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NEW IDEAS FOR HOUSING

NEW IDEAS FOR HOUSING

NLA INSIGHT STUDY





NLA INSIGHT STUDY

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Foreword.

October 2015

The facts are stark: in 2015 London’s population passed its previous peak of 8.6 million people and continues to grow. The population is likely to be around 10 million by 2030, adding nearly 70,000 people and 34,000 jobs every year.

The current net delivery of new build homes in London of all tenures stands at about 20-25,000 homes per year, a number that has not changed significantly in the last 15 years. This figure is made up of new build homes as well as homes created through the conversion of houses to flats. At least 40,000 new homes per year over the next 20 years are needed to house the new population, and a further 9,000 a year are needed to ‘catch up’ with current latent demand.

So the delivery of new homes has to at least double from its current rate in London. How are we to do that?

The private housing sector is at maximum capacity, there is a shortage of skilled labour, a shortage of some materials, and it is not to housebuilders’ benefit to radically shift the imbalance between supply and demand. Smaller housebuilders were decimated in the last recession thus making it more difficult to address the sort of smaller and more difficult sites that abound in the capital.

It is clear that there is no silver bullet that will increase the level of house building and make up for years of under investment. That is why the NLA sought new ideas from architects, contractors, manufacturers, economists and housebuilders. We wanted to look at a multitude of ways that we could implement to chip away at the big numbers that are needed.

We were not disappointed. This study illustrates a wide range of ideas and approaches to the delivery of new homes – some that can be delivered within the current regulatory system, others need a shift in policies in planning and funding. The ideas, in the main, occupy areas of delivery not covered by the major housebuilders and, taken together, can go a long way to making up the shortfall of the current system.

Peter Murray
Chairman, New London Architecture

Housing supply has become the most critical issue facing London. For decades, the number of homes built has simply not kept pace with population growth. In some ways the city has become a victim of its own success and for many Londoners, housing availability is rightly their biggest concern.

At City Hall we are pioneering new ideas such as Housing Zones, which use focused planning and flexible funding to create high quality places, fast track homes and build much-needed infrastructure. The Mayor is on track to deliver a record 100,000 low cost homes for low income Londoners by 2016, with over 94,000 already completed, and we have released 99 per cent of City Hall’s land for development, including major regeneration schemes at Greenwich and Barking.

Yet we know that more needs to be done to achieve the level of housing building required – at least 49,000 homes a year, around double the current rate. Such is the scale of the challenge that no single solution can provide this increase and nor can any single organisation deliver this change. The Mayor, London boroughs, government, private and public sector developers, construction companies and architects must work together to find new ways to drive delivery of new homes. More than that – we need creative new solutions that will improve the speed, scale and quality of housing supply.

That’s why I have been delighted to join the NLA in our quest to bring fresh thinking to building the homes that Londoners need. We asked for innovative and ambitious ideas, and we were certainly not disappointed. The range and sheer number of well-considered and imaginative entries was truly impressive. Some ideas were eye-catchingly radical – such as a floating neighbourhood transforming sites on the Thames. Others were simple yet brilliant – such as redefining the index of public transport accessibility (PTAL). Without a doubt, the entries showcase some exciting ways to challenge the traditional approach to housebuilding and we look forward to pursuing the ideas set out by winning entries in discussions here at City Hall.

Richard Blakeway
Deputy Mayor for Housing, Land and Property

Introduction.

Claire Bennie
Architect and Housing
Development Specialist

A home is fundamental infrastructure for a decent life – it is as basic a human need as food and water. A civilised society would not accept people managed without these nutritional basics so why does it seem to put up with such stark inequality or shortage of accommodation in London? If a minority of people were hoarding food and trickling it out at extortionate prices, with food banks being the norm for most people, there would surely be civil unrest. Of course the demand for food can be met from anywhere in the world now, but the creation of new housing suffers uniquely due to its reliance on a finite and static commodity: ‘land near employment’. London, with its global reach, productive economy and vibrant atmosphere, has recently created many thousands of new jobs and thus continues to attract fresh residents year on year in search of their livelihoods. But it cannot create more land. And in that basic imbalance is the housing problem born in the capital.

Neither is the remedy as simple as turning on a tap and supplying an adequate number of homes. Affordability is the other crucial factor at play, and is a factor not solely related to that lack of supply. Renting or purchasing accommodation in London is so expensive relative to earnings that it hurts many Londoners, causing flight outwards or away, overcrowding, or at worst, homelessness. Fiscal policy, whether public spending, interest rates or tax, has just as a large a part to play in the affordability aspect as pure supply.

The ‘supply failure’ issues do not stop there. Have we got the right sized homes for our households? Does their tenure and regulation provide very necessary stability? Are existing London homes in an enduringly fit state, affordable to run, and easy to get into and around? Are they chronically under or over occupied? All of these factors compound to exacerbate both the affordability and supply crisis, and may not lead society necessarily to ‘building more homes’ as an exclusive solution.

The ultimate outcome of an inadequate supply of the right housing is that London will cease to function as a city which creates £10-£20 billion of added value per annum to the UK economy. It will decline economically if the people necessary to sustain it cannot be accommodated in a dignified, let alone comfortable or affordable, way.

So what exactly is the situation now, how did we get here, and what do we do next?

London’s housing crises: A bit of history

A leading figure in housing, education and health reviewed the state of affordable housing in the city. The causes of the problems he encountered were rapid growth and immigration, increased cost of land and rents, public improvements (e.g. new railway routes), migration to the suburbs and the need of those on low incomes to live near their work. He identified the slow progress with any reform as due to inefficiency and neglect of local authorities, ignorance of ratepayers and the inadequacy of compulsory powers exercised by government. He bemoaned that no-one would provide homes for those on low incomes because of the inadequate return. It was almost 150 years ago in 1866 that James Hole, an educationalist and reformer with an interest in health, made these observations.

How depressingly familiar this all sounds. Scanning the literature about London from the mid-nineteenth century onwards reveals that a housing crisis, whether of supply or affordability, has dogged London since its first industry-inspired expansion. The causes and attempted remedies have been different over the 150 intervening years, but the ‘holy grail’ that London’s housing supply should meet its demand in both numbers and quality (including affordability) seems to have eluded all generations including our own.

The historic drivers to increasing supply have always involved the plentiful and easy supply of land and funding, as well as favourable fiscal policy. The creation, improvement and expansion of public transport in London has also been a significant enabler of new housing development. The late 19th century and pre WW1 population boom was met with a mix of private housebuilding, the majority of which was by multiple small actors, and some philanthropic and public housing in five-storey tenements. The volume of both was wholly inadequate to meet demand and was very expensive relative to wages. It is interesting to note that both Land Value Tax and Rent Freezes were introduced before the First War and both had the effect of stunting supply. The prevailing political mood nonetheless was that the market would provide – a mood and a reality only changed by the huge expectation of decent housing rightly demanded by the population after the horror of WW1 was over.

After the First War, various Acts incentivising both public and private sector housebuilding as well as slum clearance resulted in a new increase in housing supply. Private sector housebuilding was demand-led with lots of choice and builders competing. It was fuelled by plentiful and cheap land, easily obtainable funding to small builders, burgeoning transport, availability of mortgages from Building Societies and low interest rates. There were 200,000 homes built a year in the UK between the wars: the subsidised homes comprised 25 per cent by the new local authorities and a further 10 per cent ‘affordable’ homes by the private sector. This period added 50 per cent to the UK housing stock but new families were forming so the crisis did not abate before WW2 commenced.



© Lifschutz Davidson Sandilands

Ferrier Estate - now Kidbrooke Village



© Welwyn Hatfield Museum

Hatfield New Town in 1962



© RIBA Library Photographs Collection

Ronan Point, West Ham, after building collapse

After the Second War there was a huge increase in the number of London households at the same time as unprecedented prosperity across classes, causing owner occupation to become the ‘normal tenure’ for the first time. A huge political will existed to invest public money in housing in earnest for the first time and land was compulsorily purchased with public money in substantial quantities. UK housing delivery thus hit 200,000 – 300,000 a year varying from 75 per cent subsidised down to 40 per cent in the final years of that unprecedented era. Parker Morris Standards (essentially large space standards) and Cost Yardsticks proved in the end an unsustainable pairing of generous standards and impoverished grant monies. The 1970s slump, the collapse of Ronan Point and 1980s political antipathy to subsidised housebuilding brought our most recent housing boom to a close.

New Towns formed part of this public growth in the 1960s and 70s but were not as significant a factor in relieving demand as might be thought, only adding 4 per cent to the national stock. Both New Towns and town additions experienced problems such as lack of facilities or transport which undermined their success considerably.

The collapse in housebuilding after about 1980 was accompanied by the Right To Buy policy which allowed council tenants to purchase their own homes, thus reducing the stock of public rented housing by about 300,000 homes (there are only about 800,000 public or charitable homes in London now so this was a significant reduction). Other tax, rent and mortgage reforms all combined with this undersupply to push property values and rents to the limit of acceptability relative to wages for most Londoners in the 21st century. The housebuilding sector underwent a significant slow-down and has never recovered sufficiently to respond to new demand in the capital, especially as that demand is highly vulnerable to the boom and bust culture.

London’s housing crisis now

So what are the factors and dynamics which underpin London’s housing crisis now? The data and evidence is in some areas surprisingly difficult to come by, or even pin down as fact. It might be imagined that the basics of land ownership or population change were undisputed and matters of public record, but this is not the case. Readers must therefore tolerate ambiguous or contested data and make up their own minds.

DEMAND

London’s very rapidly expanding population and job creation is not a new phenomenon as has been demonstrated, but the options for addressing that demand have never been more constrained.

Page one of any economics textbook would state that there must be two interventions which might resolve a market imbalance: creating more supply of a good, and/or managing down demand. It would be wrong to plough ahead with an essay, or indeed a set of studies of London’s Housing Crisis, without addressing the issue of ‘managing demand’. Many people will ask: why even allow London’s seemingly unstoppable population rise? Can that rise not be cooled in order to avoid over-densification, tower blocks, strains on public services and yet more focus on London and not on the North? This is not a new issue: the 1940 ‘Barlow’ Royal Commission noted that ‘The continued drift of the industrial population to London and the Home Counties constitutes a social, economic and strategical problem which demands immediate attention.’

‘Demand management’ suggests both unpalatable issues such as population control, and what might be perceived as ‘anti-London’ strategies for investment and job creation outside the capital. It is worth noting that both before and after WW2, central government tried to diversify employment locations with limited effect. This strategy needs huge political will and private sector action. Londoners could of course

be housed outside London, as previously stated, in town extensions or New Towns within striking distance of the capital. The conflicts between the people of London, fearing intolerable densities, and those of the wider region, fearing growth and loss of character of their chosen low density environment, will be bitter.

Further demand side management could involve curbing investment possibilities e.g. second homes, overseas investor behaviour and easy mortgage credit. Inevitably this kind of demand suppression has unintended consequences and is the subject of fierce debate between the various policy-makers about whether it would both suppress demand and supply simultaneously.

Homes, people and households

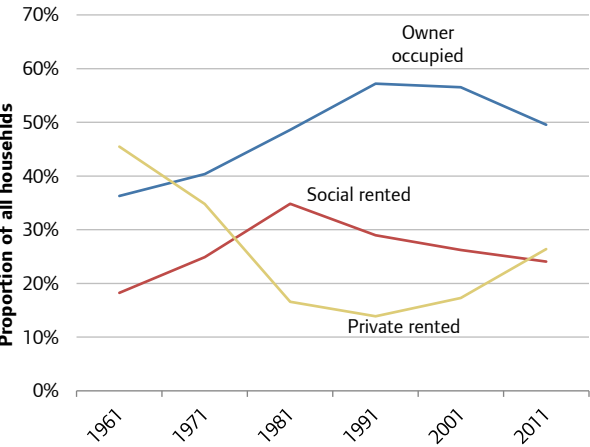
What have we got?

Greater London has approximately 3.4 million dwellings and 8.6 million residents. Households are mostly housed at the moment, even if only on a temporary basis. The average household size is 2.5 people, which is an increase of 13 per cent over the last census period. Historically, this figure has been as high as 5.5 (nationally): the population of England and Wales in 1801 is roughly equivalent to London’s population today but there were a mere 1.6m distinct dwellings then. London’s homes are split roughly into 50 per cent houses and 50 per cent flats.

In terms of tenure, 76 per cent of homes are owned privately in the capital, a third of which are then rented out on the market. The remaining 24 per cent are in public or third sector ownership and rented at a subsidised rate, a significant amount having been lost to Right to Buy during the last 30 years. The trend is clear: many households cannot buy homes any more and are turning to private renting as the only alternative. 50 per cent of those private renters don’t want to be renting.

Trend in household tenures, London 1961-2011

Source: Strategic Housing Market Assessment (SHMA) – GLA - 2013



8 per cent of households are now overcrowded, but especially those in private rented stock where the rate is more like 13 per cent. 70,000 households are living in the same home as another household. In contrast, nearly 40 per cent of owner-occupier households have two or more spare bedrooms. Contrary to the popular belief that London is a ‘lights out’ city, only c.121,000 homes are either empty or ‘second homes’, representing 3.5 per cent of the stock, albeit that the expensive boroughs contain most of these.

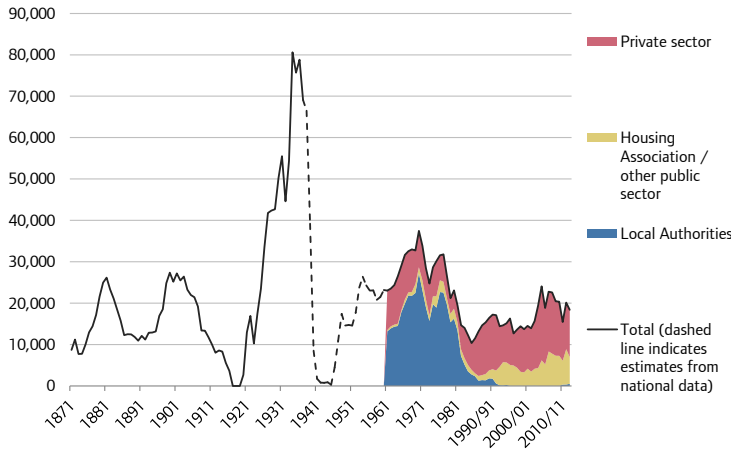
Further qualitative issues affecting London’s stock are its suitability for older or less mobile people, its age and condition, its energy efficiency and the stability of tenure afforded to the resident. These are all factors which will affect London’s offer to its new and existing residents, and make them consider their choices when deciding whether to stay or go.

What is currently being added?

The current net delivery of new build homes in London of all tenures stands at about 20-25,000 homes per year: this has not changed significantly in the last 15 years. This comes from new build homes as well as some homes created through the conversion of houses to flats.

New homes built in Greater London

Source: Housing in London – GLA - 2014



What do we need?

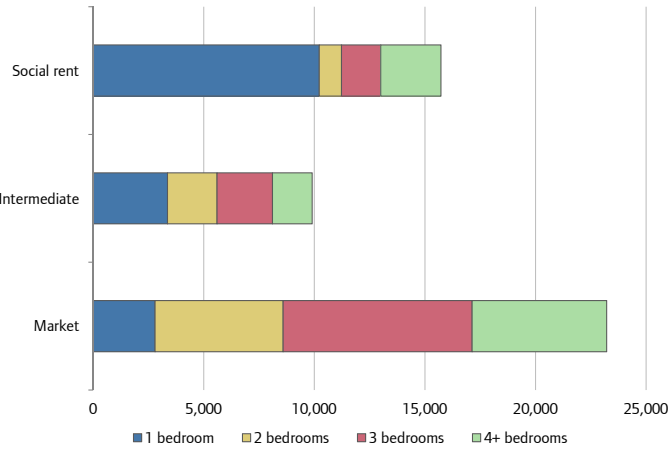
Overcrowding is rising and the projected number of people in the capital is set to rise by a further 1.6 million over the next 20 years. In households, this equates to 800,000 households due to the expected smaller household size emerging. Thus 40,000 new homes per year over the next 20 years are needed to house the new population, and a further 9,000 a year to ‘catch up’ with current latent demand. Some experts say that the backlog should be met far more quickly, resulting in a 62,000 home per year supply need during the first ten years. Others even go as far as 85-100,000 homes per year as an immediate need. So the delivery of new homes has to at least double from its current rate in London, with some saying it needs to quadruple. Tokyo and New York have managed to add enough new homes to meet population growth over the last ten years, whereas London has failed.

What tenures are needed is a matter of considerable debate and argument. The GLA evidence shows that 52 per cent of new homes should be affordable (either rented or intermediate homes) with a substantial amount of these being smaller homes for social rent and larger homes for intermediate tenures. Some commentators note that there is a significant backlog of affordable housing demand which should be addressed more quickly than over the 20 year period envisaged. The market demand is thought to be for larger homes in the future, a need which some say could be met through a redistribution of households in the existing stock.

The GLA's Housing Need Assessment is shown below:

Annual housing requirement 2015-2035 by tenure and size

Source: Strategic Housing Market Assessment (SHMA) – GLA - 2013



What other contemporary needs are not met?

Setting aside the issue of pure numbers, there are various groups whose needs are not met by the current stock or tenure arrangements which prevail in the capital. Affordability is clearly the major issue, and is dealt with in the next section. Other demand segments whose needs are not adequately met include older people, private renters, people with physical and mental health issues, 20-somethings (sharing, earning very little and often in substantial debt) and single person households (on the increase). It is striking for instance that larger market homes are not available to their target family market due to long-term and endemic under-occupation of these properties by older people, who are still not persuaded to move house by the paucity of housing offers for them in London. There is some evidence to suggest that older people enjoy the security, views, peace and communal facilities offered by well-managed tower blocks, however counter-intuitive that might seem. Supply solutions need to address these redistribution and ‘missing typology’ issues in the current stock, alongside providing additional homes.

Where did the most recent million new people go?

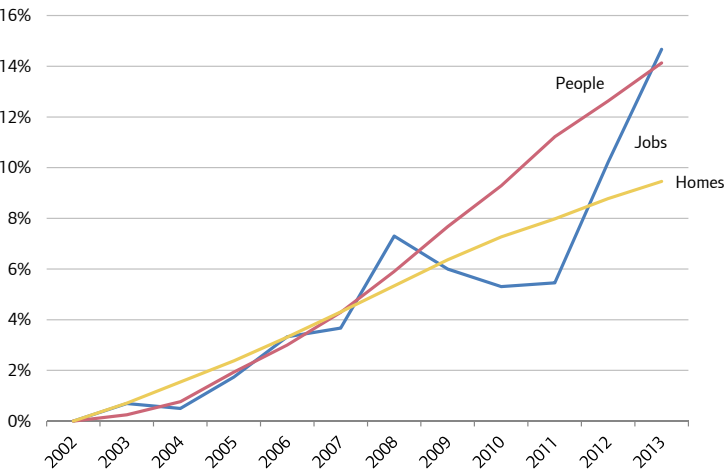
The most recent population increase of c.1 million people during 2001-2011 was absorbed about half into the existing stock (causing overcrowding in some cases) and half into the new supply of homes (about 22,000 new homes per year). This is not a sustainable model as overcrowding will eventually reach breaking point in the existing stock.

Why is the population increasing?

A substantial number of jobs have been, and continue to be, created in London year on year and this is undoubtedly creating the attraction to London. Employment in London is projected to reach almost 5.8 million jobs by 2036, an increase of 860,000 from 2011. These jobs are forecast to be highly concentrated, with about a third of these new jobs being within the Central Activities Zone, already an area with one of the highest jobs densities in Europe. Net in-migration (arrivers minus leavers) to London fluctuates over time but has recently accounted for about 20,000 people per year on average (about half of whom are from overseas) but the far bigger population boom is from births, with a net increase (births minus deaths) of about 80,000 people per year. London is becoming a much younger city.

Cumulative growth in number of jobs, people and homes in London since 2002

Source: Housing in London – GLA - 2014



The market and the affordability problem

London’s current housing market

The most visible and stark aspect of the housing crisis in London is the reducing affordability of homes in the capital. The origins of this problem are a combination of many decades of government policy-making (including fiscal and planning) resulting in under supply, as well as UK and international investment behaviour and population growth creating intense demand. The supply of housing in 2015 is currently operating almost as a free market, with very little public grant funding, tax intervention or other constraints on globally-located purchasers. The interventions which do exist, such as Housing Benefit and Buy-To-Let tax relief, create markets and incentives which do not necessarily address need. Developers are acting rationally within this environment to meet the needs of their purchasers (and hence their bottom line) through releasing land and sale homes slowly, maximising prices, seeking stable purchasers globally and minimising affordable home provision. What is abundantly clear is that the market left to its own devices does not meet the needs or aspirations of a growing number of Londoners and that intervention is required to address this. It is not enough to just ‘supply more homes’ if the market environment does not constrain their use or ownership – prices have not gone down as a result of more supply.

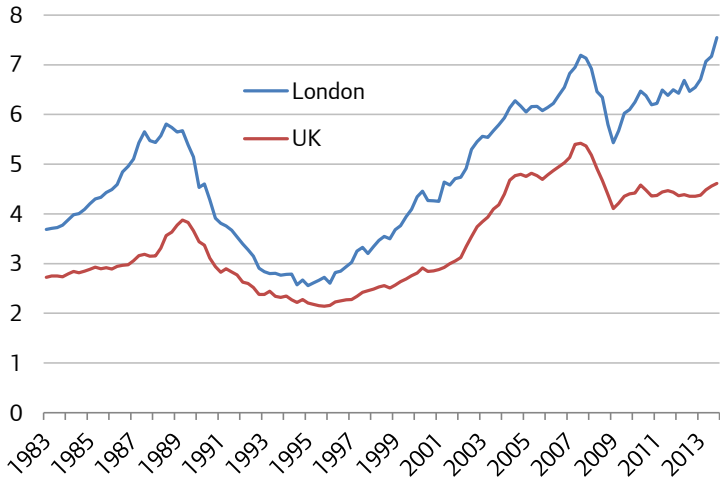
The median London household income is £35,740 and 80 per cent of households bring in less than £45,000.

Market homes and first time buyers

The proportion of 25 to 34 year-olds owning their own home has fallen from 59 per cent to 36 per cent in a decade. House prices rose by 18 per cent in London and wages by 2.1 per cent. Market values are on average 7.5 times average salaries in 2013:

Ratio of average first time buyer prices to average earnings, 1983–2013 (Nationwide)

Source: Strategic Housing Market Assessment (SHMA) – GLA - 2013

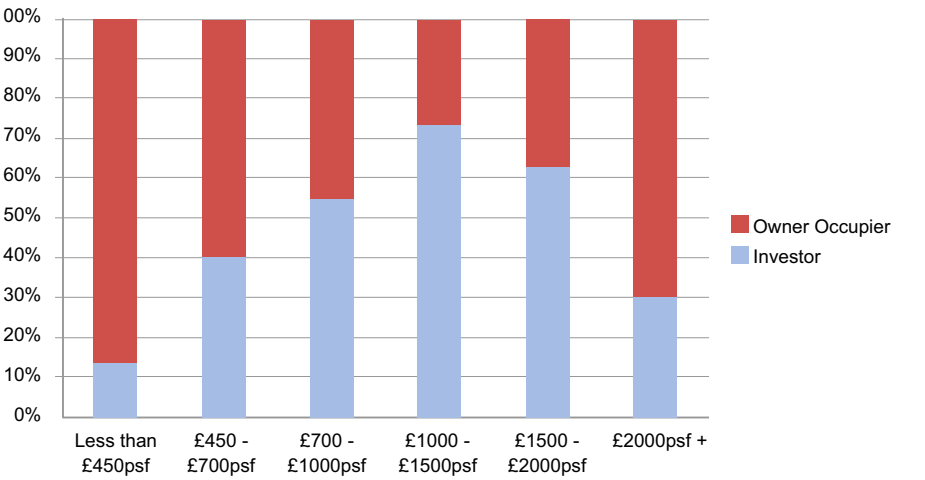


So who is buying new build homes if they are so expensive? Research by Molior shows that 61 per cent of new build homes are currently bought as an investment and 32 per cent as a place to live in. (The remainder were ‘flipped’ to shared ownership tenure). Overseas investors account for 15 per cent of the purchases, mostly in the higher price bands. It is not clear how many of the new build purchases were to first time buyers: 80 per cent of the new build sales market is affordable to only 20 per cent of working households, and the average first time buyer is now in the top 20 per cent of London’s household income distribution. It remains to be seen whether there are now more ‘buy-to-live’ purchasers due to the recent Help To Buy policy, which allowed more first time buyers access to mortgage finance with a smaller deposit. Even though the mortgage credit market is back from its freeze in 2008 and interest is at an all-time low, the entry deposit of 25 per cent required (especially for post grads with substantial debts) is an insurmountable barrier for those without equity-rich parents. The ‘Bank of Mum and Dad’ accounts for almost two-thirds of first time buyer deposits, although the average amount given is only £27,000 which hardly fits the bill.

First time buyers form 80 per cent of band 1 and 20 per cent of band 2 in the diagram below:

Owner / occupier investor splits

Source: Savills data from Who Buys New Homes in London and Why? – Molior for BPF – Feb 2014



Private rental market

Renting on the open market is clearly a growing tenure due to the inaccessibility of market homes as described above, and this tenure is currently largely being supplied ‘informally’ via small investor purchase. There is some evidence that investor-purchased homes are being used in the main for corporate lettings and overseas students, or left empty. The size and format of the new homes developed therefore reflects the needs of these users rather than long-term family households – 95 per cent of all new build homes being flats. The London private renting market is unregulated and ‘unseen’ with very few property standards and no planning use-class. There is not yet a mature new build Private Rented Sector (PRS) in London whereby known and trusted institutions fund discrete, serviced blocks and benefit from their rental stream over the long-term (as in the US). Institutional investors are looking at the sector as an investment prospect now, but some experts suggest that commercial buildings still provide better returns in London, and it is this return level which is crucial to the growth and maturing of a genuine PRS sector and stock in the capital.

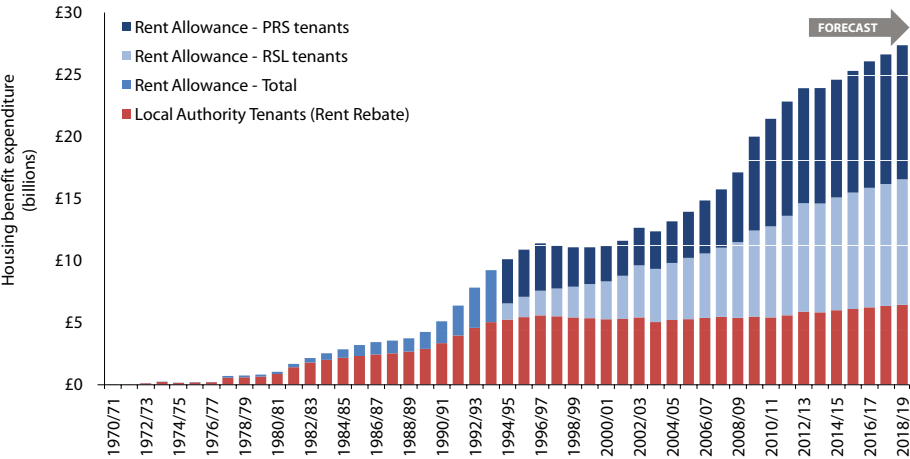
Private renting is not a cheap tenure: the average monthly rent is now £1,314 for a one-bed and £1,677 for a two-bed (Molior). Between 40 per cent and 50 per cent of renting households in London are living in poverty, the biggest increase being in private renting households. This is partly due to the increased use of private rented homes for residents who qualify for social housing but have no access to that stock. There are now 842,000 housing benefit claimants which represents about 50 per cent of renters, one third of whom are renting privately and two-thirds of whom are in social housing. London’s housing benefit bill was £6 billion in 2012-13, with a 40 per cent growth in caseload during the decade 2003-2013.

Most importantly, private renting gives very little security of tenure, a vital qualitative factor for those making housing choices. If it is to become a mainstream London tenure, then its reform is long overdue. Many commentators believe that the use and retention of public land to underpin the building of dedicated rental homes of all prices is the only way to retain public control in perpetuity of the supply of homes to meet the highly variable demand and need of London.

It is interesting to note that over the last ten years, London has received around £17 billion of capital investment to build new, or improve existing, affordable homes, while the total housing benefit bill has been £50 billion. The UK trend in Housing Benefit payments is shown below.

Housing benefit - long-term spending and projections

Source: Lyons Review - 2014



SUPPLY

Land, funding and housebuilders, and the way they are incentivised and regulated, are at the nub of today’s housing supply conundrum. London was never holistically planned until it was too late. Its organic evolution as a centre which gradually agglomerated peripheral villages meant that its density was fatally low from the outset. The disposal of land and property to private individuals, mostly over the 20th century, sealed London’s fate by making it extremely difficult to redevelop land (to suit a new economic era and population) in any great quantity. The post WW2 Town and Country Planning Act, though laudably aiming to prevent further ‘unsightly’ suburban sprawl, only frustrated housebuilding further by imposing substantial restrictions on land use which remain with us (and cherished by many) to this day, in spite of London’s very different economic environment. Ideally, large parts of London would be rebuilt from scratch and built at a different density, but private property interests are for the most part far too entrenched for this to be a realistic prospect.

The various parties who fund and build homes are motivated very differently and respond to various market interventions and stimuli as well as the seemingly untameable macro-economic environment which now has global reach and impact, where it did not during previous booms. The big question for those attempting to make policy at central or local level is how to encourage and give certainty to that willing supply chain of actors to create, scale up or invest in their businesses to increase supply.

Design is the alchemic process which draws these three supply-side raw materials into physical coherence, from neighbourhood layout through to door handle specification. The architect is a relatively recent entrant to the housing supply chain and their output has enjoyed a mixed reception over the years, but land scarcity in the 21st century means that detailed, early consideration of design, ‘product’ and space standards is now more important than ever.

Land and planning

Overview

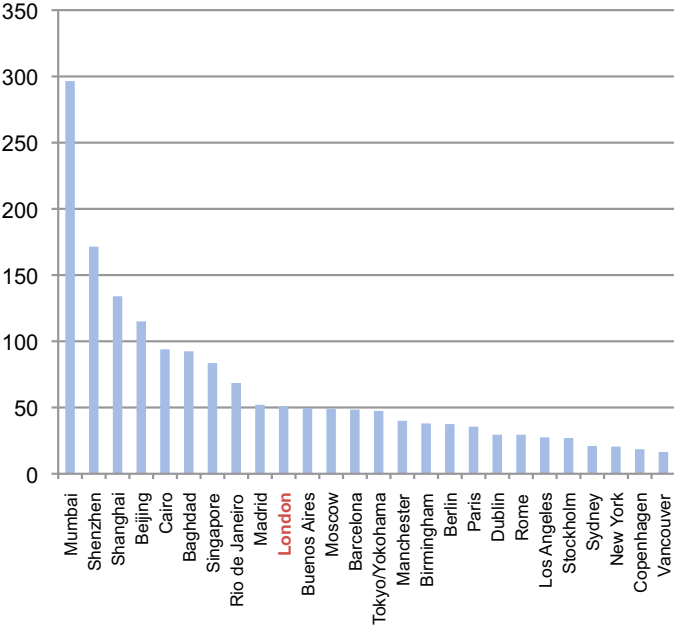
An absolute essential for the supply of new homes to be delivered is available and appropriate land. There is an instant problem here: is it possible to consider how to house the 10 million people who are projected to be living ‘in London’ without also considering the land in the whole of the South East for their possible accommodation? The GLA struggles with this in its policy documents because they have no control over the land use, spatial planning or housing targets of their adjacent authorities. (This does raise the question of the urgent need for a National Spatial Strategy but this is out of scope for this essay.) But for the purposes of this exercise, there follows an analysis of land within Greater London only.

How much land is there in Greater London?

Greater London has 152,200 hectares (one hectare = 100 x 100 metres = 10,000 square metres) which means that there are just over 50 people, or 20 homes, per hectare if all land is used. Lay out all London residents in a grid and they would be spaced 14 metres apart. London is a relatively low density city.

World city densities (people per hectare)

Source: City Mayors Foundation – 2007 data

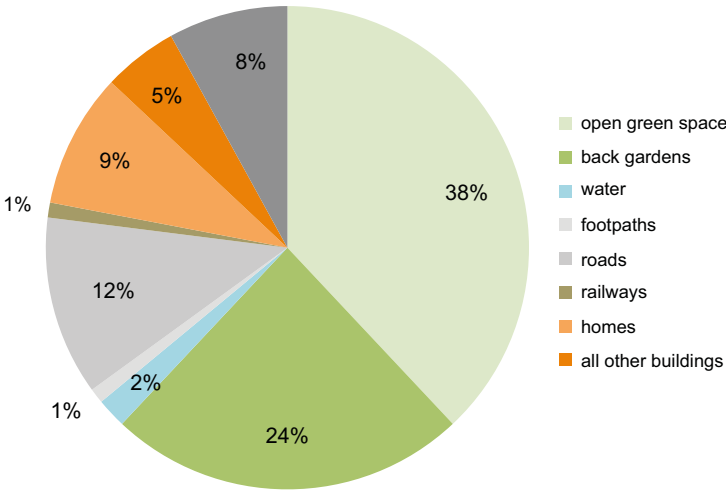


What is London’s land used for now?

The statistics which follow are very striking to both experts and lay-people alike. The National Land Use Database (NLUD) reveals that London has 38 per cent open green space and 24 per cent back garden space in addition. Buildings account for at most 22 per cent of the land usage, and more likely closer to 14 per cent. Who owns all this land? The answer is not at all transparent and many parties (most notably recently the London Chamber of Commerce) have called for the London Land Commission (LLC) to speed up its work in identifying ownership in the capital. Many people are calling for more transparency in particular around inactive landbanks owned by developers as well as non-developing organisations, although some contend that this land area is relatively small in comparison to other ownerships. The split of public and private ownership is not clear but can be surmised from the land uses shown below.

Greater London land use by area

Source: General Land Use Database (Office for National Statistics) – 2012 data



What land is therefore available for new supply of homes?

There are then two strategies for considering how much land is available and appropriate for new homes: starting with Greater London’s whole area and subtracting the impossible, or starting with and adding up Greater London’s known possible sites, identified by the local authorities, taking into account all existing constraints.

Taking the first approach is difficult because London’s land use and ownership is by no means all recorded. Making some assumptions from the chart above about the ownership of the buildings, a rough estimate says that around 45-50 per cent of land is instantly not available for development without substantial and very difficult intervention due to the existence of private ownerships, transport or water infrastructure. Of the remainder, 38 per cent is open green space, 7 per cent is in public housing or its gardens, 1 per cent is in public building assets and there is a remaining 8 per cent in unknown use. So in theory (and the multiple regulatory and other constraints which land is subject to have been ignored for the time being – see next section), about 75,000 hectares are ‘available’ for new buildings.

Now taking the second approach whereby the GLA has worked with London’s boroughs to identify actual sites with potential, this identified about 450,000 homes worth of land. 290,000 homes could be delivered within ten years, using land amounting to about 3,700 hectares, all of which is ‘previously developed land’ or already has a building on it. (Note that c.100,000 of these homes already have planning consent). A further 100,000 homes can potentially be accommodated on sites of less than 0.25 hectares in area, but these are not identified. Various London policies, including Opportunity Areas and Housing Zones, aim to accelerate this identified capacity. So only 5 per cent of the 75,000 hectares identified above is currently ‘on the table’.

What are the constraints affecting land which could be developed for housing?

Numerous overlapping constraints exist which affect land use and development potential in the capital. These could be categorized into ownership, planning, technical and viability factors.

Having identified the barrier of private ownership above (at least 30 per cent of land area being privately owned), planning regulation is then by far the most constricting factor. Taking open space, 18 per cent is designated Metropolitan Open Land and 22 per cent is designated Green Belt, the latter fact surprising many people who assume that London’s Green Belt lay outside the Greater London boundary. Experts and advocacy organisations are bitterly divided over the presence and effect of London’s green belt (and the amount of open space in general) on its ability to grow. Turning to land which is more developed, 15 per cent of Greater London is in a conservation area which affects both the areas themselves and the land adjacent. Industrial land, albeit a small percentage of London’s available land, is now being understandably protected for job retention and creation (although recent developments have seen a greater loss than desired). Where any land is allocated for or has potential for housing, density constraints then kick in, an issue requiring its own analysis (see next section). And it is not only the regulatory aspect of planning which provides the constraint: funding to Local Authorities has been cut to the point where planning departments are unable now to process the numerous and complex applications before them.

Technical constraints are myriad and complex, including Rights of Light, contamination, flood risk, noise and utilities. All of these lead in turn to an assessment of the viability of any given land for housing development, with access to public transport and other infrastructure being the other vital components which drive value and viability. It should be noted that the methods for assessing a site’s viability, and thus capacity to accommodate affordable homes, are highly contested at present, resulting in tenure mixes which are compromised with respect to policy and need.

What density can homes be built at?

Current London-wide planning policy provides for a range of densities depending on the current ‘character’ of an area and its accessibility to public transport. It is interesting to note that recent completed developments have tended to be built at lower densities than the London Plan recommendation, especially in outer London areas.

Public Transport Accessibility Levels

Source: GLA London Plan - 2013

Setting	Public Transport Accessibility Level (PTAL)		
	0 to 1	2 to 3	4 to 6
Suburban	150–200 hr/ha	150–250 hr/ha	200–350 hr/ha
3.8–4.6 hr/unit	35–55 u/ha	35–65 u/ha	45–90 u/ha
3.1–3.7 hr/unit	40–65 u/ha	40–80 u/ha	55–115 u/ha
2.7–3.0 hr/unit	50–75 u/ha	50–95 u/ha	70–130 u/ha
Urban	150–250 hr/ha	200–450 hr/ha	200–700 hr/ha
3.8 –4.6 hr/unit	35–65 u/ha	45–120 u/ha	45–185 u/ha
3.1–3.7 hr/unit	40–80 u/ha	55–145 u/ha	55–225 u/ha
2.7–3.0 hr/unit	50–95 u/ha	70–170 u/ha	70–260 u/ha
Central	150-300 hr/ha	300–650 hr/ha	650–1100 hr/ha
3.8–4.6 hr/unit	35–80 u/ha	65–170 u/ha	140–290 u/ha
3.1–3.7 hr/unit	40–100 u/ha	80–210 u/ha	175–355 u/ha
2.7–3.0 hr/unit	50–110 u/hr	100–240 u/ha	215–405 u/ha

It should also be remembered that significant new housing development generates other infrastructure needs which take up land area, such as schools, shops and workspaces – housing cannot just be considered stand-alone.

What is land worth in London?

Land value is a direct function of the value of what can be built on it, which causes significant high-risk speculation in the land market as expert and non-expert land owners gamble on what might happen at planning. London’s land prices have escalated substantially during ‘bust-to-boom’ periods – the latest being 2009-2015 – and land can go for between £50,000 to £150,000 per home built for areas with mainstream property values. At the high end extreme, this can rise to £500,000 per home; at the other extreme, land with multiple challenges such as lack of infrastructure, poor transport connectivity and remediation requirements can be worth quite a lot less than nothing, requiring a heavy public funding commitment to bring it into play.

Land and tax

Land ownership is not taxed to any significant degree in the UK, which is an area of concern to some who consider that a ‘favourable’ property tax regime has been the root cause of investor (including overseas) dominance in the housing market as well as incentivising landbanking and inactivity of land development, even when a planning consent exists. The various taxes include Council Tax, Stamp Duty Land Tax, Capital Gains Tax and Business Rates: London’s Mayor does not have the powers to raise or control the expenditure of these local taxes and is campaigning to be able to do so, in line with many other large cities. Increased value gained at planning is ‘taxed’ via Section 106 contributions and the Community Infrastructure Levy which aim to pay for the necessary infrastructure to support new development (schools, roads etc).

Land beyond London

There are many who are calling for London’s current and future housing need to be met outside the bounds of the capital itself. The South East subregion also has population growth predictions separate from London’s which mean that any moves to house Londoners in the wider region would add further pressure to that regional demand. Green Belt opponents have argued that the belt does not constrain growth or sprawl: the growth simply jumps across the belt and into the wider region, a phenomenon easily visible in London. But advocates of a more sprawling and less dense city observe that if public transport were to become extremely green and time-efficient, the sprawl would not matter. It is not within the scope of this essay to assess the detail of the capacity of London’s hinterland to house its residents but this strategy needs to be given serious consideration.

Public and pressure group opposition to land development

‘Nimbyism’ (NIMBY = Not In My Back Yard) is a crucially important factor in the supply of new homes. Land is constrained by the many and various technical and regulatory pressures discussed above, but its development is often also subject to substantial opposition from the public and bodies which have set themselves up to promote particular interests and views. The key outcomes are not only to slow down the rate of development, but also to increase cost and uncertainty to the point where schemes become undesirable to attempt or to complete. Public opposition to new housing development has recently been amplified for two key reasons: London’s increasing inequity of housing choices, and a desire to retain London’s character (as some see it) as a low to mid-rise city with generous open space. Social media has given far more bandwidth to these ideas, undoubtedly making new entrants to the supply sector nervous and slowing the rate of housing supply.

Funding and finance

Overview

Easy and cheap access to development funding by developers (both private and public) and builders is, and always has been, a fundamental component of maximising housing supply. The financial system which underpins such lending at scale has both globalised and been subject to trauma and collapse within the space of 30 years, leading to greater cost, risk and uncertainty for the developer sector. Under these circumstances, it can be seen that relying solely on private sector housebuilders to maintain a steady stream of housing supply, especially at double the rate previously achieved, would be ill-advised. Councils and Housing Associations now have new capacity to borrow to develop housing, but public subsidy in the form of grant has been gradually withdrawn, and an uncertain environment created where a smooth delivery pipeline is hard to achieve.

Development funding/mortgage lending

Access to debt finance for large private sector developers and housebuilders, having been very variable during the past 10 years, is buoyant in 2015, both on a corporate basis and on a scheme basis. Projects under £40 million (about 150 homes) are being funded by mainstream banks (subject to equity level) and other lenders: there is some evidence that ‘money is looking for schemes’ rather than the other way round. Private equity is stepping in above that amount, with far fewer lenders in that cost bracket. History tells us that ‘this too will pass’, and any significant changes in interest rates or other shocks to the lending market will cause lending, and thus delivery, to reduce significantly.

Smaller building firms find it a lot more difficult to access debt finance for schemes and it is being suggested that public sector equity loans or public sector led housebuilding opportunities would assist this important sector in delivering small sites.

It is well advertised that lending to individuals for purchasing homes has been an unsteady business over the last 10 years and that this has created sufficient uncertainty in the housebuilding sector for starts to be stalled in large numbers. This just adds to the fluctuations in delivery described above.

Public funding for Housing Associations and Councils

Housing Associations (HAs) began to be funded in the early 1960s to allow groups to develop homes for an intermediate renting/owning market: associations such as Circle 33 and Notting Hill set up at this time, some as co-operatives. The HA movement took off in earnest when large tranches of non-returnable grant were then introduced via the Housing Act 1974 which met all costs for development which would not be covered by the eventual net rental stream (about 90 per cent of scheme costs). Capital subsidy then reduced to 50 per cent of scheme costs and latterly 20 per cent, with no guarantee of any subsidy at all beyond a four year horizon, creating uncertainty and thus artificial spikes in housebuilding activity. The effect of this withdrawal of public funding has been to propel HAs into the private sale market in order to cross-subsidise their affordable home building activity, making them subject to the vicissitudes of the housing market in the same way as the private sector. HAs meet their development finance requirement through bond issues, using their all-but guaranteed rental stream to provide a long-term yield to the investors and the value of their assets as surety.

If today 15,000 social rented homes per year were funded at the 1970s level, this would represent a capital subsidy of about £4 billion per year, compared to today’s subsidy of about £350 million for about the same amount of homes. Some experts

advocate a return to this level of public investment to ensure the delivery of affordable homes which the market will not provide.

Council housing was funded and built from 1919 onwards in a similar vein, only stopping under Thatcher in 1981. Local authorities, including London’s 33 boroughs, have in the last few years been given the freedom to borrow against their Housing Revenue Account (HRA) within a capped limit. This is a major change to the access to funding for building new homes by councils. There are campaigns to further unlock council borrowing whilst still ensuring that it does not impact the Public Sector Borrowing Requirement.

Over the last ten years, London has received around £17 billion of capital investment to build new, or improve existing, homes, while the total housing benefit bill has been £50 billion. Many commentators and experts have suggested that this balance of revenue and capital subsidy to ‘make housing affordable’ is out of kilter and does not represent value for the public purse. Any transition from revenue to capital subsidy would clearly need to take place over a long period in order to work.

Institutional long term funding for PRS

A number of institutional investors are emerging as funders for the private rental market, and their involvement in London is being encouraged and incentivised by the GLA. As previously discussed, this market is not yet mature and the projected investment in and delivery of such blocks is still not anticipated to meet the burgeoning need for this tenure. It is suggested that the returns are still not adequate to promote such investment.

Construction and procurement

Overview

If homes are to be delivered at twice the rate they have historically been, the other step change needed is to increase number and diversity of players in the housebuilding arena. It is simply not possible in terms of risk profile and borrowing capacity for a big housebuilder to double their existing business whether at speed or over time. Historically, housebuilding booms have been met by a combination of smaller and larger entities, with an emphasis on the smaller firms, but recent boom and bust cycles combined with escalating land costs mean that smaller firms without much equity are not able to borrow the debt funding or take the risks involved in housebuilding at any scale.

Volume housebuilders

Thomas Cubitt was one of the first recognised major housebuilding contractors, setting up in business in the early 19th century and building much of Pimlico and Bloomsbury. But housebuilding resolutely stayed as a small, craft-based industry with thousands of firms undertaking mostly small scale work. That changed during the 1990s when the ‘mega-firms’ began to dominate the scene: in 2011, six firms started 50 per cent of private homes on big sites, increasing to nine firms in 2013 (notably now including a large Housing Association). About 100 other firms built the remaining 50 per cent of the homes. Bigger sites are also more prevalent now, further alienating the smaller constructors. There is some evidence that mergers of various larger developer organisations have tended to decrease the housing supply rate of the ‘big beasts’.

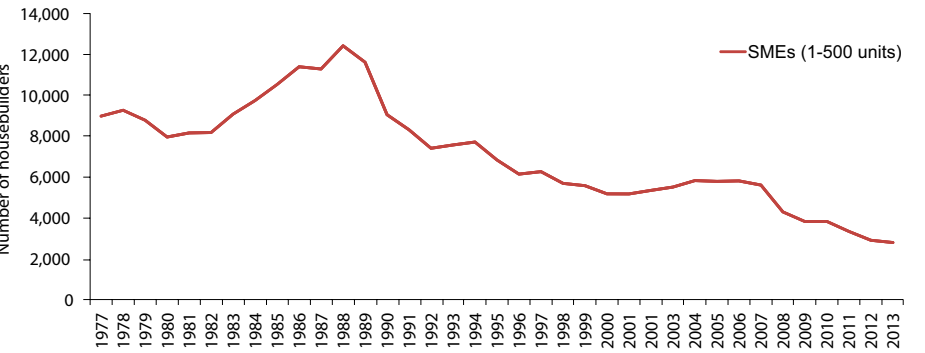
Volume housebuilders are also significant contributors to affordable housing supply via Section 106 agreements, in London building each year between one-third and two-thirds of affordable homes delivered over the last 20 years. (This has fallen to about 30 per cent recently due to renegotiations of planning gain agreements).

Small builders

Smaller firms have multiple challenges including difficult access to finance, little equity, lumpy cashflows and trying to compete in a very expensive land market. The larger housebuilders will not take on smaller sites so in theory there is a lot of opportunity to exploit, but smaller developers and builders find it hard to enter the market at all due to restricted access to funding post-crash and the vastly increased complexity of both planning and technical regulation.

