

QUANTITY AND DENSITY



Notions of Density / Phanitnart Achariyahiranchai

Density and Mixed Tenure/ Talia Brun-Marcen

Density and Intensity of Street Activity / Mariana Leguia

Building Quality and Density / Qiao Cen Zhe

The definition and measurement of density is subject to different interpretations that can lead to very different design approaches.

Since the formation of the Greater London Authority and the publishing of the Draft London Plan in 2002, a new spatial strategy for London has set out new aspirations for increasing density and accessibility in order to create a 'sustainable and compact city'. According to this strategy, an increase in density results in positive economic growth, and environmental and social advantages. Through combining mixed-use and mixed-tenure developments, greater density is associated with the construction of more cohesive and sustainable communities. Additionally, density is also seen as a tool for increasing the level and quality of street activity. Following this approach, the London Plan sets higher densities around London's public transport nodes.

However, the strategic guidance for developing a compact city has not been able to provide a clear, practical and feasible blueprint for successfully achieving it. Still a relatively low density city, London's centre is unable to accommodate affordable housing projects as the increasing value of real estate has pushed residents further out. This raises a number of questions about the idea of the compact city: Who will be able to live in a sustainable city and who will have to commute for hours to work in it? Can a global city aim to be sustainable?

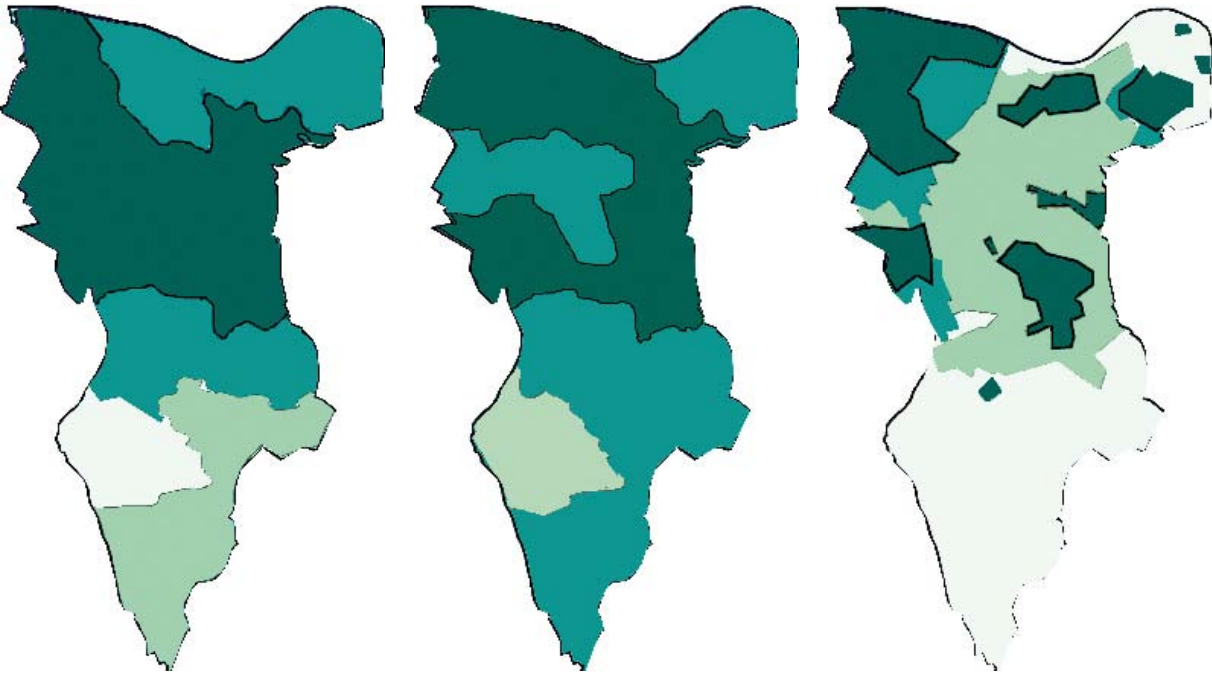
1 Southwark Current Density Measurements and Aims



UPD - SOUTHWARK
Central Activity Zone - 1,100hrh
Urban Zone - 700hrh
Suburban zone - 350hrh

DAYTIME DENSITY
1,000, - 5,000 P ph
100, - 1,000 P ph
1, - 100 P ph

RESIDENTS DENSITY
1,000, - 5,000 P ph
100, - 1,000 P ph
1, - 100 P ph



INCOME INEQUALITY
Most deprived - (20% of wards)
Second, Third quintile
Fourth quintile

UNEMPLOYMENT RATE
9% or more
6 to less than 9%
Less than 3%

DEVELOPMENT AREAS
Considered areas
Ibid + Mayor developments
Ibid + Encouraging wealth creation

Density in itself is not an end, but a tool to achieve other things. Therefore, it cannot be used as a reliable measurement for assessing the positive or negative attributes of a particular area; other factors are crucial, such as the provision of transport, health, education and leisure facilities that can support the dense housing component.

In the last 160 years, housing density in London has followed different trends and responded to different policy aims. From the 1840s the great railway boom tended to promote uncontrolled urban growth. Thousands of people were made homeless as a result of the space required for the new urban infrastructure, resulting in a densification of the existing housing stock, and problems of overcrowding. During World War II, bombing destroyed almost half a million homes. After the war, the government focused on increasing housing supply, providing 'homes fit for heroes'.

The County of London Plan 1944, undertaken by Patrick Abercrombie, set a visionary framework encouraging the decentralisation of the economy and the spread of employment and population through the creation of satellite garden cities. Also at this time, the margins of the city were defined within the green belt. Lower densities were encouraged to open up urban space for public and civic amenities.

The post-war period, however, also saw the large-scale development of high-density, high-rise council estates, making use of significant public subsidy as well as new building technologies. These typologies came to be seen as failures, with demolition later being offered as a general solution. Less than 40 years after being built, many of these council estates have been, and are still being, demolished. Under the first Thatcher government, council tenants' 'Right to buy' was introduced, depleting the social housing stock. Today the core focus is on building decent housing for all in sustainable and mixed tenure developments and neighbourhoods.

