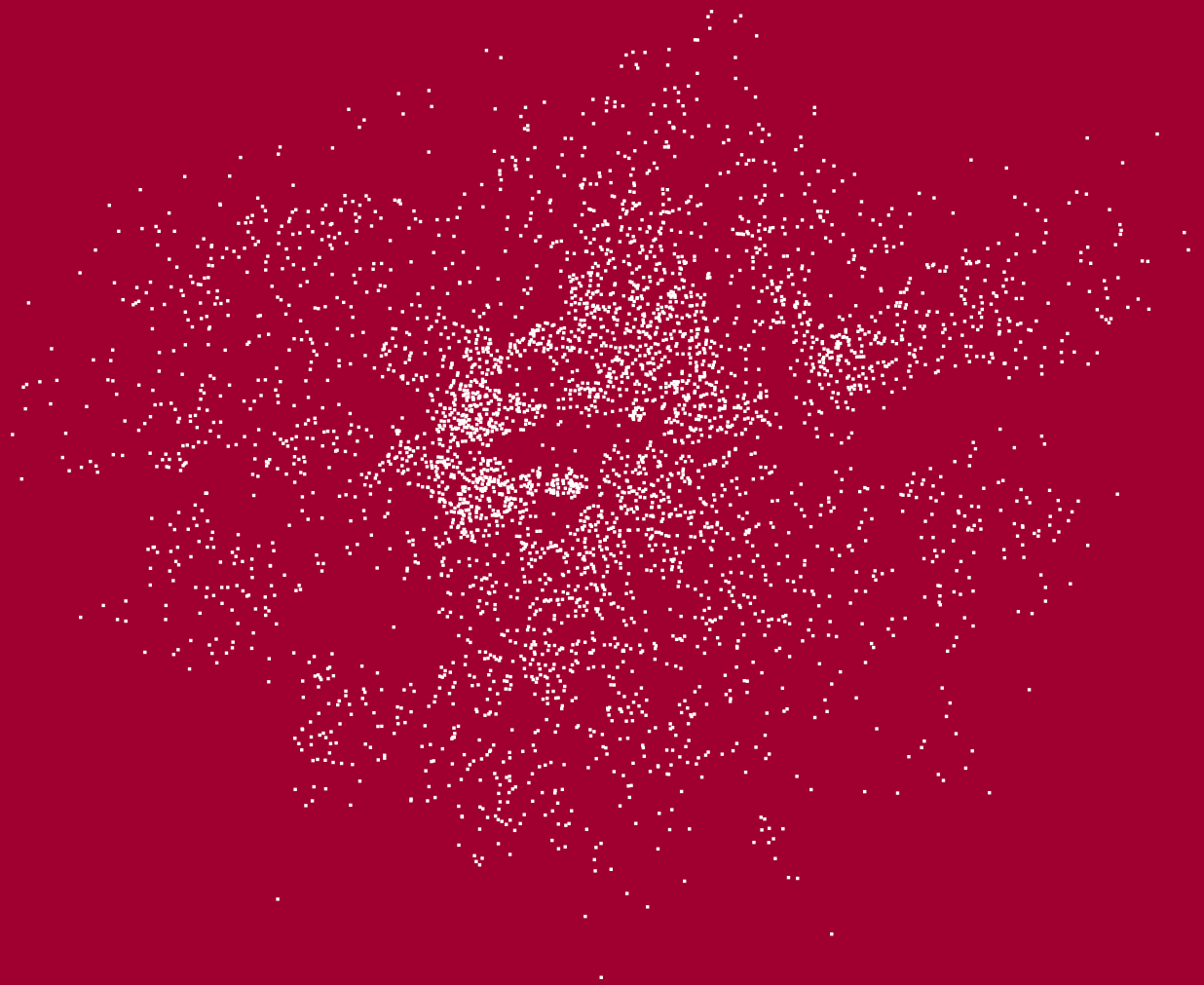




Density and Urban Neighbourhoods in London

Summary Report



Enterprise LSE
Cities

Density and Urban Neighbourhoods in London

Minerva LSE
Research Group

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Acknowledgements

Density and Urban Neighbourhoods in London has been carried out by a research team at the Enterprise LSE Cities, from February 2003 to July 2004, as one of a series of research initiatives funded by Minerva plc, through a five-year programme coordinated by the Minerva LSE Research Group. Other initiatives include the annual European Mayors' Conference, held in London in February 2003 and in Barcelona in February 2004. Future initiatives will include the analysis of urban characteristics of major world cities and a series of international conferences on urban form and development.

The authors would like to thank the following for their support and assistance:

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Dr. Vassilis Monastriotis, Department of Geography & Environment, LSE

Prof. Richard Sennett, Cities Programme, LSE

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Prof. Christine Whitehead, Department of Economics, LSE

Martin Hurst, No10 Policy Unit

Peter Wilding, Office of the Deputy Prime Minister

Simon Cooper, Transport for London

Chris Jones, London Borough of Hammersmith & Fulham

Brian Hackland, Office of the Deputy Prime Minister

Bobby Duffy, MORI

Nicholas Gilby, MORI

Adam Palenicek, MORI

Special thanks to Tim Garnham, Minerva plc and

Ian Lindsley, Jefferson Communications

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Published by Enterprise LSE Cities

ISBN 0-954888-1-1

Designed by Wordsearch

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Preface

I am delighted to be introducing the Minerva LSE Research Group's first publication on residential density in London. This is a long term research group sponsored by Minerva plc looking at issues affecting the urban environment and located in the Cities Programme of the LSE. It is a detailed piece of research intended for policy makers and politicians, as well as academics, and we hope its rich source of information and analysis will inform their thinking and decision making.

The research was undertaken at the LSE by a team of research professionals led by Ricky Burdett and Tony Travers and its conclusions are of profound significance to the future development of London. While it focused on the issue of density in urban neighbourhoods and what makes them successful, it has practical lessons for the whole approach towards sustainable communities in the UK and internationally.

Over the last two years, the Minerva LSE Research Group has also organised two very successful European Mayors Conferences in London and Barcelona and this event is continuing to grow in stature and importance. In future, we hope to conduct further research work on international cities.

Finally, I should like to thank the LSE team for producing such a comprehensive piece of research and we hope that good use will be made of all their hard work in future debates about the great city of London and its bright future.

Andrew Rosenfeld
Chief Executive
Minerva plc

Executive summary

General findings on density in London

Density distribution

The distribution of residential and dwelling densities across London has a distinctive pattern, which is very different from many European cities like Paris, Barcelona or Milan. London has a ring of higher density areas around its centre, stretching out along corridors to the north and north-east, with density “hot spots” that mark its unique structure of urban villages and town centres. Residential densities on the outer fringes of Greater London and along the Thames Gateway are amongst the lowest in London. By comparison to Manhattan or Paris, Central London is a low density city.

Many neighbourhoods on the fringes of Inner London have dwelling and residential densities that are high relative to Greater London averages. These are not limited to affluent, Central London districts, such as Kensington & Chelsea. Neighbourhoods with residential densities of well over 80 persons/hectare (above the London average of 68.6 pers./ha) can be found in typical outer suburban areas such as Croydon, Ilford or Manor Park. Equally, areas with dwelling densities of over 60 units/hectare (above current government policy recommendations) can be found in Hammersmith, Camden, Hackney and south of the Thames in Battersea, Brixton and Clapham. All these areas sustain a diverse range of lifestyles with communities of highly differentiated income, age and ethnic distribution, as well as a range of house prices at both extremes of the London average.

Urban “tribes”

While deprivation and density are relatively strongly linked in Outer London, higher density areas in Central and Inner London accommodate both deprived and affluent communities. There are many different urban “tribes” living parallel lives within the city. Although these people may have different backgrounds, incomes and outlooks, they share a willingness to live in (broadly) economically-successful parts of the capital at – by British standards – high densities. Crucially, for London, density does not exist solely – or predominantly – in deprived areas.

Higher density areas sustain different, coexistent lifestyles—communities with a diversity of incomes, ethnicities, ages, household types, etc—broadly composed of “urbanites” (people whose preferences and socio-economic conditions lead them to opt for high-density living); “suburban leavers” (people with lifestyles that eventually cause them move away from these dense areas); and “trapped residents” (groups of people who have had very limited or no choice at all in deciding where they live).

Age

There is a close fit between population age and density levels across London as a whole. While younger people, aged between 20-29, tend to live in more densely populated areas in a ring around Central and Inner London, the pattern is reversed for middle-aged groups and families who locate in the larger properties in the fringes of Outer London. The 30-44 age group is concentrated in the middle ground, occupying



London
Bayswater, about 200 pers./ha



Paris
2nd Arrondissement, about 300 pers./ha



Berlin
Prenzlauer Berg, about 400 pers./ha



New York City
East Village, about 500 pers./ha

the southern and western areas between Inner and Outer London. The predominance of younger people in the denser central areas of London is significant in the context of London's growing population, which will be increasingly composed of young adults working in the city's expanding service and business sectors.

Transport accessibility

There is a positive link between higher density areas and levels of public transport access across London, which is reflected in the decisions that people make about how to get to work. Car use in Central London is below 18% and gradually rises in proportion to distance from the core of the city, reaching an extreme of over 50% along the outer boundary of Greater London. On balance, people will use public transport where it is available, especially in high density, centrally located areas. The reverse is also true, with high car dependency for residents who live in lower density areas in Outer London, with the exception of high levels of rail (tube and suburban trains) in some non-central areas. This reflects the importance of critical mass in sustaining public transport systems, with implications for sustainable urban communities in London.

There is a dramatic difference in the levels of public transport accessibility from different parts of London, which is not dependent on relative distance to the centre. While a very large percentage of London can be reached within an hour from relatively remote parts of west, south and north London (e.g. Brent, Hammersmith, Croydon and Lambeth) the proportion that can be accessed within one hour shrinks significantly as one moves east of the City, both along the northern corridor towards Waltham Forest and, more noticeably, south of the Thames towards Greenwich. London has a highly level of inequality of service provision in the distribution of its public transport network (taking into account all rail, tube and surface transport systems).

Taken together, these findings suggest that London, with a relatively young population make-up, with almost a third of its population born outside the United Kingdom, and with its dense network of public transport, would be likely to support relatively high residential densities.

Transport accessibility
Public transport is more sustainable
in areas where more people live



In-depth analysis of five higher density wards in London

Good place to live

These general London-wide findings are confirmed by the results of the LSE and MORI surveys and interviews amongst residents of five selected higher density wards: Green Street East (Newham), Town (Hammersmith), Ferndale (Brixton), Clissold (Hackney) and Bensham Manor (Croydon).

The top five things that are most important in making an urban area a good place to live according to residents surveyed are accessibility by public transport (54%), safety (47%), the level of anti-social behaviour (34%) and the quality of public transport (33%) and health services (33%). Attitudes vary significantly by area, with those in Green Street East, Ferndale and Bensham Manor rating local facilities as more important than residents of other areas, while those in Town and Clissold wards place a higher priority on the environment. Residents in Town are more likely to consider crime and community issues as more important than those in other wards.

Satisfaction

The levels of satisfaction of residents do not directly correlate with the average densities in the wards. In fact, even though Town is the second most dense ward of the study, nearly 80% of respondents in this more affluent area recorded a high level of satisfaction, with a very small number of people, only 7%, unable to express clear views of whether the area was popular or not. The highest levels of dissatisfaction were recorded both in the densest ward, Green Street East, with 37% dissatisfied, and the least dense ward, Bensham Manor; with 31% of respondents dissatisfied with their area. Both Ferndale and Clissold, with roughly the same residential density at 151 pers./ha and 148 pers./ha, respectively, have similar levels of satisfaction at 62% and 64%.

Best and worst things about density

When asked what the best things are about living in the area, residents tend to pick aspects that are not high on their list of what is important in making somewhere a good place to live, with the exception of accessibility by public transport. This suggests they do not rate highly the aspects of the area that are most salient to them. For the latter, shopping facilities come out on top (45%), followed by accessibility by public transport (43%), parks and open spaces (31%), friendly neighbours (27%), and the quality of public transport (23%).

Diversity of high density areas (34%) is the most frequently mentioned positive attribute, closely followed by the accommodation of more homes for people (33%) and the opportunity for access to transport, commercial and entertainment facilities (28%) that high density areas provide. There are no significant differences between ethnic groups on ratings of diversity as a good thing about high density areas.

The most frequently mentioned bad things about high density areas are parking problems (60%), crime and vandalism (60%), noise pollution (60%) and smaller living spaces (54%).



Green Street East, Newham
175.9 pers./ha



Town, Hammersmith
152.6 pers./ha



Ferndale, Lambeth
150.6 pers./ha



Clissold, Hackney
148.1 pers./ha



Bensham Manor, Croydon
110.7 pers./ha

Local Shopping

The presence of local facilities, including shops, is a key factor in attracting people to higher density areas in London

Trade-offs

People generally trade-off more space in their home for other qualities of a residential area. When presented with a choice, around two thirds of people prioritise personal and property safety before space in their home, while around half prioritise the upkeep of the local area, and proximity to shops and amenities. There appears to be less of a willingness to trade-off against good transport links to Central London, although the pattern of prioritisation is similar. Proximity to people with the same background is clearly a low priority – people prioritise space in their own home and good transport links to Central London over this proximity.

Shopping

The majority of residents (72%) do their main food shopping in their local area, with 50% using local and corner shops. Residents of Ferndale (64%) are most likely to shop in their local area and residents of Clissold (35%) are most likely to shop elsewhere. There appears to be no link between the extent of local shopping and how dense the area is.



Transport

Residents in higher density areas identify the level and quality of public transport amongst the five top attributes of their neighbourhoods. They also identify high levels of congestion and problems with car parking as amongst the worst things in their area. In more affluent, higher density areas in London, a high proportion of residents use public transport to get to work, and use their cars primarily as a form of leisure or escape for non-work related activities.

Higher density areas with good public transport connections can be attractive to residents with different economic potentials and lifestyles, but car use – especially car parking provision – needs to be managed effectively where more affluent residents



require use of the private car for non-work activities. In this respect, shared-ownership schemes, car pooling and alternatives to on-street parking (e.g. shared garages, structured on underground parking) need to be explored for new residential communities of above average income who may well be attracted to living in higher density developments in London.

Concept of urban density

A significant minority of people have difficulty in understanding the concept of “urban density” even if it is part of their daily experience. They are also ambivalent about whether it is a good or bad thing, with around half seeing both the advantages and disadvantages.

Public Transport

Residents regard public transport as one of the top key attributes of higher density neighbourhoods

From research to policy

Our key findings can be summarised as follows:

- Density does not, of itself, account for positive or negative attributes of particular urban areas. Other factors are crucial in determining how such places are judged.
- Higher levels of satisfaction are determined by access to public transport, proximity to large and safe open spaces, and also good access to shops and social facilities.
- There is greater dissatisfaction in relatively densely-populated wards where high levels of deprivation coincide with concentrations of ethnic minority groups and relatively crowded living conditions within properties.
- Lack of car parking is considered a major problem, especially in more affluent areas.
- The presence of large clusters of social housing that do not link to local surroundings exacerbate negative associations linked to higher density.
- Most residents are ambivalent or have mixed opinions about density.
- Vibrancy, social mix and other social attributes are amongst the most valued characteristics of densely-populated areas.
- Higher-density areas are capable of sustaining very different social and community dynamics: places with significantly different demographic features can operate effectively and in a way that suggests they will continue to do so.

While these findings do not translate directly into a route map for new legislation, they do suggest a number of policy implications that national, regional and local government in Britain will have to take account of as they seek to increase urban densities and, more generally, to regenerate older cities across the UK. These include:

- Re-evaluate density as a planning tool: current standards (dwellings or people/hectare) should be modified to take into account more complex inter-relationships (e.g. accessibility, internal occupancy levels, car use, parking, open space, distribution of facilities, etc).
- Diversity: review planning guidance that promotes “life-time homes”, recognise different needs of “urbanites”, “suburban leavers” and “trapped” residents.
- Public transport: new communities must be planned around appropriate levels of public transport provision, yet respond to the desire of affluent residents for individual transport modes for non-work related journeys.
- Car use and parking: in areas of appropriate public transport provision, encourage reduction of car ownership and car use; minimise the impact of unused parked cars during weekdays.
- Open space: ensure that well-managed large public open space with a minimum of about 10 hectares is located within 10 to 15 minutes' walk from higher density areas; smaller local parks may feel unsafe and not provide an adequate sense of “escape”.
- Facilities: enable distribution of social facilities (schools, community, health, sports, etc) across the surface of neighbourhoods; allow for development of commercial facilities near public transport hubs; encourage ground floor flexibility for retail and other public uses.
- Housing: promote a seamless mix of market and social/affordable housing within similar building types; avoid large clusters of single-use housing forms (large estates) that break with the character and grain of surroundings.

I Introduction

“Density” has become a key policy issue in London. After decades of decline, the city is set to grow. The London Plan envisages 700,000 new households and 400,000 new jobs by 2016 and the Mayor has decided to accommodate this growth within London’s existing boundaries. A growing population contained within the same footprint implies higher residential densities. Yet higher densities are often associated with town cramming, deprivation and anti-social behaviour even though London has many affluent, safe and popular higher density neighbourhoods. But London’s population is not only growing: it is changing. Its incoming population will be younger, more ethnically diverse and composed of more single parent families than the typical family household with two parents and two children – with clear implications for the future form of the city and the design of its housing stock.

London Boroughs
Inner and Outer London



1.1 Density and quality of life

"Density is just a fact of life." (Resident, Clissold Ward, London Borough of Hackney)

Efforts to increase the residential density of Britain's urban areas have become a key feature of public policy. National and local government politicians of all parties, academics, commentators and lobby groups have evolved a new consensus. That is, wherever possible, housing and other development should be concentrated on so-called "brownfield" land. The countryside and other green land should, as far as possible, be protected from sprawl.

But while there is a broad consensus, the debate is often muddled by deep-set prejudices. There is a lack of objective knowledge on the effects of higher density environments on the people who inhabit them. The core aim of the *Density and Urban Neighbourhoods in London* study by the Minerva LSE Research Group has been to identify the positive and negative attributes of higher density areas – at the spatial and social level – so that these can contribute to the shaping of new urban policy in the UK. In undertaking the research, it was important to remain open-minded about the advantages and disadvantages of density and its impact on quality of life.

The study has sought to understand the attributes of density in the context of London, the most densely-populated city in the United Kingdom. The research group chose London as the location for study because the UK's highest residential and business densities are found within the capital, and its population is growing substantially after a period of decline. The Mayor of London's decision to accommodate future growth within the city's existing boundaries has raised the prospect of increasing residential densities, especially in the Thames Gateway. At the same time it has raised concerns about town cramming and overcrowding, especially in the capital's established communities outside Inner London, when key decisions are being taken about the need for more housing, better infrastructure and improved public transport.

London offers an interesting case study relating density to quality of life. Some of the highest residential densities in Britain are found in the more prosperous parts of Inner and Central London. Areas such as Bayswater, Pimlico and Earl's Court are settled at densities similar to those in Paris. Equally, many deprived parts of London – such as Southwark, Lambeth and Hackney – are concentrated in higher density areas, though many others are also relatively sparsely populated.

The starting point of our study, therefore, was to better understand the relationships between density, built form and social dynamics. It is important to note that, while the LSE team recognised the research merits of comparing patterns of social behaviour across a sample of high and low density areas, it was decided at the outset that the resources for the project would be best deployed by developing an interdisciplinary methodology that could be tested, in the first instance, on higher density areas. While lessons from this study are designed to inform policy currently being drafted to shape the capital's new urban communities, it is understood that the findings would be further validated by similar evaluation of lower density areas in London, as well as comparative studies of both higher and lower density urban neighbourhoods across the UK.



