underpinning our research: users, their perceptions, and physical infrastructure. More than a one-dimensional grid, our project emphasises how overlapping networks embody an entire system, or 'whole journey environment' (Evans, 2009). It considers physical layers of accessibility, such as streets, facilities, and iconic infrastructure, while also examining personal elements, such as social or financial situations. It recognises that isolation and social exclusion

are perpetuated when it is imagined that accessibility can be addressed by provision of infrastructure alone.

Our proposal bridges the gap between the potentially widespread and inclusive effects of "Copenhagenising" Hackney, and the current reality of unequal uptake of the bicycle as a means of transport across the borough. It recognises that bikeshare is not simply an infrastructural programme. It is an opportunity to recognise people's needs, and advance spatial equity and social inclusion. That is why attaching LCH stations in Hackney to familiar cultural, healthcare, and educational institutions is so important, as we demonstrated through our case study of Homerton. They are built-in systems of security, easily recognisable as apolitical, reliable organisations generally located in safer, busier areas. Supported by a highly visible, legible network of safe streets and intersections for cycling, they can expand notions of accessibility from familiar places to unfamiliar ones. This will foster the creation of a new culture of access in Hackney in which 'uninitiated'



and under-represented groups, such as women and low-income people, will not only have better access to the familiar, but also new opportunities to access unexplored areas. To shift behaviour to take advantage of the new cycling provisions, social programmes targeting uninitiated cyclists will build a new set of social norms around cycling. They will change perceptions by engendering acceptance of bikeshare as a normal mode of public transport, and confidence in it as a safe and convenient option. Oyster card integration and other subsidy programmes for LCH use are also essential. They make cycling the cheapest option—important because affordability is the leading indicator of how transport methods are chosen (Litman, 2012; 2013).

The complexity of accessibility in Hackney motivates our project to reconsider how social and spatial arenas recognise and celebrate the potential of diverse communities, their multiple identities, and their needs, reconstituting the collective imaginary of everyday life.

It is imperative to understand the bicycle itself; the bikeshare scheme; network; hubs and policy changes as a gradual process towards a more equitable Hackney, and, eventually, city. They act as urban catalysts that not only link different destinations, institutions, and actors, but also bridge socio-economic divides.



28 Daubeney road collage

BIBLIOGRAPHY

- AI.G. 2006. Legible London: A Wayfinding Study. Report, London: Central London Partnership.
- Atkinson, R. 2000. 'Measuring Gentrification and Displacement in Greater London.' *Urban Studies* 37: 149-165.
- Beecham, R, J Wood, and A Bowerman. 2012. 'Identifying and Explaining Inter-Peak Cycling Behaviours within The London Cycle Hire Scheme.' Workshop on Progress in Movement Analysis: Experiences with Real Data. Zurich: City University London.
- Buck, D. 2012 Encouraging Equitable Access to Public Bikesharing Systems. MSc Research, School of Public and International Affairs, Virginia Tech Alexandria Center, Alexandria: Urban Affairs and Planning.
- DfT. 2012. Accessibility Statistics 2011. Statistical Release, Subnational Statistics, London: Department for Transport.
- DfT. 2012. Improving Local Transport. Department for Transport.. <https://www.gov.uk/government/policies/improving-local-transport> (accessed March 14, 2013).
- Evans, G. 2009. 'Accessibility, Urban Design and the Whole Journey Environment.' *Built Environment* 35: 366-385.
- Gibbons, S., and Machin S.. 2005 'Valuing Rail Access Using Transport Innovations.' *Journal of Urban Economics* (Journal 57: 148-169.
- GLA. 2009. Mayor Answers to London. September 9. <http://www.london.gov.uk/mqt/public/question.do?id=27554> (accessed March 12, 2013).
- Goodman, F, and A Ogilvie. 2012. 'Inequalities in usage of a public bicycle sharing scheme: Socio-demographic predictors of uptake and usage of the London (UK) cycle hire scheme.' *Preventive Medicine* 55 : 40-45.
- Hackney Council. .2009 'Hackney Infrastructure Assessment.' London Borough of Hackney, London.
- Hackney Council. 2013. Leisure and Culture. January 1. <http://hackney.gov.uk/leisure-culture.htm> (accessed January 30, 2013).
- Hackney Council. 2006. 'Cycle Plan.' London Borough of Hackney, London.
- Hackney Council. 2010. 'Hackney Core Strategy 2010-25.' Hackney Council, London.
- Hackney Council. 2006. 'Local Implementation Plan: Improving Transport in Hackney.' Hackney Council, London.
- Hackney Council. 2012. 'Public Realm Strategy.' London Borough of Hackney, London.
- Hackney Council. 2009. 'Regeneration Delivery Framework.' London Borough of Hackney, London.
- Hackney Council. 2006 'Transport Strategy.' London Borough of Hackney, London.
- Hackney LCC. 2013. London Cycling Campaign in Hackney. 2013. <http://www.hackney-cyclists.org.uk/> (accessed January 20, 2013).
- Harvey, D. 2003. 'The Right to the City.' *International Journal of Urban and Regional Research* 27, no. 4 (December): 939-41.
- LCN. 2013. London Cycle Network. 2010. <http://www.londoncyclenetwork.org.uk/html/about.asp> (accessed January 15).
- Litman, T. 2013. 'Affordability As A Transportation Planning Objective.' Planetizen. February. <http://www.planetizen.com/node/60908> (accessed February 26, 2013).
- Litman, T. 2102. Transportation Affordability: Evaluation and Improvement Strategies. Research Paper, Victoria Transport Policy Institute , Victoria: Victoria Transport Policy Institute.
- Macdonald, B. 2006. Valuing the Benefits of Cycling Draft Report to Cycling England. Draft Report, Cycling England, Oxford: SQW Ltd.,.