Defining Density

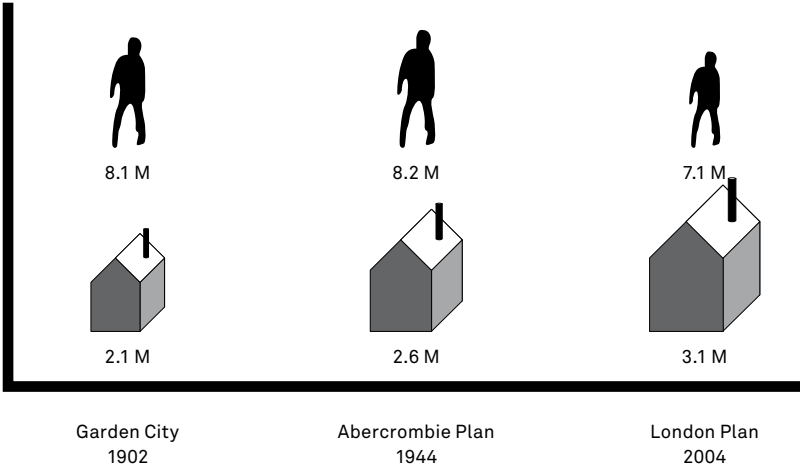
Current legislation defines density as the number of dwellings per hectare; however, the type of density output that this measurement accounts for – the concentration of units – neglects the social and morphological qualities of density. In order to grasp the human density of an area, a better unit might be population per hectare. Units are not a proxy variable for people because nothing can guarantee the size of the units, and if there is overcrowding or high levels of vacancy the density of units will not show the actual density of dwellers. Other morphological trends are defined by setting the plot ratio together with a footprint to the plot, determining the amount of m² of dwelling per resident

Southwark's current UDP has set out a very clear spatial strategy which, in line with the overall aims for the city, has separated in three main zones with different density aims: the CAZ (Central Activity Zone), Urban Area & Suburban Area. The density figures suggested for these different areas are more in line with the daytime density of the working population than with residential densities. We might also note that the spatial distribution of the lowest incomes and highest unemployment rates in the borough map closely onto the areas where the council is encouraging major redevelopments and wealth creation.

This brief introduction has analysed different ways of measuring density and the main aims that have accompanied this issue in the last hundred years. The following discussions are subdivided into four main topics. The first section focuses on a historical description of density and how it has been represented physically in the city's housing typologies. The second section studies the relation between density and mixed tenure, looking at two different case studies to enquire whether the way in which mixed tenure compounds are being produced can help to create 'contact points' between social classes. The third section analyses the particular area of Bankside in order to explore the relation between density and intensity of street activity. The final section explores the relation between quality and density, by looking at the case of a development that has been granted permission to exceed the density limit of 1,100/hrh.

Notions of Density / Phanitnart Achariyahiranchai

Density is a mode of measurement that carries various associations of value. In the early twentieth century, the majority of people in inner London areas lived in overcrowded tenements; increasing density had strong associations with overcrowding and the social problems associated with it. Over time, in order to deal with housing demand in London, values have changed from the desire for low density settlement patterns associated with the Garden City concept towards present policies that encourage high-density housing. It is now widely agreed that high density is neither positive nor negative in itself. Although certain negative connotations remain, accommodating London’s growing population is seen as an imperative and high density is accepted as a method for achieving urban growth sustainably, as well as providing benefits such as urban diversity, energy saving, more facilities, and a sense of urban identity (CABE 2005). The notion of high density in planning policies in London can be tracked over three major periods corresponding to the Garden City ideal, the Abercrombie plan, and the GLA’s present London Plan (Figure 1).








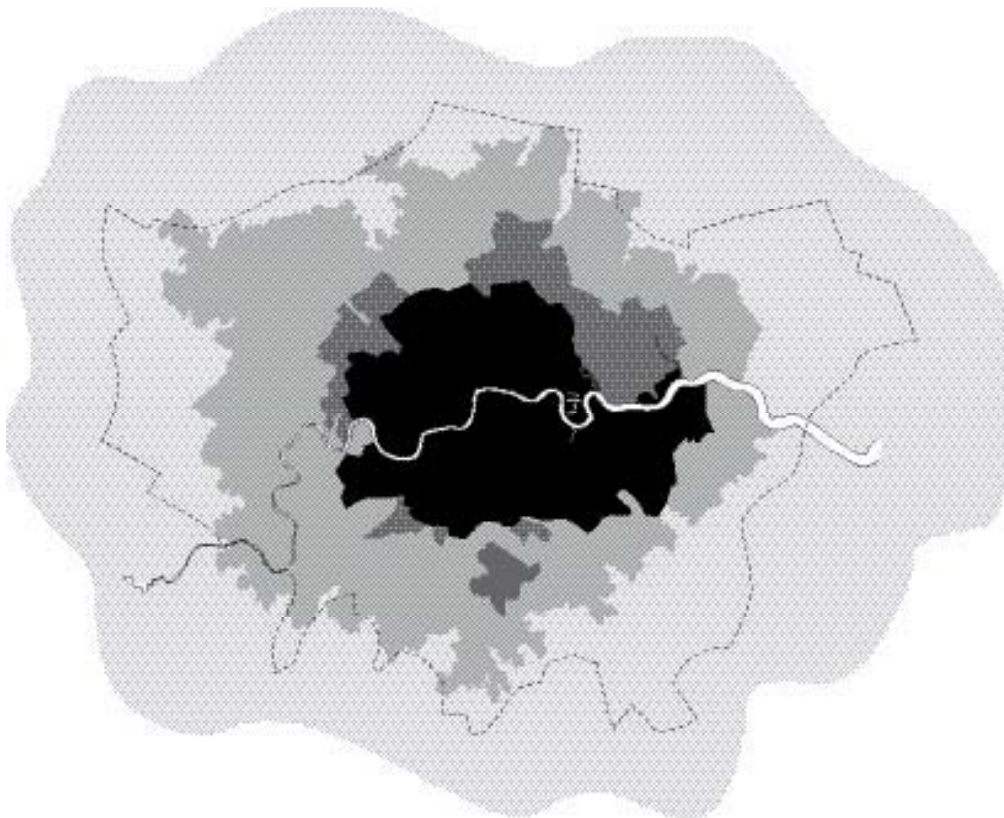
1 Population and number of households in London at the time of key planning discourses

In the London Plan, high-density housing is firmly on the agenda, as the objective to provide 700,000 new homes by 2016 within the existing metropolitan boundary means that higher residential density will apply in many new developments. The main aim in promoting higher densities is to achieve a compact city to accommodate a growing population. It is also believed that higher residential density will enhance sustainability. London Plan policies link density levels to the availability of public transport in an area, encouraging higher densities in areas well served by public transport and limiting new housing in areas where private car use is the only option.

More broadly, however, housing in the UK is built at a relatively low density. In 2001, dwellings were built at an average of only 25 dwellings per hectare, compared with the 30 to 50 recommended by government.

2 Abercrombie Plan 1944. Housing density was part of a decentralisation policy aiming to even out population densities within London's Green Belt and reduce overcrowding in central London.