Declining numbers of SME builders

Source: The Lyons Review - 2014



Public and charitable sector developers

The public and charitable sectors have been commissioners and builders of homes since the mid-nineteenth century, with a variable output depending on public spending priorities and thus grant available to them. Public sector development of new housing started in the late 1800s with philanthropic as well as public sector (through the London County Council) tenement building, followed by local council housing development in later years. Public housing ‘developers’ were often more pioneering than their private sector counterparts for a variety of reasons, chiefly not having to compete for customers (there being a ready-made tenant base) and grant funding offsetting risk. A very strong post-war sentiment of public service and duty toward people on lower incomes also permeated public sector architects’ departments, which were thus replete with talented and innovative staff. (As we now are aware, some of that visionary zeal, innovation and speed led to unintended and unworkable results.)

Housing Associations have been the chief developers of new affordable homes since the 1980s, having taken over from London’s local councils and the London County Council / Greater London Council for whom funding for new homes was cut completely. The significant reduction in grant has meant that Housing Associations are now cross-subsidising their activity with a large proportion of homes for sale, a risk arena which some associations are not happy to enter. HAs have also tended to merge in recent years in a bid to create efficiencies of scale and thus far fewer organisations are involved in new development than previously. Having said that, the HAs which do develop have substantial asset value and hence borrowing headroom which makes them important players in today’s housing development sphere. Local council development is also making a comeback with the advent of financing reform, but it is more likely that councils will use that freedom in partnership with the private sector rather than alone due to the skills shortage and risk involved in redeveloping their own land.

Procurement

Public spending activity of any size is always accompanied by a heavily regulated procurement process in order to demonstrate transparency and value for money in the use of taxpayer funds. When London councils and HAs want to develop homes, the process for engaging with the development or construction market can be drawn out and on particularly large schemes, involve the participants in considerable expense. Frameworks help to make this procurement more efficient, but can lead to ‘the usual suspects’ being identified due to a low-risk approach requiring candidates to have substantial relevant previous experience. It is notable that overseas participants seldom participate in the construction market in the UK, despite European procurement rules, perhaps highlighting that construction activity requires particular local expertise. Many commentators are pointing towards a far greater breadth (including from abroad) of construction actors being necessary to fulfill London’s housing supply need.

Community and self-builders

11,000 new homes were built as self-build in the UK 2012-13: this market represents a significant tranche of new supply to the country. Having said that, very little of it is built in London due to the cost of land in the capital and lack of appropriate sites. Various initiatives have been launched to fund and kickstart this sector, which has increasing appeal as Londoners seek to break out of the conventional and unaffordable London housing choices and forge their own destiny. Community building in its various forms is still evolving as a sector with the obvious barriers being lack of easy access to land, funding and skills amongst the very committed participants. Outside the UK, notably in the Netherlands, this sector has flourished where it has formed part of larger neighbourhoods where land and skills were dedicated to the self-build market.

UK construction industry capacity: skills

Recent experience of most housing developers is that when the housebuilding spike occurred in 2013-4, the UK construction industry was unable to respond to it, resulting in acute shortages of labour and materials as well as delayed responses from statutory authorities. There is widespread evidence that constructors could not recruit skilled workers, due to a sheer lack of new ‘graduates’ from the various building courses and a lack of apprenticeship places. There are various reasons behind this, but the basic two could be summarised as general sector uncertainty (boom and bust) making construction seem an unattractive choice, and a lack of interest from younger people in entering the business.

UK construction industry capacity: materials and techniques

Historically, attempts to ratchet up housebuilding to meet demand have resulted in a too-slow or wary response from materials and product suppliers. They understandably fear that large capital investment in manufacture of say windows will be at risk to the next market downturn. It is also fair to say that housebuilding, with notable exceptions, is a very conservative and risk-averse business. Why innovate when demand is so high and people will ‘buy anything’ as long as it has four walls and a roof? The make-up of the UK housing stock bears witness to this phenomenon, with only 5 per cent of the current total stock being constructed in a ‘non-traditional’ way:

A rare example of housebuilding innovation was the post-war efforts of Wimpey and Laing. War-time factories were no longer in use and materials in general were in short supply; these larger construction organisations took advantage of both to innovate, in particular in lower rise homes using prefabricated or concrete systems. The public sector post-war was also a powerhouse of pioneers, with in-house architects making their influence felt for probably the first time in any serious way in the design of housing. England had barely embraced Corbusian modernism before the war, and a highly motivated generation of young architects were determined to set that ‘omission’ straight. Concrete became the material of choice, in both in-situ and panellised form, and standardised systems from France and Scandinavia were used extensively in a



Prefabricated concrete system, Centre Point



Post-war development of Great Arthur House proved hugely influential



Co-op Housing at River Spreefeld, Berlin

bid to achieve the height and speed necessitated by government housing targets for London. Industrialised systems have been incentivised and trialled since in the UK, with the aim of reducing cost, creating certainty through procuring high volumes of a known product, improving quality through factory conditions and reducing time on site. From the 1960s through to the 2000s, system building of homes in the UK has never proven itself on any of these counts, except in the suburban sphere of single detached homes where it has achieved some traction. A seismic shift would need to occur in the UK’s construction industry to achieve any significant embracing of industrialised systems to solve the current demand for volume and speed.

The recent materials shortage arose from the same unforeseen boom in 2013-14, causing many sector participants to wish they had not specified brickwork for their external cladding. Renewed calls were heard for more diversity to be introduced into the housebuilding supply chain, including alternative cladding materials, prefabrication and modular construction techniques. It should be noted that planning departments now have a considerable (and perhaps at times undue) influence over facing materials, an influence which undoubtedly creates markets in building components!

Both materials and labour shortages instantly created a substantial cost increase in housebuilding which itself impacts on new housing supply as the viability of sites reduces. The housebuilding supply chain needs, above all, a consistent order book in order to be able to respond to any proposed increased level of demand, especially if a huge investment in new education and training as well as specialist factories is to be considered.

Design and product

Overview

Housing design encompasses a vast spectrum of concerns, stretching from neighbourhood planning, density and landscape via flat layouts and brick specification all the way through to the choice of kitchen tap. It would be unfeasible to attempt an analysis of the design possibilities presented by the current housing demand and need here. Historically, supplying homes to meet booms of demand has produced highly variable qualitative results, in terms of the places created, the physical and technical quality of the built product and the space standards achieved. Architects and city planners were not really involved in the design and place-making aspect of homes until the 1950s, meaning that most of what we see in ‘domestic’ London is organic and reactive rather than having an eye to the future. Both laissez-faire and interventionist approaches have resulted in variable qualitative outcomes.

The form of London’s housing past

At worst, the late Victorian builders threw up jerry-built homes where the plumbing, noise transmission, structure and the overall healthfulness of the homes was all in question. The highly valued terraced housing and mansion blocks in what are now London’s inner neighbourhoods are a testament to the best of that era, including blocks such as Peabody’s for working households on lower incomes. What is interesting to note about those philanthropic blocks was that they were decried at the time in the media for being crass, prison-like buildings which despoiled the capital and insulted their residents. A substantial amount of them are now in conservation areas.

The between-the-wars boom resulted mostly in unplanned suburban sprawl, again decried at the time by various commentators but now hugely cherished by the residents of such areas. The qualitative problem with this boom-era stock is less about architectural quality and more the lack of land efficiency and possible accusations that dormitory ‘non-places’ were created which are now all but impossible to re-imagine due to the myriad individual property interests involved. Characterful modernist flats in a European style were also built for private rent at this time, housing a particular niche of professional but not wealthy individuals, but in reality these were a very minor part of the stock increase.

1960s and 70s boom-era public housing is notorious for its challenging appearance, unconventional layout and mono-tenure mix. It is undergoing ‘regeneration’ in two ways: firstly, it is being demolished and replaced due to perceptions of technical and social failure. But second, it is undergoing a revival of interest from a number of diverse parties who see its potential in its rehabilitation for a new century. The debate about the long-term quality of these places and buildings is set to rage for decades to come, but it is worth reflecting on whether the highly systematised building techniques which were promoted (and actively encouraged through public funding) as the solution to the housing shortage were adequately thought through in the rush to achieve volume at speed. The problems of exposed concrete, high rise living for families and off-ground circulation so prevalent in these buildings cannot be blamed solely on the demand for speed; rather they emerged as fashionable design tropes of the time and have now been exposed as inappropriate in many circumstances. Places like Thamesmead remind us of the critical importance of transport and social infrastructure for large new housing development to thrive: it is not enough just to build and walk away.

Lower rise responses then took over as a direct reaction to what was perceived as the failed idealism of the 1960s. The now familiar 1970s and 80s houses arranged in cul-de-sac layouts marked a return to lower densities and the dominance of the private sector and its customer. ‘Span’ housing (an architect-led low rise typology) was designed at a slightly higher density by favouring a more communitarian approach to open space, and was a successful if niche contribution to London’s housing choices.



Terraced housing and mansion blocks of inner London



Thamesmead in 1960s



Peabody's Roscoe Street in early 20th century



Span Housing, Blackheath

Place and design today in London

The analysis of London’s demand already outlined demonstrates the variety of needs which should be met in any supply solution for the capital. Cities are never a homogenous community: they are rather a collection of people at different life stages, with different incomes and other cultural requirements. Some people are currently well served by London’s stock where others have very few choices. Should new built form be tailored to particular communities (e.g. older people, sharers) or should it aim for maximum flexibility to remain responsive to future demand? Is full ‘pepper-potting’ always the right answer, or are there advantages to a degree of mono-tenure community-making? Are there seemingly divergent communities who might benefit from being co-housed? Are there new forms of housing typology which might unlock both the lack of necessary housing but also encourage a redistribution of stock? And how should other commercial and social use be combined with the new housing to create places?

As available land reduces, more recent preoccupations around London’s housing design quality include density, space standards, sustainability, mixed tenure, mobility, private open space and accommodating cars and bicycles, all of which are captured as guidance (mandated for funded homes) in the recent London Housing Design Guide. Internal space standards in the capital are now notoriously low compared to European peers, having fluctuated over the years as sentiment about what constitutes a dignified amount of space has evolved or been crushed by market forces.

A renewed interest in towers for residential building has been sparked mostly due to London’s ‘global city’ status, causing land values to rise and incentivising developers to maximise the number of homes on any given site. In combination with this, the high-end residential tower is the typology of preference for overseas investors who now form a significant part of the demand for new housebuilding in the capital. London’s central and local planning policies have proven to be flexible enough (some would say to breaking point) to facilitate planning consents for a large number of such towers in recent years, creating a new debate about the physical and social character of London and how this might or should evolve. Calls for a pan-London tall buildings strategy which is stronger than the existing London Plan have been made, including a suggestion that London’s ‘town centres’ and/or its Opportunity Areas should accommodate more density. The stigma associated with tall buildings, largely a hangover from the 1960s failed ones, is set to be the dominant challenge to this type of development unless much more compelling public engagement and leadership emerges.



Embassy Gardens, Nine Elms

Towards solutions

The audience, the stage, the funding, the actors and even some props have all been assembled, albeit that they need significant evolution: but what is the play? Myriad discussions are currently under way in the capital and indeed across the globe about the best design and logistical solutions to the accommodation of a rapidly increasing population. Any built form responses will inevitably require a manipulation of the current constraints on the ‘raw materials’ of land, funding and constructors, whether that might be a complete change to land use designations, the rapid growth of alternative construction techniques or the acceptance of London as a 50 storey city. Large scale planning and built solutions should of course be a response to the needs of the various communities which make up the capital, and to the great challenge of how to integrate those communities into a coherent city society.

It is so vital at this high-pressure crossroads in London housing that we all ask ourselves whether we may be storing up problems for future generations through a rush to meet demand now. How do we ensure that what we build is high quality and affordable now as well as affordable to maintain, attractive, and flexible for changing circumstances in the future?



Andrew Jones
Managing Director, EMEA, Design,
Planning + Economics, AECOM

Addresses the need for London to be considered as a wider ‘city region’

The lack of supply of strategic housing opportunities – both in and around the capital – remains the greatest challenge. The industry is working, and reworking, a fixed-supply of sites and adding only small sites to help meet the ongoing housing challenge.

Yes, new Opportunity Areas are coming forward, Housing Zones created and new Garden City communities identified, but most have been in the development pipeline for decades. The policy priority is to speed development on these ‘initiative’ sites by unlocking infrastructure hurdles, streamlining the development consents and establishing development corporations.

The new Government has started to announce proposals to simplify and speed up development consents. We very much welcome these moves which will go some way to kick-start delivery on already identified sites. The bigger challenge is to identify sufficient new supply to meet longer-term growth requirements.

Earlier in 2015 we released AECOM’s ‘Manifesto’ for London and its city region. In it we argued that if we are to meet the multiple challenges of infrastructure, planning, transport and housing that are crucial to London’s competitiveness and quality of life, we need to think differently about London – not just as a city, but as a city region which goes beyond administrative boundaries and is economically, functionally and culturally connected.

In order to meet anticipated economic and population growth projections, we identified that sites for 1,000,000 homes are needed, in addition to those already allocated. The supply challenge is as pressing in the Home Counties as in the metropolitan area. Finding this number of additional sites is a significant task. It needs a strategic vision for future growth and development to help deliver the shift change needed in output.

London deserves a new vision for the coming generation of development that goes well beyond the M25, with a blend of solutions to be established within a coherent growth strategy for the London City Region.

If we are to make a tangible impact on identifying the million homes needed, then we have to look to a smaller number of larger urban projects. A review of the Metropolitan Green Belt, extending regional towns and building a new generation of new towns all need to be considered. Current cross-boundary collaboration will be critical. So too will a more proactive approach with new strategic sites aligned to infrastructure and building programmes.

Bold vision and joined-up leadership are required to ensure future success for housing delivery.

We have done this before. Seventy-one years ago Sir Patrick Abercrombie set out his vision for ‘Greater London’ – which saw the benefit of ‘the whole being greater than the sum of the parts’. The principles of his strategic plan, with a wide geographic reach, linked infrastructure to community development. It has shaped development of the London City Region during the twentieth century. It’s time for us to look at a strategic vision again if we are to unlock the supply of quality homes for the next generations of Londoners.



Robert Evans
Partner, Argent LLP

Argues that housing needs to become top of the national political agenda

Fundamentally, we need building homes to become a greater national and Mayoral priority, one that Government and the next London Mayor take on, leading and intervening as necessary to bring together the public sector, private sector and housing associations.

In May 2014, Mark Carney, governor of the Bank of England, complained that housebuilding in the UK was half that of his native Canada, despite the UK having a population twice the size. 12 months later, ‘the housing crisis’ did feature in the General Election, but some way down the list of voters’ concerns (one analysis put it, rather fittingly, at number 10). We have subsequently elected to Government the party that pledged the lowest number of new homes, and since May 2015 the Government has arguably focused more attention on promoting home ownership, than on achieving a step change in supply.

So we need something to force housing to the top of the national political agenda and give it more momentum. One housing association chief executive suggested that the national and political mood needs a major jolt – akin perhaps to the poll tax demonstrations – to engender the necessary sense of national urgency.

Let’s not wait for that. We could achieve more now through greater alignment and more collaborative working between the private and public sectors. We need to understand and address the serious funding and delivery challenges facing city and local authorities and

be innovative in framing effective partnerships, for example to make the best use of public land. In some cases, local authorities are able to contribute substantial funds as well as extensive landholdings. They can also use prudential borrowing and/or TIF-type mechanisms to fund the delivery of new infrastructure.

We also need to make better use of the registered provider sector, which can draw on significant assets, skills, borrowing capacity and design/delivery expertise. Registered providers are regulated, display the ability to invest for the long-term and have charitable purposes which attract public trust and goodwill.

And the simple fact is, the private sector cannot and will not deliver the numbers on its own. Between the late 1940s and late 1950s, councils built more homes than the private sector. Right up to the late 1970s, local authorities were building 100,000 homes a year. Since the war, the private sector has never managed to deliver more than 200,000 homes within a 12 month period and today’s numbers are at half that level. So we need public sector ‘boots on the ground’, in one form or another.

Perhaps this points to a new model for municipal partnerships: one that echoes the new town development corporations of the past, but involves all three sectors against the backdrop of a longer term funding settlement for housing. Such partnerships would deliver on the bricks and mortar and align interests and expertise in social and economic programmes, such as employment and training, school and health provision, managing the public realm and much more.

And finally, we need to address the shortage of skills, labour and capacity within our sector and make significant progress on purpose-built Built to Rent. We need to adopt harder-hitting policies to support it as an asset class and sector. I support home ownership, but we need a professional, mature rental sector too.



Nick Taylor
Head of Planning, Carter Jonas

Examines what we need to do to fix the planning system

Although not completely broken, there is no doubt that the current planning system isn’t working efficiently or effectively to deliver the housing that London needs. Housing targets are missed, not enough affordable or family homes are provided, and crucially, there is widespread breaking up of existing communities as a consequence of a lack of affordability of housing at all levels.

The problems are the same whether it is the time taken to prepare a development plan or determine a planning application, even for the most simple of schemes. The system is too slow, too cumbersome and bureaucratic. Tinkering with permitted development rights, often without thinking of the unintended consequences, such as office to residential conversion or being allowed to add one storey to an existing property in London, is not the answer.

Planning on the hoof is not a sustainable or credible model that will maintain London’s status as a world city.

We believe that the GLA needs to lead a London-wide review of existing potential sources of housing land, leading to variations in delivery of housing land, including a pan-London review of the Green Belt and Metropolitan Open Land. It needs to establish a Housing Applications Team that can recover all planning applications for over 50 units to fast track determination, with applicants paying an additional fee for determination of the applications. And it needs to consider the compulsory purchase of land

along the route of Crossrail 2 to deliver large-scale residential projects via land pooling that would allow appropriate community and social infrastructure to be provided in a coherent, planned and sustainable manner in highly sustainable locations.

In addition, we propose five changes to the planning system:

- 1) all development plan documents should have one round of public consultation before submission for examination;
- 2) written advice provided by a local planning authority at pre-application should be treated as a material consideration;
- 3) the time period for consultation responses on planning applications should be capped at three weeks for minor applications and five weeks for major applications;
- 4) strict timescales for finalising Section 106 agreements within say six weeks of resolution to grant consent, and a similar timescale for discharge of conditions;
- 5) timescales for implementation of certain planning permissions should be reduced to one year.



Paul Zara
Director, Conran and Partners

Argues that it’s not all about design

Back in the 1970s, after a massive government housebuilding programme kicked off by Winston Churchill, there was actually a housing surplus in the UK. Unimaginable now, isn’t it? OK, we all know some big mistakes were made; concrete council estates, many using new forms of construction, were thrown up at an incredible rate.

Most of these are now being ripped down and are being regenerated with a mix of housing types in a worthy attempt to avoid the ghettos we created in the past. A few of the 1960s and 70s buildings are become national treasures, like Erno Goldfinger's Trellick Tower and Colonel Seifert's Centre Point (which we are currently converting in to apartments), but most were a disaster.

So the challenge is on again; how do we provide the housing Londoners need? It's not about design. I know that's a radical thing for an architect to say but it's true. Yes we can look at issues such as higher densities, off-site fabrication and micro-flats, but we've all been there and done that, that's not really going to solve it. It scrapes the surface.

Housing is really about politics, not design. The Government's plan to cut social and affordable rents has enraged the housing associations. Many of them are saying that they will now be able to build far fewer homes. And with the 'Right to Buy' being imposed on these properties too things can only get worse. We need to sort the politics if we want to solve the problem.

London's housing price boom is all about investment – we all know that. But your house being worth £1million doesn't help much, unless you want to retire to somewhere far away maybe. And the boom means your kids will probably never be able to buy in London.

We have to make sure that the people who cannot afford to live in the capital benefit from the money that developers make from the safe investment that London property offers. We need affordable homes for the people that keep London buzzing.

Don't allow viability appraisals to skew planning consents. Rather than trying to force 40-50 per cent of the housing on high value sites to be affordable, make it say 20 per cent and agree a profit share that will allow for far more affordable housing to be built on lower value sites, possibly with land given free by the council. Build in discounted travel with the

accommodation so at least getting into the centre of town isn't a prohibitive cost.

Then get rid of planning committees, at least for a few years. A scheme that has been through public consultation and months or years of negotiation shouldn't be put at risk. If the council's officers recommend it for approval, that should be good enough.

And finally, we don't need two planning authorities for large schemes, the local council and the GLA. Either take away the GLA's powers to determine schemes, or allow them to deal with all of the large schemes and let councils deal with smaller projects. Unlocking planning is fundamental to solving the housing crisis.



Claire Graham,
Associate Director, GL Hearn

Examines the need to find available land outside the central zone

It is widely considered that housing supply for Greater London is at its tightest for years. Available land within the M25 boundary is currently limited, with designations protecting the majority of remaining undeveloped land, mainly in the form of the Green Belt. As a result, there is increasing pressure to fully develop each parcel of land for housing, along with the necessary supporting services, infrastructure and employment, which puts pressure on the viability of each development site.

Not only is the land in short supply, but a recent study undertaken by GL Hearn with the British Property Federation (Annual Planning Survey 2015) indicates that even with the relatively current buoyant economy, the number of major

planning applications has fallen significantly year on year. This could be due to a number of reasons, including constraints with the allocation of land through planning policy, restrictions with the level of funding for large scale developments, and wider global economic uncertainties.

Radical action must be undertaken in order to ensure that supply of housing can start to keep up with the increasing demand. Currently, the majority of housing is being developed 'up' rather than 'out' in order to exploit London's existing footprint as much as possible in a sustainable manner with people living as close as possible to amenities and reducing transport impacts. A study prepared by GL Hearn and New London Architecture earlier this year reinforced this view. It showed that London is building upwards, with 62 residential towers already under construction that could provide 14,800 new homes. A staggering 80 per cent of the 263 towers currently planned, approved or under construction in London are for residential purposes.

However, building higher in the centre of London is only part of the answer, and in itself won't come close to solving the housing shortage alone. Increasing density in London's suburbs is commonly perceived to be the potential game changer, particularly if this can be linked to town centre regeneration and the delivery of transportation improvements, such as Crossrail 2.

Overall, the public sector has a huge part to play in this and much has been written about the need to tap into the land opportunities that exist within its ownership. Better engagement between the public and private sectors needs to be encouraged, and an overall cultural change whereby all councils are energised and resourced to enable close links with the private sector should benefit all. Through working closely together, it should allow private developers to work together in order to fund and provide key infrastructure and services that are critical for allowing large-scale housing developments to come forward in a viable and sustainable manner.



Jerome Geoghegan
Group Director of Development and Sales, L&Q

Addresses the need for housing to stretch beyond the political cycle

There are, to my mind, two critical challenges that we face and that have an impact on the delivery of quality housing in London.

The first is the supply of land. There is not enough emphasis in our land and planning system on creating a sustained and regular supply of opportunity, and therefore the ability to properly respond in a measured way optimising the resources available to deliver. Longer term and sustainable plans that stretch beyond the political cycle with cross party support are the one of the key ingredients to unpicking this.

The second is a lack of appropriately skilled, qualified and experienced human resource – it is this that should be the bedrock of our ability to deliver. The development and construction industries need a compelling narrative to attract and retain high calibre individuals who can see a long, reliable career path that is well rewarded.

The cyclical nature of our housing market is a big contributor to why these two issues are so challenging. The problems caused by these cycles impact way beyond the short-term financial problems, but really undermine the prospects of sustainable and predictable long-term quality of delivery. With vision, leadership and commitment, we can do better and drive quality and customer focus deeper into delivery.



Jim Saunders
Group Director of Business Development,
Pinnacle Group

Argues for a longer-term approach to creating places

Improved economic performance has created a tension between increasing supply and delivering quality. In relation to supply, there is a general consensus that the big constraint on delivery is planning, where the lack of a joined-up, London-wide, planning process stifles opportunity and causes delays. However, the root causes are more endemic with serious issues around labour supply and financial capacity, which are a fall out from the last recession and require longer term planning and consistency in planning.

Similarly, achieving consistency in design quality also requires long-term planning to enable a cultural shift in how new homes are delivered, providing confidence for planning departments, developers and investors to support the delivery of quality places. Long-term planning around the delivery of infrastructure and the quality of space will lead to improved quality, satisfaction and returns.

Good housing is not just about the physical delivery of stock; quality implies longevity, and the history of badly planned, high density post-war council housing, much of which is now redundant, is testament to the importance of sustainability in development. Tenure mix is an important part of any successful new scheme, but more important is the wider nature of the community that is created.

Critical to this is the provision of services and facilities that must themselves be sustainable, to allow active neighbourhoods to develop, and here planning and funding must go hand

in hand with stewardship and management. Community services need a critical mass to sustain interest from the residents; services that might appear peripheral are in reality crucial in sustaining quality housing, with high-quality long-term management a key ingredient in ensuring that housing retains its physical quality.

To economically sustain community services and facilities, a new model needs to be developed that assesses the financial viability of facilities and services and provides subsidy or guaranteed income. This could be ring-fenced, perhaps within special purpose vehicles (which could include charities, mutual, community groups), thereby securing the long-term future of the community services and facilities on which successful neighbourhoods, and thus quality housing, depend.



Chris Gent
Associate Director, WSP | Parsons
Brinckerhoff

Argues that planners need to think longer term to find joined-up solutions

London keeps getting distracted by symptoms of the housing crisis rather than the cure. The city and the property industry both need to be single minded about the overriding need to build homes (the cure). However, too often obstacles are placed in the way of delivering additional homes on perfectly good proposed housing schemes.

Some obstacles are an important part of the city's heritage. For example, height restrictions are needed to preserve famous historical sightlines. But in other parts of the city we are seeing height restrictions limited by air

quality assessments that will be outdated as London's heating and transport electrifies, but the opportunity to build taller will be lost by the time this has happened.

Elsewhere, counter-intuitive 'density standards' are stopping sensible, immediate solutions to the housing crisis from starting. This is because current standards limit the number of houses the further away they are from major transport hubs. In some parts of London housing density on proposed developments are reduced by a quarter due to being one millimetre further away from a Tube station!

Why are these examples so harmful? Buildings last a long time, usually with a lifespan of 80 to 100 years. So reducing scale now makes it even harder to build more homes in the future.

Instead we should be saying that solving the housing crisis is so fundamentally important to the success of our city that we will remove unnecessary distractions and provide the necessary additional transport infrastructure, which also means we will ensure that more polluting vehicles are phased out from our streets. For example, if London's bus and taxi fleets were electrified, two storeys could potentially be added to every building site in central London due to improved air quality – so rather than getting distracted by housing density limits we should be promoting greener travel.

It is a well-established trend that greater housing density reduces the overall need to travel, particularly when development can be coupled with complementary land uses, such as schools, shops, and other destinations that provide for people's needs to be met in their local areas. This in turn means lower levels of travel pollution and lower overall congestion on roads and public transport services. Allowing denser development now, on the basis that our legal obligations with regards to air pollution will be met in the (relatively) near future, appears to be a sensible approach.

The ideas.

Introduction

In June 2015, New London Architecture, in collaboration with the Mayor of London, launched an international ideas competition, inviting planners, architects, contractors, manufacturers, economists, housebuilders and residents from across the world to come up with new solutions that would help improve the speed and scale of housing delivery in London, together with the affordability and quality of supply. Entrants were invited to think about everything from land assembly to planning policy, funding, construction, procurement, design and the end product.

Though London’s housing shortage is increasingly linked to the requirements of the entire South East, and indeed the UK, the competition invited entrants to consider what could be done within the boundaries of the Greater London Authority. This does not discount the need for wider, coherent solutions to be sought beyond the M25, but serves to demonstrate the available capacity within the city itself.

The competition received over 220 entries from 16 countries. From this, 100 of the best and most representative ideas were shortlisted, and 10 winning teams were selected to join a Greater London Authority working group to examine how their ideas could be applied to real London sites to deliver future housing for the capital.

It is our ambition that this competition not only encourages a more open dialogue amongst the industry about delivering more collaborative and innovative housing solutions, but will also help inform policy-makers and Mayoral candidates in the run up to the London Mayoral elections. Let a hundred ideas bloom!

The jury

- Isabel Allen** Design Director, HAB Housing
- Richard Blakeway** Deputy Mayor for Housing, Land and Property
- Alison Brooks** Principal, Alison Brooks Architects
- Robert Evans** Partner, Argent
- Hilary French** Architectural Historian
- Daniel Gray** Director, Engineering Excellence, Laing O’Rourke
- Lord Bob Kerslake** Chair, London Housing Commission
- Daniel Lovatt** Head of Property Development, Transport for London
- Peter Murray** Chairman, New London Architecture

The ideas.

Infilling

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Infilling

Introduction

With land at a premium, it is unsurprising to find many of the submitted and shortlisted entries focused on making more of what we have – or, in other words, building homes on what might be seen as wasted or underutilised space. Solutions, in what we have loosely categorised as ‘infilling’, range from creating new homes between ends of terraces, locating them above municipal car parks or redeveloping often very tatty building stock along arterial roads.

‘Building upwards’ was the most popular theme. Bell Phillips Architects, for example, identified flat roofs across London housing estates as a forgotten asset that could be productively utilised to unlock new housing supply. Buildings of this era can accommodate a degree of additional loading without requiring additional structural work, says the firm. It is proposing a lightweight modular volumetric kit that can be assembled off-site and craned into position, thereby reducing construction time, noise and disruption to tenants. On a typical housing estate, this could increase the number of homes by approximately 30 per cent, they say, without impacting on open space, car parking and trees.

Stride Treglown also wants to use a modular kit for high quality housing above hundreds of existing retail surface carparks. This temporary ‘meantime housing’ would have 10-year licences. Ideas from Gainsgrove Limited and Shepherds Bush Housing Group (SBHG), not shortlisted here, put forward ideas involving ‘air development’ themes too. In ‘Multiplying London: Space and Time’, the authors went so far as to suggest the adoption of a city-wide storey(s) addition policy, aimed at identifying new vertical opportunities – ‘onfill’ as opposed to ‘infill’ developments.

One of the most practical suggestions for building above existing buildings – and with demonstrable scope for scaling up – comes from Bill Price of WSP | Parsons Brinckerhoff. His winning entry ‘Building over public assets’ suggests there is room for 630,000 new homes in London by building apartments above public buildings such as hospitals, schools and libraries. This would comfortably meet the projected 488,000 homes needed in the capital in the next decade, he says, while simultaneously improving public facilities.

A rich vein to mine has been that of ‘micro-interventions’, or filling the gaps between houses and buildings. Leading the pack – and the winning entry in this genre – is ‘The Urban Darning Project’, which Patrick Massey suggests provides a framework for small residential developments on infill sites – ‘holes in the urban fabric’ – in central London. Each London borough commissions a team of planners and architects to work collaboratively to produce a strategic report which not only identifies desirable sites for development but, crucially, produces a set of schematic annotated drawings for each site showing the nature and scale of development desired by the local authority. This, claims Massey, significantly reduces the risk of not obtaining planning permission, and will therefore act as a catalyst for development.

Though the very nature of building on ‘infill’ spaces is likely to be small scale, as many entrants pointed out, repeated across London, the sums runs into tens if not hundreds of thousands. From the support behind it, this strongly appears to be an idea whose time has come.

Winner
The Urban Darning Project

Patrick J A Massey

Darning is a sewing technique for repairing holes or worn areas in fabric. The Urban Darning Project aims to encourage small residential developments in central London to ‘fill-in the gaps’ of the urban fabric.

Each London borough commissions a team of planners and architects to work collaboratively to produce a strategic report which not only identifies desirable sites for development but, crucially, produces a set of schematic annotated drawings for each site showing the nature and scale of development desired by the local authority. The report will focus on extension, infill, and end condition sites that have the potential to be developed into additional residential units.

Attaching a set of approved schematic drawings to a site will significantly reduce the risk of not obtaining planning permission, as the site has already effectively had an outline planning analysis, and will therefore act as a catalyst for development.

Present system

Local plans and conservation area appraisals outline key strategies for development, and even in some cases describe specific sites such as those set out in Islington’s *Site Allocations Report* (2013). However, it is important to note that the local authorities’ intentions for the sites are always presented in writing.

Some local authorities have independent design review committees, such as the Hackney Design Review Panel, which offers applicants and the council independent design and architecture advice. This advice is valued by the planning department as it gives insight into the architectural quality of proposals.

The Urban Darning Project effectively takes these two existing processes and combines them, creating a collaborative team and an aspirational report which would give a detailed idea of the local authority’s intentions for smaller developments in the borough. Another way to view this proposal is that it takes the traditional masterplan model for major strategic projects and scales it down to apply to far smaller isolated projects.

The Darning Team

The local authority appoints a team headed-up by a senior planner and a senior architect. Other important appointments within the team will include conservation

specialists, English Heritage, landscape architects and other design consultants, depending on the nature of the area in question. So as to ensure a level of continuity, I envisage that the senior planner-architect duo would oversee the entire borough, but would appoint teams to develop plans for small areas, such as a high street or a part of a suburb. These reports would be brought together to form a major publication by the Darning Team, which will eventually form a key part of the borough’s local plan.

Pros and cons

- + Urban Darning Reports would encourage more and better development of residential units.
- Planners could use the drawings in the report to deny alternative development solutions for sites.
- Publication of the report may cause a rise in the value of the property, which may encourage a selling-on of the site rather than development, which is the ultimate aim.

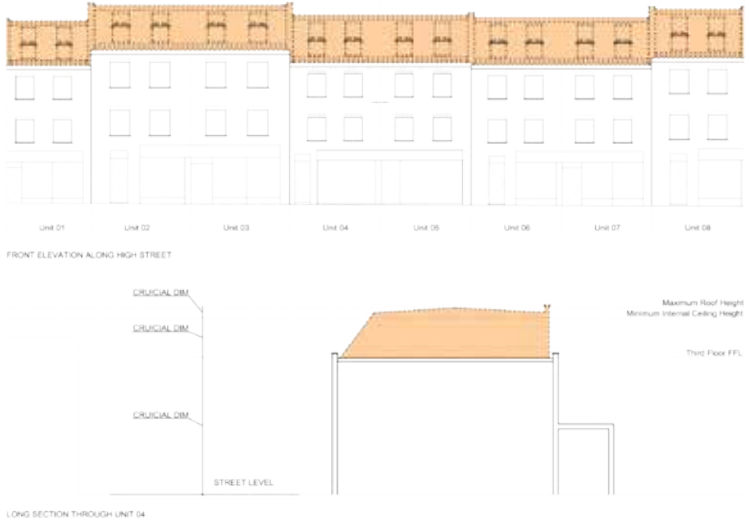
However, thorough planning and professionalism should overcome these risks.

Examples

(i) Corner Site, Camden
This site on Farringdon Road is within a conservation area in Camden. The site is small and bounded on both sides by major roads which pose risks to the build-ability of the site, and this has probably discouraged its development. However, the site has the potential for at least four additional floors and could be a high-quality piece of architecture. The inclusion of this site as part of an Urban Darning Report could help to encourage its development into homes.

(ii) High Street, Hackney
The flat-roofed terraces of Broadway Market High Street in Hackney is an example of how the Urban Darning Report could initiate the developments of groups of properties. In this case, mansard roof extensions have been suggested to maintain the scale and nature of the high street while also creating residential units. The report would identify critical aspects of the design, such as main dimensions, fenestration rhythms and even materials.

Proposal for how this High Street site in Hackney could be harnessed to create extra dwellings



Potential site at Farringdon Road, Camden

[nest]
Stride Treglown Limited

[nest] would quickly, affordably, and efficiently erect off-site manufactured, high quality modular housing above hundreds of existing retail surface car parks with 10-year licences. This temporay ‘meantime housing’ would provide 30 per cent of the 6,500 annual homes to clear the shortfall since 1981, supplementing the 42,842 target. Local people would qualify for tenancies via loyalty cards by spending money in local shops. This would buy time for longer term development solutions to be found.

Supply of land
The rise of new technologies means that some of the 1,695 hectares of retail floorspace in London will become vacant. Many of the 181 convenience superstores with over 2,500 sqm retail floorspace built before 2005 have land-hungry surface car parks ideal for development. The 100 most suitable car parks would be identified. These would form a five-year programme of 10,000 dwellings at the rate of 2,000 homes a year across London – 30 per cent of the 6,500 annual backlog requirement. A further 100 non-food retail car parks, providing 10,000 homes, would form the second phase.

The GLA would form a not for profit, arm’s length [nest] development company (NDC) to build housing, with 10-year licences requiring no land purchase. The efficiencies of off-site construction, with a 10-year guaranteed work supply, would keep construction costs low (circa £1500/sqm so that a 62.5 sqm 2-bedroom, 3-person flat would cost under £100,000 to build at today’s prices).

The GLA would offer the NDC loans at 5 per cent APR to finance each scheme. Each loan would be repaid through 10 years of tenants’ rent. Tenancies would be offered at 65 per cent of market rent – currently £1,100 a year for a two-bed flat, based on the £16,776 London average – rising by 3 per cent annually (the average annual London increase).

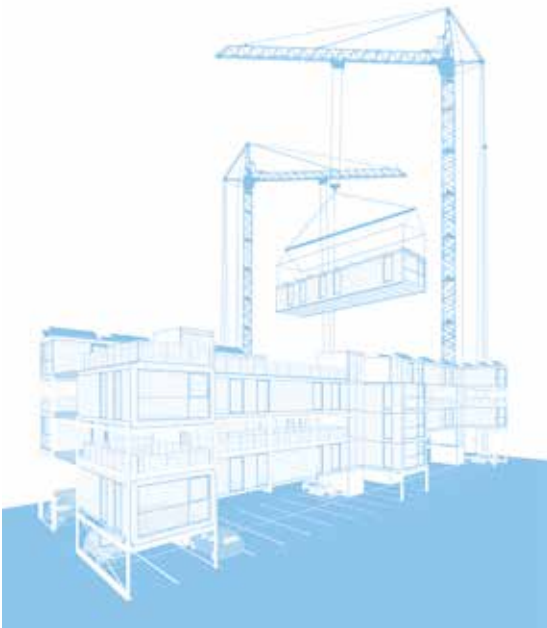
Meanwhile, the local authority could work with the landowner and local community to secure long-term planning permission, and thereby raise the value of the land. The landowner could then develop the proposal as suggested or sell the land at a large profit. If the landowner chooses to do neither, compulsory purchase powers would be used to force the sale and the profit captured by the local authority.

After 10 years, the [nest] would be dismantled to make way for its eventual residential use and moved onto the next site so that the whole process can start again.

The required loans would be funded by an increase in the GLA’s borrowing capacity and from institutional investors by raising bonds. A steady funding stream from which to borrow would be provided by devolving all property taxes to London, and providing fiscally neutral tax compensation measures.

Design and construction
The [nest] communities would be built on existing retail sites, with housing designed to fit a parking module and installed on a demountable framework. The developer would work with an off-site manufacturer to invest in a factory providing 2,000 dwellings a year, using a GLA loan. Off-site manufacture would provide housing within weeks, not months.

The homes would be energy efficient – a manufactured specification would keep U-values for walls, floors and roofs below 0.1 w/m2K and air tightness at ≤0.6 h-1@50Pa- Passivhaus standards. Roof mounted photo-voltaic panels on the highest storey would generate 20 per cent of the electricity demand.



GAP HOUSING
Akira Yamanaka Architect

Micro-scale development with impact
The most common urban typologies in London are terraced and semi-detached houses. The ad-hoc and less dense nature of the construction of these buildings has left gaps between houses and the ends of terraces. These urban typologies can be densified by utilising the gap spaces.

A 100-metre stretch of a street in south-east London was chosen as a typical example to investigate the potential of Gap Housing. The sampled area is comprised of about 30 Victorian terraced and semi-detached houses; six gaps between houses; and one gable-end condition with a public footpath to the side (Plot 1) were identified as potential sites.

Design studies were carried out for each site to see the viability. A desktop study suggested that Plot 3 and Plot 4 were found to be too narrow (2.3 metres-wide maximum) to accommodate proper habitable rooms, but all five other plots could accommodate a house each. The widths of the gaps ranged from 2.6 metres to 3.6 metres. In the case of the gable-end house on Plot 1, it was assumed that 1-metre cantilever from the site boundary above the footpath could be accepted.

Because of the small footprint of the sites and also the height of the adjacent houses, all new houses but one became three-storey buildings. It was identified that the minimum space standards for new development in the London Plan needed to be interpolated. This would need to be incorporated into the standards in one way or another, if small three-storey houses are to contribute to London’s housing supply.

Quantity projections
Official figures show in London 756,988 households live in terraced houses and 617,647 households in semi-detached houses. The total of these equate to 1,374,635 (about 42 per cent of the total 3,266,173 households). If a half (coefficient 0.5) of the study (ie. five Gap Houses built to every 30 houses in the study above) could be achieved, then it would supply 114,552 new houses. The Gap Housing will not increase the supply of large family houses, and each site would need to be appraised with site-specific solutions proposed by experts. We also acknowledge that coordination of obtaining sites with multiple owners can be time-consuming.

- However there are a number of benefits including:
- The additional accommodation of the Gap Housing will be spread all across London minimising the impact to existing infrastructure and transport.
 - If some pilot schemes are shown to be successful, it would incentivise landowners for development. This can lead to crowd-based housing developments.
 - Relatively smaller size of the Gap Houses meets demand for smaller households and helps first-time buyers.

This proposal is about implementing bottom-up initiatives into the housing supply chain, instead of top-down approach led by large developers or the government. It would need to develop pilot schemes to show the potential to landowners and the developers. If successful, the crowd-based initiatives could unlock the housing supply for London.



Really Free Schools

Denizen Works

Background

Since the scrapping of the schools building programme, design in education buildings has been removed from the agenda. With our experience in both housing and education design, we have been looking for an opportunity to combine our expertise in both fields to help ease the housing crisis in London and bring high quality school design to the market. We think our Really Free School concept could.

What is the problem?

- Housing is in dangerously short supply.
- London’s local councils are struggling with widespread cuts.
- Schools building programmes have been scrapped.

Our proposals look to address these three by combining them into a development model that will earn councils much needed money and provide first-class educational facilities built cheek-by-jowl with high quality housing.

The Proposal

London is littered with school and nursery buildings sitting in the middle of bombsites surrounded by playspace. These sites are under-utilised, create breaks in the inner-city urban form and represent opportunities for local councils to make much needed revenue. We are proposing a phased approach to re-build these education buildings and integrate them with new housing provision (with elderly homes at the base and family housing and apartments above), creating vibrant city blocks.

We have undertaken an initial desktop study and located 25 schools that sit on underdeveloped sites. Of these 25 sites, we have examined how, through careful phasing, one of these sites could be intensified to accommodate much needed housing whilst providing new high-quality education facilities and retaining vital play space.

The development principle is that local councils could lease or sell air rights to developers and have schools/nurseries built in lieu of the land value. With careful management and design, these sites could raise millions in funds for local councils, while improving both the education and housing provision of their boroughs and still offering developers a healthy profit.

These proposals are borne out of a study of BDP’s Hamden Gurney School in Marylebone. The school,

shortlisted for the Stirling Prize, was built on the site of a single-storey primary school sat in the centre of a bombed-out city block. By designing a vertical primary school on a prominent corner, the rest of the perimeter of the site was available for high-quality housing, which paid for the building of the school. Not only has a fantastic relationship been fostered between the school and the residential accommodation (schools and housing work well together as the hours of use are complementary) but the urban fabric has been improved and restored to its pre-war form.

Example

The site we have chosen to demonstrate our concept is St. Monica’s Catholic Primary, near Hoxton Square in Hackney. The site has a single-storey primary school with an adjacent small nursery complex. In relocating the education buildings to the perimeter of the site and maximizing the vertical development potential (bearing in mind likely planning constraints), space is generated for housing to occupy the edges of the site, completing the urban block. This form frees up the centre of the site which is retained by the school for play space and recreation.

Through careful phasing, we believe that this site could easily be developed to bring 80-100 new homes to the area (with significant revenue potential), providing a brand new nursery and primary school and repairing an important corner on Hoxton Street.

Conclusion

Expanding this idea to the wider city, the potential development opportunities would increase dramatically - providing sites for an estimated 5000-10,000 new homes.



London’s Corridors

Barbara Weiss Architects and Allies and Morrison

London is not short of brownfield sites that could be expediently developed for housing. The majority of these are infill sites, varying greatly in size and quality, but eminently appropriate for mid-rise construction. While such derelict or semi-derelict sites are prevalent across London in all sorts of locations, we are only considering – for the purposes of this competition – the opportunity presented by the very high percentage of land either side of the metropolitan Red Routes that is wasted or inefficiently used.

For the benefit of this exercise, only the outer portion of the Red Routes (taken from the North and South Circular outwards, towards the metropolitan boundaries) is considered. This measures approximately 190 kilometres, so given roads have two sides to them, 380 kilometres. These corridors alone could generate 250,000 units.

The building typologies that currently line long stretches of the Red Routes include a high incidence of derelict buildings.

While it is true that many of these sites are in fractional ownership, making them less appealing in terms of ‘grand picture’ regeneration, the positive side of this coin is that their small-scale presents an excellent and unique opportunity for involving smaller developers and investors, or for site assembling under direct purchase or CPO legislation.

Proposal

We advocate that much of the Red Routes (and of the many other similar A roads within outer London) should be redeveloped with mixed-use or residential buildings, up to an overall height of six- to eight-storeys. This will involve building a large variety of blocks of all sizes on brownfield sites, demolishing derelict and low quality structures – but retaining the best structures and quality green areas, whilst adding extra storeys above buildings that can structurally afford to do so (showrooms, supermarkets, petrol stations).

The ground- and first-floors, where appropriate and required, should be kept for local retail, offices, small workshops, live-work units, childcare facilities, community spaces, and leisure activities.

The quality of the Red Routes would be enhanced by better, grander, pedestrian-friendly architecture, by creating wider pavements and the planting of avenues of trees in central reservations.

A better provision of public transport would also be required on these roads – reducing the number of private cars, and their speed.

Benefits

- We anticipate that we will be creating an average of 2,000 flats per mile.
- The scope of the developments proposed is such that they can be undertaken at a lower level of financial risk, and considerably more expediently than the larger schemes embraced by the usual volume house builders.
- They can be carried out piecemeal, without blighting huge areas of London for long periods.
- It will be much easier to seamlessly integrate social and affordable housing adjacent to market housing, delivering a far more sustainable community.
- The size and variety of development will lend itself to setting up new arrangements for government subsidies or tax breaks. Offered to developers building social and affordable housing, these could, for instance, be linked to appropriate re-sale or rental restrictions. This would help the local job market in many neighbourhoods, ensure the buildings are well-maintained and looked after, and provide some of the desperately needed affordable housing.



Winner
Housing over public assets

Bill Price, WSP | Parsons Brinckerhoff

There is room for 630,000 new homes in London by building apartments above public buildings such as hospitals, schools and libraries. This would comfortably meet the projected 488,000 homes needed in the capital in the next decade while simultaneously improving public facilities. To achieve this, the private sector would refurbish or fully rebuild a hospital, library or school, which would be paid for by adding several floors of apartments above the new facility that could be rented or sold. Our proposal has examples, existing expertise and public support from Londoners keen to remain in the city.

How it would work

There are three options for building on an existing public facility site:

- 1. Build apartments on top of the existing facility in the form of an extension.
- 2. Build an independent apartment building on top of an existing building.
- 3. Redevelop from scratch the existing facility with the residential apartments on top.

Research

We worked with University College London (UCL) to analyse potential sites. The findings show the vast potential for reaching housing targets by applying this idea to sustainable regeneration schemes across London, particularly where more housing and an upgrade of local public facilities are both needed.

Using single-storey additions to all municipal buildings would provide 639 hectares of developable space. Using six-storey additions to all buildings would provide 4,200 hectares. And using 12-storey additions to all buildings would provide 8,475 hectares. Therefore a mixed-height solution (half six- and half 12-storeys) would provide 6,337 hectares. On this land – based on a 100-sqm unit – you could build 633,700 residential units.