Bayswater, over 200 pers./ha
The densest residential areas of London are the most affluent



Pimlico, over 200 pers./ha
5-storey mansion blocks and houses create a well designed high density environment



Ferndale, about 150 pers./ha
Higher density in deprived parts of London

Density and Urban Neighbourhoods in London was carried out between March 2003 and July 2004 and structured in a series of discrete research elements, which are reflected in the layout of this report and supporting documentation included in the Detailed Report, Parts A-E:

- An analysis of residential density in Greater London, which examines relationships between residential density and lifestyle factors such as age, ethnic origin, household type, deprivation, transport use and accessibility. This section is based on the correlation of data from the 2001 Census for all wards in London, providing a city-wide account of the interactions between density and quality of life (Part A).
- An analysis of social, demographic and spatial attributes of fifteen higher density neighbourhoods in London derived from 2001 Census data, supported by detailed mapping and photographic surveys of each area, providing a catalogue of physical and lifestyle characteristics that relate density to quality of life (Part B).
- A detailed spatial and social survey of five higher density wards outside Central London (Green Street East, Town, Clissold, Ferndale and Bensham Manor) based on in-depth interviews with local actors and stakeholders and street-to-street analysis of the physical form, layout and housing characteristics of each ward (Part C).
- A quantitative survey, carried out by MORI through a postal ballot within the five wards, of the attitudes held by residents within the wards, along with – where possible – comparisons to Greater London and the country as a whole. The survey was based on 1,917 completed questionnaires returned between 2 February and 12 March 2004, a 24% response rate (Part D).
- A literature review of previous and current research relating density to quality of life, as well as relevant policy guidance on urban regeneration and development, which has helped shape the methodology of this study (Part C and E).

The overall findings of the study are set out in the following pages of this Summary Report, but detailed information on the methodology and research is set out in the relevant parts of the Detailed Report.

1.2 Density: a key policy issue

In one form or another, density has been at the heart of the planning debate for decades. The 1999 Urban Task Force report [UTF, 1999] acted as an influential launch-pad for the lobby for more densely-populated towns and cities. It proposed that official planning and funding guidance should be revised so as to discourage local authorities from using “density” and “over-development” as reasons for refusing planning permission and to create a planning presumption against excessively low density urban development.

In response, the government produced new planning guidance that required local authorities to adhere to higher standards of density. In the 2000 consultative paper *Our towns and cities: the future*, the government observed: “we...build at very low densities and, in the past, have squandered land. Recent housing development in England has been built at an average of 25 dwellings per hectare. That compares unfavourably with the 35-40 dwellings per hectare of many of our older suburbs – made up of semi-detached and terraced houses with gardens – and with current development densities in many other countries” [Department of the Environment, Transport and the Regions, 2000a]. Since then, the government has accepted the idea of increasing densities and now uses the planning system to require local authorities to achieve particular minimum numbers of dwellings per hectare.

Lobbyists for rural interests, older cities and London have all converged on this pro-density approach. The Council for the Protection of Rural England, the Core Cities Group and the Mayor of London have all come to similar conclusions [CPRE, 2003; Core Cities Group, 1999; Greater London Authority, 2004]. But, there are dissenting voices. Some commentators have challenged the rush to higher densities. Michael Breheny, from the University of Reading, noted that “one major problem with this high-density approach is that it is generally unpopular with both residents and local politicians.” Like others, Breheny believed that a “sense of realism” is missing from the debate about compaction and density [Breheny, 2001].

There is little doubt that long-term British cultural and political trends have asserted themselves over earlier economic pressures for the creation of large metropolitan areas. Cities that once grew rapidly with industrialization have seen their populations shrink significantly since the 1950s. The desire to have a larger amount of space per person and to live in rural or faux-rural settings has profoundly affected Britain's cities.



Clissold
Two storey terraced housing
148.1 pers/ha, 66.8 dw/ha

Ferndale
Five storey council housing
150.6 pers/ha, 65.9 dw/ha



Ferndale
Four storey terraced housing
150.6 pers/ha, 65.3 dw/ha

Bensham Manor
Housing mixture
110.7 pers/ha, 43.2 dw/ha

Any consideration of residential density in London – or other British cities – takes place against a cultural background where there is considerable popular confusion about density, overcrowding, tower blocks, slum conditions and deprivation. For example, the misconception that high-rise equates with high-density still prevails despite the fact that most 1960s tower block estates, with their wide expanses of disused open space, are built at considerably lower densities than typical streets of two-storey terraced housing. There are also long-developed attitudes that associate crowding and density with deprivation and sub-standard housing, particularly because of previous public policies to house the poor at high densities. Similarly, Britain's land use planning system – reflecting public attitudes to “England's green and pleasant land” – also has profound impacts on the way in which both towns and countryside develop.

1.3 London's changing context

In London, the situation is even more complex. Over the last century or so, the capital's physical development – from Victorian social reform to 20th century slum clearance and post-war reconstruction – has created a cultural and political environment within which any governmental efforts to encourage local authorities and developers to increase residential densities run up against powerful cultural inhibitors [Travers, 2003]. And, these issues are as alive today in the planning committee rooms across London as they were twenty, fifty or a hundred years ago.

Yet there is a difference to the current policy debate, determined both by the sheer numbers and the type of people who make up London's growing population. As with other cities across the UK, London's population fell from 8.6 million in 1939 to 6.6 million in the mid-1980s. Subsequently, the city's population has grown back to 7.3 million, though net out-migration of British-born residents has significantly increased from the mid-1990s. Natural growth (because of a relatively young population) and net international in-migration have, between them, more than balanced the flow from London to the other UK regions. But the trend of moving away from the capital – generally towards lower-density rural or suburban areas – continues.

According to the Office for National Statistics, net out-migration from London to the rest of the UK averaged 47,700 between 1991 and 1996, though this figure rose to 70,800 from 1997 to 2002 [ONS, 2004]. The gross outflow from the capital rose from 202,000 in 1991 to 262,000 in 2002 – gross inflow remained broadly constant. There appeared to be a developing trend during the 1990s for greater out-migration from London to the rest of the UK. This net out-flow from London to other parts of the country was (at least) matched from the mid-1990s onwards by a significant growth in net international in-migration. Between 1997 and 2002, this total jumped to 94,200, which coupled with natural growth in the capital's population (more births than deaths), led to a sharp rise in the city's overall population.

A growing population, when contained within the same urban footprint, implies higher average residential densities. But the fact that this rising population was driven heavily by international in-migration is important. As in other British cities, out-migration to more rural areas remains an important factor. The *State of the Countryside 2004* report [Countryside Agency, 2004] showed just how popular these rural areas have become and also, apparently, that problems such as a shortage of affordable housing and traffic congestion were becoming a problem for county areas. Urban Britain, with its relatively dense population, remains less popular than lower-density rural areas.

The precise reasons for this drift from urban to rural areas would be the subject of another report. But, crucially for this study, it is important to note that despite all the urban regeneration and renaissance efforts of recent decades, there is still an apparent preference – at least among a mobile proportion of the population – to leave cities. The purpose of this study is to analyse the characteristics of densely-populated areas within London with a view to judging whether or not such characteristics play a role in creating conditions that can make urban life relatively more (or less) desirable.

1.4 The research context

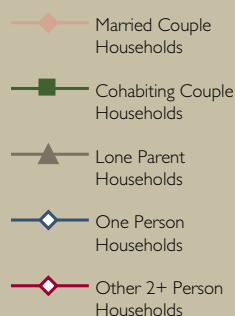
Density, as such, has not greatly exercised academic or other expert research in Britain. This is not to say that researchers have failed to consider a number of issues related to urban density. Disciplines such as sociology, economics, statistics, political science, geography and environmental studies have each contributed to society's understanding of how people live in densely-populated urban areas (see Part C and E). Economists have studied the agglomeration and productivity benefits of densely-used urban areas. For example, Paul Krugman has argued that cities foster efficiency gains by providing firms with access to markets and with supplies of labour, intermediate inputs, information and technology [Krugman, 1991]. Local agglomeration economies are features of cities. In addition to industry-specific efficiency gains, firms locating in cities enjoy additional advantages, namely "external economies" (or urbanisation economies) such as more advanced infrastructure.

Of course, economists have generally considered the overall size of cities, with limited implications for density. Some have considered the relationship between the size of central business districts and surrounding suburban areas [Dixit, 1973]. Other disciplines have considered issues such as the impacts of particular housing types, or different settlement patterns by immigrant groups, or life-cycle impacts.

Of central interest to this study is the fact London's population is both growing and changing, and that new population trends are having impact on urban lifestyles. **Figures 1.1 and 1.2** show the projected change in terms of household types and ethnic composition, indicating a dramatic shift towards one or two person households (singles, cohabiting couples) and non-white ethnic groups. The lifestyles of these socio-demographic groups will have important implications for the urban economy and service provision in London, as acknowledged by the London Plan: "a younger, more diverse London will increase the demand for higher density living close to leisure, entertainment and services" [GLA, 2002].

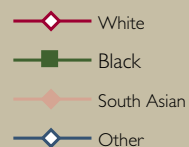
A key issue in the literature on the social effects of density is the implied association with over-crowding and anti-social behaviour. Yet, some academics recognise the shortcomings of research methodologies. Krupat, for example, states that "researchers who have statistically attempted to separate the effects of density and social class have consistently found the latter to be more influential; others have suggested that pulling these two factors apart statistically is not meaningful because they simply cannot be pulled apart in reality: the effects of crowding and poverty are not independent and should not be treated as such" [Krupat, 1985]. This approach suggests that more can be learned about the nature of crowding by looking at it from the point of view of impact and process than from the point of view of outcome.

Figure 1.1
**Greater London:
projected change in
population by household
type 1991 - 2016**

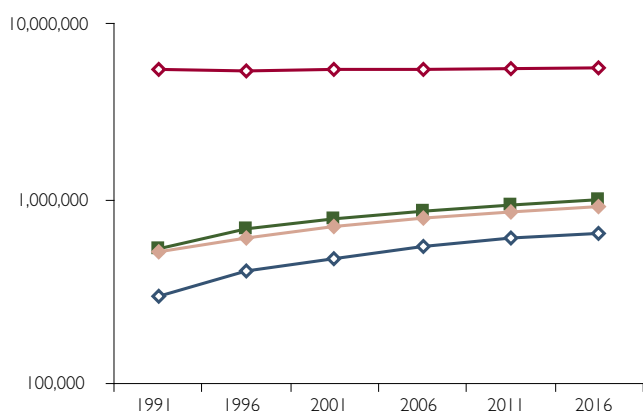
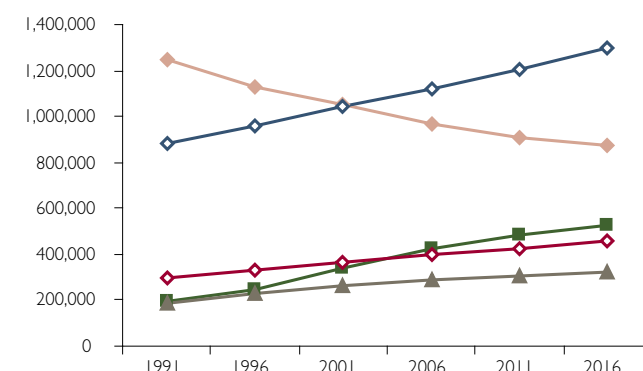


Source: GLA 2000

Figure 1.2
**Greater London:
projected change in
population by ethnic
group 1991 - 2016**



Source: GLA 2000



1.5 Methodology and research techniques

For our study of higher density areas in London at the neighbourhood level, we took the view that housing should be considered as part of a bundle of physical and social attributes attached to a particular local area. Thus, we developed a research methodology – through mapping, observation, interviews and surveys – which sought to link the characteristics of housing (typology, layout, disposition and size) in each area with residents' perceptions on density. To capture the desirability of an area, we used interviews with estate agents, housing association representatives and other local stakeholders to establish the most sought-after characteristics of each area and how these related to relative density of the housing typologies.

Our mapping techniques included an analysis of the spatial distribution of streets, open spaces, private gardens, commercial and social facilities and amenities, as well as an analysis of building massing and heights and the relationship between housing estates and the surrounding urban context.

The need to undertake detailed examination of a number of relatively densely-populated neighbourhoods required the selection of a manageable number of neighbourhoods. Because of data available through the 2001 Census, it was decided to concentrate the analysis at the level of individual wards. Thus, a process of selection was undertaken to provide a cross-section of wards for detailed examination and analysis.



Belgravia

One of London's most affluent and highest density neighbourhoods at the centre of the city

All London wards were ranked in order of gross residential density (see p.18). Those with a residential density below 80 persons per hectare (pers./ha) were then excluded (the London average being 69 pers./ha). It was decided to exclude all wards in Central London, on the grounds that areas in the "downtown" part of the city had less in common with the rest of London (and other urban areas in Britain) than with, say, the central areas of other world cities. Among those that then remained, a selection was made so as to ensure wards were selected with (a) a balance between inner and outer boroughs; (b) different forms of building types and lay-out (i.e. wards with different types of housing and/or tenure); (c) varied social composition (i.e. wards with different social and income backgrounds) and (d) locations in different parts of the city. Wards with characteristics that closely resembled those of Central London were excluded (see Part B).

This process left a short-list of 15 wards, which was then reduced, by further reference to the principles outlined above, to five. The selected wards: Bensham Manor (Croydon); Clissold (Hackney); Ferndale (Lambeth); Green Street East (Newham) and Town (Hammersmith & Fulham) represent significantly different kinds of areas at varying distances from the centre of the city. Thus, for example, Green Street East is a ward with a very large proportion of ethnic minority residents with average incomes below the London average. Town, by contrast, has a predominantly white population with above-average incomes. Bensham Manor and Green Street East lie some ten miles from the centre of London and are certainly not part of the capital's core. The housing stock in Town and Green Street East is heavily skewed towards long streets of terraces, whereas in Clissold and Ferndale there is a far more varied set of building types. The characteristics of individual wards are summarised in Section 3 below and fully documented in the Detailed Report.

Measures of densities

Scale	Density Measure	Variable	Basis	Unit
Continent, Nation, Country	Population Density	Inhabitants	Total area	pers./km ²
City, Urban Area	Town Density	Inhabitants	Total area	pers./km ²
Neighbourhood, Development Site	Residential Density	Inhabitants	Total area	pers./ha
Neighbourhood, Development Site	Living Density	Inhabitants	Habitable space of area	pers./m ²
Neighbourhood, Development Site	Workplace Density	Employees	Total area	pers./ha
Neighbourhood, Development Site	Dwelling Density	Dwellings	Total area	dw./ha
Neighbourhood, Development Site	Room Density	Habitable rooms	Total area	room/ha
Neighbourhood, Development Site	Bed Density	Beds	Total area	beds/ha
Development Site	Plot ratio	Floor space	Property area	factor (m ² / m ²)

The table above provides an overview of the most commonly used density measurements, reflecting either the number of inhabitants, employees, dwellings, habitable rooms, beds or floor space per given area. Although UK government and planning authorities are using dwelling density as key unit for policy, for the purpose of this study, a measurement that is based on inhabitants was selected. This reflects the view that it is really the amount of people that is relevant to support transport and public infrastructure as well as facilities for retail, health and leisure. Particularly with the increase of single person households, dwelling density becomes less and less of a reliable figure in relation to the actual amount of residents living within a given area.

Densities based on the amount of people are used to characterise areas of different sizes, from the scale of a neighbourhood to that of a nation. At larger scales, the percentage of actual inhabited space decreases since large areas of non-residential land is included in the total area. Therefore, there is a tendency for densities to decrease as the area of investigation increases. For example, the Greater London Wards Average is 66 pers./ha; the Greater London Borough Average is 61 pers./ha; the Greater London is 46 pers./ha; whereas for England the average is 38 pers./ha. It is therefore misleading to compare density figures across different scales, indicated by using different units of measurement. The unit "persons per hectare" (pers./ha, called "residential density") is used for areas up to the borough or local authority level and the unit "persons per square kilometre" (pers./ km², called "population density") for metropolitan scales and above. For this study, densities were measured on the level of wards, therefore the gross residential density with "persons per hectare" as unit was chosen. This leads to the important differentiation between *gross* and *net residential density* which is further explained in Part A.

2 London-wide analysis

Compared to other world cities London remains relatively sparse and low density, with large areas of parks, open spaces and brownfield land. Yet, its organic form conceals a varied and mixed pattern of dense residential building, with concentrations of high density in relatively unexpected areas – not only in the affluent centre. Many parts of typical 19th and 20th century “suburban” London are quite “dense” – or much more so than commonly believed - often at three or four times the density of many housing developments built over the last few decades. The study reveals how younger and more ethnically diverse communities tend to cluster in higher density areas – across the city – while older, (predominantly) white and UK-born residents inhabit lower density neighbourhoods, often on the fringes of outer London. A similar pattern pertains for one-person households and larger families. Higher density areas sustain both affluent and deprived communities. Finally, people use public transport more than the private car if they live in higher density neighbourhoods in London.

2.1 Residential densities

The highest densities of more than 100 pers./ha as shown in **Figure 2.1** can be found in a ring around Central London with clusters in Hammersmith and Fulham, north and south Westminster, Camden Town, Islington, Elephant and Castle and Central Lambeth. The distribution of pockets of relatively high-density residential development across the surface of London, graphically captures its unique structure of “urban villages” founded along the city’s main transport routes. London is far more of a “polycentric” city than many other more centralised European cities – like Paris or Madrid - which have a well-defined higher density “heart” surrounded by a highly fragmented low density outer fringe.

Figure 2.1

Gross residential density [pers./ha]

Source: Census 2001

200 to 240	(4)
160 to 200	(12)
140 to 160	(32)
120 to 140	(37)
100 to 120	(52)
80 to 100	(82)
60 to 80	(101)
40 to 60	(156)
20 to 40	(112)
1 to 20	(40)



London’s punctuated pattern of density is made more complex by the existence of six corridors of higher density stretching outwards from the centre. These extend from Tower Hamlets to Barking Town Centre; from Islington to Enfield; from Kilburn to Cricklewood; from Westminster to Ealing; from Lambeth to Croydon; and, from Southwark to Bexley. Residential density levels in these corridors remain above 50 pers./ha whereas in areas in between and along the outer fringe of Greater London they drop to below 20 pers./ha. Relatively low residential densities of about 30 pers./ha in some Central London areas reflect the dominance of office and retail space, as well as the presence of major parks such as Hyde Park, Regents Park and St. James’s Park.

Figure 2.2 shows the household size (number of persons per household). It reveals a ring of higher concentration around Central London with larger family homes distributed along the periphery of Outer London. Higher rates of more than 2.4 persons per household prevail in Outer London, whereas in areas closer to the centre average household sizes decrease significantly, falling below 2 persons per unit in some areas.

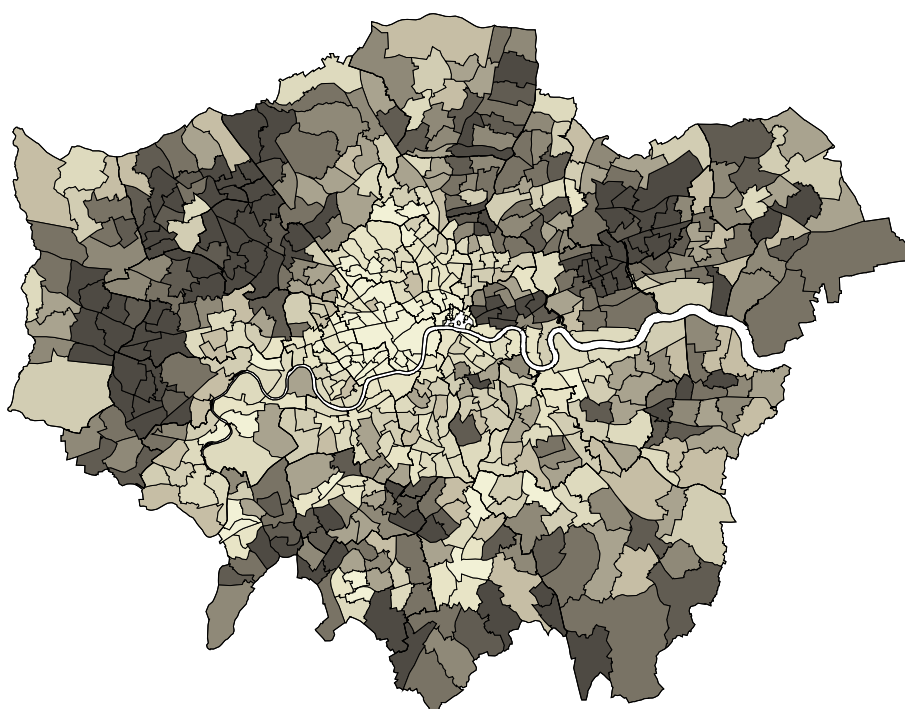


Figure 2.2

Household Size

Source: Census 2001

2.59 to 3.59	(98)
2.53 to 2.59	(50)
2.46 to 2.53	(60)
2.41 to 2.46	(56)
2.35 to 2.41	(63)
2.3 to 2.35	(48)
2.25 to 2.3	(60)
2.16 to 2.25	(70)
2.03 to 2.16	(64)
1.28 to 2.03	(64)

By world city standards, London has a relatively low residential density level. **Figure 2.3** is a comparison between Central London and Manhattan showing that the lowest density levels in Manhattan equate to the highest in London. Many areas in Manhattan possess residential density levels far above 400 pers./ha, whereas areas of 200 pers./ha in Central London are among the densest. Across an area covering just over 50 km², Central London shows a density of 82 pers./ha (with 422,000 residents) whereas Manhattan's density of 284 pers./ha is more than three times as high (with over 1.5 million residents). While Central London supports nearly 1.4 million workplaces, Manhattan sustains 2 million workplaces over a similar area.