-  County of London. Density to be reduced below 136 persons per acre where possible
-  Inner Urban Ring. Density not exceeding 100 persons per acre
-  Suburban Ring. Density not exceeding 50 persons per acre
-  Green Belt Ring. Infill development in existing settlements not exceeding 20 persons per acre
-  Current Greater London boundary



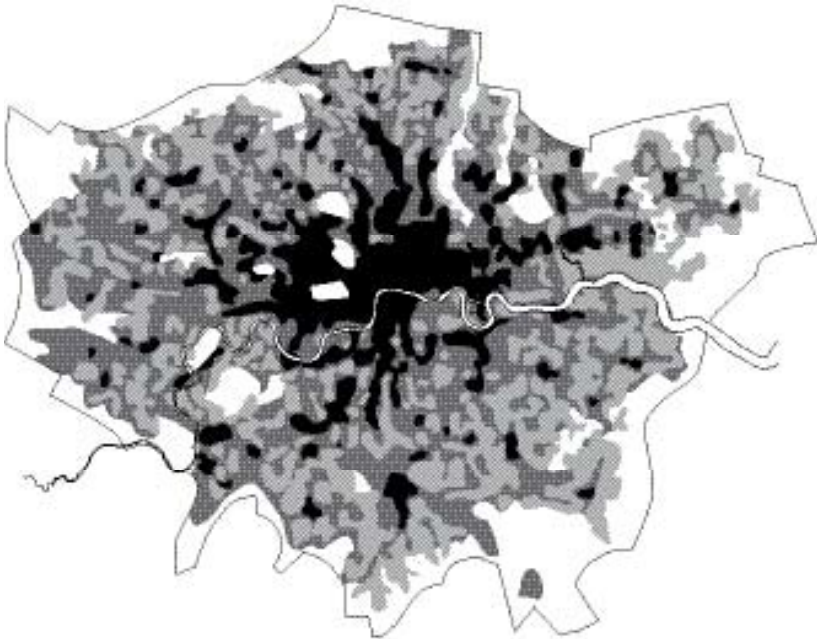
Apart from setting a maximum density for development, one of the tasks for government to achieve its high-density housing strategy is to promote the positive value of high-density living. Though the ideal British house may be low-rise, low-density, and in a suburban area, it is essential to encourage urban living in higher densities, especially for the growing number of single-person households or childless couples.

In Southwark, one of the most densely populated boroughs in London, high density is encouraged in the central activity zone in the northern part of the borough. According to its Unitary Development Plan, Southwark aims to accommodate 29,530 new dwelling units by 2016. This implies higher densities in key regeneration areas such as Elephant and Castle; the density of the new scheme in Wansey Street discussed in the following essay is projected as 1129 habitable rooms per hectare, higher than the ceiling of 1100 habitable rooms per hectare in the central area.

The value of high-density housing has shifted from its historical association with overcrowding towards a positive value as a key solution for achieving a sustainable city. The most important trend in terms of accommodating London's growing population is the value placed on high density in the London plan, emphasising the capacity to accommodate more houses in the same urban footprint.

3 London Plan 2004. Housing density is linked primarily to Public Transport Accessibility Level (PTAL), with the highest densities in areas well served by public transport.

- PTAL 4–6. Permitted density 45–405 dwellings per hectare
- PTAL 2–3. Permitted density 35–240 dwellings per hectare
- PTAL 0–1. Permitted density 35–110 dwellings per hectare



The question

‘The structural conditions under which survival communities could work are, first, those of heavy population density and, second, those of multiple contact points’ (Sennett 1970:151)

One of the assumptions underlying many of the strategies adopted by the government to create sustainable urban environments is that mixing diverse neighbours and making them live close together will help develop more inclusive communities. In this recipe, social mix is conceived as a tool to create ‘cohesive’ and ‘balanced’ communities and higher density as a means to achieve economic, environmental and social sustainability. In particular, to argue that a more densely populated area will also be more socially sustainable, the link is often made between density and the level of interaction among people: the denser the development, the more interactions there are and the more potential there is for community construction. We can conclude from this that higher densities and social mix have become two major tools to achieve wider policy objectives like sustainability or cohesiveness.



Elephant and Castle Apartments

Wansey Street Apartments

13 Caspian Street

1 Case study sites

Among the plethora of reasons that might have pushed for the adoption of these tools there are two important contextual facts. On the one hand, evidence suggests that since the 1960s there has been a residualisation and a narrowing of the social base of socially rented housing. On the other, there is a deficit of affordable housing as a result of the decrease in council housing production paralleled by the sale of public housing stock via 'Right to Buy' schemes.

The translation of the emphasis on 'planning for the mix' into actual policies can be based on various dimensions of diversity including typology or tenure. In this analysis we will be looking at the latter because, as a proxy for income, mixing tenure is intended to produce income mix. As a result, in the academic and policy realms claims are often made on behalf of mixed tenure and its application is often given a major role in meeting social policy objectives.

Interviews and results

I explored these issues in two mixed tenure developments. One is the Wansey Street apartments that Southern Housing constructed recently on the edge of the Heygate Estate, in Southwark. I carried out semi-structured interviews in ten of the thirty-one units. As a control group for the economics of the delivery method, I also observed a part of the Elmington Estate: number 13, Caspian Street. The building also has mixed tenure, but there it has grown organically through 'right to buy'.

The choice of sites has been determined by the fact the two share some characteristics that otherwise might create a bias in the results. They are both relatively small buildings in which the dwellings have different typologies and both are tenure blind. With regard to their populations: both have a relatively high proportion of children and a broad mix of age groups. Finally being relatively close they have approximately the same facilities and levels of transport accessibility.

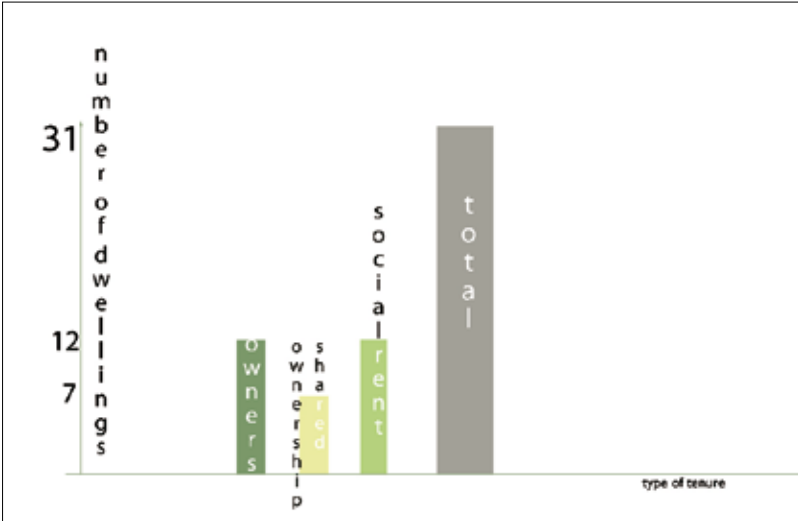
A difference that should make us read the results with caution is the unavoidable difference in maturity of both communities. Wansey's dwellers have been there less than a year while in Elmington –although some are new- most have been living there for more than five years and up to twenty five. Another factor to consider is that in Wansey most tenants have moved directly from the Heygate Estate which was unanimously detested. In contrast, people who moved into Elmington seemed to be generally satisfied with their previous accommodations but wanted to change because of the location or the size of the dwellings. A final consideration is that interviewees in Elmington tended to be families, while in Wansey most of those who answered were other type of households.



