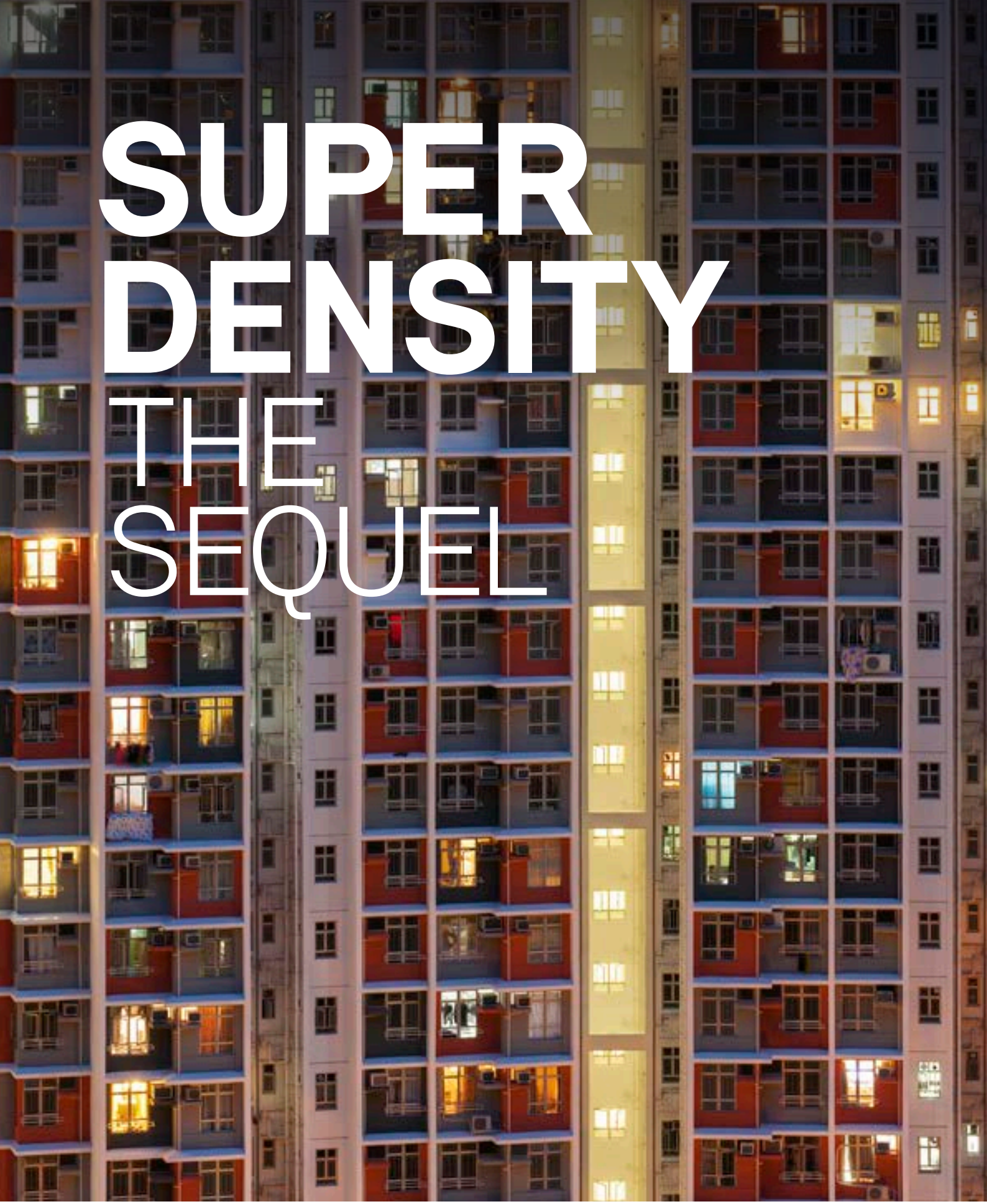


SUPER DENSITY
THE SEQUEL

hta Levitt Bernstein Pollard Thomas Edwards PRP

2015

SUPER DENSITY

THE SEQUEL

Contents

MATT COOPER - LONDON

Foreword

Peter
Murray

The survey carried out by New London Architecture and GL Hearn in 2014, which revealed the number of tall buildings to be built in London, prompted considerable debate about the future shape of the city, its skyline and the quality of the places created at ground level. The debate frequently polarised into those who liked tall buildings and those that didn't.

The answer is not a question of either/or; as this excellent study illustrates taller buildings do have a role within well-connected developments, provided they are integrated with other building types and contribute to the creation of successful streets and other public realm.

The NLA research showed that some people want to live in taller buildings, but the majority do not. Thus a mixed mode strategy with mid-rise development as the preferred solution to London's housing needs is eminently sensible and democratic.

I welcome the serious work that HTA, Pollard Thomas Edwards, Levitt Bernstein and PRP have put into this research. There is a paucity of thinking on the topic of density. Half a century ago Lionel March and the Land Use and Built Form department at the University of Cambridge laid down the ground rules for lower rise high density development, and Sir Richard MacCormac carried out ground-breaking work on perimeter housing in Merton, following the principles set out by March. The architectural profession does not do enough to promulgate the benefits of its research and experience. This report is a welcome exception.

At a time when London is gearing up for a Mayoral election and the Greater London Authority is starting work on the new version of the London Plan, this study provides much food for thought as well as eminently sensible ways of shaping a liveable city.

Peter Murray is Chairman of New London Architecture and of The London Society

Introduction

Since our four architectural practices came together to publish the first *Superdensity* report in 2007 (*Recommendations for Living at Superdensity*) many of its recommendations have become accepted best practice. However, the intensity of development in London continues to increase, in some cases way beyond the densities envisaged in our earlier study, and as such we feel it is time to both restate those principles and air emerging concerns. The proliferation of tall towers is one controversial aspect of this trend, but not the only one.

We are concerned about the immediate social and environmental impacts of very dense developments and their long-term sustainability. We also observe that this new superdensity – which we've dubbed hyperdensity when it's over 350 homes or dwellings per hectare - derives, not from London's distinctive and popular urban forms, but from global development patterns. We may well ask, is London becoming a victim of its own success, meeting demand by sacrificing the very distinctiveness which makes people want to live and work here?

Though the rash of tall towers is a concern, this report is not another campaign against those *per se* – that genie is out of the bottle. Rather, it gives positive guidance on how to combine ambitious densities with popular and familiar urban forms.

Building on our first report, through a series of essays and case studies, we show that it is possible to create successful places based around streets and a variety of urban typologies, including houses and medium-rise apartment blocks, as well as some carefully integrated taller buildings.

We show that densities up to around 350 homes per hectare can be achieved in this way (corresponding to the top of the London Plan Density Matrix at 1,100 habitable rooms per hectare for central well-connected sites). Above that, we believe there should be a presumption against development, and that any exceptions should be subject to much more rigorous impact testing.

From Superdensity to Hyperdensity?

The pace and extent of change to London's physical fabric is greater today than at any time since the era of post-war reconstruction. In 1981 London's population was 6.8 million – today it is 8.3 million and predicted to reach 10 million by 2031. London's success in attracting people and money creates a tremendous challenge for the provision of additional homes and infrastructure and inevitable pressure to increase development densities.

It is against this background that our group of four architectural practices, specialising in housing and neighbourhood planning, is publishing further guidance and observations about how to create more and better homes for Londoners. The practices have been at the forefront of housing debate, design and delivery for 40 years or more, and are currently delivering a significant proportion of London's supply of new homes. We are therefore able to take a long view, and to bring experience from across the whole spectrum of housing by type, location and tenure. We are creating homes for all sorts of people: young and old, wealthy and poor, singles and families.

In 2007, *Recommendations for Living at Superdensity* was published by Design for Homes with support from the NHBC and Design for London. This intervention was triggered by a shared concern that the density of residential development was increasing rapidly, but without a widespread understanding of how to create high density developments which would be successful in the long term – and how to avoid repeating past mistakes. We defined the threshold for superdensity as 150 homes per hectare (around 450-500 habitable rooms) or above. These figures are reflected both in past planning policies for central London and in the current London Plan.

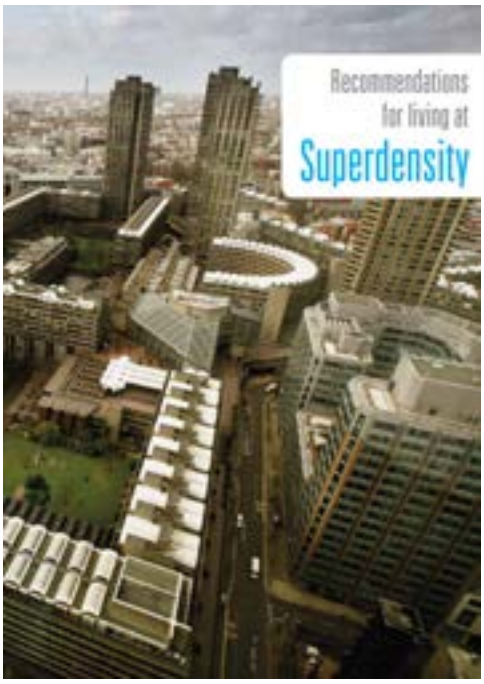
Planning authorities have started to approve residential developments far denser than those we considered in 2007 – we refer to these as 'hyperdensity'. For example, Wood Wharf, next to Canary Wharf, will contain around 3,100 apartments at a density of 436 homes per hectare. It features a cluster of tall residential towers peaking at 57 storeys. Smaller developments, with more tightly drawn site boundaries, can work out at over 1,000 homes per hectare – more than double the maximum envisaged by the London Plan matrix.

The original Superdensity report

We provide in the Appendix a summary of the recommendations in the *Superdensity* report. The issues identified then are even more relevant today, and it is striking to note that the predicted need for additional homes in London has increased since then from 31,000 a year to 49,000.

Superdensity set out a series of recommendations under 10 headings. Seven of these were about design, and we were pleased to see most of our suggestions taken up in the Mayor's London Housing Design Guide and subsequently in SPG 12 of the London Plan. Although we don't agree with everything in SPG 12 we acknowledge that it is succeeding in raising the quality of housing and in harmonising standards across the capital. (Our reservations are that some aspects of design which we regard as good practice in most situations have been elevated to the status of strict rules in all situations – this is leading to a certain rigidity and homogeneity of design solutions.) It is time for a review of the impact of the guidance, and potential adjustment to some its provisions. This will now be happening in the context of the National Housing Standards Review.

The other three sections in Superdensity (chapters 4, 9 and 10) were about the related topics of management, procurement and cost-in-use. Although these continue to be widely debated within the housing industry they hardly feature in the London Plan, and there is not the same clear consensus about good practice or any of the same impetus to implement them in practice. (More recently the Mayor's Private Rental Management Regime is a welcome attempt to establish common standards in that sector.) As the density of new development continues to rise, its long term sustainability becomes increasingly dependent on effective structures of ownership, management and funding of services.



SUPERDENSITY REPORT 2007

THE FIRST DRAFT CONSULTATION OF THE LONDON HOUSING DESIGN GUIDE 2009

PORTOBELLO SQUARE, KENSINGTON

Superdensity: the Sequel

This new report, *Superdensity: the Sequel*, consists of a series of short essays and case studies which show how patterns of development in London have evolved since the first report was published and offers some ideas about the way forward. It does not revisit the design guidance in the original, which we think still holds good and is now widely accepted and practised. The new report does not try to be comprehensive. For example, it does not deal with the hugely important subjects of utilities, transport and community infrastructure. Rather, it aims to provide some fresh perspectives on how to create successful homes and places at high densities up to around 350 homes per hectare.

Although London is the focus of this report, the observations are relevant to other UK cities, and hopefully will become increasingly applicable as and when economic growth starts to exert development pressure more evenly across the country.

The first essay is called *How Dense Can We Be?* It shows just how far and how fast things have changed since our previous report. It concludes that there are many ways of creating more and better homes in London on previously developed land and at moderate height – before we resort to high-rise or Green Belt release. The public debate about housing supply and design has tended to polarise between those who think towers are the solution and those who believe that London should be allowed to spread outwards. We believe that both solutions have some part to play, but neither is the only answer or the best answer. Our case studies show that there is lots of scope to create high density places within existing neighbourhoods and with a creative mix of typologies and building heights.

The second essay is called *Street Life at Superdensity*. It expands on the importance of thinking about our streets and public places as the setting for civic life and for the (mostly) private structures which should form the background to public space. It emphasises the primacy of the spaces-in-between and the limitations of the 'object building'. In this context, the question is not whether high-rise is appropriate to London, but how and where to combine different urban forms in relation to our street network.

The third essay is called *Creating Mixed Communities at Superdensity*. The integration of market housing with subsidised housing is enshrined in policy and good practice and is one of the things which makes London distinctive and different among world cities. It is relatively easy to create mixed neighbourhoods at low and medium densities, and the traditional London street house and mansion block are proven models of how to do it. However, it becomes progressively harder to do as densities rise, building heights increase and the spaces in between are squeezed. This piece looks at how good design can facilitate the integration of diverse households and can accommodate different tenures, levels of wealth, cultures and household size. It also considers whether integration is actually practicable and sustainable in high-rise development.

The final essay, *Managing Superdensity*, comes back to the growing importance of management strategies in sustaining successful places and the related issue of service charges. Denser (and especially taller) development requires more management and therefore more cost to be passed on to the occupier. How can we design and manage high density developments to keep cost-in-use under control? What are the implications of rising costs for residents on lower incomes – and is there any justification for 'poor doors'?

We conclude with some case studies showing recent and current projects which address all of the issues above. The projects are in London and the South East and involve neighbourhood-scale interventions combining mixed-tenure homes, public space and other community infrastructure. All achieve densities of between 150 and 350 homes per hectare, using mostly mid-rise typologies, combined with elements of low-rise housing and some carefully located taller buildings.

As they demonstrate there are many alternative ways to create more and better homes in London before we resort to building more super-towers or concreting over our open spaces.

Further Recommendations for Living at Superdensity

Here are our key recommendations for making superdensity work in 2015. More detailed exploration of the issues and guidance is interwoven into the topic-based essays which follow and the case studies.

1 **Adopt mid-rise development to meet London's housing needs:** apartment blocks of between five and eight storeys, including family apartments and duplexes, create successful homes and neighbourhoods at surprisingly high densities, are cost-effective and perpetuate the character and street life of London. Creative combinations of mid-rise mansion blocks with taller elements can make room for family houses within high density neighbourhoods.

2 **Resist 'hyperdensity':** there should be a presumption against 'hyperdense' developments over 350 homes per hectare, which should be confined to exceptional locations and subject to exceptional justification. At these densities, and even with the best practice approach we advocate, it is very difficult to create the conditions that allow mixed communities to thrive. The Mayor's new Housing Zones should not become populated with such hyperdense schemes.

3 **Integrate towers with street-based typologies:** taller buildings do have a role within well-connected developments, provided they are integrated with other typologies and contribute to the creation of successful streets and other public realm. We must avoid trophy towers dropped at random into our unique city: they are alien to our street-based culture, socially divisive and make little contribution to meeting London's housing needs.