Following these comparisons, the study then looked at a set of social variables often associated with residential density, including deprivation, household size, ethnic and age distribution, and mobility.



Figure 2.3

Central London and Manhattan Gross residential density [pers./ha]

Source: 1991 UK, 1990 US Census

400 to 800
300 to 400
200 to 300
130 to 200
100 to 130
80 to 100
60 to 80
40 to 60
1 to 40
0

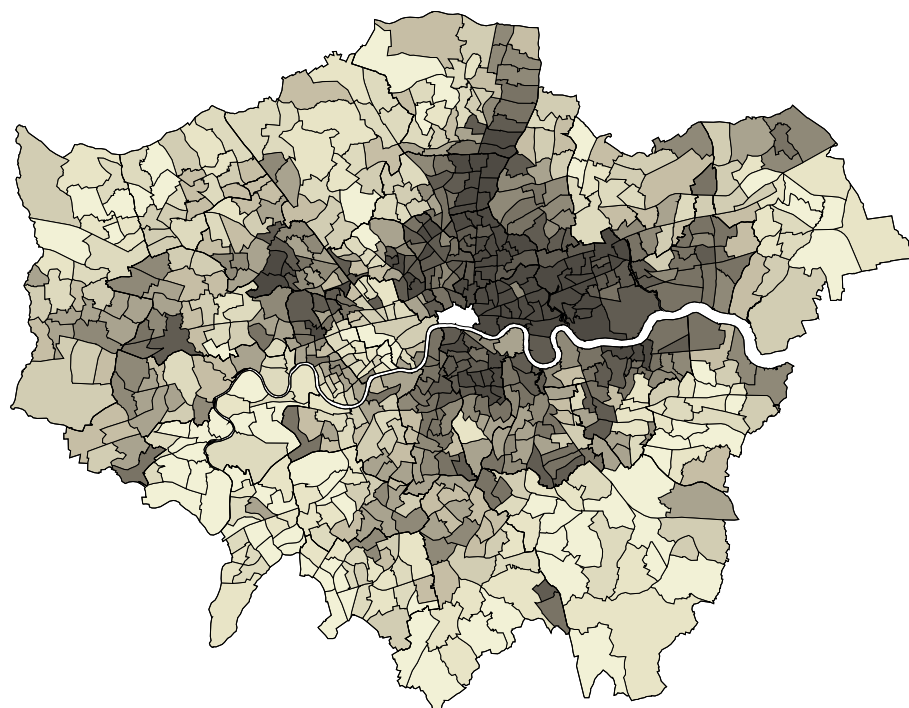
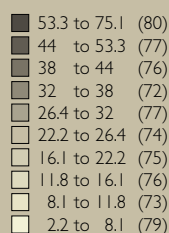
2.2 Deprivation

Figure 2.4 indicates that the most deprived wards in Greater London are located in south-central and east London, with two major corridors of deprivation, one running from Tower Hamlets along the Thames to Barking and Dagenham, the other from Hackney to Enfield. There are visible clusters of deprivation in Southwark and isolated pockets in west London. Unlike many other European cities (such as Milan or Paris), which have an affluent “heart” and a more deprived “periphery”, London’s wealth is firmly rooted in an inner (non-central) ring, with concentrations in central areas like Westminster, Kensington, Hammersmith and Fulham.

Figure 2.4

Index of multiple deprivation

Source: DETR 2000



While one might expect the distribution of wealth and lower density to go hand in hand, the picture which emerges is more complex. There is a relatively strong correlation between levels of wealth and density across London as a whole, with more affluent people living in lower density areas. But a more detailed analysis shows the patterns are very different in Inner and Outer London. In Outer London **Figure 2.5**, there is consistent correlation between density and deprivation, but in Inner London **Figure 2.6** the pattern is in effect random, with no clear connection between these two factors. While broad conclusions cannot be drawn on these basis of these factors alone, they illustrate the key point that there are many higher density areas in London which sustain both affluent and deprived residential communities – an issue that will be addressed in some detail in the ward-level analysis below. Crucially, density does not exist solely – or predominantly – in deprived areas.

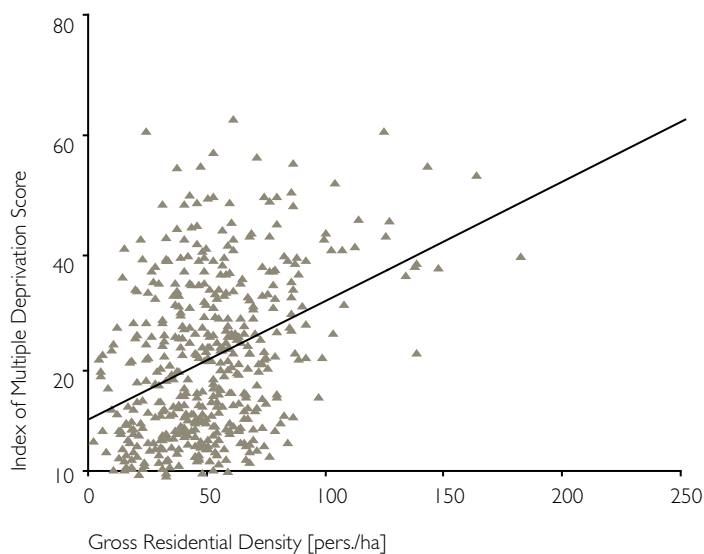


Figure 2.5

OUTER LONDON
Scatterplot of Multiple
Deprivation Score and
gross residential density

Source: DETR 2000

Significant correlation
Pearson's coefficient: 0.378

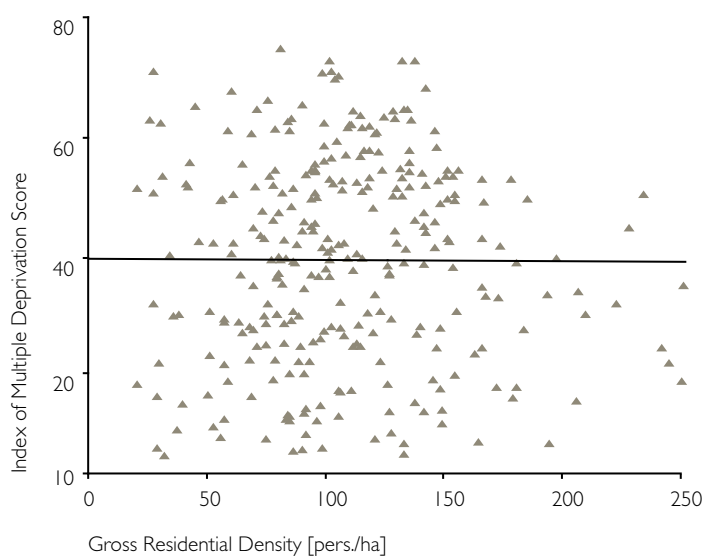


Figure 2.6

INNER LONDON
Scatterplot of Multiple
Deprivation Score and
gross residential density

Source: DETR 2000

No correlation
Pearson's coefficient: -0.006

2.3 Household size and age

If the patterns relating density to deprivation turn out to be more complex than might at first appear, the distribution of household size and age groups instead proved to be remarkably consistent. **Figure 2.8** shows there is a very strong correlation between the location of one-person households and levels of residential density across London, with a high concentration of areas with over 65% of one-person households in the western and northern districts of Central London, with some clusters in the south-west and in the corridor extending north-east from the City **Figure 2.7**.

Figure 2.7

Percentage of one person households [%]

Source: Census 2001

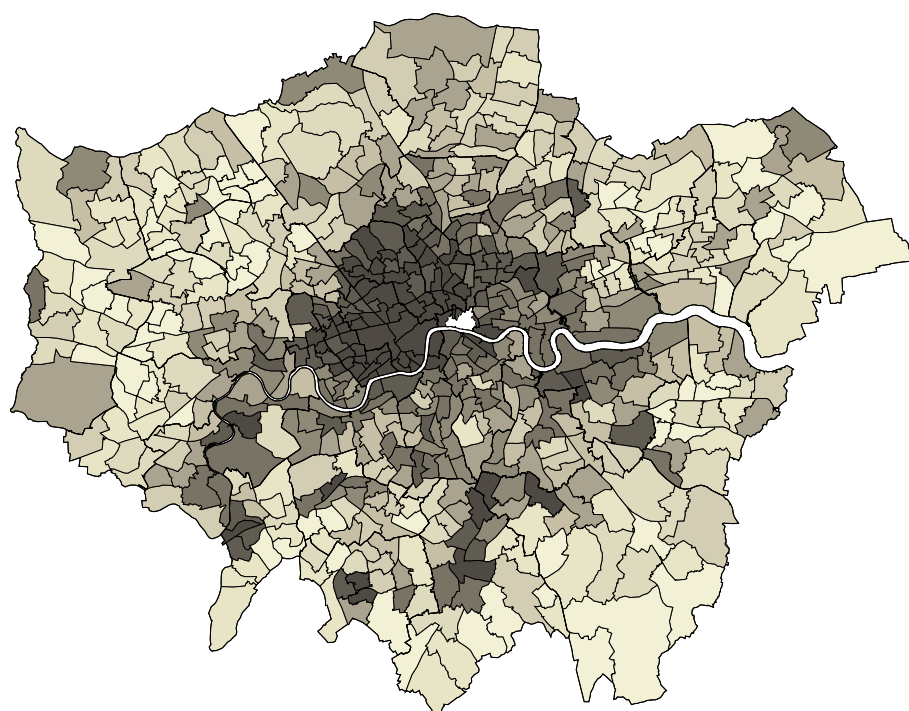
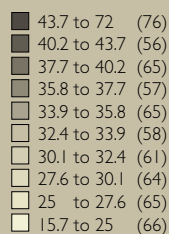
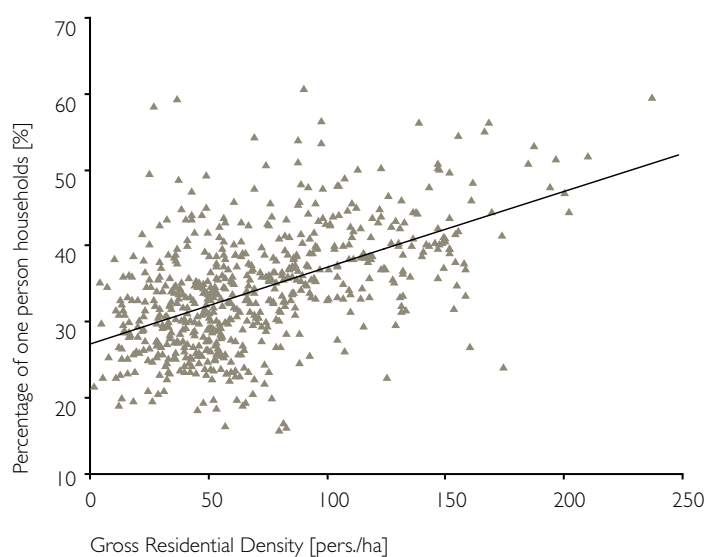


Figure 2.8

Scatterplot of one person households and gross residential density

Source: Census 2001

Significant correlation
Pearson's coefficient: 0.503



Similarly, **Figures 2.9 to 2.14** reveal there is a close fit between population age and density levels across London. While younger people, aged between 20-29, tend to live in more densely populated areas in a ring around Central and Inner London, the pattern is reversed for middle-aged groups and families who locate in the larger properties in the fringes of Outer London. The 30-44 age group is concentrated in the middle ground, occupying the southern and western areas between Inner and Outer London. Again, the predominance of younger people in the denser central areas of London is significant in the context of London's growing population, which will be increasingly composed of young adults working in the city's expanding service and business sectors.

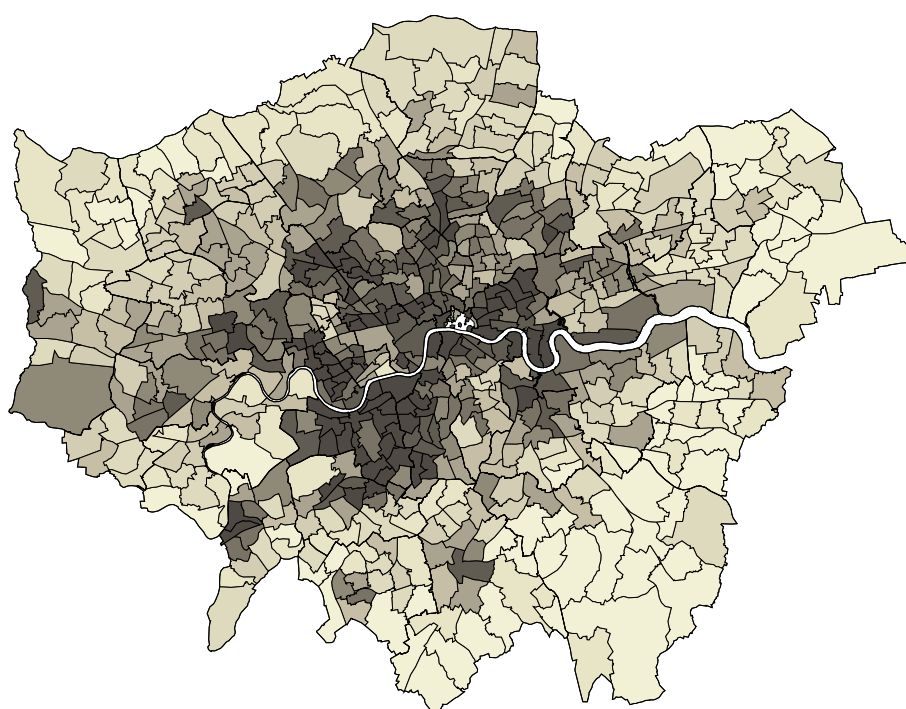


Figure 2.9

**Percentage of people
aged 20 to 29 [%]**

Source: Census 2001

23.2 to 43	(81)
20.9 to 23.2	(57)
19.1 to 20.9	(62)
17.8 to 19.1	(56)
16.4 to 17.8	(66)
15 to 16.4	(63)
13.7 to 15	(56)
12.5 to 13.7	(62)
11.2 to 12.5	(63)
7.2 to 11.2	(67)

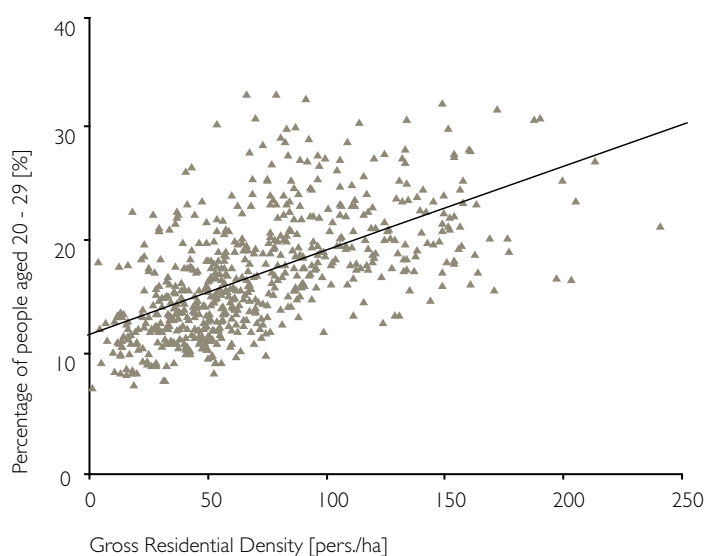


Figure 2.10

**Scatterplot of people
aged 20 to 29 and
gross residential density**

Source: Census 2001

**Significant correlation
Pearson's coefficient: 0.582**



Figure 2.11

**Percentage of people
aged 30 to 44 [%]**

Source: Census 2001

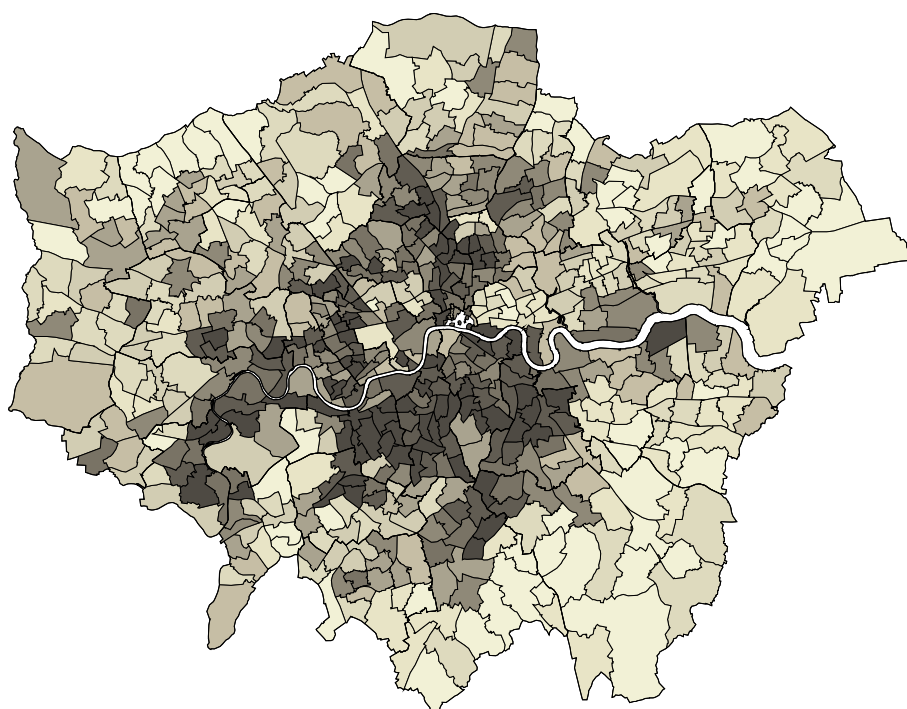
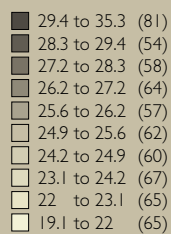
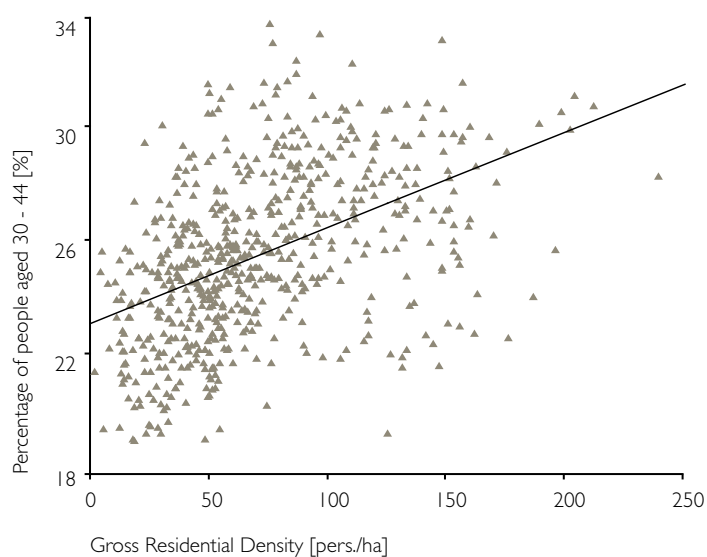