Given that both buildings are tenure blind, the first thing that I looked at was the consciousness of the tenure status of the neighbours. The results for both buildings are very different in this respect. Wansey's residents- owners or social tenants alike – know that there is tenure mix and most of them are also capable of identifying the tenure status of some dwellings in their block. As well as that, some owners were able to identify owners in other blocks. The exceptions in this sense are private landlords' tenants who had less information and tended to see this as private information. In contrast, tenants in Elmington generally did not know who owned the houses and owners there had only an approximate idea.

In this context one may wonder whether in both developments the range of incomes is equally wide. A narrower range in Elmington would make possible lifestyle differences smaller and thus contribute to the indistinguishable tenure status. Data to approximate the range are not available. However, I simplified this question by looking only at the degree to which neighbours perceived differences in lifestyle in relation to food consumption patterns. The answers show that in both developments owners and tenants generally shop for food in the same local supermarkets or stores. In Elmington no differences were perceived at all. In Wansey the general feeling was that in 'you can't tell' and some neighbours said things like:

'I don't think there is any difference; I think that you may think oh! Are they a tenant or they own ...but sometimes you are not too sure (...)'



4 The Wansey Street Apartments are a new mixed tenure development by Southern Housing. The graph on the left shows the number of units of each type of tenancy present: 12 units are owned outright, 7 are shared ownership and 12 are a rented.

The diagram below indicates the location of the different types of tenure but it does not map their distribution exactly because information about certain units was not available.



As well as being conscious of the tenure difference, many owners in Wansey were conscious of the cross-subsidisation of the dwellings. When explicitly asked about whether they thought that this sort of redistribution was fair, they unanimously answered yes. They reasoned it in different ways. A few did not have a strong opinion on it and assumed things were just like that. Some argued that the economic burden was compensated for by the fact that the flat had been cheaper for them because of the mix. Finally most of the owner occupiers, the private tenants and the shared ownership dwellers interviewed justified the economic burden by referring to their ideas of social justice. These are some of the ways in which this idea was phrased:

'I am for it but then, I am a socialist'

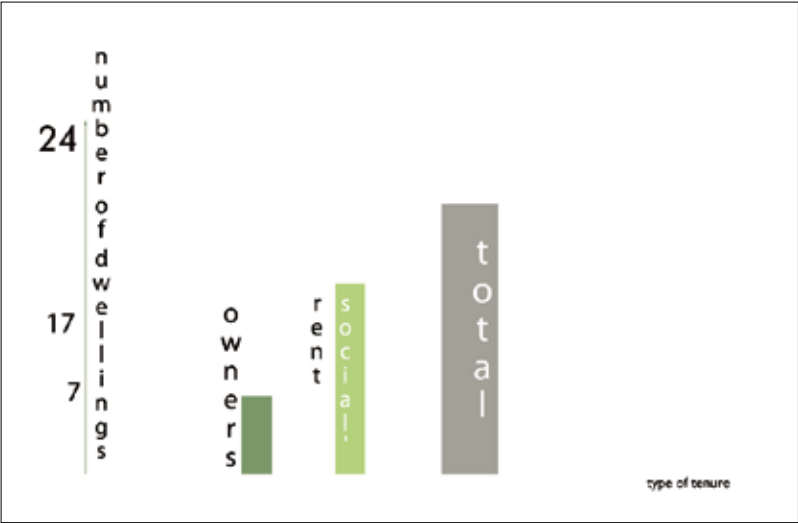
'I think we should all live together side by side'.

'I like the idea and I think it should be promoted I think society can... you knowgo two ways and it can either...if you give people the opportunity to go completely private and they can afford to do it then, they generally will do itBut if they are forced into situations where they are forced together, I think there is a lot of benefit to that because that forces society to sort of integrate'

On this basis it would be possible to state that the method of delivery and its economics are acknowledged but do not affect the perceptions of the other or the potential of mixed tenure to reduce social distance.

5 The Elmginton Estate on Caspian Street was built for social housing but , over time, it has become a mixed tenure development through 'right to buy' schemes. As the graph on the right indicates: 17 units are occupied by social tenants and 7 occupied by owners.

The diagram below represents the distribution of the different types of tenures in the block.



■ social tenants
■ owners

Having said that, it is interesting to look at the existing distance among the groups and at any evidence about the closing of the social gap. In Wansey some tenants and some owners spoke of their tenure group as a collective 'we' and even when not directly asked about it, expressed the view that owners had or should have 'more rights'. For instance, owners' comments about the lack of response of the developer and the housing association when they complained about some damages in the property:

'(...)they don't really care and they are treating us basically as council tenants,... which is probably an insult to council tenants but unfortunately that is the way things... in the packing over that's where ... but we are not tenants,... ahhh.... We are not even tenants of the private landlords I mean we own the property ,... people who own the property and deserve to get what they have paid for.'

Another example, this time coming from a social tenant when speaking about the initiative to direct the tenants association by another social tenant:

'(...)the people downstairs , as I've said, think that anyone who moves here has to obey by our rules ... well: no, people are actually paying good money, they are not renting like you are, they are actually buying so how can you say that these people have got to follow your rules,... you know,... you don't spend a lot of money in a property in London and then have someone who tells you what to do , you know , so I think it will be a problem'

Another trace of social distance appeared when some of the owners expressed the view that people who own take more care of things and that, in turn, tenants were careless. For instance, when speaking about the problem with rubbish, the link between tenure and carelessness was directly made by an owner:

'... I don't know I just have got the feeling that no one is gonna really care,... have you noticed the rubbish bin down here?...'(...)'rather than putting their rubbish in the bin, they just chuck it on the floor and scatter it everywhere so... so I don't think they're gonna be,... I don't know ...I think that when you are given something you don't care very much, that's all'

These few examples show that there is still a way to go if the gulf among the groups is to close and suggest the necessity of evaluating the progress made in the future.

Nonetheless, it is arguable that the mix has already contributed to narrowing the gap from the social tenants' side. All the people interviewed who were previously living in the Heygate described their previous lives as being isolated from their surrounding neighbours. As one of them described it was like living in a 'rabbit hutch' in which he would close himself up after crossing the door. Now however, they generally appreciated living with people more 'alike' and they enjoy and valued being able to be polite with their neighbours. This could be a manifestation of a diminution of the psychological distance social tenants had with respect to other groups.



6 Imaginary representation of the social network among the neighbours of 13, Caspian Street: Elmington Estate.

The units that provided some information about their relationships with the neighbours are indicated by the green squares.