Not every building can be redeveloped in this way, but even targeting one in every two municipal buildings could provide 315,000 homes.

Case Study – Lambeth

Research findings suggested there is a potential for around 31,400 new homes in Lambeth if all municipal land potential could have 12 additional floors added – or 15,575 homes with six extra storeys. With a mixed-height strategy, there would still be twice the potential to meet the entire 2021 monitoring target and estimated capacity deficit combined for Lambeth (9,835 homes).

What Londoners think

We teamed up with polling and research consultancy ComRes to interview over 1,000 adults living in London* about the idea of building new homes over London’s public buildings set out in our report. Our headline findings showed:

- 57 per cent think that London’s public facilities are in need of regeneration and refurbishment.
- Building new homes above publicly owned buildings is the third most popular method of improving housing affordability in the city.
- 60 per cent of Londoners would happily live above a library, while a quarter would be willing to live above a school or hospital.
- Three in five (61 per cent) support the idea of private developers refurbishing government buildings, funded by residential apartments on top.

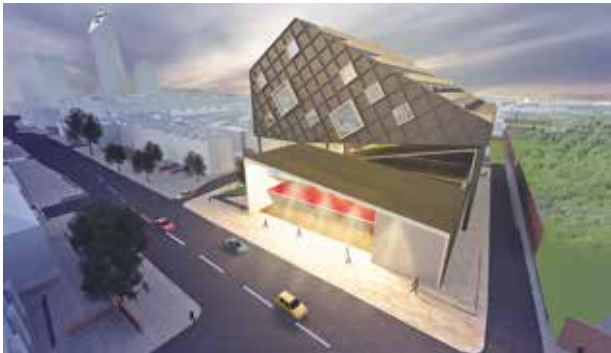
**Survey carried out by WSP | Parsons Brinckerhoff with ComRes: 1,008 adults living in London were interviewed online in September 2014.*

Existing examples

- (i) Plimsoll
Argent’s 13-storey Plimsoll development at King’s Cross will be home to a mix of uses. Designed by David Morley Architects, the building’s lower two floors house a new primary school and the Frank Barnes School for Deaf Children, both with outdoor play space.
- (ii) Beekman Tower
In New York, this 76-storey skyscraper created 898 new residential units, a public school and space for hospital offices.



Building over a hospital



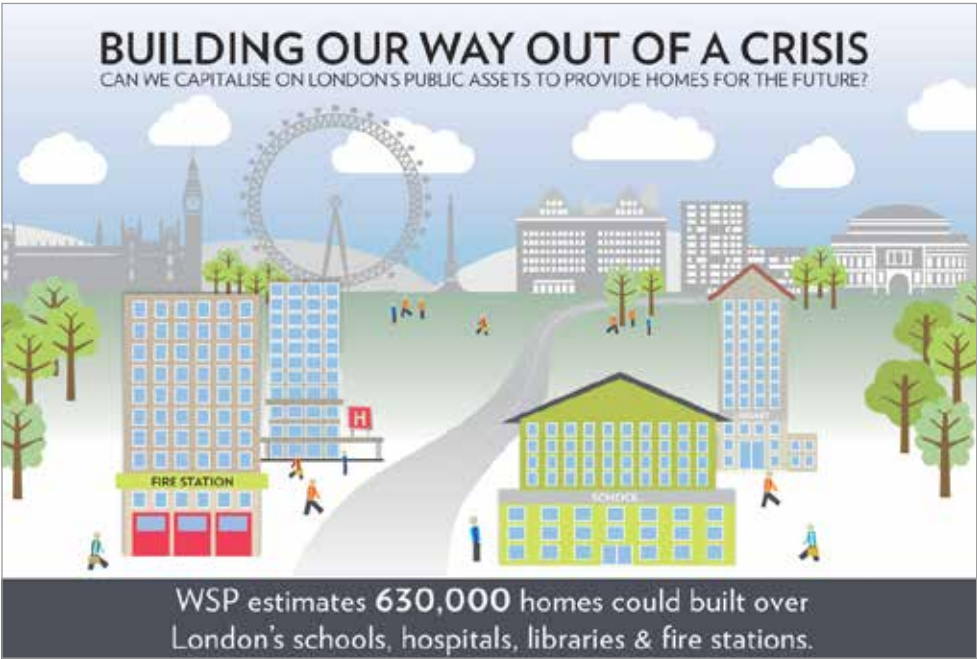
...a school



...a library



...and a fire station



Multiplying London: Space and Time

Urbem | Elemental | Ratti | Triptyque

To increase the supply of market and affordable housing, we propose a regulatory policy and an urban design blueprint that would (i) intensify the use of developed land, (ii) establish a market incentive system aimed at aligning interests of different stakeholders (landowners, developers, investors, civil society), and (iii) increase funding for social and intermediate housing.

We suggest the adoption of a *city-wide storey(s) addition policy*, aimed at identifying new vertical opportunities – ‘onfill’ as opposed to infill developments. Property owners would enjoy immediate increased value and higher equity position. And the public administration would collect more taxes and be empowered to create a specific fund for new affordable homes and/or to establish a Housing Voucher Programme (HOVOP) that would provide rental assistance and home ownership option to low-income individuals or families.

One idea in three levels of complexity

Level 1 – Simple densification

The first design variant is the large-scale duplication in height of two-storey buildings, and the addition of one floor to three-storey buildings. Through our new regulatory planning model, owners of existing properties will be allowed to sell their corresponding aerial rights to developers.

Revenues generated by the new construction rights would be shared between landowners (and potentially tenants), in order to give them an incentive, as well as to minimise Nimbyism conflicts within the community that can arise during construction and as a result of denser occupation. Council and stamp duty land taxes, capital gains taxes, business rates and Section 106 Community



Contributors:

URBEM - Philip Yang, Milton Braga, Adam Vanzella Yang, Beatriz Vanzolini, Stephanie Freitas, Homero Neves da Silva, Teresa Caldeira, University of California Berkeley; Elemental - Alejandro Aravena,Victor Oddó, Kim Courreges; Carlo Ratti Associati - Carlo Ratti, Giovanni de Niederhäusern, Antonio Atripaldi, Mariachiara Mondini; Triptyque - Olivier Rafaeli, Guillaume Sibaud

Infrastructure Levy originated from the new areas would be allocated to the HOVOP, to finance the construction and acquisition of social housing and to fund part of the necessary additional hard and soft infrastructure.

Level 2 – The ambitious next step

Building on Level 1, we also ambitiously suggest: multiply London, not just housing. Take the most desired typology in the world, a lot of it with a small front and a backyard, and multiply it as many times as possible in height. If such a parcel is built several times into the air, then the forces that shape the city will automatically take care of housing, within the suggested policy parameters. A public elevator in front of the lots, maintained by the city (as the streets are), would allow each property to be entered through a front yard. But since the elevator is public, the rooftop is also public property. This would consequently increase the area of London’s public green spaces.

In a typical 0.5 hectare block with 20 lots of 300 sqm each, we pile 14 lots vertically on two parallel blocks’ sides, obtaining 28 new aerial lots that would add to the existing 12 ground lots in the central strip of the block. Thus, a 160 inhab/ha block would turn into a 320 inhab/ha block.

Level 3 – From CO₂ to CO₃ (co-living, co-working, co-making)

With these new structures in place, the urban landscape would be in a much better position to host a functional mix, in space and time. In a denser and hyper-mixed London, distances will be shorter and spaces (including dwellings) more flexible and diverse.

Rooftop Re(Generation)

Bell Phillips Architects

As major landowners, councils have the potential to make a significant contribution in delivering the volume of new homes required to meet the urgent housing demand within London.

The majority of available council land comprises post-war or inter-war housing estates which offer a number of opportunities for modest infill housing development – for example, on garage sites or redundant pockets of land.

However, delivering housing on these sites is invariably disproportionately complex, costly and time-consuming compared to the number of new dwellings provided. Consultations with local residents who are understandably concerned about the loss of open space or car parking, the impact on light and views, the presence of existing trees, ground contamination, the requirement to relocate existing underground services, and the dysfunctional layout of many estates, contributes to slow and expensive delivery of relatively few homes.

In some cases, councils have taken a bolder approach and proposed substantial, or complete, demolition of estates to make way for a far greater number of homes. However, this can lead to the fragmentation of existing communities, displacement of families and people who are vulnerable or elderly, and concern, suspicion and cynicism on the part of local residents. As a result, many emerging proposals are being vehemently and bitterly opposed, leading to friction and mistrust.

At the same time, it is often the case that the existing building stock is in decent physical condition with many decades of life remaining. Therefore, where possible, it makes sense to retain the existing buildings and communities in situ, avoiding the upheaval and complexity of demolition and renewal.

On post-war housing estates, the existing buildings are invariably flat-roofed with relatively few constraints restricting development, with the exception of some services that may require relocation.

With open space and public realm in limited supply within London – and with large-scale demolition and regeneration so contentious – we believe that these flat roofs are a forgotten asset that could be productively utilised to unlock new housing supply.

Typically buildings of this era can accommodate a degree of additional loading without requiring additional structural work. This will usually result in one- to two-storeys of new-build construction on top of the existing building, assuming that the construction method used is of a lightweight nature. On a typical housing estate, this could increase the number of homes by approximately 30 per cent without impacting on open space, car parking, trees and so on.

These homes should be highly desirable homes, offering outstanding views and quality of daylight.

Disruption to residents is clearly a major consideration. With this in mind, we propose a modular volumetric ‘kit’ that can be assembled off-site and craned into position, thereby reducing construction time, noise and disruption. CLT is the perfect material as it is strong, light, precise, can be rapidly assembled and is inherently sustainable.

We propose that this kit of parts is designed and promoted by the GLA, with input from local authorities, so that it can be rolled out across London. This would provide local authorities with a turn-key solution, that they can be easily, quickly and cheaply utilised to provide outstanding new homes.



The Terrace Upcycle
Adams + Collingwood Architects

Our proposal aims to take one of our most valuable assets, the terraced house, and ‘up-cycle’ it with a simple set of design rules to create two homes in place of one. This helps to solve our current housing crisis while retaining and reviving a valued London housing typology. Working within design parameters aimed at maintaining quality, living accommodation in terraces could be increased by 30 per cent by simply adding a single storey with roof terrace and a full-height extension to the back. And the ‘up-cycle’ offers a significant financial saving when compared to new build while creating a considerably lower carbon footprint.

Creating lifetime homes for Londoners
The supply of housing in 2015 is currently operating almost as a free market, with very little public grant funding, tax intervention or constraint on non-domestic purchasers. Left to its own devices, the market will not meet the needs or aspirations of the growing number of Londoners: intervention is required to address this.

It is well documented that the projected number of people in the capital is set to rise by 1.6 million over the next 20 years. Developers across London are responding to this crisis with proposals for soaring towers and large-scale redevelopments that stretch further and further into the suburbs. This, in spite of the fact that approximately half of the near 1 million increase between 2001-2011 was absorbed into existing stock rather than new homes, showing people clearly enjoy living in our historic terraces.



However, this is not a sustainable model. Instead, by implementing our proposal, approximately 1.7 million ground-floor dwellings could be achieved for the relatively small price of a rear extension and an additional storey. This solution relieves demands from the increasing population when a terrace house becomes the home for three generations rather than one.

Our solution
Our solution is to create a unified and systematic approach which increases usable space in the typical terraced house, reflects current lifestyle trends, and adds an additional dwelling per house; enhancing London’s iconic streetscapes whilst reducing the housing shortfall in one hit.

We propose that permitted development rights are altered to allow changes to terraced houses if they are made within specific design parameters. These parameters would include:

- The addition of a single storey in place of the typical pitched roof, including a proper roof garden accessed by stairs, with a gazebo
- The conversion of the ground floor to a garden flat suitable for a single person or couple
- Full-height, glazed extension of the property at the back
- The upgrade of existing elements to be zero carbon

With the extra income which could be generated by the lease / sale of the new second property, these additions would very quickly pay for themselves. Alternatively, the government could support this initiative by offering loans or finance for these projects on the understanding that the new property would be let or sold as affordable housing to key workers, first time buyers, pensioners or similar.

Other ideas...



‘No Cars Go’ by Australian practice Oliver Du Puy Architects examines how above ground car parks could be repurposed for housing.



‘Living the Green Edge’ by Briand Renault Architects focuses on the linear opportunities around London’s open spaces for pre-built housing units.



‘Building in the Air’ was devised by Shepherd’s Bush Housing Group (SBHG) as a strategy to replace old buildings, such as community halls, with brand new community facilities and homes above.



‘London Plus One’ by Iancanu identifies the huge potential for Londoners to add additional floor space at roof level to accommodate new lodgers.



‘Can Subterranean Architecture Solve London’s Housing Crisis’ by Tom Bestwick examines the possibilities of new subterranean housing to solve London’s housing crisis, using a site south of Somerset House as a test case.

Densification

Introduction

Contrary to popular perception, London is actually a rather low density city, as Claire Bennie points out in her introduction, and the prospect of transforming this under-utilisation of space into new dwellings has inspired a host of creative solutions.

Most proposals centre on two main areas – the suburbs and council estates. A number of architects point out that the suburbs need modernisation and that the many generous suburban rear gardens offer opportunities to create new dwellings.

A winner in this category, ‘Supurbia’, submitted by Ben Derbyshire and HTA Design, addresses the 24 per cent of London’s land classified as rear gardens, and suggests owners of semi-detached homes could co-operate with neighbours to develop their land into flats and small apartment blocks, “thus intensifying the land while preserving the buildings’ individuality”. They believe applying this across London could realise 16,800 new homes each year.

Building on this idea, Pollard Thomas Edwards and Nathaniel Lichfield & Partners suggest using permitted development rights to incentivise the owners of semis and detached homes to replace or supplement their houses with additional modern homes. Maccleanor Lavington submitted a proposal along similar lines.

‘Right to Replace’ went one step further. The proposal, from the GLA’s Alastair Parvin and Adam Towle in partnership with WikiHouse Foundation, suggests creating a new planning mechanism – Right to Replace – which gives homeowners the right to demolish their existing home, and build their dream eco home on half their site, paid for by selling the other half to a family to build their own dream eco home too.

The second winner, Natasha Reid Design’s Intimate Infrastructures, confronts the ‘ghettos’ of mono-tenure developments, with a proposal that accommodates private renters in shared houses alongside larger family homes.

London’s housing estates were another focus of attention, with ‘Pocket Regen’ submitted as a new way to regenerate them. This would be a tripartite joint venture bringing together the estate community, the local authority, and developer Pocket to deliver the maximum number of new and affordable homes. Residents decide the proposed development’s scale in terms of the number and size of new units, where they live, and the opportunity for local people and families of those on the estate to access new affordable and social rented homes. In return, residents benefit from a charitable trust, based on the scale of the project they support, and help decide what it should be used for.

Grimshaw also agreed that housing estates could offer a great opportunity – if you build on top of them. They propose an exoskeleton system that allows dwellings to be added on top of existing building, occupying about a 3m wide zone all around the building – doubling the provision of dwellings in the building.

Clearly there would be many barriers to be overcome in adopting what are radical ideas, as the authors readily acknowledge and address, again providing a range of inventive suggestions.

Winner
Supurbia
HTA Design LLP

Supurbia – our strategy to increase the speed, scale and quality of housing provision in London’s suburbs – builds on our suburbs inherent advantages. It uses existing infrastructure and preserves the individuality of homes, easy access to private outdoor space, verdant environments and wider town settings, while increasing both density and amenity value.

With homebuyers and renters being continuously pushed out from the dense central boroughs, London’s suburbs become ever more important. As central London’s vibrancy and accessibility spreads into zone 3 and beyond, Supurbia can meet it by unlocking land in low-density developments for intensification.

Our approach is twofold. The first strand focuses on the local main streets, collaborating with local authorities to refigure parades of shops offering minimal housing as mixed-use places. The size of such sites invites a range of uses, including Private Rental Sector (PRS) development, purpose-built student housing and affordable first-time buyer flats.

The second strand of our proposal addresses the streets of semi-detached housing behind main roads. With an estimated 24 per cent of London’s land classified as rear gardens, suburban plots consume a disproportionate amount of land. The typical suburban plot, 8-metres wide and 40-metres deep, often accommodates no more than a two-storey house with a footprint of 7.5 metres by 6 metres.

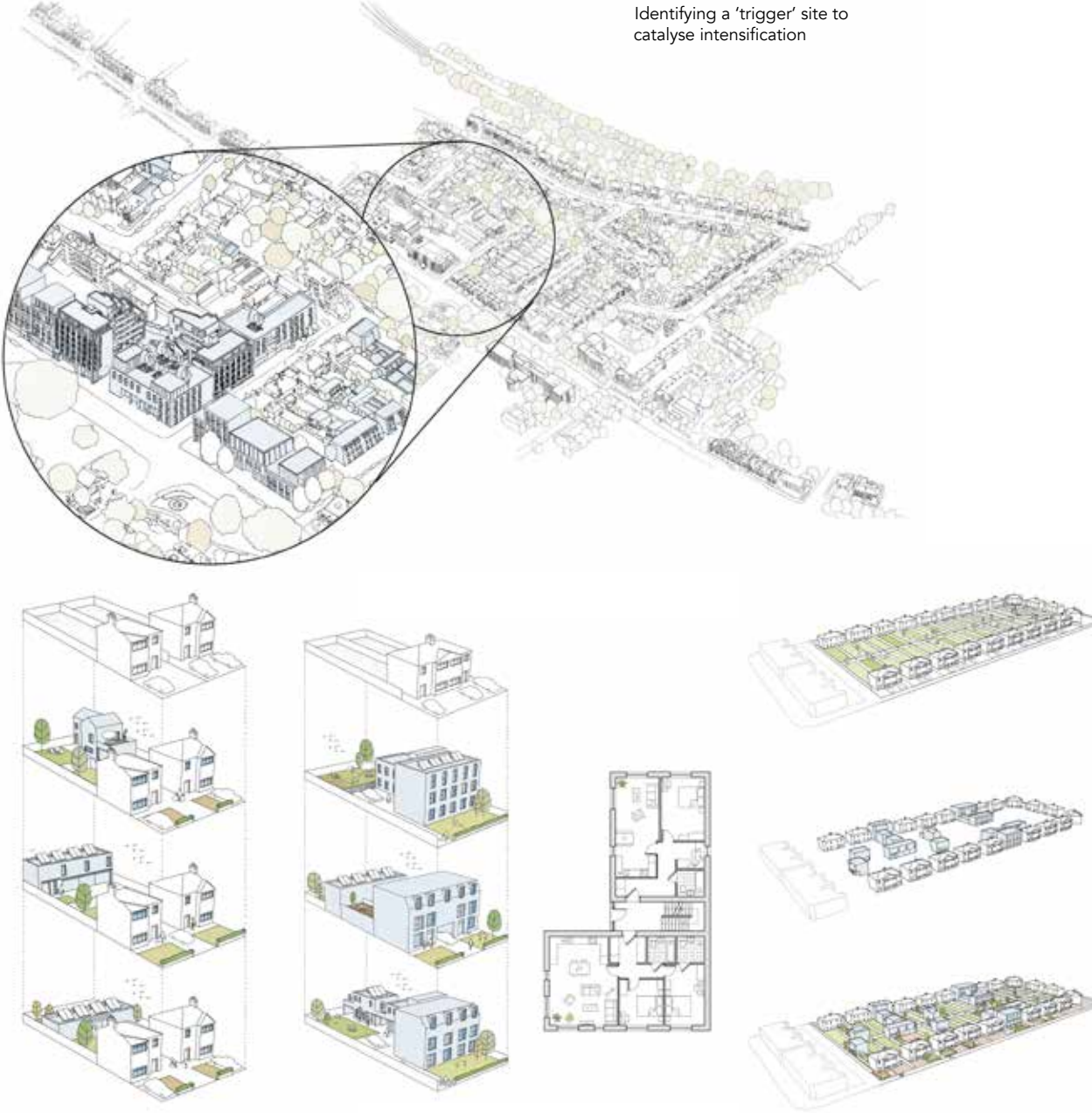
Whilst once the suburban ideal, such plots became unappealing through loss of original character – front gardens are converted for parking, and verges and trees are lost to hardscaping. Moreover, changes in household makeup mean that ever fewer households really benefit from their space. Nearly 40 per cent of owner-occupier households (often ‘empty nesters’) have at least two spare bedrooms, while sharing groups who increasingly rent suburban homes rarely take full advantage of large gardens.

Contributors: Benjamin Derbyshire, Scott Adams and Melanie Forster-Nel, as well as members of the Urbanism Unit, Architecture, Planning, Landscape Design, Sustainability and Communications teams, HTA Design LLP; Alistair Russell, Ian Sayer & Co

Supurbia offers the opportunity for the owner of a single semi-detached house, or a pair of neighbouring or facing owners, to develop their land to suit their needs through a range of options – including flats over garages, mews houses, town houses, small apartment blocks and bungalows. Each option would have pre-approval through a shared neighbourhood engagement process, and off-site manufacture would deliver highly energy efficient homes with minimal disruption. Land would thus be intensified while preserving buildings’ individuality, and owner-occupiers could unlock the equity in their unused land and invest it in their home, raising the quality of housing across the neighbourhood and improving the street as front plots are renovated as part of development.

Our illustrative block begins with a density of 33 dwellings per hectare. If a quarter of all plots added one dwelling, the density would increase to 45 dwellings per hectare. Through the Supurbia strategy, we believe we could intensify 10 per cent of outer London boroughs every 10 years. Assuming a mere doubling of density per plot, this realises 16,800 new homes per year, or 40 per cent of London’s projected housing need for the next 20 years.

To minimise resistance to development and ensure it is delivered appropriately, a coordinated approach is needed to realise benefits for all stakeholders. Supurbia would therefore bring together local authorities, designers, developers, offsite manufacturers and local residents to collaborate on local development orders (LDOs) for suburban blocks considered suitable for intensification. In this way, residents would understand from the outset how construction would be managed and benefits delivered, and would have early input on materials palettes and design options, creating unique neighbourhoods reflecting the character of their communities.



Identifying a ‘trigger’ site to catalyse intensification

Creating higher densities at a neighbourhood level by utilising garden spaces



Gradual intensification of local main roads over time

Semi-permissive

Pollard Thomas Edwards and Nathaniel Lichfield & Partners

For all its virtues, the inter-war suburban semi is in some respects an outmoded dwelling type for 21st century London. It is land-hungry and energy-hungry and encourages car dependence. Car-cramming has disfigured the street-scene, destroying privet hedges and cherry trees. The side passage is less important now that we have stopped digging for victory and feeding coal-fired boilers.

But politicians and planners are very reluctant to promote change in the suburbs, and suburban voters are fiercely protective of the status quo. The pattern of individual freeholds and predominance of owner-occupation contribute to community cohesion, but make large-scale change almost impossible.

So, how can we modernise the suburbs?

Our solution

Our proposal is to use permitted development rights to incentivise the owners of semis (and detached home-owners also) to collaborate to replace or supplement their two houses with additional modern homes – development will be *semi-permitted*. It builds on the wider-ranging work by HTA on Supurbia, and it works like this.

Owners of *adjoining* semis (sharing a party wall) would be permitted to redevelop or radically remodel their houses to create three or more modern homes. Owners of *neighbouring semis* (removing their party fence and combining their side passages) would be permitted to develop one or more single-storey courtyard house/s at the rear. Our proposal would lift the blanket restriction on ‘garden grabbing’ and extend permitted development with a more intelligent approach.



We have modeled six scenarios based on a pair of typical suburban house plots, and creating between one and five additional homes.

Our proposal is to establish a Prior Approval process under the Town and Country Planning General Permitted Development Order 1995. It would apply in the following circumstances:

- There must be a net increase in residential dwellings.
- Developments must be within 800 metres of a tube or railway station.
- Land in the Green Belt, conservation areas, statutorily and locally listed buildings are excluded.

Permitted Development must not be hampered by over-complex rules or subjective approvals. On the other hand, a few simple rules, such a requirement to be within 10 minute walk of a station, can ensure that a decent standard of design is achieved. These need to be measurable, easily understood by the applicant and easily checked by an approved inspector. Permitted development should improve the appearance and sustainability of its setting, not damage them. In terms of finance, unless a local Community Infrastructure Levy is in place, a Section 106 Agreement on a standard template will cover transport and affordable housing obligations where required. A financial contribution to affordable housing would be set at a standard rate per additional home created.

The benefits

Semi-Permissive development could make a significant contribution to housing delivery in London, and it can be implemented quickly and easily working within the established planning system. Approximately 40 per cent of land in outer London falls within 800 metres of a local station, which suggests that a high proportion of the 730,000 existing houses could meet the location requirement. If just 10 per cent of owners brought forward proposals to double the homes on their plot, this would create 73,000 additional homes and renew a similar number. A 15 per cent take-up – coupled with our more ambitious design scenarios – could create over 200,000 additional homes.

The next step would be for the GLA to endorse the scheme and fund research and development of a pilot in a designated area.

The London Multi-Detached

Richard Lavington, Maccreeanor Lavington

More new housing should be delivered through the intensification of the 34 per cent of London land that is currently homes and back gardens, rather than simply focusing on the centre and on brownfield land.

For this proposition we have focused on the 27 per cent of homes in outer London that are semi-detached, typically the interwar development of suburbia often referred to as ‘Metroland’. This is a part of London’s land resource that has traditionally been avoided as a source of land supply because of its individual ownership and potential for political controversy. However, if intensification of the suburbs could happen on a plot-by-plot basis, it would be more akin to the process of gentrification than state-led regeneration.

If just 5 per cent of these homes could be replaced with small four-storey detached mansion blocks, then 81,000 new homes could be delivered.

Suitable properties for replacement are those in areas with good access to public transport, proximity to neighbourhood services, and areas where the housing stock is currently in poor repair. Having identified such areas, a planning context could be created that would allow the replacement of pairs of semi-detached houses with detached mansion blocks that we have called Multi-Detached. Through this process, two houses would be replaced with eight to ten new homes.

It is proposed that the planning process is streamlined through the use of a Local Development Order. And the conservation areas would be excluded.

One of the original advantages of the semi-detached house was its separation into pairs, allowing smaller builders to construct a pair at a time. Their replacement, a pair at a time, will similarly open the market up to small builders and various forms of collective self-build; sectors of the market that could be making a bigger contribution to the delivery of new homes.

These suburbs are currently based on repeated similar homes and standard plot sizes, and therefore a high level of standardisation would be appropriate in their replacement. This can be through standardised designs, creating a contemporary pattern book, or kit buildings based on prefabrication systems.

The Typical London Multi-Detached

The example that we have shown is just one possibility. However, for the idea to be taken up it will need to be popular, therefore we believe that the following qualities are important:

- Four to five storeys – this contrast in scale is not uncommon in suburban areas.
- Generally pitched roofs and materials selected to maintain the positive character of the existing architecture.
- Green front gardens and tree-lined streets re-established, trees and green rear gardens retained.
- Larger family homes at ground- and first-floor with direct access to the garden, smaller homes with roof terraces above.
- All terraces and balconies to the garden side.
- Low structures for bins and bikes within the green front gardens, car club and disabled parking within the street,
- And, of course, bay windows, gables and porches.

We believe that this proposition could offer the opportunity for a popular intensification of the suburbs that is led by individual property owners, clearly guided by policy and in-keeping with the original vision of ‘Metroland’.



Right to Replace

Alastair Parvin and Adam Towle in partnership with WikiHouse Foundation

Millions of Londoners would love to solve the housing crisis themselves, by buying a plot of land and commissioning their own affordable, sustainable home. The problem is, there just isn't any land.

Our idea

Much of the housing in Outer London was built in the thirties or fifties, with rows of two-storey, semi-detached houses. Today they can cost £600,000 or more, despite the fact that they are often poor quality and in need of repair.

These houses are also inefficient in their use of land and of the street frontage. Between each semi-detached home there are gaps – often several metres wide – usually where people keep their bins or build a garage. Significantly, across London, there are 465,000 of these gaps according to a survey by the Valuation Agency in 2014. Added together, that's an area of undeveloped land about 12.7 square kilometres in size – larger than the Borough of Kensington and Chelsea.

At present, planning law gives homeowners General Permitted Development Rights: permission to modify or extend their homes, within specific rules, without the need to apply for planning permission.

What if we were to create a new planning mechanism called 'Right to Replace', giving homeowners the right to demolish their existing home and build their dream eco home on half their site, paid for by selling the other half to a family to build their own dream eco-home?

Right to Replace comes with predefined rules, set by each local authority, determining size, use, performance, materials and appearance. As long as you stay within the rules, no planning permission is needed. The most important rule is that the plot cannot be sold to speculative developers, only to those who are going to live there. The online marketplace also allows you to prioritise the sale to members of your own family.

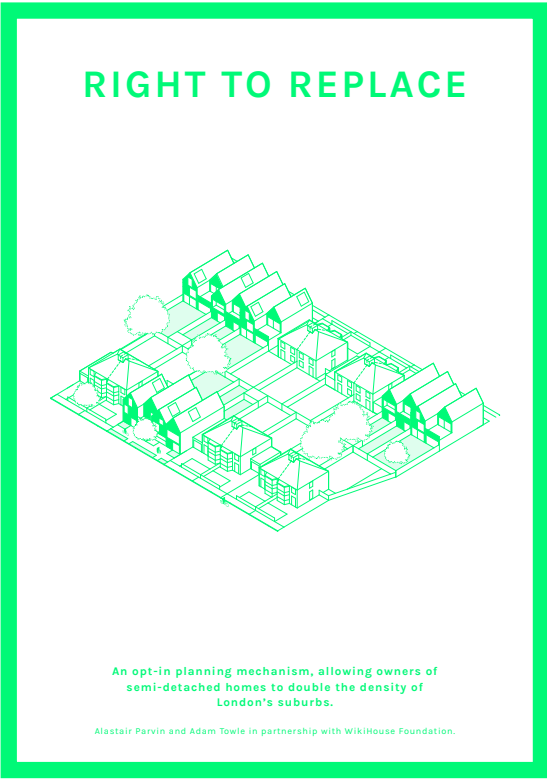
Plots are sold at a pre-calculated price. Importantly, a large slice of the price (for example £10k-15k) goes directly to the local authority, to invest in schools, infrastructure and other public services.

'Replacers' get access to a competitive marketplace of companies to help them make every part of the process as simple as possible, from design, finance, removals, storage, demolition, recycling and construction to temporary accommodation during the build.

Right to Replace works on an opt-in basis. First, the local authorities opt-in and set their rules. Then, for homeowners, it works a bit like dating apps such as Tinder. You only get your right to replace if at least two of your four immediate neighbours (including your adjoining neighbour) also opt-in to use theirs.

Right to Replace could apply to 465,000 homes in Greater London. If only 50 per cent of eligible households opted-in to use their right, we estimate that it would unlock 232,500 new family homes by 2025 (more than half the total housing target), and £3.5 billion of investment in public services.

It would leave a new vernacular housing legacy for London: affordable, sustainable and characterful homes and dense, liveable neighbourhoods, built by and for the people who are going to call them home.



house+garden+house: A new suburban code for London

Pierre d'Avoine Architects

Our aim is to help provide Londoners with appropriate places in which to live. For too long there has been empty talk by politicians and policy makers about housing need without this being translated into action.

We contend there is a simple solution and that land is available across the whole of London suburbia to build enough houses to supply the demand. This land is located in the back gardens of most suburban semi-detached houses.

There is always concern about new development in residential neighbourhoods. Back garden development is a sensitive issue, but, if carefully designed, need not be invasive and detrimental. Indeed it could be a positive contribution to the suburban environment – one which acknowledges the rich and evolving mix of communities that now live in London and provides new scenarios for neighbourly living.

We designed the Invisible House for the back garden of a semi-detached house in Acton, west London. It met the planning criteria of the time and received planning permission in 1994, but not without objection from local residents and neighbours.

The Invisible House is one of a series of interstitial suburban houses the practice has designed as a response to major cultural changes that have occurred in London since 1945 and are continuing to take place.

Our competition proposal is for a site in Feltham, south-west London near Heathrow Airport where there has been a large influx of people of South Asian origin particularly Sikh and Punjabi communities. In 2009, we were invited by a Sikh client to convert a garage he had built in the back garden of his inter-war semi-detached house at 158 Uxbridge Road into residential accommodation for his family.

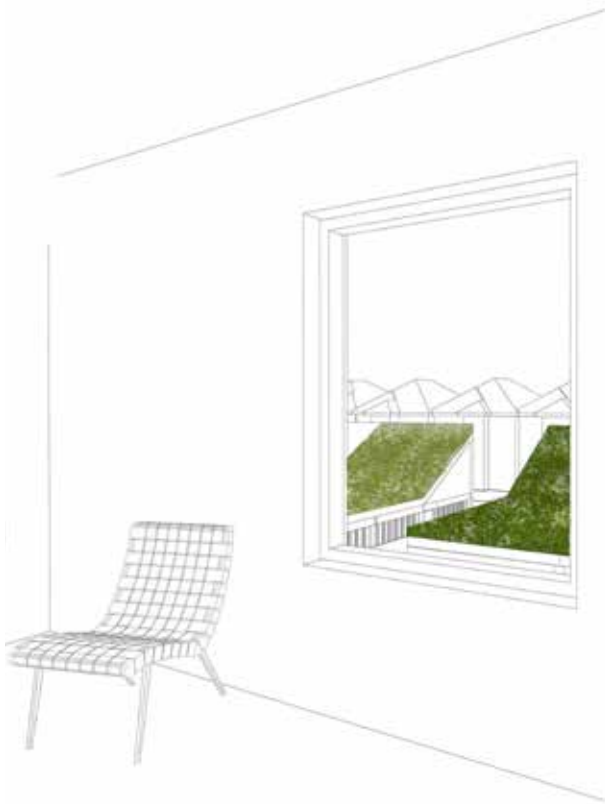
The site had rear access and we conceived the new building as part of a potential mews development. For this competition, we have focussed on a 25 hectare grid which includes the above mentioned house in Feltham.

We propose new small houses, studios and workshops in existing back gardens that could effectively double the density within the 25-hectare grid, without loss of garden space.

For example, the new house we have designed in the back garden of Uxbridge Road house comprises two bedrooms, a living room/ dining room/ kitchen with mezzanine gallery and bathroom, with total internal floor area of 76 sqm.

The new house uses 60 sqm of garden, plus a parking space of the existing garden. The existing three-bedroom semi-detached house (118 sqm) has 102 sqm of garden – front garden 42 sqm and 60 sqm of back garden with a shared driveway.

We have applied this idea to the seven pairs of semi-detached houses in Uxbridge Road, including number 158 to provide 14 new houses in individual back gardens. Roof gardens may be used to cultivate vegetables and flowers. Thus, the new houses could maintain the productive potential of suburban back gardens.



Ministry Of Densification Of Suburbia (MODS)

Hal Currey, Hal Architects Limited

MODS is a new joint GLA/Central Government-backed agency to promote and manage the densification of London’s suburban edges to meet ballooning housing need, tackle the backlog and anticipate further housing need.

We remain reluctant to build on the Green Belt to create the homes Londoners need. But the more we argue, the less housing gets delivered. Complex policies – exacerbated by Neighbourhood Planning, local resistance to densification, problems of diverse land ownership and upfront investment needed to remediate brownfield land, and lack of viability on such sites – is preventing housing being built at the rate needed.

Control and direction of the process and its planning must be centralised and accelerated – and can still include local input. The suburbs have the space to provide the 60,000 homes a year (and more) required. But how to persuade affluent suburbanites to part with their luxurious, car-dependent, land-ownership which is stifling London’s growth? And how to wrest control of the process away from reluctant local authorities?

The MODS task force will identify and take planning and regeneration control of development zones in the outer boroughs where increased density can deliver more homes. MODS will then establish mini-Mayoral development corporations (MINI-MODS) to manage Zones of Densification (ZODS).

Planning and development in ZODS will set out key parameters for bulk and massing, with a loose design code and acceptable uses. Planning permission, other

than design and building regulation approval, will not be required.

A new development company, perhaps a special purpose vehicle for a single development zone (a MODEVCO), will be established to drive densification in an area, or on a particular site.

Crucially, our proposals can allow the existing community to remain intact and to breathe new life into suburbia, allowing homeowners to partner with a new development company to build on existing and under-utilised land. Once owners recognise extra value can be realised because of the extra density allowed, the market will move in to assemble larger sites and pay enhanced values to existing owners. Owners could take a share in the MODEVCO, or sell outright, or move back into a new house on their old plot.

The MODEVCO will seek the best build solutions that deliver economic value and sustainability in the widest sense. THE MODEVCO will generate a Community Infrastructure Levy based on a percentage of the overall return, or on the extra area created. This levy will be payable to the local borough, and used to improve transport provision, healthcare, education and community facilities.

MODEVCO shareholders, which may include residents, developers, funders and the local authority, will be able to sell the new or existing housing to the private market, or to housing associations for rental, or keep it for council housing. Or the JV may wish to explore a PRS model and go for early capital receipts and long-term income.



Connected Living: Modern Mews for Symbiotic Communities

tp bennett

Our proposal is for a community-led web of local initiatives across London’s suburbs to deliver quality low-cost housing, making existing living space work harder.

The concept requires consensus and collaboration between neighbours, political leadership to galvanise support and facilitate development, and a supportive planning and funding framework. It is an idea that could be directly transferable to a larger scale and includes a flexible ‘kit of parts’ design that can be reproduced in volume.

London has historically low densities in its suburb areas. The critical mass of people necessary to support transport, shops and schools requires at least 50 dwellings per hectare – few of London’s outer suburbs reach 20-30 dwellings per hectare. Higher densities historically result in a broader mix in communities, better social integration and community safety. Better access to healthcare, public transport and local amenities benefits the entire community, and older people in particular.

The concept we propose is simple: a one- or two-bedroom dwelling located at the rear of a long garden plot, accessed via existing pathway or introduced access lane. The inserted ‘mews’ would use a slice of neighbouring properties to facilitate access and provide a route for utilities to the new dwellings.

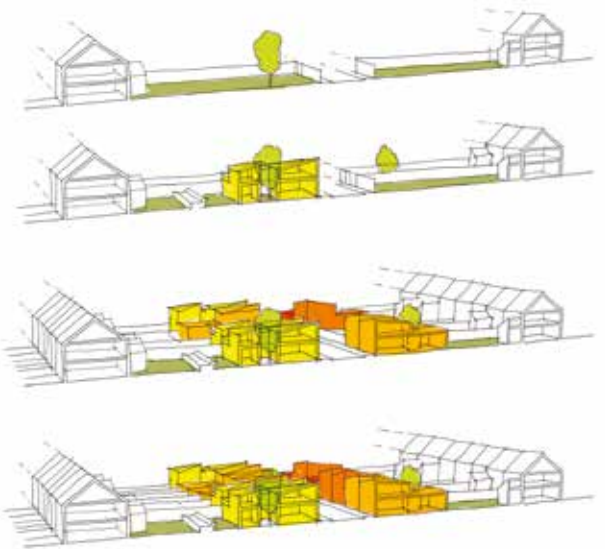
Once erected, the new dwellings could be inhabited either by ‘down-sizers’, allowing a young family to move into the larger house, or alternatively a young family in the new dwelling, living alongside extended family or friends. There are many variations of this ‘connected living’ within a plot, all with the aim of providing an enhanced environment for both parties that can ultimately provide more support in what can be an isolating city.

The new buildings are comprised of space modules from a ‘kit of parts’ that can be combined to suit the needs of the future inhabitants, and the site constraints. The design offers flexibility to address the size of the plot; solar orientation with various roof configurations; the level of privacy desired; and the amount of interaction within the garden with courtyard and window aperture options.

We suggest a community building company be established to assemble the sites and build the housing. This is a limited liability partnership with an elected board of local residents. Non-executive directors are invited from the development industry to advise the members of the LLP. Existing neighbourhood residents can buy into the assets of the partnership with either investment or contribution in kind (land).

Under our proposal, Government lending is available to neighbourhoods that adopt a new style Neighbourhood Plan under a reformed planning system, and the Mayor of London approves a Housing Zone to accompany the plan, bringing further investment and granting a blanket outline planning permission for the new homes within the plan area.

The proposal puts people back at the centre of the housing discussion: people who need a home, co-operating with people who have a home, and a slice of land to share.



Pocket Regen – a new way to regenerate London’s housing estates

Pocket

Pocket Regen is a completely new way of managing estate regeneration, keeping people in their homes, and providing new homes that are 100 per cent affordable.

At its heart, Pocket Regen will deliver back middle market and starter homes to estates which have become polarised over the last 30 years through under-investment on the one hand and Right to Buy on the other.

Crucially, we need to overcome the feeling that estate regeneration is ‘too hard’ by engaging openly with estate communities and offering them real reasons to welcome regeneration, by investing in their estates, building new affordable housing for their children, and creating an annual revenue stream for the community.

Pocket Regen is a tripartite joint venture bringing together the estate community, the local authority, and Pocket to deliver the maximum number of new and affordable homes.

Re-engage

Pocket Regen can harness the support of all residents by offering them a fair deal, collaborating with the overall community as well as the tenants and residents association. Our approach will, therefore, involve residents in deciding:

- Scale in terms of the number and size of new units
- Where they live and the opportunity for local people and families of those on the estate to access new affordable and social rented homes
- The return, with residents benefitting from a charitable trust, based on the scale of the project they support, and help decide what it should be used for



Based on an estate of circa 240 existing homes, the scale of the schemes will range from between approximately 150 new affordable homes with a £20,000 annual revenue stream, up to 250 new homes with a £65,000 annual revenue stream.

Repair

Even after decades of neglect, most estates can be made to look great internally and externally with the appropriate level of investment. Pocket Regen’s starting point is an assessment of what can be kept and enhanced.

Rebalance

Pocket Regen’s extra homes will be 100 per cent affordable and prioritised for the family members of existing residents, thus visibly increasing the investment in the estate’s social capital.

Pocket compact homes are at least 20 per cent cheaper than the market rate (for rent or purchase), and are maintained as affordable in perpetuity through a restrictive covenant that is policed by Pocket and the local authority. Also, Pocket homes are only sold or rented to local people, with the rented homes offered on longer tenancies (three years), so all new residents will become net contributors to the community.

It is clear that a new approach to estate regeneration is desperately needed. Even if only 25 per cent of the under-developed small- and medium-sized local authority estates (around 1,218) in central London were regenerated, we could deliver 50,000 new homes, with the first of them seen within three years. With the level of engagement and collaboration envisaged, we are confident that programme durations can be cut by 20 per cent with resultant savings in costs.

We have failed to deliver homes for the next generation. We have failed London’s estates through a series of broken promises over the course of the last generation. We must engage both and deliver homes quickly before the city’s global success becomes illusory.

A New Life Line – Densifying Housing Estates

Grimshaw

As young professionals, we are paid above average but we are still priced out of the market. Our pay level makes it close to impossible to enter the affordable market in zones 1, 2 and 3, and very difficult to be eligible for housing association and part ownership schemes. Even the Help to Buy scheme is out of the question because of the challenge of saving 5 per cent of £400,000 whilst renting in London.

So, thus far nothing new. But the direct effect this has on us focused our search for a creative, innovative and ideally simple proposition to tackle the issue. We discovered that housing estates could offer a great opportunity and we believe we can propose a win/win situation. We based our idea on the following observations:

1. There are a number of large housing estates located in zones 1/2/3 in very convenient locations.
2. While being a collection of very densely populated buildings, they often don’t use land in a very efficient way.
3. Quite a few are within walking distance from a large park.
4. Most are in dire need of an upgrade (infrastructure, access and building fabrics are three common issues) which neither their inhabitants nor the council can afford.
5. Private amenity space is often below current standards.
6. The public areas within the estate are often degraded.
7. The commercial facilities within the estate are struggling if they have not already shut.
8. Estates often still have a strong sense of community.

The proposal

We propose to develop an exoskeleton system that allows dwellings to be added on top of existing building. A simple description might be like a permanent scaffolding structure – not reliant on the existing building structure while being connected to it.

We envisage this structure as being prefabricated offsite and modular, thus providing excellent building quality and a high degree of customisation. This structure will occupy about a 3 metre-wide zone all around the building. It would sit on new independent foundations which can be engineered to support and compensate the existing foundation if necessary.

Our ideas was inspired by the project ‘Transformation de la Tour Bois le Prêtre – Paris’ by French architects Lacaton & Vassal.

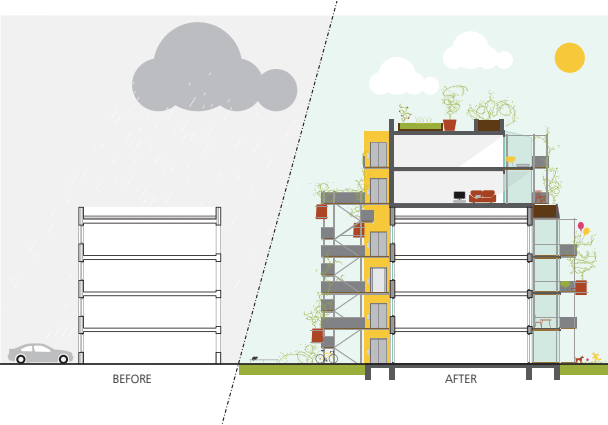
To make it financially viable, we expect that we would need to double the provision of dwellings in the building with the new ones on top. These would be one- and two-bedroom apartments.

Vertical circulation to them can be totally separated from the lower block. Rooftops can provide new, shared amenity spaces with greenery and grow beds inspired by another Grimshaw scheme – the Via Verde project in New York City. New services will be installed so that no structural or functional relationship between the existing and new is necessary.

As part of the scheme, we envisage the existing building is upgraded as their external walls get removed and the interface with the new external structure is installed.

We believe this scheme would provide a multitude of benefits including:

- Upgrading of existing housing stock
- Substantial increase in numbers of dwellings available in central locations
- An extra revenue stream for the councils
- A more efficient, comfortable and modern dwelling to the existing occupiers
- An interesting investment opportunity for housing associations and developers



Better than New

MOCT Studio and Structure Mode

‘Better than New’ looks to retrofit and extend existing post-war social housing stock to increase London’s housing supply. Through an assessment of their functional obsolescence, an economy of cost and resource can be made in delivering new housing, allowing local communities to grow.

The idea’s application is based on the Borough of Tower Hamlets – chosen due to its extensive post-war social housing estates – with specific focus on Poplar. Post-war developments in the area are predominantly a mixture of flats and maisonettes. The maisonette typology in particular is prevalent, as it provided a compromise between tenants’ ambition for a house and the borough’s need to build flats.

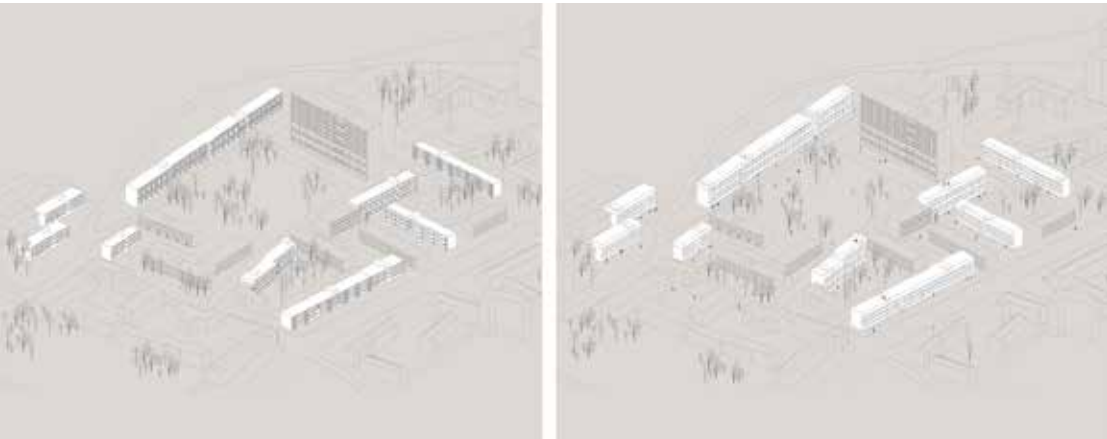
The maisonette typology can be viewed as partly obsolete from its inception, as it was contrived as a compromise of tenant ambition for houses. But obsolescence in buildings rarely occurs suddenly: it is normally caused by an incremental loss of value following changes in standards, market effects, technology and less tangible factors. Through the lens of social housing in London, the appearance of obsolescence has been distorted by ongoing demand issues.