4 **Promote street life:** the streets and squares of London provide an unbeatable model for successful urban living and are the envy of the world. We need to continue this tradition of urban place-making, ensuring all new development begins with a coherent strategy for the public realm.

5 **Build on London's tradition of mixed communities:** unlike other global cities, London's residential neighbourhoods have evolved by successfully integrating diverse people of different income, age and household size. Larger developments should contain a balance of homes for families, the elderly and young people.The economic and social health of our city requires it.

6 **Provide a wider range of housing typologies:** planning policies and standards are focused on conventional models of permanent housing for long-stay households. We also need alternative types of housing design and tenure to attract and retain London's young mobile workforce.

7 **Harness space above public buildings:** recent precedents show that successful new homes can be built above schools, libraries, shops, cinemas and workspace. There is much more scope to exploit air-rights to meet housing need and intensify street-life - including making better use of public-sector land.

8 **Design for management:** intelligent management plans are essential to avoid future social and management problems in high-density housing. We need to balance capital and maintainance costs through tighter specifications, closer collaboration with suppliers and early involvement of housing managers in the design process.

9 **Make service charges affordable for all:** very dense developments, and especially tall towers, have higher management and maintenance costs than other typologies, and create more intense pressure on shared space and infrastructure. More rigorous projections of service charges are required to ensure that dense developments pay their way, but do not become unaffordable for future occupiers.

10 **Develop new funding streams for long term management:** we should under-write the long-term management of shared space and community facilties through capital endowments at planning approval stage and ring-fencing income from ground rents.

And finally, let us not give in to collective amnesia. We have spent the last 30 years trying to understand and correct the mistakes of post-war development. Let's use this knowledge and not repeat the same mistakes.

How dense can we be?

We are sleep-walking into hyperdense development without proper regard for the long-term consequences. Mid-rise street-based alternatives can meet all London's housing needs and create popular and sustainable places

There is massive unmet demand in London and the South East for more homes and better homes and the community infrastructure required to create successful neighbourhoods. This essay will provide some historical perspective to the debate about housing supply, and will touch on the wide range of possible solutions. Our message is that there are many answers – and growing up (meaning tall buildings) and growing out (meaning Green Belt release) are not the only solutions or the best ones.

The four practices involved in this report have been designing and delivering new and improved homes for over 40 years. In that period, we have seen a dramatic change in the intensity of residential development in London and in former market towns within London's orbit. You can see this most clearly in the typical height of new residential buildings. Just 25 years ago it was around three to four storeys. Today it seems that only 20 storeys and more is regarded as 'tall'. The illustrations which follow show the density of each example expressed in homes (dwellings) per hectare (dph), and show a range from just 12 dph for parts of inter-war Metroland up to 450 dph or more for projects emerging along the River Thames today.

For an explanation of how we measure density please refer to page 40.

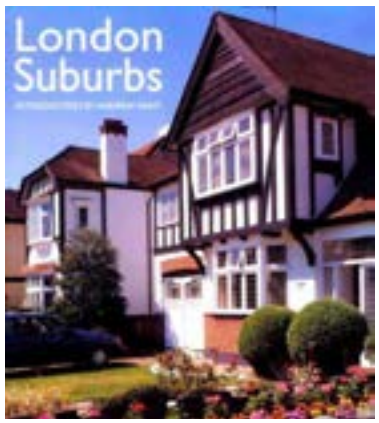
Garden suburbs and Metroland

We are hearing a lot about garden cities just now. Although the name has been hijacked by politicians to make the prospect of new settlements sound more palatable to rural electorates, the original garden suburbs and garden cities still have much to teach us. Property values in Hampstead Garden Suburb, Welwyn, Letchworth and Bourneville are higher than neighbouring areas with similar locational advantages. Their popularity reflects a deep desire for a traditional house, with front and rear gardens, enclosed by hedges and set on a tree-lined street. Architects tend to be disparaging about the merits of suburbia, but at a recent NLA symposium of urban housing specialists everyone present 'confessed' to living in a suburb.

The garden cities and garden suburbs provided the imagery for the massive 20th century expansion of London along new commuter rail and underground lines to create the stereotypical outer London suburb, marketed as Metroland by the Metropolitan Railway in 1915. They also inspired the New Urbanist movement in the 1990s, which gave us Poundbury, New Hall in Harlow and much of today's best practice in the design of new settlements and urban extensions.

The density of the garden suburbs and inter-war Metroland is typically between 12 and 25 dwellings per hectare. In a modest attempt to make more efficient use of land, from 2000 to 2010 national planning policy set a minimum density target of 30 dph. This was abolished by the new coalition government in 2010 as a nod to the shires. It was briefly the benchmark for new suburban development, and is a useful starting point for a short survey of the changing intensity of development in London.

Our view is that London's suburbs are a neglected resource. Smart thinking about property ownership, transport and housing typologies could bring about a new golden age of Metroland – preserving the greenery while creating many more homes and bringing obsolete housing stock into the 21st century.



DENSITY: 12-25 DPH
METROLAND

'Smart thinking about property ownership, transport and housing typologies could bring about a new golden age of Metroland'

DENSITY: 20 DPH
HAMPSTEAD GARDEN SUBURB

Inner London street houses

Back in the 1970s, our four practices restored hundreds of Victorian and Georgian street houses for housing associations - transforming the slums (as they then were) of Notting Hill and Barnsbury. Large houses built for single households at a density of around 30 dph had over time been broken up informally into small flats or single-room bedsits. Careful restoration and permanent conversion typically produced a garden maisonette for a family with a couple of decent smaller apartments above. In this way the density of whole streets could be tripled to around 90 dph with minimal external alteration.

Much quoted studies by the LSE[1] take the density of the grander traditional streets of Kensington and claim that London's backlog and future housing needs could be met entirely by developing the capital at an equivalent scale based on five to seven storey apartment blocks.

DENSITY: 1848 - 32 DPH / 1987 - 96 DPH
THORNHILL SQUARE, ISLINGTON: BUILT 1848, RESTORED & CONVERTED 1987

Mansion blocks

The mansion blocks of Bloomsbury, Victoria and Battersea tell a similar story. They belong to London's first (and still golden) age of purpose-built apartment block development, from Richard Norman Shaw's famous prototype of Albert Hall Mansions in Kensington built in 1876, up to the Great War. They typically produce around 200 dph, and are based on European patterns of urban living which often include large family apartments.[2]

Given their enduring popularity (and value) you might suppose that they would provide the ideal model for today. But, sadly, modern planning and building regulations outlaw some of the key design features that enabled Edwardian architects to create such opulent buildings on such small footprints. Apartments of this era typically offer spacious and bright front rooms with bay windows and balconies forming their distinctive street facades. Meanwhile the rear rooms are quite dark and have privacy distances way below current standards. To us it seems a satisfactory trade-off, which should be encouraged rather than prevented.

TYPICAL DENSITY: 200 DPH
EDWARDIAN MANSION BLOCK

Erasing the post-war estates

The post-war estates boosted housing supply by applying modernist planning principles to sites made available by the Luftwaffe and slum-clearance programmes. They were initially popular among residents (and we should not romanticise what they replaced), but many soon fell into disrepute because of poor management, demographic change, technical failure - and inflexible idealistic designs, which adapted poorly to changing circumstances. Residential towers became a symbol of failure. Although these estates often look big and forbidding they are actually quite low density – around 100 dph - because of large expanses of surface parking and amorphous open space.

Since the early 90s the four practices have been creating whole new neighbourhoods to replace big council estates, which have become hard to manage, hard to let and hard to maintain. We found that we could more or less match the existing density with a traditional compact streetscape, re-connected with its surroundings. Typically these regeneration projects combined new family houses and small blocks of flats, usually four-storey walk-ups, achieving densities of about 90 dph, with around 50% being houses, and up to 150 dph with a higher proportion of flats.

DENSITY: 1970 - 110 DPH / 2003 - 90 DPH
LEFEVRE WALK, BOW: REDEVELOPED 1993 - 2003

Urban Task Force and balanced communities

We experienced a big change in the late 90s – the time of the Urban Task Force and rapid house price growth. Quite suddenly we were building a lot of apartments at around seven storeys – and we set about re-inventing the London mansion block, which we continue to promote as a preferred typology for urban housing.

These projects achieved around 200 dph and consequently they required, but did not always receive, more intensive management of common parts and open spaces. They also involved a reversal of some of the lessons learned from the failure of the post-war estates: once again we were building underground car-parking and housing families in upper floor flats. This was also the period when mixed-tenure became accepted best practice, and the planning system started to impose a significant proportion of affordable housing on developments for market sale.

The combination of increased densities with 'mixed communities' highlighted the contrasting lifestyles and management demands of widely differing occupiers within the same development. This issue is even more challenging at today's superdensity and hyperdensity, and is addressed later in this report.

What's all too clear is that we can't surrender to collective amnesia. We have spent the last 30 years trying to understand and correct the mistakes of post-war development and it's imperative we use this knowledge and not repeat the same mistakes.

DENSITY: 292 DPH - ARUNDEL SQUARE, ISLINGTON

Global style for a global city

Fast forward to today, and all the talk is about tall buildings. The NLA's 2014 exhibition London's Growing Up! catalogued 236 towers over 20 storeys in the pipeline for the capital – defined as having planning permission or under construction. Less than a year later the figure was updated to 263, of which around 80% are residential-led. The fact that planning policies define tall buildings as anything over 30m (10 residential storeys) seems to have been quietly forgotten as 20-plus becomes the new normal. Meanwhile, the *Architects' Journal* Skyline Campaign laments the casual desecration of London's skyline and calls for more care in the location and design of tall buildings.

It isn't just about architecture. For the media, tall buildings have become a convenient symbol for the twin evils of foreign investment and bankers' bonuses. A scathing (but inaccurate) article in the *New York Times* (March 2014) imagined smug oligarchs looking down on ordinary Londoners from their penthouses in the Shard. Noel Coward put it rather more pithily in 1940: ''I don't know what London is coming to – the higher buildings, the lower the morals''.

The focus for these towers is on the south bank of the Thames and the Isle of Dogs, where they compete for international buyers. These high profile new developments emulate the urban forms of Far Eastern cities and are starting to approach their densities – over 400 dph, way above anything this city has previously known and a radical departure from London's established patterns of urban living and place-making.

'It is a myth that super-towers make a significant contribution to London's housing need'

The development of tall towers along the river is now a fact, and if London's economy continues to thrive there will be no going back. However, we are concerned that this laissez faire approach to densities will spread to London's Housing Zones and other growth areas. The first 20 Housing Zones are set to deliver 50,000 homes for Londoners over the next decade, and it is imperative that local authorities, designers and developers approach them with care and humility, creating places for people and avoiding seductive hype. Does anyone seriously believe in 'vertical villages'?

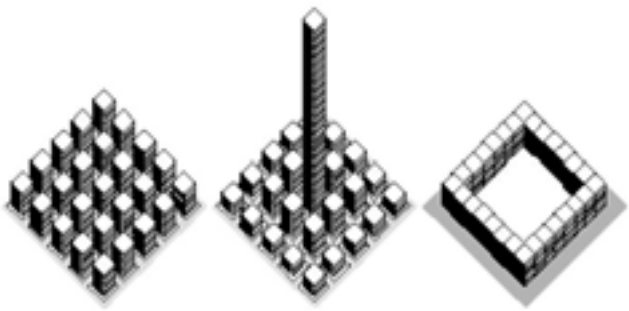
DENSITY: 500 - 2,000 DPH IN CENTRAL AREAS - HONG KONG

PROJECTED VIEW OF VAUXHALL NINE ELMS FROM MILLBANK

Objects and spaces: perimeter planning versus the point block

It is a common misconception that high density requires high-rise and precludes more familiar patterns of living. As every architecture student knows, tall buildings are not necessarily an efficient use of land. Lionel March's famous diagram, showing the same built volume arranged in three radically different forms, still has the power to surprise: the perimeter block, with spacious courtyard, provides the same floor-space as the tall tower, and has a better net:gross ratio and lower capital and lifetime costs.

While low-rise alternatives cannot compete with Hong Kong's tight cluster of towers, they can achieve much higher densities than might be expected.



LIONEL MARCH
ARCHITECTURE AND MATHEMATICS SINCE 1960

'We are concerned that this laissez faire approach to densities will spread to London's Housing Zones and other growth areas'

DENSITY: 436 DPH - WOOD WHARF, ISLE OF DOGS

Combining typologies to create new neighbourhoods

The 308-home Zenith development occupies a prominent corner site on the Edgware Road in Barnet, North London and is a good example of superdensity development responding to context and creating a sustainable place. Challenged to create a high-density residential neighbourhood in a low-density area of suburban houses and 'big-box' retail, the development achieves around 282 dph yet allocates over half the site to landscaped open space.

The scheme comprises a 16-storey tower complemented by six-storey mansion blocks wrapped around a garden square. Mews houses, each with an entrance courtyard and roof terrace, form a low-rise boundary to neighbouring suburban gardens.

DENSITY: 282 DPH
COMBINING TYPOLOGIES - ZENITH HOUSE, COLINDALE

Conclusions

There are many alternative ways to create more and better homes in London before we resort to building more super-towers or concreting over our open spaces. We are struck by how polarised and simplistic the debate has become. Some commentators declare themselves pro-skyscraper or anti-tower-block. Others are outraged at any suggestion of a Green Belt review and outward expansion.

It is a myth that super-towers (over 20 storeys) can make a significant contribution to London's housing need. When their overall impacts are fully considered they are an inefficient use of land, energy and other resources. Medium-rise urban quarters can create better homes and neighbourhoods at surprisingly high densities, and are more cost-effective than other solutions.

We go with the view that well-located clusters of towers, alongside low-rise development and open space, can boost regeneration. But we don't like trophy towers dropped at random into our historic city. Taller buildings do have a role within well-connected developments, provided they are integrated with other typologies and contribute to the creation of successful streets and other public realm.

Residential towers need more careful consideration than other typologies: where to locate them, what they look like and the much-publicised impact on London's skyline are just a few among many issues to consider, including management, microclimate and energy use.

At the same time, we believe that London's suburbs are a neglected resource. Smart thinking about property ownership, transport and housing typologies could bring about a new golden age of Metroland – preserving the greenery while creating many more homes and bringing obsolete housing stock into the 21st century.

If London is to evolve in a way that creates thriving communities, then planning policies and standards need to adapt too. At the moment they are focused almost exclusively on conventional models of permanent housing for long-stay households. Although these will rightly remain the priority, we should also consider alternative typologies to attract and retain London's young mobile workforce: micro-homes, cluster-homes and even temporary pre-fab cities. In accessible locations and with an effective management strategy, these could potentially be justified, as part of a balanced and affordable mix.

There are many other solutions besides 'growing up' and 'growing out' to create popular homes and neighbourhoods, which build on London's distinctive traditions of place-making and social integration. Our case studies seek to demonstrate this.

Recommendations

Adopt mid-rise development as the preferred solution to London's housing needs: mid-rise mansion blocks (5-8 storeys) including family apartments and duplexes, as well as smaller homes, should be the starting point for meeting London's housing needs.