A light green square means that the maisonette is owner occupied and a dark green square, that the unit is occupied by social tenants.

The red curves represent a linkage between two neighbours and the thickness of the lines is an approximation of the level of interaction among the two.

It is not an accurate portrait of the Elmgton community, but the diagram suggests how dense the networks in the block are and the amount of interaction present.

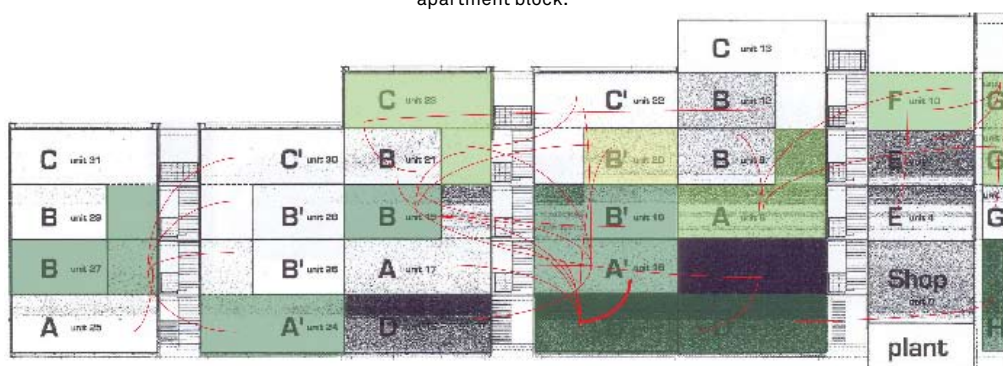
7 Imaginary representation of the social network among the neighbours of the Wansey Street Apartments.

As in the previous diagram, those neighbours for whom some information is available are indicated by the green squares.

A very light green square indicates that the flat is a shared ownership; the mid green squares show the people living in the flat are social tenants and the dark green, that they are owners.

Again, the red curves represent a linkage between two neighbours and their thickness, the approximate level of interaction.

This imaginary representation is based on the comments made by the interviewees on their relationship with the rest of the neighbours. Detailed information was not requested and the newness of the community has to be accounted for. Nonetheless, the resulting image portrays how little interaction is present in this apartment block.



The Elmington community presents a very different picture today in terms of distances. Irrespective of tenures people care about each other, visit their neighbour's house and organise Christmas trips to France and Easter Bonnet contests. It might be a very exceptional place but it is intriguing to wonder whether Wansey will eventually form such a community. From the evidence collected, the delivery method would not be an obstacle to community building over time in Wansey. However it is early and impossible to know which are the factors that will determine whether the gap will disappear like in Elmington. Factors such as the range of incomes present, the family structures or the use of communal spaces may affect its evolution. Nonetheless one key force of neighbourliness in Elmington was the willingness of a majority of the dwellers to get involved. Some comments point to very different values in Wansey as many of the interviewed mentioned that they were happy to say 'hi' but that they did not want to 'be in each others' houses all the time'. In fact, privacy was often praised, especially by social tenants. This may be a trace pointing towards a very different mode of community construction in this new development.

In conclusion, the new means of delivering social housing might make people more aware of the differences in tenure status than other systems of delivery. However, this does not have to be an obstacle for the creation of a space that challenges social distances by reducing physical ones. The economic burden placed on owners was often acknowledged but accepted and considered fair in the case study chosen. Although there is still a considerable gulf of prejudices and 'rights to' between people with different tenure status, a few indications of change exist especially on the side of social tenants. A future analysis of social distance in Wansey would be necessary to study the factors affecting tenure mix's effectiveness in reducing social distance.

8 Owner in Wansey Street:
"I like the block being mixed because instead of having all the people from over here"(referring to the Heygate Estate) "who don't really care about this place, you have people who buy them and own so they look after the place a little bit more."

9 Owner in Caspian Street:
"oh yeah the neighbourhood is quite ok... you know the neighbours are very friendly and we all, we all you know are very close, and we share things together you know we arrange excursions together to the continent and other places so you know it's a close little neighbourhood."



Density and Intensity of Street Activity / Mariana Leguia

Expansions and Extinctions

Several institutions such as CABE, UTF, GLA, DETR, and LDA have produced development frameworks in order to suggest ways to alleviate London's housing shortage for the projected population and to transform it into a successful compact and sustainable city. The strategic objective has set out detailed advice to generate higher planning densities. It also assumes that density will translate into a vibrant and successful public realm through increasing the intensity of street activity.

The Urban Task Force Report (UTF 2005), addresses the question of how to provide homes for almost 4 million additional households in England, promoting a 'well designed, compact and connected city, supporting a diverse range of uses, where people live, work and enjoy leisure time.' To achieve this, four main tools are highlighted, these are:

- Excellence of design
- Social well-being
- Environmental sustainability
- Accessibility

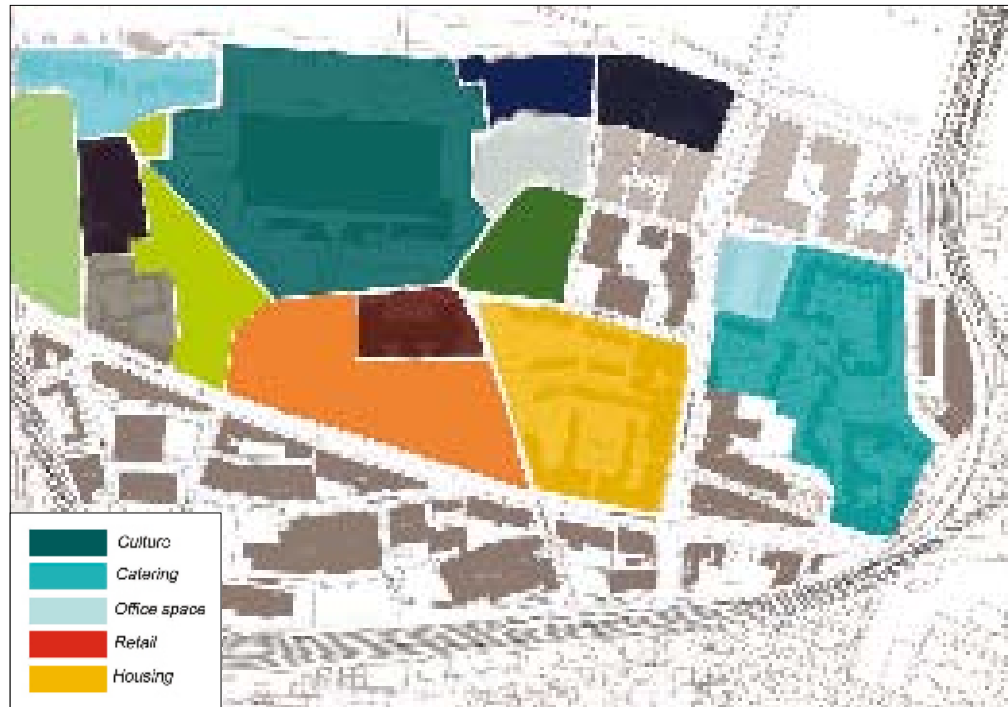
Today, these sets of recommendations, incorporated into PPG3, are being questioned. One exemplary area currently undergoing major transformation in the London Borough of Southwark is Bankside. Examining this site allows us to question the relation between the density proposals and street activity in order to enquire if this current model of densification really helps to promote intensity of activity in the public realm.