When a building reaches a critical state of obsolescence, it can either be replaced with a more up-to-date version, or it may be retrofitted, following a critical assessment of how well the building elements function: their functional obsolescence. This assessment of the maisonette typology reveals the latent capacity of the structural frame to be retrofit.

Our idea is to utilize the remaining building fabric not suffering from obsolesces to retrofit and extend the typology. By removing the heavy masonry cladding and replacing it with lightweight – thermally performing construction – we can provide additional storeys to the buildings. We propose that the existing and new storeys of the building are clad in structural insulated panels with an external face of lightweight rainscreen cladding. The new upper levels are formed structurally from cross-laminated timber panels, external openings are enlarged and lift cores are added to provide access to the upper floors. With the additional density, there are new community spaces inserted into the cores and ground floor of each building.

This approach is also economically energy- and cost- saving, as exemplified by Bois le Pretre, Paris by architects Frederic Druot and Lacaton de Vassell. The retrofitting and horizontal extension of the existing housing block met current environmental standards and provided a cost-saving of £8.8 million versus proposals for demolition/reconstruction.

The extensions to the buildings can occur predominately with residents in situ and will provide units to expand existing communities. The idea could be scaled from a single building, to an estate, to a borough wide proposal. Our case study delivers 900 sqm of new floor area at Pennyfields – a block on the Birchfield Estate, Poplar, and 3,000 sqm on the whole estate, with an estimated 120,000 sqm across the borough. There is also scope to extend and adapt the strategic approach to different housing typologies, including post-war high-rise pre-cast clad housing and point blocks.



The Rookery – A new (old) idea for housing

Projects Office

Taking inspiration from one of London’s historical indigenous housing typologies – the Rookery (pre-19th century slums) – this proposal explores the latent opportunities presented by London’s mid-century housing estates. It suggests ways to integrate new housing into established urban areas without the comprehensive demolition and redevelopment that is so prevalent in London today, creating vibrant community-driven housing in the process.

It seeks to start conversations about density and community: to move the debate forward from the simple fact more housing is needed to a more productive conversation about what kind of housing we should be building (and destroying), and the possibilities for social – and sociable – housing models for 21st century communities.

Background

The Rookeries were a series of slum neighbourhoods that threaded their way through inner London until the mid-Victorian era. Comprised of winding networks of courts and alleys, they housed people with nowhere else to go. Pockets of external space would be surrounded by lodging houses and ad-hoc additions. Each area had a self-organising social structure defined by its inhabitants.

This proposal looks at the thoughtful preservation of the existing estates; seeking opportunities for intensification by utilising the underused spaces around the existing built-fabric of mid-twentieth century housing estates for further development.

It is crucial that we stop thinking of demolition as the default option when presented with the challenge of addressing our ageing estate building stock.

The recent report ‘Knock It Down or Do It Up’, published in February 2015 by the London Assembly’s Housing Committee, suggests that major estate regeneration schemes have resulted in thousands of new homes being built, but have also resulted in a loss of more than 8,000 social homes over the past 10 years.

The De Beauvoir estate in Haggerston has been analysed as a typical example of an estate with latent opportunities. A development site was identified in the unused car parking deck, adjacent to a high-rise tower block. Through sensitive site appraisal, the estate can be densified without the loss of the its existing valued green amenity space.

Construction and procurement

The proposal is that schemes would be partially constructed by existing local authority landowners empowered to act as developers, and then completed by self-build co-operatives. Similar to ‘shell and core’ construction, the project proposes that a contextual outer wall and primary structure of floor and roof plates could be constructed as a whole to reduce cost. Each courtyard and surrounding housing units could then be completed as a self-build group, either through a scheme for existing estate residents, or sold on to private purchasers – generating revenue for reinvestment back into the surrounding estate.

Design

The existing local authority landowner would be responsible for providing an external ‘contextual’ façade that reinforces the – often distinctive – identity of the surrounding estate architecture. The new internal courtyards are then free to be developed by self-build co-operatives, in effect devolving important planning decisions such as aesthetics and landscaping to the future residents. A standardised system of floor plates provides an easily modified shell and allows for rapid construction. Pre-fabricated construction methods reduce the disruption to the existing residents of the estate.

With future residents empowered to build their own homes, a true sense of ownership is encouraged through responsibility not only for the design of the individual dwelling but also the semi-private shared spaces between.



The High Street Living Project

A-ZERO architects

The way out of London’s housing crisis has to be met through a combination of new building and making better use of the spaces we already have. Our proposal focuses on planning and land, through unlocking gaps in the city where development could happen.

Since the 1900s, some of London’s residential streets have evolved into a typology of its own. Georgian and Victorian residential town houses, originally built with generous front gardens, were swallowed up by expanding high streets. In the absence of planning constraints, the gardens were built as single-storey shops and the original houses landlocked behind. This typology exists often in low-density neighbourhoods with good transport links and existing amenities.

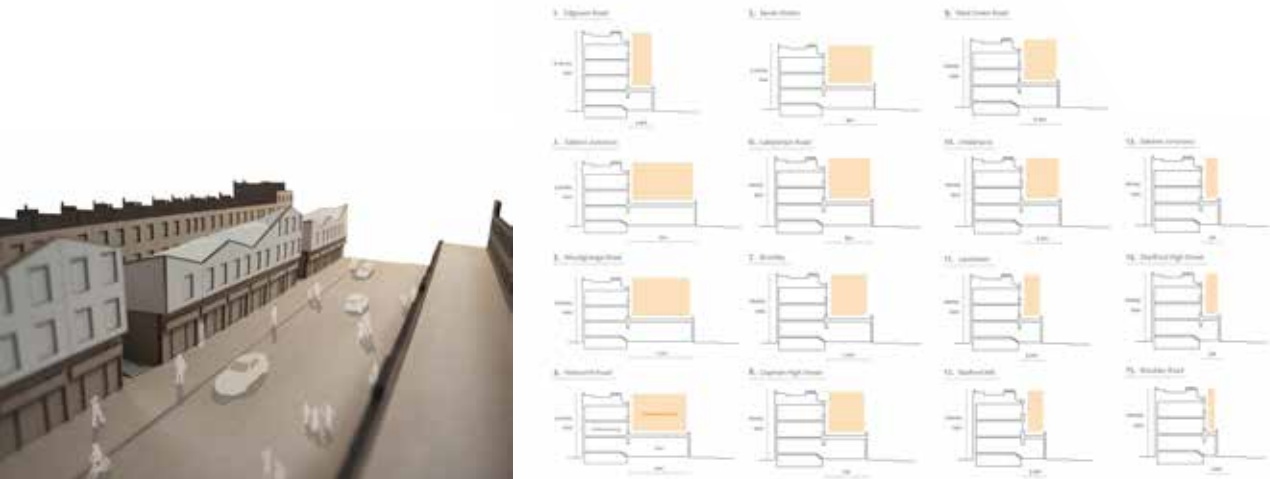
We have identified 20 sites of the same typology across the city, but our proposal focuses on Walworth Road, an area undergoing rapid and radical regeneration.

Single-storey high street
The original houses with front gardens allowed social interactions and a green buffer from the street. Now the residents have to access their front door via a series of long narrow ‘tunnels’ from the street to the original stair buried deep within the building. The ground level of the house becomes rear-facing single aspect, and the two or three levels of accommodation above have an outlook to a long expanse of the flat, dull roof over the single-story retail unit below. The opportunity to engage with neighbours no longer exists, and homes become undesirable due to poor entrance and property frontage.

How to create a sense of community
The proposal is two-fold: provision of new homes and reactivation of the existing houses. Working with the current spatial and environmental standards, and targeting young professionals, elderly and small families, we propose a ‘cluster’ of three homes spanning six retail units below. At every seventh property, the retail unit at ground level is appropriated as part of the whole development. Each cluster is serviced by a gated entrance staircase, a lift, a bicycle storage area, and a communal refuse collection (currently unmanageable on Walworth Road). On the first floor, a semi-public walkway is shared by 10 households – three new, seven existing – and new front gardens are added to the existing houses. Accessibility to the original houses is significantly improved via a lift, and the new community made of old and new residents have more opportunities for social interactions.

The massing of the new one- and two-bedroom units is calculated to ensure right to light. Overlooking between new and old houses is prevented by removing clear windows on the side facing the original houses, and a skylight is introduced in each of the new unit to add daylighting. The orientation of the entrances to the new houses is at right angles to the original houses to provide further privacy.

Although this proposal is modest in quantity, with three new units being provided for every seven existing, when repeated throughout the city it offers another solution for addressing the housing shortfall in a sustainable way.



New High Streets for London

ROEWU architecture

London is a city of villages and local high streets. But in many areas, high streets are not fulfilling their vital role as the heart of their communities. Many have become run-down and dominated by low-value uses like betting-shops and fast-food. The quality of building stock is quite low and ageing without adequate investment. Density varies but is generally much lower than is required and public spaces for community use are generally inadequate.

This proposal introduces a new typology that creates both residential and commercial units with mutual benefit to each other. This new typology can promote the contribution of small-scale developers, achieve consistency and revitalise local communities. It is proposed that this new typology would be adaptable to different sites but would maintain density over 150 dwellings per hectare while guaranteeing good light and green spaces to all dwellings. This proposal is based on the examples of the past where thousands of small-scale developers built up the city but achieved consistency through the use of repeating typologies.

This strategy would make it easier for small builders by reducing complexity of both planning and technical regulation – for instance providing 21st century ‘Pattern Books’. These could be adjustable BIM models which would comply with planning and regulations and could be ‘pre-approved’ to secure finance and make sites more attractive to develop.

Transforming neighbourhoods – A bottom-up process
On existing high streets, development does take place right now but it is piecemeal and provides poor quality accommodation – especially the residential accommodation which rarely has any outdoor space. It also contributes very little to community life.

This is a natural result of each owner developing their site in isolation. This proposal gives them a framework to work within which would add up to much more than the sum of its parts. Local authorities would facilitate development by insisting on use of the typology but fast-tracking approval in return for having some say on terms of tenure.

- Consistent rules for the typology could include:
- Deep commercial space with service access from rear laneways
 - Front block aligned with street frontage
 - Green space behind street frontage blocks – to connect with neighbours. Through shared gardens and urban farming allotments, people can regain a sense of community.
 - Back (mews) block aligned with rear laneway – where space allows
 - Maximising use of roofs as green space

We appreciate our proposal is not a ‘silver bullet’ that can solve everything or provide all of the housing needed. But combined with other strategies, it could make a significant contribution to addressing London’s housing problem.



Winner
Intimate Infrastructures
Natasha Reid Design

In response to the drastic urban changes occurring in east London, Intimate Infrastructures proposes an alternative to more dominant forms of volume house-building and provides solutions for both private renters – in the form of purpose-built shared homes – as well as considering the needs of local communities vulnerable to displacement.

We ask, can a form of ‘above ground’ development provide a way to capitalise on the land available within the city, to allow for urban intensification rather than sprawl? Could we also build in this way above existing buildings, from community assets, workspace or other types of structures?

The proposals challenge the pervasive model of towers: is there a strategy for maximising land available without incurring the formidable build costs of high-rise – to provide an economic housing solution for different groups in need? We ask if there is a way of working at a big scale, whilst also paying attention to quality of life, urban vitality, character of place and civic relations. What are the tools for delivering high density at a human scale?

The study focuses on two groups: local communities at risk from radical urban renewal, and private renters who cannot access home ownership in the current crisis – from young professionals on low incomes to other more vulnerable or mobile city dwellers.

The project proposes a ‘missing typology’ of new-build, shared housing to meet the demand of renters in the immediate term, while also accommodating larger family homes within a framework that focuses on qualities of place. The study explores mixing different types of people rather than creating mono-tenure ‘ghettos’.

Currently, the private rental market is unregulated in terms of space standards – epitomized by the extreme cases of makeshift ‘beds in sheds’. New mass-produced, modular ‘shared houses’ are proposed as standardised components, to regulate minimum levels of living standards, speed up delivery and reduce construction costs.

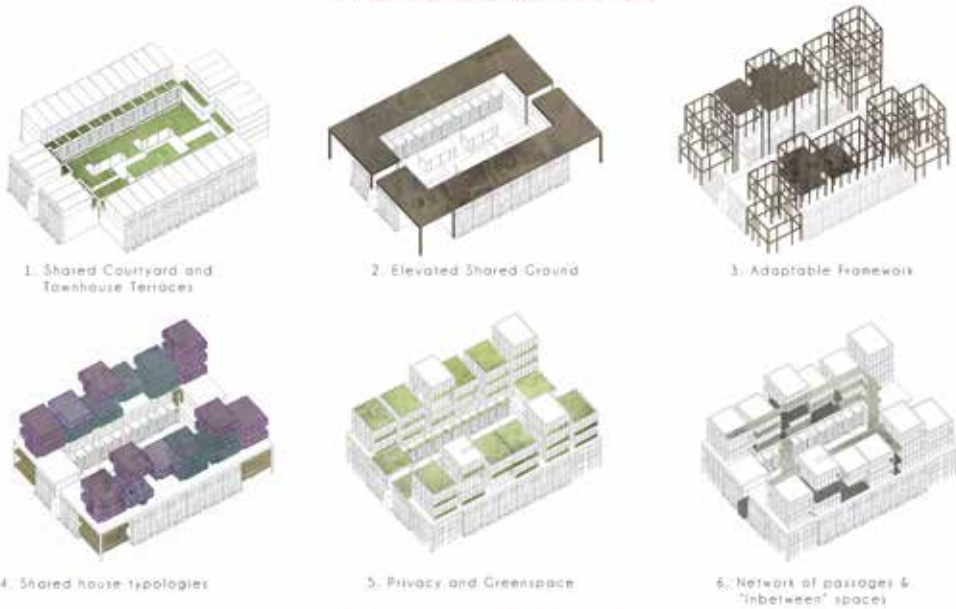
Permanent infrastructure is provided at ground level in the form courtyards and owner-occupied townhouses, based on the London pattern of squares, to embed the importance of street-life into areas undergoing change. An adaptable frame structure above holds the shared homes, which can change, grow and recede according to future needs.

The ‘shared house’ modules are low-cost, robust shell spaces which can be finished by inhabitants according to their means. This new model could also provide a radical approach to giving access to property and security by allowing micro units of space to be owned, such as a single bedroom.

The collision of different tenures and groups reflects that city is homogenous, and so the proposal provides a range of different conditions to suit people at different stages in life, incomes and lifestyle preferences. It seeks to interlock two types of community; not ‘pepper potting’ but allowing opportunities for interaction through mixing space for social activities. To create a closer, denser layout of households, shared space is emphasised and privacy provided by the careful treatment of boundaries.

Our study is based on an initial research commission undertaken in collaboration with UrbanWorks, a Johannesburg-based practice for the British Council’s International Architecture Showcase in 2014. It investigated whether a high-density, more adaptable ownership model for overlapping uses and people can provide a resilient solution for places in transition and create neighbourhoods of character, distinctiveness and vitality.

LARGE SCALE INFRASTRUCTURE



INDIVIDUALISED, INTIMATE "INFILL"



Creating density at a human scale

100 Ways to Use 100 sqm

Julia Park, Levitt Bernstein

If London is to remain a city for everyone, we have to think more creatively about the homes we build. How can we build homes that meet diverse needs while remaining flexible enough to meet the constantly changing demographic challenges that lie ahead? How can more people share space and yet gain more privacy? How can we allow the young to live better and save more, and the old to stay at home, supported by family, friends or a live-in carer? How can we embrace custom build, co-housing, mutual support, multi-generational living, cultural diversity and more flexible forms of tenure and temporary housing? And how can we make this possible in flats – because that’s what most new homes will have to be.

Our big idea

The ‘big idea’ is far from glamorous. It’s a simple, repeatable, low-cost, flexible space – empty, but full of possibilities. In order to pare back, we had to look first at dozens of different layouts and find some common denominators. We came up with a versatile, rectangular shell of 100 sqm, partially subdivided, structurally self-sufficient, very soundproof and extremely energy efficient. It has a balcony at each end, four soil vent pipes (SVPs) and up to four entrances.

The shell is designed to work as one, two, three or four separate homes and house up to five people. It can remain whole, or split into halves or quarters to provide:

- 1 x 3b5p (three-bedroom five person) flat of 100 sqm
- 2 x 1b2p flat of 50 sqm
- 1 x 2b4p flat of 75 sqm + 1 x 1p studio (or integral bedsit) of 25 sqm
- 1 x 1b2p of 50 sqm + 2 x 1p studios of 25 sqm
- 4 x 1p studios of 25 sqm



We looked at many possibilities ranging from loose-fit spaces with minimal bathrooms and kitchens to conventional, cellular, layouts. They could be rented or bought, temporary or permanent. Any number of any of the options could be combined in a single block, and they are all interchangeable. We estimate that there are a least 100 possibilities.

The single person studios and integral bedsits address some of the most poignant issues. Private renting is not a bad concept but is largely unregulated and fast becoming a trap, with many young people spending up to 75 per cent of their income on rent. Unable to contribute much to the local economy, they have nothing left to save for a mortgage or pay into a pension. The studios are too small to make good long-term homes but would be a perfect step up from flat-sharing en-route to home ownership. We’d like to see ‘Rent To Save’ become a new form of covenanted, low-cost, not-for-profit temporary accommodation with capped rent, and a maximum (but protected) tenancy of say three years for low-income singles – an affordable alternative to private rent. Used in this way, 100 sqm could allow four young people to enjoy a better life while paying less and saving more. Ideally, they would be part of a mixed-use building with an Internet café, fitness suite and laundry.

The bedsits (which form part of a large flat) are perfect for a ‘stay-at-home’ son or daughter, a granny or a nanny, a carer, live-in friend or lodger, providing someone else a home.

We’d like as much of this housing as possible to be publicly funded and owned, managed by cooperatives or responsible, not-for-profit landlords. That makes good economic sense too.

GET SMALLER!

The Manser Practice Architects + Designers

In response to a growing younger population, privately-owned housing and high prices, we have developed this ‘starter flat’ for young professionals. It is suitable for a single occupant or a young couple.

Only 15 sqm in area, it contains a shower room, WC and basin, washing machine, fully-fitted kitchen, a pull-out double bed, desk, wardrobe and storage in every other conceivable nook and cranny – a perfect and affordable first step onto the housing ladder.

The studio will be zoned into two separate areas; ‘Washing & Cooking’ and ‘Sleeping & Living’. The room is visually split, with washing and cooking near the entrance and living and sleeping towards a large east- or west-facing window. The tall sofa-bed acts as a divider and provides increased privacy for the living zone from the entrance area.

The Manser Practice approached the design by trying to integrate furniture, services and electronic equipment in order to save space and provide a design that is without clutter and more functional to the occupant. The design features smooth shapes that create the perception of a more generous and spacious interior.

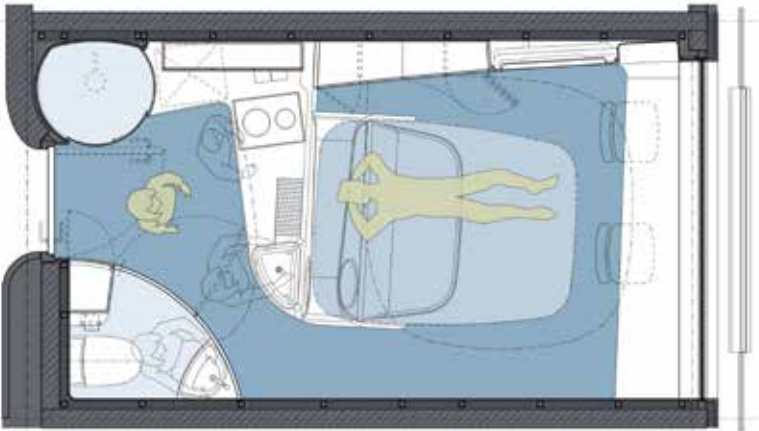
The material of the fit-out is resin-based, reconstituted stone panels that can be prefabricated to high precision in a factory offsite and delivered to site as flat-packs. The high level of prefabrication will allow a reduction of construction time. In the future, we envisage that the units could be entirely 3D-printed, and later slotted together on site.

Land values are growing and available land diminishing, therefore high-rise, high density residential development should be encouraged in London – especially in those areas currently underdeveloped and underproviding in terms of affordable living.

A fully modular construction of self-supporting steel or concrete frames is a possible approach to reduce construction time on site. The production by future 3D-printing technologies will allow the integration of furniture and structure, and reduce waste in the construction process.

Communal functions will be important to build a sense of place and community. The following communal spaces are proposed: roof terrace, lounge with soft furnishings, party space with kitchen, communal drying space on each floor and work hub with wifi and communal tables.

Future buildings could typically include 16 residential floors, with about 800 pod units on top of two floors with commercial and communal functions. In order to implement our ideas for housing London, we would need a relaxation of the building regulations and Mayoral guidelines relating to space planning in residential developments.



Hyperdensity

AWP office for territorial reconfiguration with Rowan Moore

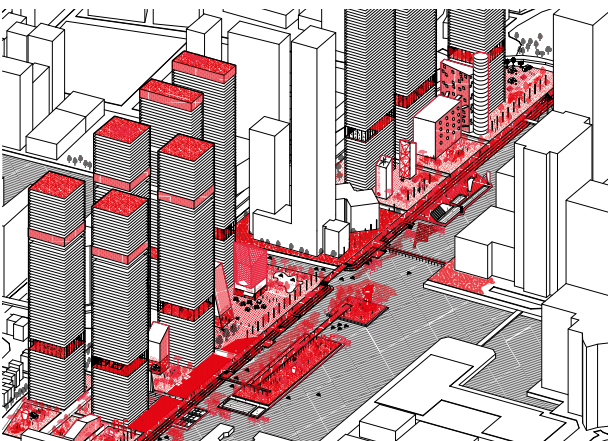
London faces the possibility of new areas of with the highest residential densities in the world. South Quay, alongside Canary Wharf, will attain these levels, if all available sites are developed to the numbers seen in those proposals already submitted. This prospect has been criticised, and rightly so if it is the accidental consequence of speculative punts and ill-considered planning decisions. But what if, in designated areas, hyperdensity were embraced as a way of making exceptional urban zones: if by meeting the market for these properties, it were also possible to enrich London’s urban realm? The demand issue that this proposal addresses is therefore the considerable pressure exerted by investor-led housing. By doing so, it seeks to turn this investment to maximum benefit for London, and free up other areas of the city to meet other needs.

Shared space

South Quay is in multiple ownership. It faces the prospect of a series of disconnected fragments between buildings. The lack of an overall vision would put it at a commercial disadvantage. But South Quay contains the elements of an extraordinary situation that can make it world-famous. It can go beyond the good-quality but generic types of space created by Canary Wharf and Wood Wharf. The key is in the making of shared spaces.

Beat the High Line

The most powerful and memorable shared spaces are those which grow out of the particular characteristics of a time and place to create territories like none other. The High Line in New York is one example, the floating lido in Copenhagen harbour the vibrant paving by Burle-Marx in the Copacabana waterfront, Bo Bardi’s conversion of



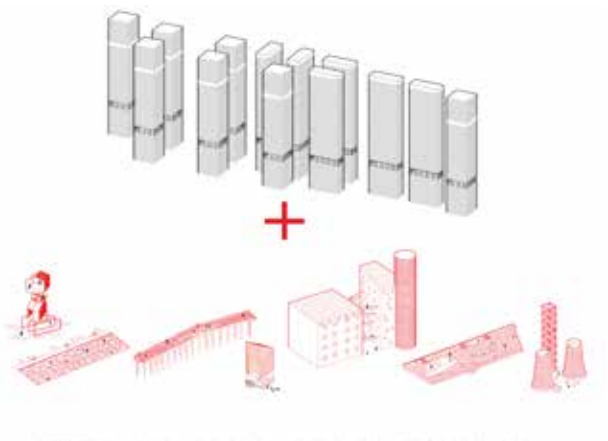
SESC Pompeia, Sao Paulo, AWP’s observatory tower for viewing the Seine in Poissy or the conversion of old steel works in Emscher Park, the Rhür, are others. Each is exceptional in its own way. The way to match or exceed their success is to learn from their fundamental principles.

3-D Park

If South Quay ’s most powerful characteristic is its very density, an opportunity for a 3D park presents itself here – a park that is not confined to the ground plane but extends into buildings of two-, three- or more storeys. It combines landscape and buildings to create cultural, social and sporting facilities for the area’s residents. It occupies the quay, extends into the dock, and connects with accessible zones within the new towers. The cliché of ‘public’ sky decks is not offered: developers are free to maximise the value of their private penthouses. Although made of many elements this 3D park will be conceived as a single integrated work. It will learn from the best of the mentioned example and create something new. The Queen Elizabeth Olympic Park is a model: a public asset that creates the setting for new development.

The opportunity

The 3-D park is not in itself a housing project, but it makes a significant contribution to London’s housing issues. It makes the ideas of hyperdensity and housing built for investors – which are negatively perceived – into positive and creative forces for the city, and it turns high-density living from a potential nightmare into something enriching and inclusive. A home is not made by a housing unit alone, but by the city around it.



Streets Count

Stitch

This proposal imagines a point in the future where the street is the focus of the housing debate and creates a new legacy for London. The street will be celebrated as the starting point, the collective domain of the public. Its form and character is supported by the design of housing and the community it serves. Exemplar streets are awarded special brand status: they are called the ‘New London Street’, and become the aspirational public face of housing in London.

How great it would be if every project that contributed towards delivering London’s much needed housing added some value to the street which it creates, or with which it interfaces. Even better: what if every project’s mission was to make or help make a great street for London.

Why streets? Why wouldn’t high quality housing be enough? The street has a different kind of value to the public’s traditionally individual and introspective view of housing. If we carry on focusing only on the quantity of homes being built and not on their potential role in changing the face of London, we will be in trouble.

Everyone has something to say about a street. People have emotions tied into the streets where they live, or work, or pass through, or admire. It’s not about their own individual patch on the street, but rather observation and appreciation of the collective performance of the street. How the buildings and boundary treatments work together; how its scale and form can make it intimate, or grand, or quirky, or formal. There is no definition of a great street, but it will always be the result of people, or designers or developers looking beyond the boundaries with a greater aspiration about community and place. The question is, how we facilitate this transition in public perception about housing. We think streets need to be a public brand – why not seize this opportunity to make London’s streets have the same level of brand and identity as New York’s highline?

Our idea is an imagined feature article in the Evening Standard two years after the new Mayor is elected. The legacy of New London Streets is by then emerging. The article interviews a spectrum of punters in the housing world. But they are not talking much about the houses. They are excited about the brand of streets coming to the fore.

Our proposal is that New London Architecture turns its attention, in collaboration with the new Mayor, to New London Streets (NLS). NLA’s famous model of London will light up where great new streets are being created, and the public will vote for streets to be awarded NLS status. New London Street awards will be entered by residents, communities, or groups of architects and developers. The public will vote for the winners. A great street will never have the stamp of only one person or organization. Londoners will work together on making great streets and the process and product will be collaborative, focused, and value adding.

The Mayor can assist in the following ways. He/she can:

- Provide incentives for ‘across the street’ dialogue to happen (CIL reductions?)
- Create a panel of ‘Street Champs’ and provide one Champ per project to work with parties to bring ideas and initiatives together across the street. A Street Champ should have no other objective other than to make a great street, with no vested personal interest.
- Give London Streets a brand. Make Londoners proud to be part of a generation that creates this new London legacy.



Mayfair New Town

Guy Rochez

The proposal, Mayfair New Town, puts forward a strategy for the Grosvenor Estate to reinvest in their Mayfair portfolio to provide new social housing and unlock their existing underused housing stock. The proposal is specific to the Grosvenor Estate's control over Mayfair, but the underlying ideas may be equally applied to London's other great estates.

As councils look to introduce an empty homes tax and the sharing economy explodes, there is an opportunity for the Grosvenor Estate to renew and redesign their leaseholds to coincide with the arrival of Crossrail to Mayfair. A revised leasehold structure could provide new streams of funding for social housing developments whilst opening up a range of underused properties to a wider market in a proposition for Mayfair New Town.

The context

The so-called 'sharing economy' – based on collaborative consumption to make better use of resources – is attracting a lot of attention (Airbnb being one such example). As it grows in popularity and practicability, the relationship between property owners and occupiers may well shift.

The introduction of an Empty Homes Tax is currently being discussed, and has been given backing by Westminster Council and Tessa Jowell. This would directly affect Mayfair's many luxury properties that sit empty for great portions of the year.

The opportunity then arises for a new leasehold system whereby absentee leaseholders (i.e. the global super-rich who are Grosvenor's typical clients) either rent out their homes via the sharing economy or contribute to new social housing schemes.

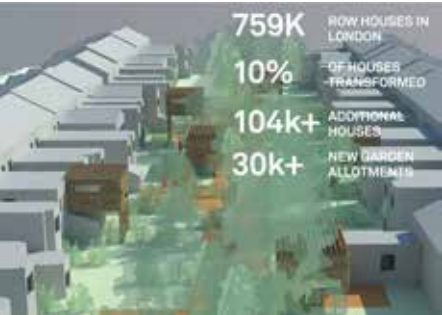
Homes unoccupied for over nine months of the year would be made available through the sharing economy. These would have regulated rents, offered out at market rate for 90 days or at an affordable rate for 180 days, and then being available for their primary leaseholder for the remaining time.

In addition, there are two other proposals. Firstly, six major social housing developments would be built by the Grosvenor Estate, perhaps in partnership with Peabody Trust, offering a range of flats, from studios through to three-bedrooms. Each housing development would include a piece of New Town infrastructure, such as a high school or car park. The end effect, visually, would be an architectural mash-up of six new landmarks across Mayfair.

Secondly, and most innovatively, rooftop bedrooms would be constructed of a lightweight steel frame that could be adapted to fit onto the differing roofs as belvederes. The bedrooms would be connected by towers and walkways. The towers would be formed of precast concrete with brass detailing (think, "heroic new town infrastructure meets the glamour of Mayfair"). The walkways would be constructed as lightweight metal structures to reflect the historic black iron service ladders and walkways seen across the rooftops of Mayfair. The rooftop bedrooms would provide cheap accommodation for young workers who continue to be priced out of much of London.



Other ideas...



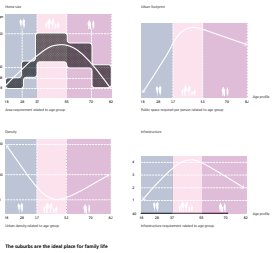
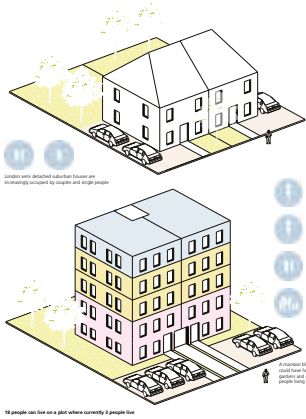
'One million new homes one thousand better neighbourhoods' by Hassell proposes row houses for the future. Applied to just 10 per cent of London's row houses, it could provide more than 100,000 new homes and 30,000 new garden allotments.



'In-residence' by DLG Architects considers the short-term use of empty retail units as affordable accommodation for residents who commit to activating the shop frontage.



'Less Parking _ More Housing' by Elmeare Hanratty examines the opportunity to turn unused garages into homes.



'Reinventing the Suburbs' by Gerard Maccreeanor of Maccreeanor Lavington proposes replacing suburban houses with five-storey mansion blocks. Seven people could live on a plot previously occupied by two.



'Intelligent Densities / Vertical Communities' by SOM proposes a fully flexible tower which can incorporate various apartment sizes, uses and amenity spaces, using sustainably sourced British timber.

Introduction

The infrastructure challenge drew a rich crop of imaginative solutions. Ideas included building above stations, building above station car parks, new low-level bridges to the east of London that open up fresh development zones and even spatchcocking new homes into 4-8 metre sections of existing domestic roads.

The idea that most interested the judges, though, was ‘Buoyant Starts’, the Baca Architects and Floating Homes proposal for utilising London’s ‘bluefield’ sites. There are 50 linear miles of rivers and canals forming the waterways network of the Greater London area, and an additional 150 hectares of developable waterspace in the city’s docks, marinas, and basins. These ‘bluespaces’, suggest the proposers, can deliver 7,500 floating homes at £150,000 for a two-bed unit, thus making high quality and affordable homes a reality for key workers wanting to take their first step on the property ladder in the capital.

Unsurprisingly, railways and their vast acreages of adjoining land attracted much attention from entrants. Benjamin Marks’s ‘Living arteries’ proposal points out that “railways take up a lot of land carrying out one function when they could share it with other uses such as housing.” And the rail system is the only truly contiguous network of land ownership in the capital, providing the opportunity to strategically locate new development in almost any area. “Railways often divide areas,” he says. “Building over them could help to increase connectivity by ‘stitching’ parts of the city back together. It could also help to unlock sites currently ‘stranded’ between railways, and bring them forward for development.”

A similar thought occurs to Grimshaw, whose ‘Find The Gap’ idea proposes “intelligent asset recycling of existing lands which have been preserved solely for railway use” saying it offers “an opportunity to increase land capacity while preserving existing green space in the city”. Identified in its proposal are railway cuttings, decking over railway infrastructure that’s close to stations and housing alongside railway lines. Burrell Foley Fischer’s closely aligned proposal is to build over desolate areas of asphalt alongside London’s stations to provide 10,000 new homes suited to meet the tenure and current needs of 25,000 people.

Farrells and Buro Happold identify enormous potential in a series of low-level bridges, which could lead to the creation of new ‘mini cities’ on the north and south banks of the Thames that could deliver up to 50,000 homes. They make the point that high-level bridges will not support the kind of high quality urban growth that is needed “because of their long approach ramps, often stretching a mile back from the river bank and connecting directly with a motorway, high-level bridges and tunnels sterilise the river banks. By contrast, low-level bridges enable walking and cycling and conveniently connect people to transport nodes on either side of the river.”

Other ideas, many outlined in the following chapter, testify to the vast range of possibilities for ‘discovering’ new housing sites across London, as well as to the abilities of professionals to capitalise on them.

Winner
Buoyant Starts

Baca Architects and Floating Homes Ltd

Buoyant Starts addresses the housing crisis in Greater London by providing high quality prefabricated floating homes, at an affordable price, for the unused water space of the capital.

There are approximately 50 linear miles of rivers and canals forming the waterways network of the Greater London area, and an additional 150 hectares of developable waterspace in the city's docks, marinas, and basins that we call 'bluespace' or 'bluefield' sites. Collectively, bluespace has the potential to deliver as many as 7,500 floating homes with minimal disruption to existing communities – 'Generation Float'. Using off-site construction means that these floating houses could be delivered speedily within 6-12 months from order, with minimal disruption to existing communities – making high quality and affordable homes a reality for key workers wanting to take their first step on the property ladder in the capital.

Floating homes are affordable. At £150,000 for two-bed unit (65 sqm) plus mooring costs, potential new homeowners will buy an attractive, low-energy floating home with riverside views in the heart of the capital; much less than an equivalent land based flat or apartment. Pre-fabricated, low energy by design, and spacious, floating homes have the added benefit of location. Other benefits include reduced transport pressure as many of these units could be delivered next to economic hubs, meaning many homeowners could walk to work. Being transportable, there is also the option to take your home with you should you choose to relocate.

Floating Homes has developed its first modular unit designed by specialists Baca Architects and Techniker Engineering; it has secured planning and will be buoyant by the end of 2015. Floating Homes is a pioneering UK manufacturer that is using tried and tested Dutch technologies to re-imagine the floating home for the UK market.

Planning and Water

Bluespaces (inland waterways, canals and rivers, empty docks and wharfs and floodplain) in Greater London are, broadly, publicly owned and could be made quickly and easily available for sustainable housing developments. However, there is no clear policy/directive on what space is available and where; whether short- or long-term leases for residential development are available;

and in planning terms, what quantum of development would be appropriate and what might it look like. One step forward would be to include waterspace within the GLA's database of public land for development, with supporting guidance on permissible densities and design codes for building on or adjacent to water. One example where this has worked is the waterspace plan for Liverpool's South Docks, where a framework for waterborne development and broad planning guidance has enabled floating retail, commercial, residential and maritime uses to come forward and co-exist in harmony at this World Heritage site. Here for the first time, long-term leases for use of the waterspace have meant stability for use and for investment.

Funding and Finance

One major challenge to funding and finance is that the Building Regulation 2015 does not include construction standards for domestic 'floating homes' or 'displacement structures'. Without this, LABC (Local Authority Warranty Providers) or private warranty providers will not provide the necessary insurance required by prospective homeowners to obtain a mortgage. This is currently locking out developers and potential end-users; and has stifled volume-floating developments. A simple solution would be to raise the awareness of the benefits of floating homes, and for the GLA to lobby the Department for Communities and Local Government for construction standards for domestic floating homes to be incorporated into the latest regulations as an addendum.

Design and Construction

The unit will be constructed using a lightweight Structurally Insulated Panel System (SIPS) and then clad in timber. This is a modern method of construction, providing a factory quality finish – highly insulated, watertight and at the same time a beautiful and elegant cladding. Vertical timber slats provide privacy from passers by while maintaining glimpsed views of the waterfront. The whole building will be delivered by truck and craned directly into the water.



Utilising the River Lea to create moored dwellings



Floatopolis

dRMM Architects

Floatopolis would provide Londoners with more affordable homes, in ecological ‘Waterhoods’ which you can shape and adapt according to your needs and desires. The flexibility of floating architecture means that the urban layout can be reconfigured and new facilities literally floated into place: schools, shops and creative workspaces but also lidos, open-air cinemas, cafés, sports areas and more.

Waterhoods would also allow you to live in a more integrated ecological environment – an environment where the natural habitats are not separated from built areas, where instead a ‘nature reserve grows within an urban context. By creating open ‘water squares’ between the floating streets, we can protect the open quality of the waterspace – instead of paving it over, as was done with many of London’s rivers. Through carefully considered planting, we can encourage biodiversity and an oxygenated, healthy aquatic environment. And by building housing and infrastructure which is designed to float when water levels rise, we can develop on flood risk areas in an environmentally responsive way instead of trying to build ever-higher flood barriers.



None of this is wishful thinking. Many people already live in floating homes and communities in London, and larger floating neighbourhoods have been successfully tried and tested. A notable example is Waterbuurt West at IJburg in Amsterdam, a development of 75 floating dwellings by Marlies Rohmer Architects. Rotterdam also has plans for 6,000 floating homes. Land-based buildings which float during flooding have also been successfully delivered, such as Baca Architects’ amphibious home on the Thames riverbank.

dRMM is currently working on a prototype Waterhood with LB Newham, the Mayor of London and Carillion igloo: a globally unique Floatopolis in Royal Victoria Dock.

Affordability

Floatopolis increases the supply and affordability of new homes by building on London’s water and flood plains. The cost of land in London often represents between 40-60 per cent of the cost of new housing. By building on water we can take land cost out of the equation; and by building floatable architecture on flood plains we can open up new areas of land for development.

Financing

Up until now, the principal challenge has been financing: how to raise funding for the development of Waterhoods and how to access mortgages for floating homes. Most of London’s floating homes don’t have security of tenure, an endemic insecurity they have been battling for many years and which limits access to mortgages.

In London, Carillon igloo have worked with their financial advisors to resolve these financial issues. By demonstrating tried and tested Dutch construction techniques, and by getting UK manufacturers certified and warranted by lender-approved UK institutions, floating homes will be provided with 100-year plus mortgageable water leases.

Construction

Floating dwellings are surprisingly simple to build. A floating concrete ‘basement’ supports a lightweight structure (timber frame or structural insulated panels), clad in durable dry-cladding systems able to cope with a marine environment. They are guaranteed against deterioration and sinking is impossible in normal use.

Canal Housing

Mæ Architects

Our proposal to increase sites for housing is to take land out of the equation, literally, by using our waterways. We propose that London’s network of canals could form part of the solution through the development of purpose-built floating housing at higher density and to current space and servicing standards than the moored narrow boats that many London dwellers are now resorting to as an affordable place to live. This proposal would allow all existing canal activity to continue both on the water and the towpaths. In addition, the public realm and amenity would be improved to the benefit of all.

Space for housing

The main stretches of London’s canals are between 12-15 metres in width. Traditional narrow boats are 2-metres in width. If a zone for floating housing development of 5-metres wide were taken (4 metres plus 1 metre for an access route), on a 12-metre wide section, 7 metres would still remain – enough for a moored narrowboat on the towpath, plus two boats to pass on the canal. There are stretches of the canals up to 20-metre wide such as the 20 kilometres of the Lea navigation where a strip of floating housing 9-metres in width would be viable. These housing units would typically be located along the off-side of the canal, leaving the towpath side open for boat mooring and views over the canal.

The total length of London’s canals is 85 kilometres. Subtracting 10 per cent of this length as unusable due to bridges and locks, we calculate that 4,000 plots can be provided of 4x15 metres, with a 5-metre gap between each. If these were developed at an average of two storeys then 480,000 sqm of area is generated, which equates to the equivalent of approximately 8,000 residential units.

Maximising the use of off-site prefabrication would increase the speed of delivery as well as reduce disruption on the canals.

The canals are owned and operated by the Canal and Rivers Trust. This single point of ownership simplifies the logistics of implementation and is one of the key attractions of this idea.

Model of tenure

Our proposal to increase housing supply is to increase suppliers – by enabling self-build, custom-build and small developers to adopt the pioneering spirit of post-war ‘plotlanders’. These multiple forms of procurement and tenure allow a broad demographic to benefit from canal housing. Those wanting to own an affordable family home over the long-term can procure it through self-build or custom build, while small-scale developers would be able to develop housing for rent at a capped rate. This ‘affordable’ rent model would make it possible for those wanting to save for a deposit to buy a first home, or indeed to put a substantial amount of their salary into savings or pension to enable renting for the duration of their lifetime.

Our proposal to increase affordability is to isolate build costs as the primary capital investment required. A mooring fee would be levied to cover service charges and canal improvement and maintenance. We estimate that a floating housing would cost just 40 per cent of the cost of the equivalent sized house currently for sale in London.



Bridging East London: Unlocking housing capacity with low-level river crossings

Farrells & Buro Happold

Solving the housing crisis is not only about technical innovation, new housing policy, new forms of ownership, or innovative funding mechanisms: the answer lies in transformative spatial planning at a metropolitan scale.

The GLA has responded to this challenge by investing in a number of bold infrastructure projects, notably London Overground and Crossrail, with more investment planned. But a lack of transport accessibility has held back housing delivery in east London.

There are 34 bridges across the Thames, but only one to the east of Tower Bridge (the Queen Elizabeth II Bridge). Proposals for further Lower Thames Crossings will support the UK’s strategic economic objectives, with improved national and regional connections, but high-level bridges such as these will not support the kind of high quality urban growth that is needed. Because of their long approach ramps, often stretching a mile back from the river bank and connecting directly with a motorway, high-level bridges and tunnels sterilise the river banks. By contrast, low-level bridges enable walking and cycling and conveniently connect people to transport nodes on either side of the river.

East London has the city’s greatest growth potential, with more than 40 per cent of its Opportunity Areas. We believe that building low-level bridges in the right locations will provide the connectivity that already drives growth in other parts of London. More importantly, it will re-integrate settlements on the north and south banks with the Thames itself. New opportunities for house building, recreation, landscape restoration and the animation of waterfront will transform quality of life. All of this can be done for a fraction of the cost of most infrastructure projects – for the cost of one high-level

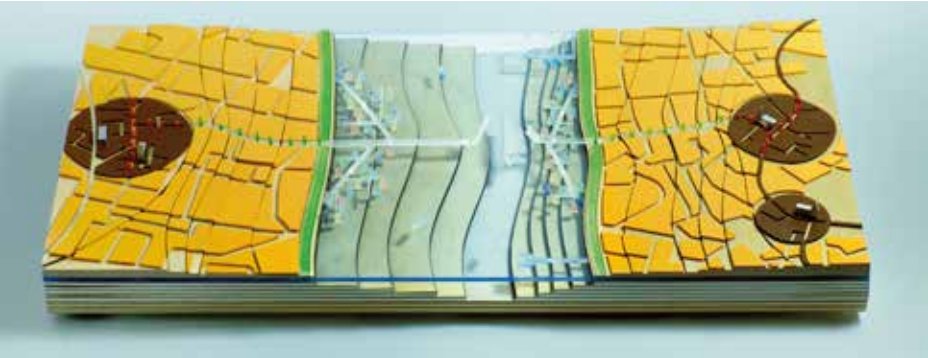
bridge we can afford to build four low-level bridges. We envisage a series of ‘mini-cities’ along the Thames interacting with each other as well as with the rest of London, enabling the delivery of at least 50,000 new homes and 40,000 new jobs.

- Low-level bridges will:
- Capitalise on existing infrastructure by connecting roads, stations, and town centres on both sides of the river.
 - Reduce travel times and enhance the use of sustainable transport modes. We propose bridges of sufficient width to cater for pedestrians, cycles and public transport.
 - Allow developers – public and private – to create vibrant urban communities rather than soulless dormitories, through increases in land value.
 - Transform east London’s economy by transforming access to jobs, markets and housing.

We propose bridges between Barking and Thamesmead, North Woolwich (and Royal Docks) to Woolwich and Greenwich Peninsula to the Isle of Dogs and Surrey Quays. All these will make even more of Crossrail by increasing the catchment area.

We have carefully considered maritime constraints and are fully aware of the cultural and economic importance of river traffic on the Thames, and have initiated dialogue with the Port of London Authority.

We believe that building low-level bridges in east London – with opening sections to allow river traffic – is the single most important thing we can do to transform housing delivery in London.



Crossrail at a Crossroads

Carter Jonas

This proposal arose out of our recent work looking at retrofitting two Crossrail 1 stations in west London, and a short study looking at options for how Crossrail 2 might deliver more substantial numbers of new homes and urban growth. With talk of Crossrail 3 and beyond, we think it is timely to consider how an integrated plan for an outer ring of new settlements around London might deliver the houses the south-east needs and how it could deliver the number of affordable homes that young people need.

Looking at Crossrail 1, we were struck by the patchy nature of urban development along the corridor from Reading/Maidenhead to Paddington. There are so many opportunity sites going begging, which are considered undevelopable because of Green Belt restrictions but which could offer sustainable growth around new or existing railway stations. Taplow, Langley, Iwer, West Drayton and Heathrow are examples of places which could take much greater urban growth. More central sites in Hayes and Old Oak Common already have ambitious redevelopment plans.

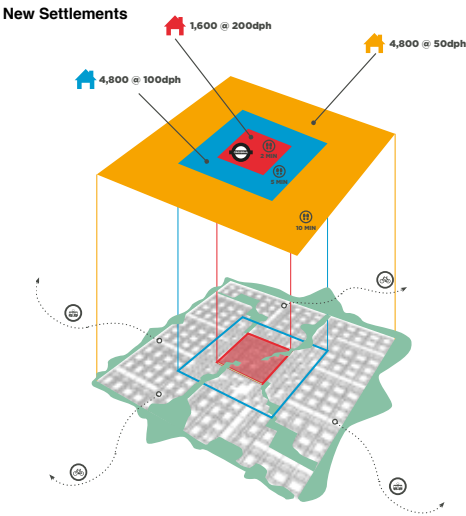
Very crudely we looked at two very different options: a high density, high rise, Hong Kong-type solution with multi-level development with towers over a podium; and a more conventional ‘London’ type solution which was medium rise – perhaps up to eight storeys – the height of traditional London Mansion blocks (which deliver over 200 dwellings / hectare). Recent research into Super Density has shown the latter approach to be entirely sensible and deliverable, and we strongly believe that London-based development solutions are much better than randomly adopting international examples.