Integrate taller buildings into mixed-density masterplans: taller buildings can form part of the solution when integrated with other street-based typologies and generous public realm.

Create mixed neighbourhoods by combining housing typologies: careful combinations of mid-rise and taller elements can accommodate low-rise houses within high density neighbourhoods.

Resist hyperdensity: there should be a presumption against very tall residential towers and hyperdense development over 350 dph.

Subject hyperdense proposals to more rigorous testing: very dense and tall development, including iconic landmarks, may be justifiable in some locations, but should be scrutinised more carefully for their impacts over a wide surrounding area.

Review planning policies and housing standards to allow more flexibility and encourage innovation: although the London Housing Design Guide has generally had a beneficial effect, it is too rigid and tends towards homogeneous solutions. We also need to promote new typologies to attract and retain London's young mobile workforce.

Superdensity and street life

One of the reasons London has become such a desirable destination for people from all around the world is our street life, which is so easily threatened by the move to hyperdensity

Walkable streets are our cities' greatest asset. The long and rich history of European urbanism has been, until the 1960s at least, predicated on the ordering principles dictated by the urban street. London's success in creating mixed communities and a lively mix of uses is the envy of the world. Here, streets are a means of comfortably juxtaposing diverse people, cultures, activities and, with appropriately sensitive urban design, a diversity in the scale of built form too.

Today, learning from the mistakes of post-war redevelopment, citizens increasingly demand that their city should be developed as an extension of the network of these streets. Citizens rightly object to the privatisation of public realm. They expect freedom of access to all areas on the ground that is in public ownership and that is policed by consent - ground that is by definition shared space and under collective control. We enjoy a sophisticated legislative framework which supports these principles.

NOLLI MAP OF THE CITY OF LONDON, BY UNIT 8 AT THE UNIVERSITY OF EAST LONDON UNDER THE GUIDANCE OF ALEX SCOTT-WHITBY

Citizens value street life

One of the reasons London has become such a desirable destination for people and their money from all around the world is that this powerful democratic principle instills order and a sense of safety and security. So London is once again attracting people in large numbers to come and stay, and young Londoners no longer flee to safer places to bring up their children. The resulting rise in population has reopened the discussion of density and in what built form to create new accommodation.

The debate has crystallized lately around the question of the suitability of high-rise housing and the current plans for more than 200 new residential towers in London, which many suggest would ruin the city's historic skyline. However, we believe this debate as to whether or not high-rise is appropriate in London over-simplifies another issue of equal if not greater importance. This is the question of where to locate different urban forms in relation to our street network in the interests of promoting street life.

The phrase 'street life' sums up in two words the essential focus for successful place-making. The phrase captures the human dimension; creating an environment that works for people; the fulfilment of the various public aspects of life as the paramount consideration for designers and developers of successful places - places that enable and support enjoyable human existence. Streets are the physical connective tissue that hold the city together, supporting not just movement but carrying essential infrastructure and providing access for repair and reconstruction - a mechanism that enables a constantly self-sustaining urban fabric. Thus 'street life' encapsulates all the key human and spatial ingredients of place-making.

A RANGE OF SCALES INTEGRATED INTO THE STREETSCAPE: AYLESBURY ESTATE

Mid-rise superdensity need not normally be exceeded

The examples we illustrate as case studies in this report indicate that at 150 to 350 dph, it's possible to achieve a desirable relationship between residential density and the intensity of street life. In fact, the places that result from this kind of built form and density can have the character that makes many established neighbourhoods of London, Paris and Barcelona so appealing.

It is at these densities that many such desirable locations achieve a perfect balance between public and private amenity, microclimate, biodiversity, the opportunity for mixed uses and human interaction.

'When the London Plan was first published it was evident that it lacked a spatial dimension... which would provide any kind of clear indication as to where to add density in the city'

All of these places are mid-rise neighbourhoods which can display a variety of characteristics from perimeter blocks with classically consistent cornice lines as at Portobello Square by PRP in West London, or more crenellated forms with occasionally taller elements and breaks in the building frontage as at the Aylesbury Masterplan by HTA. Either way, such is the potential of this scale of development that our base position is that it should not in principle be necessary to go outside it. Indeed, all of London's housing need could theoretically be met without ever going beyond this range of density and built form.

Tony Travers of the LSE has speculated on London's residential capacity if the whole city was redeveloped at the (ascending) average densities of Islington, Kensington or Paris – all popular examples of mid-rise. His conclusion is 10, 20 and 30 million people respectively.[3]

Design of the public realm and the dangers of hyperdensity

All our case studies share certain important common principles in the design of the public realm. Designing a successful public realm at superdensities can be especially difficult, as it involves designing the right kind of open space. Designers of public realm work with planting, manipulate the surface treatment of paving and ensure that the purpose of the space is clear and the detail and the boundaries are obvious, often from the material they choose.

Our case studies display clear and unambiguous definition at all the important spatial boundaries and clarity and continuity of the building line. There is carefully designed division between the private and the public, such as front areas or gardens and the pavement, and equally clear distinctions between space given over for movement of traffic and for landscape. In every scheme we illustrate, a place is found for a significant number of street trees.

And underpinning the successful design of public realm is a necessary technical understanding of how the servicing needs of the surrounding buildings are interwoven through space and beneath the surface and indeed in time. It is all too easy to undermine the success of a spatial design by failing to accommodate underground services, access for parking, refuse requirements or the need for adequate cycle storage. For success, these technical requirements and constraints must be fed in to the design process from the very beginning.

As our case studies demonstrate, it is perfectly feasible to comfortably accommodate these requirements at superdensity, that is between 150 and 350 dph, provided these principles are followed. Above this range it becomes increasingly difficult to accommodate more intense human activity comfortably and safely.

It is also a mistake to assume that the principles of perimeter block planning which work well at lower densities will be successful for over 350 dph. Designs at these hyperdensities risk forcing people towards kerb edges at the ground level and into conflict with traffic and each other through overcrowding. Equally, simply allowing a no-man's land of space between the public footway and the base of hyperdense buildings, cluttered with ventilators, planters, ramps and service access, is even less satisfactory.

Worse still, the absence of a coherent public realm, in neighbourhoods where significant new development has been stimulated, can create a confusing disarray of such unplanned spaces. The resulting townscape will feel desolate and windswept in its failure to enclose space and engage people.

Where the ground space is in intense demand, around transport hubs for example, success lies in making a generous allocation of comfortable sheltered space. This space needs to be safe from traffic and removed from noise and fumes. Wherever there is a high intensity of commercial, retail and leisure use, pavements can become so overcrowded that pedestrians jostle in dangerously uncomfortable proximity to busy traffic. Here the challenge is to create more high quality outdoor space to accommodate pedestrian movement and provide a suitable environment for people to sit, rest or enjoy café life, free of noise and pollution. Courtyards, arcades, canopies, loggias, belvederes and terraces are useful devices to achieve this and these should be designed bearing in mind orientation, aspect and shelter to create a comfortable microclimate.

'Hyperdensity, with a predominance of tall buildings, should be confined to exceptional locations'

The optimum relationship between density, footprint and the mix of different uses, will produce a successful balance between the intensity of street life and the public realm to accommodate it.

Where tall buildings form a considered part of the overall townscape, the way they meet the ground is especially critical. The arrangement should allow sunlight to penetrate and views to be glimpsed from surrounding approaches. The form of tower structures therefore needs to be slender with adequate space between. Windbreaks should be incorporated at about second floor level to deflect downdrafts and provide shelter from rain for café goers and shoppers. Central St Giles, in central London, designed by Renzo Piano, is an excellent example of this principle. Carefully designed towers can enliven the space at their base, disgorging occupants at ground level so as to contribute custom to shops, cafes and services. Clusters of such towers should be composed with the tallest at the centre of the group, falling away to the edges.

PUBLIC REALM: AYLESBURY ESTATE

‘Above the range of 150 to 350 homes per hectare it becomes increasingly difficult to accommodate more intense human activity comfortably and safely’

The robust simplicity of successful mid-rise neighbourhoods

The design of the public realm has the job of successfully spanning extremes of usage at the same time as holding a neighbourhood together, creating a recognisable language of materials, details, hard and soft landscape that is familiar, legible and identifiable with the location. The design of the public realm contributes powerfully to a coherent sense of place capable of communicating its identity as an attractive destination to live, work or play.

Robust simplicity is the way to achieve the integrating function of well designed public realm. A high quality pallet of durable materials with simple delineation of space allocated to different functions works best; over-elaborate geometrical design creates confusion and is hard to maintain. But perhaps the most important ingredient is the successful integration of substantial elements of planting. It is especially effective in the early days of creating a desirable destination for newcomers to be struck by the sense of established well-being that is imparted by substantial and mature greenery.

The question for our urban planners is where to locate different urban forms in relation to our street network, and the task is one of creating liveable, safe, sociable and self-sustaining neighbourhoods.

When the London Plan was first published it lacked a spatial dimension, based on urban design analysis, which would adequately indicate where to add density in the city. The London Plan Density Matrix is a good start, but the Public Transport Accessibility Level (PTAL) on which it is based, does not take account of the full range of issues which bear upon good place-making. Indeed, it could be revised substantially to allow higher density in some areas, particularly by recognising the potential for cycling to shrink distances.

A place-making analysis, with a particular focus on improving the environment for pedestrians at ground level, permitting the quiet enjoyment of pavement and public realm in a suitable microclimate, can justify taller buildings in exceptional locations of high value and intensity. But if this is to enliven street life, promoters of urban intensification must put in place a robust public realm strategy as a pre-condition for higher density development on specific sites. Not to do so is to court disaster as site owners seek to exploit potential value. At the same time, we believe our case studies make the case that for most purposes, superdense schemes of between 150 and 350 dph, in mid-rise configurations of built form, can perpetuate the character of city we have come to love at the same time as accommodating all our future needs.

CENTRAL ST GILES COMBINES SUCCESSFUL PUBLIC REALM WITH TALL BUILDINGS

Conclusions

Our street network and our tradition of street life are the European city's greatest assets. London's success in creating mixed communities and a lively mix of uses is the envy of the world. The phrase 'street life' sums up the essential focus for successful placemaking; creating an environment that works for people, while meeting the physical and servicing needs of the city.

Our case studies show that superdense schemes of between 150 and 350 dph, in mid-rise configurations of built-form, can perpetuate the street life and character of London while accommodating all our future needs.

Such is the potential and flexibility of this scale of development that all of London's housing need could theoretically be met without ever going beyond this range of density and built form. Hyperdensity, with a predominance of tall buildings, should be confined to exceptional locations and subject to exceptional justification.

It is at mid-rise densities that many characterful locations achieve a perfect balance between public and private amenity, microclimate, biodiversity, the opportunity for mixed uses and human interaction.

It is a mistake to assume that the principles of perimeter block planning, which work well at a wide range of densities, will be successful over 350 dph. Designs at these hyperdensities tend to lead to a degraded ground plane, with a poor microclimate and conflicts between people and vehicles.

Where large-scale new development at high density is being promoted, it is essential to start with a coherent public realm strategy. Otherwise we risk a confusing disarray of badly connected spaces and a desolate townscape, which fails to enclose space and engage people.

Recommendations

Design for street life: buildings should create and reinforce liveable, safe, sociable and self-sustaining street networks, facilitated by the early definition of a robust public realm strategy, preferably with statutory status.

Design robust public spaces: public realm should comprise a high quality pallet of durable materials and easily-maintained planting, with simple delineation of space allocated to different functions.

Design towers to enhance the ground plane rather than blight it: where tall buildings are proposed, they should be slender and well-spaced to admit daylight, sunlight and views.

Design for tempered microclimate: where tall buildings are proposed, windbreaks should be incorporated to deflect downdrafts and provide shelter from rain. Clusters of such towers should be composed with the tallest at the centre of the group, falling away to the edges to deflect wind upwards.

Refine the London Plan through spatial analysis: a thorough urban design analysis should inform strategic decisions about the location of higher density - and especially hyperdense - development. This should consider impacts over a wide surrounding area.

Creating mixed communities at Superdensity

Diversity brings untold physical, social and economic benefit and we value it as a hallmark of a vibrant place and a civilised society. It is one of the attributes for which London is internationally renowned and yet we risk losing it, perhaps in the course of the next 20 years

A city for everyone

London has always taken pride in being a city for everyone: to visit, to use and to live in. Until relatively recently, the city's housing stock has been as diverse as its citizens. Young and old, singles and families, rich and poor and people of all ethnicities have coexisted within neighbourhoods to create rich, naturally evolving, mixed communities. This diversity brings untold physical, social and economic benefit and we value it as a hallmark of a vibrant place and a civilised society. It is one of the attributes for which London is internationally renowned and yet we risk losing it, perhaps in the course of the next 20 years.

Spiralling density, fuelled by an acute housing shortage and soaring land value, has led to an unprecedented price hike - jeopardising the principle of mixed communities. As house prices have risen, the provision of affordable housing has plummeted and it is now much harder to move into London, or to trade-up within it. Even in outer areas like Waltham Forest and Enfield, prices are now beyond the reach of many ordinary Londoners. Families who want a house with a garden have to settle for a two bedroom flat and face on-going affordability issues because of service charges they can't control.

STREET-BASED, MIXED-TENURE HOMES: OCEAN ESTATE, TOWER HAMLETS

Young, single professionals face similar exclusion from the London housing market. Twenty years ago it was normal to share a flat or a house through university and for a couple of years beyond that. Now, a large proportion of young, single professionals are flat-sharing into their late thirties and even forties – some even sharing rooms into middle age with life-limiting consequences. 'Want to buy but forced to rent' is the predicament for a hidden number who are not officially 'homeless', but are without a home.

Only politicians can solve these huge, underlying problems but part of the solution is to ensure that every sizeable development supports diversity. A good brief is one that demands a wide range of dwelling types – designed to address diverse needs and circumstances. Mixed use, mixed tenure and mixed typologies for mixed income households are the basis of a mixed community. Ensuring that these spaces - housing and non-housing, indoor and outdoor - are of a high quality and remain flexible and manageable over time will secure their future, and the future of the city.

Catering for families at superdensity

Although terraced housing is still the most appropriate contextual approach in many residential London streets (and what most families want) it is not an answer to superdensity. Above 100 dph, flats inevitably predominate. The vast majority of new London development now consists of one- and two-bedroom flats with a token number with three bedrooms. The internal layouts are largely generic – open plan living with windowless kitchen and bathroom adjoining the corridor or deck, and the frontage reserved for bedrooms and the living space. It's easy to overlook the fact that an increasing number of flats, even the smaller ones, are actually family homes. There is a pressing need to consider 'family friendly' alternatives with better forms of private and shared outdoor space that make maximum use of roofs, courtyards and raised gardens above commercial or other street-level uses.

Notwithstanding the complexities of stacking different dwelling types, two- and three-storey duplexes work well at the base of flat blocks and, with individual street entrances and small gardens, function much as houses. As duplexes, they are also useful at the top; the roof can be articulated to create more interesting homes as well as a more interesting street, and there is obvious potential for an outdoor terrace rather than just a balcony.

We are increasingly incorporating duplexes on intermediate floors as well. Externally, they are an excuse to break up the massing and introduce a different pattern of windows and balconies, and internally they let us play with volume. They, too, feel more like a house.