Since the refurbishment of the Bankside Power Station in 2000 as the new art museum Tate Modern, Bankside exemplifies the process of gentrification in central London. Since this time, the area has become a major touristic attraction receiving almost 5 million people every year. Despite the major new input of wealth into the borough, Southwark (and Bankside) still has some of the highest rates of unemployment and deprivation in London, and the highest unemployment rate of any borough to the south of the river.

Analysing the area in more detail illustrates how zoning in the neighbourhood is well balanced between the amount of residential, retail, leisure, and office space. According to UK planning guidance, this should result in a vigorous and lively place to reside, as the 'By design' (DETR 2000) document states; 'A mix of uses may be appropriate at a variety of scales: within a village, town or city: within a neighbourhood or a street; or even in a particular building.' (p.31)

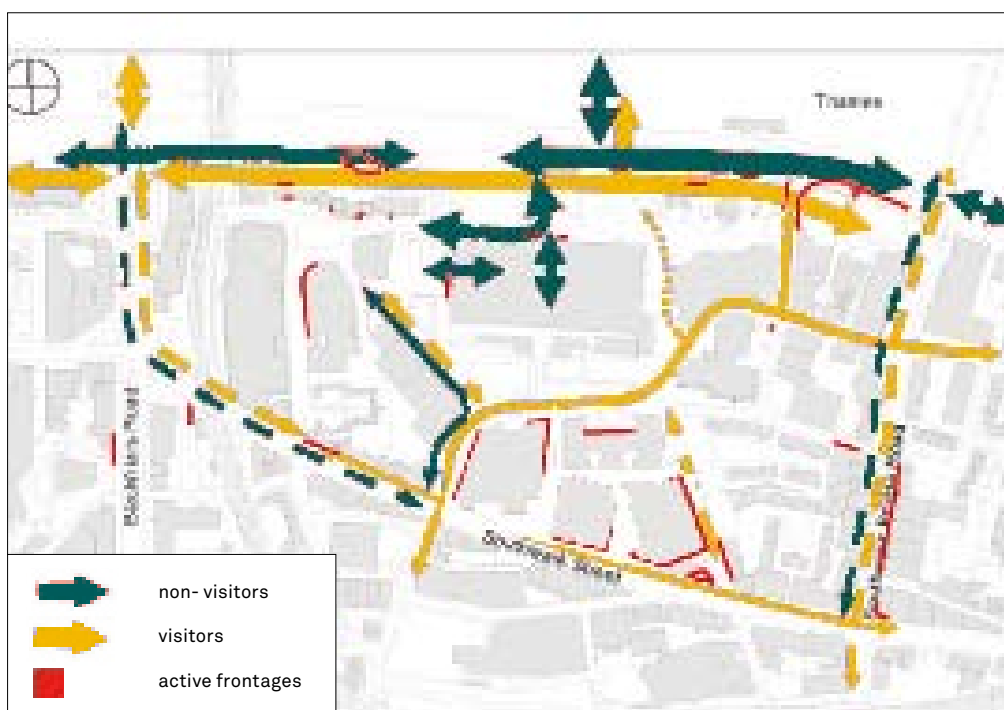
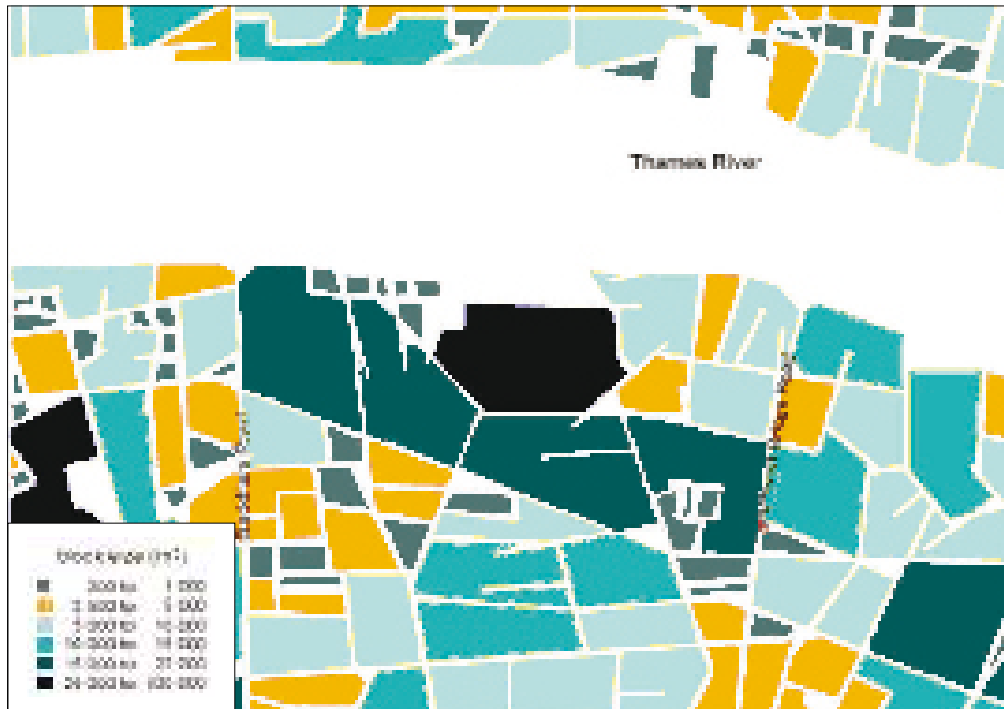
1 Zoning

Land Ownership, Bankside Urban Study,
Richard Rogers and Partners 2001



2 Block size

Flows diagram and active frontages *Figures courtesy of Maya Lemlij, Space Syntax Ltd*