London’s patchwork of buildings and open spaces is an important part of its charm – a city of urban villages – and this pattern should be continued into an outer ring around London. It is important that communities here should not just be connected to the centre by radial connectors, but also linked orbitally to their neighbours by tram, guided bus and dedicated cycleways. It is equally important that there should be proper and permanently protected landscape and forestry buffer zones between these separate communities to avoid their coalescence. As London gets bigger and more diverse so its transport choices also need to get more diverse, but not at the expense of its historic or new landscape frameworks.

Our development concept is based on three concentric rings of development around a Crossrail station, but with an optional extra of a further ring within 15 minutes’ walk:

- **An inner town centre mixed-use ring around 2 to 3 minutes walk from the station.** This might deliver 16 hectares gross, net 8 ha. at a density of 200 dwellings per hectare, which will deliver 1,600 units and can be achieved with traditional urban form up to eight storeys.
- **An inner ring only 5 minutes’ walk from the station.** This might deliver 48 hectares gross, 24 net at a density of 100 dw/ha, which would deliver 4,800 homes in a traditional urban form up to four- or five-storeys high.
- **An outer ring 10 minutes’ walk from the station.** This might deliver 192 ha. gross, 96 net at a density of 50 dwellings / hectare which would deliver 4,800 homes at two- or three-storeys high traditional suburban form.

This traditional town of 11,200 dwellings (28,000 population) where most people live in ordinary housing – be it mansion blocks, town houses, mews houses or houseboats – is a good size to provide all day-to-day services. Options exist to extend it to a 15 minute walking catchment which would increase its size by another 8,000 dwellings (total population 48,000). Orbital connection between these towns is critical – by tram, bus and dedicated cycleway – because it would provide a whole new healthy living corridor circling around London. Twenty-one such settlements could house over one million people.



Tramland

Coffey Architects

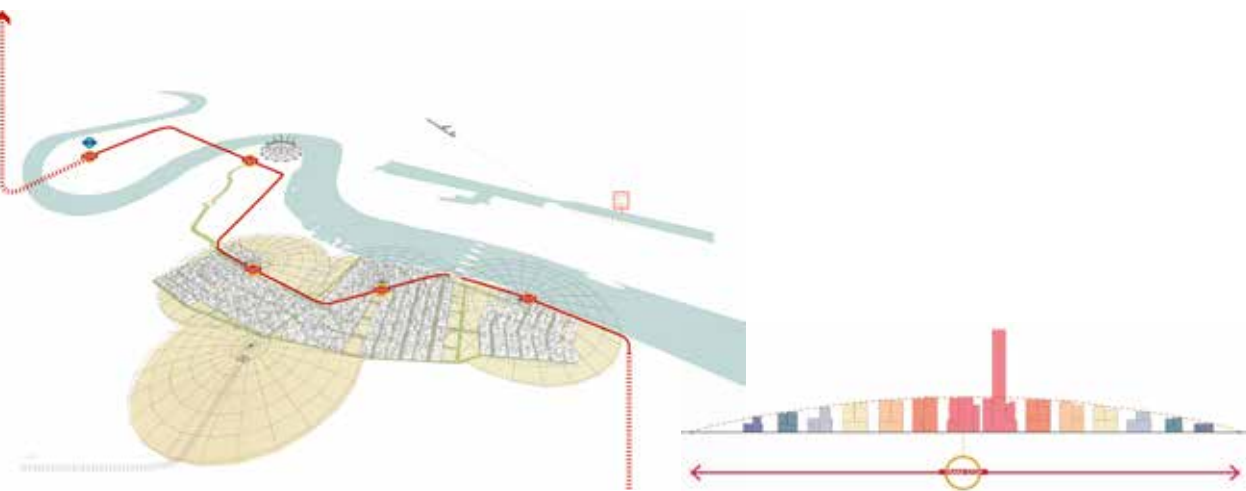
Trams are the most economical rail system, and have a greater appeal than buses. The urban framework proposes a new tram route, to open up the south of the Thames to development as the DLR opened up Docklands.

The urban framework proposed is a way of getting realistic density that addresses both the numbers of homes needed, and the kinds of homes Londoners require. As tested at Charlton Riverside, the framework delivers several times the 3,000-5,000 homes the area’s masterplan proposed.

Transport

Rail moves more people more quickly than busses, so uplifts PTAL ratings more (Public Transport Accessibility Levels define how many units a site can accommodate). The new route would make appropriate densities possible and also increase values, so a portion of this uplift would be taken to pay for the tram, as a transport CIL described in the London Plan. The linking of development and funding would allay the sort of problem seen in Barking Riverside, where the cancelled DLR extension delayed development of the area.

For viability and utility the route connects several others: from the DLR at Crossharbour, past the Jubilee Line at North Greenwich, by the train, DLR and Crossrail station at Greenwich, and up to the new Barking Riverside overground station. It then serves as an upgrade to the East London Transit bus route via the rail, tube and overground station at Barking, up to the rail and Crossrail station at Ilford.



With no tailpipe emissions and reduction of congestion, the proposed tram would be better for regeneration than road crossings, which like the Thames Gateway Bridge will likely be quashed anyway for worsening the already illegally bad air quality.

Within the urban framework, the heights of the taller elements rise with proximity to the tram stops, up to a maximum of 16 storeys above the commercial base (350 u/ha). Away from the densely urbanised areas, heights drop down.

A Homes for London agency, run from City Hall, would CPO the relevant sites and obtain for itself the planning permission to develop, based on the framework. So the public sector would capture all of the uplift in value that the public sector had itself generated with the grant of planning permission.

This would mean there would be much more money to fund the transport, community uses and social rented housing, as well as likely a generous surplus.

Our proposal to increase density in conjunction with improved transport at Charlton Riverside is undoubtedly applicable to many other sites across London. This is a sustainable solution to the current housing supply crisis housing, delivering high density housing with a true sense of place.

Living Arteries

Benjamin Marks

The case for development

Railways take up a lot of land carrying out one function when they could share it with other uses such as housing. There have been very few developments spanning older train tracks in London since the tunnels were constructed in the 19th century shortly after the railways themselves. Where these have been left exposed, their development potential has generally been forgotten.

Yet railways are naturally close to public transportation. They are often less sensitive in planning terms than surrounding urban fabric. And the rail system is the only truly contiguous network of land ownership in the capital, providing the opportunity to strategically locate new development in almost any area.

Railways often divide areas. Building over them could help to increase connectivity by ‘stitching’ parts of the city back together. It could also help to unlock sites currently ‘stranded’ between railways, and bring them forward for development. And it could enable us to resist the urge to build tall and create new streets instead.

Network Rail is publicly owned and owns most of the country’s rail network. A development would require air rights. A joint venture between National Rail and a developer involving profit sharing might be a model that could lower initial borrowing costs.

Where to begin?

While it would be technically possible to build over almost any railway in the city, some would present more challenges than others. An initial study of the three main types of railway found in London suggests that cuttings may be easier to develop than level lines or viaducts.



Case studies

(i) Wandsworth Triangle
Wandsworth has a significant amount of open railway cuttings, well below street level, with wide overgrown verges, crossed at various points by road bridges. The triangle of railway running between Earlsfield, Clapham Junction and Wandsworth Common railway stations represents a significant development opportunity. A school, a road, and some housing border the railway in the northern section of this triangle. If this railway was built over, it would be possible to construct around 300 four-bedroom houses of 190 sqm – roughly equivalent to 600 two-bedroom flats at 85sqm.

Towards Earlsfield, the railway is bordered by terraced housing, Wandsworth Prison, and Wandsworth Cemetery. To the east, the railway passes between the two sides of Wandsworth Common. It would be possible to construct around 500 four-bedroom houses of 190 sqm, equivalent to 1,000 85sqm two-bedroom flats here. If both north and south areas were built over, it would be possible to build 800 four-bedroom houses of 190 sqm, roughly equivalent to 1,600 85 sqm two-bedroom flats.

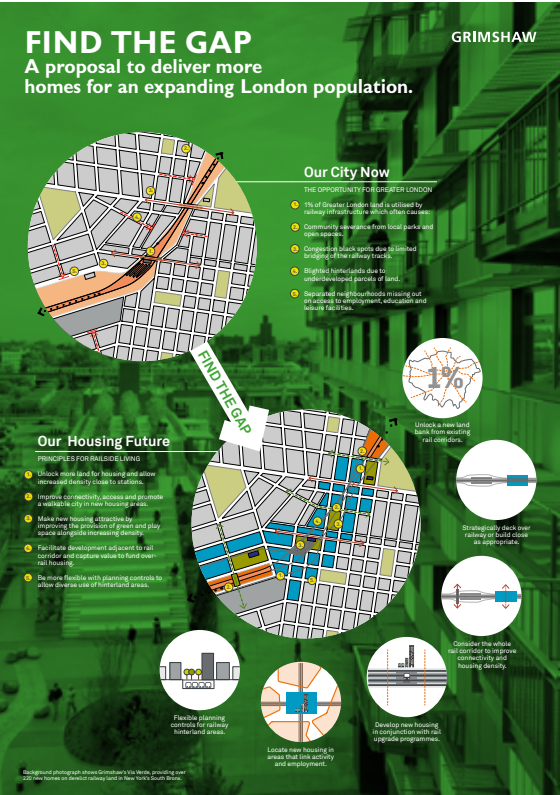
(ii) New Cross “Horseshoe”
New Cross is close to the city centre with excellent transport links and a university. It has several stretches of railway running through residential areas that could accommodate housing above them. Up to 600 four-bedroom houses at 190 sqm or 1,200 two-bedroom flats at 85 sqm could be built over the railway between New Cross Gate, New Cross, St. Johns, and Brockley.



Find The Gap

Grimshaw

A proposal to deliver more homes for an expanding London population, ‘Find The Gap’ is an idea for unlocking additional land in the Greater London area for housing. Intelligent asset recycling of existing lands which have been preserved solely for railway use offers an opportunity to increase land capacity while preserving existing green space in the city. Smart design and thoughtful identification of suitable locations near areas of activity and employment centres offers the opportunity to build new housing areas of higher densities close to transport. Cumulative benefits and values capture would be realised through broader re-development in these areas offering existing communities better connectivity, major rail infrastructure improvements, and uplift of adjacent lands.



Contributors: Jolyon Brewis, Andrew Cortese, Declan McCafferty, Annelie Kvick Thompson

The main features of Find The Gap are:

1. **Creation of a new land bank:** we need to unlock a fresh source of land in the capital, and use this to catalyse increased capacity from existing land.
2. **Green-keeping:** protect the green spaces that give London its character and amenity.
3. **Railway cuttings:** land currently in railway use is a relatively small percentage of London’s total, but offers an opportunity for a significant amount of new housing.
4. **Go high:** decking over railway infrastructure is expensive, but can be justified close to stations where density should be high.
5. **Go close:** along the rail corridor, housing can be developed close to railway lines, at higher density, with bridges across the tracks to connect communities.
6. **Go smart:** ingenious design of stations, railway lines and housing will be needed to create great homes and places close to transport routes.
7. **Infrastructure leads, housing follows:** line-wide housing strategies can be tied into major rail improvement schemes, garnering better political traction.
8. **Making it happen:** mayoral development corporations could facilitate cross-borough co-operation to ensure that the potential for new homes is fully realised. They should also bring neighbouring landowners together with transport and infrastructure delivery authorities to ensure that the value, regeneration benefits and costs are shared fairly, improving the financial viability of development.

This proposal offers realistic ideas for rail-side living that will increase the speed, scale and quality of the housing supply in Greater London. There are numerous benefits to unlocking these sites in order to create new communities that operate at high density and offer a quality standard of living.

TFL TransForming – Living above your station

John Burrell, Burrell Foley Fischer

The proposition is to build over desolate areas of asphalt alongside London’s stations to provide 10,000 new homes suited to meet the tenure and current needs of 25,000 people. Additionally, self-sustaining gardens, green terraces and surface water management will enhance the biodiversity from its current ‘level zero’.

At least 150 new affordable and mixed-tenure housing sites can be established above existing station car parks across London to create life and a new vitality as public, social, places. This has the potential to be part of the realisation of a long-established concept: of a London made up of polycentric town centres in suburbia taking pressure off central London and the heavily challenged transport network within the sprawl of mediocre suburbia.

New jobs, cultural and recreational facilities could be created, and it could play a significant part in an overall strategy to urbanise and raise densities in London.

Rationale

This land’s current sole use is for parking during the day, and is a vacant area overnight. With the right strategic intervention, imagination and commitment, new housing for thousands could be created. This will be immediately adjacent to fast transport links to take residents either inwards to the city centre or outwards to new peripheral, much higher density urban centres developed around key stations.

Frequently there are other available adjacent massive pockets of underused land to be found such as vast supermarket car-parks, depots and railway land.

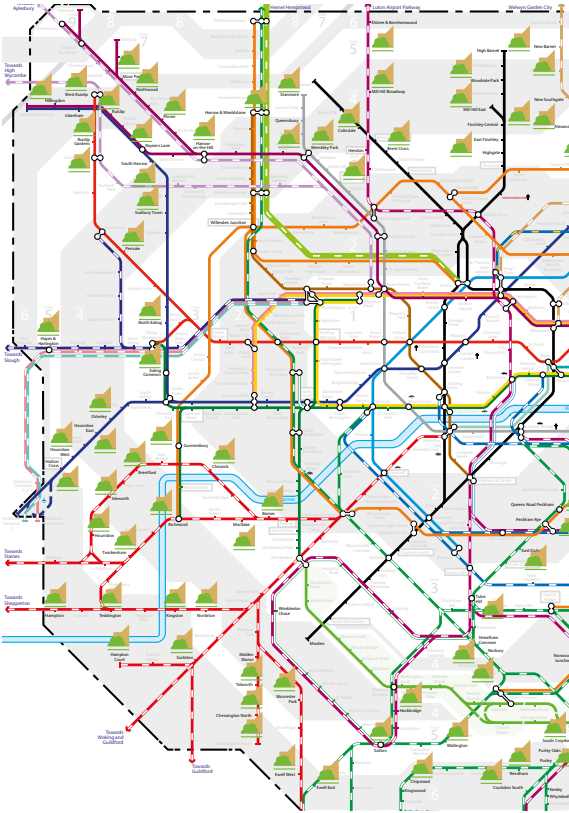
This adjacent under-developed land would be re-generated by entrepreneur owners if encouraged by incentives. This could be facilitated by a more imaginative, bold planning strategy which is set up with competence, sensitivity, and vision.

London-wide, in the suburban zones 3 to 7, people of all incomes and backgrounds are now looking for places to live as they are excluded from the central boroughs through lack of choice at a price they can afford.

Across 150 sites of varying sizes, some 25,000 people could be housed without the need for additional transport infrastructures.

There will be an enormous benefit to the physical environment, as the sites – without exception – are wasted asphalt eyesores with no spatial attributes whatever. Predominately (80 per cent) affordable housing should be built over these barren expanses of open parking to create weather-protected parking for people using the stations.

This ignored opportunity, like many others that exist and which it would complement, has been evident, obvious and waiting to be realised for decades. Let’s do it!



The Streets

NBBJ

We are now at a watershed moment – our existing infrastructure is ageing, populations are rising and technology allows us to communicate at the speed of light and from any locality. People’s movement patterns are changing, as attitudes towards more sustainable living patterns increases: people now wish to shop, work and play locally.

Technology is revolutionising the way we think, see and relate to each other and the environment. The future is difficult to predict but with the emergence of cycle superhighways and self-driving cars, our road system will eventually need to change to meet our needs.

In 2015 the International Transport Forum, an inter-governmental Forum representing the OECD, published a report entitled *Urban Mobility System Upgrade: How self-driving cars could change city traffic*. The report examines the changes that might result from the large-scale uptake of a shared and self-driving fleet of vehicles in a mid-sized European city. Among its main findings were that nearly the same mobility can be delivered with 10 per cent of the cars currently used, and that public transport would all but disappear.

Fast forward over the next 50 years, and we feel streets offer a fantastic new untapped resource for new homes - homes which can be developed without changing the existing urban morphology or functionality of the road network. Even in a strongly growing city such as London, we can provide all our housing needs forecast for 2050 within the existing street network while meeting our changing transportation needs.

The principle is to reserve a 4-8 metre section of road (around 30 per cent of the road surface) for housing whilst creating shared surface streets either side of the new development.

We chose as a study the area around the Building Centre, Store Street, and calculated it could provide 355 houses. If this was to be replicated across London’s 170,000 hectares we would see up to 3 million new homes.

Land

Traditionally private interests have frustrated large-scale development in London, but the road network is available immediately and, in most cases, is in public ownership. Legally, the framework for such development could occur with little additional legislation, as most streets are government-owned development.

Planning

The associated green spaces could increase a city’s surface water capture by over 20 per cent. This is important as future forecasts see drinking water becoming scarcer and flooding more commonplace. The additional amenity would support the additional housing. Redundant car parks could be used for infrastructure such as schools, healthcare and social services. Additionally, the streets would provide improved planting, air quality, food production and biodiversity. The consistent nature of street design would support a permitted development approach through development control.

Funding

The streets also contain much ageing infrastructure which is due for replacement. The sale of housing would offset the cost of infrastructure and future-proof access for ongoing replacement.



Other ideas...



‘Living Bridges’ by Weston Williamson + Partners proposes three bridges along the River Thames to address London’s shortage of housing and shortage of bridges east of Tower Bridge, including a 1000km high tower.



‘What Has the River Ever Done for Us?’ by Cousins & Cousins Architects examines the opportunities presented by riverside living, using Venice as a structural and visual reference.



‘The Vertical Marina’ by Tom Wildbore of Jestic + Whiles Architects is a high-rise model for narrowboat living, allowing London’s vast network of canals to be intensified.



‘Over Station Development’ by Weston Williamson + Partners puts forward a proposal for prefabricated units stacked above existing train stations.



Introduction

Proposals for freeing up land through new planning and finance solutions were ingenious and thought-provoking. They range from relaxing planning restrictions and creating a new development zone around the rim of the M25, through to planning apps and an affordable housing levy.

Three impressive winners emerged from the judging process: David Kroll, GL Hearn and the ATAL Team.

Kroll suggests – as do several others, notably Jonathan Hawshaw’s ‘Fluid Housing’ scheme with its modular building approach – that it is crucial to separate home ownership from land ownership. Says Kroll: “Suitable public land could be released to build housing, but it would not be sold off to private developers. Instead, it would remain in public ownership. What is privately contracted out is only the planning and construction of the buildings. The leasehold to the houses or flats can then be sold for the amount that it actually costs to develop and build them, which is affordable to most Londoners. This way, housing as a ‘product’ could be built and sold at an affordable price, in the same way as other consumables, by separating it from the land cost.”

One of the other co-winners, GL Hearn, proposes an ambitious ‘MegaPlan’ for the ‘MegaCity’ that London will become by 2050, which looks to maximise potential land supply across ‘Edge Land’, the inner belt running from the inner London Green Belt to the M25, along five growth and transport corridors. Edge Land is the relatively untapped source of land on the circumference of the M25, suggests GL Hearn, and represents a clear physical and strong long-term boundary enclosing highly accessible land. Although over three quarters of Edge Land is Green Belt, in order to meet the shortfall in housing less than four per cent of Edge Land would need to be released from the Green Belt, it believes.

The ATAL Team, our other co-winner, identifies current transport strategy as holding back housing development in parts of London with poor public transport provision. ATAL (Active Transport Accessibility Level) says: “The London Plan limits housing density across London based on the Public Transport Accessibility Level (PTAL). This makes sense from a public transport-led sustainability perspective, but it leaves large swathes of London where higher densities cannot be realised, thereby supressing the provision of new homes.” The answer is to shift the focus from ‘transport accessibility’ to ‘active transport’. This means taking into account the quality of walking and cycling infrastructure along routes to transport nodes. The effect would be to double the density building rate.

Baca Architects called for an ‘Innovation Licence’ which would be an alternative to planning, whereby licences would be granted for innovative buildings and designs on challenging sites (such as floodplains or deprived areas) and, crucially, would not be required to comply with current planning policy.

Winner
Investing in London’s Future by Learning from its Past
David Kroll

The basic principles of the following idea draw on a well-known system of housing development from London’s past – the leasehold system. In the 19th century, finance for housing construction was not readily available from banks, particularly not for small housebuilders who then constructed most of the housing. Funds were instead often raised from private individuals with the help of solicitors. A typical speculative builder-developer would not have been able to pay for high land costs in addition to construction costs. They were, however, able to raise sufficient funds for the construction of the houses – of the actual physical product – which they could then sell on. They did not need any initial funds for buying the land because it was only leased for a certain period (99 years for example) for an annual ground rent. The land still belonged to the landowner or ‘freeholder’.

Consider the Minet estate in south London. It was built as a leasehold development, with different builders/leaseholders involved in its development from the mid-19th to early-20th century. A number of different builders undertook the construction of the houses, which was possible largely because, in terms of cost, the entry threshold to house building was much lower. Many of those building houses on the estate sold them on. Others were owner-occupiers who built for themselves. No initial fee was paid by any of them for the land. Instead, the cost of the land was paid by the leaseholders over a long period of time as ‘ground rent’.

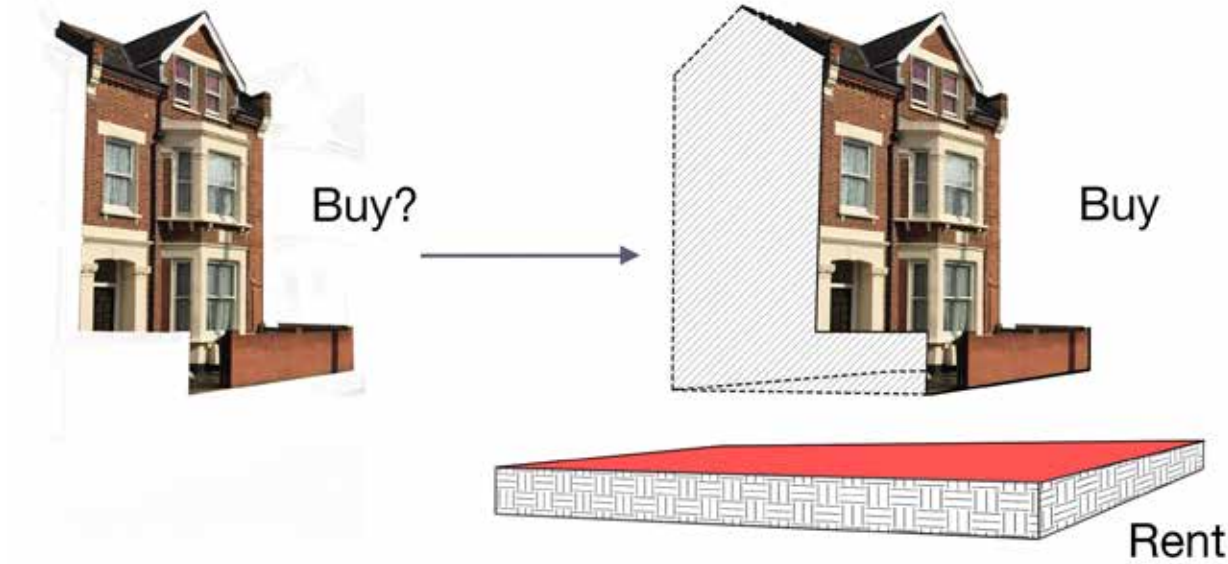
How could this help with London’s current housing problem? A similar system could be used today in order to separate the cost of housing as a physical product from the cost of the land that it is built on. Suitable public land could be released to build housing, but it would not be sold off to private developers. Instead, it would remain in public ownership. What is being privately contracted out is only the planning and construction of the buildings. The leasehold to the houses or flats can then be sold for the amount that it actually costs to develop and build them, which is affordable to most Londoners.

Those who purchase the dwellings would then pay an additional, stable ‘ground rent’ for the land. The level of such a rent can be set strategically and with social sustainability in mind. The ground rent could be smaller, for example, for young families who are first time buyers. This would help to keep London as a good place for hard-working families on average incomes, and for their children to grow up in and to put down roots. Such a strategy would be an investment in London’s future. Young families should therefore be a key group that would benefit from and be supported by this proposed scheme. They would be able to buy their own homes as leaseholds at a very affordable price – even if they still pay some rent for the ground – set at a level that is realistically payable from their salary.

In summary, these are the key components of my idea:

- Use public land for new kinds of ‘leasehold’ developments, where ownership of the land itself remains with the council.
- Those who live in the houses or flats can purchase these as leaseholds outright for price it cost to build them, and they pay an annual ‘ground rent’ for the land.
- This ‘ground rent’ can be set strategically to achieve affordable and socially sustainable housing provision for those in need.

This proposed approach means that housing as a ‘product’ could be built and sold at an affordable price, in the same way as other consumables, by separating it from the land cost. The initial land cost for development – usually the biggest obstacle – would be kept low by transferring the cost to affordable annual ground rents. Such a system would mean that land as a limited resource could be used in ways that benefit the common good, rather than only serving as an easy passive income for some. Ownership of leaseholds on council-owned land could even return to council ownership after the lease period and then be re-sold (unless the leases are being extended).



Lessons from 19th-Century Housing Development

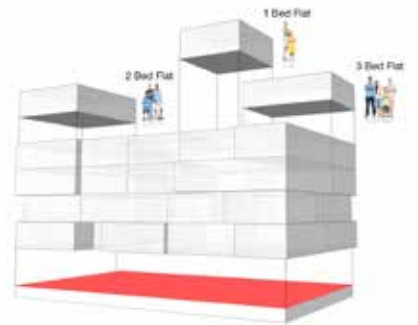
The map shows the various builders/leaseholders involved in the development of the Minet estate in Lambeth in the 19th century. The entry threshold to house building in terms of cost was much lower because no initial payment was required for the land. Could lessons from Victorian house building inspire a way to separate the cost of housing as a physical product from land costs in order to make it more affordable to build and buy houses, in particular for young, first-time buyer families?

Builders/Leasees:

- Other builders (2 lots and less)
- Lee
- Skam
- Mayhew
- Johnson
- Panons
- July
- No data
- Cooper
- Arundell
- Cooperative builders
- Fulcher
- Smith
- McDowell



Example of How Idea Could be Realised



Example Project (for illustration only)



Example Site (for illustration only)

Fluid Housing

Jonathan Hawkshaw

Land for construction seems to be the greatest constraint to future housing development in the capital. Within this constraint lie two objectives which need to be achieved in order to form a successful solution: increasing the density of existing residential areas, and successfully accessing land for new developments. The concept of fluid housing was therefore created with a focus on solving the problems inherent to these objectives. The concept looks to separate the notion that owning a home means owning a piece of land. This is because permanently attaching house to land is a permanent solution to what is essentially a transient problem. We need to create enough housing for current demand – in a decade this demand may very well have changed.

Consider how the housing requirements change for a typical person over time. The ‘flow’ is as follows:

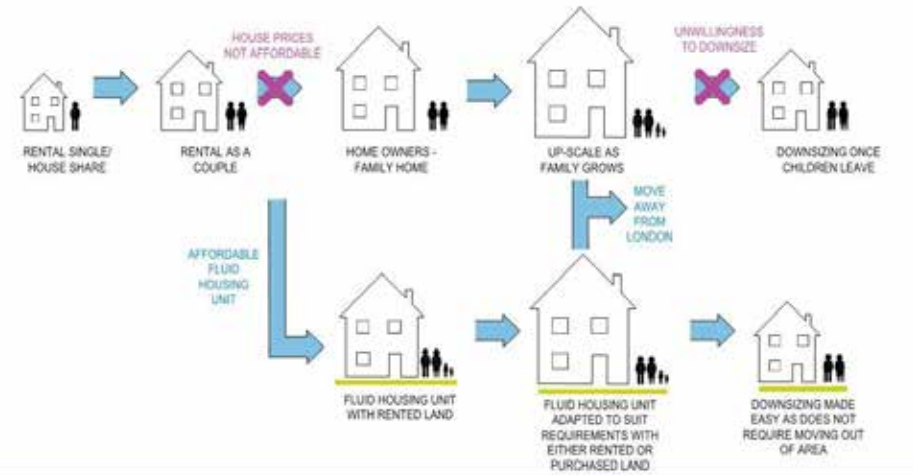
- Move away from parents into rented accommodation
- Save enough money to buy a small house/apartment
- Look to move to a larger dwelling to form a family (this stage can have a number of iterations as the individual up-sizes for capacity)
- Downsizing, once children move out, to a smaller residence

Like the flow of water in a river, this system works under normal conditions. However, when there is an inundation of people flow, or an obstruction is placed within the system preventing flow (let’s say the price gap between wages and house prices due to demand), a backlog starts to build up, overcoming capacity

and ‘flooding’ the area. In London, this flooding has been absorbed by the rental market, resulting in an extraordinary number of people stuck in the aptly named ‘rent trap’, not progressing up the property ladder. The fluid housing concept would alleviate this ‘flooding’ by allowing people to buy an actual house, which can then be situated either in developments – transient in nature – which evolve with the flow of demand and have infrastructure integrated around this, or, within existing residential areas to increase housing density. The developments would be areas of land which can provide plots for housing in times of boom and can revert to a different use (possibly public green space) in times of bust. They plots would be rented or loaned out for limited periods of time, encouraging people to move in and out of London as their needs change. The housing unit itself could start off small and then adapt and grow to the persons needs over time, thereby doing away with the need to climb the property ladder entirely.

Design and product

Fluid housing uses a modular system which breaks a home into parametric components, allowing adaption to take place to suit design conditions. These can be mass produced under factory conditions, resulting in a suite of components which are cheap, of high quality and are quick to fabricate. Encouraging contractors to create their own components based on this modular philosophy would bring a variety to the design – reducing pressure on the procurement of specific materials which would inevitably occur if there was an industry-wide standardisation of this system.



Greater London Estate

Jonathan Manns, Colliers International

A new Great Estate

The Great Estates grew following the introduction of the leasehold system in the 17th century. This meant that leases, typically over 99 years, could be issued to enable the lessee to construct property. The owner took a regular income from the ground rent with minimal outlay, whilst the lessee took income from development constructed. Once leases expired, the Estates were able to consider how best to manage the property thereafter. Building on this success, the creation of a new Greater London Estate could similarly facilitate development today by using public sector assets to establish a built legacy for future generations.

The potential benefits

There is little risk or capital outlay for the landowner, who also receives a capital receipt (from the lease), income (from the ground rent) and capital growth (from the reversion). Importantly, when considering long-term objectives, the landowner also has flexibility to control the type of development that comes forward. The leaseholder is able to develop the land and to profit from the disposal of that scheme. If acquired with the benefit of a planning brief, to guide future development, they would also have increased certainty as to what was achievable, thus reducing risk and thereby enhancing the ‘planning gain’ that could be returned to the community.

Estate management: how would it work?

In February 2015, the Chancellor set out plans to help London deliver 400,000 new homes by 2025. This is to be supported by creation of a London Land Commission (LLC). Based at the Greater London Authority (GLA), it will be tasked with identifying enough surplus public sector land to ensure all new homes can be built on brownfield land. Chaired by the Mayor of London and Housing Minister, the Board will include representatives of the GLA, Department for Communities and Local Government (DCLG), Local Authorities (LAs), Department of Health (DoH) and other independent representatives. As part of the LLC, the GLA will undertake due diligence of a number of properties, working with other public bodies to ensure the coordination and disposal of sites. The proposed approach would involve those sites identified for disposal being passed to a new, independent – but publicly accountable – Greater London Estate. The Estate would manage the disposal process.

In the majority of instances, it is assumed that land assets would be disposed on a leasehold and subject to planning (STP) basis. These would go on to form the bulk of the future Greater London Estate’s portfolio.

In situations where the Estate did not feel leasehold disposal was appropriate, sites could be sold on an unconditional or joint-venture basis with profit share agreements overseen by an independent client monitor to validate the costs and profit.

Estate letting: how would it work?

Those sites that the Greater London Estate retained within its portfolio would be disposed of in a similar, if modernised, manner to that applied by the historic Great Estates. Greater London Estate would work with the local planning authority (LPA) to prepare a planning brief for the site. These documents would be prepared jointly, to clarify aspirations for the property and provide a basis against which a future planning application could be bought forward. This might, for example, provide details on acceptable uses, scale and massing.

Once the planning brief has been agreed, the site would be made available on the open market to potential purchasers. The brief would provide a degree of certainty as to what was achievable; ensuring that bids were received on a comparable basis, but also that they could be more competitive.

Leases for each site would be issued for a typical term of 150 years, or longer subject to market requirements, fitting closely with the current leasehold system.

Conclusions

Whilst the Greater London Estate would take time to establish, the disposal model could be employed immediately on any public sector land without legislative change. It could be applied easily and with confidence that it would be attractive to the market. The capital growth would deliver best value for the public purse in the longer-term, while the income achieved from ground rents and/or commercial investment elements would provide an income that could contribute towards the establishment and running of a self-sustaining Greater London Estate in the future.

Growing London – a plan for smarter, more competitive, resilient city

Gail Mayhew

10-point plan to reform the housing market to deliver smart growth in London:

In order to plan positively for smart growth and rebalance the London property market so the common good is served along with London's long-term 'place competitiveness' and resilience, I propose the following 10-point plan to reform the housing market and deliver smart growth in London:

1. Decision-making on housing markets should be guided with a Property Market Oversight & Innovation Commission to consider the broad public interest and support the delivery of 'smart growth'

To act as a source of impartial, expert, innovative and independent advice on the property market, charged with the aims of: achieving stability within the market, equitable access to housing; 'place competitiveness', and to underpin a sustainable infrastructure and urban footprint.

2. Identify a new property investment class – strategic land & infrastructure

Separate the funding and management of the underlying land and infrastructure and 'place-making' (a long-term activity, requiring patient capital and engaging with all relevant use classes) from the activity of developing property (a short-term activity, developers expert in single-use class, understood risk/return). This enables the delivery of mixed-use; opens the development market to smaller developers through the sale of parcelled plots; and leads to the possibility of self-build/commission at scale.

3. Create Strategic Land & Infrastructure Fund for London

A socially responsible long-term investment fund should be set up; conditioned to invest for sustainability and design quality, to leverage institutional, sovereign and global-high-net-worth investment into regeneration and neighbourhood development; and to produce long-term returns that enjoy value uplift with the creation of new prime residential areas.

4. Fiscal incentive / flows of capital

A fiscal incentive should be put in place to encourage investors to commit patient capital to the new strategic land and infrastructure asset class. This should incentivise investment flows into creating new prime residential neighbourhoods, in preference to acquiring portfolios of standing property that are displacing owner occupiers – sometimes producing management issues and the 'hollowing out' of neighbourhoods.

5. Purchase controls

London may have to face up to the need to put in place purchase controls on at least some element of the housing stock, to reserved this for people who live and work here. This could help to ensure an affordable supply of housing for owner/occupiers and London workers, while continuing to encourage investment flows into the UK property market through investment in the development of the underlying product.

6. Land supply

Publicly owned sites with potential to unlock regeneration and smart growth in London should be held for co-investment rather than sold to realise short-term asset value. These sites should be vested on an equity basis, to create long-term income streams and value uplift on a value for money basis – on the model of the traditional London urban estates. Under-utilised urban land that is in private ownership in car-dependent single uses, such as retail warehousing, mega format supermarkets – future 'greyfield sites' – should be considered for long-term redevelopment as mixed-use neighbourhoods.

7. Land pooling and assembly

Remove tax barriers and put a legal mechanism in place to encourage land-pooling; land-to-equity investment; and, as last resort, measures to enable compulsory land pooling to supplement local authority powers of compulsory purchase.

8. Affordability

Recalibrate the narrative on owner-occupation to positively recognise the role and acceptability of all forms of tenure as part of a balanced housing provision.

9. Exempt London from the extension of right to buy

Exempt London from the extension of right to buy, to maintain tenure diversity across neighbourhoods and to underpin the future regeneration and redevelopment of publicly and RSL owned estates to achieve value-for money and other socially responsible objectives.

10. Land use planning and decision-making should be informed by the deployment of intelligent data-analysis and scenario planning to consider impacts

Planning at all scales should deploy the use of intelligent GIS and property, movement modelling and property market data analyses to underpin decision-making to ensure accuracy and effectively analyse impacts.

An infinite solution

RICL Studio

The problem

Inner London is a dense, vibrant, global city; the city's beating heart. Outer London, in contrast, is less beating heart and more middle-age spread, with a population density one-third that of inner London – whilst accounting for 80 per cent of the land area of the capital. The car is still the dominant transport mode. It is single use, almost exclusively residential. Historically, the two cities had a symbiotic relationship; workers lived in outer London and worked in inner London. But 21st century pressures are turning this relationship parasitic. Outer London is ripe for development.

Planning and land

Outer London must be transformed. Starting at major transport interchanges, the inter-war developments will, in a way controlled by the local communities, be developed into dense, mixed-use communities. By removing some of the rows of 1930s streets and cul-de-sacs, provision for public space will be greatly increased, while also lifting the vibrancy and energy of the neighbourhood. A city-wide height framework, used informally in Paris, would mean it can develop coherently. As density rises, improved public transport between the interchanges will both be demanded and required. Orbital transit routes will grow – sympathetic to cyclists and providing a modern service – with density spreading along these routes.

Funding and finance

The transformation of outer London into 21st century urban space will largely be self-funding. London is currently able to attract large amounts of investment capital for real estate development. By combining the planning framework with other incentives – and by calling a hiatus to the chaos of development that is currently unfolding within inner London – this capital will be directed outwards to drive this transformation.

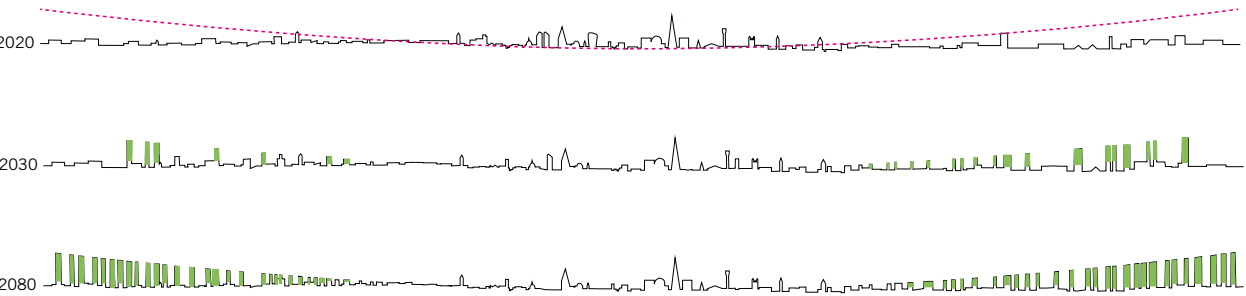
Furthermore, our proposal will also significantly reduce the cost of ownership. The release of significant new areas of the capital for development will reduce the price of land, thus reducing the primary barrier to enter the market for developers and community groups who do not already own large land banks.

Construction

The construction industry is often blamed for providing low-quality housing, but with the current system demanding buildings as financial products, innovation is stifled by the requirement to deliver the lowest-risk option. By lowering boundaries to enter to the market, new clients will demand construction to innovate – faster, greener, more efficient, higher wellness ratings – to compete with a competitive market.

Design

Our proposal gives an opportunity to create new local identities in outer London: planners and architects will work with local communities to create new vernaculars, replacing identikit suburbs with neighbourhoods which each have a unique sense of place.



City in a Building

Teatum + Teatum

From a horizontal to a vertical city

City in a Building takes the horizontally distributed functions of a city and reorganises them in an intensified vertical structure – maximising the opportunity for spatial interaction and shared social experiences.

The opportunity of industrial land

City in a Building reconfigures the single-volume low-density employment spaces of London’s industrial zones. Characterised by large plot sizes, single ownership and a relative separation from established residential areas, industrial zones offer a unique opportunity to provide new land for mixed-use development. They provide a scale of space that can facilitate development at densities double the London Plan Standards – up to 1,000 units/ha. Industrial land also provides the lowest cost land available in the city, with an average per hectare price of £482,000.

City in a Building retains the employment space in a dense flexible base building and organises a cluster of high-density residential towers that interact with the base building. By choreographing a series of overlapping stratas, living space is combined with employment space and shared social spaces allowing interaction between

residents, workers and the public. City in a Building seeks to provide a new model for young workers locked out by high prices, low wages and increased requirements for deposits. It is organised to be 100 per cent privately rented, allowing users to experience a new residential typology with an expanded range of facilities.

What needs to be done

To continue to meet the current requirements of 40,000 housing units per year, a radical shift will be required from each component of the development process.

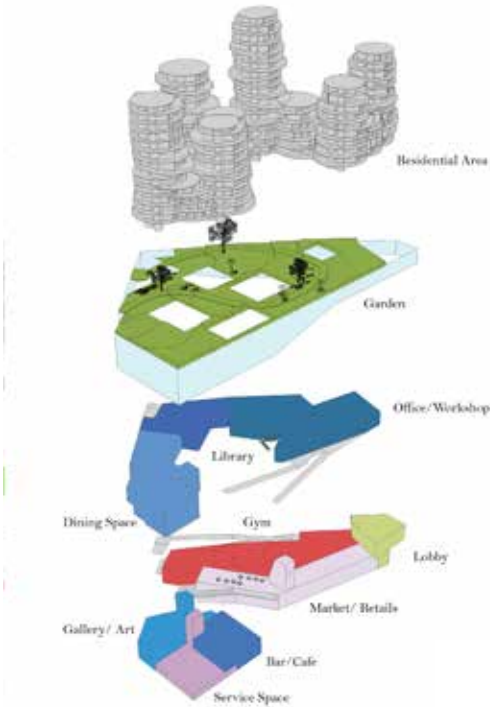
- Release land that has a lower pre-development cost to reduce pressure on residential prices
- Allow an intensification of planning on sites to create development over and with existing uses
- Significantly densify the city in excess of London Plan Standards, and closer to 1,000 units per hectare in central locations

Park Royal – a site for a new high-density mixed-use housing

Park Royal is Europe’s largest industrial estate and the main industrial area in west London. Providing 750 hectares, the Park Royal Opportunity Area accommodates some 2,000 businesses employing around 40,000 people.

Industrial land in Park Royal is separated from established residential land and the restrictions of developing near conservation areas. The existing conditions associated with industrial land provide an opportunity for a new model of development that can combine large-scale employment space with high-density residential space, interconnected with a range of social spaces.

The proposal takes an existing Park Royal location of 0.6 hectares and proposes seven residential towers that provide 500 units of accommodation. The towers are characterised by a stacked circular floorplate. Each plate contains six to eight prefabricated living units that provide a sleeping and living space for a single person or couple. Bedroom units can be joined to create a small flat, or an entire floor can be structured to accommodate one group of 6-12 people.



Green Urban Centres

Rock Townsend

We propose meeting the demand for new housing by establishing Green Urban Centres as part of a densified, multi-nuclei Greater London to be delivered by a newly commissioned Social Enterprise Development Vehicle (SEDV) that will retain a long-term vision and commitment to supply, quality and affordability.

The proposed centres will be aimed at establishing neighbourhoods for whole-life. They will accommodate a mix of lifestyles and life-stages, minimising single-demographic regions of London by creating the mix of use, sense of place and adaptability that will encourage people to stay.

How the SEDV works

Delivering these neighbourhoods requires a business plan that looks forward several generations and is thus fundamentally unsuited to traditional development models that are focused on short-term investment returns.

We propose increasing public sector involvement by establishing a SEDV – perhaps led by a third sector organisation – which will limit profiteering in favour of the sustainable and affordable long-term growth. The SEDV will use seed capital to secure land and meet upfront infrastructure requirements in exchange for an equity stake. Additional seed capital might be provided by long-term investors such as pension funds seeking a steady, safe return.

The social enterprise will retain overall control of the masterplan, its design, mix of uses and viability, with some elements being delivered via partnerships with, or sale to, private enterprise, and some elements being delivered directly by the SEDV as developer. The governance and control over third party delivery could be implemented via long leasehold rather than freehold disposals with appropriate covenants put in place.

This approach will allow the uplift in land value arising from change of use and a proportion of normal development profits to be retained by the SEDV for re-investment, targeted at affordable housing. In the

longer term, yields on the retained portfolio combined with ground rent investments would be used to sustain dividend pay-outs to equity holders and repay long-term borrowings.

We would envisage traditional planning rules being relaxed on the basis of a clear business plan and design code, permitting delivery to be light-footed in response to market needs. The long-term vision and investment by the SEDV will provide increased certainty to SMEs, enabling them to invest and compete and alleviate pressure on the resource of top contractors and primary supply chain members.

The spaces inbetween

With ‘developer-safe’ zones around existing transport nodes or significant destinations (such as the London Olympics site) already experiencing intensification, we propose looking at the outer zones of Greater London and to the ‘spaces in-between’.

The indicative area we have identified has the capacity to deliver over 100,000 homes. Duplicating this on 12 similar sites on London’s periphery enables the delivery of over 1 million homes with associated infrastructure and amenity.



Winner

Mega Planning: Beyond 2050 – MegaPlan for a MegaCity

GL Hearn (part of Capita Ltd)

GL Hearn proposes an ambitious MegaPlan to match the ambition of our future MegaCity. The MegaPlan would act as an overarching document to provide a long-term strategy to 2050 and beyond to promote a sustainable pattern of growth. Assuming densification alone will not solve London’s long-term requirement for new homes, the MegaPlan would look beyond this and seek to maximise potential land supply across ‘Edge Land’ – the inner belt running from the inner London Green Belt to the M25.

The challenge and strategy

By 2050, London’s population is forecast to rise to approximately 11.3 million. This means London will become western Europe’s first MegaCity, and mega planning is required to implement a radical step change in housing delivery.

The strategy for London is centred on developing the built up area and along five growth and transport corridors. To fully address the housing crisis and deliver step change, the MegaPlan should consider a future scenario when densification becomes saturated.

A possible solution lies in a third and relatively untapped source of land, Edge Land. This inner belt runs to the M25, which represents a clear physical and strong long-term boundary enclosing highly accessible land.

The degree to which the South East should seek to help meet the needs of a growing London, under the duty to co-operate, is debated. Firstly, London must seek to meet its own needs. Only as a fall-back position should it rely on the wider South East, and under this circumstance it is not reasonable to extend beyond the M25.