Figure 2.12

**Scatterplot of people
aged 30 to 44 and
gross residential density**

Source: Census 2001

**Significant correlation
Pearson's coefficient: 0.459**



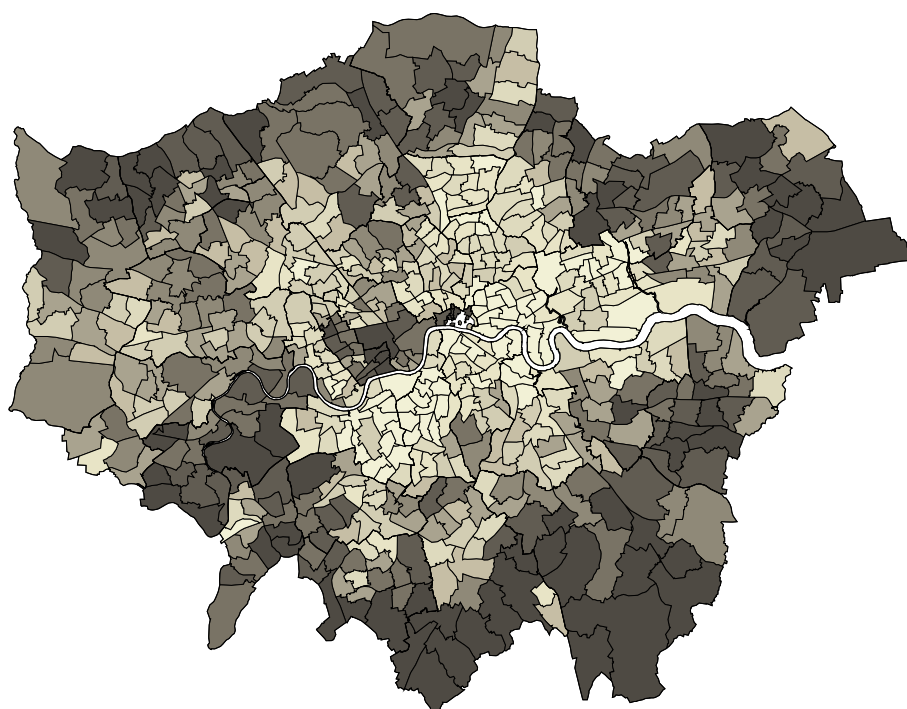


Figure 2.13

**Percentage of people
aged 45 to 59 [%]**

Source: Census 2001

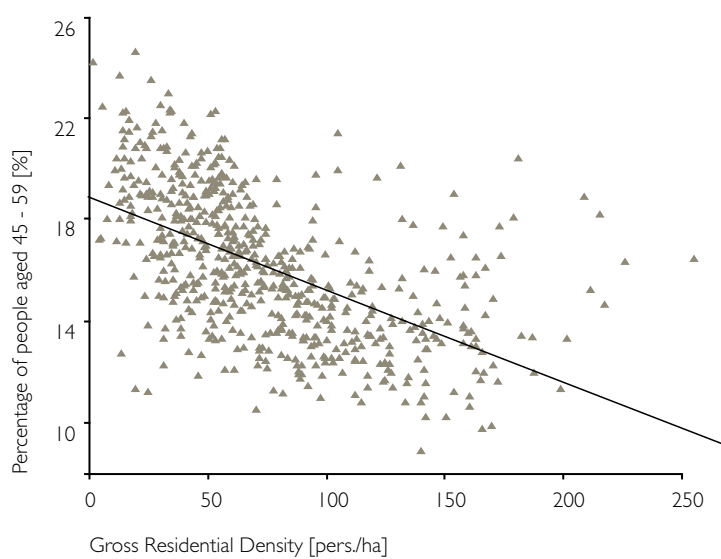
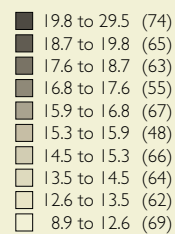


Figure 2.14

**Scatterplot of people
aged 45 to 59 and
gross residential density**

Source: Census 2001

**Significant correlation
Pearson's coefficient: -0.521**

2.4 Ethnicity

Matching the pattern of distribution of older age groups and lower density housing, a large proportion of white British people live in the outer fringes of London, with a high concentration along the south and east towards the commuter belts of Sussex and Surrey, as illustrated in **Figure 2.15**. This clearly differentiated pattern of distribution reflects the degree of clustering of London's ethnic communities into distinct geographical areas. Nevertheless, the distribution graphically illustrates that immigrants who have moved London have chosen to live in areas throughout the capital. Immigrants and ethnic minorities tend to live in more densely populated areas, though not exclusively so.

Figure 2.15

Percentage of British [%]

Source: Census 2001

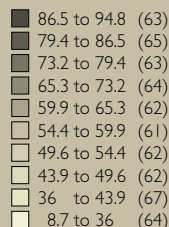
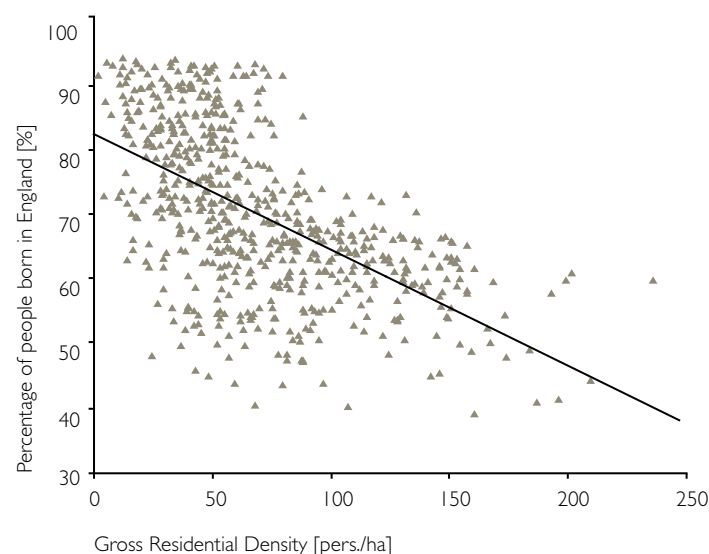


Figure 2.16

Scatterplot of people born in England and gross residential density

Source: Census 2001

Significant correlation
Pearson's coefficient: - 0.576



2.5 Mobility and transport

For both Inner and Outer London the use of public transport and private car are more dominant in work trips than are walking or cycling. Less than a quarter of all work trips in Inner London are by car and over half are by public transport. In Outer London, car trips dominate at 45%, with only 37% using public transport. Train journeys play a more significant role in Outer than Inner London, with more people walking and cycling in Inner London. The number of people who work from home is roughly the same across London as a whole.

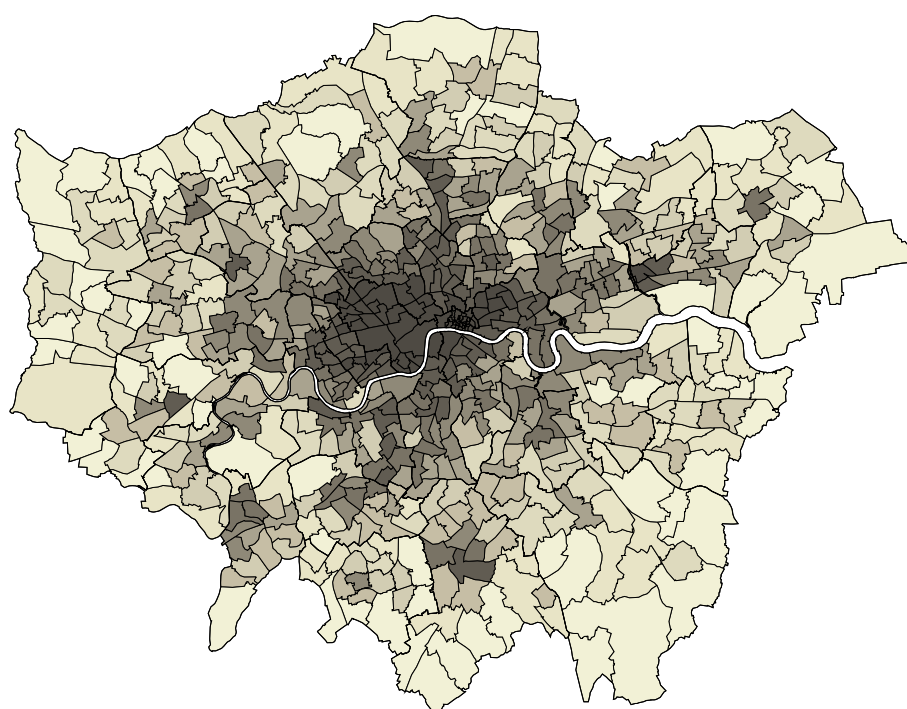


Figure 2.17

Public transport accessibility level [PTAL score]

Source: Transport for London 2003

30.33 to 109.16	(64)
16.2 to 30.33	(66)
12.27 to 16.2	(65)
9.88 to 12.27	(65)
7.82 to 9.88	(65)
6.53 to 7.82	(64)
5.4 to 6.53	(65)
4.42 to 5.4	(63)
3.59 to 4.42	(67)
0.77 to 3.59	(65)

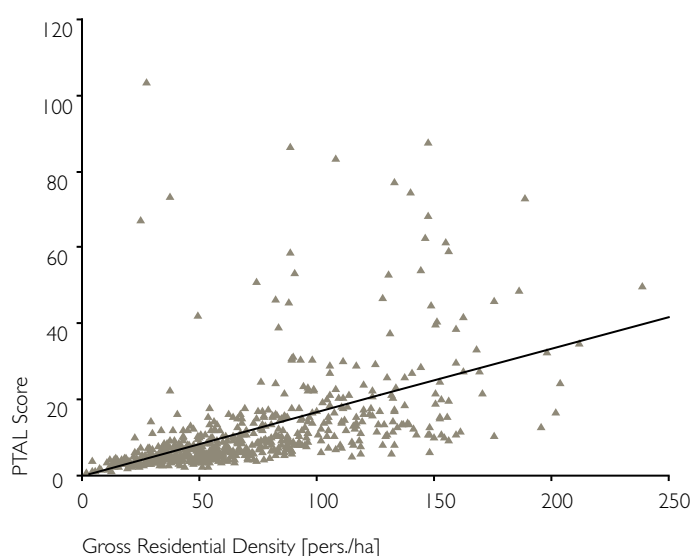


Figure 2.18

Scatterplot of public transport accessibility levels (PTALs) and gross residential density

Source: Transport for London 2003

Significant correlation
Pearson's coefficient: 0.520

The distribution of public transport provision, expressed in PTALs (Public Transport Accessibility Levels) shows a high level of service provision in central areas, with decreasing levels as one moves from the city centre to city fringe. While **Figure 2.17** shows the bulk of east London, on both sides of the Thames, remains poorly served by public transport to the east of the Isle of Dogs, a number of well-served zones appear along public transport corridors and around nodes such as Barking, and in the south and west around Croydon and Kingston.

Figure 2.19

**Percentage of trips to work
by public transport [%]**

Source: Census 2001

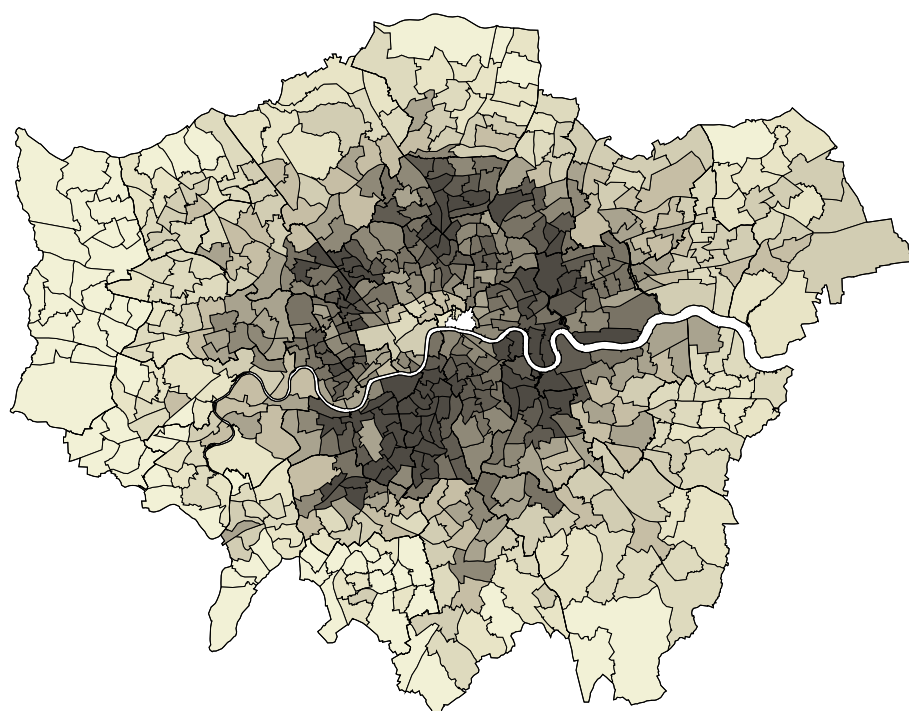
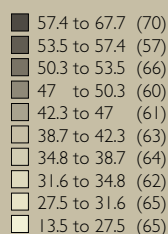
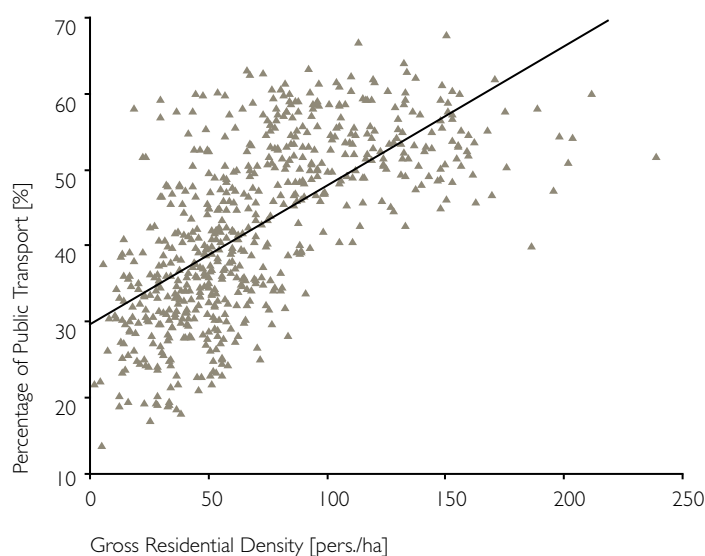


Figure 2.20

**Scatterplot of trips to work
by public transport and
gross residential density**

Source: Census 2001

**Significant correlation
Pearson's coefficient: 0.652**



There is strong correlation between residential density levels and public transport provision in London as a whole, with large parts of higher density Inner and Central London being areas with above-average levels of public transport accessibility **Figure 2.18**. Yet when one compares actual public transport use (as opposed to potential transport accessibility) with residential density a more complex picture emerges.

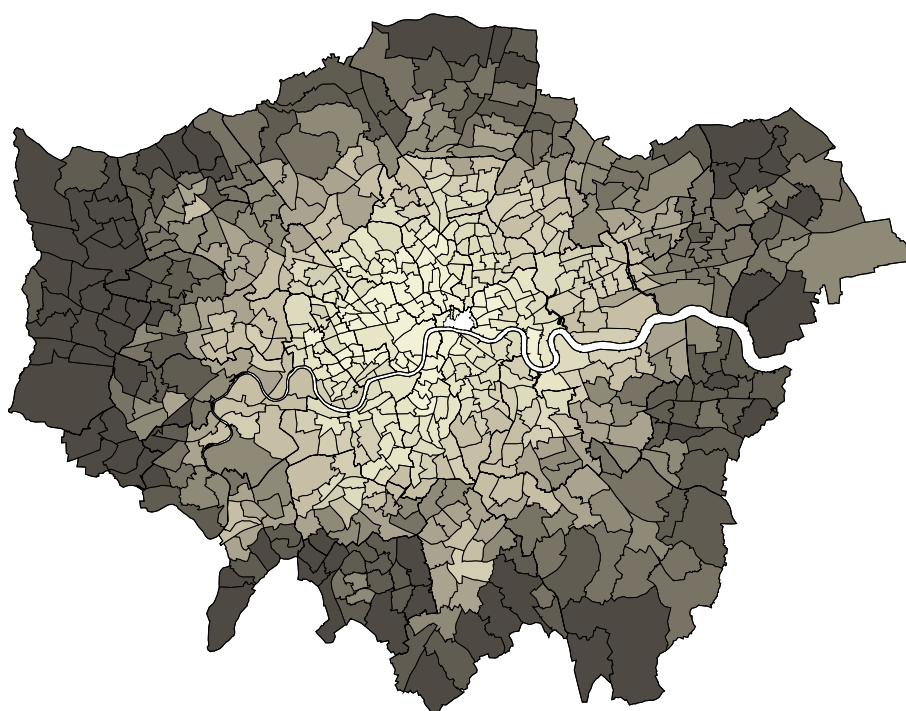


Figure 2.21

**Percentage of trips to work
by car or motorbike [%]**

Source: Census 2001

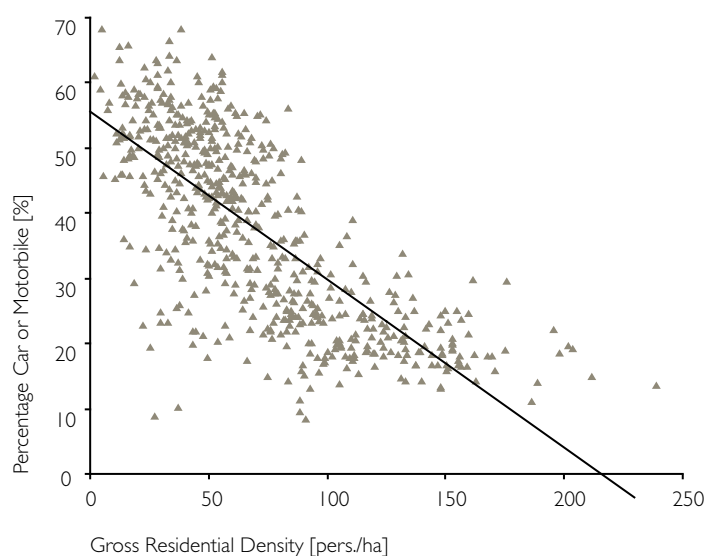
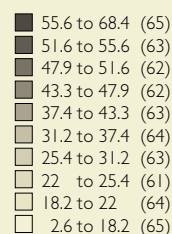


Figure 2.22

**Scatterplot of trips to work
by car or motor bike and
gross residential density**

Source: Census 2001

**Significant correlation
Pearson's coefficient: -0.725**

While there is a ring of high public transport use (more than 50%) around Central London **Figure 2.19**, the levels decrease both as one moves outwards towards the boundary of Greater London (falling to less than 25%), and as one moves closer in, with a similar decrease towards the centre (levels below 30%).

Within this ring, Lambeth and Clapham, north Greenwich, the Docklands, west Newham, north Islington, and west Camden appear as pockets of extremely high public transport use (more than 57%), confirming the polycentric nature of the city defined above. In the outer boroughs, levels remain high along rail corridors, with pockets of relatively high use in Croydon and Kingston. On balance there is a high correlation between residential density and transport use **Figure 2.20**, with the percentage of public transport trips remaining above 40% at density levels of around 100 pers./ha. Above this density level, the correlation appears to be no longer significant.

