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EMERGING TYPOLOGIES & DENSITY

Typologies: An Introduction

As an expression of the interaction between developers, the market and the planning system, building typologies – that is categories of buildings that share common denominators (e.g. terraced house, flats) – reveal the philosophical and ideological principles that shape the urban landscape.

Yet as the connective tissue between private and public space, typologies also influence the manner in which a society conceptualises, shapes and uses urban space.

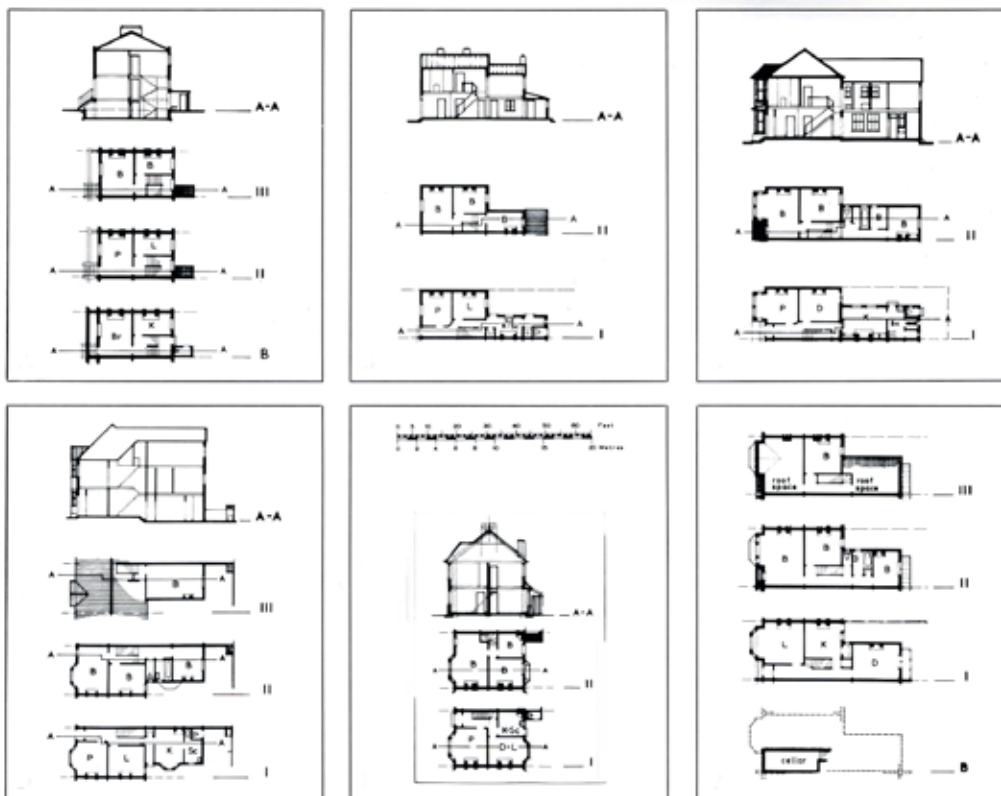
For centuries awareness of building typologies has guided the production of urban fabric and has provided a way to both unify and organise urban space. Nowhere is this more apparent than in England, where, since the latter part of the nineteenth-century, the country has been a magnet for foreign observers. These observers came to study English architecture and became fascinated with the most enduring and versatile of English housing typologies: the terraced house. These observers took the knowledge they gained home with them implementing it into housing across continental Europe.

While adhering to set typologies does not necessarily result in good city-making, pursuing high densities at the expense of thinking more seriously about typologies (as currently seen in parts of London) may result in poor city-making. Paradoxically the lessons learnt in England, and eagerly applied across much of continental Europe, appear to have been largely forgotten here, as an understanding of how housing typology's effect on urban space, in relation to density, is ignored.