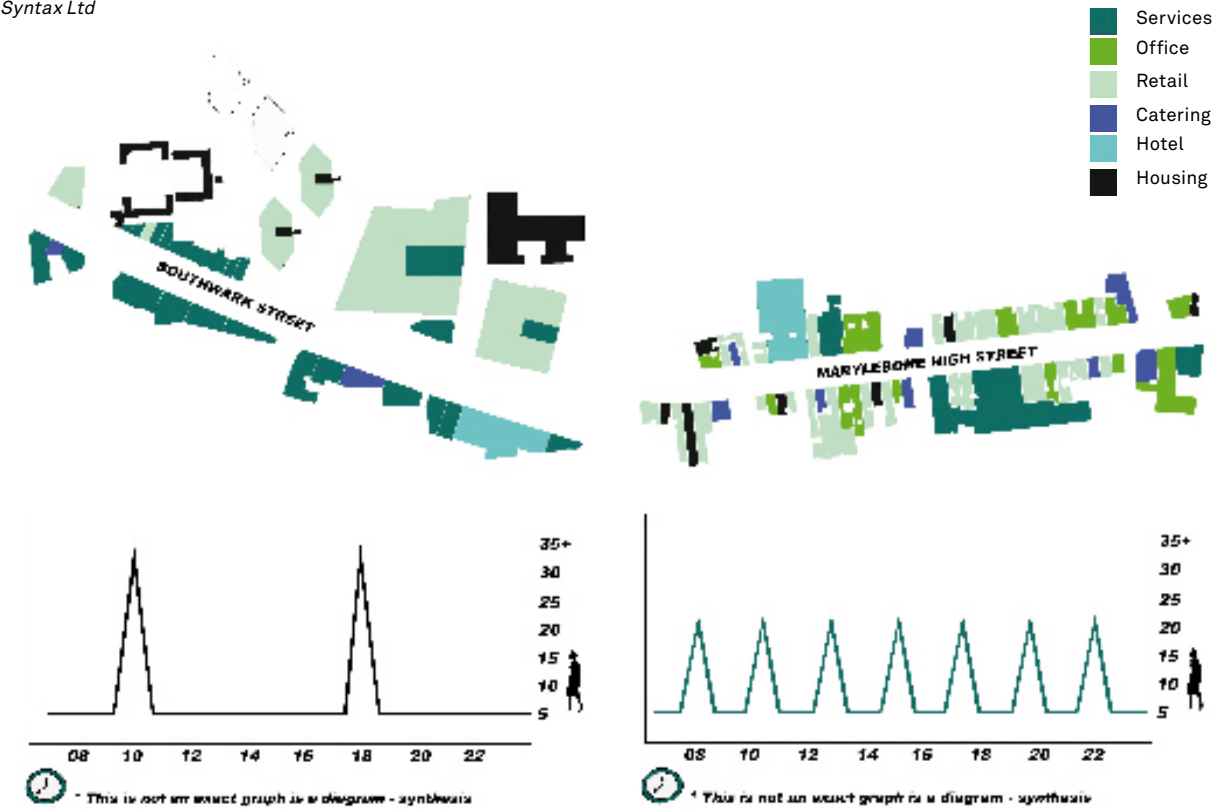
However, when looking at the land ownership map of the area, it is clear that because of the few proprietors with vast holdings the zoning of Bankside has followed large-scale property sizes.

This massive scale of zoning has led to precisely the opposite of the aspirations set out in By Design. Moreover the plot size negatively impacts on the community in three main ways: Firstly, the biggest plots form a barrier across the site from west to east, clearly blocking accessibility from north to south of the site. Secondly, this size of block also negatively impacts the area by allowing mega-structure developments which are difficult to adapt over time. Thirdly, the pedestrian flow occurs primarily on the riverside, mainly from west to east, leaving the rest of the street area in the vicinity almost unused. Though the closest underground station, Southwark, is located to the south of the site, the large east to west blocks have severed the pedestrian flow from there towards the river. From this illustration, one can conclude that there is a problem of porosity in the heart of Bankside and that the flows of people are largely visitors heading only to the Tate Modern, not permeating though the rest of the area. As one of Southwark’s Peabody Estate managers stated in an interview; “People from the Elephant don’t even realise that the river is right there!”

To corroborate this phenomenon, figure 2 also shows the amount of active street frontage and public entrances that the area has, and how few there are beyond Southwark Street. Unlike overlooked streets where ‘buildings with live edges, such as shop front, door, directly to the street or residential upper floors, enable people to keep an eye on public space and make it feel safer,’ (By Design 2000: 26) many of Bankside’s streets are lined with fences and blank brick walls.

Figure 3 describes the life of two streets, Marylebone High Street and Southwark Street. Both lengths compared are equal. In both cases we find a diversity of uses, but the difference relies on the scale of this diversity. On the one hand, Marylebone High Street has many smaller properties adjacent to one another. Because of its designation as a conservation area, it has a framework for design. Marylebone High Street is not successful because of its aesthetic and historic qualities alone but because of its preserved pedestrian scale. Southwark Street has much bigger properties. No legislation has framed any parameters for this area of the city. As a result, the street with small scale properties translates into a ‘healthy street’, being used regularly through the day, while the other is a ‘sick street’, being used only at certain peak times or not at all. Within the same walk-band, pedestrians through a healthy street are able to find a broader range of possibilities than in the other case.

3 Comparative Diagram
Figures courtesy of Maya Lemlij, Space Syntax Ltd



Building Quality and Density / Qiao Cen Zhe

As London's population is increasing, so the problem of housing shortage is back on the agenda. The demand for housing far exceeds supply, and increasing housing density is regarded as an appropriate solution. In the present market, density is a key factor in the success or failure of a given site and is based on guidelines set out in the London Plan. 1100 habitable rooms per hectare (hrh) is the maximum recommended density for any scheme, under the Greater London Authority's London Plan Density Matrix. Nevertheless, more than 50 schemes obtained planning permission to build above maximum density in 2004–5.

Since building higher-density housing above the official figure may be a quicker way to meet housing targets and may use land more efficiently, under what circumstances might local authorities grant planning permission for schemes above the maximum requirement? Focusing on Southwark, I consider the case of a successful housing application which obtained planning permission in 2006 for building at a density of 1481 hrh. Southwark has one of the highest rates of population growth among London boroughs, but with potential to develop higher population densities. Southwark's Unitary Development Plan sets out the authority's policies and proposals for the development and use of land in its area over a ten-year period. The plan's strategic objective in regard to housing is to achieve an additional '1,500 homes a year...to meet the target set in the London Plan of 29,530 homes by 2016' (Southwark UDP 2006: 5). The borough's open spaces are protected, as are certain areas where only or mainly employment uses will be allowed. Most other land will be considered for housing or for housing mixed with other uses. The plan seeks to ensure that 50% of all new homes are affordable.

How to build high density housing without compromising quality has become a challenge for both local authorities and developers. In order to avoid the potential disadvantages of high densities (such as overcrowding, residential dissatisfaction, environmental blight, etc), local authorities will only grant planning permission for building above the official density limits very cautiously. According to the GLA database, the mean density of all 5,109 schemes granted planning permission in 2004–5 is 125 dwellings per hectare (dph). As shown in Figure 3, 96% of the schemes have a density of 1–400 dph, 3% have a density of 401–800 dph, and less than 1% of all schemes have a higher density of 801–1200 dph.