Patterns of commuting to work in London are largely influenced by residential location relative to the city centre. Car use in Central London is below 18% and gradually rises in proportion to distance from the core of the city **Figure 2.21**, reaching an extreme of over 50% along the outer boundary of Greater London. The negative relationship between density and car use is symptomatic of London's centrality and its influence on mobility patterns **Figure 2.22**, but it also indicates the lack of dependency of car use in areas with higher residential densities, which, in turn, are generally well served by public transport. But while for density levels above 100 pers./ha car use remains below 40%, it drops to about 30% for even higher density levels of over 150 pers./ha.

These charts show a number of statistical links between residential density and other characteristics of urban areas. Earlier studies by planners, sociologists, geographers and others have suggested links between density and factors such as age, life-cycle, family status and public transport availability. There are also statistical links between concentrations of ethnic minority and/or immigrant populations and density.

These statistical associations suggest that at particular phases of peoples' lives (e.g. parents with young children), or when they live in areas with high levels of accessibility, they are more likely to reside either in housing configurations where there is a relatively high concentration of people per dwelling and people per hectare.

In the context of this study, such statistical links between residential density and other demographic factors are of considerable interest. It is clear that London, with (a) a relatively young population make-up; (b) almost a third of its population born outside the United Kingdom and (c) a dense network of public transport, would be likely to support relatively high residential density.

However, such links do not necessarily provide evidence that would be particularly helpful to British policy-makers who wish to increase the residential density of urban areas. It would not be acceptable, for example, to increase density by encouraging more new immigrants to concentrate together in urban areas. Nor would it be plausible to seek to concentrate single person households or people aged 18-30. Such concentrations may grow up by chance and may tend to increase residential density, but it is unlikely that public policy could explicitly encourage such changes.

Public transport improvements could, of course, be made with the explicit policy objective of encouraging greater residential density in urban areas. Indeed, the development of new, higher-density homes close to good public transport interchanges and lines has been explicit policy in Britain for a number of years.

The issue we now turn to, given the different population make-up in densely-populated wards, is the extent to which it is possible to identify other characteristics or attributes (that is, apart from those considered above) according to which public policy could exert some influence over the likelihood that higher (or lower) densities would be likely to be achieved. The sections that follow examine a number of London areas in great detail seeking attributes that help to explain attitudes to residential density.

3 Five higher density wards in London

The detailed analysis of five individual wards across Inner and Outer London shows that housing density can take many different forms – from the compact two and three-storey terraced houses of south and east London, to the mix of mansion blocks, high-rise and large houses in found Brixton, Hammersmith and Hackney. Despite their spatial differences all these areas have well over 100 people per hectare (the London average is 67) and sustain very different types of communities – from the affluent, flat-sharing city workers of west London and to the larger, Asian families of Green Street East. Typical house prices in these areas are at both extremes of the London average. All five wards are well connected to their surroundings and benefit from good access to public transport, although Clissold is not served by the underground network, with most properties within five minutes' walk from an underground or train station or bus stop. While the majority of people shop in their local area, the type and quality of facilities varies considerably, depending on the age and ethnic distribution of the residents. In all cases they are often clustered along the high streets or around transport hubs.

Figure 3.1



3.1 Introduction

Using the city-wide analysis as a starting point, researchers drilled into the five selected wards **Figure 3.1** to understand their spatial character and analyse the ways in which their populations live. In parallel with the data-based analysis, each ward was visited by researchers who generated a series of maps and photographic records to demonstrate their key physical, architectural and design features. In addition, direct interviews were carried out with local stakeholders and MORI carried out a postal survey of residents. Some of this analysis was, inevitably, more impressionistic than the data-based work. However, it produced a series of findings about the ways in which different communities use their streets, open areas and private spaces, under the following categories of investigation (see Part C):

- Negative and positive attributes (what do people like and dislike about the area; why have they moved in and why would they move out).
- Resident profiles (who are the long-term residents and what is the profile of people moving in or moving out of the area; do the residents consider the area as a “staging-post”, or are they “trapped” due to economic and other circumstances).
- Lifestyles and patterns of mobility (how does the area fit with the day-to-day needs of different resident groups; is there a local job market; how do people get to work and go about their daily business).
- Social and community dynamics (how do residents interact with other communities; how do they use local facilities; what do they enjoy most and what do they lack).
- Urban character and layout (what is the area like; what is the pattern of housing development; what is the dominant house or apartment type; are there large areas of social housing, and do they fit into the overall character and grain of the area).
- Trade-offs (what reasons do residents give for wanting to live in the area; what are they ready to give up; what are the most significant assets of the area in relation to their current circumstances).
- Perceptions on density (what do residents feel about the level of density in the area; is it too crowded or is it acceptable; what do they think are the best and worst things about higher density areas in their neighbourhood and in London generally).

The following section provides an overview of the five individual wards, while full details are included in Parts B-E.



3.2 Green Street East



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Located in the London Borough of Newham to the east of Stratford, with a dominant Asian population, and the highest average density of the sample at 176 pers./ha – Newham could be called one of London's "Asian enclaves". The ward is the fourth densest in terms of dwellings per hectare (54 dw./ha) and is London's most overcrowded ward (21% of households). While the area has a large proportion of Asian families who live in relatively large numbers within small two-storey terraced houses, it is also home to a dwindling number of white British families and an incoming population of poor immigrants and refugees. More recently, this wave of immigration has been joined by so-called "Stratford gentrifiers" – young urban professionals who take advantage of the good public transport connections to Canary Wharf and the City and have invested in an area that will be transformed in 2007 by the arrival of CTRL high-speed trains from the Channel Tunnel at Stratford. There is a higher-than-average percentage of families, with over 58% of residents living in terraced houses, and a high level of young children under the age of 14. Nearly one third of all residents live in rented accommodation. Average house prices are about half the London average. The ward's 7% unemployment exceeds the London average of 4.4%.

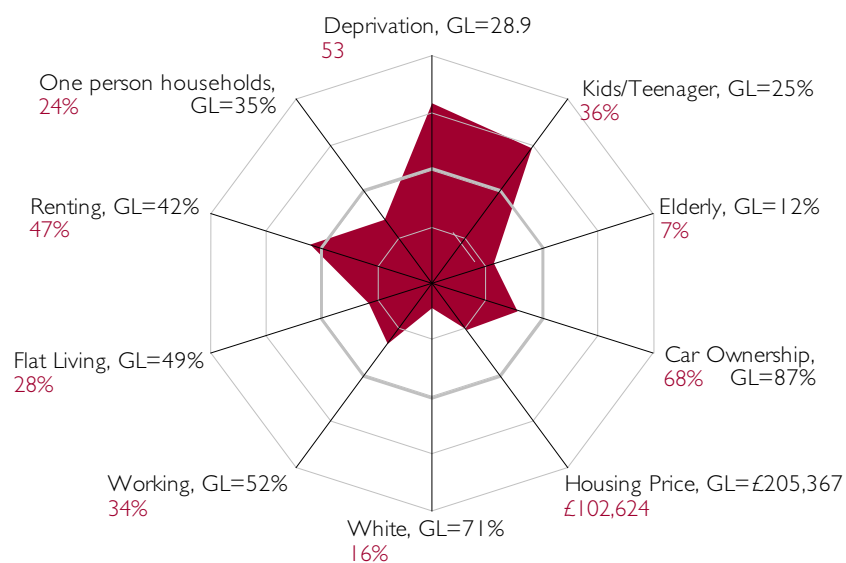


Green Street East
London's most overcrowded ward is made up of terraced houses and inhabited predominantly by Asian communities

Green Street East

Socio-demographic parameters
(Further information in Part B)

- Green Street East
- Greater London



Green Street East
Local shops and facilities provide
goods and services geared to the local
residential community



With linear streets of two- to three-storey east-west terraced housing, framed by north-south arteries connecting to the wider east London grid, the local streets are well connected to the surroundings. There is good public transport provision with extensive bus coverage, underground stations at Upton Park and East Ham, and rail service at Forest Gate – all within a five-minutes' walk from most parts of the ward. The commercial facilities along Green Street form the commercial spine of the predominantly residential neighbourhood, while relatively large private gardens make up the majority of open space within the ward. Many of the two-bedroom houses have been converted into three-bedroom houses. While there are no major open spaces within the ward itself, there are a number of smaller public parks and open areas within 10-15 minutes' walk, but they are relatively small and disconnected.



Green Street East
Terraced housing on Monega Road

Green Street East
Many of the shops cater to the needs
of the local Asian community

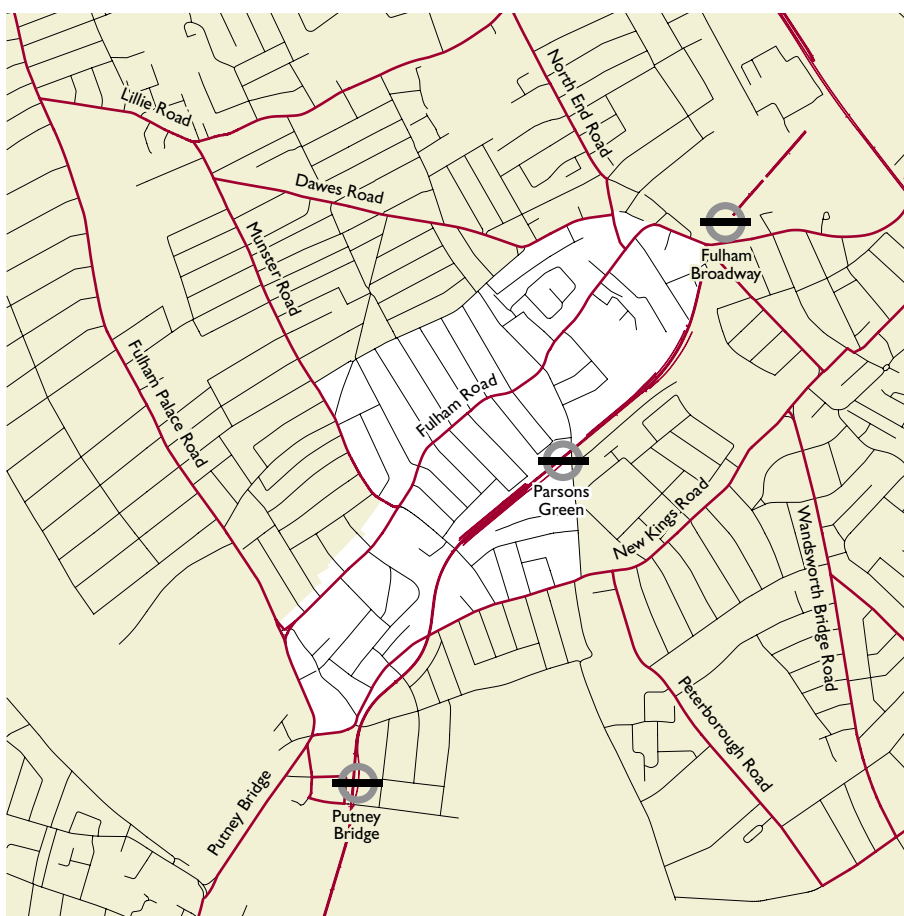


Green Street East
Upton Park Underground station provides
good transport connections across London

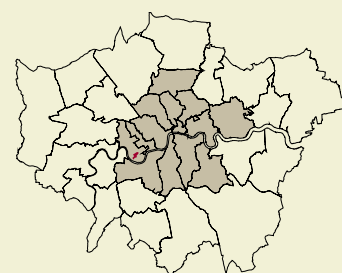




3.3 Town



An affluent west London neighbourhood in Hammersmith and Fulham, surrounding Parsons Green, with the second highest density of the sample at 153 pers/ha, Town is the quintessential London “urban village”. Inhabited mainly by American, British and European professionals, the ward’s population includes junior City workers and a large percentage of educated and relatively affluent immigrants from Australia, New Zealand and South Africa. There is a perception that its good access to public transport, flexible housing stock with mansion houses and small terrace houses—not unlike Green Street East, but with smaller back gardens—as well as its proximity to parks and the River Thames, have contributed to the “pricing out” of traditional white and black British residents.



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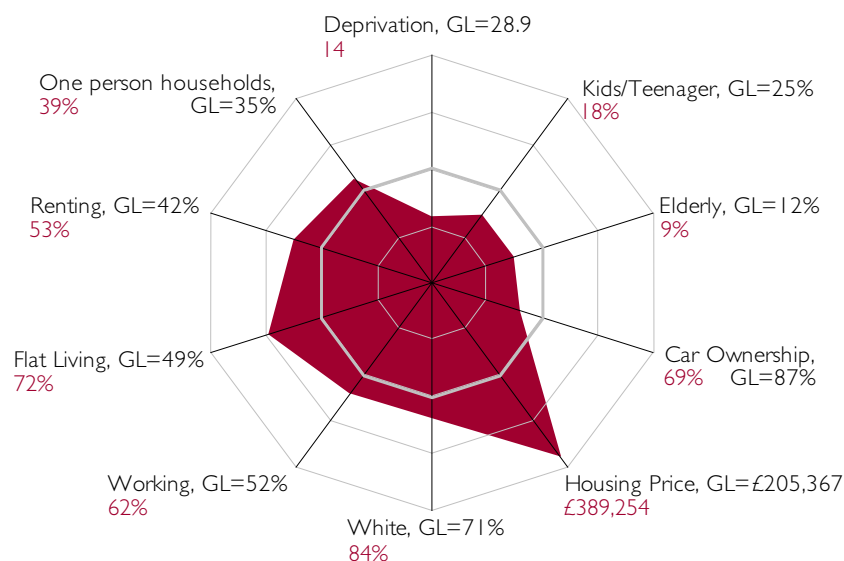


Town
A typical London higher density “village” composed of a mix of houses, converted flats and mansion blocks

Town

Socio-demographic parameters
(Further information in Part B)

- Town
- Greater London



Town

Many of the council housing estates
are integrated in the urban fabric



Town

River Thames and Fulham Palace Gardens
are close to the high density streets

Town

Fulham Broadway Underground Station
is one of the many well connected public
transport facilities

Town is the densest ward in the sample in terms of dwellings per hectare at 71 dw./ha, and is the most affluent and the most ethnically homogenous (84.4% white) of the five wards. It is predominantly young, with the majority of its population between 20-44 years old. Residents commute to work mainly by tube (41.2%) and bus (11.5%), and have a relatively low car usage as compared to the London average. The area provides large three- to four-bedroom houses for families and apartments for young professionals, who often share accommodation. A large proportion of residents live in flats in converted or shared houses (35.5%, well above the London average) and in flats in purpose-built blocks. The main tenure types are owned (46.7%) and rented from private landlords. Most of the ward is reachable within five minutes' walk from three underground stations at Fulham Broadway, Parsons Green and Putney Bridge, and access to bus routes is also very effective.

With its linear arrangement of densely placed terraced houses, the ward is very well integrated into the surrounding street pattern, with many roads leading into and across the neighbouring areas. The properties have relatively small private gardens, but there is a ring of large, well-maintained open spaces all within a 10-15 minute band from the centre of the ward. While difficult to discern from within the narrow streets of the ward itself, the River Thames is very easy to reach, providing a large and varied open space, with opportunities for long walks along the south-facing river's edge. While many of the streets are lined by three- to four-storey houses, taller mansion blocks and estates follow the alignment of the prevailing urban grid, and do not cause an interruption to the continuous urban experience of the area.





Town

Three to four storey terraced housing
on Munster Road

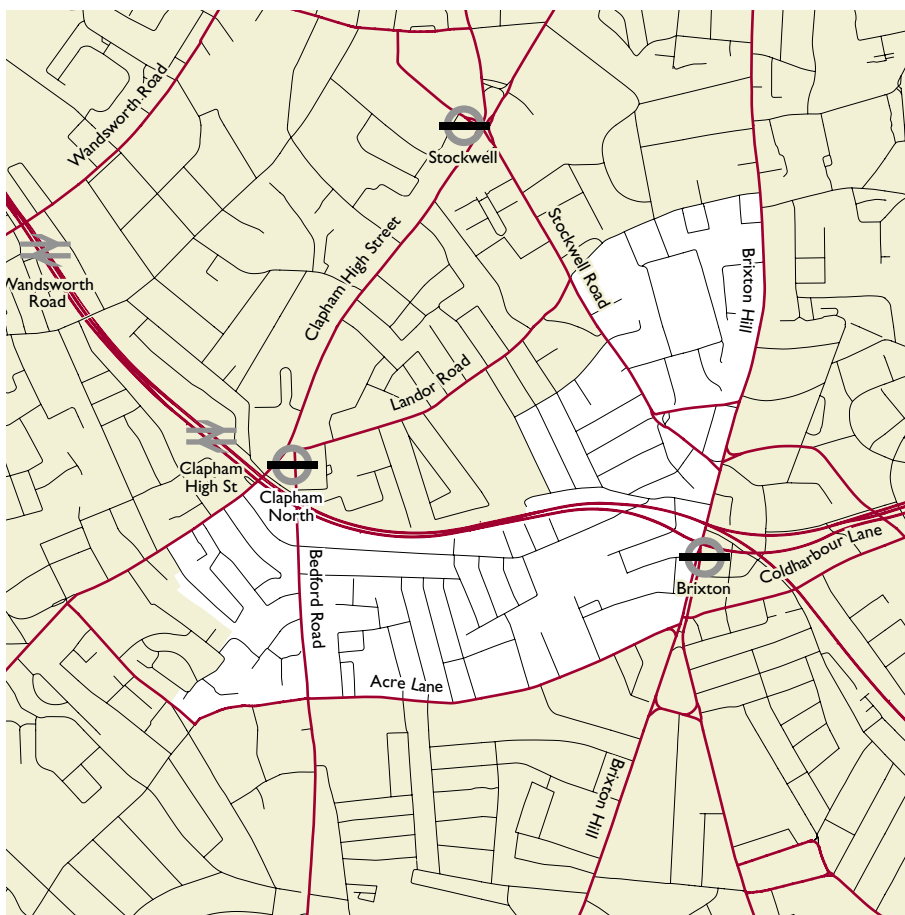
Town

Fulham Palace Gardens provides a large,
well-maintained green lung for local residents





3.4 Ferndale



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Located at the heart of Brixton in the London Borough of Lambeth, with an ethnically and socio-economically varied population and an average density of 151 pers./ha, Ferndale is an area associated with the urban characteristics of the “Brixton buzz”.

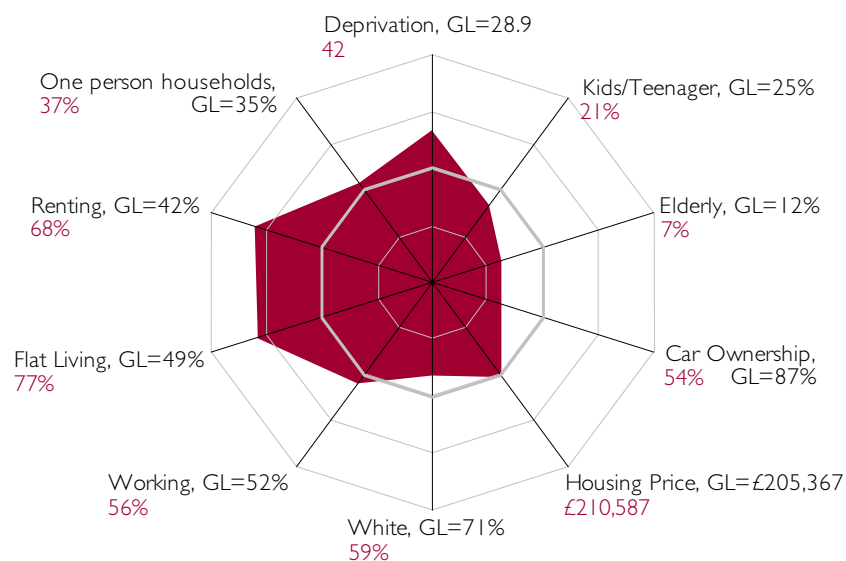
As with Town, the traditional black Caribbean population has been priced out by “City boys” and creative professionals who enjoy the vibrancy of the area and its good transport connections. In addition, there is a marked influx of Portuguese immigrants. Consistent with Brixton’s history and profile, the ward has more than two and a half times the London average of black residents, and a significantly smaller percentage of white residents. The ward is distinguished by its variety of local amenities, its night-time entertainment activity and its easy tube connections to Central London. The ward’s population is young, with over 60% of residents aged between 20 and 44, and with a high proportion of young city professionals (17.4%), considerably higher than the London average (12%).