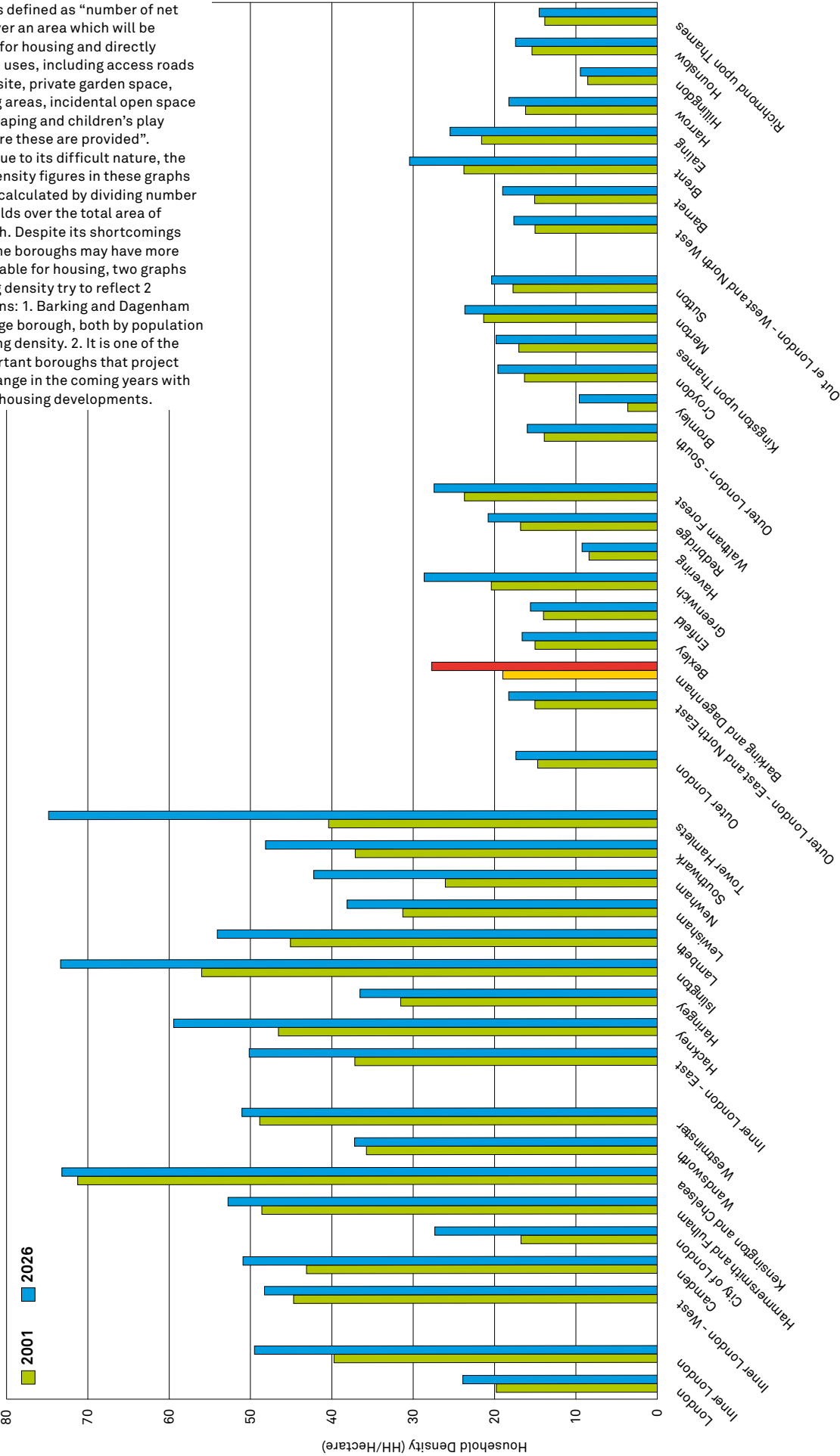
Density

As part of the British government's Planning Policy Supplement 3 (PPS3), the London Plan is set out as the regional planning policy. This plan projects an increase in London's population over ten years, beginning in 2006, of 540,000 – 728,000 additional households (27,000-36,000/year). Taking into account existing housing shortfalls, to accommodate this growth, the London Plan sets a minimum target of 30,500, additional housing units per year (GLA 2008: 66). This projected population growth has created a demand for housing at higher densities as well as a concern that these higher densities will result in new and different housing typologies that will not suit the populations for which they are intended.

1 Examples of variations within the terraced-house typology (Muthesius 1982)



2 Density is defined as “number of net dwelling over an area which will be developed for housing and directly associated uses, including access roads within the site, private garden space, car parking areas, incidental open space and landscaping and children's play areas, where these are provided”. However, due to its difficult nature, the dwelling density figures in these graphs have been calculated by dividing number of households over the total area of the borough. Despite its shortcomings (where some boroughs may have more areas available for housing, two graphs concerning density try to reflect 2 observations: 1. Barking and Dagenham is an average borough, both by population and dwelling density. 2. It is one of the more important boroughs that project a steep change in the coming years with respect to housing developments.



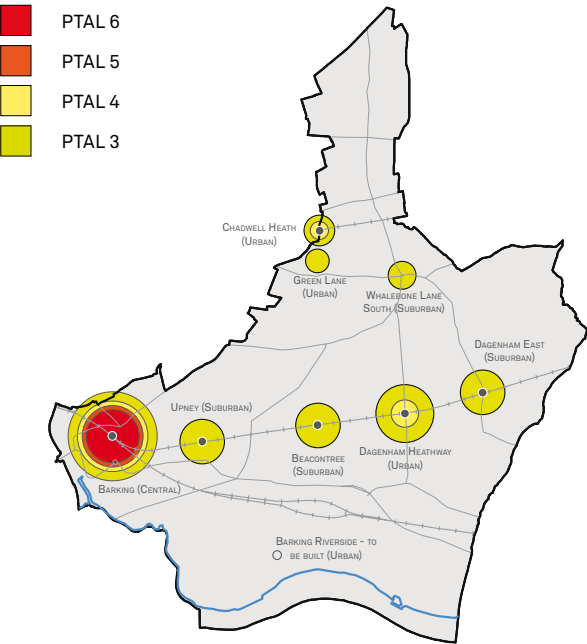
In response to this projected growth, the first Mayor of London, Ken Livingstone, set an ambitious agenda for intensification. In the report, ‘Housing for a Compact City’ published by the Mayor’s Office, Richard Rogers claimed that London was still being built ‘at ridiculously low densities’ (GLA 2003: 5). To promote a high density development agenda for London, the report highlighted the much higher densities being achieved elsewhere, in parts of inner Paris (300 dwellings/hectare), central Barcelona (500 dwellings/hectare) and in the Kowloon district of Hong Kong (1,700 dwellings/hectare) as examples.

As part of the Mayor’s housing and intensification policies, various parts of London are treated differently with some areas being intensified more than others. The London Borough of Barking and Dagenham (LBBD) is an example of a part of the city where complex urban changes and intensification are being focused. Of the 30,500 previously cited new homes needed per year in London, 1,190 are to be provided in LBBD with a total over ten years of 11,900 (GLA 2008: 66). As part of this move towards increased residential density in the borough, the location and the type of housing built, and the effect it will have on the social and physical environment, are closely related to emerging housing typologies. The interrelation between density and housing typology can be clearly seen in government policies related to what is known as the ‘Density Matrix.’