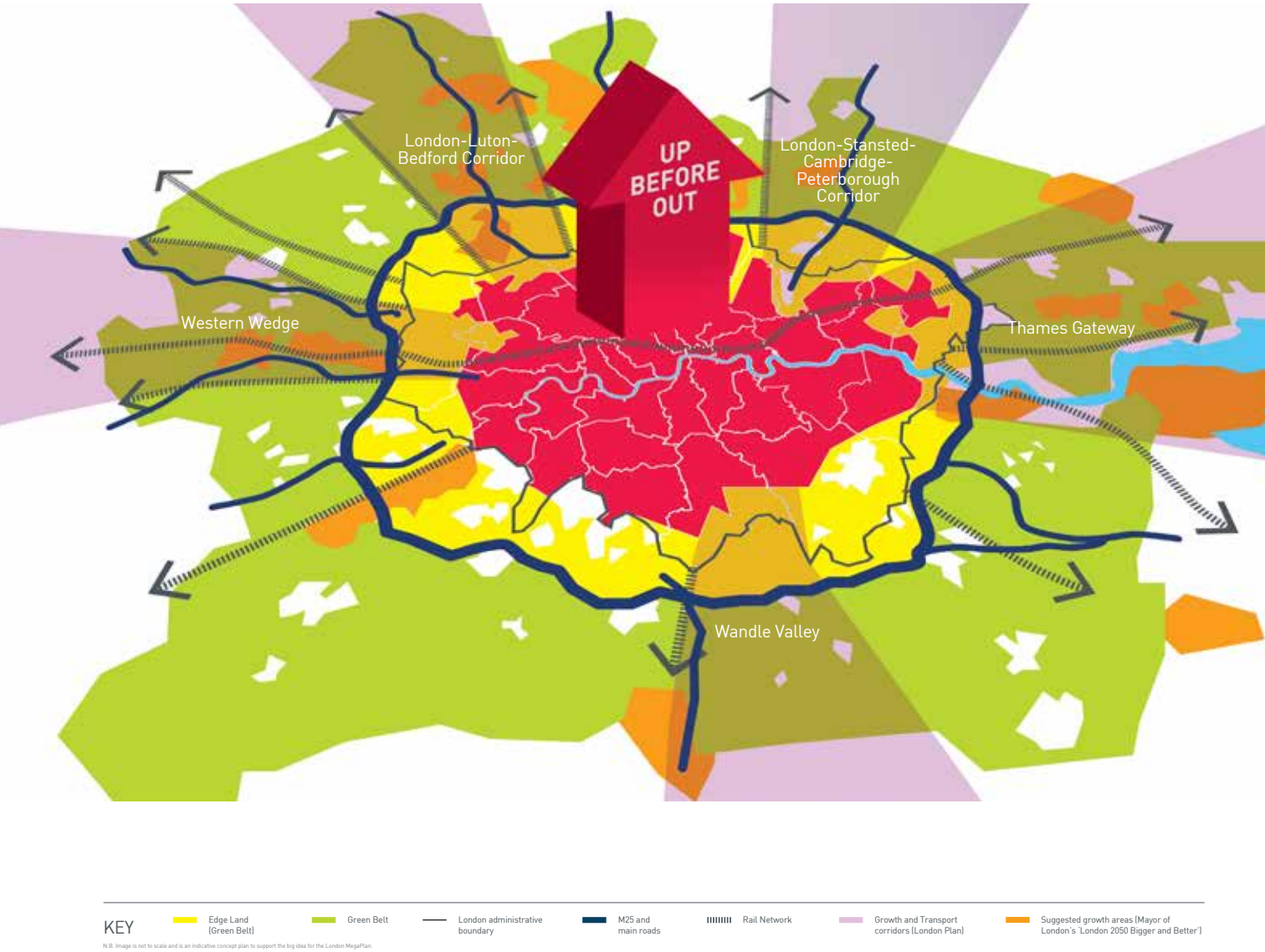
Green Belt land within the M25 (including London) totals 86,000 hectares, and non-Green Belt (covered by existing settlements) equates to approx. 20,000 hectares. Over three quarters of Edge Land is therefore designated as Green Belt, and almost one third of this land is covered by primary environmental, landscape or heritage designations. This means a balanced and sensitive approach must inform the future strategy for this land.

In order to meet the shortfall in housing, less than 4 per cent of Edge Land would need to be released from the Green Belt.

Implementation and benefits

For London to grow successfully as a MegaCity whilst remaining a global economic powerhouse and retaining its world renowned character and heritage, aspirations for growth and protection must be held in equally high regard. This is to be reflected in new land allocations to create ‘Mega Parkland’ and ‘Activity Corridors’ which radiate outwards as (i) wedges through the Green Belt to the M25 and beyond, and (ii) narrower spokes which intertwine through London Boroughs and around existing settlements and transport hubs up to the M25 and beyond.

In order to identify the location of these areas, a strategic Green Belt review must be undertaken as a priority action. This review must assess Green Belt land against the five National Planning Policy Framework purposes: openness and ability to provide long-term boundaries to understand the role and function of the land and level of contribution towards national policy. To deliver effective protection and growth, a second stage assessment should consider non-Green Belt factors such as housing needs, affordability and accessibility to test sustainability.



Winner

ATAL Opportunity Areas

Brendan Cuddihy, Arup; Rupesh Varsani, Craigewan

The concept
ATAL (Active Transport Accessibility Level) is our concept for unlocking housing density in parts of London with poor public transport provision.

The London Plan limits housing density across London based on the Public Transport Accessibility Level (PTAL). This makes sense from a public transport-led sustainability perspective, but it leaves large swathes of London where higher densities cannot be realised, thereby supressing the provision of new homes.

How do we improve accessibility from these parts of London to enable a higher yet moderate housing density to unlock new supply? By shifting the focus from ‘transport accessibility’ to ‘active transport’; cue ATAL.

ATAL will consider the quality of walking and cycling infrastructure along routes to transport nodes; PTAL takes no account of this. Though PTAL accounts for walking distances, ATAL would go further – allowing for longer walking and cycle rides from high-density development to destinations such as public transport nodes – subject to provision of high quality Active Transport infrastructure.

Stop thinking PTAL – start thinking ATAL
Permissible ATAL densities will follow the PTAL range, with potential for up to 225 units per hectare (under ATAL) in areas that are otherwise currently limited to 100 units per hectare (under PTAL).

All else being equal, if areas with PTAL 0-3 were to transform to ATAL 4-6, the density that could be built to would effectively double.

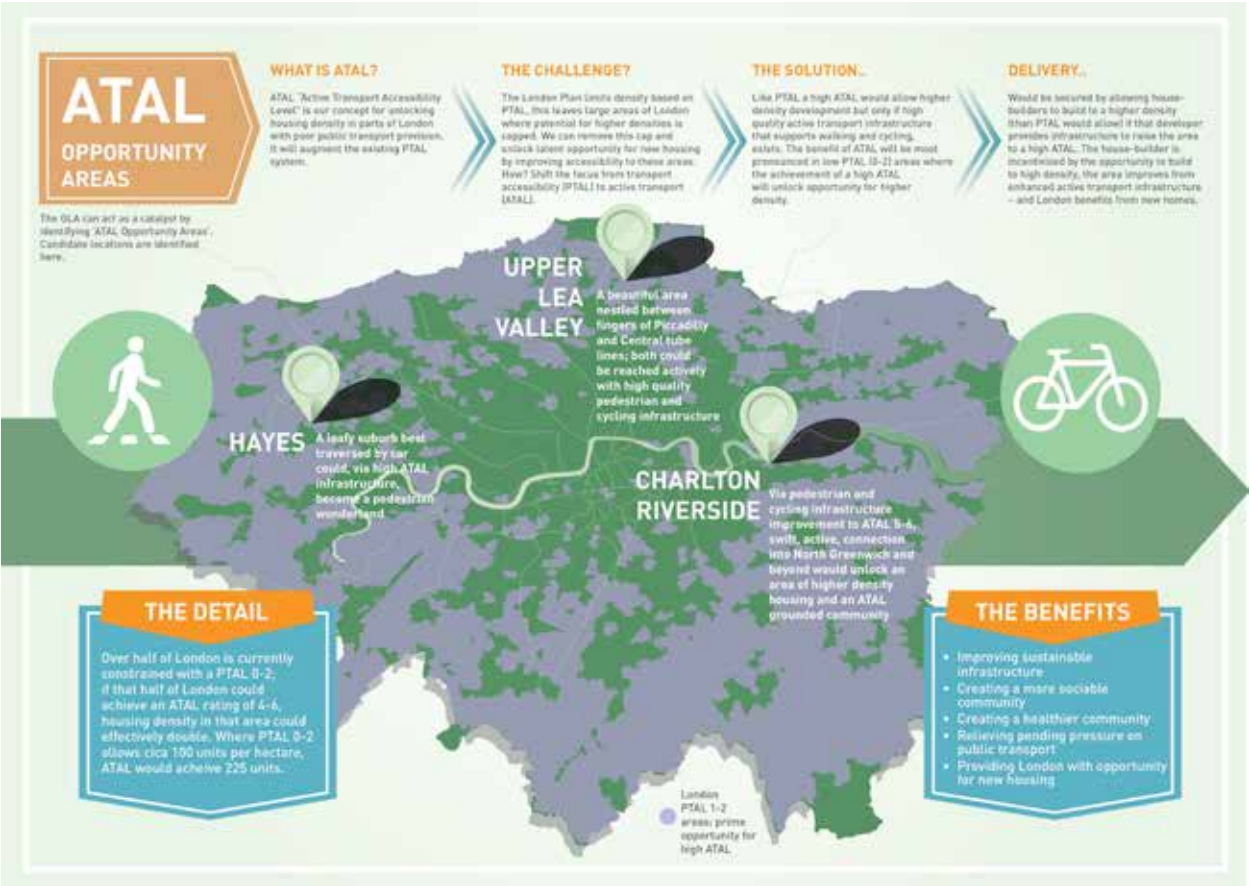
Further, over half of Greater London is currently density-constrained with a PTAL of 0-2; or put another way, if that half of London could achieve an ATAL of 4-6, housing density in that area could effectively double, helping solve London’s housing deficit.

How do you rate ATAL?
The ATAL system, like PTAL, will rate locations from very poor to excellent provision – excellent being achievable where the highest quality walking and cycling routes link developments to destinations.

High quality provision at all stages of the journey will be key to high ATAL scores. For people on foot, this will mean safe, comfortable routes from homes to destinations, including road crossings where necessary. TfL’s Pedestrian Comfort Assessment may be a useful tool to gauge provision. Ensuring that routes are suitable for the old, the young and the disabled will also be an important consideration.

ATAL Opportunity Areas
House-builders see value in achieving higher density, as it generally correlates with higher returns. The benefit of ATAL will, therefore, be most pronounced in areas that currently suffer from low PTAL scores – the achievement of a high ATAL in these areas will unlock higher density than PTAL currently allows, and at considerably less expense.

Be the catalyst
The GLA can act as a catalyst by identifying ATAL Opportunity Areas for housebuilders. Such areas would be able to achieve a high ATAL level through the provision of high quality Active Transport infrastructure provided by the housebuilder; the quid pro quo being the housebuilder can construct higher density housing. By identifying potential ATAL Opportunity Areas, uncertainty is removed, encouraging the housebuilders to act.



Evolution of an ATAL Opportunity Area - Pioneer ATAL Housebuilder



Contributors: Benjamin Derbyshire and Rory Bergin, supported by members of the Urbanism Unit, Architecture, Planning, Landscape Design, Sustainability and Communications teams, HTA Design LLP; Shelagh Grant, The Housing Forum; Kim Vernau, BLP Insurance

Home Performance Labelling

HTA Design LLP, in conjunction with BLP Insurance and The Housing Forum

The housing market would be greatly improved by the availability of clear and accredited information about the quality and performance of new homes. Consumers have instant access to information on every other aspect of life on/via their smart phones and computers, so why not give them the same level of information about their homes? The questions are: how best to introduce information to the marketplace? What information would be most useful? How are we to overcome the various obstacles involved?

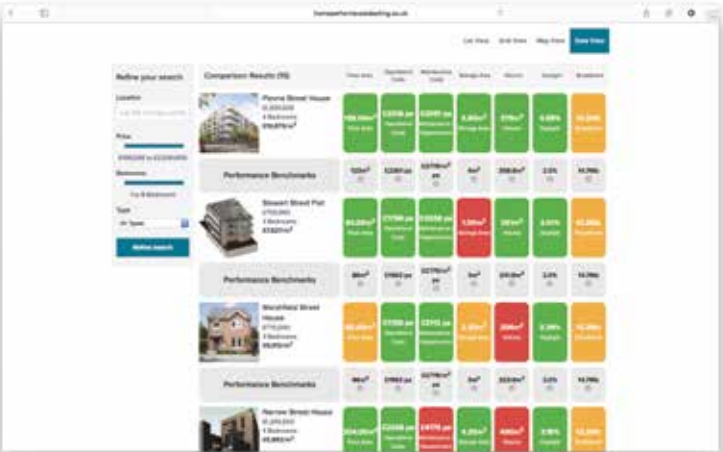
The Housing Forum has brought together a wide range of contributors from across the industry seeking answers to these questions. This work has culminated in the Home Performance Labelling Pilot, which has engaged designers, homebuilders and suppliers in an exercise to explore the idea. By creating a prototype housing comparison website (homeperformancelabelling.co.uk), we have anticipated a time when customers will make choices about their next home fully informed about the standards it will achieve and the running costs they will incur, in addition to the price and the location of the most expensive purchase most of them will ever make.

The pilot illustrates how a website based on a Home Performance Label could be used by purchasers or renters to search for a home that meets their needs using metrics such as price range, bedroom size, location, running costs, available space, lifecycle costs, daylight and broadband speed. The best performing homes are highlighted using a red-amber-green colour scheme, and the selected homes can be sorted from lowest-to-highest or highest-to-lowest in each area of performance.

The outcome of the pilot exercise justifies the idea that more information should be provided to home seekers than is currently the case. In the pilot, the range of running costs – even amongst new homes built to contemporary standards – is almost £3,000 per annum. The amount of space available in a three-bed home varies by 47 sqm. Many homes in the pilot fail to provide adequate storage, and levels of daylighting provided vary widely. Crucially, none of these differences are recognised in the pricing of new homes. Purchasers of two three-bedroom houses in the same post code will most likely be offered the same mortgage, irrespective of any differences between the two homes, and of the purchasers ability to pay more for a bigger or better performing home. Price does not reflect performance.

It is important that renters in the affordable and private markets understand the full costs of their bills so that they can manage their budgets effectively. Providing an assessment of their likely bills in a new home will help them to make the appropriate choice for their pocket, and also enable them to get the best value for money. The system will also benefit landlords, as they can use a label to differentiate their rental offer by including the amenities available in their homes as well as the running costs.

In the medium term, we anticipate extending this approach to the existing home market.



Contributors: Robert Barker, Richard Coutts

The Innovation Licence

Baca Architects

The Innovation Licence would be an alternative to planning, whereby licences would be granted for innovative buildings and designs to be carried out on challenging sites, such as floodplains or deprived areas. To obtain a licence, the building design would need to meet a number of overarching environmental and design aspirations, but, crucially, would not be required to comply with current planning policy. This would encourage innovative thinking.

Each London borough could be entitled to grant up to five licences per year (or it could fall under the remit of the GLA). These licences would be an incentive for public and private companies to innovate and compete to find ways to deliver more housing, more quickly, and with higher densities. The pilots would help to stimulate housing growth in London and establish a technological creativity hub in the UK, which could provide the opportunity for UK businesses to demonstrate innovation that could be exported to the rest of the world.

Should these schemes succeed in achieving their performance criteria then the pilots would become future exemplars, incrementally raising the bar for sustainability and filtering down into policy reforms with each new year's license.

Planning and land

Many land areas are underutilised. The water space in London (canals, rivers, docks, wharfs, water basins, marina, etc.) is under the control of many different authorities and governmental bodies. These water space owners could be bought under the umbrella of the GLA, which could co-ordinate and make available developable water space in London. If only 5 per cent of the enclosed waterspaces in London were considered for floating development, this could provide an additional 3,000 homes or businesses in the capital.

To help unlock the water in Liverpool, a Waterspace Strategy was created – prescribing a range of appropriate activities within each dock, and providing guidance on scale, massing and planning envelopes so that potential investors can generate viable business plans.

Construction and procurement

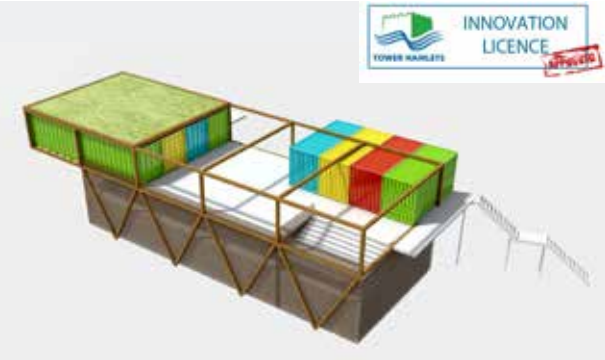
One innovative building approach is to build over existing structures using low-cost but large-span structures such as used in pylons and shipping containers. This may be a way in which new housing can be generated on top of existing without occupiers needing to decant into alternative premises.

Relaxing building regulation controls in some areas (i.e. maintaining fire standards but relaxing, say, thermal regulations or airtightness) may make it possible to explore new materials such as concrete composite, recycled waste products or green concrete.

Design

Co-housing models or shared amenity space can provide improvements to people's overall wellbeing, while at the same time increasing densities. This was well demonstrated through Forest Mews in south-east London, which despite its success, would not meet the amenity standards in many London boroughs.

Many plans for micro-flats are unlikely to pass minimum space standards. An alternative approach may be 'time of life homes' in which people have different home types based upon the stage in their lives – large homes for families, and smaller, cheaper to run homes for younger couples and senior citizens.



OpenPlan Interface

PHASE3 Architecture and Design

As designers/planners, we spend a lot of time working with, and mediating between, councils and clients. So we felt we could bring something different to this discussion and tackle design and coordination issues rather than policy.

We have found it is this coordination issue with the council that seems to stretch for long periods of time, to the extent that the planning process can easily match the build time. We chose to look at how to speed up the process and thus increase housing provisions each year. A question we have been exploring is how digitisation and the use of more accessible online information can facilitate a more interactive methodology between planners, architects and their clients, and how this process can affect the speed of planning and increase the quality of both design and the final product. A quicker planning process would give all involved parties more clarity to move forward on financial and schedule strategies, and ultimately enable them to deliver new projects quicker.

Proposal

We propose OpenPlan Interface, a London-wide standardised platform for browsing, testing, altering and debating new proposals in a life-like experience as part of the planning portal. This new structure would be a complementary interface to the current planning system that enhances the communication between local authorities, architects and developers to coordinate and illustrate the debate and data concerning new proposals.

Like most peering firms within the profession, we are developing our projects digitally in 3D CAD programmes. These tools are vastly improving and are

constantly becoming more and more powerful. Through the current guidelines for Building Information Modelling (BIM), this process is enhanced and more collaborators – from structural engineers to the executing construction companies on site – are using this information.

In contrast to the digital conception and design development, conventional methodologies for planning are still paper/pdf based. In addition to the time it takes to translate the information from 3D into the appropriate 2D format, the submitted information is less flexible and can naturally only contain a limited amount of information.

In response to the amounts of information added to each planning application, often resulting in data duplication and non-standard file formats, OpenPlan Interface would introduce a common language between the platform’s different user groups. Architects and planners could directly discuss projects in context on a 3D basis: thus height, overlooking and daylight issues, to name a few, can be assessed and recognised directly in-situ and without having to produce the time-consuming intermediary 2D data.

During the comment phase on planning applications, the public will be able to access the submitted information more easily through the same platform.

The framework for the new three-dimensional planning platform will be a digital model of the whole of London. The NLA as a comprehensive organisation could take a strategic coordinating role with their know-how comprising an existing model of most parts of the city already.

Affordable Housing Levy – An alternative to the viability process

Marsh & Parsons

This proposal concentrates on the use of financial viability reports in calculating affordable housing levels, and sets out how a new process could increase the speed and scale of housing delivery.

While the GLA and local authorities (LAs) have set policy requirements for affordable housing, a financial viability process exists to enable sites that would otherwise not be brought forward (by reducing affordable levels). The process was originally envisaged for exceptional economic circumstances yet it has become commonplace. However, it is widely criticised on the grounds that assessments can be skewed in the favour of applicants – i.e. inflated developer profit requirements, manipulation of cost/sales comparables, failures to account for HPI. Additionally, the process is increasingly complex and prolonged, adding further cost and delay to the planning process. And negotiations are often undisclosed because of commercial sensitivities, which contributes to a lack of transparency and increasing public concern in the process.

In the context of the high-cost London residential market, it is hard to conceive that many sites should qualify for reductions in affordable housing levels, save for those blighted by extreme levels of contamination or delivering significant other forms of public benefit. The reality is that most consented sites come forward with a reduced quantum of affordable housing, as a result of protracted viability negotiations between third party firms.

Affordable housing levy – an alternative to the viability process

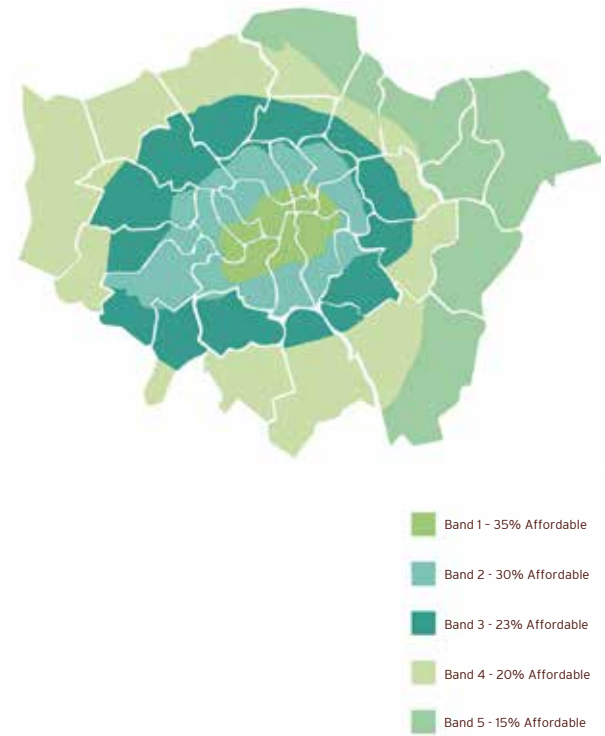
It can be argued that the viability process is an anachronism in the current marketplace. In its place, we propose a banding system which would generate fixed financial contributions for affordable housing. At its simplest, this would be an extension of the current community infrastructure levy mechanism and would broadly work as follows:

- GLA and LAs work together to agree fixed quantum of affordable housing to be delivered within geographically defined zones or bands. This would include a fixed tenure split between rented and intermediate products, and would be calculated as a percentage of Net Sales Area (NSA – a per unit basis for calculation being open to manipulation). In essence, a higher percentage of affordable housing would be allocated to higher value areas and vice-versa.

- GLA/LAs, in conjunction with bodies such as The Royal Institute of Chartered Surveyors, determine on an annual basis a ‘standard’ cost for the development/ construction of residential accommodation (again based on NSA). This would include finance costs, professional fees and profit, but exclude land costs which are accounted for in the banding system above.
- The Affordable Housing Levy (AHL) for a scheme is then a simple calculation based upon a scheme’s location and NSA.

The outcome would be a banding system across London that could simply be used to calculate payments in lieu of affordable housing. The tariff would be fixed (as with CIL, not open to negotiation) and payable at implementation (or in tranches on multi-phased schemes).

The introduction of an AHL as outlined above would provide all parties with absolute clarity concerning the cost of affordable housing when evaluating a site, reducing the need for protracted viability negotiations and the potential under-delivery of affordable housing.



Bringing together complementary uses to unlock housing supply

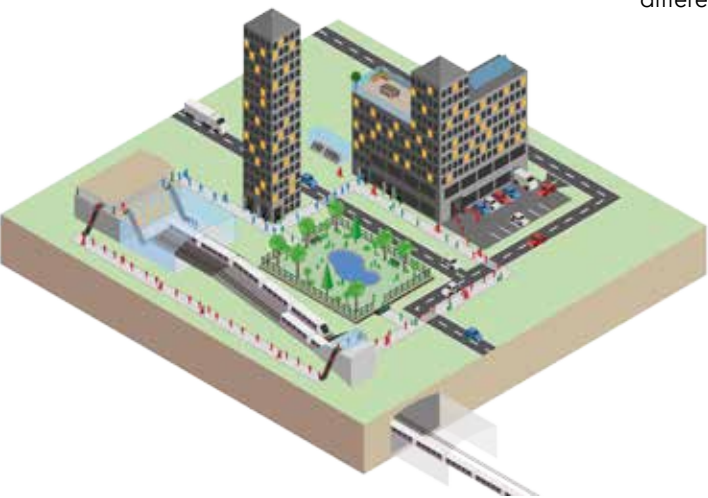
George Buxton, WSP | Parsons Brinckerhoff

The nature of London’s housing crisis is twofold: not only does overall demand for accommodation across the city outweigh supply, but the geography of this disparity is such that people who succeed in finding somewhere to live may face a long journey to work.

Transport constraints can represent a key barrier to development. This blocker may be overcome by funding additional capacity, but this requires sufficient capital to be raised – and if a developer is not confident of obtaining permission for a denser scheme with better economies of scale, they may decline to pursue the original, smaller proposal.

The proposal would seek to identify sites in London which are potentially suitable for large-scale residential development but which have not been able to fulfil this for reasons including infrastructural constraints. They would then be tested for viability of complementary land uses to assess whether the total size of development could be further increased if it were not solely residential-focused.

This approach could deliver homes and jobs which are not only supported by viable infrastructure but which also relate to each other on a social level: not just a pair of silent neighbours, but a single community of different land uses, making the most of the space which is at such a premium in our city to bring integration, efficiency and sustainability to London’s housing stock.



Investment rationale

London’s overall transport capacity is immense; however, as with any city, demand is heavily uneven, so it becomes difficult to justify investing in upgrades which will only be utilised for a couple of hours per day.

To tackle this crisis it is necessary not only to increase absolute housing supply, but also to ensure it is situated within reach of where people need to get to – principally their workplace. This proposal would seek to achieve this by siting complementary land uses alongside housing to make more efficient use of infrastructural enhancements, and thus render transport improvements more economically viable.

Key to this proposal’s success is defining complementarity of land uses so that they can co-exist.

Housing sited adjacent to land uses generating significant nocturnal footfall – eg. nightclubs – could pose noise issues. Tertiary-sector business and housing are more likely to be happy bedfellows, and even heavy industry could be suitable if the hours of operation are limited to daytime when residents are less likely to be disturbed.

Land uses with higher inbound trip rates in the AM peak and outbound in the PM would counterbalance most journeys made by Londoners. Not only does this enhance the cost-benefit ratio of transport upgrades through high demand in both directions during both peaks, but it also offers the potential for sharing facilities at the site itself, such as parking bays occupied by different land uses at different times.

Contributors: Simon Child, Child Graddon Lewis, in collaboration with Ramidus Consulting, Steer Davies Gleave, Peter Brett Associates, Mott MacDonald and Strutt & Parker

Find The Gap

Child Graddon Lewis

This submission focuses on the housing potential that exists in the outer boroughs and how to unlock brownfield land. Find The Gap provides innovative solutions to create viable, sustainable housing that would otherwise be overlooked.

Changing the way we look at transport accessibility is a key factor in relation to increasing density and developing London as a sustainable city. This could be a combination of inclusion of cycling in the Public Transport Accessibility Level (PTAL) calculations, and development to permit micro-apartments. This would translate into sites slightly further from transport hubs becoming suitable for higher densities and thus tipping over the viability of difficult sites.

Another key factor to Find The Gap is innovative approaches to dealing with land: landowners, developers, local authorities and communities must collaborate to overcome the various barriers and find pathways to delivery that meet market demand without threatening the character of outer London neighbourhoods.

Other novel approaches to turning non-viable sites into viable ones include: considering innovative production techniques; designing for changing lifestyles; and rethinking the conventional assumptions about development finance.

Finding the gaps

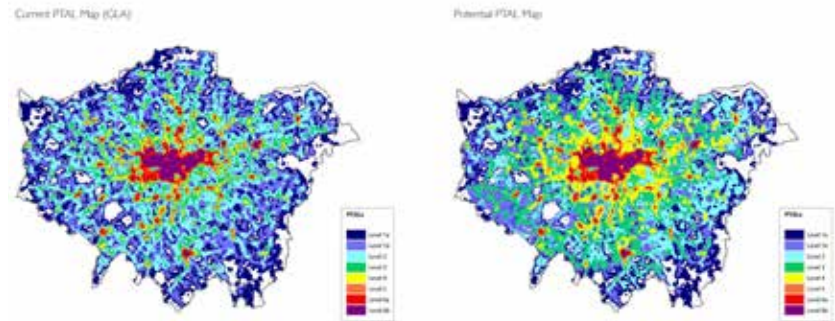
In addition to the five categories of brownfield sites, there are innumerable buildings and sites where their potential for housing is untapped – for example, above low rise retail centres, above schools, basements and roofs, car parks, garages, on top of a road tunnels, disused railways, theatres, libraries, cinemas, golf courses, over water, and so on.

Filling the gaps

Unlocking even quite straightforward brownfield sites demands a mixture of imaginative ways of bringing the various actors together and innovative design, as well as changes to policy and funding. Numerous ways can be found to make suburbia more multi-functional, more self-contained, more appealing to a wider range of occupiers, and less likely to generate more commuting. Planners, developers and housing associations spoke about the importance of a vision and strong leadership.

Policy recommendations

- Revise the system for calculating PTAL scores by including cycle access to public transport access points.
- Commission surveys of town and district centres to assess the potential for densification, and compile a detailed database of all relevant information that could assist local authorities and their partners in realising potential for additional residential accommodation.
- Deploy a range of techniques for engaging people in outer London to recognise the potential benefits of densification and thus to be more minded to accept proposals for change.
- Set up Experimental Housing Zones in some of the neighbourhoods where transport connectivity can be enhanced – based on the Housing Zone designation, but including a temporary lifting of restrictions on built form such as space standards so that very small apartments are permitted.
- Support the outer boroughs in setting up or strengthening officer teams to specialise in bringing forward difficult brownfield sites for residential/ mixed development. There is good practice in several boroughs and lessons could be shared.
- Strengthen the role of the GLA in gathering and promoting intelligence, co-ordinating efforts and providing financial backing for unlocking difficult sites.



High Density Housing in Low PTAL Neighbourhoods

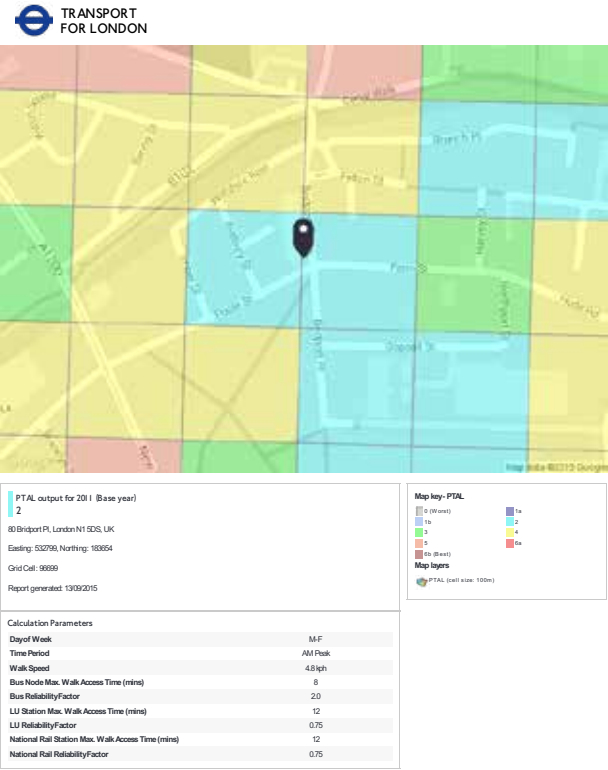
Vincent Stops, Chair Hackney Planning Committee

The provision of car parking on any scheme utilises valuable land if the ground level is used for parking. It can add cost – typically £20,000 per vehicle space in a basement. Designs are poorer, having to take account of the slab, air vents, ramps and access routes etc. The potential impacts of additional traffic generates objections and will often result in lower densities – indeed some councils use it as an excuse for lower densities. Car-free development can deliver much higher housing densities and better design at lower cost.

It is assumed that car-free development must primarily be built in areas with high PTAL scores – that is with high levels of public transport – when in fact many Londoners live a car-free lifestyle and get around by bus, walk or cycle.

Whilst Hackney has generally high PTAL scores, there have been car-free permissions in low PTAL parts of the borough and the flats are occupied! In Hackney, over 93 per cent of development is car-free, which has, in part, enabled Hackney to meet its London Plan targets. More of London needs to look like Hackney in terms of housing density and access. Much needs to be done on London’s public realm to support those densities. My proposal is to build more car-free housing, and thus build at higher densities, in areas with lower PTAL scores. This would, of course, necessitate on-street parking controls being introduced.

The simple ideas are the best!



Relax Planning Rules on Density

Chris Gent, WSP | Parsons Brinckerhoff

Reducing the need to travel must be a fundamental part of solving London’s housing crisis. Without this approach we will need to invest billions of pounds in additional transport infrastructure – that money could no doubt be put to better use elsewhere, and the space freed up could instead be used to provide additional homes.

The London Plan recognises this and promotes increased density around transport hubs according to a site’s setting (central, urban, suburban) and PTAL (a measure of how much public transport is nearby), as shown in the extract below.

Unfortunately the London Plan does not currently promote this approach as effectively as it should: both ‘setting’ and ‘PTAL’ place unnecessary restrictions on density, which detract from the capital’s ability to deliver new homes.

Setting defines density as a function of the local area (i.e. where local buildings are currently low density, new buildings should also be low density), which in a city that is known for its typically low density housing is hardly a progressive approach. PTAL measures a site’s connectivity to the public transport network, based on services passing nearby. Unfortunately it does not take any account of where those services will go, or whether they provide good onward connection to the rest of London and a range of destinations within a reasonable travel time. PTAL also contains arbitrary maximum walking distances (640 metres for bus and 960 metres for rail), yet in reality people are willing to walk much further and many people walk faster.

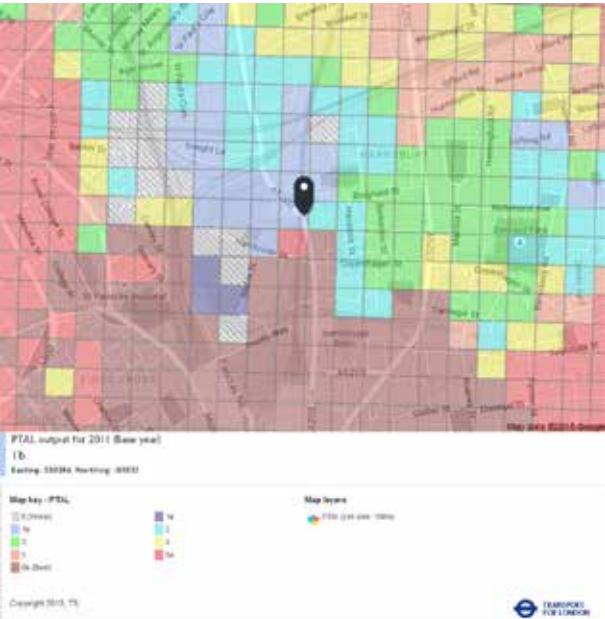
One example we have studied is an area north of King’s Cross where the PTAL falls from 6b to 1b once you are 960 metres from King’s Cross station. Clearly, this is one of the most connected places in London, and yet, the maximum residential density for this site would be 110 u/ha (for PTAL 1b), as opposed to the 405u/ha that would be permissible immediately adjacent (PTAL 6b).

TfL’s TIM mapping demonstrates that you can reach everywhere in Central London within 30-40 minutes from this location, suggesting an artificial restriction of this magnitude on density (one quarter of what otherwise would be allowed) is unnecessary and inappropriate.

- Two possible solutions:**
- Revise the PTAL equations to remove arbitrary distance cut-offs, which will remove the arbitrary step changes in accessibility and recognise that areas of London are more accessible in reality, and, therefore, that higher density standards are applicable to a greater proportion of London
 - Replace PTAL with a simpler minimum density in proximity to stations, promoting greater density above the current maximums in these areas.

Density proposals

There should not be prescriptive maximum densities that reduce the scale of an otherwise acceptable development. Just because a station is currently surrounded by two- or three-storey homes does not mean that those historic building heights are appropriate for the homes we need now or fifty years from now. Local Authorities should perhaps seek to zone the scale of developments adjacent to stations with increasing minimum building heights the closer you get to a station.



Relax / Strengthen

Barbara Weiss Architects / Allies and Morrison

We wish to address a sample range of short-comings of the planning system that appear to be obvious obstacles to maximising London’s residential development opportunities. We need a new design freedom that allows all involved to come up with innovative solutions specifically appropriate for London, and on much greater certainty as to what necessary, immovable planning constraints might be.

- In order to achieve these targets, it becomes essential to:
- Identify and relax misguided ‘red tape’ that is currently not delivering the flexibility necessary to create new and more housing solutions
 - Identify and strengthen regulations and provisions that will promote the quantity, quality and type of residential development specifically needed by Londoners

Surgically improving these aspects of the house-building equation will lead to a streamlined process that should drastically reduce inefficiency and waste, while highlighting new opportunities and alternative ways of procuring much needed housing.

This must go hand in hand with a meaningful, all-inclusive debate about the direction in which London is heading as a city of 10 million people.

Planning rules we should ‘relax’:

1. Height restrictions: It is suggested that, with the exception of conservation areas and listed buildings of any type, there should be a London-wide presumption in favour of granting permission to extending upwards by two storeys – up to a maximum total of eight storeys.

2. Overlooking and daylight restrictions: To substantially increase density, it should be possible to reduce distances between buildings, particularly in suburban areas – replicating the very successful and much-loved model of closely-knit historic European cities.

3. Over-prescriptive design guidance: Prescriptive design guidance (eg. Lifetime Homes) tends to be too rigid, compromising flexibility and individual requirements. One size does not fit all.

4. Permitted development: There is a need to re-look at ways in which Londoners can quickly and efficiently alter their homes in order to accommodate changing family requirements and demographics (sharing, down-sizing by subdivision of units, extending, and multiple occupancy).

5. Green belt development: While totally supporting the sanctity of the genuinely green areas of the Green Belt, there are large areas within its boundaries that are brownfields. We should consider building well-designed, high-quality homes on these sites.

6. Prescriptive mix of unit sizes: Different areas of London have different needs, and different buildings offer different opportunities. A more flexible attitude will reduce inefficiency while offering greater variety and better fit.

Planning rules we should ‘strengthen’

1. Local identity: London needs to become even more polycentric. Mixed-use developments should be included in the creation of all new residential areas, to generate local workplaces, and to give real urban life to the new communities.

2. Affordable housing quotas: Establishing a mandatory, fixed percentage of affordable and social housing quotas for all developments across London will save an enormous amount of time currently spent in haggling.

3. Parking quotas: London does not need more cars; it needs green, flexible, collective transport. A general presumption against extra parking should be the norm.

4. The green agenda: A clear, effective, affordable and enforceable green agenda needs to be introduced before the onslaught of the next wave of housing. Too often, this is left too late, or mere lip service is paid to it.

5. Planning needs an overhaul: None of the above can be achieved without a serious restructuring of the planning system. We need skilled, experienced, committed officers with specific knowledge of their boroughs.

6. Make the most of it: All developments should be aiming at ‘maximising’ opportunity: the mix in every block should be appropriate for the needs of potential local residents. London’s historic buildings are far more flexible than modern ones. We need to rediscover the art.

The All-Electric City

Barny Evans, WSP | Parsons Brinkerhoff

This proposal for new ideas for housing in London suggests that a London that is all-electric for buildings and transport will allow for denser construction of new homes and mixed developments, whilst maintaining or improving quality of life. In the longer term, it will allow or facilitate additional elements to allow us to build more homes:

- Make the use of large-scale vehicle hire schemes easier, reducing the space required for parking.
- It will also allow for the provision of cooling or retrofitting of cooling in the future if necessary. There is evidence that the urban heat island and modern building standards are already making modern flats too hot.

Several benefits of electrification allow denser housing:

- Reduced noise from road traffic allows for developments closer to roads and in areas that cannot be used for homes at present.
- Denser and taller developments are sometimes restricted due to poor air quality exacerbated by the lack of air circulation caused by high structures. The better air quality will allow for taller and denser developments and even allow developments where it would otherwise be refused.
- Overheating is already an issue and expected to grow substantially in the future. Electric buildings (using heat pumps) offer the opportunity to be designed to allow cooling and/or easy retrofitting of such. This will allow for more dense developments and reduce the risk of homes being uninhabitable in the future.

Interviews with over 1,000 adults living in London found that one in four people had seriously considered moving out of the capital because of noise and air pollution. London regularly breaches European air quality standards for nitrogen dioxide (NO₂) and particulate matter (PM10) linked to heart problems, asthma and other lung diseases, including cancer. Transport emissions contribute nearly 50 per cent of nitrogen oxides (NOx) and PM10, with a further 15 per cent and 3 per cent of NOx and PM10 respectively emitted by gas used for heating and cooking. The effect of ‘street canyons’ caused by tall buildings prevents wind from dispersing air pollution.

By going all-electric, NOx and PM10 emissions can be reduced. Modelling shows that by going all-electric, London can cut NOx emissions by 37 per cent. PM10 (i.e. dust) emissions will also be reduced by 1 per cent on average across the whole of London, increasing to 20 per cent in localised areas such as Oxford Circus. An all-electric London will be able to meet air quality standards right across London by 2030, reducing the impact of street canyons.

Traffic noise is the largest source of noise concern to residents, according to the London Household Survey. Electrification of transport creates significant reductions of noise at street level. Reduced noise from electric cars will allow for housing to be built closer to roads increasing space available for developments. Going all-electric will contribute to the Greater London Authority’s target of cutting CO₂ by 60 per cent by 2025.

How can all-electric be achieved?

A clear and consistent vision is required to electrify the city and allow the densification and quality of life required to deliver more homes.

Electrification of buildings: New homes and offices will be required to be all-electric, (probably using heat pumps) rather than gas/biomass for heating, to improve air quality. Heat pumps also enable cooling, an increasing issue as cities become warmer. Heat pumps would also replace gas boilers as they reach the end of their lives in existing buildings. As heat pumps work best in energy efficient buildings, more needs to be done to improve existing stock. We propose a focus on energy efficiency as the buildings are electrified.

Electrification of transport: It is unrealistic to expect all Londoners to buy electric vehicles soon, but this will happen eventually, along with our public transport, and we need the infrastructure to cope with that in terms of electrical grid. This should be a priority. In the meantime, we suggest commercial development of a London-wide electric vehicle hire scheme which will – in the longer-term – negate the need for the current level of vehicle parking as people can rely on a hire scheme.

Unlocking Housing Delivery

Peter Eversden

Sites with planning permission for new housing should be catalogued and investigated to ascertain reasons for lack of development.

Those where there are outstanding negotiations with a local authority on Section 106 conditions or other obligations should be fast-tracked by support from a team led by the GLA.

Those where there is no clear indication of commencement of building should be subject to a ‘Use It Or Lose It’ process by the Mayor.

For large sites not being developed, the Mayor should consider setting up a Mayoral Development Corporation.

The Urban Edge

Studio SE5

To tackle London’s housing crisis, we are advocating a carefully designed expansion of suburban London as the only sensible sustainable solution. It is unfair that hundreds of thousands of people are living in unsatisfactory conditions because of the perpetuated nostalgia for rural England and the Green Belt.

Central to our proposition is that new development should, where possible, be related to existing transport infrastructure. This idea was first submitted in February 2014 as an entry for The Wolfson Prize for Economics. There are many rail and tube stations which, inexplicably, are situated in almost open countryside and could support additional passenger numbers. Some new or extended rail and tube lines with new stations could be built.

Within the Greater London Authority, it is proposed that all land (including that designated as Green Belt) is considered for development, with the following exceptions:

- Royal Parks and other designated public urban and country parks
- Woods and forests
- Nature reserves
- Most golf courses and sports fields
- Designated Sites of Special Scientific Interest (SSSI)
- Designated Areas of Outstanding Natural Beauty (AONB)
- Reservoirs and their enclosures
- Historic houses and their enclosures
- Working hospitals and their enclosures
- Working schools and their enclosures
- Working universities and their enclosures
- National Trust properties

We are of the opinion that when taking an overall view of the London Metropolitan area (from Luton to Crawley and from Reading to Southend), it is not obvious where the Green Belt is.

However, such designated land outside the Greater London Authority would retain such protection. That land remaining is to be considered for housing (and associated uses) – subject of course to planning approval. There should be a sensible view taken by developers and the relevant London borough as to how such land is developed: taking into account local topography, natural

constraints and access requirements. We would suggest an urban scale approach to new housing similar to the typical two-, three- and four-storey Victorian terrace with a more dense build close to transport hubs.

We strongly encourage industrialised housing production (factory built) as a means of lowering construction costs, ensuring quality control and speeding up delivery.

Typical examples of possible development areas (including protected uses as above) are briefly described as follows:

North Stanmore (Harrow)
This proposal is put forward as a less intrusive incursion into open countryside, being between heavily developed areas and adjacent to three very busy roads – namely the A5, the A41 and the M1. There is evidence on the map that development was possibly envisaged north of the tube station indicated by the beginnings of a boulevard (Kerry Avenue). This could be extended to Wood Lane over a cut and cover extension to the Jubilee Line to a new station at The Royal National Orthopaedic Hospital. This institute is surprisingly remote from public transport and it is felt that extending the tube could serve additional residential provision as well as staff, visitors and patients at the hospital. A local shopping centre could be built around Stanmore tube station.

Cockfosters-Oakwood (Enfield)
This proposal is also within the Green Belt, but, with both tube stations adjacent to open countryside, it would seem an ideal location for housing development running up to Trent Country Park and the Middlesex University campus.

Hayes-Bromley Common (Bromley)
By extending the railway from Hayes station under the town centre, the area of land between Hayes and Keston could be developed. This area of Green Belt is curiously surrounded by urban areas. Norman Park would remain as an urban park. A protected corridor could be put in place for a future rail extension to Locksbottom and The Princess Royal University Hospital (another large traffic generator).

Other ideas...



'The Thames Archipelago: A 34th Borough' by C.F.Moller argues that we should colonise the Thames Estuary to create a new London Borough.

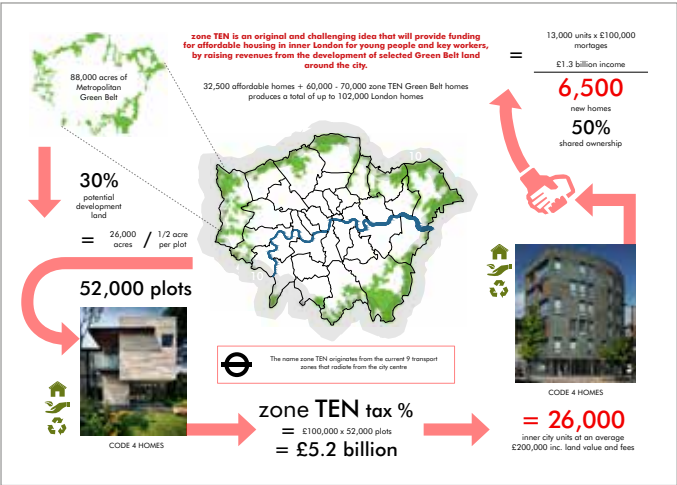


'St Paul's Primrose Hill' by Denizen Works proposes moving St Paul's to Primrose Hill to allow higher levels of development while protecting views of the historic landmark.



'The Smart Green Belt' by ISLESNET proposes to transform the Green Belt into a zero-carbon green environment with cutting-edge technologies and a selective set of activities and living places.

'zone TEN' by Jonathan Lovett proposes taxing the sale of Green Belt building plots to create revenue for a new zone TEN of 32,500 new affordable homes, plus 60-70,000 Green Belt homes.



Introduction

Amongst numerous proposals for entry level homes, encouraging self-building, and young and old sharing homes, it was an idea for unlocking under-utilised public land for customisable homes that really caught the judges’ attention.

‘Making More with Less’, from Pitman Tozer Architects and Naked House, aims to unlock the potential of infill sites across London to provide 100 per cent affordable customisable homes in large warehouse-style complexes. Local authorities grant Naked House a head lease for the site, packaged together with other similar sites across the borough. This allows Naked House to secure development finance against the value of the land, negating one of the greatest financial barriers to such schemes. Combined with resident deposits (10 per cent) it greatly reduces the need for public funding. The main units are concrete-frame structures, and once they’re up, homeowners then complete their homes to their preferred design – building interior walls, installing second fix services. Naked House manages the customisation process, ensuring households have necessary funds and professional expertise.