At Bermondsey Spa, double-stacked, family-size, affordable walk-up duplexes create an appropriate urban scale in a narrow 'pedestrian street'. Each pair of three-bedroom homes houses 10 people – two more than the stack of four one-bedroom flats that would have been possible in its place. This solution required less parking and, in terms of capacity (measured as people/hectare) is actually a 'higher density solution' despite being half the density in terms of homes her hectare. It is regrettable that housing targets are always expressed in terms of homes or dwelling numbers: when the pressure is on (and when is it not?) small units win every time. Policymakers should measure density, and set targets as bedspaces per hectare and consider requiring a proportion of family homes to be built as houses or duplexes. These two simple measures would help to retain the city's character while addressing the aspirations of families.

FAMILY, STACKED DUPLEXES: ST JAMES SQUARE, BERMONDSEY SPA

Nonetheless, flats are likely to remain the predominant form of new high density housing and we need to develop solutions that work better for a wider range of people. The GLA's recent drive towards dual aspect homes has contributed to a revival of deck access. As well as improving ventilation and reducing overheating, this has moderated the density being achieved by the double-loaded corridors that threatened to become the norm until 2011. External circulation is often a nicer way to 'get home' – you stay outside until you reach your front door and enjoy

closer contact with the wider world. When properly secured, and wide, but not too long, these 'above ground pavements' can be convivial spaces too; you are somehow much more likely to stop and chat with neighbours on an open gallery than in a hotel style corridor where talking isn't really what you do.

A slightly different approach was taken in the first phase of the redevelopment of the Aylesbury Estate in South London. The 'central corridor' was widened to become a 6m wide linear atrium, criss-crossed by short bridges linking galleries, and full of climbing plants. Top-lit and unheated, this solution also achieved natural cross ventilation – a real plus in a dense, urban environment.

ATRIUM ACCESSED APARTMENTS: ROFFO COURT, AYLESBURY ESTATE

Internal layout

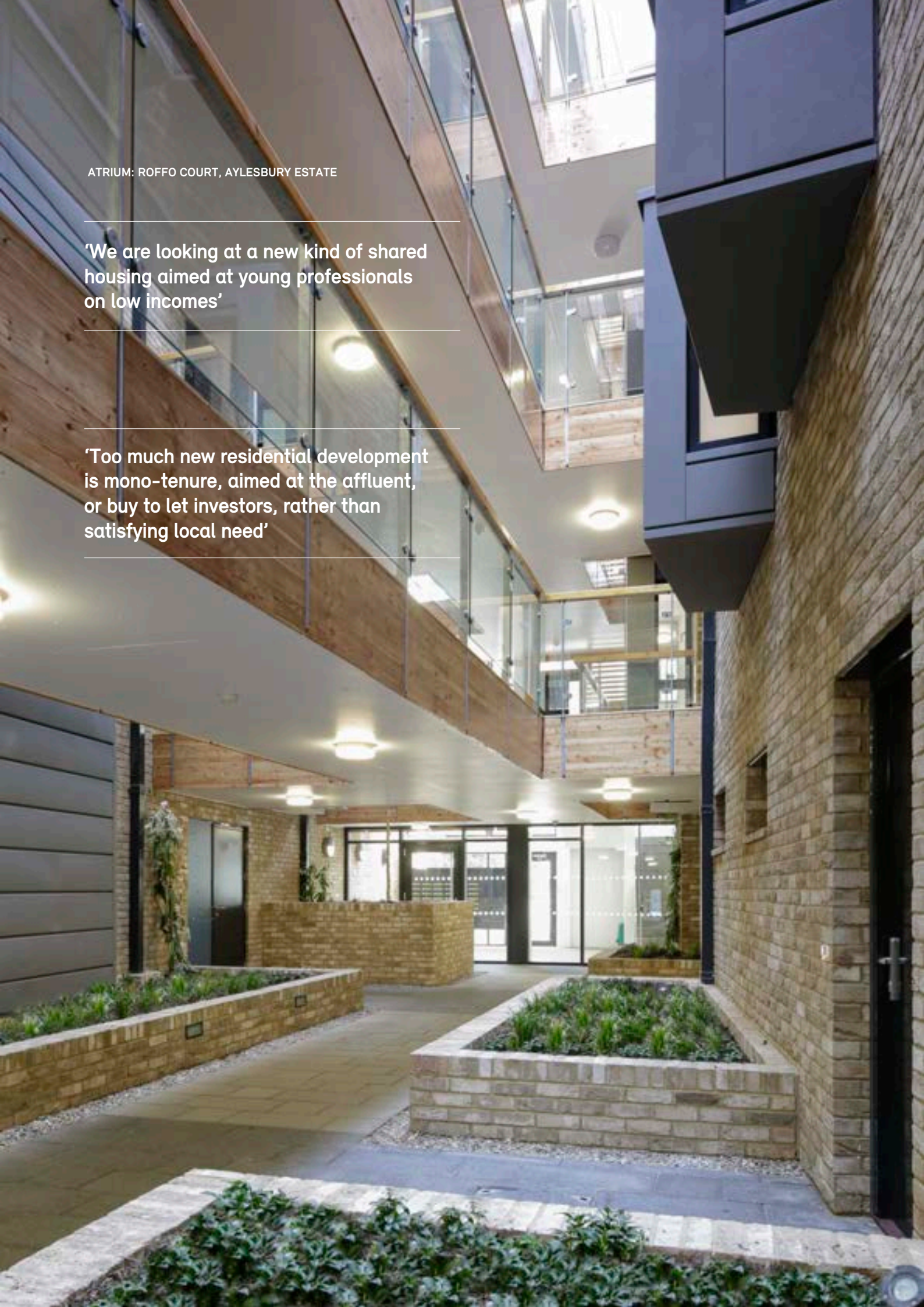
Many of the detailed internal recommendations made in Superdensity still stand. In fully occupied flats with two double-bedrooms, no one gets any space to themselves so we advocated more flats with a double and two singles - with large single bedrooms to take pressure off 'cooped-up' siblings. We recommended utility space for larger families - because drying washing is such a problem with no garden - and extra internal storage - because external storage is rarely feasible. We also recommended that affordable dwellings should have a separate kitchen/dining space to allow people to do different things at the same time. We think it essential to incorporate these features wherever possible – minimum standards are, after all, just a starting point.

Layouts in which partitions can be easily removed (and/or reinstated) increase living choices and make life easier for wheelchair users. We think carefully about the overall layout and the room relationships. Is there a bedroom that could be opened up to the living space and used for play, dining or study? Would it be good to split the flat into two distinct zones - a family bit with all the social spaces and a private bit with the bedrooms and bathrooms? An extra door between the two might be very helpful where family members lead very different lifestyles – shiftwork is an obvious example, home-working is another.

The recent growth of the private rented sector (PRS) has spawned new flat layouts that offer distinct benefits for other tenures too. The 'dumb-bell' plan puts a bedroom and bath or shower room each side of the living space. Intended for young sharers, this could work surprisingly well for a family - separating kids' space from parents' space has many advantages and gives young adults, who need to stay at home through university and beyond, more privacy and independence. It's practical, too, for couples who want separate bedrooms, friends or siblings who share for companionship when partners have left or died, and those who need a live-in carer.

At around £1,500 per flat, sprinklers are worth considering for the flexibility they permit and the peace of mind they provide when housing older or disabled people. Extra soundproofing between rooms, as well as between dwellings, is another simple way in which quality of life in a busy city can be improved. Tackling overheating will become increasingly important too. We may be losing the Code for Sustainable Homes, but we are still able to adopt the more valuable of its proposals.

SHARED APARTMENT (PRS) FOR FOUR PEOPLE



ATRIUM: ROFFO COURT, AYLESBURY ESTATE

‘We are looking at a new kind of shared housing aimed at young professionals on low incomes’

‘Too much new residential development is mono-tenure, aimed at the affluent, or buy to let investors, rather than satisfying local need’

Sharing space and combining uses

In Superdensity, we advocated mixed-use buildings while recognising that they present particular challenges. It is now rarely affordable or logical to build new stand-alone nurseries, schools or health centres in high density areas. London has a vast legacy of public buildings which are barely fit for purpose but which occupy prime sites. As individual practices, we have each created many successful, mixed-use buildings - putting housing above shops, community centres, sports and heath, and education facilities etc - often using cross subsidy from the residential element to part-fund the replacement of a tired, local facility.

Careful match-making is crucial. Living above a school would suit young professionals who don't return from work until the children have left for the day and the noise died down and it makes sense to house older people above health and community buildings. As public assets, it also feels right that these sites should provide public housing wherever that works.

FLATS OVER A SCHOOL: ST THOMAS' CE PRIMARY SCHOOL, KENSINGTON

Student housing and other forms of temporary accommodation are a good option in locations less suitable for family living. We are looking at a new kind of shared (cluster type) homes aimed at young professionals on low incomes. Typically, these would be small groups of two to six ensuite bedrooms, each with a 'front door', integral study and storage space and excellent soundproofing, linked to a shared living/dining/kitchen space - and with safe cycle space. The rent would be capped, they would be reserved for lower earners and restricted to a maximum tenancy period – hopefully long enough to scrape a deposit together. With no need for parking or private gardens, it makes perfect sense for this housing model to be tall, superdense and sit above something else - a supermarket or police station, for example.

Integrating housing for older people

Much has been made recently of the need to build more specialised housing for older people. While undoubtedly right for some, large purpose-designed blocks, complete with the sort of communal facilities and activities and on-site care traditionally associated with extra care housing, are only one answer.

In the first phase of redevelopment at Bermondsey Spa, a core of ten two-bedroom flats was allocated to a group of older people who needed to move to make way for the regeneration. With shops nearby and a health centre planned in the next phase, they didn't feel the need for communal facilities but wanted their own entrance and some sense of collective identity. Their flats have slightly bigger bathrooms and wider hallways (Lifetime Homes+), but not much more. Externally, they mirror the market-sale flats on the opposite corner – the only visible clue to any difference is that the older residents clearly have a little more time to tend the plants on their balconies.

This low key approach to accommodating older people within a mixed use, mixed tenure development was uncomplicated and has proved to be very successful in social terms; largely because they are so integrated. It could easily become part of a mainstream approach in all developments of 50 or more homes.

INTEGRATED OLDER PERSONS' HOUSING: BERMONDSEY SPA

Conclusions

London has a lot to offer and a lot to lose. It is here that the principle of mixed communities seems so valuable and yet so threatened. Too much new residential development is mono-tenure, aimed at the affluent, or buy to let investors, rather than satisfying local need. Affordable housing targets are too often waived, the principles of tenure blind development ignored, and gated developments permitted at the expense of normal street activity.

If London is to remain a city for everyone, we need to give more thought to the range and types of dwellings we provide within a development, how we combine uses and tenures, how homes are marketed and how charges are levied. Every neighbourhood, and most developments, should offer something for young and old, singles and families, rich and poor. The right mix makes the social and physical fabric of a place more interesting and more balanced and the finer the grain, the better the outcome.

We need to face up to the crisis facing young low paid professionals, the predicament of families and the lack of options for older people. We should look at ways to cross-subsidise the cost of building larger homes so that the burden is not carried solely by the purchaser, and find ways to keep service charges manageable - the subject of our next and final chapter.

And we need to tread carefully. A number of new developments that fall well within our definition of superdensity have already failed due to poor design, the wrong tenure balance, inadequate security and/or lack of good management and maintenance. At densities above 350 dph and even with the best practice approach we advocate, it feels very unlikely that we can create the conditions that allow mixed communities to thrive.

Recommendations

Create genuinely mixed developments: all sizeable new developments should make provision for young and old, singles and families, rich and poor. They should be mixed tenure and tenure blind supported by simpler and more realistic Section 106 policies.

Cater better for families: supported through planning policy, developments should include more homes with three or more bedrooms and provide a proportion of these as houses or duplexes. Family homes should offer at least one single bedroom and utility space or extra storage.

Set targets as bedspaces per hectare: if policy makers set targets by bedspaces, it would help avoid small, single person dwellings becoming the easiest, or only, way to achieve the required numbers.

Provide a wider range of housing typologies: layouts should be designed to respond to different types of need; including those of older and disabled people. New types of short-term, shared housing are urgently needed for young people.

Harness space above public buildings: more public buildings should have housing above, provided that the type of housing is compatible with the non-residential uses.

Design to promote social interaction and sustainability: solutions such as deck access and atria that promote the potential for social interaction and provide increased daylight, natural ventilation and passive ways to achieve year-round thermal comfort should be encouraged, alongside compact-core 'mansion block' arrangements.

Managing Superdensity

It is essential to design for cost effective management that can also help to reduce services charges in superdensity development - an area where more progress needs to be made

In recent history, the development industry has spent considerable resources on addressing the collective failure of the design, management and maintenance of tall buildings built in the 60s and 70s. We need to ensure that the current pressure to increase housing supply and maximise land use through superdense developments does not present future generations with a similar problem.

While there is much in the press around the rising costs of purchasing or renting a home, particularly in London, and the need to address affordability for first time buyers and the young, little is said about the rising management costs and the knock-on cost of service charges that impact equally on affordability. Yet, for example, service charges at the new Nine Elms Point, where densities are in excess of 350 dph are averaging between £2,250 per annum (studio) to £4,600 per annum (3B) in 2014[4] - a considerable monthly payment on top of a mortgage.

Service charges have historically been treated as an after-thought to the design and not given the early consideration they need in order to keep costs down. In the US and Scandinavia, the emphasis on service charges is greater. For example, in Sweden management costs are considered at the design stage and highlighted in front of the sale or rent prices as an indication of how well the scheme is managed.

However, while keeping the rising cost of management down is recognised as an increasingly critical issue by many housing providers, it is less of a concern for trading developers who develop and sell on. This tension needs to be addressed if we are to understand the influence of design choice and best value in terms of future management considerations and to meet the requirements of those living in flatted developments, currently 40% of London's current accommodation, or 500,000 leaseholders. In the London Assembly report[5], service charges were cited as top of the list of leaseholder complaints. Lack of transparency and control over who does the work were among a number of matters raised despite many managing agents promoting their services as 'highly transparent and open to leaseholder scrutiny'.

This final essay addresses the importance of understanding the various long-term management components at the design stage in order to minimise the complexity of maintenance in the future and to keep costs affordable for future tenants and leaseholders.

Social considerations

Diversity of tenure has increased in recent years with pressures on affordability, changes to funding new homes for rent and the availability of more intermediate market products. Developments can now include high-value sale units, mid-price sale, shared ownership, intermediate rent, market rent and affordable rent, which is presenting new challenges for how developments are managed. While affordable and intermediate tenures require service charges to be kept as low as possible, those in market sale properties may well be prepared to pay higher charges to meet their expectations of expensively finished common parts through 'discretionary' charges such as a 24 hour concierge.