Ferndale
The variety of local amenities, young population and ethnic diversity add up to the “Brixton buzz” effect

Ferndale
Socio-demographic parameters
(Further information in Part B)

■ Ferndale
□ Greater London



Ferndale
While the housing stock is mixed and varied, from almshouses to tower blocks, the local facilities cater to the cosmopolitan needs of the different types of local residents

Much of the housing is back-to-back terraced houses with small gardens, 60% of which has been converted into flats, with a large and discernible presence of large council estates, such as Stockwell Park, occupying the northern area of the ward. The residential stock of the area is relatively fragmented, with large social housing blocks that break with the urban grain of terraced streets, and only a small percentage of open green areas both within the ward and in its surroundings. These purpose-built blocks, with low quality open spaces, cause a clear visual interruption to the pattern of surrounding streets, with little or no continuity to the neighbouring areas. Ferndale has the lowest ratio of green to total space amongst the five wards, with a number of small parks scattered in the vicinity. The size and height of the buildings units also increase in scale along the main commercial spine adjacent to Brixton Underground Station, with larger and deeper buildings with shops and retail facilities. Clapham North Station has good tube connections to Bank, facilitating access to the City from Brixton, while the extensive bus service connects the area with south London.



Ferndale

The different types of residential units create a mixed and fragmented environment that, in some areas, emphasizes the distinctions between income groups and ethnic communities in Brixton

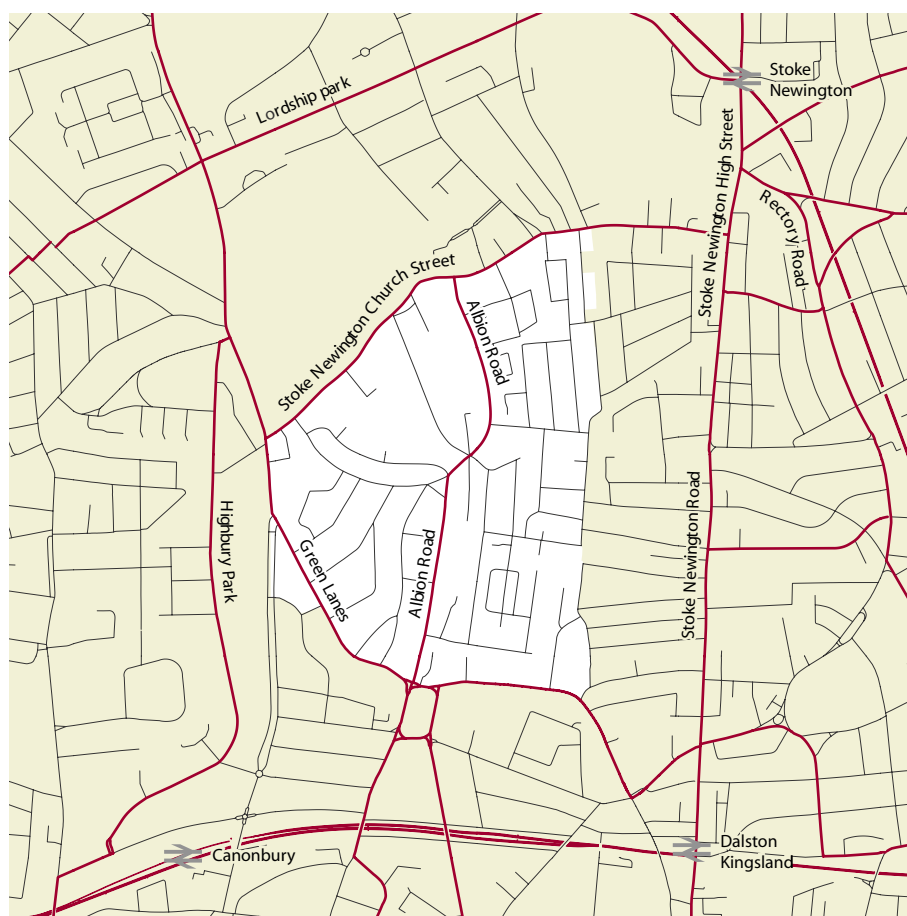


Ferndale

Brixton Underground station provides fast access to jobs in central London and the City, making it attractive to more affluent, younger residents



3.5 Clissold



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The more fragmented urban area close to Clissold Park in north-east London in the London Borough of Hackney with an average density of 148 pers./ha, Clissold is a classic “multi-cultural village” within London. The area is inhabited by well-defined communities that co-exist within the long streets composed of large Victorian and Edwardian houses and clusters of post-war housing estates. The Turkish and Kurdish community is a dominant ethnic minority, with white young professionals and students more recently moving in to take advantage of the ward's affordable prices, wider range of amenities – especially the large and generous Clissold Park – and good shopping and leisure facilities along Stoke Newington Church Street. The absence of any underground stations in the vicinity is offset by good bus connections to Central London and the City. Clissold is the most deprived ward in the sample and hosts higher-than-average levels of renting, and small household sizes. The ward offers affordable flats for first-time buyers. The lack of direct tube access to Central London creates a “village” atmosphere of local shops and amenities which appeals to “creatives”, students and young families.



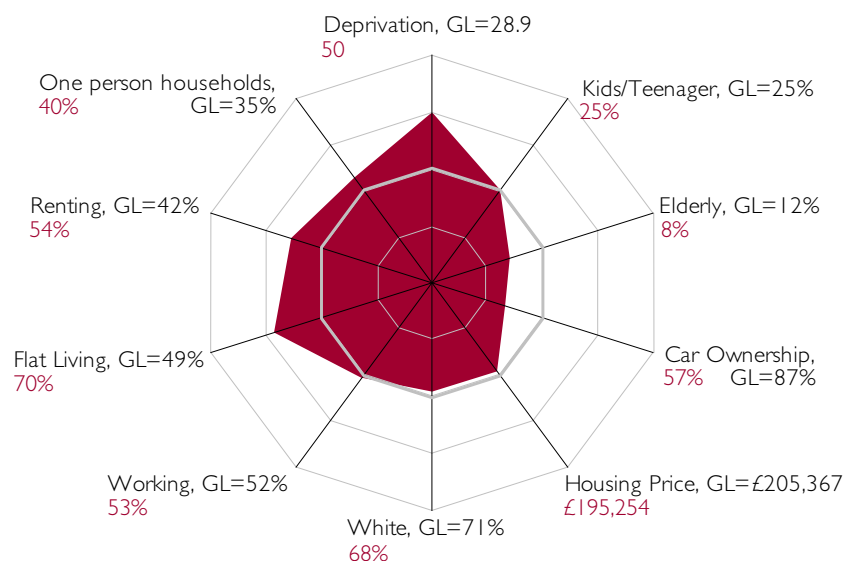
Clissold

At the heart of a predominantly residential neighbourhood, Stoke Newington Church Street is a lively and vibrant local high street

Clissold

Socio-demographic parameters
(Further information in Part B)

- Clissold
- Greater London



Clissold

Clissold Park is considered as one of the major assets that makes living in this inner city neighbourhood attractive to old and new residents



The overall urban layout is relatively fragmented, with a mix of building types, sizes and layouts distributed across the ward. Clissold Park dominates the open space structure of the area, while Stoke Newington Road and High Street define a very strong north-south axis to the east of the ward. Stoke Newington Church Street is lined by upmarket, small-scale shops, restaurants and bars. The housing stock consists mainly of two- to four-storey terraced houses, many of which have been turned into flats. Some streets stand out for a better quality architecture, with four-storey terraced houses with large back and front gardens and basements. The relatively small council estates are scattered amongst the streets of terraced housing, and do not have an overwhelming impact on the area. The presence of Clissold Park, the railway line to the south and major north-south arteries make the area relatively self-contained, with few streets connecting deep into the surrounding area.



Clissold

Three-storey terraced housing in a high density inner London ward



Clissold

Stoke Newington Festival at Clissold Park — a strong focus of community life



Clissold

Five-storey council housing relates to the prevailing pattern of streets

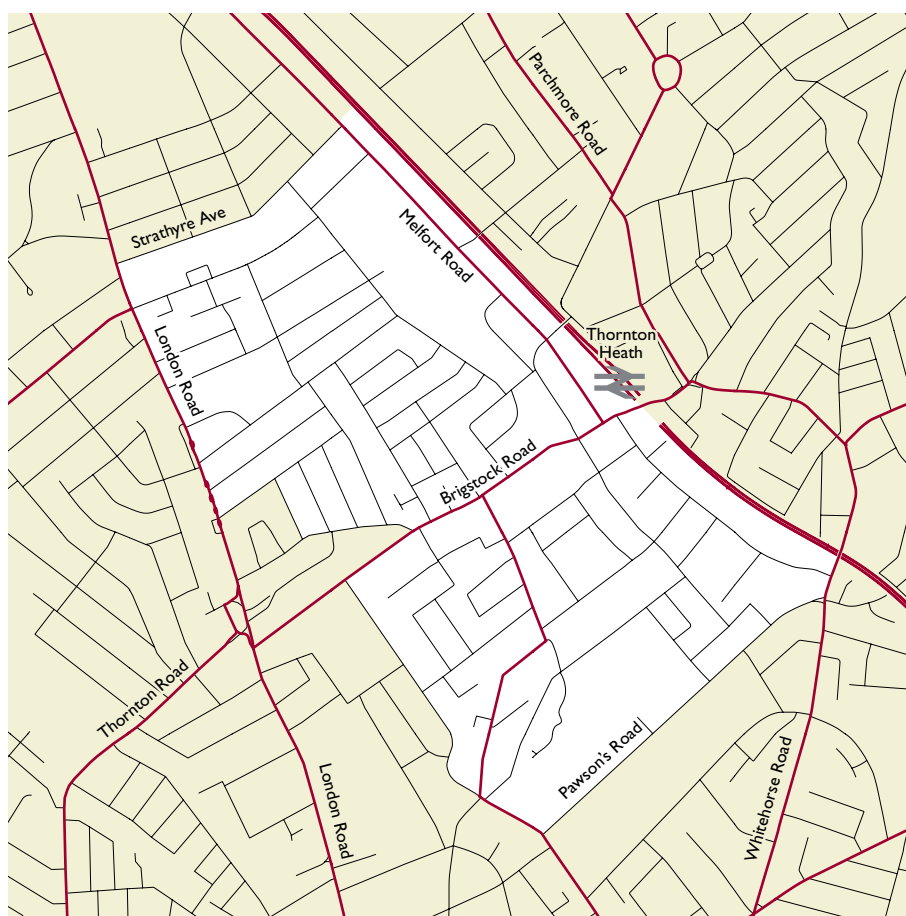


Clissold

Local retail on Stoke Newington Church Street caters to the needs of different residential groups in the area



3.6 Bensham Manor



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A relatively quiet residential neighbourhood in south London within the London Borough of Croydon, with the lowest density of the sample at 111 pers./ha, Bensham Manor is representative of many areas of London associated with "rough suburbia". Home to a large percentage of both white and black British families, the neighbourhood is home to an incoming Asian population as well as refugees who find temporary accommodation in the area. The generous provision of front and back gardens to the two- to three-storey semi-detached and terraced housing, as well as a number of small public green areas, gives a greater sense of openness than in Town or Ferndale. As with other parts of Croydon, the level of rail-based public transport is good with access to Thornton Heath and East Croydon stations and an adequate bus system. Shops and other commercial facilities are concentrated along Brigstock Road.

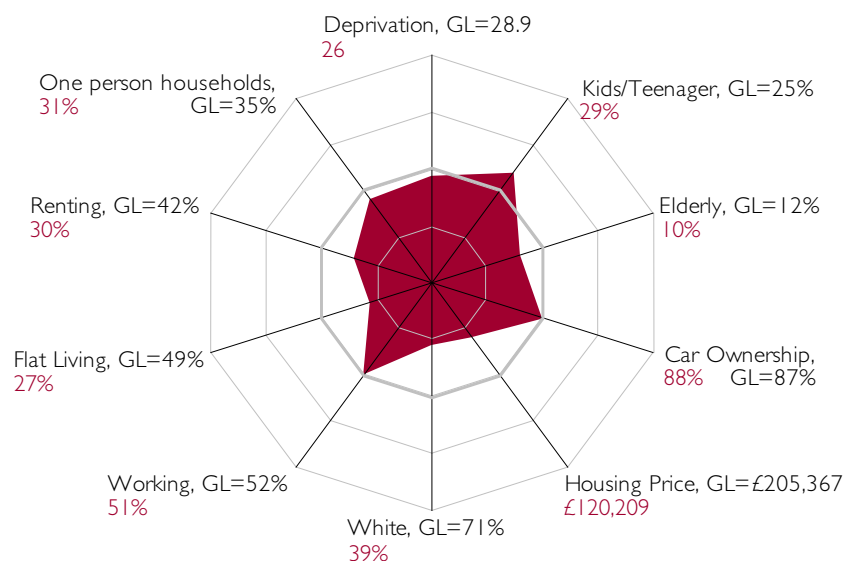


Bensham Manor

One of London's early 20th century suburbs, the area is composed of two-story terraced houses with gardens that generate a relatively high-density environment

Bensham Manor
Socio-demographic parameters
(Further information in Part B)

- Bensham Manor
- Greater London



The typical terraced house arrangement shows a very clear pattern of long east-west streets with a major hospital complex interrupting the prevailing urban grain. With the exception of the severance caused by the main line rail tracks to the east of the ward, the streets are relatively well connected to the surroundings. The more extensive bus service provides relatively good access across the ward, while only a small portion of the houses are within a few minutes walk from Thornton Heath Station. There are a few public open spaces dispersed across the ward or its immediate edges.

The properties in the area is characterised by one- and two-storey terraced three-bedroom houses, with large gardens, of appropriate size for families with children. There are several four-storey blocks and mini-estates. Due to the proximity to Luna House (the Home Office), there is an emergent housing market to provide temporary accommodation for asylum seekers, which has resulted in the conversion of terraced houses into B&Bs for these residents, as well as the construction of new purpose-built blocks.

Bensham Manor
Local retail around Thornton
Heath station





Bensham Manor

The neighbourhood is characterised by suburban houses and mixed-use buildings with shops for local communities on the high street, and a few scattered open spaces



4 General findings

Interviews with local residents and stakeholders, as well as a detailed MORI postal survey of nearly 2,000 residents, confirm that Londoners have strong positive and negative associations with density. Positive attributes include shopping facilities, public transport, parks and open spaces, vibrancy, liveliness and friendly neighbours. Negative attributes include parking problems, crime and vandalism, pollution and living in cramped conditions. While the positive attributes are influenced by very local experiences, many of the more negative attributes are more generic and tend to apply to London as a whole. On balance, there is no direct correlation between levels of density and levels of satisfaction. Residents make clear choices involving trade-offs when living in higher density areas – quality of shops, travel to work, access to parks, amount of space – often affected by the amount of time they spend in their neighbourhood. There are many different urban “tribes” living parallel lives in these areas broadly composed of “urbanites”, “suburban leavers” or “trapped residents” who make choices – wherever possible – to live in certain areas for given periods of their lives, depending on their age, income and stage of life (early career, young family, retirement age).

The size, location and upkeep of large open spaces – like Clissold Park and Fulham Palace Gardens – play a significant factor in making areas attractive to residents, as does the proximity to public transport though this is often traded off against other attributes such as good local facilities and parks. Car parking and traffic congestion are problematic in areas where more affluent residents use cars for non work related journeys. Overcrowding within the dwelling unit has a negative impact on the perceptions of density at the neighbourhood level as does the presence of large clusters of social housing that do not integrate with the urban grain of an area.

4.1 Transport and mobility



Our study confirmed that the important interrelationship of transport and density – a classic pair in the density debate – at the Greater London scale is complex and mixed.

The MORI survey showed that residents of the five higher density wards attach great significance to key opportunities and constraints in respect to transport. When asked about the best aspects of their area, accessibility by public transport (43%) came second after shopping facilities, while quality of public transport (23%) was mentioned as the fifth-best attribute.

To gain a better understanding of the opportunities for public transport that result from higher density, the LSE team commissioned Transport for London (TfL) to carry out sophisticated computer modelling that simulates travel from the centre of a given ward to all other possible destinations in London which are reachable through some form of public transport connection (tube, rail, bus or taxi). The model not only takes into account direct routes and connections, but also possible transfer and waiting times between one form of public transport (e.g. tube) and another (e.g. bus), giving an accurate account of potential transport accessibility measured in terms of time. The results are informative for all five wards, confirming the systemic inequality in London's service provision, which favours west and Central London, and penalises parts of south and much of east London.

Figure 4.1 graphically illustrates the point. While a very large surface area of the metropolis can be reached within one hour from Town and Ferndale, the urban reach is radically reduced for Green Street East and – to a lesser degree – Clissold, which has no tube access but good bus service provision. Despite its geographical remoteness from the centre, Bensham Manor benefits from its proximity to East Croydon and Thornton Heath stations with their good rail links to Central London, and has a large “footprint”, extending to most of Central London in less than 70 minutes. To some extent, this inequality of service provision is independent from the present residential density and is a consequence of land use changes and selective transport developments of the past.

Figure 4.1

Temporal proximity in minutes



Green Street East, Newham, 176 pers./ha



Town, Hammersmith & Fulham, 153 pers./ha



Ferndale, Lambeth, 151 pers./ha



Clissold, Hackney, 148 pers./ha



Bensham Manor, Croydon, 111 pers./ha

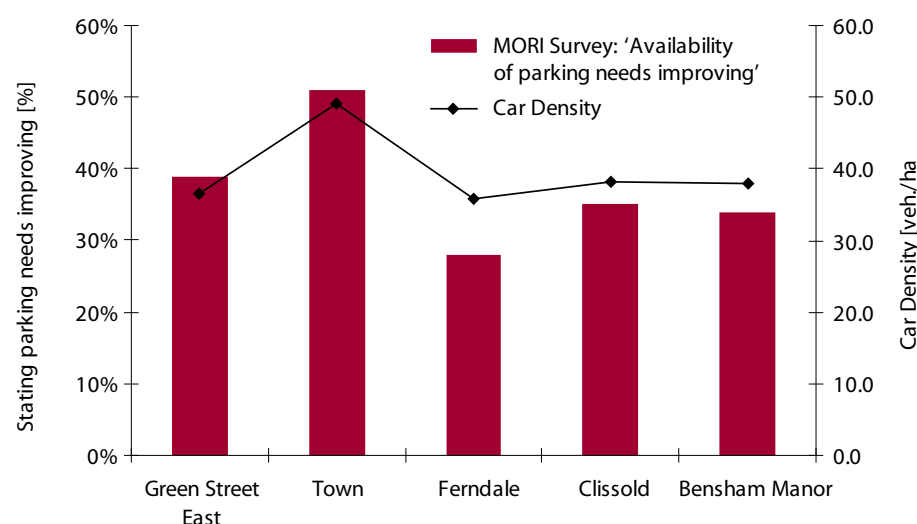
The MORI survey and our interviews confirmed that car parking and congestion are amongst the most negative attributes associated with higher density living. This general finding points to the fact that the private car, with its need for circulation and parking space, has a disproportionately negative impact on how people perceive congestion and the quality of the environment [Rode and Gipp, 2001].

Looking more closely at constraints on car use resulting from higher densities, a clear picture emerges by comparing the MORI survey results in **Figure 4.2** (residents stating that parking needs improving) with levels of car ownership and what one might call “car density”, or number of cars per hectare across the five different wards. The percentages of people agreeing that parking needs improving for each of the wards corresponds largely with the car density in each ward. Town and Green Street East, which report the highest level of dissatisfaction with parking are also the wards with the highest car density. Particularly for Town with a car density above 50 cars/ha, interviews with local key actors emphasised the negative effect of higher density on vehicle mobility and congestion, as demonstrated by the following comments:

“[Density is] negative for the reasons that I first touched on, i.e. parking, driving around, the amount of times you drive down a street to pull in and let someone go past, because they are quite narrow streets and you have an awful lot of people who have large 4x4’s! God knows why when they are in an area like Fulham.” (Real Estate Agent, Town).