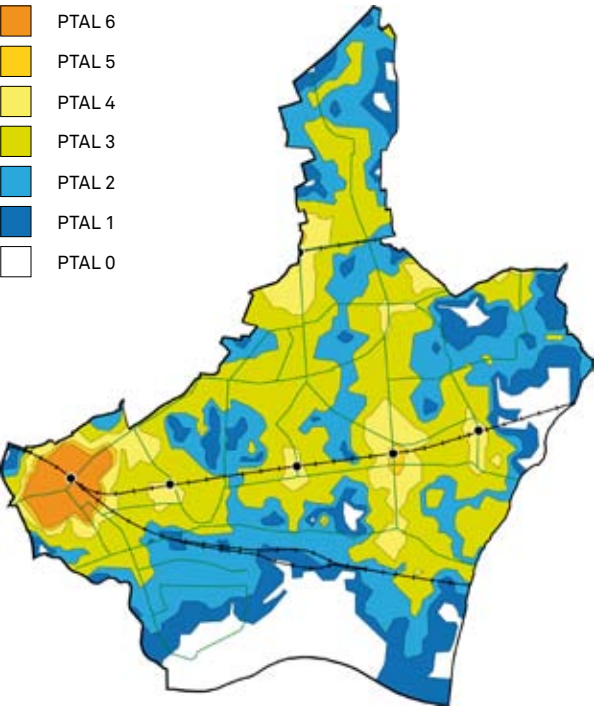
The Density Matrix

The London Plan sets out a matrix (the Density Matrix) that indicates appropriate density levels for new developments according to two independent variables. The first variable is the Public Transport Accessibility Level (PTAL) which defines how well an area is connected via transport links within London. The second variable is ‘Setting’ which classifies areas as ‘Suburban’, ‘Urban’ and ‘Central’ according to their development typologies, mix of uses and proximity to Major or District Centres. Local boroughs are enjoined to adhere to the overall targets set in the matrix and to ensure that prescribed density levels are met (GLA 2008: 65). Such measures of density are open to manipulation, however, as using crude measures of density often results in wildly different results. While more dwellings/hectare may satisfy national and London intensification ambitions (as well as the Density Matrix) it may also result in smaller houses as the number of units increases on a given site without a significant increase in overall floor area.

3 Map showing areas in the borough with defined “Settings” and relevant PTAL.



4 PTAL map of the borough with frequent rail and underground services displayed.



Indicative Average Dwelling Size				
Setting		Suburban	Urban	Central
		3.8 – 4.6 hr/unit 3.1 – 3.7 hr/unit 2.7 – 3.0 hr/unit	3.8 – 4.6 hr/unit 3.1 – 3.7 hr/unit 2.7 – 3.0 hr/unit	3.8 – 4.6 hr/unit 3.1 – 3.7 hr/unit 2.7 – 3.0 hr/unit
Public Transport Accessibility level (PTAL) (6 represents a high level of accessibility and 1 a low level of accessibility)	0 – 1	150 – 200 hr/ha 35 – 55 u/ha 40 – 65 u/ha 50 – 75 u/ha	150 – 250 hr/ha 35 – 65 u/ha 40 – 80 u/ha 50 – 95 u/ha	
	2 – 3	150 – 250 hr/ha 35 – 65 u/ha 40 – 80 u/ha 50 – 95 u/ha	200 – 450 hr/ha 45 – 120 u/ha 55 – 155 u/ha 70 – 170 u/ha	300 – 650 hr/ha 65 – 170 u/ha 80 – 210 u/ha 100 – 240 u/ha
	4 – 6	200 – 350 hr/ha 45 – 90 u/ha 55 – 115 u/ha 70 – 130 u/ha	200 – 700 hr/ha 45 – 135 u/ha 55 – 225 u/ha 70 – 260 u/ha	650 – 1,100 hr/ha 140 – 290 u/ha 175 – 355 u/ha 215 – 405 u/ha

5 Density Matrix

Sites Over 2 Ha Can Determine Their Own PTAL Level.

PTAL Calculations:

- Measure of accessibility from a given point to the public transportation network.
- Takes into consideration walk access time and service availability.
- Assumes an Average walk speed of 4.8 Kph (800m in 10 minutes).
- Measures density of public transportation network at a given point.
- 6 levels – 6 represents a high level, 1 a low level of accessibility.
- Catchment area for a transportation node defined as:
 - Buses – maximum walk time is defined as 8 minutes (640 metres)
 - Rail – maximum walking defined 12 minutes (960 metres)