ROBUST PUBLIC REALM: GEORGE STREET, CROYDON

A key issue that will determine the level of service charges is therefore the extent of tenure integration. Clustered units by cores or blocks facilitates easier management systems, enabling private developers and registered providers (RPs) to manage service charges to an appropriate level for their customers, and ensuring they are not paying for services they do not need or use. However, while tenure segregation and their different service requirements may simplify complex management arrangements, this may also undermine community cohesion. We are witnessing the return of the 'poor door' syndrome where separation of tenures is often distinguishable by the disadvantaged location and lower specification for the affordable housing provision, often in response to the demands of overseas investors and purchasers to keep affordable housing separate from their investments.

Tenure-blind developments can be achieved if there is agreement over design and management standards across the development. There are security and management benefits for integrating social housing into private sale and market rent; social housing residents tend to be around more in the day time providing community stability and continuity when owners and private renters are either not integral to the community or are more transient. This is evident at the Oval Quarter regeneration project in Lambeth, South London, where tenures are mixed by blocks and managed by a commercial managing agent which acknowledges the contribution that social housing tenants can play in establishing a sense of community.

To go down the route of greater integration, a strategic decision with developer partners has to be taken early in the design process. Issues such as the potential impact on values for the developer and common management standards need to be agreed up front. For example, closer integration of tenures through clustered units by core or block is easier to achieve in mid-rise developments than in high rise developments.

The Portobello Square development in North Kensington is a model example of a tenure blind approach, where homes for sale, shared ownership and rent are mixed by cores and are indistinguishable in the streetscape of this historic area of London.

The changing role of RPs from social housing providers to developers and managers of a mix of tenures including market sale presents new management challenges. Historically RPs have been able to 'blend' service charges across their wider portfolio, but as they become more engaged in the private market with the need for 'transparency of charges' to be provided to private residents, the custom of cross-charging between schemes or tenures to minimise service charges for affordable tenants will reduce. Offering a menu of services from which residents can elect the range of services they require as occurs in the private sector may become more commonplace. The upward pressure on costs due to the complexity of modern buildings, the need to employ billing agencies for district heating and the requirement for sinking funds for future replacement will require RPs to become increasingly commercial.

'Tenure-blind developments can be achieved if there is agreement over design and management standards across the development'

TENURE BLIND DEVELOPMENT: PORTOBELLO SQUARE, KENSINGTON

Design considerations

Designers and their clients should apply a sequential test to compare the cost and management implications for mid- and high-rise development of equivalent density before opting for a strategy for tall buildings. There should be an awareness that while it is possible to employ strategies to mitigate the costs of service charges for tall buildings, it is inevitable that for developments above 350 dph this will be far more challenging.

High-rise or superdense developments need responsive maintenance, concierge and caretakers and an adequate sinking fund to cover future repairs, as a minimum. Increasingly management teams in both RPs and commercial managing agents argue for the need to be engaged in the early stages of design in order to influence these future management arrangements and costs. This is particularly important when service charge costs are introduced in the initial tenancy agreement and therefore need to be considered before residents move in. However, when a private management company administers the service it is not uncommon for charges to be kept artificially low in the first year as some costs are being covered by defects arrangements - landscape planting, lift installation and so on - and therefore the real costs are not introduced until the second year, when they can rise considerably.

CONCIERGE: FORUM HOUSE, WEMBLEY

There is an increased complexity to all services in buildings, and this necessitates greater cost and specialist maintenance. High-rise development is inevitably more expensive to manage and maintain than lower-rise buildings, due to requiring more lifts, a higher proportion of communal areas to be cleaned, more sophisticated technologies for fire, window cleaning, security, pumped water supply, smoke ventilation, cladding systems and provision for safe access for maintenance. For some, the higher management costs associated with high rise are not a concern; to them, it is a life style choice and they are prepared to pay for good views, greater privacy, security, concierge arrangements and hotel style facilities.

GROUND LEVEL SERVICING: RUBICON COURT, KING'S CROSS CENTRAL

The national obligation to address climate change and the legislative framework for achieving this has led to more localised energy systems at the building, neighbourhood and district scale. This means greater complexity for both user and management and requires costly maintenance regimes provided by specialist companies. While district heating and power systems contribute to improved sustainability requirements they require new methods and agencies to manage their complex control equipment.

Visits to service the new technologies, both inside the home (such as mechanical ventilation systems or MVHR), and to communal areas (such as heat exchangers, switch gear and controls for lifts), are becoming increasingly onerous and expensive as sealed systems cannot be repaired without recourse to the manufacturer's replacement components or the supplier's maintenance contracts, requiring 'specialists' who command high charges. Sophisticated equipment relating to other technologies - communal IT and TV installations, entry phones and lift controls, for example - progressively require this specialist maintenance.

A significant challenge for management of superdense development relates to refuse storage and recycling facilities. The mode of storage and frequency of collection can have a significant impact at ground and below ground levels and will require specific management resources. Changes to on-line purchasing and deliveries have implications for ground level entrance facilities and associated servicing arrangements. More intensive vehicular movement requires robust detailing of public realm, again with implications for cost and ongoing maintenance.

COMPLEX ENERGY TECHNOLOGIES

Mitigating service charges

So what can be done at the design stage in terms of management considerations and keeping costs down?

Early determination of the level of services required will assist developers, RPs and future residents to understand the financial commitments and anticipated costs of managing and living in a particular development. Design elements should aim to address these.

Life cycle and maintenance costs should fall within the scheme's business model, rather than being separated out for later consideration as a self-financing model, financed by a revenue charge, on scheme. This will encourage cost-saving design and choice of fittings with longer life cycles.

There is a need for users of buildings to be better informed about how they function and how their behaviour can influence functionality. MVHR, heating controls and smart meters require easy guides such as the NHBC's Home User Guide approach or training and support for residents when they move into their homes.

The use of BIM (Building Information Modelling) for the design, detailing and construction stages can be usefully extended to the post occupancy stage, particularly for developers that have an ongoing responsibility for management. The BIM model contains all the data and schedules for components of the building which are required for the on-going maintenance of the building and can enable the structuring of management regimes.

A cost management plan should be established with a view to minimising charges to future residents through capital contributions from a range of sources including extended defects arrangements. This is particularly recommended for M&E installations and landscaped areas.

Extending defects arrangements from 12 to 24 or even 36 months will increase the contract value marginally, but lower charges for residents, placing greater responsibility onto contractors for servicing lift, entry-door systems and scheme-wide heating systems, resolving associated computerisation problems and bedding-in of trees and planted areas, for example.

Ring-fencing income from ground rents could establish a sinking fund for major repairs and works to help reduce the level of service charge and to remove the potential threat to lease-holders of unexpected large costs, for example when the roof or lift needs to be replaced.

Ring-fencing commuted sums from the land value or developer's profit could provide a funding stream for the management of communal facilities. This is particularly recommended on Section 106 schemes with a small allocation of affordable housing and high service charges.

'While there is much in the press around the rising costs of purchasing or renting a home... little is said about the rising management costs and the knock-on cost of service charges'

Local authority adoption of roads and public realm will keep charges down, but may influence how the scheme is perceived; while private developers favour keeping the maintenance of the public realm in-house enabling design innovation, for example in the type of lighting or planting, RPs often favour adoption by the local authority to minimise their on-going liability and costs.

Although controversial, a cap imposed by a local authority would focus debate on how service charge subsidies could be raised. It would provide greater coherence to the system by provoking central guidance on a creative service charge policy, and who should pay for what. Alternatively, elements of the service charge could either be funded out of council tax or undertaken through volunteers doing, for example, garden maintenance.

A common set of standards for public areas is crucial to avoid some areas becoming disadvantaged by not taking account of the wider context. Working with other developers/service providers in the area can help to achieve economies of scale. For example, local authorities or managing agents can extend their services from an adjoining area to cover the management of a new area of parking, open space or other public amenity. This could have an impact on master planning, for instance, the siting of open spaces, play spaces or parking courts.

The list below provides a quick checklist for designers of the key issues to be addressed in keeping future management and maintenance charges affordable:

Building configuration: building heights, lifts per core, units per core, cluster and core for tenure separation.

Servicing infrastructure: access for refuse collection, car parking, emergency services, utilities and energy infrastructure requirements.

Bins, bikes and cars: management of communal refuse collection and recycling facilities, cycle storage and parking.

Public realm: management of communal spaces and play areas: lighting, landscaping, garden services to shared gardens and open spaces; estate cleaning maintenance of roads and pathways.

Building maintenance: heat and light to communal areas, window cleaning and replacement, cladding maintenance, cleanable surfaces for easy graffiti removal, cleaning points for communal areas.

Communal facilities: space for deliveries, meeting spaces, cleaners' rooms with water at regular locations in tall buildings, gardening equipment storage in large developments.

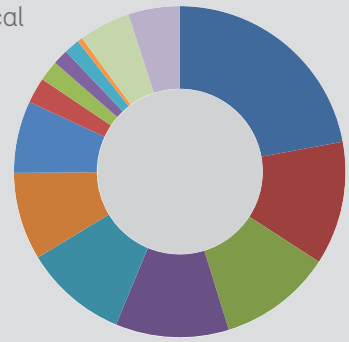
M&E: lift servicing arrangements and replacement (computerisation of systems), scheme-wide IT and TV services; entry-systems and locks, fobbed entry, CCTV; maintenance of new technologies for heating and renewable energy (photovoltaics/ solar panels/heat pumps), for ventilation (MVHR), communal/ district heating systems (CHP, bio-mass boilers, metering), grey water, SUDS.

Reception and caretaking: concierge, security patrols, an active concierge service responsible for a wider range of services including front door security, handling internet shopping deliveries (storage space required), handyman service.

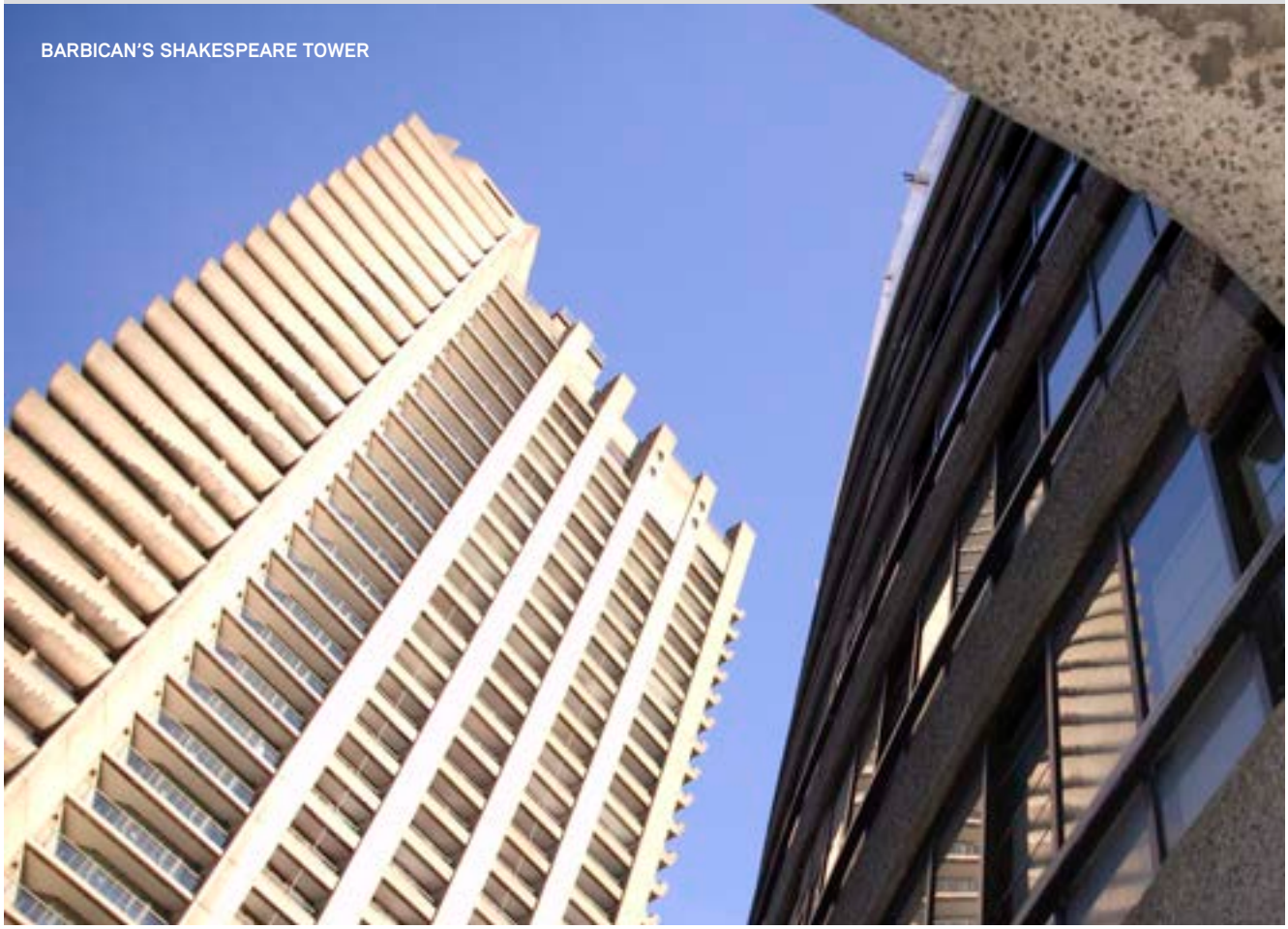
The actual cost of service charges has risen noticeably for new developments over the last few years with the average cost for affordable, new, two-bedroom apartments in London, excluding heating, rising to around £1,500- £1,600 per annum[6], or around £2.90/sqft. However, for private developments, service charges can vary enormously depending on values, location, age of properties and the level of discretionary services.

One of the benchmark schemes for the way properties are managed is the Barbican's 44-storey Shakespeare Tower, where service charges for a two-bed flat for 2013-14 were £8,000 per annum. Despite these high costs, the development is still regarded as one of London's most popular developments because of the generous accommodation layouts, its desirable central location, high quality public realm and perceived security. The Barbican is an example of the current trend for tall towers where the tenure is all private sale and there's a presumption that purchasers will expect and pay for quality management.

Breakdown of typical service charges



Buildings insurance (including terrorism)	22.0%
Maintenance of electrical services and bulb replacement	12.0%
Management fee	11.0%
Window cleaning	11.0%
Lift maintenance and telephone	10.5%
Door entry system	8.5%
Maintenance of mechanical services	7.0%
Water supply costs	2.5%
Bin hire and additional weekly collection	2.0%
Communal area cleaning	1.5%
General repairs	1.5%
Pest control	0.5%
10% reserve fund for long term maintenance	
Internal communal area decoration	5.0%
Major repairs to lifts and door-entry systems	5.0%



BARBICAN'S SHAKESPEARE TOWER

Conclusions

In conclusion, as density inevitably continues to rise and multi-tenure schemes become commonplace, we need to ensure there is more focus on the long term management and maintenance costs at the design stage of a development, with the appropriate future management professionals participating fully from the outset. Putting in place efficient management plans is essential to avoid a repeat of the social and management problems of mid-20th century housing estates.

Cost effective and efficient management arrangements in superdense development are essential to mimimise services charges and aid affordability. A balance must be struck between reducing capital costs in the short term and the costs of maintenance of the building fabric and equipment over the long term. This requires tighter specifications, closer collaboration with suppliers and early involvement of contractors during the detail design process.