“It is too crowded, there is not the parking, most of the houses are Victorian houses, and they don’t have garages so you can’t park your car. ... Travelling around isn’t easy because the roads are so congested although the borough does have parking restrictions and they’ve tried to make life a little bit simpler for residents, but it still is busy with cars.” (Head of School, Town).

Figure 4.2:
**Car parking problems based on
MORI survey and car density**



The high levels of car ownership in Town, an area with good public transport connections, reflects the relative affluence of the residents, yet only 17% trips to work are by car [Census, 2001]. In addition, MORI showed that 34% of trips for non-work activities are by car – higher than other wards in the sample. In this case, the car is not a “necessity”, but an important means of escape for evenings and weekends, often used as a status symbol, or as a convenient and safe means of access to facilities and leisure.

A tentative conclusion that could be drawn from these findings is that higher density areas with good public transport connections can be attractive to residents with different economic potentials and lifestyles, but that car use – especially car parking – needs to be managed effectively where more affluent residents desire individual transport modes for non-work activities. In this respect, shared-ownership schemes, car pooling and alternatives to on-street parking (e.g. shared garages, structured or underground parking) need to be explored for residential communities of above-average income, who may be attracted to living in higher density developments in London.

A range of different transport use patterns were discovered within the areas of study, although the five wards share similar, relatively high levels of residential density. Unlike car ownership patterns, the actual weekday travel to work pattern very much follows the actual public transport service provision. As one moves closer into the individual wards, the comparative diagrams in **Figure 4.3** show that there is a considerable difference in accessibility from the closest tube or rail stations. In fact, while much of the area of Town and Ferndale wards lies within a few minutes' walk to the closest stations, a large proportion of Green Street East and Bensham Manor is more than five minutes away, with Clissold being even more remote from a rail-based transport hub. So, Town and Ferndale are not only better connected globally to the rest of the metropolis, they are also well connected locally in such a way that many residential properties are literally a few minutes walk away from a station which connects well to the rest of London – a clear advantage recognised by the increased popularity amongst new residents in these wards who trade-off good transport connections to Central London and the City against other environmental and qualitative factors.

Nonetheless when one considers the extent of bus coverage illustrated in **Figure 4.4** there is a form of transport “compensation”, with most streets in Green Street East and Clissold – which are relatively disconnected from the metropolitan transport network – within a few minutes' walk from a main bus route. Bensham Manor remains the exception with a relatively large proportion of the properties in the ward more than a few minutes' walk from a bus route or tube station.

When one considers the actual decisions local residents make to take a journey to work, as illustrated by the modal split diagrams in **Figure 4.5**, it becomes clear that Town and Ferndale have the lion's share of tube, tram or bus (with 57% and 68% respectively) and small amount of car trips (21% and 16%), with Clissold reaching nearly 50% public transport despite its relative inaccessibility to the underground network. Despite its more pronounced deprivation and lower car ownership, Green Street East has a relatively high percentage of car journeys to work at 29% while Bensham Manor – in line with many other Outer London areas – has nearly 40% of car journeys and 41% of public transport journeys, not dissimilar to Clissold.

Figure 4.3

Tube proximity analysis

The colour coded buildings represent walk-bands around tube and rail stations.

- 1 minute
- 2 minute
- 5 minute



Green Street East, Newham, 176 pers./ha



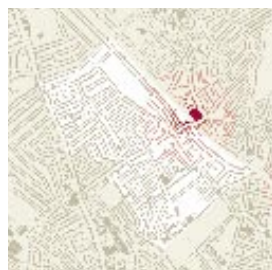
Town, Hammersmith & Fulham, 153 pers./ha



Ferndale, Lambeth, 151 pers./ha



Clissold, Hackney, 148 pers./ha



Bensham Manor, Croydon, 111 pers./ha

Figure 4.4

Bus proximity analysis

The colour coded buildings represent walk-bands along bus routes.

- 1 minute
- 2 minute

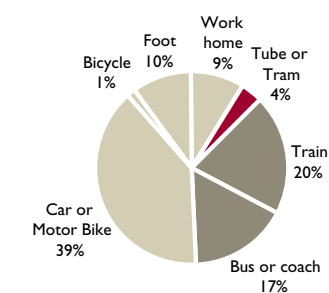
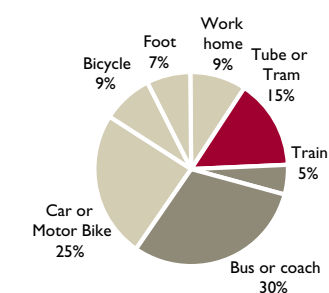
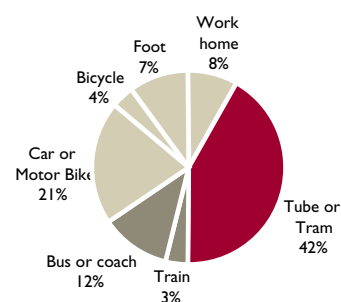
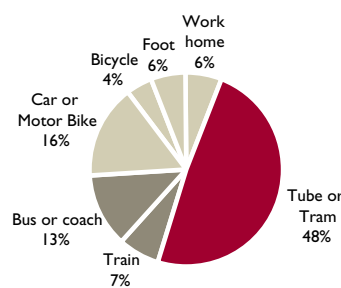
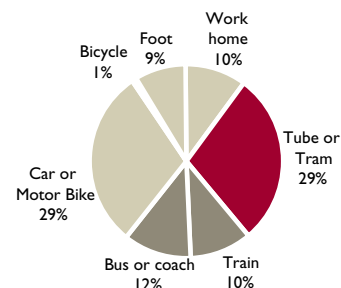


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Figure 4.5:

Modal Split for Trips to Work

Source: Census 2001



That higher density levels themselves lead to a better provision of public transport, particularly bus service, becomes clear by comparing Clissold, with a gross residential density of 148 pers./ha, and Bensham Manor, with 111 pers./ha. Bus service in Clissold is accessible at a short walking distance (to simplify, only measuring the distance to the bus line and not considering the actual location of the bus stop) from 83% of the entire ward area, whereas in Bensham Manor it is from only 52%. The share of bus trips in Clissold follows the logic of this advantage, being 30% compared to 17% in Bensham Manor.

4.2 Built form and open space

The study carefully analysed the built form of housing, and the scale and quality of public space provision. These were considered significant factors given that quality of the environment featured so heavily in the MORI survey as a positive attribute of the individual wards – at 78%, ranking as the third most positive factor after transport (85%) and local facilities (80%). This analysis was done by identifying the spatial characteristics – the balance of buildings to open spaces of each ward and the areas' connectivity to the surroundings, and by asking residents what they valued in terms of public space provision in their area.

The presence of green open spaces was one of the key attributes that make people in higher density neighbourhoods more satisfied with their local area. The main parameters associated with public open spaces are actual size, their maintenance and sense of safety, as well as proximity to residential properties. Residents in Green Street East in particular, were very clear about the importance of allowing densely packed residential buildings to “breathe” by optimising the amount of sky, trees and natural landscape visible from the street or from within individual units.

Our findings suggest that the size of an open space – especially a green open space – very much determines how people value it as an asset and how it is used. Whereas smaller green spaces (under approximately 10 hectares), prove suitable for brief events like lunch breaks, they do not seem to be the natural place for residents to spend more extensive periods, over holidays or weekends.

The interviews confirmed a pattern that emerged from the spatial analysis, as illustrated in **Figure 4.6**: that the more successful wards in the sample have access to large, coherent pieces of well-landscaped and well-maintained open space within a 10- to 15-minute walk from most properties in the area. Clissold Park stands out as the prime asset of a neighbourhood which otherwise lacks other facilities found in competing wards (in particular, good access to the underground network), as exemplified by these comments:

“Maybe because we have the park close by, they feel that there is a bit of fresh air. I think that the park does make a big difference there. It has massive open space there.”
(Resident, Clissold).

“As you walk towards the river, somehow the area opens: so you’ve got the river which gives you a huge feeling of open space, so I don’t think you feel crowded in Fulham.”
(Resident and community worker, Town).

Figure 4.6

Green open space

- Private gardens
- Green public open space



Green Street East, Newham, 176 pers./ha



Town, Hammersmith & Fulham, 153 pers./ha



Ferndale, Lambeth, 151 pers./ha



Clissold, Hackney, 148 pers./ha



Bensham Manor, Croydon, 111 pers./ha

Clissold

Clissold Park is a key asset to
Clissold's residents

Residents' accounts are graphically reflected in **Figure 4.6** by the comparative distribution of large clusters of open green space in all five wards. This shows how larger green spaces, over 10 hectares in size, appear on the fringes of Town and Clissold. In Green Street East and Bensham Manor, however, many smaller pieces of fragmented (unfriendly and poorly managed) open spaces are nearby, but do not offer residents the same sense of openness that could act as a counterpoint to the densely built fabric. In Ferndale, there is an evident lack of open landscaped space – either large or small – often referred to in the interviews as a negative attribute of living in the area.



The maintenance and upkeep of the parks is an equally important issue, with 30% of the respondents thinking that they need improving, compared to 32% who believe the same to be the case for "general appearance". The results are fairly similar in all wards, with slightly higher figures for the wards of Town and Clissold, both areas with the best public open space provision.

Safety also has a major influence on the usability of green public open spaces. The MORI poll gives an insight into the different levels of crime perception: people in Town feel most safe (about personal or property crime), with only 19% of respondents asking for improvement, whereas the figures for all other wards are significantly higher, especially in Lambeth, where twice as many people see crime as an issue (40%). The level of anti-social behaviour shows a more homogenous picture (average 42%), although again Ferndale has an above average value (54%).

The disposition of social housing estates appears to be a significant factor in what residents feel about density in their areas. We found that people made negative associations with higher density in those areas where housing estates formed large clusters that interrupted the prevailing urban grain (as in Ferndale or Green Street East, **Figure 4.6**). In areas where

smaller groups of housing blocks blend into the surrounding fabric (such as Clissold and Town), the negative associations were not as pronounced. Interestingly, many of these estates – arranged in linear or U-shaped blocks surrounding often disused open spaces – have a relatively low residential density, yet their visual impact seems to affect the perception of density and overcrowding substantially. This reflects the fact that scale and poor design can generate a sense of being “overwhelmed” and “closed in.” and that non-estate residents tend to attach a negative social stigma to council tenants due to perceived levels of anti-social behaviour and poor maintenance.

The following comments from residents of Green Street East and Clissold are instructive:

“You stand in a block of flats, what can you see: another block of flats ... visually I think that could feel quite closed in as well. But I think when you’re living in that kind of area and like Park Road and Crescent Road all you’re seeing is flats around you, it gives you the feeling of living on top of each other.”

“I think [the streets up here] don’t feel as dense [as the council blocks] because you’re looking at a house in front of you and you can see a tree behind that and you can see the sky behind that. But I think when you’re living amongst that, all you can see is another block of flats in front of you so your actual, visual doesn’t feel like you can see but I think in the houses you’ve got a feeling, you’ve got a long street and it’s all nice trees.” (Housing Officer, Green Street East).

“[In] the part of the ward where I live, the council estates and the council blocks are not particularly dominant. ... they tend to be at the back of the private housing so you don’t actually notice them ... Although I guess that there is a fairly high density, there is a lot of space on the estate, so you don’t get this feeling as you do on a lot of Hackney estates that the feeling is overbearing or overpowering. So I think the space elements are very important. You can have high density, but if it is combined with relatively generous public space you don’t get this feeling of overpowering, overpowering feeling of density.” (Resident, Clissold).

One of the issues most commonly associated with higher density development is the perceived problem of overlooking. Yet our research has shown that overlooking seems to be more acceptable than noise as a side effect of density. While noise transfer is problematic, interviews indicated that overlooking – if well designed – can sometimes foster sociability and integration, as noted by the following comments:

“You could be sitting in someone’s house and you can hear their telly next door or it’s like you can hear someone shouting in the street or you can hear someone’s door shut downstairs or you can hear a toilet flushing and you know it’s just like this constant noise ... and I just get the feeling that they’re in my room, you know what I mean, it’s just there.” (Housing Association Representative, Green Street East).

“One person’s overlooking is another person’s only contact with the outside world... at one time, ...our communication with [the old lady who lived in the first floor] from our back garden to her kitchen window was the only communication she had with the outside world. Because she couldn’t get out, she was in an upstairs flat, she couldn’t get out, you know, leaning out of her kitchen window and chatting to us was one of the sad highlights of her week. ... if that overlooking had been designed out, that option wouldn’t have been open to her.” (Resident, Ferndale).

Figure 4.7

Surface Analysis Ground Floor Uses

- Trade, services & food
- Assembly, leisure
- Religious worship
- Cultural
- Health
- Education
- Public services



Green Street East, Newham,
176 pers./ha



Town, Hammersmith & Fulham,
153 pers./ha



Ferndale, Lambeth, 151 pers./ha



Clissold, Hackney, 148 pers./ha



Bensham Manor, Croydon, 111 pers./ha

4.3 Facilities and density

Our research suggests that the higher density areas support more facilities and a broader range of services than most lower density, suburban areas, though further research will be required to validate this impression. While residents rated local shopping facilities as the single most positive attribute of their area, they rated them as important as schools (both at 29%) in making a neighbourhood an attractive place to live. In Town, local shopping is seen as more important (37%), whereas in Clissold it is less significant (20%). Interestingly, there are also distinctly different results in the age groups: for teenagers and the elderly, local shopping is valued as more important (43% and 40%), contrasting with a rather low figure (24%) for the more mobile, middle-aged groups of 35-44 years, who adopt different lifestyle and commuting patterns. When residents are asked about the actual assets of the area, both Town and Bensham Manor return the highest figures (51%), slightly above the average of all five case study wards.

"You need to have density to have facilities." (Social Worker, Bensham Manor).



Figure 4.7 shows a comparison of where different social, community and commercial facilities are located at ground floor in all five wards. These maps are significant in giving a sense of the experience of moving through an urban area since they indicate where one is likely to find other people congregating. They reveal different types of spatial distribution patterns: even distribution (linear) and clustering (circular).

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In all cases, commercial activities tend to be located either along a high street or in a cluster around a transport node, benefiting from increased footfall and proximity to other businesses. Often, these activities form clear linear routes within or on the edges of the ward (as in Green Street East, Clissold and Town), or form a ring around the predominantly residential central areas (as in Ferndale). Rarely are the commercial facilities distributed across the surface of the ward, which is instead where the majority of institutional buildings – schools, hospitals, religious buildings, community centres – are found.



Green Street East
Primary School on Bristol Road

Bensham Manor
Primary School on Ecclesbridge Road

The number of buildings with commercial activities on the ground floor can be explained at different levels. The demand for local shops can vary, according to the age or social profile of the area. Another important factor is the affluence of the residents; while this has a smaller impact on primary goods, it also has an impact on the provision of bars and restaurants.

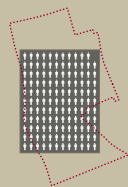
These commercial clusters are fairly developed in some of our case study wards (e.g. Town, Ferndale), but in other areas, which are undergoing socio-structural changes (such as Clissold) they are still in transformation. This adoption of existing building stock for new uses requires flexible building structures. The lack of flexible typologies is a disadvantage in traditionally purely residential areas, for example where terraced houses dominate, as this typology may not allow the built environment to respond to the needs of a new population.

Figure 4.8

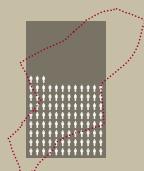
Internal occupancy

The dark brown area represents the total of habitable space within the ward.

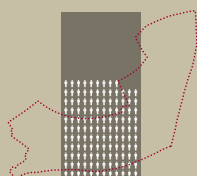
- Habitable space in the ward
- 👤 100 residents



Total 364,890 m² per head 27.8 m²
Green Street East, Newham,
176 pers./ha



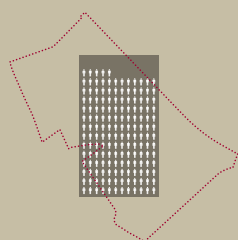
Total 484,650 m² per head 49.0 m²
Town, Hammersmith & Fulham,
153 pers./ha



Total 563,360 m² per head 43.7 m²
Ferndale, Lambeth, 151 pers./ha



Total 437,480 m² per head 41.9 m²
Clissold, Hackney, 148 pers./ha



Total 500,200 m² per head 31.1 m²
Bensham Manor, Croydon, 111 pers./ha

4.4 Internal occupancy levels and residential density

One of the unexpected findings of the study was the identification of a clear connection between the level of satisfaction of a high density area and the actual occupancy levels within individual dwellings. In short, the greater the number of people who live within a given unit (e.g. house or apartment), the more this will affect how neighbours and other residents feel about the acceptability of higher densities. By calculating the average area (in square metres) occupied by residents in each ward, we identified a “hierarchy of overcrowding,” which gives an indication of “internal” density in an area. While this measure has not been scientifically tested, it gives a relatively accurate account of the level of congestion that people experience within their homes.

Thus, Green Street East, which has been identified as the most crowded ward in London, has a measure of only 31 m²/pers. while Town – with roughly the same housing stock of two- and three-storey houses – has 54 m²/pers., over 50% more area per individual. This is one of the ingredients that accounts for Town’s higher level of satisfaction amongst its affluent residents, compared to Green Street East where people feel congested and crowded both within and outside their residential units.

Figure 4.8 shows how much personal space is taken up by the number of people living in each area. Both Town and Ferndale, two popular areas, indicate a degree of extra capacity with individuals occupying between 50 and 54 m²/person, followed closely by Clissold, also a relatively popular and successful neighbourhood, at 37 m²/person. Significantly, both Bensham Manor and Green Street East, with a much reduced amount of “personal” space, 35 and 31 m²/pers. respectively, are far less popular with their residents, who often complain that their neighbourhood is too dense. This points to an intrinsic awareness on the part of residents of the unquantifiable threshold beyond which services and infrastructure become milked beyond capacity, leading to a negative association with higher density in certain areas, as illustrated by a local councillor’s comment:

“There’s almost a sense of over-populating, because when we go around the borough talking to people they start complaining about kids not getting places at school, houses are overpopulated. There’s a house for three or four people and there are seven living there.” (Councillor, Green Street East).

4.5 Lifecycle and lifestyles

4.5.1 Key drivers

As noted in the introduction, the key drivers that motivate people to live in London at higher densities are a combination of economic, lifecycle and lifestyle factors. The analysis of metropolitan and regional economic drivers (changing job markets, global city dynamics) is beyond the remit of this study. However, our study has identified how people live in certain areas, and how they make choices to move in and, eventually, move on. Our findings have shown that there is a category of first-time buyers – young professionals and young families – who identify dense inner city areas as their best chance to “step on to the property ladder”. We therefore focussed on the socio-cultural and demographic factors, which – coupled with economic variables – drive

certain social groups to make decisions and trade-offs about where and how they live. For this reason, the analysis of lifecycles and lifestyles (i.e. patterns of use, mobility and links with the rest of the city) became a key part of our investigation.

Our findings suggest that a major determinant of the choice for higher density areas is rooted in specific lifecycle dynamics. We have identified that people use some urban areas as a “staging ground” in their life plans. Individuals choose to move into these areas because they provide suitable typologies combined with suitable transport options and amenities – including access to economic and social networks – appropriate to an individual’s time of life. When lifestyles change (e.g. as they get older), they often leave these areas for other locations, which offer more appropriate housing typologies (e.g. larger family homes), different transport options and amenities which are more suited to their changing needs. These choices involve a complex process of “trading off” some qualities of one area against qualities of another. In our study, we observed these processes in all five wards, but they were particularly evident in the middle-class areas with thriving Asian communities: Green Street East and Bensham Manor.

From our detailed observations we can conclude that higher density areas sustain different, coexistent lifestyles – communities with a diversity of incomes, ethnicities, ages, household types, etc. – which can be grouped into the following three categories:

- “Urbanites”: people whose preferences and socio-economic conditions lead them to opt for high-density living.
- “Suburban leavers”: people with lifestyles that eventually cause them move away from these dense areas.
- “Trapped residents”: people who have had very limited or no choice at all in deciding where they live.