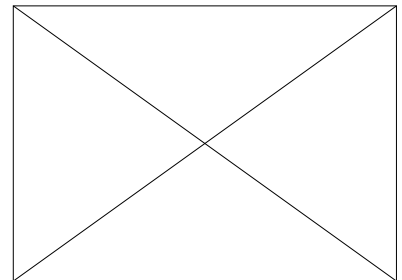
Suburban



Urban



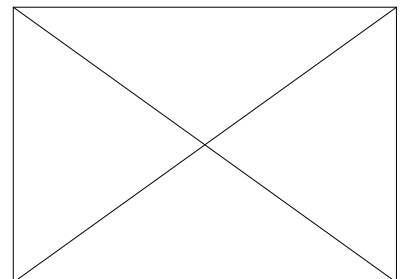
Central



Perivale, Ealing



Barking Riverside, Barking & Dagenham



6 Ground and aerial photos of areas with PTAL 0-1. No applicable areas at this PTAL for Central settings

Suburban



Urban



Central



Bensham Manor, Croydon



Town, Hammersmith & Fulham



Belmont, Sutton



7 Ground and aerial photo samples of areas with PTAL 2-3.

Suburban



Urban



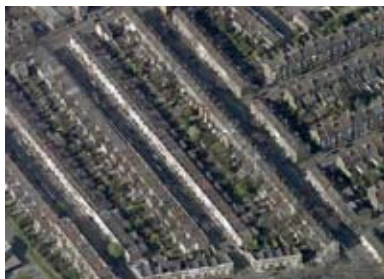
Central



Wembley Centre, Brent



Ferndale, Lambeth



Addison, Hammersmith & Fulham

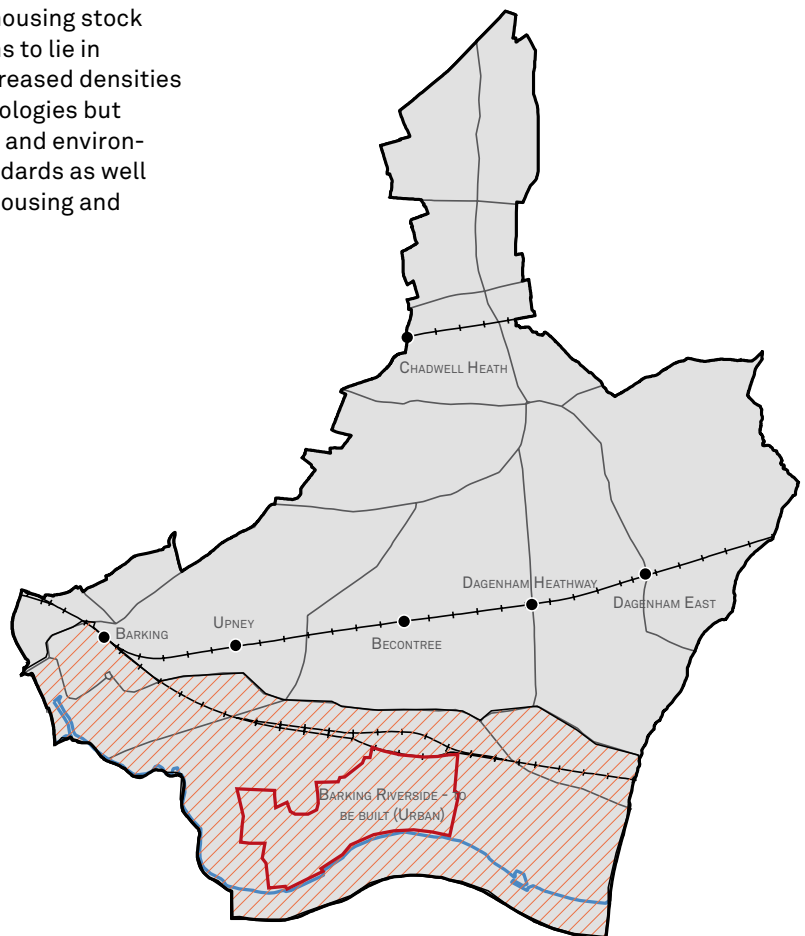


8 Ground and aerial photo samples of areas with PTAL 4-6.

The Planning System

The current planning system hierarchy asks London boroughs to serve as local planning authorities. In this capacity the London Borough of Barking and Dagenham (LBBD) has produced a Local Development Framework that defines its housing policies (London Borough of Barking and Dagenham 2007). However, an additional body, the London Thames Gateway Development Corporation (LTGDC), has planning powers over parts of the borough, including Barking Riverside, designated an 'opportunity area' by the London Plan (GLA 2008: 308). Stretching over different boroughs along the Thames, the LTGDC overrides borough planning powers. This causes incoherence whilst cutting into the policy-making scheme involving the Government, the Mayor, and the LBBD. Furthermore, the LTGDC has powers over portions of Barking Town Centre, despite its geographical distance from the Thames Gateway, whilst ignoring Gascoigne Estate, an equally central site within the Town Centre.

The current consensus in favour of intensification drives development in new 'brownfield' sites such as Barking Riverside, despite arguments suggesting there is existing housing that is not fully utilised. Accepting the intensification agenda, and the emerging typologies that come with it, should not come at the expense of the existing housing stock and urban structure. A solution seems to lie in creating an environment in which increased densities alone do not determine emerging typologies but equal consideration is given to social and environmental factors that affect living standards as well as their basic rights to good quality housing and urban living.



9 London Borough of Barking and Dagenham with shaded area showing LTGDC boundary incorporating all of Barking Riverside and Barking Town Centre.



Gascoigne Estate
A tower block and a security sign, existing typology at the estate, and a renovated house conserving its traditions (clockwise from left)



Barking Town Centre
Facade of the renovated Lifelong Learning Centre, view from the Town Square, view of the building from east, and balconies (clockwise from top left).



Barking Riverside images

Space Standards

One area in which the drive for intensification can be seen as having a negative effect on housing typologies and quality of life of borough residents is seen in the size of new dwellings being built.

Evidence suggests that new homes in London are being reduced in size and that 'less family sized housing is being produced.' Concerns over such trends prompted the Mayor of London in 2006 to commission a study of 'housing space standards' as part the review of the London Plan. The result of this study was a recommendation that the Mayor's office adopt minimum space standards for residential dwellings (HATC 2006) but these were rejected and not implemented in the revised London Plan (2008). This reduction in dwelling size is clearly evident in Barking and Dagenham as new residential construction reveals a reduction of internal space for both family and non-family homes.

A review of historic, international and current Borough space standards suggests that maintaining the status quo will not meet the needs of current and future residents in Barking and Dagenham. The reduction in dwelling size has long-term implications for accessibility, sustainability and for the quality of life for the Borough's residents. If new housing typologies are to be sustainable and meet the needs of future generations, they must be of adequate size and quality.