The Bear Lane development in North Southwark obtained planning permission in 2006 to build at a density of 1481 hrh (exceeding by almost 400 hrh the current maximum limits). There has been a rapid change in North Southwark over the last decade. Since Tate Modern was opened in 2000, transport links have been improved, notably with the opening of the Jubilee Line tube station at Southwark. With Waterloo, London Bridge and Blackfriars offering mainline train and underground services, the region is well connected north, south, east and west. The key attractions of the area include Tate Modern, Borough Market and the Southbank, all within walking distance. Blackfriars Road and Southwark Street are re-establishing themselves with new landmark high-density office developments. The realisation that this area is prime centre-city land has in turn increased pressure to raise the densities to an appropriate level for this scale of regeneration.

The 0.193 hectare development site is triangular, bounded to the west by Bear Lane and to the east by Great Suffolk Street, a pedestrian route between Southwark Station and Tate Modern. The application proposes to demolish the five industrial units on the site and replace them with a new 8 storey (28 metre-high) building. The proposal sought permission for a mixed use building with parking in the basement, commercial floorspace on the ground floor and 89 residential dwellings on the upper floors; 42 one-bed units, 35 two-bed units and 12 three-bed units. There would be 62 private sale apartments and 27 affordable units, of which 9 would be fully wheel-chair accessible.

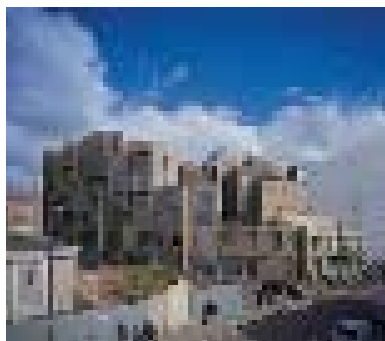
In interview, a Senior Planner in Southwark's regeneration department mentioned as the two most important factors determining whether planning permission is likely to be given, firstly proximity to excellent public transport connections, and secondly, exemplary design.

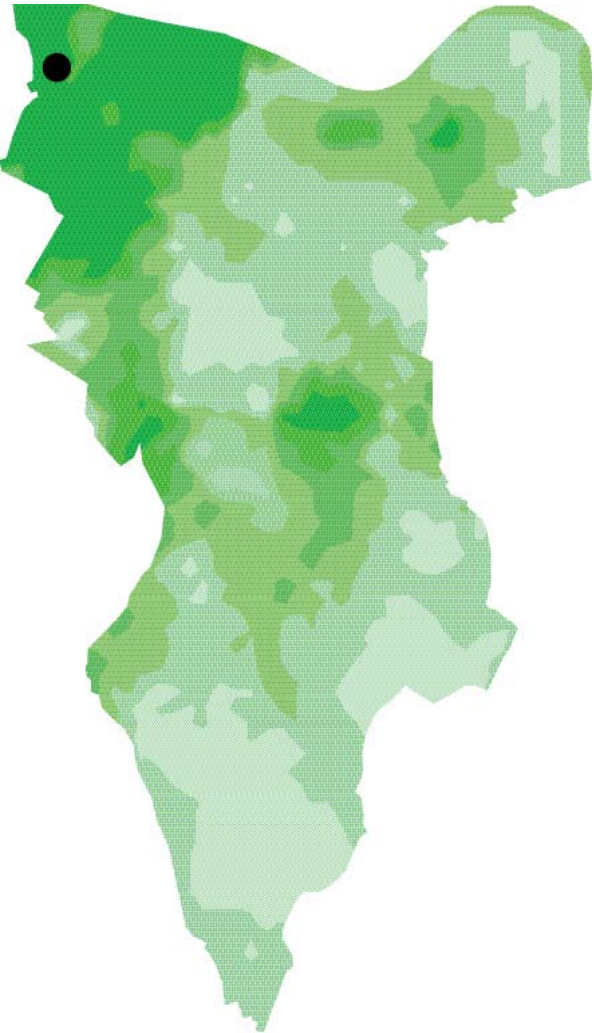
While transport accessibility can be quantified, design quality is more abstract to define. The proposed development is on a site that was densely populated from the mid-eighteenth century. The tradition of Bear Lane and Great Suffolk Street is of tall buildings positioned up close to the pavement. The streets have historically made strong visual statements.

The design of the building will be stepped up gradually from the two and a half-storey existing White Hart pub on the corner to meet the proposed new 8-storey hotel. The building façade is designed around balconies and large recessed windows. This will allow natural light to penetrate to the middle of the site and in turn will distribute natural light back into the residential properties.

With the rapid economic growth of London, the problem of housing shortage has become more and more serious. The targets for new housing have been increasing every year: under these circumstances, building at densities as high as possible without losing design and environmental quality is a key solution to London's housing shortage. The Great Suffolk Street case suggests that successful high density housing should fit well with its surroundings; make a clear distinction between private and public spaces; include good security, lighting and landscaping; and provide adequate transport access. Higher residential densities may also be easier to achieve in areas that have supported high (residential, commercial or industrial) densities in the past. The primary challenge remains to link building density with design quality.

1 Bear Lane development proposal, Panter Hudspith Architects





2 Public Transport Accessibility Levels (PTAL) in Southwark

Bear Lane development

Public Transport Accessibility Level

- 6
- 5
- 4
- 3
- 2
- 1

3 London Plan Density, Setting and Accessibility Matrix

Setting	Public Transport Accessibility Level (PTAL)		
	0 to 1	2 to 3	4 to 6
Suburban	150–200 hrh	150–250 hrh	200–350 hrh
Urban	150–250 hrh	200–450 hrh	200–700 hrh
Central	150–300 hrh	300–650 hrh	650–1100 hrh

4 London Plan Density and Dwelling Size Matrix

Setting	Dwelling size requirement	Public Transport Accessibility Level (PTAL)		
		0 to 1	2 to 3	4 to 6
Suburban	3.8–4.6 hr/unit	35–55 dph	35–65 dph	45–90 dph
	3.1–3.7 hr/unit	40–65 dph	40–80 dph	55–115 dph
	2.7–3.0 hr/unit	50–75 dph	50–95 dph	70–130 dph
Urban	3.8–4.6 hr/unit	35–65 dph	45–120 dph	45–185 dph
	3.1–3.7 hr/unit	40–80 dph	55–145 dph	55–225 dph
	2.7–3.0 hr/unit	50–95 dph	70–170 dph	70–260 dph
Central	3.8–4.6 hr/unit	35–80 dph	65–170 dph	140–290 dph
	3.1–3.7 hr/unit	40–100 dph	80–210 dph	175–355 dph
	2.7–3.0 hr/unit	50–110 dph	100–240 dph	215–405 dph

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