HutLab Gregory Kewish Design’s for ‘tree houses’, or ‘nano towers’, also attracted much comment. These are small well-designed homes in central London locations, which offer new ‘super low’ entry level and ‘middle entry’ level stages of ownership prior to the current typical first time buyer level of accommodation. Going high as well as small, and using offsite-manufactured cross-laminated timber, a ‘nano tower’, HutLab suggests, could provide 21 micro dwellings and three larger market value dwellings on a very small building footprint of 160 square metres.

Bringing the old and young together in new housing complexes was suggested by numerous entrants. Shareditch, from Stephanie Adebayo and Lavanya Kumaran, is an experiment they call “the next iteration in the development of the nuclear family”. The idea is that an older person aged 55 and above can return their larger three- to four-bedroom council house, which has now become empty since the departure of their families, to be reallocated to a young family on a council house waiting list and in turn receive an apartment with three other younger residents. Cullinan, Savills and BR+W also explored other inter-generational schemes.

Entrants to the competition were very much encouraged to think creatively, and Crispin Kelly took his cue to develop an idea of such brazen originality that the judges were minded to award him a special “Brass Neck” commendation. In order to inspire “the entrepreneurial and visionary zeal of everyone interested in London’s future”, he suggests anyone should be allowed to apply for planning permission to develop publicly owned land which is currently undeveloped. If consent is granted, the applicant is granted the right to build the consented scheme, with 50 per cent of what is built given to the landowner on completion.

Within a few months, he suggests, “councils would receive hundreds of applications showing how more housing could be added to the city. Another period of intricate city making would begin on public land which is presently underused.” Brass neck indeed – but then again, in the face of a desperate housing crisis, why not?

Winner
Making More with Less: Unlocking leftover land for generation rent

Pitman Tozer Architects and Naked House

Naked House is a new generation, not-for-profit housing provider that will unlock the potential of infill sites across London to provide 100 per cent affordable customisable homes. Our model joins the dots between: under-used public land – for this proposal we have partnered with Enfield Council; good design – we have partnered with multi-award winning architects Pitman Tozer; and people on intermediate incomes, our members, wanting to custom-build.

Naked House acts as developer, taking on the developer risk and managing the process throughout, allowing us to jump many of the barriers to such schemes and provide a scalable model.

Unused public land
According to Future of London, there is the capacity to build up to 110,000 homes by 2025 on small infill sites across London.

Local authorities themselves own a huge array of these under-used sites. Often lacking capacity or resources to develop them directly, they are too small for large-scale developers. Individually, these sites may be insignificant, but taken together, they can help solve London’s intermediate housing shortage.

The Naked House solution
Inspired by the Victorian warehouse typology, Pitman Tozer Architects has designed a Naked House prototype. All units are planning, building regulations and high-street mortgage compliant.

The concrete frames will be built by small- to medium-sized contractors, bringing benefit to the local economy. This reduces reliance on large house builders – opening up the market and increasing competition.

Homeowners then complete their homes to their preferred design – building interior walls, installing second fix services. Naked House would manage the customisation process ensuring households have necessary funds and professional expertise.

Crucially, all units will be London Housing Design Guide space standards compliant. There will be flexibility for future extension and for families or businesses to grow.

Land, procurement and process
We will be using a real site, owned by Enfield Council, to demonstrate the model. Ingersoll Road is in the north of the borough, and is typical of many council infill sites across London – a disused garage plot within a residential estate. There is the potential to build nine units of one- to three-bedrooms.

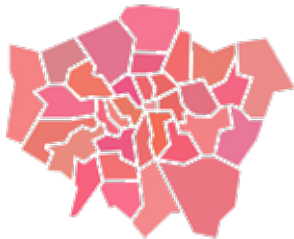
Subject to approval, Enfield Council would grant Naked House a head lease for the site, packaged together with other similar sites across the borough.

This structure allows Naked House to secure development finance against the value of the land, negating one of the greatest financial barriers to such schemes. Combined with resident deposits (10 per cent), it greatly reduces the need for public funding.

Naked House units are available with a deposit of no more than 10 per cent and a mortgage of x3.5 salary for those with household incomes of between £25,000 - £80,000 (First Steps maximum income threshold). The council propose to realise long-term value through a ground rent linked to the value of the land (and so any uplift in value is shared), the guaranteed provision of permanently affordable intermediate housing (a resale covenant locks in affordability for perpetuity), additional council tax receipts, etc.



Utilising unused land, the warehouse typology can create flexible units for different lifestyles



The Tree House – The Nano Rise

HutLab Gregory Kewish Design

There is a growing population who need and desire to live within central London, or near as possible. They need a small, well-designed home. If ‘big living’ facilities and services are provided in an attractive and fun manner, small domiciles will become ‘big time’.

I propose pared-down stylish London dwellings that respond thoughtfully to a fast changing social and economic dynamic that is London today and the future. We need to make a few more rungs on the property ladder. We need a ‘super low’ entry level and a ‘middle entry’ level before we get to the current typical first time buyer level of accommodation. I propose high-quality micro homes built for comfort that provide ‘big living’ facilities and services on site. I propose onsite cafés and ‘hot desking’ facilities. Onsite ‘micro offices’ allow occupants to work and stay local if they wish.

Let’s respond to the housing opportunities on the macro level with increasing nuance. Let’s make more nuanced planning law, for instance, by lowering the minimal allowable sqm area for new dwellings. This has occurred in many major cities (Paris, San Francisco, Boston, New York) with positive outcomes. The way people live is different to that of only 15 years ago, and we need to change the way we allow people to build and live. There is a new motto – ‘dwell small, live and play large’. We need to unlock potential sites and, where possible, build high and beautiful. Going high in designated zones in cities should be the presumption. Smaller dwellings constructed on public land with Section 106 restrictions can be sold at very affordable sums. This can happen with schemes like the Tree House.



Contributors: Catherine White, Catherine White Interiors; Camilla Jarvis, Freelance Designer

Building Blocks

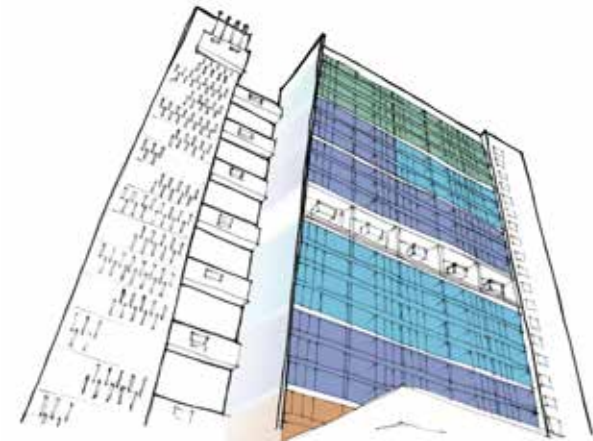
White and Jarvis

With 40,000 homes needing to be built a year in London, it will be difficult to regulate quality and ensure a diverse demographic. There is currently little collaboration or communication between residents and local authorities, leading to poor management of housing, and a lack of opportunity to work with our councils and share / push down costs. The shortage of affordable housing options means that local residents are pushed out of city centres, away from their support networks.

The solution: community-led urban development

A residential area with a sense of community is safe, vibrant and diverse; a place where people can live and work together. When communities work together, we see more affordable management for housing associations and developers; residential developments responding to the varying needs of people; residents saying how their neighbourhoods are shaped; and fewer derelict housing estates.

There are many community-led housing success stories, including: Granby Four Streets, Troxleth, Liverpool; East London first CLT’s development at the former St Clement’s Hospital; Haggerston Estate Co-operative; and Cressingham Gardens, Lambeth.



Community housing groups: what have we learnt?

Building, filling and managing a smaller number of homes at a time means:

- We build the right number of homes to start with
- We provide local solutions for local people
- Breaking down our housing developments into small groups means we can focus on the specific needs of people from the start

The Residents Housing Group (RHG): What is it?

In large-scale residential developments, it is difficult to create a sense of community. The RHG is an organisation which aims to increase engagement within our communities.

The RHG works with housing trusts, developers, planners and councils to split developments up into smaller, more manageable bundles of housing known as blocks. Each block has its own organisational committee. Decision making for, say, 25 homes, instead of an entire tower block, means that residents can take ownership of their corner of the community.

As well as discussing the management of each block, another key role of the RHG is the procurement of contracts for large-scale maintenance, refurbishments or construction work. Contracts would be issued on a block-by-block basis, and if residents wish to seek alternatives, they would have the freedom to opt out and procure new ones.

Each block has a communal space, which the RHG can agree on and manage. Uses could include a DIY co-op shop, children’s play space, workspaces or DIY café. Blocks can work together to combine or share their communal spaces, but this has to be agreed upon by all residents represented.

The RHG can represent people in all living situations: from council house tenants, to social and private rentals, to part-ownership, first-time buyers and higher cost investments. The aim is for blocks to be made up of smaller, more varied groups of residents, reducing chances of creating a ‘cliff edge effect’ in new large-scale developments.

Community Chest

Levitt Bernstein

Community-led development can address the key issues of housing quality and speed to meet demand in a way that other models cannot: it allows self-selection as to what is most appropriate to users, resulting in a range of housing that is more appropriately designed.

How it works

An app and mapping platform can be designed to share skills, information and ‘credits’ which will equip communities with the tools and knowledge to co-create housing in London. The interface with members is designed to encourage wide participation, and is targeted at groups that are technologically astute, familiar with sharing platforms and open-sources of information – such as the web – and able to offer time, small amounts of finance and knowledge to the process. This places information and trusted expertise in one source, making the process more accessible, sociable and inclusive.

It also opens up the ability to obtain affordable credit based on shared pots of money, held in trust through a recognised entity with industry and government support. This should be developed as a low-risk and stable entity that passes the benefits of this onto its many members.

People can pay in to the organisation financially or by volunteering time, building up credits towards a home built by the community. Membership is required, but it is open to all individuals (not companies) and requires

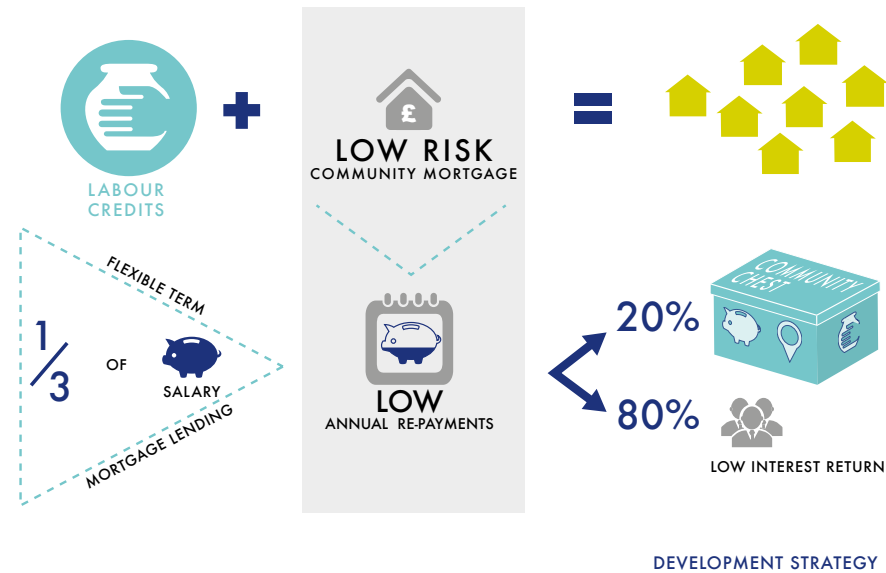
information necessary only to prove identity, maintain correspondence and comply with statutory requirements.

The organisation is not-for-profit, so investments are not designed to give large ‘returns’ in terms of interest.

Desire to translate investments into housing credits encourages participants to find a suitable housing development project to get involved with. This incentivises active participation in the process and creative solutions are discovered.

Available land can be mapped by anyone (member or non-member) by submitting the location of the site via the app. If a potential project stacks up, it is down to the interested members to forge a community and apply for funds to develop a feasibility study on it and potentially make a bid.

The scheme will require approval and accreditation from some of the existing professional and public bodies to begin with, in order to secure its future as a low-risk model capable of securing credit and services at low cost. As the scheme develops, membership could be a city-wide norm and could lead to the development of thousands of owner-occupied homes throughout economic cycles.



Community-led Intensification

Feilden Clegg Bradley Studios

Small sites, grand designs

Small infill developments have the potential to be crafted and loved by the community that delivers them. Working together with talented architects and other professionals, micro-developments can raise the quality of an area while providing the maximum number of homes. Recognising opportunities for intensification and creating efficient mechanisms for delivery can encourage change from the bottom up.

Five steps to enable community-led intensification

1. Enlist everyone to identify potential sites

The first step is to publicise the initiative and set up an app where individuals can propose sites such as: council estates, which often have irregular layouts that present small infill opportunities; roof tops, where developments could be craned on top of buildings; garages and gardens; existing apartment blocks – if a way can be found to grant leaseholders extension rights; and disused/inactive landbanks.

2. Identify areas ready for interventions

Once the sites have been identified, the information could be overlaid onto other data to see if there are any correlations between negative activities, such as transport, crime, fly tipping, or land values. By overlaying information, we can identify optimum ‘micro-regeneration zones’.

3. Designate a micro-regeneration zone

A ‘micro-regeneration zone’ would need to establish a community partnership that would shape the development framework. The designation would also release seed funding to employ professionals to help draw up plans, value sites and suggest a disposal and delivery mechanism. The local authority would also need additional funding to enable the delivery of the sites.

4. Agree delivery strategy

Planning permission is granted on a case-by-case basis, based on guidelines set out by the micro-regeneration framework. If proposals are poor, these should not go forward until they are improved. Only the best designs – from bespoke to prefab – should be realised.

5. Get building

The method of delivery will depend on the nature of the site. We propose using a mix of traditional building practices while trying to kick start more innovative and efficient methods of construction. These could be building co-operatives, self-build or partnerships with housing associations or developers.



Brass Neck Award
Consent and Implement
Crispin Kelly

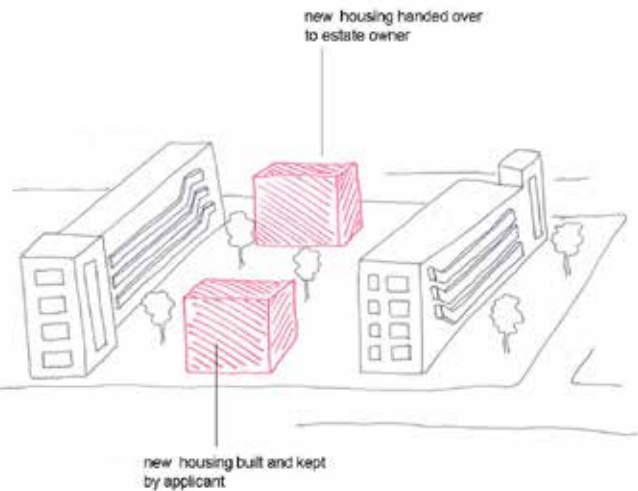
The proposal
Harness the entrepreneurial and visionary zeal of everyone interested in London’s future. Let anyone apply for planning permission to develop publicly owned land which is currently undeveloped. If consent is granted, give the applicant the right to build the consented scheme. Half of what is built must be given to the land owner on completion.

How it works
London’s planning regime is fundamentally reactive. Entrepreneurs make proposals, which are then assessed against very broad criteria. The benefit for London has been a diverse cityscape. But a disadvantage has been that much publicly owned land lies fallow, outside the reach of developers.

Yet there already exists a way of making better use of our ‘left-over’ land. It is not widely known that in Britain anyone can apply for planning permission on any land, regardless of whether they own it.

It is proposed that planning applications made for the redevelopment of public land, if granted, entitle the applicant to develop that land within three years of receipt of consent.

When the consented development is complete, half the development is transferred to the applicant at no further cost, and half stays (as a form of payment) to the public body.



Imagine a council housing estate in the Borough of Hammersmith and Fulham. Built before the Second World War, it offers corners and pockets which might accommodate a few houses, a modest block of flats, or some business units. You are free to apply for permission to realise your vision. If you get consent, you can get on with it.

The planning process will, as always, determine whether the development is appropriate, taking into account its context and design.

Applying for planning is not a cheap process, and this should alone discourage those with ill intent. An additional condition for this new ‘consent and implement’ form of development is that the applicant would have to demonstrate 100 per cent equity funding to complete the development, so as to avoid sterilised sites or half-finished developments.

London currently has 3,358,163 dwellings, and, of these, about 24 per cent are social-rented. To gauge an approximate potential quantity of new homes deliverable under ‘consent and implement’, a target of 5 per cent of existing social rented stock gives a figure of 39,300 new homes.

The outcome
Within a few months, councils would receive hundreds of applications showing how more housing could be added to the city. Another period of intricate city making would begin on public land which is presently underused.

Objectives in Common
Cullinan Studio

What if we stopped wishing we were land speculators and thought more about the home instead? Let’s mutualise small businesses’ pension funds and their employees to create a model for sustainable housing and to secure these businesses’ survival.

Stewardship not speculation
In our low-growth, post-financial crisis world, pension funds struggle to find opportunities for income growth, just as the demands of an ageing population reach new heights. But a pension fund is more likely than a traditional developer to put a value on quality, community and vibrancy with an eye towards a sustainable and growing income into the future.

Mutualising the landowner
With the consensus of directors, company stakeholder pension pots can become more agile, decentralised, Small Self-Administered Schemes (SSAS). Funds can instead be diverted from traditional investment funds towards the purchase of land for commercial lease. This in turn would secure an asset investment like any other, but add a rental income and a place for its employees to build upon.

Claiming the land
With the supply of private land so suppressed by the inertia of lax taxation, a new source of land may be emerging via local authorities. ‘Community Right to Bid’, ‘Community Right to Build’ and ‘Community Right to Reclaim Land’ are new government initiatives which put the onus on the public to identify underused public land. It is regrettable that these policies further the government’s momentum towards privatising publicly owned assets. However, there is a public interest in securing a sustainable and diverse community which is common to both a land-purchasing SME pension fund and land-selling local authority.

Mutualising the homeowners
The problems facing ‘Generation Rent’ may lead to the acceptance of shared amenities and the willingness to compromise on tenure that make a Mutual Home Ownership Scheme (MHOS) possible.

In this model, the group owns shares in their Mutual Property Trust rather than their own home. Formed by employees from similar-sized SMEs, the group might bring a diversity of means and skills to a user-led design and even delivery of the new homes.

Through a business-owned land investment (SSAS), an employee-owned housing cooperative (MHOS) and a community-minded local authority, the business needs of a sustainable pension plan are united with the employees’, employer’s and the local authority’s aspiration for a sustainable housing model.

By separating the land from the home, a leasehold condition is established offering affordable land rent to the MHOS which assumes the right to build. Further cost efficiencies and necessary diversity backgrounds could be found by bringing together similarly sized SMEs and their employee groups, aiding the delivery of homes and of the community that they would form.

In uniting values rather than pursuing value, we might find a hybrid of traditional common land where a long-term hand of land stewardship meets a diverse and aspirational collective to build upon it.

LONDON FABRICation: Ideas, tools and tactics to scale the potential of housing in the capital

Kelvin Campbell, Smart Urbanism: Urban Research and Development Collaborative

Housing is not a problem to be solved. It is a potential to be realised. Housing was never the domain of government. People did it. It was not a problem to be solved. We created it. The buck is now passed to the big guys to solve the created problem. But housing can be reduced to the smallest units of delivery – a single building, a terrace, a block. Many agents can do it if we allow them. The private sector means all of us, not just the big guys. Open up the market to the widest possible opportunities. Make it work equably for the individual, collective and corporate.

LONDON FABRICation: five ideas, tools and tactics for the London Mayor

- 1. **The London Open Standards:** takes the Government’s Open Standards Principles for IT interoperability and apply this to housing. This would encourage open, inclusive and collaborative development of standards across the sector.
- 2. **The London Popular Home:** utilises the range of tried-and-tested housing typologies within the range of 50-200 dwelling units per hectare, with the full spectrum of popular, long-life, loose-fit housing solutions: mews houses, terraced houses, townhouses and small apartment buildings.
- 3. **The London Street Types:** develop a range of street types: the avenue, shopping street, residential street and lane. Fix the dimensions, produce a full specification for each and provide simple choice matrix to clarify their application.
- 4. **The London Tissue Manual:** structure choice and promote scalability by adopting the 15-metre-wide lot, of varying depths, as standard unit of delivery.
- 5. **London Local Development Order:** any housing that uses this process is permitted development, and develop a Fast Track Route through planning.

Putting this into operation

- 1. Create a Neighbourhood Enabling Agency to work with all authorities. Employ people who know about housing. Reward success in delivery. Incentivise every action, at every scale.
- 2. Parcel up publicly owned land using the London Lot principle (a 15-metre-wide lot that can be further subdivided). Make it the primary unit of delivery. Open this land to wider market choice all on equal terms. Prevent speculation and land banking through structured land deals.
- 3. Practise ‘disintermediation’. Deal directly with end-user. Invite people or groups to tender for plots. Let them come with mortgages, bridging finance, subsidies and schemes. Let them come as groups or as individuals. Let them come with their architects and builders. Reward the best.
- 4. Don’t keep our low density, well-connected interwar suburbs in suspended animation. Produce development orders to allow them to intensify into fully functioning parts of the city. If every lousy suburban house was replaced with three or four townhouses, London would not have a problem. Everyone could do it so it ceases to be a NIMBY issue.
- 5. Start by starting. Learn by experimenting. Don’t waste your time on protracted studies. Don’t ask architects and volume housebuilders what they think. They may be part of the problem.
- 6. Within six months you can have the bones of this in place. Within two years this will be ‘the London way’. Be brave!



Own Build

Yolande Barnes, Savills World Research

Assisted self-procurement by households, coupled with new ways of delivering land to them, a new ‘build to own’ model could help unlock larger sites for development by providing another route to market for land owners – public and private – resulting in a higher build rate than can currently be achieved by the usual players (speculative house builders, social housing and rental investors) alone.

Why self-procurement?

Self-build or, more accurately self-procurement, is a mode of delivery that is used much more widely in other developed countries than in the UK. If ‘own build’ became another delivery stream, at the European norm it could add 28,000 homes each year in addition to the current output.

The own-build model

The principles of ‘own build’ are that:

- 1. No subsidy needs be involved.
- 2. Householder and/or landowner housing equity is created through
 - a) Greater landowner participation, risk and guarantees
 - b) Individual householder risk participation
 - c) Innovative mortgage lending (which should still comply with MMR)
 - d) Monetising the qualities of customised MMC (timescale, product and cost certainty)
- 3. Money that would otherwise be developer profit is used instead to bridge the affordability gap
- 4. No housebuilding expertise or involvement is required by the householder beyond putting down an initial deposit, remaining creditworthy over the build period and taking on a mortgage at completion

Process

Landowners are encouraged to promote land further, through the design process, to create an urban fabric of streets with many individual plots, mostly terraced housing types that can be built using cost efficient, replicable methods.

Landowners form partnerships with custom housing providers who can deliver high quality homes to a definite standard, timescale, specification and price, which can be reliably valued prior to being built.

Landowners form partnerships with mortgage providers willing to lend money for build costs over a short period, prior to lending on a conventional mortgage at completion.

Landowners are incentivised to grant, say, six month licenses to build to householders procuring the house.

Under this particular self-procurement model, would-be homeowners with adequate incomes to repay a mortgage would be encouraged to enter a self-procurement contract. This could be provided by a private landowner, local authority, third-sector organisation or other land-owning party.

At the end, the owner is left with at least a 25 per cent equity stake in the property (having started with a 5-10 per cent deposit). Given the ‘development profit’ is effectively being transmuted into owner deposit, landowners or planning authorities may wish to impose covenants or other conditions on resales, to ensure that this benefit is passed on to subsequent owners. Alternatively, some of the ‘own build equity’ might be retained in a shared equity scheme with the landowner or other provider – or it could be kept by the owner-occupier. This model effectively replaces the need for ‘the bank of Mum and Dad’ or other equity provider by utilising the development profit.

Custom build – Creating the homes Londoners want

igloo HomeMade™ Homes

We are the only country in the developed world without a thriving custom build sector. Yet the concept flourishes on the continent, where the homes are better designed and more appealing than the mass-produced houses and apartments developers have built in London over the last few decades.

igloo is a purpose-driven developer, funder and partner, which is delivering the country's first large-scale custom build pilot with the Government's Homes and Communities Agency in Cornwall.

The custom build process is simple. The custom build enabler buys the site, gets planning permission (including design codes for each plot), puts in the streets and services, makes mortgages available, and trains a group of home manufacturers (whose house-types comply with the agreed planning parameters whilst offering a range of choice).

The custom builder picks the plot they want. These are sold on a first-come, first-served basis, at a fixed price for plots. Or in the case of apartments, a group of people with shared interests can agree a price and select a home manufacturer to deliver their home. Then, like buying a car, the custom builder selects a home manufacturer, chooses the size of home and customises it to meet their requirements working with the home manufacturer's architect.



Contributors: Jon Sawyer, igloo HomeMade™ Homes; Alex Ely, Mæ / MyHouse; David Rudlin, Urbed; Ben Derbyshire, HTA / Custom Build by Potton; Cany Ash, Ash Sakula / The LightBox House; Geoff Shearcroft, The AOC / LittleBIG House; Ric Frankland, Dwelle; Paul Newman, Potton; Craig White White Design / Balehaus

Once the design is agreed, the home manufacturer does the rest – secures planning permission (in Holland this takes three days!), building regulation approval, and then builds the home. For houses, this takes between 12 and 24 weeks.

Custom build homes are better designed, with larger rooms, more storage, and more environmentally sustainable than the speculatively built house. Evidence shows custom builders stay living in their homes five times longer. This creates more stable communities.

London local authorities have many small sites that could be packaged together for custom build to achieve scale. And national planning policy requires local plans to provide sites for custom build. Local authorities must keep a register of anyone who wants to custom build. The GLA intends to launch a register for the whole of London in autumn 2015 and the Government is legislating to make local authorities provide custom build plots.

To turn custom building into a reality, what needs to happen next is for NLA and policymakers to back and promote custom build to help the critical process of awareness-raising, people interested in custom build to sign up to the local registers, planners to designate sites, mortgages to be made available, and land owners to realise custom build produces better land values, quicker housing delivery and creates better places.

Custom-Build→ Custom Development

Edgley Design Limited

Although we are an architectural practice, we have also acted as a speculative developer, which has allowed us to self-generate projects but also set the agenda and ambitions of these projects.

As developers, we can work to our own principles of value, namely that investment in design and construction is profitable in terms of the higher quality end product. In our experience this is not a mainstream philosophy among small developers. In terms of procurement of buildings, we have found our approach succeeds where we are able to purchase land prior to planning. Value added during the planning process unlocks financing for the construction phase.

This idea seeks to work out how we could create access to this process for the average house buyer, and thus create a new way to build a house.

Our brief

The key issue is that new build residential in London is unaffordable to the average buyer once built, and that much of it – as flats – is unsuitable for many purchasers such as families.

It's possible to self-build a house for less, but the barriers are:

- Difficulty in finding suitable land at a reasonable cost
- Impossibility of securing finance to buy land without planning (and even with planning this is difficult)
- Similarly, difficulty of securing finance for the construction phase

As architects, we get regular enquiries from clients who have the funds to build a house, but do not have a site or access to development finance. They are usually individuals with a passion for design who would put their resources and energy into the creation of quality buildings if given the means to do so.

Concept

The concept is to try to find a way to allow ordinary purchasers to develop their own housing, thus passing the developer's profit to the purchaser, and giving the purchaser control over the design of their home. Put simply, we aim to pass developers' profits to purchasers'. We propose to form an organisation that can facilitate the sourcing of land and the finance, overcoming the barriers to self-development. We like to think of this process as 'custom development' – allowing purchasers

Contributors: Jake Edgley, Ben Kirk, Paddy Perring, Tina Anzinger

to be a part of the development process as well as simply the design process (as implied by custom build).

The purchasers would need to take on some risk in return for the potential rewards – however, there would be an option to return the purchase option to the organisation at any point so these risks would be relatively low.

Process

This organisation could be a company, a JV formed by the end users, a charity, or a housing association. The legal and tax ramifications of each would need to be carefully explored, but, for now, we will simply refer to 'the Organisation'. In whatever form, this would be a not-for-profit organisation, thus creating a social enterprise.

- The Organisation would secure a deal to purchase land, perhaps subject to planning, and would invite purchasers to take an option to buy a unit within the scheme – subject to proof of a mortgage offer that was high enough to cover the anticipated land and build budget.
- The purchasers would not have access to development loans to fund the scheme, so the Organisation would agree to fund the development. The purchaser would pay a monthly 'membership fee' to show commitment up until transfer of title. The contract would remain in place as long as the monthly payments were made.
- Once planning was secured, the Organisation would secure finance to purchase the land and to build the development, using its status as a scale developer to secure funding at a reasonable rate.
- Once the scheme was built, the purchasers would obtain a mortgage to pay back the land and development costs to the Organisation.
- The Organisation would take a fixed project management fee to cover operating costs, but crucially would not take the full development profit – this would be passed to the clients in reduced purchase costs.
- Options that were given up would revert to the company, creating some revenue. The Organisation might also develop a percentage of plots for sale to raise revenue for land acquisition.

There are legal and tax details to consider, particularly concerning the point at which land title is passed to the purchasers. This would perhaps be once planning is secured but before construction, to reduce capital gain tax for purchasers. Initially this would suit small, difficult sites that are less attractive to mainstream developers.

Disco

Ben Adams Architects and Inhabit Homes

Demand for city centre homes continues to rise, pushing young professionals to the commuter zone to secure home ownership. By 2025, due to the aging population, the UK will have a record number of persons who have paid off their mortgage. The imbalance is evident, with the younger generation labelled ‘Generation Rent’ whilst the older generation has equity tied up in their home but a need to draw a living allowance through retirement. Our proposal, ‘disco’ (disparate property equity + cohabitation = disco) proposes that a cohabitation complex can provide benefits for both user groups.

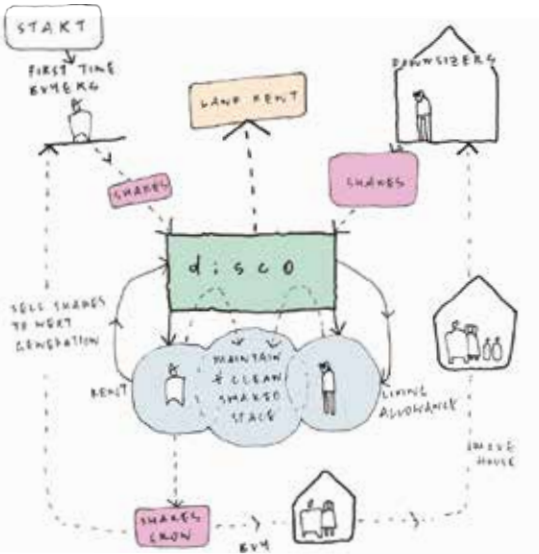
New land, new use class
Only when we decouple land value from construction costs do other measures to streamline construction and reduce developers risk premium become efficient. To be successful, borough councils need to commit to identifying imperceptible sites for what we are calling ‘Use Class C6’. Councils are then encouraged to create new land to be tested as ‘Use Class C6’. This includes: bridges, parks, above railways and existing buildings or between terraces and estates.

Affordability
Decoupling land value provides the opportunity to secure affordable housing through open book accounting with the local authorities. If council land is identified as suitable for a disco complex, the land rent they choose to charge will have a direct impact on the level of affordability achieved.

With disco, one does not buy property but instead buys shares in the disco fund which will gain value above base rate, making it an attractive but affordable investment.

To further increase efficiencies, bespoke elements are limited to ground works or assessment of the building to be extended. A frame of standard components is then erected and panalised infills dictated by those configured by each disco investor.

By operating as an investment fund, disco generates profit to be reinvested in future developments. This allows the transmission of the idea and way of living to available land across London.



Worked example:
A range of variables can be input to this formula to secure a number of ways of life within a zone 1 community.

For the market value of a 300 sq ft unit in zone 1 at £1,000/sq ft = £300,000 value.
Assumption that land forms 35 per cent = approximately £100,000
Construction cost = £140,000
Normal developer profit = 25 per cent of costs = £60,000

In the disco model, land is excluded and developer profit dropped to 10 per cent, due to reduced planning risk and standardised construction elements. Therefore, ‘market value’ of unit = £140,000 + £14,000 = £154,000 plus rental cost of land (£1,000-3,000 per year).

1,540 Shares are sold at £100/share

First Time Buyer
Buys 77 shares: £7,700 (5 per cent)
Pays rent on remaining 1,463 shares to downsizers at 4 per cent of value = £487pcm
Land rent = £100pcm (Assume that rent on the land is 1-3 per cent of value)
Management fee = £100pcm
= £687pcm. Compared to £1,500

Downsizer
Sells home for £1,000,000 and buys 10,000 shares
Lives in one unit: £154,000: 1,540 shares
Collects a 3.5 per cent dividend (after charges) from the rest = £2,468pcm
Land rent and management charge = £200pcm
= £2,268pcm income, as well as their own home

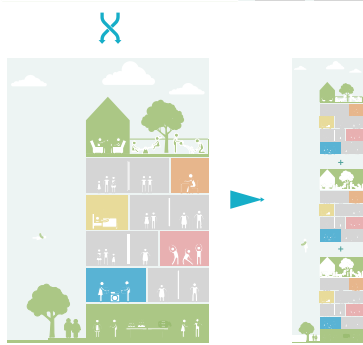
Co-Lateral Living

Tibbalds Planning and Urban Design and Henley Halebrown Rorrison Architects

Proposal: Co-lateral living
Co-lateral Living is a new housing typology, designed to respond to the needs of two sectors of the market: generation rent – who are young, employed, but cannot enter the private housing market due to the high costs; and baby boomers – who are older, have benefitted greatly from a rising property market and are thinking about retiring, downsizing and releasing capital from their homes.

The financial concept
Co-Lateral Living is a not-for-profit company or Trust into which people invest capital. The primary investors are older people who are downsizing and wish to release capital from the sale of their home. These investors (or shareholders) will occupy 50 per cent of each co-lateral home. Their investment will pay for the construction of the housing.

The other 50 per cent of co-lateral occupiers will be younger people, who will pay rent for the space they occupy. Their rents provide the older investors with an income or pension supplement. In return for receiving this income, the older person’s original investment (or share) is gradually transferred to the younger renter.



Over time, share capital will transfer from the older to younger residents. As the younger residents grow older, they will gain a share ‘pot’, and in turn they will be able to receive a rent or pension from an incoming younger generation that will take their place.

When an older person dies or wants to move out, remaining share capital is either bequeathed or sold back to the Trust. If their capital is bequeathed, it would be exempt from any tax burden.

If a younger person moves out, they can leave their accumulated shareholding within the Trust or sell it back to the Trust.

The model assumes that share capital invested or accumulated would only grow in line with inflation, and hence the capital growth currently associated with property ownership would be removed from the equation, making access to property affordable to all.

Design and ownership
The co-lateral home combines a series of well-suited and efficient private apartments with a rich variety of shared activity spaces. The area of the living space in each scenario exceeds London Housing Design Guidance by between 5 and 25 per cent.

As well as private apartments, a typical 30-home co-lateral scheme provides: a 45 sqm rooftop clubhouse (with kitchen), three serviced ensuite guest double bedrooms, 110 sqm of shared workspace (3 sqm per home), a 15 sqm laundry, and a 45 sqm gym and wellbeing centre and a garden.

The community has a rich base of social capital. The mix of generations encourages people to trade childcare for other forms of daily support, and prevents loneliness among older people.

The model is applicable to taller buildings in the inner city, a typical London terrace street, or a low-density chequerboard pattern in the suburbs.

Each co-lateral home is managed by a not-for-profit management and maintenance company, which would be funded through a service charge.

The model assumes the land would be rented, with the landowner receiving a rental income over the lease term. Landowners are likely to be public bodies.

RedefinedLiving

Ryder Architecture

Our concept is to match larger homes with families needing more space. Homes are made available by homeowners aged 50+ leasing their homes in exchange for moving into a RedefinedLiving cross-generational apartment.

RedefinedLiving is simple. By attracting homeowners aged 50+ into spacious, high amenity, cross-generational community-living schemes, we can release a significant proportion of three+ bedroom households across London to those that might benefit more from larger homes.

RedefinedLiving is unique. Homeowners are able to retain their asset, which is managed and let by a centralised public housing trust – the RedefinedLiving Fund. Houses will always remain owned by the homeowner.

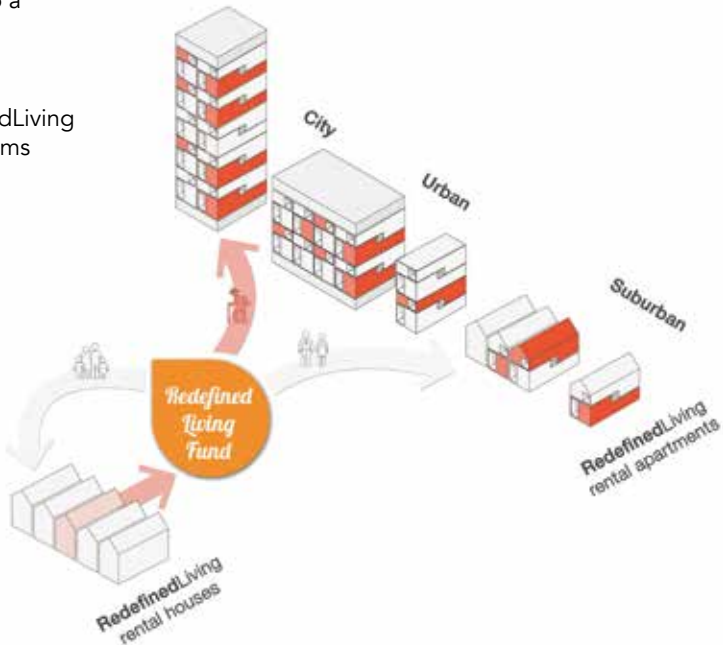
Evidence tells us that many older homeowners would like to reduce their domestic responsibilities and increase their lifestyle quality; yet many do not, due to fear of additional costs, stress and concern about losing their family asset, and poor quality alternative housing.

The RedefinedLiving concept matches families in need of larger housing or individuals who wish to house share with larger properties. These homes are released into the Fund by the owners, who in turn move to a RedefinedLiving apartment.

By attracting homeowners aged 50+, with three+ bedroom properties, into two-bedroom RedefinedLiving apartments, we estimate that 2.25 million bedrooms could be released or created for Londoners.

RedefinedLiving benefits

- Contemporary apartment dwellings built on brownfield land where possible.
- The ability to keep the family home as an asset to sell at a later date for inheritance and equity; it is also possible to move back into the original home.
- Cross-generational community living; inclusive of all ages.
- Potential for rental income from the original home and potentially zero rent within the new apartment.
- By boosting the market with RedefinedLiving rental houses, we aspire to create a more sustainable and affordable wider rental market.
- High quality two-bedroom apartments with a larger than average living space.
- Flexible and adaptable homes which provide terraces and ample storage.
- Maintenance and repair responsibilities undertaken by the RedefinedLiving Fund.
- Access to on hand medical and extra-care packages, if required.
- Exclusive use of high quality facilities and amenity spaces.
- The RLF manages original homes for the benefit of the tenants and owners.



Reinstating Community Living

David Morley Architects

In many London neighbourhoods, particularly within zones 2 and 3, the existing Victorian three- to four-bedroom housing stock has been carved up into one- and two-bedroom apartments. This has created an imbalance in the dwelling mix and a lack of family housing within densely populated neighbourhoods.

Our proposal is tailored towards serving the needs of young people (20-40), people growing old (60-80+) and those with specific needs – such as people with learning difficulties, people with dementia, the physically impaired, and those suffering from mental health issues.

It will create new, low cost, smaller housing units of one- and two-bedrooms, while in parallel reinstating three- to four-bedroom family housing to its original composition, thus creating a greater diversification of units within a given hectare.

By re-evaluating the need and size of garden space associated with many properties in London, we believe it is possible to urbanise suburbia by constructing low cost, smaller modular housing units which are designed to provide affordable accommodation for the young, and alternative and adaptable accommodation to meet the needs of the older generation and those with specific needs.

The location of our proposal is only limited by the overall distance between two sets of back-to-back terraced houses, and requires a maximum development width of 7 metres.



Introducing additional smaller one-bedroom and two-bedroom dwellings on existing land creates surplus supply, unlocking the potential for population movement between dwellings. The elderly gain the ability to downsize from family units – often too large and no longer appropriate to their needs – whilst inhabitants of flats – created by the sub-division of existing family housing stock – also have options to move to purpose-designed accommodation within the same geographic area. This unlocks the potential for existing housing stock to be reinstated as family dwellings as originally designed, or for existing houses to become fully occupied once more thus redressing the balance.

Lower cost housing is reintroduced into the system, increasing supply to match demand. House prices decrease and become affordable to all on each tier of the property ladder; this re-densification increases the population capacity.

We believe it will be faster and more cost effective to produce smaller one- to two-bedrooms units in mass quantities than to fabricate and construct larger three- to four-bedroom units, which will also require more space, thus exacerbating the current challenges.

Modular construction is our preferred route to mass produce the new dwellings and ensure a consistent high quality approach.

We envisage prospective tenants reimbursing existing house owners for a proportion of their existing garden land on which to build. This approach will require Government and each of the London boroughs to agree and implement a fixed regulated rate for the land to prevent the rapid rise in land cost and mitigate against the current challenges of property hyper-inflation in the capital. The cost of building efficiently, alongside regulated land cost, will ensure all new housing remains affordable for the majority.

Shareditch

Stephanie Adebayo and Lavanya Kumaran

Shareditch is the next iteration in the development of the nuclear family. This is an experiment into a new kind of living in which young people can reawaken the generational benefits of having family and companionship with the elderly for a reduced rent.

With an aging population in which generations are becoming more and more disconnected, Shareditch encourages and promotes friendships that can bridge that gap between the retired and those about to start their journey through life.

An elderly person aged 55 and above can return their larger three- to four-bedroom council house – which has now become empty since the departure of their families – to be re-allocated to a young family on a council house waiting list, and in turn receive an apartment with three other younger residents.

Shareditch has been designed to promote and encourage the collaboration of multiple generations. A special emphasis and importance has been placed on the elderly person within this scheme, under the premise that they will be there for the longest, with it being their permanent residence that they can retire into. It will have a fully equipped apartment with an ensuite bathroom and separate living space allocated for them; younger people will have rooms with only a bed, desk, sink, microwave and an ensuite.

One of the main social consequences of an undersupply of housing identified in research is the stifling of young peoples’ ambitions for their lives and careers.

Research shows that the undersupply of housing is affecting household formation; in particular, it is leading to more young people living with their parents for longer. This has had a negative impact on young people’s ability to fulfill their potential. IPPR’s polling has showed that over a quarter (26 per cent) of young people living with their parents said that their current housing negatively affects their ability to achieve life goals that are important to them. For some, this meant that they were not able to force their own identity.

Shareditch allows the young person to move out of their parent’s home and begin to forge their own identity and take on real responsibilities within a home. Although they are making a sacrifice by living with an elderly person, the location and a reduced rent will act as further incentive for them.



TONY: Together Old’N’Young

BR+W

TONY: Together Old’N’Young

No, not Tony Ferrino, Tony Blackburn or even Tony Blair. TONY is the latest initiative from developers BR+W, designed to bring younger and older people together in bustling town centre locations. Their needs are surprisingly similar: two-bedroom homes in highly serviced blocks with buzzing lower floors and tranquil, sizeable balcony gardens. BR+W noticed that older people were staying in their four-bedroom family homes, even when they couldn’t manage any more. New research has shown that 41 per cent of older people actually want to move out, but they are prevented from doing so by the lack of homes suitable for their needs.

What is TONY?

TONY is an inter-generational high-rise residence designed for town centre locations in London, close to stations and shops. The lower storeys of the building sit in the streetscape and make a lively and neighbourly ‘threshold’, containing business, café and social uses. Older and younger residents live floor-by-floor above this level, sharing communal terraces and a top-storey roof garden. Older residents are drawn from the local area and benefit from increased disposable income and a maintenance-free property. Younger residents are selected via interview, renting at sub-market rates, and giving time and skills to their older neighbours.

Where is TONY?

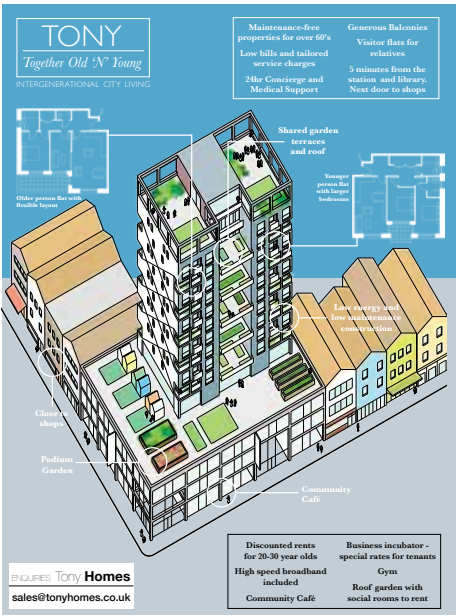
TONY properties are located on small ‘town centre’ sites in London’s identified opportunity areas and town centre densification areas. They use council land, as part of a ‘whole portfolio’ approach to public land development. Land payments to the local council go towards new affordable lower-rise family homes in area.

Who is building and managing TONY?

TONY is a concept funded by an institutional investor for long-term rental at market and sub-market rates. It is managed by a specially formed management company, which is a wholly owned subsidiary of a housing association. It is built on a long lease on public land where the freehold is retained by the council.

What does TONY solve?

- Large homes are released for families who desperately need them.
- Older people release a monthly income.
- Older people become less isolated and are close to key amenities.
- Older people keep their family asset for later sale.
- Younger people are able to save for a deposit.
- Younger people can volunteer their time and skills to support their neighbours.
- Younger people receive entrepreneurial support.
- Young people bring creativity and vibrancy to the town centre.
- Two sets of marginalised Londoners are housed together.
- Older and younger people are highly visible in the town centre.
- Older and younger people live together and join forces and skills, promoting inter-generational understanding.
- Old and young benefit from secure entrance and fully managed building.
- Flexible layout to suit a variety of sites.
- Costs to local authority reduced through efficient delivery of services.
- Land is used efficiently.



Let’s Unblock the Market – A new rental model for London

Assael Architecture

The market is changing

There is a major shortage of housing supply in the capital and the private ‘for sale’ market is unable to address this. Many people are facing huge rental sums to gain access to the diminishing number of suitable dwellings available for rent.

Unblocking the market will be achievable through a combination of small-scale solutions but also by radical change. Our radical proposal is that residential use should be permissible on all of London’s brownfield sites, regardless of their allocated land use – i.e. encouraging dual uses as a general rule. An expansion of the emerging ‘purpose-built, build to rent’ sector, backed with institutional investment, will be necessary to meet the huge surge in demand.

Long-term investment

Build to rent, as an alternative tenure, encourages institutions to invest in residential development – a necessity for it to succeed due to the large up-front costs. The development is not sold, but retained by the investors who act as landlords, renting out the residential units, and managing, operating and maintaining the entire building. The clients’ interests therefore lie in the long-term quality of the finished product.

The funding model is sustainable over the long-term. The rental income pays for the build and operational costs of the building, and after a period of payback, generates profits for the investor.



The benefits of build to rent

The key to a successful build to rent development is attracting and retaining renters to secure investors’ long-term returns. As such, dedicated residents’ amenities – for example on-site gyms, cinemas, crèches and business lounges – are incorporated into the design, with an aspiration to encourage social interaction and to help foster a greater sense of community.