While England is one of only a few European countries that do not currently have minimum space standards for residential construction, it has a long history of trying to define minimum standards in the public sector (HATC 2006).

One of the primary historic attempts at establishing design standards was the 1961 Parker Morris Report and Design Bulletin 6. The Parker Morris Report established space standards based on an assessment of 'the functions of a dwelling and rooms.' It emphasised the importance of storage space and recommended all rooms in a house be heated. While the standards it established were seen as a minimum, they quickly 'became maxima for public subsidy purposes' (HATC 2006: 23). Today Parker Morris is still one of the more widely cited benchmarks for space standards although neither public nor private sectors seek to achieve it. A majority of new construction, particularly in Barking Town Centre, has been built well below Parker Morris standards.

The lack of mandatory space standards today has resulted in increasingly small dwelling units that are significantly smaller than in other European countries.

Residential Trends

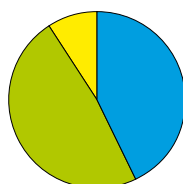
Without enforceable standards, developers tend to reduce the size of dwellings to the fullest extent possible without a reduction in value. In London's demand driven market, this has resulted in an increased pattern of 'cramming' rooms into dwellings with reductions in storage space and smaller habitable rooms (HATC 2006).

According to the London Plan 'changing lifestyles are making new demands upon the way residents use their homes. While there is an increasing number of single person households, this has not necessarily translated into a higher demand for small one bedroom flats as demands for internal space have increased from new leisure activities and an increase in home-working. If new housing is to meet the needs of the future in a sustainable manner, it must reflect these changes by providing a range of house types and sizes to create 'mixed and balanced communities' (GLA 2008: 71).

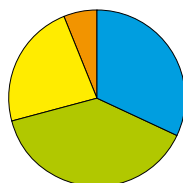
Comparison of England Public Sector Design Standards Since 1949									
Bedrooms	1949 Housing Manual*	1961 Parker Morris*	England* (National)	GLA Housing & Space Standards*	East Thames Housing Asc. Space Standards*	English Partnerships Housing Space Standards*	Kensington & Chelsea*	Barking & Dagenham UDP*	Barking & Dagenham LDF* (CEL+Min Bdrm m2+Sc)
1	27.9 m2	30.6 m2	1 prsn Bdrm: 6.5m² 2 prsn Bdrm: 10.2m² (These standards apply to all housing, public and private) *Source: (Housing 1985)	28.5 m2 33.0 m2	51.0 m2	45 – 55 m2	30.0 m2	28.5 m2	28.5 m2 33.0 m2
2	41.8 m2	45.5 m2		41.75 m2	66.0 m2	60 – 65 m2	44.5 m2	40.0 m2	41.75 m2
3	51.1 m2	57.8 m2		51.5 m2	93.0 m2	85 – 90 m2	57.0 m2	49.0 m2	51.5 m2
4	65.1 m2	75.7 m2		61.25 m2	106 m2	95 – 100 m2	70.0 m2	x	61.25 m2
5	78.9 m2	85.9 m2		71.0 m2	x	x	80.5 m2	x	71.0 m2
6	83.6 m2	97.5 m2		80.75 m2	x	x	86.5 m2	x	80.75 m2
7	92.3 m2	x		x	x	x	x	x	x
	*Source: (HATC 2006)	*Source: (HATC 2006)		*Source: (HATC 2006) Min. Room Dimensions at Shortest Ponts: –Living area: 3.2m –Double Bdrm: 2.6m –Bdrm Length: 3.0m –Ration 2:1 not to be exceeded.	*Source: (East Thames 2006)	*Source: (English Partnerships 2007)	*Source: (LBKC 2002)	UDP Standards Currently Geing Replaced by LDF. *Source: (LBBD 1995)	CEL = Cooking, Eating Living Areas Bdrm = Bedroom 6.5 = 1 Person Bedroom 10.0 = 2 Person Bedroom Sc = Minimum Storage Cupboards Floor Area *Source: (LBBD 2007)

11 New Housing Developments in Barking and Dagenham by Number of Bedrooms

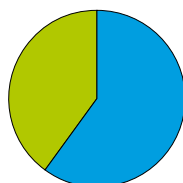
Axe Street Car Park



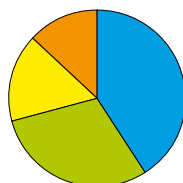
Fresh Wharf Estate



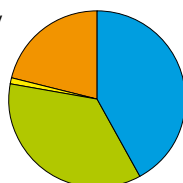
Learning Centre



The Lintons



Tanner Street Gateway



A regional study by the Greater London Housing Association found that to meet London's projected growth and backlog in currently unmet housing needs, within the next 10 years, 30% of new housing should be four bedrooms, 38% should be two or three bedroom and 32% should consist of 1 bedroom units. In addition 41% of social housing should consist of four or more bedrooms (GLA 2004).

In London, recent trends have resulted in 80% of housing being produced as flats. There has also been a significant reduction in three (10%) and four (5%) bedroom dwelling units and a large increase in the construction of one (25%) and two (60%) bedroom accommodation. This has resulted in a significant increase in the incidence of one and two bedroom flats in both the private and housing association markets (HATC 2006: 7). The London Assembly report, Size Matters, found a surplus of 12,100 one bedroom homes in London and a chronic shortage of three and four bedroom housing, particularly in the social housing market (London Assembly 2006: 17).

A similar reduction in dwelling size and mix can be seen in Barking Town Centre where a significant number of recently built, current and planned housing projects are predominantly one or two bedrooms. While the Barking and Dagenham Housing Needs Survey (2005) indicates there is a greater need for more and larger family housing, the current draft LDF does not address this need with actionable policies (LBBD 2007).