- Mayhew, L., Harper G., and Waples, S. 2011. Comparative analysis of the resident population of the six Olympic host boroughs. Population Analysis, London: Olympic Host Boroughs.
- Midgley, P. 2011. Bicycle-sharing Schemes: Enhancing Sustainable Mobility in Urban Areas. Background Paper, Global Transport Knowledge Partnerships & International Road Federation, New York: UN Department of Economic and Social Affairs, 2011.
- Moody, J. 2007. 'Simmel: The Stranger & Group Expansion and the Development of Individuality'. http://www.soc.duke.edu/~jmoody77/TheoryNotes/Simmel_strangerIndividuality.htm (accessed March 10, 2013).
- New York City Global Partners. 2011. 'Best Practice: Largest Bicycle Path Network.' Innovation Exchange Report, New York.
- ONS. Neighbourhood Statistics. 2011. <http://neighbourhood.statistics.gov.uk/dissemination/> (accessed October 30, 2012).
- Peñalosa, E. 2007. 'Politics, Power, Cities.' In *The Endless City*, by Burdett R. and Sudjic, D. (eds). 307-319. London: Phaidon.
- Pooley, C. Understanding Walking and Cycling. Summary of key findings and recommendations, Lancaster Environment Centre, Lancaster University, 2011.
- Sustrans. Sustrans. 2011. <http://www.sustrans.org.uk/> (accessed March 1, 2013).
- TfL . 2010. 'Measuring Public Transport Accessibility Levels: PTALs.' Summary, Transport for London. 1-7.
- TfL. 2013. Barclays Cycle Hire. January 1. <http://www.tfl.gov.uk/roadusers/cycling/14808.aspx> (accessed January 20, 2013).
- TfL. 2010. 'Measuring Public Transport Accessibility Levels: PTALs.' Summary, Transport for London, London, 1-7.
- TfL. 2011. TfL Planning Information Database. <http://www.webptals.org.uk/> (accessed January 28, 2013).
- TfL. 2013 Tickets: Fares. January 1. <http://www.tfl.gov.uk/tickets/14416.aspx> (accessed February 20, 2013).
- Alexi, interview by Authors. Hackney Cyclist Case Study (November 23, 2012).
- Linton, Tyler, interview by Authors. Senior Sustainable Transport Planner, Hackney Council (November 30, 2012).
- Sadhik, interview by Authors. Pizza Deliverer, Mare Street Pizza Hut Case Study (November 30, 2012).
- Spiekermann, Erik, interview by Authors. Creative Director, Managing Partner, Edenspiekermann (January 30, 2013).
- Stops, Vincent, interview by Authors. Hackney Councillor (November 23, 2012).