“Urbanites”	“Suburban leavers”	“Trapped”
Young City workers (singles and couples without children).	“Empty nesters” wishing to be close to their family.	Long-term council tenants.
Young families (with up to two or three young children) and middle- to lower middle-class, first-time buyer families.	“Priced out” children of existing residents.	Elderly poor.
Self-employed people working from home.	Families with three or more children, or children of secondary school age seeking better schools or more room.	Refugees, asylum seekers.
Recent university graduates.	“Displaced” ethnic groups.	
Recent immigrants.		

Table 4.1
Lifestyles in higher density areas in London

The detailed interviews with local stakeholders and residents, coupled with observation of local patterns of behaviour within each ward and analysis of the MORI survey findings, allowed the research team to define with some accuracy the different socio-economic dynamics of these three groups. The full results of this analysis are given in Part C, but the key characteristics are set out below.

London Bridge

Many young City workers enjoy living in high density areas with good transport connections

4.5.2 Urbanites

Young City workers: These are resident groups made up of singles and couples in their twenties or thirties who work in the business and financial services sectors, usually within the City of London. Often described as “dormitory” residents,



as they have chosen to live in these areas attracted primarily by their convenience in terms of accessibility to Central London – specifically to the City. The presence of these groups is particularly evident in Ferndale, Clissold and Town. They trade-off accessibility to Central London for other qualities such as upkeep of local

area, safety, internal space or open green space. However, these trade-offs vary in different places. While “City workers” are attracted to Ferndale by the convenience of the tube connection to the City and are willing to forsake qualities such as upkeep of their local area and safety, in Clissold they are willing to use alternative modes of transport to get to work but gain proximity to amenities such as Clissold Park and the multicultural and “village” atmosphere of the area. In either case, these groups are most likely to stay in these areas for a limited period of their lives, usually until they form a family or advance to senior professional positions.

“[On Clapham High Street] everything caters for that young City guy who sort of like gets up early in the morning, jumps on the tube and comes back, grabs some shopping, into his place, puts on his shirt, back into the wine bar, necks as many drinks as he can, into bed at twelve o’clock, up on the tube and it is the rat on the wheel.” (Estate Agent, Ferndale).

“[Clissold Ward] is one of the yuppier parts of the borough ... More middle class, more articulate ... Church Street is a bit of a magnet, you know, for restaurants and for sort of more middle class residents ... than some other areas.” (Council Planner, Clissold).

Young families: This group is made up of couples with up to two or three young children, who stay in these areas until drawn elsewhere by the desire for higher-quality secondary schools, more space within the domestic unit, and access to larger open areas. These groups include both young, professional, middle-class gentrifiers (i.e. people attracted by these areas by their particular taste for inner-city living) and middle-class to lower middle-class families seeking to “step on to the property ladder” (particularly evident in Bensham Manor and Green Street East).

“It’s always been a place where people come perhaps when they’re first married ... it’s generally I would say a sort of middle-earners area and when they get better off then they move out.” (Resident, Bensham Manor).

Self-employed people: This group is composed of residents working from home who are attracted to these areas due to their need for either proximity to economic clusters or affordable domestic space; they also tend to value social qualities such as the multicultural character and vibrancy of an area. They are often labelled “Bohemians” or “Creatives” by estate agents and market research studies. This group is particularly evident in Ferndale and Clissold.

"A lot of things that attract a lot of creatives, ... those people they like to feel that they are different you know and Brixton does have that sort of like vibe about it. Although Brixton has fantastic commuting I wouldn't say facilities that is not really the main reason why people come to Brixton. People come for the community." (Estate Agent, Ferndale).

"Quite a lot of artists live around here and people connected with the arts ... there is quite a surprising number of small workshops." (Resident, Clissold).

Recent university graduates: A group of residents composed by flat sharers who move into these areas attracted by their proximity to other young people and amenities, particularly nightlife and leisure activities. Our study identified their presence especially in Clissold (particularly drawn by the multi-cultural and "alternative" character of the area) and Ferndale (attracted by its "buzzing" nightlife and cosmopolitan atmosphere).

"You do get a lot of professionals,... people who have just graduated, getting their first jobs in London and they are coming. They ... could be four mates all been at Lancaster but all four of them come from all over the country, if you know what I mean, in terms of their original home, but they would all gravitate to here and be sharers." (Estate Agent, Clissold).

Recent immigrants: The last group of urbanites is made up of residents who seek proximity to ethnicity-specific social and economic networks. Newcomers use these dense inner-city areas as a first port-of-call to embed themselves in London, accessing job opportunities as well as community support. Our research found this group to be particularly prominent in Green Street East, Bensham Manor and Clissold.

"People are expanding their houses, children growing up, new businesses opening, family businesses. Some of the people have come in as immigrants, opened businesses, expanded their businesses and brought in more family." (Councillor, Bensham Manor).

4.5.3 Suburban leavers

Empty nesters: A class of residents composed of mainly elderly people whose children have left home. Some of them move to more suburban areas wishing to be closer to children and relatives who have settled in the neighbourhood. This group is particularly evident in Bensham Manor, Ferndale and Green Street East.

"Elderly people who have moved, who have been here all their lives ... as they get older [their] partner dies and they're slightly infirm as well, their children tend to be on the outskirts ... and they tend to move out to be close to their children and I think that the elderly ... people feel really quite vulnerable." (Resident, Ferndale).

"Priced out" children of existing residents: A group of residents who typically cannot afford to buy homes where they grew up. This group is most evident in Clissold, Ferndale and Town.



Ferndale
Brixton Academy, adding to the cultural offer of the area

"My neighbour's children who were born here, they wanted to stay in Hackney [but] they couldn't. They all have to move out to Chingford and I think it is a loss to us in terms of that supportive network because what is going to happen now is that [the parents] now have to sell their house and move out to get a bungalow near their children because they can't afford anything in Hackney." (Resident, Clissold).

Families with three or more children: This group tends to include families with children of secondary school age who leave the area in search of better – and cheaper – schools or more space within the domestic unit. There is a strong pattern in Town and Clissold.

"People don't tend to stay once they get onto their ... second or third child, they tend to move further out of Fulham, purely because of the size of the houses and the size of the gardens you get in Fulham, just don't make fantastic family homes ... they would rather go out of London maybe and get a proper house that they are going to have for the next 20 years, so you tend to find there is a bit of a shelf life with the houses here." (Estate Agent, Town).

"[Middle class people] tend to come into the area because the housing is affordable, there are reasonable facilities ... But they tend to move out, usually out of London altogether when their children come to secondary school age, because ... they don't have faith ... in the local secondary education." (Resident, Clissold).

Socially mobile families: For this group, "moving up is moving out". This trend is especially evident in the case of settled communities of earlier migrants, such as Asian (the Indian, Pakistani and Bangladeshi populations) in Green Street East and Turkish/Kurdish communities in Clissold.

"We do get some of our ... 'better' families who will be looking to move from Thornton Heath to Sanderstead or Purley, that would be considered the next step up if you'd done well." (Clergy, Bensham Manor).

"Because they are very well established and run businesses, obviously they become more affluent and when we do that we start thinking, you know, we move out of these areas. And I think what's happening is, more people from Eastern Europe are settling here and we are getting a slightly bigger population of African pupils and as that's happening, what the Asian communities are beginning to do is move out of it very slowly and into places like Upminster ... it's exactly what the white population did pre the Asian population establishing themselves here." (Head of Schools, Green Street East).

Displaced ethnic groups: Many of those in this category are people who feel they have lost culture-specific amenities to newcomers and feel the need to move on. They can be found particularly in Bensham Manor and Green Street East.

"I don't know any white shopkeepers anymore, they're all Asian. ... I think we've got one white butcher now in the market, he's been there since year dot, so you've got one white butcher, all the rest have Hal Al meat." (Housing Association Representative, Green Street East).

"It is hard really because a lot of the shops are owned by Asian families. They don't employ anybody else other than Asian families, themselves. That upsets me." (Resident, Bensham Manor).

4.5.4 Trapped residents

“Trapped” residents can be defined as people who are socio-economically deprived and vulnerable (e.g. long-term council tenants, elderly poor, asylum seekers). Clearly, such groups’ lack of residential choice impacts on their quality of life and on their level of satisfaction with their area as a place to live. Negative associations with higher densities, especially a sense of overcrowding, is common place amongst this typical resident group.

“There are a mixture of elderly who have lived here an awfully long time, which you find often on a lot of council estates, because there is no mobility for them.” (Housing Association Representative, Clissold).

“I don’t mean to sound patronising but they don’t have the choice of living anywhere differently.” (Housing Association Representative, Green Street East)

4.5.5 Temporal dimension of density

Our study suggests that the implications of different lifestyles for dense living should be interpreted at a spatial level and a temporal level. The *amount of time spent* by an individual in their neighbourhood of residence over the course of the day, week and year may determine the trade-offs they make. One key factor is the significance attached to getting away regularly which allows people to “cope” with higher densities better than people who cannot, such as “trapped” residents. The MORI study shows that rates of satisfaction are higher among people who make more frequent trips out of London – either on holiday or weekend breaks. In addition, the time residents spend working and socialising away from their homes may also impact significantly on their attitudes to dense neighbourhoods, as suggested by the following comments:

“A lot of the professional[s] will go out at night maybe close to work and only come back here late [Local] retail is not important because if they don’t work ‘round here ... they can shop in the West End, maybe shop in the City.” (Estate Agent, Clissold).

“Some [use] these houses like a dormitory and will be out of London at the weekend anyway.” (Clergy, Clissold).

“They park behind the gates, the drive out in the morning and probably work in the city and the West End, they drive back late at night having eaten somewhere else, they make no contributions whatsoever to the local economy.” (Resident, Ferndale).

“The adults work in the City and the children go to the Lycée, they go to France for their holidays, I assume they shop by car at some Sainsbury’s, or they have their food delivered. So they are not actually using the local shops very much and their social life, their children don’t go to dancing lessons locally, they don’t go to swimming lessons locally; they don’t go to school locally.” (Resident, Town).

Columbia Road flower market

Many residents recognise that density provides the critical mass to sustain local facilities at the heart of their communities

4.6 Perceptions of density

The majority of people in the areas studied tend to be ambivalent or reflexive about density, as both the interviews and survey show. This suggests that most people are able to see both good and bad things about density, while only a minority of people tend to have clear-cut, black-and-white views about it.

“I don't know [if density is a positive or a negative thing], it depends on your outlook ... Some people enjoy having the support of people, neighbours or people around them. Some people perhaps enjoy more freedom and open space.” (Community Worker, Green Street East).



The interviews and survey results can be classified into two types of attributes to density:

- *Positive associations with density:* “People-related” attributes (community cohesion, cultural diversity), and the presence of facilities and amenities.
- *Negative associations with density:* Physical elements such as parking stress, overrun of facilities and lack of green space.

Our research shows that “vibrancy,” “liveliness,” and “community life” are positive attributes associated with density by residents of all five areas. People of different socio-economic backgrounds and with diverse lifestyles appreciate these “people-related” attributes from different perspectives. On the one hand, less affluent groups value the possibility of access to broad social networks that can provide help and support (particularly in Green Street East and Bensham Manor). On the other hand, middle-class groups such as “creatives” and some young professionals with cosmopolitan values acknowledge the advantages of these dense areas in terms of their vibrant, multicultural atmosphere and the “colour” and “richness” this can bring to their lives (particularly in Clissold and Ferndale).

The extent to which these attitudes lead to deeper levels of social integration is beyond the scope of this study. However, our survey has shown that residents of these areas express a higher-than-the-British-average appreciation for diversity (Part D), which corresponds to the definition of urban life as a place where people from heterogeneous backgrounds coexist “packed together rather densely” [Sennett, 1977]. Wirth has highlighted the double-sided outcome of this urban condition: it can lead either to greater tolerance or to antisocial behaviour [Wirth, 1964]. From our findings, however, we have no evidence to establish a causal link between density and antisocial behaviour. As our study of residents’ perceptions shows, the main negative aspects that interviewees associate with high density are physical characteristics such as parking stress, overrun of facilities and lack of green space.

4.7 Desirability

Our research confirms that certain attributes can make high-density living desirable, or at least acceptable, in London. Such attributes include accessibility to green open space, provision of a wide range of facilities, proximity to transport nodes and the presence of community networks that are perceived as valuable assets by certain groups of people.

"[Density is positive] because you can get a lot of different mix of people really, and you can learn from the experience that they have, and the knowledge they bring with them." (Councillor, Green Street East).

These findings add evidence to what previous literature on compact urban development, gentrification and inner city revitalisation describes as the qualities of high-density living [see, for example, Allen, 1980; Jenks, 1996; Rogers, 1997; Butler, 2003]. However, our study shows that in the specific case of London, these qualities prove attractive for certain types of people at certain times in their lives. The issue of lifestyles integrates our finding about temporal dimension of density ("density of use"), whereby the possibility to "escape" acts as a coping mechanism that makes high-density living acceptable. Our study found this particularly in Town and Clissold and, to a lesser extent, in Ferndale.

High-density living becomes problematic in areas where high levels of deprivation coincide with a concentration of vulnerable ethnic groups and with over-crowded living conditions. The perception of lack of privacy and the objective negative side-effects of over-crowding (noise, accumulation of rubbish, parking stress and traffic congestion, etc.) can neutralise or counter the potential of dense inner-city areas to act as nodes of robust community networks that provide social support for deprived groups. This is illustrated by the social dynamics observed in Green Street East, and partially in Ferndale and Bensham Manor.

"[Density] can bring communities together because of the number of peoples there are, but then sometimes ... when you get a large number of people living in a small area, you get this feeling of crowdedness and ... people turn inwards." (Councillor, Green Street East).

"I enjoy living in, well, reasonably close proximity to so many people and, you know, I'd choose to live in a terrace house rather than in the middle of 20 acres, [it was] my first choice I suppose. But I think it leads to problems and I think there were very significant problems with social housing around overcrowding in that really need to be addressed." (Resident, Ferndale).

On balance, our study of residents' reactions in dense areas suggests that density, in itself, does not account for positive or negative attributes of urban areas. Yet, our findings suggest that a combination of specific factors can make high density living either more or less desirable for different types of people at different stages of their life.

5 Links to Policy

Having established that there are very different urban “tribes” living parallel lives within the city, the research team briefly considered what impact this might have on current and future policy making. We identified that people with different backgrounds, incomes and outlooks share a willingness to live in (broadly) economically-successful parts of the capital at – by British standards – high densities. Our research has been able to provide a number of clues as to why people will choose to live in relatively high densities, even within a country and culture where urban life is often disliked.

The research and key findings from these wards can be taken as a relatively simple analysis of how a small group of people living in (again, by British standards) atypical urban surroundings see their neighbourhoods. But it is important to use the information and analysis undertaken to tease out a number of key policy implications that might have more general applications.

Because of the difficulty of generating causal links between social or demographic characteristics and residential density, it is difficult to say to politicians and officials “do this ... and that will happen”. The very complexity of urban life and the millions of decisions that determine how a city will change cannot easily be turned into a simple set of policy recommendations.

Yet, our findings on the links between higher density and quality of life do, we feel, have some general relevance on how policy can be taken forward. To summarise, the key findings are:

- Density does not, of itself, account for positive or negative attributes of particular urban areas. Other factors are crucial in determining how such places are judged.
- Higher levels of satisfaction are determined by access to public transport, proximity to large and safe open spaces, and also good access to shops and social facilities.
- There is greater dissatisfaction in relatively densely-populated wards where high levels of deprivation coincide with concentrations of ethnic minority groups and relatively crowded living conditions within properties.
- Lack of car parking is considered a major problem, especially in more affluent areas.
- The presence of large clusters of social housing that do not link to local surroundings exacerbate negative associations linked to higher density.
- Most residents are ambivalent or have mixed opinions about density.

- Vibrancy, social mix and other social attributes are amongst the most valued characteristics of densely-populated areas.
- Higher-density areas are capable of sustaining very different social and community dynamics; places with significantly different demographic features can operate effectively and in a way that suggests they will continue to do so.

While these issues do not in themselves provide a route map, they suggest a number of policy implications that national, regional and local government in Britain will have to take account of as they seek to increase urban densities and, more generally, to regenerate older cities.

The early sections of this report considered the policy background that had provoked this project's concern with generating a deeper understanding of density within the British context. These final points suggest the need for a more sophisticated approach to the issues raised by political concerns for higher urban densities in sustainable urban communities within London and other growth areas across the UK.

- Re-evaluate density as a planning tool: current standards (dwellings or persons/hectare) should be modified to take into account more complex inter-relationships (e.g. accessibility, internal occupancy levels, car use, parking, open space, distribution of facilities, etc).
- Diversity: review planning guidance that promotes "life-time homes", recognise different needs of "urbanites", "suburban leavers" and "trapped" residents.
- Public transport: new communities must be planned around appropriate levels of public transport provision, yet respond to the desire of affluent residents for individual transport modes for non-work related journeys.
- Car use and parking: in areas of appropriate public transport provision, encourage reduction of car ownership and car use; minimise the impact of unused parked cars during weekdays.
- Open space: ensure that well-managed large public open space with a minimum of about 10 hectares is located within 10 to 15 minutes' walk from higher density areas; smaller local parks may feel unsafe and not provide an adequate sense of "escape".
- Facilities: enable distribution of social facilities (schools, community, health, sports, etc) across the surface of neighbourhoods; allow for development of commercial facilities near public transport hubs; encourage ground floor flexibility for retail and other public uses.
- Housing: promote a seamless mix of market and social/affordable housing within similar building types; avoid large clusters of single-use housing forms (large estates) that break with the character and grain of surroundings.

6 Bibliography

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7 Glossary

ACCESSIBILITY – the capacity of a location to allow people to reach and take part in an activity at ease.

CONNECTIVITY – the property and degree of being joined or linked together, including the subjective feeling about the state of being linked.

DWELLING DENSITY – the ratio of dwellings within a given locale divided by its area, measured in dwellings per hectare (dw./ha).

GROSS RESIDENTIAL DENSITY – The gross residential density is calculated by dividing the total number of people living in an area by the total surface area.

HABITABLE SPACE – This measurement expresses how many square meters of actual habitable space, on average, are available per capita in a specified area; the same issue is also addressed by the concept of **INTERNAL DENSITY**.

MOBILITY – the quality and capability of moving people, goods and information freely in space.

NET RESIDENTIAL DENSITY – The net residential density is calculated by dividing the total number of people living in an area by the total land area devoted to residential use. Depending on the scale, the residential land use area excludes the following: at the scale of the neighbourhood, it excludes all public space, such as roads, pavements, and public open space. At the scale of the borough and city, the “inhabited surface” excludes major parks and open spaces only.

OVERCROWDING – Households with over 1.0 person per room are described as “overcrowded”; households with over 1.5 persons per room are “severely overcrowded”.

POPULATION DENSITY – the ratio of people living within a given locale divided by its area, measured in persons per square kilometre (pers./km²). In this study, this measurement is used for locales greater than the size of a local authority.

PROXIMITY – the property of being close together in spatial and temporal terms.

PUBLIC TRANSPORT ACCESSIBILITY LEVELS (PTALS) – detailed and accurate measure of the accessibility of a point to the public transport network, taking into account walk access time and service availability, essentially measuring the density and service frequency of the public transport network at a particular point.

RESIDENTIAL DENSITY – the ratio of residents within a given locale divided by its area, measured in persons per hectare (pers./ha). In this study, this measurement is used for locales up to the size of a local authority.

TOWN DENSITY – the overall gross residential density of an entire settlement or discrete urban area, with no part omitted [TCPA, 2003].

TRANSPORT – various mechanisms by which people, goods and information can move from one place to another.

CL	Central London	IMD	Index of Multiple Deprivation
DETR	Department of the Environment, Transport and the Regions	OL	Outer London
DOT	Department of Transport	ONS	Office of National Statistics
GL	Greater London	OPDM	Office of the Deputy Prime Minister
GLA	Greater London Authority	TCPA	Town and Country Planning Association
GLUC	Generalised Land Use Classification	UTF	Urban Task Force
IL	Inner London		



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