And although they do not impact directly on service charges, there are issues which do impact on the long-term social viability of a super dense development and need to be addressed by policy makers and authorities. These include: questions around the appropriateness of high rise buildings for families; whether social housing should be closely integrated with other tenures to avoid stigmatisation and the 'poor door' effect; encouraging a tenure blind approach to development that fosters long term socially sustainable communities enabling residents to move between different tenures within a neighbourhood as their circumstances change.

Recommendations

Reduce maintenance costs by design: greater rigour is required during concept and design stage to build in robust, cost effective and efficient management arrangements in superdense development to mimimise services charges and aid affordability. This requires tighter specifications, closer collaboration with suppliers and early involvement of contractors during the detail design process.

Establish a long term management cost plan during the design process: this must become a pre-requisite of the sign off process at the development stage, before schemes proceed. This should be made easier as building technology becomes more sophisticated and computerised, so that long-term maintenance arrangements need to be tied into the original suppliers.

Aim to keep service charges affordable for all: tall buildings will have higher costs associated with management and maintenance whereas lower/ medium rise potentially offers greater efficiency and lower costs to manage, and designers should demonstrate to local planning authorities that they have applied a sequential test to sites before opting for a tall building approach.

Develop new funding streams for long term management: mechanisms are required to capture the land value uplift that is generated when planning approval is granted, or ring fence income from ground rents to provide revenue for and investment in long term management and community facilities.

Appendix A: **Case studies**

Why does density matter and how do we measure it?

Density is a way of measuring the intensity of development on a particular site. On its own it does not tell us anything about whether a proposal is good or bad. However, an unusually high or low density for the location should trigger an especially careful review of the actual impacts, and may be a clue that something is amiss.

Density is generally used for residential development (or mixed-use schemes with a high proportion of residential use). It can be measured in numbers of homes (or, for the technocrats, units or dwellings), habitable rooms, people (or bed-spaces), or floor-space. None of these is perfect – and they all measure the built *capacity* rather than the actual *occupancy*. The simplest is to measure the number of homes, and for this report we use homes or dwellings per hectare or dph. This takes no account of whether the homes are large or small, but does serve our overall purpose: this is to compare different typologies and different case studies, and to show how typical development densities have changed over time.

When assessing particular schemes, we recommend using habitable rooms, bed-spaces or floorspace rather than simply the number of homes, and we note that planning authorities tend to favour habitable rooms. Bed-spaces give the best guidance to potential occupancy, but the actual occupancy will depend on tenure: private buyers and renters will often pay for surplus space, while affordable housing tenants will tend to fully occupy.

To compare densities with any accuracy, we also need to measure the relevant site area in a consistent way. This can be complex on large schemes and may involve an element of judgement about whether open spaces, roads, parking and non-residential uses are an integral part of the development or serve a wider neighbourhood role.

We have used Net Site Area as defined by Planning Policy Statement 3 (PPS 3) and explained in the diagram.

Density is more useful on larger schemes, and especially at the neighbourhood scale. Measuring density on small sites sometimes produces a very high figure, which might be acceptable in the specific context, but would be oppressive and unsustainable if repeated over a wider area. The small scheme is relying on surrounding sites to provide amenity space and social infrastructure. We need to be very wary of the cumulative impact of building large numbers of superdense buildings in close proximity.

A further complication arises when apartments are built above commercial or community space – which is commonplace in London and applies to several of our case studies. We have adopted the London Plan convention, of calculating the ratio of residential to non-residential floor space, and then reducing the relevant site area (for residential density purposes) by the same proportion. This will produce a higher density than the unadjusted version. When density is used as a restraint on development this means that mixed-use schemes may be unfavourably treated, even though integrating non-residential facilities may justify higher residential density.

We recommend that, in discussion with the RICS, the DCLG and local planning authorities, the GLA should review the way in which residential density is calculated and used to assess individual schemes and masterplans. We also need a national methodology that is clearer, simpler and leads to more logical outcomes.

Glossary of terms

Duplex: apartment on two levels (traditionally called maisonette)

Mansion block: apartment block with compact core serving 2-8 homes per level and sharing a front door to the street. Typically 5-8 storeys and often grouped to create a continuous street frontage

Gallery access: open-air sheltered access walkway serving upper level apartments (traditionally called deck-access)

Atrium access: galleries set within a covered internal space

Corridor access: extended internal common parts with apartments on one side (single-banked) or both sides (double-banked)

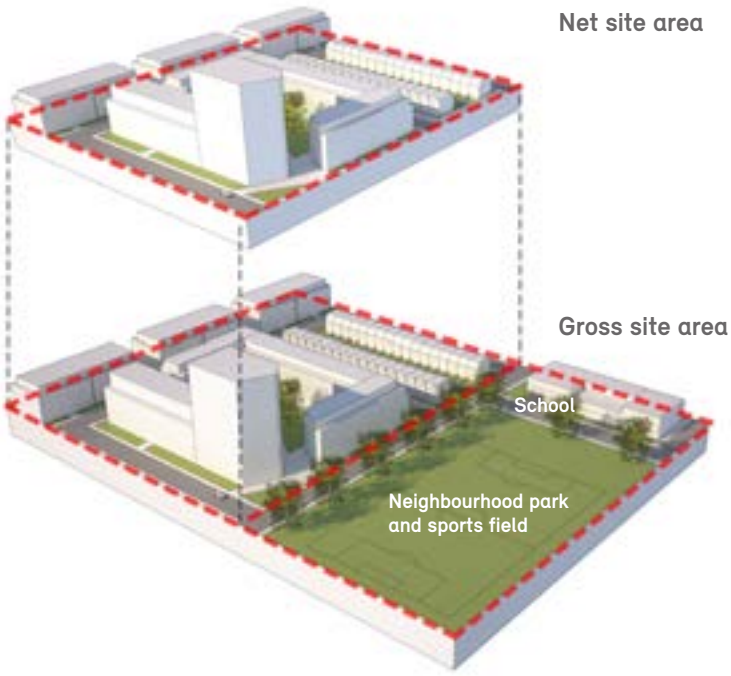
Tower: vertically-proportioned building over 30m (usually ten residential storeys)

Tall tower: tower with 20 or more storeys

Car parking ratio: % of car parking spaces to the number of homes served

Site area: case studies state the net site area in square metres before possible reduction to reflect non-residential facilities built below homes

Habitable rooms: bedrooms, living rooms and kitchen-dining rooms. Smaller kitchens are excluded (usually below 13 sqm but varies with different local authorities)



HOW WE MEASURE DENSITY DIAGRAM

Case studies summary sheet

Portobello Square

Architect PRP
Client Catalyst Housing Group

Homes per hectare: 128
Site area (m^2): 25,700
Number of homes: 324
Car parking spaces: 35%
Community and commercial space (floor area in m^2): 700
Housing typologies: houses, duplexes and mansion flats
Range of storeys: up to 10

South Acton

Architect HTA Design LLP
Client L&Q and Countryside Properties

Homes per hectare: 223
Site area (m^2): 7,500
Number of homes: 167
Car parking spaces: 45%
Housing typologies: flats and houses
Range of storeys: 3-9

Aylesbury Phase 1

Architect HTA Design LLP
Client Notting Hill Housing

Homes per hectare: 225
Site area (m^2): 4,400
Number of homes: 830
Car parking spaces: 36%
Community and commercial space (floor area in m^2): 263
Housing typologies: flats, houses, duplexes, extra care and sheltered housing
Range of storeys: 3-20 (plus roof gardens)

Walthamstow Arcade

Architect Pollard Thomas Edwards
Client Hill and Islington & Shoreditch Housing Association

Homes per hectare: 263
Site area (m^2): 6,600
Number of homes: 121
Car parking spaces: 2%
Community and commercial space (floor area in m^2): 1,950 plus 9-screen multiplex cinema (2,130)
Housing typologies: flats and houses above commercial space
Range of storeys: 3-6

Queen Elizabeth Hospital

Architect HTA Design LLP
Client Rydon and Family Mosaic

Homes per hectare: 299
Site area (m^2): 6,808
Number of homes: 188
Car parking spaces: 43%
Community and commercial space (floor area in m^2): 91
Housing typologies: duplexes and flats
Range of storeys: 4-9

Ceres, CB1

Architect Pollard Thomas Edwards
Client Hill

Homes per hectare: 303
Site area (m^2): 5,300
Number of homes: 150
Car parking spaces: 82%
Community and commercial space (floor area in m^2): 1,037 plus
Housing typologies: mansion flats and duplexes
Range of storeys: 6-7

Clapham Park

Architect PRP
Client Clapham Park Homes

Homes per hectare: 240
Site area (m^2): 5,000
Number of homes: 120
Car parking spaces: 25%
Housing Typologies: duplexes and flats
Range of storeys: 6-8

Aylesbury South West

Architect Levitt Bernstein
Client London Borough of Southwark and L&Q

Homes per hectare: 244
Site area (m^2): 10,087
Number of homes: 261
Car parking spaces: 22%
Community and commercial space
(floor area in sqm): 1,904
Housing typologies: atrium accessed flats, duplexes, mansion flats and small tower block
Range of storeys: 3-10

Ocean Estate

Architect Levitt Bernstein
Client First Base, East Thames Group and London Borough of Tower Hamlets

Homes per hectare: 261
Site area (m^2): 26,900
Number of homes: 702
Car parking spaces: 14%
Community and commercial space
(floor area in sqm): 1,300
Housing typologies: deck accessed flats, duplexes and corridor accessed flats
Range of storeys: 4-9

Bermondsey Spa

Architect Levitt Bernstein
Client Hyde Housing Association

Homes per hectare: 333
Site area (m^2): 20,320
Number of homes: 644
Car parking spaces: 30%
Community and commercial space
(floor area in m^2): 3,175
Housing typologies: deck accessed flats, duplexes and mansion flats
Range of storeys: 3-10

Micawber Street

Architect Pollard Thomas Edwards
Client Notting Hill Housing

Homes per hectare: 350
Site area (m^2): 3,096
Number of homes: 108
Car parking spaces: 32%
Community and commercial space
(floor area in m^2): 2,442
Housing typologies: mansion flats, duplexes and mews houses
Range of storeys: 2-7 (plus basement)

Lewisham Gateway

Architect PRP
Client Muse Developments

Homes per hectare: 350
Site area (m^2): 19,800
Number of homes: c700
Car parking spaces: c27%
Community and commercial space
(floor area in m^2): 11,000
Housing typologies: towers, duplexes and flats
Range of storeys: 8-25

Portobello Square, Kensington & Chelsea, London

Wornington Green is a rundown estate built in the 1970s comprising 550 social housing units with a poor quality environment, inadequate security and amenity and associated social and economic problems. Following an extensive consultation process the resulting masterplan comprises 1,000 new homes to replace the existing social housing provision, and shared ownership and private housing.

The key design objectives for the redevelopment of the estate were to reintegrate the site with its immediate neighbourhood and to establish a poorly-located public open space at the heart of the development as a new park in the tradition of a London garden square. The masterplan reinstates a number of the historic road positions in order to repair the urban fabric, and is predicated on a traditional London street pattern.

Tenures are distributed by core and cluster, with no visual distinction between tenure, to create a truly integrated mixed development.

The housing is provided as tenure-blind, high- quality typologies drawn from traditional Kensington residential precedents. They are modern interpretations of mews houses, town houses, mansion blocks and terraces of the adjacent conservation area and the wider borough, designed in line with the high densities in what is London's densest borough.

The focus on quality ensures that all tenures of housing would make a positive contribution to the regeneration of this under-valued area of North Kensington; for example, the private sale element contributes to the costs for re-provision of the social housing by drawing from the surrounding high values.

There is an integrated approach to management of this mixed-tenure development with Catalyst employing a managing agent initially, enhancing in-house management capability for private development with a view to managing and maintaining the estate in-house in future phases.

Architect PRP
Client Catalyst Housing Group

Homes per hectare: 128
Site area (m^2): 25,700
Number of homes: 324
Car parking spaces: 35%
Community and commercial space (floor area in m^2): 700
Housing typologies: houses, duplexes and mansion flats
Range of storeys: up to 10

Awards
– Project Award Housing Design Awards 2011

South Acton, Ealing, London

Architect HTA Design LLP
Client L&Q and Countryside Properties

Homes per hectare: 223
Site area (m^2): 7,500
Number of homes: 167
Car parking spaces: 45%
Housing typologies: flats and houses
Range of storeys: 3-9

South Acton Phase 1 is part of the HTA-designed masterplan for a 15-year regeneration programme on South Acton Estate includes 2,350 homes, half of which will be affordable and over a quarter will be family housing. A strategically important scheme for Ealing Borough Council, the key objective was to help deliver transformative change to the locality, to attract a diverse range of new residents whilst fulfilling the needs of existing residents. The proposal delivers a high quality, cost-effective and tenure-blind choice of new build homes and a dramatically changed residential environment. Phase 1, comprising 167 homes, has been an outstanding success.

The tenure blind homes in Phase 1 are located around a leafy, shared courtyard, with many overlooking the adjacent park. The dwellings benefit from generous balconies, winter gardens or roof terraces with outstanding views across the park and the London skyline.

Site constraints included working around existing trees, buildings, roads and services, which had to be maintained until residents could be decanted into new homes. Effective passive surveillance with clear definition of the public and private realm creates a safer communal environment. A car park and energy centre are discretely located under a raised communal courtyard, with shared amenity over parking. A variety of homes include wheelchair units and homes for rent, shared ownership or outright sale.

The dwellings match or exceed the standards of The London Plan and London Housing Design Guide and score highly on other widely used building standards. The scheme also scored on 18 of the 20 Building for Life criteria at the time of design. The windows, shading from buildings and balconies, daylight levels, and heating and ventilation strategies were developed in parallel, with an exercise for the wider estate, to mitigate against climate change, and exceeded British standards.

Interlocking L-shaped apartment blocks allow taller buildings to overlook low rise courtyard houses, maximising dual aspect, daylight and views to the adjacent park.

The scheme is designed to be future-proof, durable, sustainable and fit for purpose, taking into account both current need and future aspiration. It demonstrates a model approach for delivering long term regeneration in difficult and challenging market conditions and delivers exemplary community and stakeholder engagement.

Aylesbury Estate Phase 1 of the Masterplan, Southwark, London

The application is for 815 new homes across the site arranged within six plots, each forming a perimeter block within a new network of streets and open spaces. Within these six blocks, 23 buildings are arranged to create a varied townscape from three to 20 storeys, in response to the adjacent built form and the park edge.

The housing mix is extremely varied from one-bedroom flats to five-bedroom townhouses and provides a range of tenures including private sale, market rent, shared ownership and target rent. Exactly 50% of the homes will be affordable.

The scheme will provide specialist housing in the form of 50 extra care apartments and six dwellings designed specifically for people with learning disabilities. The scheme also provides a 260m^2 community facility. Car parking is provided at 35.7% and the scheme offers cycle storage for residents above a 1:1 provision.

A car-share scheme, TfL cycle hire station and visitor cycle-parking spaces are also provided.