Tanner Street Gateway: Tower



Tanner Street Gateway terrace housing



Tanner Street Gateway living spaces:
Flat: living room and kitchen (left),
House: backyard and kitchen (right)

Because the London Plan does not include a city-wide space standard for residential construction, the boroughs are left to set standards for themselves. This results in a wide range of standards, or lack of standards, between boroughs. While the Royal Borough of Kensington and Chelsea has adopted comparatively generous standards, the Borough of Barking and Dagenham has adopted the minimum standards recommended by the Mayor's Housing Space Standards study in addition to the Lifetime Home Standards.

While there is neither a national nor city-wide standard for space requirements, Housing Associations, directed by the Housing Corporation, and other agencies have adopted residential space standards. Two of these, East Thames Group and English Partnerships are actively engaged in the construction of dwelling units across London and in Barking and Dagenham.

East Thames Housing Group adopted space standards for all of its housing with the latest standards published in May, 2006 (East Thames 2006).

English Partnerships, the national regeneration agency, adopted space standards in late 2007 for all homes built on its land because it realised that 'new housing in England provides some of the poorest internal space standards in Europe and the smallest average room sizes' and to 'prevent smaller flats and houses which have limited scope for adaptability and flexibility and do not support the needs of growing families and wider choice' (English Partnerships 2007).

Existing Typologies: The Becontree Estate

There have been no mandatory minimum space standards since the Parker Morris standards were abandoned in the 1980 Housing and Local Government Act. Despite the evidence collected for the GLA by HATC and by the Housing Corporation, there has been unwillingness on the part of government at all levels to impose any restrictions on type or size of dwelling so that densification, almost the only determinant, results in a surplus of one and two-bedroom flats and a shortage of family houses. In LBBD this is exacerbated by the LTGDC regeneration programme that further distorts development in the areas it controls.

Within Barking and Dagenham, however, the Becontree Estate occupies about 30% of the total Borough land area and represents an *existing* typology that might be upgraded to meet much of the Borough's housing requirements.

The Becontree Estate, the largest municipal estate in Europe, was designed and built between 1919 and 1935 and on completion housed approximately 127,000 people in upwards of 30,000 houses (Home 1997).

Conceived as 'A Township Complete in Itself', it was built by the London County Council (LCC) under the 1919 Housing Act to provide 'Homes Fit for Heroes' for those returning from the 1914-18 War and to relieve overcrowding in inner, especially east London (Olechnowicz 1997).

12 Map of Becontree from 1934, showing Garden City layout with radiating roads. (source: Young, Terence (1934). Becontree and Dagenham. The Story of the Growth of a Housing Estate. London: The Becontree Social Survey Committee)



Planned on the Garden City principles of locating civic functions at the centre, surrounded by open space and housing and with industry located at the edge, the main road layout is of avenues radiating out from the centre of the site (Howard 1965). Subsidiary roads trace pre-existing road layouts and the areas between are laid out in patterns of avenues, roads, crescents, circles, squares and the characteristic ‘banjo’ cul-de-sac (Young 1934). The plan as conceived and executed is two-dimensional, exaggerated by the flatness of the site and the uniformity of housing types but it is relieved both locally with different open spaces and centrally at the transport ‘nodes’ where three and four storey blocks of flats, some with shops at the ground floor, provide variation.

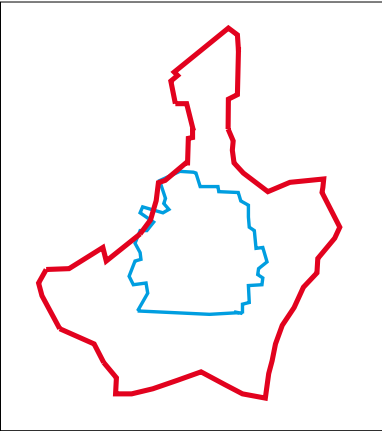
Most of the original estate is two-storey, with terraces of four, seven or nine houses, some semi-detached and a very few detached houses. The houses are of brick or rendered block with pitched tiled roofs. Every house has a front and back garden.

The houses are of seven basic types. Five room houses (parlour and non-parlour) tend to be at the ends of terraces with four room (parlour and non-parlour) and three room houses between and, in addition, there are separate terraces of two-storey, two room flats. House sizes compare favourably with historic and current measures.

The houses are laid out at a density of 12 dwellings per acre (dpa) equating to approximately 27 dwellings per hectare (dph) over all, but when the very large areas of open space, and the sites retained for schools are subtracted, the net density rises to in excess of 30dph. House types are mixed throughout the estate.

The Estate has good transport links, with two District Line stations, a comprehensive bus network and had a good provision of local schools, libraries, churches, shops, cinemas and pubs. But the post-war period has not been kind to it. Successive housing policies resulted in a decline in population to approximately 60,000 (Wilmott 1963). Many of the social amenities have been driven out. Schools, colleges and libraries within the estate have closed and relocated to the edge of the estate or beyond. The sites released are being redeveloped with housing, all of it developer driven (Home 1997).