The scheme proposes a new edge to Burgess Park, with three towers and three lower mansion blocks creating an improved relationship between the park and its urban surroundings.

Fundamental to the application proposals are new streets that connect the site to its surrounding context, improving permeability across the local area. This street-based approach will ensure that the development knits in seamlessly with the surrounding city, creating a place that is recognisably part of both Walworth and London.

Architect HTA Design LLP
Client Notting Hill Housing

Homes per hectare: 225
Site area (m^2): 4,400
Number of homes: 830
Car parking spaces: 36%
Community and commercial space (floor area in m^2): 263
Housing typologies: flats, houses, duplexes, extra care and sheltered housing
Range of storeys: 3-20 (plus roof gardens)

Clapham Park, Lambeth, London

The masterplan for Clapham Park includes the regeneration of 61.4 hectares between Brixton and Clapham in the London Borough of Lambeth to provide 2,500 mixed-tenure homes. New community, educational and commercial facilities are being developed to provide a new heart for the neighbourhood around a high quality central park. The scheme is facilitating a high density approach to the surroundings. The buildings reinforce the existing urban grain and reflect the materials and proportions of neighbouring buildings.

The phased development is configured as a series of perimeter blocks orientated around and framing the new park, creating a network of streets and high quality public realm. The scheme is tenure blind both in terms of appearance and dwelling space standards. Private sale dwellings are designed to maximise value while meeting affordable design standards, enabling flexibility for homes to be a mixture of outright sale, shared ownership, intermediate rent or social renting.

Half of the family accommodation is provided as duplexes at ground and first floors with direct access from the street and large patio gardens leading onto the communal courtyard. The balance of family homes are large apartments at the top floor of the blocks. All apartments have generous external private amenity space in the form of balconies or terraces. Flexibility has been built into the homes to allow double bedrooms to be subdivided as children grow older and to extend the longevity of the family home.

In terms of management and maintenance, duplex typologies limit the areas for management and tenures are separated by vertical cores that are well lit and have good views to the courtyards. Materials are robust and low maintenance such as brick, precast concrete, aluminium windows and metal roofs. All homes will achieve Code for Sustainable Homes level 4 when the CHP plant reaches full capacity, providing heat and power for up to 2,500 new homes.

Architect PRP
Client Clapham Park Homes

Homes per hectare: 240
Site area (m^2): 5,000
Number of homes: 120
Car parking spaces: 25%
Housing Typologies: duplexes and flats
Range of storeys: 6-8

Aylesbury Estate, South West Corner, Southwark, London

Phase 1A of the Aylesbury Estate regeneration followed a community consultation and masterplanning study to agree the future for an estate of 2,760 dwellings with a population of 9,000 people. This consultation included options appraisals for refurbishment of the existing buildings versus redevelopment, with policies for education, open space, landscape design, community development, health, employment and transport. The estate as a whole defied three previous attempts to rescue it from demolition but is now due to be redeveloped in phases to provide 4,200 homes.

This first phase for 261 dwellings is spread across six buildings of 39% affordable tenure on an unoccupied site in the south west corner of the estate and at 240 dph is intended as a minimum density benchmark for the standards which the local authority wishes to see for the whole estate regeneration. All spaces between new buildings have been designed to provide the maximum amenity for different age groups. The phase also includes a day centre for older people.

The council's declared aim of diluting the enormous number of flats occupied by tenants paying social rent with a very significant percentage of privately owned homes necessarily meant that the existing density has to be increased overall without resorting to building high. The initial phase averages around six storeys with a taller block of 10 storeys overlooking Burgess Park on the other side of the road. But the density of around 240 dph, almost double the existing density, demanded a built form of urban scale blocks closely lining both existing streets and some former streets which have been re-opened to increase pedestrian permeability of the estate and as a way of integrating the new buildings into the surrounding neighbourhood.

The urban form encloses a series of three open courtyards, one of them publicly accessible using a converted Victorian school building as an attractive backdrop, while the other two are entirely enclosed shared-amenity spaces.

Architect Levitt Bernstein
Client London Borough of Southwark and L&Q

Homes per hectare: 244
Site area (m^2): 10,087
Number of homes: 261
Car parking spaces: 22%
Community and commercial space (floor area in sqm): 1,904
Housing typologies: atrium accessed flats, duplexes, mansion flats and small tower block
Range of storeys: 3-10

Awards
- Civic Trust Award 2015
- Evening Standard New Homes Awards 2013: Best Regeneration Project
- London Planning Awards 2012/13 Best New Place to Live
- Affordable Home Ownership Awards 2012: Best Design
- Affordable Home Ownership Awards 2012: Best Regeneration Commendation

Ocean Estate, Tower Hamlets, London

A consortium, led by East Thames Housing Group, was appointed in 2009 to work in partnership with the London Borough of Tower Hamlets to regenerate the large council owned Ocean Estate, whose residents had, like so many other similar post war estates, been living in very poor conditions, in this case one of the ten most deprived estates in England.

Over 1,200 former council homes were refurbished with the building of a further 1,039 homes for affordable rent, shared ownership and outright sale at a density of 261 dph. Outwardly the aim is for the completed scheme to be 'tenure blind', in that the external treatment of the new buildings gives no indication of who is living behind the various facades, and nor do the entrances to the various circulation cores.

One guiding principle of the layout is the renewed emphasis on the formation of new streets, mostly with pedestrian priority, as 'Home Zones. These conduits of social interaction provide new and secure permeable routes through the estate. The street frontages of the existing neighbourhood are lined and strengthened by new housing, with varied massing and heights that respond to the differing characteristics of the adjacent townscape.

Aside from sculpting new streets, each new block by and large lines the perimeter of its site on all four sides, enclosing a central, soft landscaped courtyard, secure from the public streets and for the exclusive use of its residents.

Gaps within the southern facades of some of the buildings create viewing corridors from the street into the courtyards and allow additional daylight to fall within the courts.

The Ocean residents benefit from a central heating plant which is designed to serve the whole scheme and to achieve Code for Sustainable Homes Level 4. These systems while admirable, still provide the landlord with considerable management issues.

For the internal block layout, ground and first floors are reserved for family duplexes with their front doors leading directly to the street. Above, first floor, dual-aspect flats, all with their own private open space are served by open access galleries. This solution has been chosen in preference to double-loaded internal corridors serving single aspect flats.

Architect Levitt Bernstein
Client First Base, East Thames Group and London Borough of Tower Hamlets

Homes per hectare: 261
Site area (m^2): 26,900
Number of homes: 702
Car parking spaces: 14%
Community and commercial space (floor area in sqm): 1,300
Housing typologies: deck accessed flats, duplexes and corridor accessed flats
Range of storeys: 4-9

Awards
- London Planning Awards 2014/15: Best New Place to Live
- Sunday Times British Homes Awards 2013: Apartment of the Year
- Sunday Times British Homes Awards 2013: Social Housing Development Commendation
- Premier Guarantee Excellence Awards 2012: Multi-Storey Development of the Year

Walthamstow Town Centre, London

Town centres are struggling with the decline of traditional retail and require a complex mix of uses to bring them back to life. There are many under-used town centre sites with the capacity for transformation in both the variety and intensity of use; increasing the residential population in retail locations is a key part of this.

The Walthamstow Arcade development has rejuvenated an important town-centre site and boosted its evening economy. Replacing a 1960s low-rise shopping mall, new homes sit above a multiplex cinema, shops and restaurants, all fronting onto a new public square. The Arcade site is located in the heart of Walthamstow town centre on the high street, near the new bus terminal and at the head of Europe's longest outdoor daily street market.

Above the busy leisure complex, new flats and houses surround a quiet communal garden. This kind of mixed-use development, placing homes above public uses, requires very careful consideration of access, management and construction detailing.

Architect Pollard Thomas Edwards
Client Hill and Islington & Shoreditch Housing Association

Homes per hectare: 263
Site area (m^2): 6,600
Number of homes: 121
Car parking spaces: 2%
Community and commercial space (floor area in m^2): 1,950 plus 9-screen multiplex cinema (2,130)
Housing typologies: flats and houses above commercial space
Range of storeys: 3-6

Queen Elizabeth Hospital, Hackney Road, London

The Queen Elizabeth Children's Hospital regeneration site sits in a conservation area adjacent to Haggerston Park on the border of Tower Hamlets and Hackney in London. The hospital was closed almost 20 years ago and has been unused since. Both the GLA and Tower Hamlets are keen to return the site to use after a long period of abandonment, and to maximise the development potential and community benefits of this key location.

HTA has designed a scheme that retains the buildings of significant heritage value and successfully integrates the old with the new. After lying derelict, the existing structures on the site are in extremely poor shape. The design team has worked closely with heritage consultants and the structural engineering team to devise a scheme that preserves as much of the original fabric of the Hackney Road building as possible.

Each elevation is designed to respond to the street scene in a unique way, both in terms of scale and architectural articulation, and the resultant scheme represents a sensitive integration with the retained Hackney Road Building.

To meet the GLA's requirements and to satisfy local demand, the proposals have been designed with family accommodation as a key consideration. Wherever possible, family housing is located at ground level with easy access to the adjacent park. We have created new streets with active frontages through maximising the family accommodation on the ground floor level with individual front doors and small front gardens.

The development provides a new pedestrian link from the east of the site to Haggerston Park connecting residents to the park from the proposed development and existing residents to the east via two new streets: Muffin Lane and Northern Lane. The improved connection to the park has created an opportunity for the provision of community enterprise units on Goldsmith's Row.

All dwellings match or exceed the standards of the London Plan and London Housing Design Guide and the family accommodation at ground floor is generally larger still. The development has been designed to meet the London Plan 2011 through a combination of energy conservation measures and low-carbon technologies. Storage provision meets the industry standard and the car parking space conveniently occupies the existing basement level, which currently stretches the length of Goldsmith's Row.

Architect HTA Design LLP
Client Rydon and Family Mosaic

Homes per hectare: 299
Site area (m^2): 6,808
Number of homes: 188
Car parking spaces: 43%
Community and commercial space (floor area in m^2): 91
Housing typologies: duplexes and flats
Range of storeys: 4-9

Ceres, CB1, Cambridge

The idea of concentrating higher-density development in the most accessible places is a central plank of planning policy, but too often the result is generic, bulky buildings that make little effort to engage with their surroundings.

Ceres is different. Part of CB1, the largest current regeneration scheme in Cambridge, it is located next to the station - and benefits from the creative two-way traffic between London and the global academic and scientific power-house in the Fens. Ceres is part of a major new neighbourhood containing apartments, student accommodation, office headquarters, a bus interchange, shops and restaurants.

The four apartment blocks create an elegant backdrop to a new public park and provide spacious homes - many of them dual-aspect - with great views, especially from the duplex penthouses set behind a brick colonnade. Distinctive details include textured brickwork and patterned bronze balconies.

In addition, the historic Foster's Mill is being converted into outstanding apartments and shops, set within the imposing and massive retained shell.

Architect Pollard Thomas Edwards
Client Hill

Homes per hectare: 303
Site area (m^2): 5,300
Number of homes: 150
Car parking spaces: 82%
Community and commercial space (floor area in m^2): 1,037 plus
Housing typologies: mansion flats and duplexes
Range of storeys: 6-7

Awards
- Cambridge Design & Construction Awards 2015: Best New Building
- Housebuilder Awards 2014: Best design

Bermondsey Spa, Southwark, London

Four buildings together provide 644 new homes plus an NHS GP surgery and 1,200m^2 of commercial space. Together they represent a major part of the newly established masterplan for the area known as Bermondsey Spa, bisected by the elevated railway line serving London Bridge. The three blocks to the East of the railway, 33% of which are affordable homes, establish a new street centred on the axis of St James Church.

Given the location, only 10 minutes' walk from Butlers Wharf at the southern end of Tower Bridge, it is hardly surprising that the target densities were more than twice the permitted maximum before the long established ceiling of 150 dph was lifted in 2000. The density of 317 dph has been achieved with storey heights of no more than five floors on average and, from the outside, the difference between different tenures is indistinguishable.

The number of dwellings served by each core is 20-25, each with a single lift. One exception is the eight storey private ownership block which has a single core in the form of a covered atrium serving all dwellings, while there are ground and first floor duplexes with their front doors opening directly, via private patios onto the surrounding streets.

Flats on either side of the new Frean Street leading to the church have their principle windows only 12m apart, with no evident complaint about lack of privacy.

Car parking, at a ratio of 0.3:1, is situated in ground level undercrofts each beneath a landscaped courtyard.

Architect Levitt Bernstein
Client Hyde Housing Association

Homes per hectare: 333
Site area (m^2): 20,320
Number of homes: 644
Car parking spaces: 30%
Community and commercial space (floor area in m^2): 3,175
Housing typologies: deck accessed flats, duplexes and mansion flats
Range of storeys: 3-10

Awards
- RTPI Awards 2011: Sustainable Communities Commendation
- Housebuilder Awards 2010: Best Regeneration Project
- HCA Award 2010: Quality of Place Category, Commendation
- Evening Standard New Homes Award 2010: Best Regeneration Project
- London Planning Awards 2010/11: Best New Place to Live

Micawber Street, Hackney, London

With the erosion of grant funding, increasing demands have been made through the planning system to require private housing to cross-subsidise affordable homes. The challenge for designers (and housing managers) is how to accommodate on one site the very different, and sometimes conflicting, lifestyles of different income groups. This has hit the news recently with the simplistic controversy around 'poor doors'.

PTE has for many years promoted the 'modern mansion block' as a popular and flexible form of medium-rise housing, which enjoys distinguished precedents in Edwardian London. Long before the *London Housing Design Guide* declared war on flat blocks arranged around long internal corridors, PTE was championing developments with a small number of apartments clustered around compact stair and lift cores, with streets activated by a series of entrances to adjoining blocks.

Micawber Street is a recent example of this typology. It has delivered 108 new apartments and houses, creating a mixed-tenure development on a complete urban block near the Regent's Canal in Hackney. Six adjoining blocks, each with its own street entrance, look identical, but contain everything from lavish penthouses to homes for affordable rent and shared ownership.

A mews of large family houses is similarly mixed.

Although only seven storeys high, the compact planning and tightly drawn site boundary result in a density of 350 dph – the top end of the proposed superdensity range.

Architect Pollard Thomas Edwards
Client Notting Hill Housing

Homes per hectare: 350
Site area (m^2): 3,096
Number of homes: 108
Car parking spaces: 32%
Community and commercial space (floor area in m^2): 2,442
Housing typologies: mansion flats, duplexes and mews houses
Range of storeys: 2-7 (plus basement)

Lewisham Gateway, Lewisham, London

Lewisham Gateway is a prominent roundabout site at the heart of Lewisham adjoining the transport hub where the DLR, mainline and bus stations conjoin. The project is an exemplar of town centre regeneration containing a high density mixed use development comprising retail, leisure, office and residential. This is achieved by reconfiguring the infrastructure and road layouts to create a single parcel of land. The private developer is developing the site on a phased basis against an Outline Planning consent with parameter plans. A new integrated management company is envisaged and the private rented homes is separately managed by a PRS specialist provider.

The masterplan is designed to create a sense of place and identity to the town centre location, linking the transport hub with the existing moribund shopping centre with high quality public realm in the form of a new park and town square.