13 Becontree Estate (blue) in Barking and Dagenham (red).



14 Becontree comparative house sizes in square metres

	Becontree	Parker Morris	HATC 2006	GLA Actual
2 Room Flat	60.5	44.5	44.0	31.0
3 Room House (Semi-detached)	65.0	57.0	57.0	51.0
3 Room House (Terrace)	68.5	57.0	57.0	51.0
4 Room House (No-Parlour, Semi-detached)	81.0	72.0	67.0	62.0
4 Room House (Parlour, terrace)	80.0	74.5	67.0	62.0
5 Room House (Semi-detached)	92.0	82.0	81.0	73.0
5 Room House (Terrace)	84.5	85.0	81.0	73.0



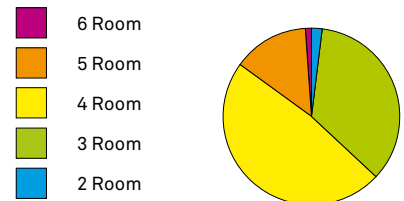
Despite being neglected and asset-stripped, the Estate has retained much of its quality. But the uniformity of the housing that was one of its strengths is being gradually eroded.

In its Housing Strategy 2003-2006, LBBD identified Becontree as an area requiring a comprehensive renewal strategy although only the 1950s Cleveland Estate (now Tanner Street Gateway) in the centre of Barking was actually scheduled to be renewed (LBBD HS 2002).

In LBBD's Housing Strategy 2007-10, only five Council owned estates, all post-war, are identified as regeneration areas, of which four are in Barking and only one, the smallest, in Dagenham. Despite being the largest land area in the borough with the most council-owned houses, Becontree is not mentioned at all. Only the University of East London and Lymington Fields sites, both sites released by college closures and relocation, appear and neither they, nor the other infill sites on the Estate, appear to have any regard for the estate or how it may be upgraded (LBBD HS 2006).

Without a change in policy, the council will continue to sell off the houses, either under the right-to-buy scheme or as they fall vacant because it is too difficult and expensive to do anything else and the downgrading of the estate will continue.

15 Becontree housing mix



16 Becontree Estate today showing different typologies

Degradation evident in changed windows, roof materials, loss of front gardens



17.1



17.2



17.3



17.4

17 Conflicting Typologies

- 1 Barking Town Centre:
PTAL 6 – Potential Density 1,100 HR/HA
- 2 Barking Town Centre:
PTAL 6 – Potential Density 1,100 HR/HA
- 3 Becontree Centre:
PTAL 2 – Potential Density 650 HR/HA
- 4 Becontree Suburban:
PTAL 2 – Potential Density 650 HR/HA

Proposition

With the increasing drive towards densification and the resultant emerging typologies, if the London Borough of Barking and Dagenham is to meet its current and future housing needs in a sustainable manner, it must have an understanding of how density and typology act locally and impact the quality of life of its residents.

If it is to do this, there needs to be a more comprehensive approach to the city, involving all parties to promote greater understanding of the nature of urbanity, more specifically of the qualities that make places attractive to the socio-economic class targeted in each case. Given that the regeneration agenda is strongly driven by a desire to attract the middle classes these factors might prove more important than price when it comes to attracting newcomers to less popular boroughs. But this cannot be achieved by the creation of middle class enclaves or the neglect of more 'difficult' sites.

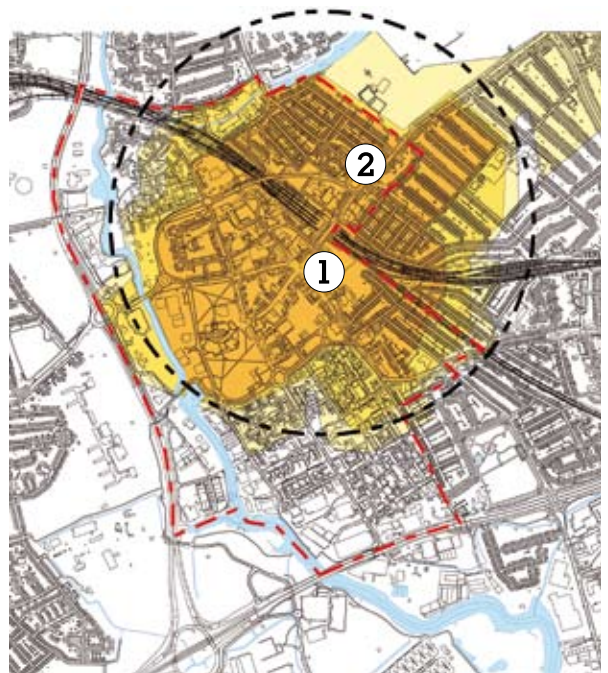
Specifically, consideration should be given to the long-term effects of emerging housing typologies where small dwellings may only house a shifting dormitory population with resulting damage to social cohesion, social provision (of schools and other amenities) and the local economy.

It is apparent that the government's preferred method of calculating density in dwellings per hectare only works when considering uniform house types, but not does not encourage variety of unit sizes and falls short of defining wide-ranging social policies in housing and urban density. A more refined measure of density would be to set habitable rooms per hectare.

While densifying urban areas that are close to transport nodes makes sense in terms of mobility, more refined criteria are needed to balance mobility with other factors contributing to quality of life.

The Density Matrix poses its own problems. Dependence on variables such as PTAL has several shortcomings. Despite the importance of connectivity in considerations of density, the three segments of PTAL, especially PTAL 4-6, in the Density Matrix allow for a very wide range of densities. Moreover, the 'settings' (central, urban and suburban) are not well-defined either in the London Plan or in Barking and Dagenham's LDF and appear to be applied arbitrarily to promote some areas and not others.