The total residential content for this mixed use development comprises up to 700 flats for sale or rent in the form of towers and linear blocks. The first phase comprises of 350 new homes for private sale and private rent, together with concierge and retail uses at ground floor, across two towers of 22 and 25 and two towers of 15 storeys each.

The landscape design celebrates the confluence of the Quaggy and Ravensborne Rivers, a key feature of the site, by creating a new public park at their meeting point. A further green structure is developed that includes formal tree lines, and ecological park that links people and nature, and binds the remaining masterplan together. Art is woven into the fabric of the landscape in the form of wall reliefs and sound circles, echoing the river to the square above and sculptural pavilion buildings.

Architect PRP
Client Muse Developments

Homes per hectare: 350
Site area (m^2): 19,800
Number of homes: c700
Car parking spaces: c27%
Community and commercial space (floor area in m^2): 11,000
Housing typologies: towers, duplexes and flats
Range of storeys: 8-25

Appendix B:
Where it all began: Superdensity the 2007 report

The original *Recommendations for Living at Superdensity* report responded to a sense of crisis caused by a property bull market which threatened good practice in the creation of liveable environments. It was published shortly before the 2008 credit crunch effectively removed the immediate threat. But alongside a number of other reports expressing similar concerns, it contributed to a climate for change which has proved influential, particularly in the capital. When the Greater London Authority published the Mayor's Housing Design Guide in 2010, it adopted many of the report's recommendations on design and space standards for very dense developments.

More recently, the implications of the importance of good management in achieving sustainable outcomes is beginning to be realised in the response of the authorities to development pressure. The Mayor's *Housing Covenant with a Rental Standard for Private Rented Schemes*, published in December 2012, is an example of a local planning authority setting out minimum requirements for management which could become a useful precedent.

When the report was published in 2007 Unitary Development Plans had been waived and developments of between 150 and 500 homes per hectare had begun to emerge. We dubbed it superdensity.

Developments of 150 homes per hectare had been the ceiling in inner London since the end of the Second World War. Many Victorian and Edwardian London neighbourhoods operate successfully just below these densities, and developments which were built slightly above these densities, such as the Barbican, have also thrived. But once PPG3 directed planning authorities to intensify development of urban sites, pressure to build at much higher density emerged and limits set within UDPs were waived.

Issues raised in the report

The benefits of superdensity

Urban renaissance thinking has it that intensification is more sustainable than simply adding to London's perimeter. Urban policy in London is partly about securing its future as a world capital by supporting the accommodation needs of an expanding workforce.

Higher densities support the capital's drive in three ways:

– In social terms, because it encourages mixed communities, enhancing social capital and reducing social isolation.

– In economic terms, because it brings economies of scale in services and markets; and

– In environmental terms, owing to a reduced carbon footprint.

Challenges of superdensity

But there are considerations that may work against the advantages of urban intensification:

Neighbourhoods and recommendations

– In dense developments, the effort involved in using those amenities, and the difficulty of supervising children using them, make their use less likely.

Planning for families

– People will spend more time in their homes and therefore place heavier demands on the living environment than they would in a home with direct access to the ground.

– There will be increased pressure on communal circulation spaces.

Privacy

– Intensity of use and closer proximity of people impose pressures on acoustic and visual privacy.

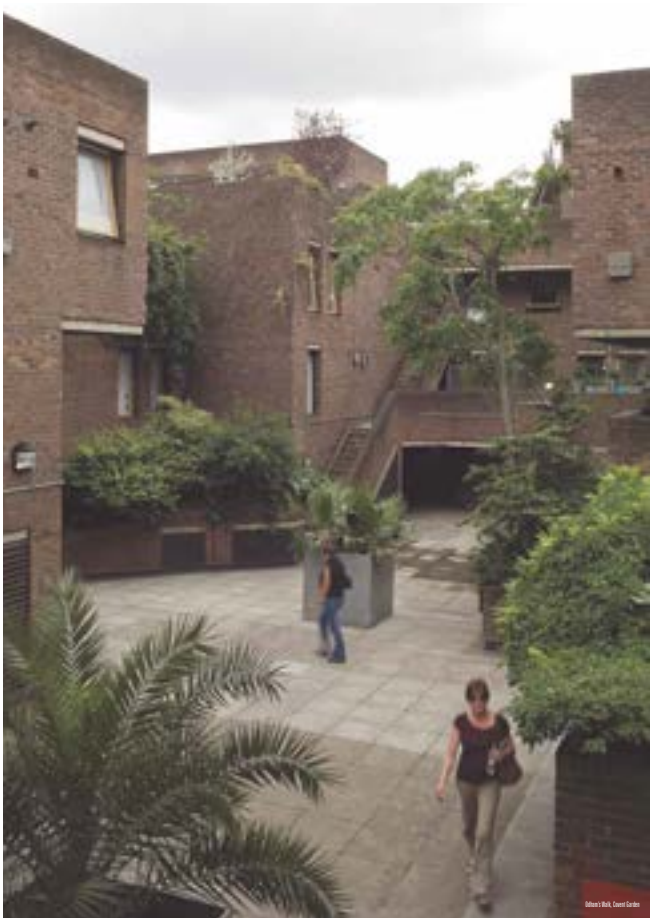
– Large tall buildings, with their downdrafts and shadows, make it more difficult to provide high quality amenity space at the base of tall buildings.

– Most vitally, superdensity schemes rely on high quality management for their enduring success. Although much of the resistance to very high densities owes its origins to negative experience of poorly managed 1960s council estates, there is little evidence of a move to impose higher standards of management as a prerequisite for approving new schemes. The relationship between management, design, and the procurement and approvals process is a core theme behind our thinking.

Recommendations and regulation

Superdensity schemes fall outside the parameters of the current regulatory framework. There is widespread acceptance that schemes at superdensities call for high quality design. Indeed, design quality is often invoked as a prerequisite for permitting schemes that breach previously accepted norms. But in some cases the focus appears to be on aesthetic, contextual or stylistic considerations rather than aspects of design that might impact more directly on the quality of life for families living at super densities.

Over the following pages this publication makes 10 recommendations for living at superdensity, even emphasising the role of the procurement authority. But we are cautious about calling for standards. We recognise that the development industry struggles with contradictory legislation and overzealous application of standards can produce undesirable consequences. It is clear that further guidance is required, but it is for others to decide whether this should be made mandatory. If it is, it has to be undertaken within the context of a review of other requirements to provide clarity for the industry.



OLDHAM'S WALK, COVENT GARDEN

Key recommendations
The report's key recommendations centred on 10 themes:

1. Creating better neighbourhoods

– A 'placemaking' approach should be taken to the creation of superdensity schemes, with local stakeholders, developers and their professional advisers creating a shared vision.

2. Balanced communities

– The tenure mix should meet the local planning requirements and local housing need.

– The general appearance and physical access to different tenure groups should be as identical as possible.

3. Making flats work for families

– The house is the most successful and proven type of home for families, so should be incorporated into superdensity schemes.

– Private open space, with direct sunlight for part of the day, should be provided for all homes.

– Single bedrooms should be suitable for study and recreation by older children, and large enough to entertain visitors. It is not possible to allow for all of these activities in a room smaller than 8.5 square metres. A separate utility area should be provided for washing and drying clothes away from eating/cooking spaces.

4. Planning for good management

– There must be a management plan, for which the freeholder is responsible, which specifies how the landlord(s) will manage the development.

– The plan must demonstrate that satisfactory levels of security can be achieved, and include measures to address antisocial behaviour by individual residents.

– The plan should set out rents and service charges, and how these will be changed in the future.

– There should be a maintenance plan setting out objectives and standards, as well as how it will be funded by freeholder or landlord.

– There should be a residents' forum to discuss management, and changes in procedures and obligations.

5. Organising and accessing flats

– Corridor access offers inherent efficiencies, but long double-banked corridors tend to create a bleak environment and to be very difficult to manage for families.

– Security of shared areas must be considered at the earliest design stage.

– Secure door entry systems are adequate to protect common circulation where 25 or fewer dwellings share a single entrance point.

– Entrance cores serving more than 25 dwellings should ideally each have their own concierge. If they cannot, remote control of access can be considered.

– For small isolated blocks with more than 25 dwellings per core, management support close by, with regular inspections may be sufficient.

6. Privacy

– Better sound proofing is needed at higher densities.

– Outdoor space should be as private as possible.

– Design of mixed-use developments should seek to minimise noise disturbance to residents.

7. Outdoor space and the public realm

– Superdensity schemes should always be viewed in the context of a masterplan framework, extending well outside the boundaries of the development site itself.

– Masterplans should be created in accordance with best practice advice available from CABE and other sources.

– Movement of people and vehicles around superdensity schemes, provision for parking, servicing and so on, will need to be organised in three dimensions as part of the building design.

8. Environmental sustainability

– There should be an energy strategy which takes advantage of the inherent opportunities available in superdensity developments to provide better than average performance.

– The strategy should seek to reduce energy costs to residents in order to offset high service charges.

– Buildings over eight storeys should include access to communal landscape space. This might be contained within the building, as atriums or 'winter gardens'. Alternatives might be large balconies, winter gardens within flats, or public open space within a ten-minute walk.

– Advantage should be taken of roofs in order to reduce water surcharge, and to provide biodiversity or amenity space.

– Sunlight: single aspect north-facing homes should be avoided. Wherever possible it is preferable to have at least one living space facing south.

9. The role of local authorities in procurement

– Developers should be required to discuss their Design and Access Statement with planning authorities at the earliest possible moment, before significant design effort has been expended.

– Planning authorities should consult the proposed housing manager on the adequacy of the statement.

– There should be an assessment of management proposals, mix, tenure and balanced communities based on the procedure used in CABE design appraisals.

– Local authorities should have access to adequate technical support when assessing and briefing for superdensity schemes.

– The report on Planning Delivery Agreements, noted above, should be used as a basis for setting up a framework between developer and the Local Authority for processing larger superdensity schemes.

– The planning authority should allow other affected local authorities to have an input into schemes that have significant cross-borough impacts.

– Local authorities should provide strong and proactive leadership in guiding schemes through the planning process and where they have control of land they should directly manage the initial stages of superdensity schemes and consider retaining a financial interest in the resulting development.

10. Meeting the cost of service charges

– Minimising service charges must be considered at the earliest design stage.

– Where service charges are high, they should be partly capitalised.

– Investors should be encouraged to take their return from long term growth, to allow service charges to be capitalised.

– Where public bodies sell land, they too should seek a long term return to allow service charges to be capitalised.

– Planning briefs should specify management and maintenance requirements, and acceptable service charges, to allow these costs to be taken account of in residual land value calculations.

Superdensity: the Sequel
about the authors

Four architectural practices

This report – like its predecessor – is the product of collaboration between four architectural practices, specialising in the design and delivery of residential and mixed-use neighbourhoods. We have been at the forefront of housing debate, design and delivery for 40 years or more, and are currently delivering a significant proportion of London's supply of new homes. We are therefore able to take a long view, and to bring experience from across the whole spectrum of housing by type, location and tenure. We are creating homes for all sorts of people: young and old, wealthy and poor, singles and families. Our regeneration work, engaging with local people, has given us particular insights into what has worked – and failed to work – in the past.

Why collaborate?

Although we are fierce competitors, we also recognise the benefits of collaboration when it comes to understanding and influencing the wider context in which we operate. We therefore meet regularly to discuss current issues in relation to housing and place-making, and the way they are shaped by the pull of market and regulatory forces.

With a wide range of clients and huge collective experience, embodied in our 600 combined staff, we find that we can we can bring knowledge and insight to contemporary issues, and we are keen to share that with the wider community of developers, local authorities, practitioners and politicians. We certainly don't agree about everything, and we bring four different voices to each debate, but we typically discover a high degree of consensus about what are the problems and what might be the solutions.

We also collaborate, individually and collectively, with other organisations such as the NLA, the Housing Forum, Future of London, NHBC and Design for Homes.

Some of our collective work to date

The group has produced a number of reports and discussion papers including:

- *Recommendations for Living at Superdensity.*
- *Space Benchmarking: Helping Consumers to Make Informed Choices about Homes to Buy and Rent.*
- *London Housing Design Guide: detailed involvement in drafting and a consultation response on the draft.*
- *Yes! In our backyard. Reflections from 30 years of experience of community architecture on how Localism can be made to work.*
- *Red Tape Challenge and Innovation in Housing.*
- *Bonfire of the Regulations - Rights to Light.*
- *Home Performance Labelling.*

Collectively and individually, members of our practices have participated in the Housing Standards Review, undertaken research for government and many other national organisations, written numerous design guides and published articles, papers and books about housing.

Credits

Recommendations were written and compiled by Ben Derbyshire of HTA, Matthew Goulcher of Levitt Bernstein, Andrew Beharrell of Pollard Thomas Edwards and Andy von Bradsky of PRP Architects.

The team would especially like to thank Denise Chevin, Peter Murray at the NLA, Julia Park at Levitt Bernstein, Tim Metcalfe at Pollard Thomas Edwards, Sarah Harrison and Philip Murphy at PRP and other contributors at the four practices.

The orginal Superdensity Report published in 2007 was complied by the four practices in partnership with David Birkbeck of Design for Homes.

Graphic and web design: Tim Metcalfe

Contacts

Ben Derbyshire
Managing Partner
HTA Design LLP
106 - 110 Kentish Town Road
London NW1 9PX
020 7482 8016
www.hta.co.uk
@HTADesignLLP
ben.derbyshire@hta.co.uk

Matthew Goulcher
Managing Director
Levitt Bernstein
1 Kingsland Passage
London E8 2BB
020 7275 7676
www.levittbernstein.co.uk
@LevittBernstein
matthew.goulcher@levittbernstein.co.uk

Andrew Beharrell
Senior Partner
Pollard Thomas Edwards
Diespeker Wharf
38 Graham Street
London N1 8JX
020 7336 7777
www.pollardthomasedwards.co.uk
@PTEarchitects
andrew.beharrell@ptea.co.uk

Andy von Bradsky
Chairman
PRP Architects
10 Lindsey Street
Smithfield
London EC1A 9HP
020 7653 1200
www.prparchitects.co.uk
@PRP_News
andy.vonbradsky@prparchitects.co.uk

Further copies of the report can be obtained from any of the above or is available to download from www.superdensity.co.uk

Footnotes

[1] Reinventing London (Bridget Rosewell, 2013).

[2] Ecological Urbanism, The Nature of the City, Susannah Hagan, 2015.

[3] A Tale of Two Cities: London and Tokyo in the 21st Century.

[4] Barratt Homes 24/11/2014.

[5] London Assembly Report: 'Highly Charged – Residential leasehold service charges in London' (March 2014).

[6] City of London Barbican Residents Information-Estimated Service Charges 2014/15.

Photography and image credits:

Matt Cooper, Dennis Gilbert/VIEW, Paul Tyagi, Tim Crocker, Unit 8 at the University of East London under the guidance of Alex Scott-Whitby, Andy Spain, Fisher Hart, Huw Evans, Morley von Sternberg, David Bank, Hayes Davidson and Allies and Morrison.