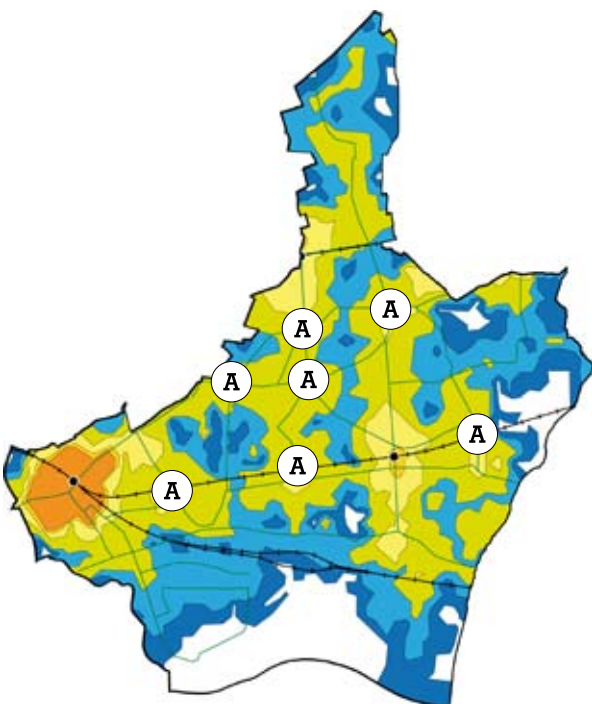
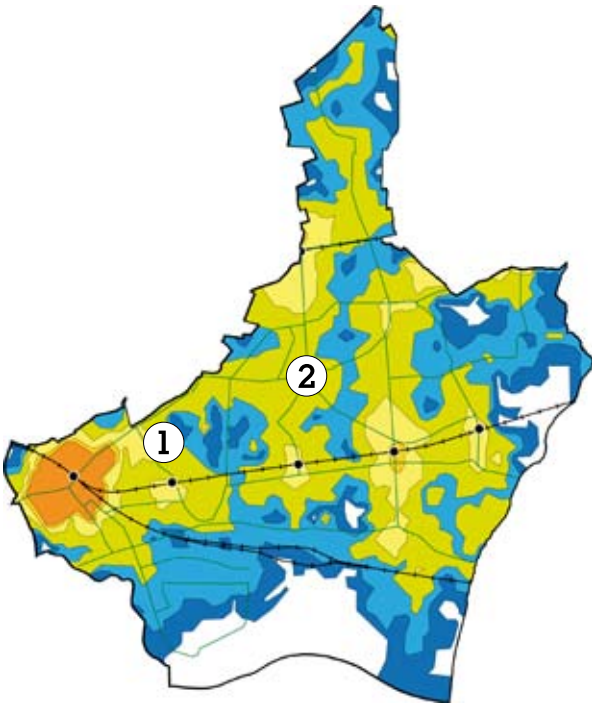
These two factors affect the existing typology of the areas while trying to tackle the problem of intensification. Furthermore, the Matrix promotes the use of the crudest measure of density, dwellings per hectare, which inhibits high quality design and space standards for appropriate typologies.



18 Barking Town Centre – PTAL Map

While the PTAL criteria should not be abandoned they should be refined to pay regard to other factors such as alternative transportation, amenities, green spaces, environmental quality, social provision, communications.

In this regard what might be the future of the Becontree Estate? There are undeniable problems including the low density, lack of diversity in housing types, loss of amenities from the centre of the estate and the piecemeal disposal of and alterations to the houses. But there are significant good points on which to build. There are good public transport connections, notwithstanding its low PTAL score and 'Suburban' setting, good school provision and ample open space. The housing is fundamentally sound.



19 LBBD – PTAL Map

20 LBBD – PTAL Map A= Potential nodal areas for densification

A comparison of the space standards proposed by the Borough of Barking and Dagenham and those adopted by English Partnerships and the East Thames Group (as well as typical figures for much of the rest of Europe) calls into question the justification provided for current minimum standards in the Borough. If the goal of the standards are to ensure that ‘everyone has the opportunity of living in a decent home’ and to ensure that new housing is environmentally sustainable by ensuring adaptability and a long life, one is led to question why there is such a discrepancy between Housing Association standards and those for the private market (LBBD 2007). In addition, when compared to historic and international standards, the standards set by the Borough appear increasingly unlikely to be able to meet the housing needs of the future (or even the needs of the present). Considering that East Thames Group builds a significant amount of housing within the borough and their space standards provide a significant degree of flexibility, it would be beneficial for the Borough to adopt similar standards if they hope to provide housing that meets the needs of the present while allowing for adaptability in the future.

- Proposed Standard:
- 1 Bdrm/2 Person Home: 45 – 55 m2
 - 2 Bdrm/3 Person Home: 60 – 65 m2
 - 2 Bdrm/4 Person Home: 70 – 80 m2
 - 3 Bdrm/5 Person Home: 85 – 90 m2
 - 4 Bdrm/6 Person Home: 95 – 100 m2

It is proposed that LB BD reviews its regeneration strategy over the whole Borough to include the Estate and to put in place a scheme that promotes, at the macro-level, increased densification with respect for existing typologies and an aim to increase the population by 30,000; and at the micro level, policies to mend and make good the fabric of the Estate.

21 Refined Density Matrix
This matrix uses a “Typologies” variable instead of “Setting”. PTAL margins have been refined, high and low ends of U/HA number have been constrained.

Indicative Average Dwelling Size								
Typologies		Detached and Semi – Detached	Semi – Detached w/ Terraced	Terraced w/ Semi – Detached	Predominately Terraced	Terraced w/ Flats	Flats w/ Terraced	Flats
Public Transport Accessibility level (PTAL) (6 represents a high level of accessibility and 1 a low level of accessibility)	0-2	10-20 u/ha	20-40 u/ha	20-40 u/ha				
	3-4	15-25 u/ha	25-45 u/ha	25-50 u/ha	50-100 u/ha	100-150 u/ha	150-240 u/ha	240-350 u/ha
	5-6			30-60 u/ha	60-150 u/ha	150-240 u/ha	200-300 u/ha	300-400 u/ha

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