Simultaneously, a supporting mixture of commercial and social land uses creates a sense of place through employment opportunities, active frontages and animation of an enhanced public realm, making the build to rent model attractive to local authorities.

Within the private dwellings themselves, homes can be designed for sharers with equal-sized bedrooms, each with ensuites, and open-plan living. Alternatively, family homes may offer extra storage, larger living areas and flexible rooms for a study, nursery or spare bedroom.

Procurement

Build to rent investors are interested in reducing construction timescales to improve capital returns by achieving a rental income from an earlier date. This, in combination with the standardisation previously mentioned, lends itself to modern methods of construction (MMC) such as prefabrication and offsite assembly, which may reduce the project timeline by up to 40 per cent.

With quality assurance processes in place in the factories, building quality is improved in comparison to on-site work. Therefore, over the lifespan of a building, the maintenance costs of a volumetric scheme should be significantly lower than that of a traditionally constructed building.

Construction

High-quality dwellings that meet the relevant London Housing Design Guide and Lifetime Homes standards can be achieved from a series of efficient module sizes. Prefabricated modules can be left open-sided to form larger dwellings or duplexes when combined on site.

Modules would arrive on-site fully fitted-out with insulation, interior linings and decorations, sanitary fittings, kitchens, wiring and plumbing – a factor which is claimed to be one of the most significant cost-time benefits of this form of construction.

Room To Grow

HLM Architects

The aim of Room to Grow is a private rented model which provides:

- A real alternative to the established culture of home ownership.
- Multi-generation, inclusive and integrated communities.
- Flexible homes to adapt to changing needs through life.
- Greater variety of lifestyle choices, especially for the elderly.
- Housing choice to the elderly and other user groups.
- Reduced care needs for the NHS and Social services through fostering community spirit and care.
- Options to alleviate the issue of under-occupancy of the elderly in larger homes.
- New typologies for dense urbanity – low rise/high density.

We propose that flexible, multi-generation housing – delivered through the private rented sector – could not only address the changing needs of a complex society, but create the opportunity for integrated managed communities.

We have considered two main building typologies – lateral apartments and a townhouse – to provide absolute flexibility of space through the simple connection and separation of various living spaces. We have also maintained a particular focus on the elderly. While downsizing to smaller accommodation provides a short-term solution for some, it is important to consider the ongoing, changing needs of the elderly. We must ensure the environment can easily adapt to provide access to care and support, while addressing issues of isolation, social networking and property management as people’s dependency levels increase.

In 2011, only 3.5 per cent of older Londoners (aged 65+) were private renters. But, as the number of older people in London increases, more of them can be expected to move into or remain in the private rented sector.

The proposal

The proposal addresses the issue of changing need requirements of the elderly through the provision of interchangeable flexible housing types, which can adapt to continually changing needs. Connecting four different home types allows us to provide a variety of different elderly care needs, as well as a broad range of other generational requirements:

- Young professional/Studio
- Young Couple/1-bed
- Small family/2-bed
- Large family/3-bed
- Independent elderly/1-bed
- Small family with ‘granny annex’/2-bed with annex
- Large family with ‘granny annex’/3-bed with annex
- Semi-dependent elderly/1-bed with warden
- Dependent elderly/1-bed with attached independent carer accommodation

The proposal explores how these types might be applied within various urban typologies, looking at different approaches to levels of density and opportunities for community integration. PRS tends to create greater opportunity for large communal areas which encourage opportunities for chance interaction and community. Due to the flexible nature of the proposal, the mix of users is likely to be varied – more likened to the type of community you might expect in rural villages. Independent elderly people who would otherwise feel cut off from society in large under-occupied homes would have the opportunity to form relationships with neighbours.

The rising numbers of older people, and the pressures on health and social care services, means that it is vital to create new approaches to stimulate increased housing options that support active, connected and independent lifestyles amongst the ageing population. The proposed approach creates the opportunity to shift provision from residential to more independent living models.

TOWNHOUSE CONFIGURATION



Connect

Lipton Plant Architects

The proportion of people living in private rental accommodation has doubled overall since 2000, but for those in the 20-39 age bracket, it has jumped from 20 per cent to 50 per cent. London rents now average more than half of typical take-home pay, marginalising many, and leading to poorer quality, cramped accommodation, that is often long distances from workplaces.

A number of forward-thinking organisations seek to address supply issues and opportunities with new models for affordable housing. The developer Pocket focuses on providing affordable starter homes. Their model is to deliver compact but well-designed apartments to ‘middle-income Londoners who are salaried out of social housing and priced out of the property market’.

Shared spaces

The Connect design aims to build on the principles of developers like Pocket and their compact starter homes, whilst utilising the potential of shared resources. We set about to integrate compact private habitats with relatively generous shared spaces, and have created connected modern units – for sale or rent – which future residents can be proud to call home.

Sharing facilities reduces spatial pressures to fit and squeeze every function into a private dwelling. We are offering residents more generous and fun living spaces, and there is a fundamental net saving on overall space. By achieving greater density – without meaningful loss of privacy – we address the much needed increase in supply, and allow volume building which will be so vital to London’s housing future.



Build to Rent – Making it work

Stanhope and Savills (UK)

London’s planned housing development is in a range of prices that is misaligned with the distribution of incomes of existing households in the capital. There is the potential for the purpose-built private rented sector market to address London’s ‘mid-market’ housing need, and broaden the range and number of homes being delivered in London.

Why/who: the key demand issue

Demand in this sector is led by two key drivers: (i) Investor-led demand: London’s private rented sector is expected to continue its rapid growth. The attractiveness of this sector for the city is confirmed by the investor market, which has currently c.£30billion of equity available to invest in dedicated build to rent product over the next five years. This is potentially enough to build more than 150,000 homes.

(ii) Tenant-led demand: the inability to access home ownership, alongside a growing population and limited social housing delivery, has left the private rented sector to absorb the pressure. Since 1991, the private rented sector has grown at an increasing rate during each subsequent ten-year period, reaching 860,000 households in 2011 (26 per cent of households). While it has still not reached the same size as in 1961 – when it housed around 1.2 million households (45 per cent of households) – it appears likely to reach this number of households by 2021.

In London, the existing private rented sector is dominated by people under 35 years, comprising 50 per cent of the market. In a recent survey, tenants revealed low expectations of a market currently orientated around independent landlords. However, if you look at what people are willing to pay extra for, it is clear that tenants are becoming more discerning, and it is easy to see that as professionally managed blocks come to the market, expectations among renters will grow.

Who will live in these homes?

- Young professionals – the under-35s continue to dominate the private rented market. We expect that pattern to continue.
- Young families – there has been a surge in the 35-44yrs market from 2001 to 2011, and this could lead to a very real rise in the number of families renting.
- 55yr+ homes – there is the potential for build to rent product to serve this increasingly important market.

What / where: the proposed physical solution to meet demand

For both tenants and investors, there are certain needs and wants that are essential to consider when deciding on the most appropriate solution to this problem.

What tenants want:

- Location – close proximity to transport hubs.
- Flexible living – product appropriate for their current needs.
- Security – a safe place to live.

What investors seek:

- Scale – to deliver efficiencies and economies of scale for service provision.
- Supply of product – directly or via developers and house builders.
- Sufficient returns.

Therefore, it is essential that we support the growth of the private rented sector and encourage its transformation into a more structured and professionally managed tenure that can meet the needs of ordinary working Londoners.

Capital Project

The Hylozoist Union

The vision

Not cramped shoe boxes. Not a city filled with vacant safe deposit schemes. Instead, high ceilings, rooftop gardens, micro-generation of power and the benefits of renting with the capital gain of owning.

The problem

You are a young person, and you need a chance to generate the capital required to put a deposit on a house, or to start a business. Your job takes you around the globe, and you enjoy the community benefits of sharing, but long for your own high quality living space. What can you do?

You are an older person, who is looking for the social support of a community. You need less space, and no huge financial burden. You do not want to be corralled into living only with your demographic. Why shuffle off to Bournemouth?

You are a developer, looking to get into the private rental sector. You need consistent returns, manageable risk and ideally an international market spread. How can you access the rental return on all those buy-to-let schemes you are building?

Houses do not suit us anymore. We need to live collectively, and generate wealth for all. We need a new business model to turn the housing market on its head.



Design and product

You wake up on Saturday and want to spend all day watching movies. Instead of hiding in your bedroom, you have your own private living room. You spend the summer months on the garden roof terrace. You share a kitchen with a maximum of two other people, and you can vet them before they move in. You can have a dinner party in your own living area. Your space is your own. Why go back to a cramped bedroom in a five-bedroom house in Hackney?

How it works

The renter moves in with a deposit of £10,000, and pays a capped rent, comprising both rent and a contribution to the fund that will eventually be theirs upon vacating. After five years, they move out with £50,000, comprising the amount they have paid in extra to their rent, to enable them onto the housing ladder.

Funding

This housing model gives large investors, such as pension funds, access to the private rental sector. The key investment in this model is the value in the land. Land would be purchased by investment bodies, and a high quality building would be constructed with an adaptable building configuration. This asset would remain for the investors, who would also cover the cost of construction and receive revenue from the private renters who would occupy the property.

Summary

We need the benefits of living communally, but with beautiful private spaces. We need the freedom of renting, but not to be crippled by high rents that curtail our futures. We need a model that provides access to the private rental sector for investors, without inflating the market.

The Capital project is a series of beautiful, adaptable buildings built all over the world – that gives investors access to the private rental sector while not tying up highly valuable land. A whole new business model of shared accommodation that will change the world. A London where we can all live well.

Contributors: Simon Pitkeathley, Camden Town Unlimited; Martin Sagar, Sheppard Robson Architects

Collective

Camden Town Unlimited and Sheppard Robson Architects

This proposal will improve the speed, scale and quality of housing supply by accessing alternative finance methods and empowering new types of organisations to deliver housing and employment space. ‘Collective’ will target existing sites, including those owned by local authorities, and develop a mixed-use building.

The development will be paid for using social finance to build homes exclusively for the private rented sector on the upper floors. The rental income from the PRS homes will be used to pay back the social finance and to subsidise co-working and retail spaces on the lower floors.

What/where

As a leading member of a BID (business improvement district), Camden Town Unlimited (CTU) is leading the way in city centre management.

Our proposal is to carry out mixed-use development on existing sites, including those owned by local authorities to intensify growth in town centres. The two most obvious elements to stimulating local growth are the provision of homes and jobs. Both can be supported by a burgeoning private rented sector (PRS) via this proposal, and facilitated by an enlightened local authority (a sister guide will be made to support local authorities help home builders) on their own land or by purchasing directly from the private sector.

Our proposal is specific to Camden High Street but the model can be applied across London.

How

Private renting is generally seen as the poor relation to home ownership. We want to reverse this trend. PRS development is particularly suited to a town centre development in Camden because it allows CTU to retain control of the residential and non-residential elements of a mixed-use scheme, and establishes CTU as the landlord which addresses issues of fragmented ownership.

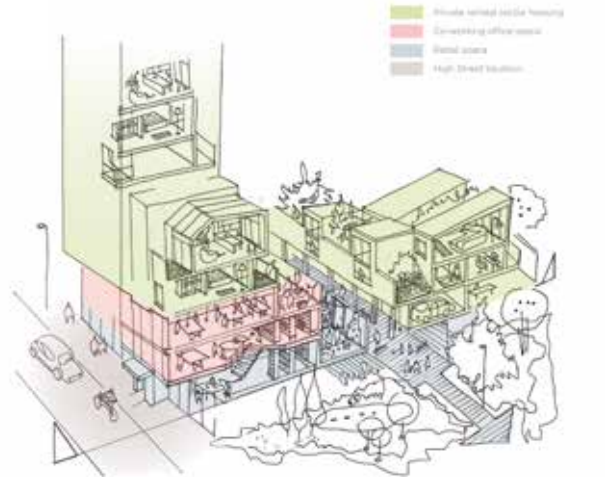
The proposal will create significant strategic added value, encouraging new types of delivery bodies and alternative finance methods to build houses. Upon completion, it will provide a blueprint to empower existing BIDs, community partnerships and neighbourhood forums to deliver housing solutions.

Planning and land

In light of the current sale of public assets, the proposal makes use of this ‘opportunity’ and ensures their value is retained within the community via new types of housing suppliers (ie, BIDs) rather than traditional developers. This model would mean local authorities could exchange a lease on the section of a redeveloped publicly owned asset for a longer-term revenue stream rather than an instant capital gain from a site sale.

Finance

In recent years we have seen student accommodation become an institutional commodity because investors can achieve scale in one building driven off net operating income. Our proposal mimics this operational model and is a first-of-its-kind mixed-use development that is funded via social finance, meaning the proposal can be carried out by community partnerships, charities, neighbourhood forums and BIDs, like CTU. The proposal has received financial backing by the Mayor of London and Corporation of London providing more than £50,000 to finalise a financial package to purchase a pilot site.



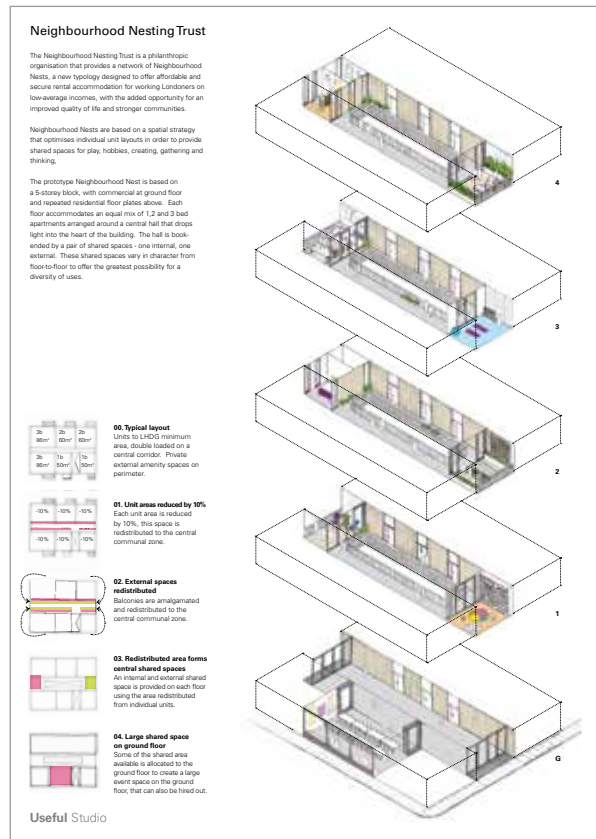
Other ideas...



'Homes for the Homeless' by James Furzer addresses the 750 people who sleep rough in London on any one night, with a parasitic sleeping pod that can be attached to the side of any building or structure.



'In God we Build' by Aaron Ho speculates on a self-assemble housing community initiated by the Diocese of London, prioritising the ethical and affordable production of bespoke dwellings.



'Neighbourhood Nesting Trust' by Useful Studio is a philanthropic organisation that provides a network of Neighbourhood Trusts, a new typology designed to offer affordable rental accommodation for working Londoners on low-average incomes, with shared facilities.

Introduction

What to build and how to build it are two important areas that need to be rethought if we are to solve London’s housing crisis. Pressure on affordability, particularly for the young, has sparked a raft of proposals for new housing typologies providing smaller or temporary units. Like other proposals in this chapter, these tend to be founded on innovative technology and factory prefabrication to make building them faster and cheaper and of a higher quality. AECOM’s ‘Rational House’ is one exciting example of a new generation of factory-built homes.

Offsite technology is also being touted as a way to make housebuilding more palatable to local residents by making the process far less disruptive. It’s fair to say that system or factory building has always held allure for architects, but has had little up take in the market because of high costs and poor public perception. Skills shortages, improved quality and rising costs of labour are all tipping the equation more towards factory prefabrication, with some new systems already starting to appear on the market or built as prototypes.

This includes ‘NuVenture Homes’, based on factory built standardised house types and a lightweight foundation, thus enabling infill sites, garage courts, underused amenity spaces and the like, to be financially and logistically deliverable.

Temporary is another buzzword amongst our submissions, either in the form of temporary structures or more permanent structures that provide what are seen as ‘passing through’ rather than lifetime homes. ‘Umbrellahaus’ and ‘Spacebox’ are two ideas making it into our 100 list: they propose erecting moveable homes on leasehold land as a quick, short-term solution.

Meanwhile Rogers Stirk Harbour+Partners is working with the YMCA London South West to build an economical and innovative housing solution for those who have previously been living in hostels. The new product, ‘Y:CUBE’, provides one-bedroom studios for single occupancy. Each unit is constructed in the factory with services already incorporated. ‘The Helix’ is another solution being put forward along these lines – to provide a ‘new rung’ on the housing ladder in the form of a ‘helix’ shaped community of one-bedroom starter apartments formed from a repetitive series of prefabricated modular units in a helical spiral accessed by a ramped walkway.

Another important strand in this collection of ideas is flexibility that allows homes to adapt to different scales, contexts and tenures. ‘The Infinite House’, for example, is constructed from single fully-designed modular units that can accommodate a micro-flat or connect to form one-, two-, three- or four-bedroom units on one or two levels. ‘Finch Buildings’ from the Netherlands also makes a virtue out of flexibility.

It was also the concept of flexibility that caught the judges’ eye with a submission from dRMM, whose ‘Wood Blocks’ idea proposes a shell and core typology for housing in the same way as is the norm in commercial. By excluding internal fit-outs, the cost (to the developer/house-builder) of building new homes can be reduced by roughly up to 40 per cent, and the duration of construction is reduced by 25 per cent – delivering faster, cheaper housing. Just as importantly, this typology gives Londoners more autonomy in creating homes they really want.

Winner
Wood Blocks
dRMM Architects

It's 2025 and the housing crisis in London is no longer a crisis. A revolutionary new housing typology has been instrumental in speeding up the delivery of new housing and making it affordable to people of all ages and incomes, including the self-employed. The typology is shell and core residential – adapting a tried and tested development model from office buildings to housing. By excluding internal fit-outs, the cost (to the developer/house-builder) of building new homes was reduced by roughly up to 40 per cent, and the duration of construction was reduced by 25 per cent – delivering faster, cheaper housing. Just as importantly, this typology gave Londoners more autonomy in creating homes they really wanted.

How it works
Shell and core residential is built in two phases: phase 1 includes the external envelope, party walls between flats, cores and common areas only; phase 2 includes all internal fit outs, and is undertaken by the home owner. The developer/housebuilder delivers flats which are 'ready to camp in': they satisfy Building Regulations including thermal/acoustic insulation and fire regulations, and are fit to live in from day one. This provides maximum flexibility for new owners: those short of money can fit-out their flats over time, according to their finances; keen DIYers can choose to do much of the fit-out themselves, which will also keep costs down; and those short of time can choose to have the entire fit-out carried out by small contractors whom they appoint. It also means maximum flexibility in layouts: a single buyer might start off with a huge studio flat, adding partitions to create more rooms as and when needed – for example, when starting a family or to rent out a spare room.

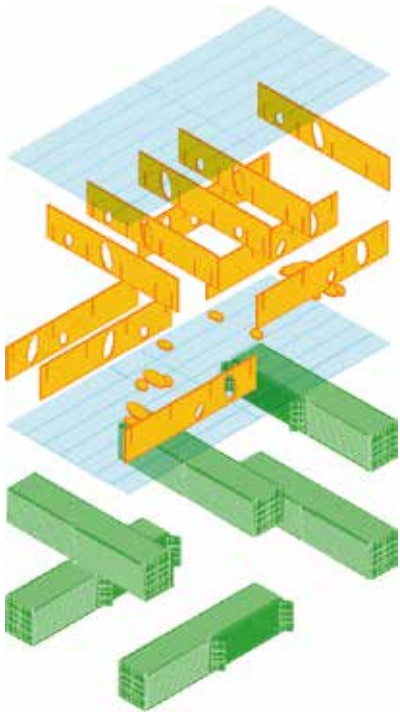
How it was made possible
The biggest obstacle to this typology becoming widely adopted was financing: banks were initially reluctant to give loans for shell and core residential developments as there was no clear market precedent; mortgage providers were equally hesitant. As was the case with office shell and core, it took some early adopters to forge the way. An enterprising developer/co-housing group found an angel investor who was willing to fund a groundbreaking scheme.

Unsurprisingly, the development was a huge success with buyers from the creative industries, attracted not only by the lower prices of these 'self-finish' apartments, but also by the opportunity to create a living space ideally suited to their needs and style. Gone were the soulless, identikit developments of old – with their value-engineered finishes and squeezed layouts – replaced instead by inhabitable blank canvases. And, as so many London neighbourhoods demonstrate, where the creatives go, bankers and developers follow. Once this scheme demonstrated market demand/value for this new product, lenders were only too happy to fund construction and provide mortgages to buyers as this opened up new markets for their financial services.

This first development, occupied and 'finished' by a group of creative buyers, became a landmark scheme.



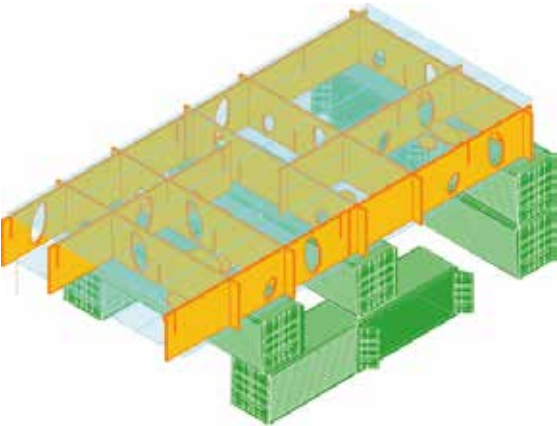
Engineered timber can quickly and safely produce sustainable developments



Quickly assembled, the units are ready to camp in. Over time, residents can add in partition walls.



Mass produced, prefabricated pods form a kit of parts that customise the unit with significant cost savings.



Finch Buildings

Finch Buildings BV – the Netherlands

Our company name derives from the biologist Darwin and the finches he found on the Galapagos Islands. These finches were extremely well adapted to different circumstances. With his evolution theory based on these adaptations, Darwin changed the world for good. We use this theory on buildings.

Finch Buildings creates evolutionary wooden buildings which adapt to their surroundings and can hold different functions. We also construct transportable buildings, which are truly ‘plug and play’. The highly adaptable modules prevent a future need for new buildings. Buildings can grow or shrink over time and modules can be linked or unlinked to create larger or smaller floor areas.

Finch Buildings’ modules are made of solid timber, which is renewable, stores CO₂ and provides a healthy indoor climate. Finch Buildings is circular: everything is designed with a new life in mind and can thus be re- or up-cycled. The modules operate solely on electricity, which comes from renewable sources. Smart technology and excellent isolation makes the modules highly energy-efficient.

Our fight against climate change

In many different ways we’ll reduce greenhouse gas emissions and combat climate change. We consider this the most important fight of this century. Here’s how we do it:

- 1. CO₂ buffering:** Every module is made from massive timber, which is a CO₂ buffer (20 tons per module). All the trees we use, we’ll plant back and the wood is certified (FSC and/or PEFC). Europe’s forest will even grow due to our wood use.
- 2. CO₂ emission savings:** Because we use wood as a constructive element instead of concrete or steel etc. with very high CO₂ emissions, we save an additional 20 tons CO₂ per module.
- 3. Energy efficiency:** Our modules are very energy efficient because of smart construction, high thermal insulation and smart technology.
- 4. No fossil fuels:** Our modules don’t use any fossil fuels – they are electric and de-central in their operation.
- 5. No harmful substances:** We don’t use any harmful substances during production or operation.
- 6. Circular design:** The module itself is re-usable and has many different lives. It’s built larger and better than regulation requires, in order to make sure we can give it many lives over time without the problem of not meeting requirements. If the modules are, for some reason, no longer appropriated for use (after 50, 100, 150 years), we can harvest the raw materials and reuse them. Everything is build to be separated easily and without harming the raw materials. For example, we’ve not integrated the electricity canals in the wood itself. Instead, we used a ‘double’ floor for the electricity distribution, filled with sand that can be altered easily.



Grow London!

Waugh Thistleton Architects

To solve London’s housing crisis, we must create a future building stock that is healthy and habitable. Our heavy dependence on concrete construction, however, is set to undermine national efforts to combat climate change. We propose that engineered timber is placed at the forefront of construction, addressing our current and future needs. Our system provides a scalable housing solution, up to 20 storeys, for varied sites, including those for which conventional development is not feasible. The housing demand must be seen as an opportunity to develop a new sustainable prototype to improve the quality of urban living.

The current carbon cost of housing

Meeting housing requirements must be considered alongside the major issue of our time: climate change. Approximately half of UK carbon emissions result from the construction, or use, of buildings. The industry focuses on regulations for energy efficiency, delivering projects with ever-lower operational energy. But, this means the embodied energy of a structure – which is unregulated – has become increasingly significant. Construction materials now make up around 50 per cent of a building’s entire carbon footprint.

Construction is dominated by concrete, with billions of tonnes produced each year. The manufacture of a tonne of cement produces a tonne of CO₂, making this one of the most polluting processes we undertake. If we were to assume our housing target would be met entirely with concrete construction, the CO₂ emitted would make it impossible to reach our goal of an 80 per cent reduction in emissions by 2050.

Timber, the original building material

The growth of trees absorbs CO₂ from the atmosphere – acting as the total antithesis of concrete and steel production. A tonne of CO₂ can be stored in a cubic metre of timber, which, when used in construction, creates a carbon sink.

Engineered timber products are prefabricated components produced under factory conditions. It is capable of immense structural feats, being four times stronger than steel, kilo for kilo. The achievable heights and spans make this the exemplary construction material of the future.

The on-site construction of these lightweight structures is quick, clean and easy, undertaken by small skilled crews with mobile cranes. This keeps erection times down, keeps impact on neighbours to a minimum, and avoids the cost and concrete inherent in massive foundations. A 15-storey building can be completed in just nine months.

Conclusion

Embodied energy must be quantified alongside operational energy and incorporated into BREEAM ratings and building regulations. Councils should emulate Hackney’s ‘Timber First’ policy, ensuring that architects are asked to justify their use of carbon-intensive materials in planning applications. Educating the industry as a whole to use and understand the material with its implications on programme and procurement is essential to highlight the advantages of timber construction.

The more commonplace and accessible this method becomes, the more cost-effective and user-friendly timber construction will be. We need to ensure the mainstream adoption of carbon-free construction across our city to successfully tackle the crisis in housing need and the plight of our planet.



A Housing Solution with Legs!

Urban Space Management

We believe that there is a great deal of space available in London if one knows where to look. In particular, we see underutilised space above nearly every local authority car park and storage area. Using our innovative modular design solution based on up-cycled shipping containers, we can construct attractive, low-cost housing on top of steel pillars. This leaves the existing space underneath undisturbed and creates much needed affordable accommodation for London’s growing population.

At Urban Space Management, we have the expertise and experience to roll out the large-scale provision of quality, low-cost housing infilled into these small pockets of land. This housing will be produced rapidly, with minimal disruption and without straining the public purse. This solution will work if local authorities can be persuaded to meet us halfway, and open a dialogue regarding the development of the unused land that exists above so many of the sites they control. We look to the NLA and the Mayor of London for this assistance.

Design

Our buildings are made using shipping containers as building blocks to create a strong, lightweight structure of up to nine storeys in a range of configurations, from the functional to the avant-garde. Because of their lightness and rigidity, they can be built on pillars to create new space in the air or form the pillars themselves, over which roofs can be erected to create larger communal spaces.



© Cartwright Pickard Architects

Construction

Our construction takes place off-site, and we can prefabricate many units at the same time which keeps our costs very low. Our last ten projects cost approximately £100 psf, including groundworks, installation and shell and core fit-out, which is highly competitive.

Funding

Innovative forms of funding are necessary to reach the scale of construction that London needs. Our solution is to bring land, demand and revenue streams into a mutually beneficial structure which can unlock the pockets of land we need. Initially, we plan to construct affordable housing units above unused pockets of local authority land. We would then pass the management and ownership of the apartments to a Housing Association who would pay us for the construction. The Housing Association would then receive all of the rental income (underwritten by the government in the form of housing benefit) for a predetermined length of time – perhaps ten years – after which it would begin to pay a ground rent to the local authority that originally provided the land.

Y:Cube

Rogers Stirk Harbour + Partners and YMCA London South West

Y:Cube provides a genuine alternative to the private sector rented market, providing tenants – particularly young people – with a stable environment where rents are set at around 65 per cent of the market rent for the area. This medium- to long-stay, low-cost accommodation allows them to improve their skills through training, education and volunteering options, while still able to pay their rent.

Designing Y:Cube

Y:Cube is an innovative housing concept providing self-contained units that offer affordable housing for single people in need of accommodation. The Y:Cube units are 26 sqm one-bed studios, for single occupancy, that arrive on site as fully finished units. Each unit is constructed in the factory with all the services already incorporated. Therefore, the water, heating and electricity can be easily connected to existing facilities or to other Y:Cubes already on site. This ‘plug and play’ approach results in a modular, demountable system of apartments that are perfectly designed for brownfield sites.

Each unit is constructed from high quality, eco-efficient materials (primarily renewable timber). The factory conditions in which the pods are assembled ensure tolerances of 2mm, creating accommodation that is so well insulated that they require little or no heating, even in winter months.

The units are located in scalable clusters (typically between 20-40 units), on sites that can be bought or leased for as little as 10 years. The accommodation can be owned and managed by housing charities, registered housing providers or local authorities. When located on leased sites, at the end of the lease period, the accommodation may be removed and relocated onto another site.

Through this unique design and construction method, a Y:Cube development is not only extremely affordable to build but can be delivered just 12 months from an initial enquiry. This is far quicker than more traditional methods, and as such, Y:Cube represents a genuine, scalable solution to the housing crisis – stimulating massive interest in London and elsewhere.

Rent will be set at, or below, the local housing allowance for a one-bedroom flat, making the accommodation accessible for people in low income employment or who are training or volunteering in order to get on the employment ladder.

Financing a Y:Cube Scheme

Y:Cube has been designed so that a capital grant is not required. All capital costs can be recovered from the rental stream, charged to the tenants and payable within as little as 10 to 15 years.

Planning for Y:Cube

Y:Cube housing is not designed to be a life-time home. The scheme is with a specific use of providing medium-stay accommodation, and as such can be exempt from local authority housing space standards. Schemes can be classed as ‘semi-permanent accommodation’ although permanent planning applications are submitted. This principle has the support of the Greater London Authority and has been confirmed via a successful planning application for the first UK scheme in Mitcham, London, which completed in September 2015.



Spacebox – Movable, stacked homes

Gainsgrove Limited in partnership with Cocon BV

Parcels of land, large and small, lie idle throughout London – pending site assembly for large schemes, on the margins of transport infrastructure, or awaiting planning consent. Such sites are frequently utilised for car parking, storage or occasional events, with many lying empty at night and weekends. Many of these properties could be used for movable, stackable housing, while retaining car parking or other uses at ground level.

Local authorities and Government have ample land resources which may not be readily sold in the near future, but which could be used in the short-medium term to alleviate housing pressures. Conversations with private owners indicate a variety of reasons why idle land is not being used more intensively – such as land remediation, restrictive covenants, financing difficulties, and personal circumstances. Permanent construction would require a commitment of resources which may not be feasible for individual land-owners at a given time. Long-term plans may be in conflict with short-term needs. Many of these issues can be overcome with movable, stacked housing generating short-term revenue while leaving longer-term options open.

Solution

Erect modular, demountable housing on marginal land to alleviate pressure for emergency and short-medium term housing. Factory-built, movable housing units have been constructed in several countries. The most popular applications are single person and student accommodation, and for hospitality, key-worker and emergency housing.



Modules can be erected as single studios, or they can be inter-linked to create multi-room apartments. Modules are lighter than conventional buildings and do not require deep foundations, and can be placed on land that would otherwise be difficult to develop due to contamination, with appropriate safeguards.

Finance

The cost of construction of modular housing to building regulations standard starts at approximately £1,150 per sqm (subject to project specification) – comparable to, or slightly below, the cost of conventional housing.

Housing modules are built for rent with the cost of erection and capital depreciation spread over the lease term. Housing modules have a residual value at the end of the lease and may be relocated or sold on to other users.

Benefits

- Landowners receive a new source of income while keeping long-term options open.
- Local authorities relieve pressure on their housing budgets, utilising unused land while retaining other long-term options.
- Housing charities have a new, quick response to emergency housing for key target groups, and one which has the potential to recycle modular units at considerable saving.
- Tenants get new, well insulated, thoughtfully designed homes with ‘own front door’.

Key elements

- Landowners willing to enter into a master lease – minimum five years, preferably 10 years +.
- Lease-purchase agreement for housing modules and related infrastructure, using charity or social landlord(s) willing to take an operating lease and manage administration.
- Finance providers to fund operating and finance costs and depreciation, secured against operating-leasehold income.
- Local authorities willing to encourage specific provision for movable housing on underutilised land.

Modular Mobile Housing

Use Architects

Mobile modular housing (MMH) is a flexible turnkey system of self-contained, volumetric, pre-made housing units, specifically aimed at resolving the chronic shortage of fast, affordable, sustainable start up homes for the youth and key market sectors.

We partnered with Cloud 9 Homes to buck this trend at the onset of the last recession, seeking green field space to construct their range of sustainable volumetric eco-homes. Initially installed as a test home at Cornwall College Science Department, the first prototype two-bedroom 65 sqm £98,000 unit returned impressive energy consumption figures of circa £30 annually for heating and £500 annually for total energy consumption. These figures were achieved via a strategy of sustainable heat generation to a thermal hot water store via air/ source heat pump combined with solar PV. The store drew heated water to in/wall and floor conductors and ambient temperature was maintained with whole-house heat recovery with an impressive 95 per cent return.

Proposal

Our proposal is to develop this C9 prototype and reverse its initial inception as green field suburban dream home to address the current housing shortfall in affordable start up urban pads.

MMH offers a fast, highly specified and elegant solution to both the established and migrant populations.

The trip from the block entrance to the circulation core is via an internal oasis containing exotic flora and fauna. Each wing on each floor has a communal garden for green release with the potential for a winter garden enclosure for neighbourly partying.

The units are flexible and highly specified for storage, cooking, consumption, and resting with integrated built in units for each activity. Full-height doors and balconies stream light in and offer private amenity as well as engagement with the urban environment.

Production and costs

MMH units will be produced utilising a set of relatively low skill-based greenfield-located workforce teams, managed by several experienced joiners/housebuilders. Production time is a three-month turnaround for delivery to site, via un-escorted articulated truck. While the units are in production, a pile-driven ring beam foundation is struck with a pre-fabricated steel frame structure above containing lift shaft and service cores. Once the units are delivered to site and craned into place, the external fabric is sealed and services connected. Allowing pre- and post-production of delivered units, we estimate a four to six month turnaround for the finished 72-unit block.

Based on the above, sale values cost is £1,507 sqm for a fully fitted unit including all fixtures, fittings and finishes. Applied to an MMH 35 sqm 64-unit scheme, the delivered cost is £52,769 per unit. With a profit margin of 33 per cent, this enables a potential sale figure per unit of circa £180,000.

Each block could also associate and profit share from the commercial units and plough the profit back into servicing and management, encouraging self-sufficiency autonomy, and independence.



Livinhome

Geraghty Taylor Architects (GTA)

Livinhome responds to individual, family and community dynamics that occur over a lifetime and provides options to adapt to changing circumstances. The Livinhome design accommodates the changing needs of users and, by anticipating and designing for change, it allows the building to be readily modified. In providing this predesigned flexibility, it delivers a home that remains relevant to the lives of its occupiers for longer than the more static designs of conventional houses.

Research

Our studies into demographic lifestyles and tenure durations informed the design, as did conversations about healthcare in the home and the impact of crisis moves. GTA research confirmed that the financial value of the house is prized, but the cost of extending or adapting were lamented. Moving is disruptive and expensive. It became clear that change was a constant dynamic – sometimes we need more space and other times less. Livinhome offers the stability of staying in one house and one community.

How it works

In office buildings, the independence of the cores is critical to the flexibility of the building. We applied this logic to a house and moved the stairs to the external wall, thus forming a circulation core that would allow each floor to be accessed independently. The remaining floor plate is open plan, enabling a variety of floor arrangements. To achieve and maintain this flexibility, careful consideration was given to servicing and structure. A duct is formed along one of the party walls for principal services and drainage, and all structural elements are kept within the external walls.

Using the London Housing Design Guide, we developed three standard floor layouts – open plan, a one- or two-bedroom flat, and a three-bedroom house. Each layout includes a ‘service zone’ where the kitchen, utility and bathrooms are located. These standardised layouts are stacked on top of each other. Woodview Mews, the first of GTA’s Livinhome typology, comprises 18 modules formed into a terrace of six blocks. A typical house of three modules uses all floor accommodation and the core as its own – but if it were converted to three flats, or a duplex and one flat, the core would become a common stair with a separate entrance to each of the units. A family might adapt a house to allow the parents to downsize to a ground-floor flat and release the upper floors to grown up children, or rent the floors to augment their income, all without moving house.

GTA has obtained three planning consents for projects using Livinhome, each with a different elevation designs. Obtaining planning consent for a new and flexible house type was challenging. Croydon Council was unsure if Woodview Mews was a development of six houses, 18 flats or something in between. Eventually we settled on 11 units, comprising two houses, three duplexes and six flats. Croydon deserves credit for its support in bringing Livinhome through the planning process.



21C Living Concept

BMM Modular Solutions

BMM is an innovative concept that brings modular homes into the 21st century. A technically advanced modular system that it is simple, affordable and flexible, it starts with a single module – the habitat – and easily expands into houses, buildings, apartment blocks and cities. This expansion can scale for simple to complex urban requirements, based around the modular nucleus, easily extended to meet growing demand.

It is suitable for social rents, intermediate tenures, or high demand dwellings, urban or suburban, low- or high-density, sponsored by the Government or private investment, for houses of any type that can have adaptable typologies during their lifetimes.

Planning and land

The fact that the solution can be installed without the need for heavy plant and utilises lightweight foundations opens up otherwise impossible or inaccessible plots, making them viable for this type of construction. Within London, there are numerous plots of this nature that could become feasible to use in this way. Additionally, the option to build on stilts allows for infill on car parks, or similar, that can be reinstalled after the build process – not requiring new footprint for the construction and reassignment of the car park when completed. And, of course, it is ideally suited to regular sites too.

Regarding planning, the modular nature of the design potentially allows for the generic concept to be granted building regulation permissions, which can then be applied as additional modules are added – reducing the demand on planning authorities time and budget. Another consideration is the significant reduction in timescale to complete a project, minimising disturbance and neighboring access considerations.

Funding and finance

This approach for domestic and smaller-scale construction fundamentally changes the paradigm of construction to a model more aligned with buying a car rather than the traditional ‘house’ purchase. Additionally, the significant reduction in timescales, and costs, will be an attractive proposition to either private investors or GLC funding bodies. The faster turnaround and return on the investment will significantly benefit any funding and finance business case.

The University of Lisbon estimates that the technique developed by BMM will reduce costs by one-half to one-third that for similar-sized traditional site-built homes.

Construction and procurement

The construction technique is an adaption of that used for warehouse construction or designer market, but benefits from very well optimised architectural design that contributes to the cost saving and results in this very flexible and scalable solution. The pre-fabrication technique can bring small and large construction companies together to form the solution and all procurement potentially sourced within the GLC boundaries.



Monad – Parametric Housing

LWPAC – Lang Wilson Practice in Architecture Culture Inc.

Since its initiation in 2006, the ambition for Monad is to develop an adaptable platform for urban housing and present a qualitative paradigm shift for dense urban living and urban infill development. A first full-scale prototype of our new system Monad has been built in Vancouver, Canada in 2012, with various new project iterations at various scales actively in process.

Context

Over the next couple of decades, metropolitan areas like London and Vancouver will add millions of residents while available land will become increasingly contested. Current housing models – despite their constraining uniformity – have become unaffordable, lack quality and are slow in their project delivery. This leads to risk, delays, unnecessary complications and added expense. Consequently, risk-adverse processes preclude innovation towards new models and housing today is essentially broken. At the same time, environmental concerns continue to increase. For the dense and sustainable metropolis, it therefore seems imperative to develop new highly integrated housing models that provide viable alternatives to create vibrant communities, allow for diversity, choice and individualisation, while offering better quality and more predictable construction.

Instead of the usual highly standardised and prescriptive urban form, the Monad model introduces an integrated approach that is a systematic and scalable based on solid wood technology.



View from Mund Street, LONDON - Existing



Photomontage - 10m lots increments filled with the built prototype MONAD

Design principles

The goal was to design a model that can be readily adapted and applied to typical urban infill sites ranging from 8 metres - 100 metres in width, 4 to 30 storeys in height, and unit sizes ranging from a 325 sq ft one-bedroom micro flat to 2,000 sq ft four-bedroom multi-storey skyhouses, configured in stacked and/or interlocked arrangements.

Designed as much from the inside out, they present choice, flexibility and a high degree of livability. Void spaces allow for a substantial reorganisation of both the unit layouts and address a typical dilemma of access to natural daylight and natural cross-ventilation, which is now abundant. The double-sided orientation allows for active noise mitigation, with quiet bedrooms along noisy urban arterial roads. The building connects tenants to each other and to the social urban fabric of the city.

Sustainability

Following a highly integrated green building design process, heat loss is minimised by following Passive House and LEED principles with triple glazing and a highly insulated envelope, in addition to solar orientation and solar gain control through sliding screens. Ground source geothermal and thermal solar system with in-floor radiant heat has been installed, resulting in a building with no or limited onsite carbon emissions and very low energy consumption.

Construction

The residential units can be prefabricated offsite in a climate-controlled factory in form of modules and panels. The modules are specifically designed in a C-shape profile to provide for spatial possibilities ‘beyond the box’, allowing for modules in combination with hybrid panels to create large span column-free spaces that can be customised as desired. Despite qualitative architectural features, projects can be built for less than typical construction cost for comparable developments.

NuVenture Homes

Nuhaus Systems Ltd

Under existing legislation, local authorities retain a proportion of the receipts from the sale of homes under the Right to Buy (RTB) which can be spent on replacing each home sold.

Central to our proposition is taking advantage of lower costs of offsite manufacture to make using retained RTB receipts more efficient, economic and effective.

By using standardised house types and a lightweight foundation solution, factory-built housing delivers new homes economically, efficiently and effectively. This makes developing infill sites, garage court, drying greens, underused amenity spaces and the like, deliverable.

Additionally, lightweight structures could be added to existing medium-rise buildings as part of a refurbishment programme to increase densities and help fund investment through sales.

Our homes are eco-friendly (made from sustainable materials), have a life span of 60 years, can accommodate all available renewable technologies, and require as little as £160 per year to heat and light. Each element of the build process is subject to precise costings – which, being factory built, do not vary with the weather or the day of the week.

Our proposal is that local councils or housing associations work with NuVenture Homes as an investor developer to bring forward opportunities, defining a range of house types that meet local needs and planning policies, securing pre-approval from building control for the designs. Working together, housing providers and NuVenture Homes will secure planning consents and then develop the sites. The completed homes are leased to the council or housing association net of a premium equal to the 30 per cent retained RTB receipt, with the balance of the cost funded from the rental income. The cost of the superstructures would be fixed, with only site-specific costs to be assessed at project level.

We see the benefits from this approach being:

- Working with communities to deliver homes within neighbourhoods
- Neighbourhoods evolve over time and communities stay together
- Ability to plan how to recycle RTB receipts
- Cost certainty (subject to site conditions)
- Reduction of planning risk through continuous engagement with communities and regulators
- New Homes Bonus secured
- Local employment for semi-skilled and skilled workers in non-building trade skills

Underpinning the approach is keeping communities and neighbourhoods together, thus avoiding the dislocation, uncertainty and costs of large-scale projects.



PAYD Housing for London

Mobile Studio Architects

Concept

‘PAYD Houses’ (Pay-As-You-Develop) is a future design concept for London housing that offers modular flexibility in density, habitation and fiscal management.

Acting as a conscious mediation between ‘affordable renting’ and first time buying, PAYD addresses the needs of both short- and long-term tenants to maximise the number of homes that ordinary Londoners can afford.

The provision of a new and adaptive housing stock allows for a critical, additional clause to be extended as part of the government’s current Right to Buy (RTB) initiative. As such, the proposed scheme is applicable to future PAYD housing stocks that would be owned by London councils and/or housing associations (HAs).

It is anticipated that London councils and housing associations would release the funds required to build new PAYD housing from the sale of their existing RTB stock. Previously developed land or brownfield sites (as identified by the council) could provide an existing infrastructure for the development of new PAYD homes.

The standardised, prefabricated construction system of PAYD houses means they will be economic to build in volume, offer flexible design iterations, and promote sustainably managed development. This method of mechanised construction can also be scaled up/down, increasing both volume and speed whilst maintaining assured quality.

A PAYD masterplan would initially offer 49 base units per hectare (49u/ha), but increases steadily over time as more units are developed into maisonettes and houses.



How it works

Tenants qualifying for affordable housing would be eligible to rent a single base unit from the freeholder (council or housing association).

After ‘x’ amount of years renting (and in conjunction with other government criteria) tenants qualify for RTB. But this is only granted if, crucially, the tenant ensures the base unit is developed and additional units are added/extended accordingly. A tenant’s ‘Right to Buy’ now becomes an obligatory ‘Right to Buy & Develop’ (RTBD). All unit extensions are pre-approved by the council and thus fall under Permitted Development.

RTB discounts on market value are still applicable, but with discount values dependent on the length of tenancy, size of intended development and location of property. The discount must be repaid in full if the property is sold under ‘x’ amount of years.

The freeholder does not lose out as money is recouped after RTBD. The contractual addition of ‘plug-in’ modules by the tenant must be supplied through the freeholder, with profits reinvested into building more base units. This regulated market construction would only contractually work alongside volume house builders due to financial implications, asset management and mass-methods of production.

Freeholders (councils and HAs) would also maintain a ‘first right of refusal’ to buy back the newly developed property should the tenant wish to sell in the future. But by virtue of the modular PAYD design, the property can then either be affordably rented again as a larger house, or divided back into separate modules to be rented as individual base units, as dictated by local development frameworks.

Tenants will passively benefit from renting a property, whilst simultaneously earning a financially attractive RTB option should they wish to own a personalised version of a larger house in the future.

Solidspace Connect

Solidspace

Respecting the English love of homes with stairs, whilst understanding that our next period of housing needs to be pointed towards upward – and not only outward – expansion, we have conceived an apartment typology that not only embraces the stair, but uses it to actually create greater volume within the home. We’re proposing homes in the sky – complete with their own gardens and stairs.

To invent a product as adaptable, scalable and repeatable as the terraced house, our first consideration is to redesign the apartment itself. Breaking it into parts, we identify the spaces most occupied as those where we eat, live and work. These form the core spaces of our proposal and it is from them that the rest of the architecture unfolds.

We identify volume as a measurement of one’s wellbeing within the home and set about rearranging our spaces so as to unlock as much of it as will allow. Simply put, we take the minimum floor area and with it, create additional heights and thus greater internal volume.

To deliver scalability, the buildings have to sit comfortably in any locality. To achieve this, we devise a method that separates skin from skeleton, allowing the buildings to be enveloped in any external cloak to suit their local context.

To create genuine affordability, we need to manufacture as well as design the product. As such, the design of our apartment has incorporated a building system made up of identical components, partially built on site from in-situ concrete with the addition of prefabricated bathroom and kitchen pods delivered to site and quite simply bolted to the concrete frame.

How it works

Over the last three years, in collaboration with Loughborough University, we have developed and lab-tested our own method of casting using a cranked concrete beam, which led to a patent registration in June 2015. This will be further tested with a full-scale prototype of our unit to be built at the Building Research Establishment’s Innovation Park in Watford, opening next year.

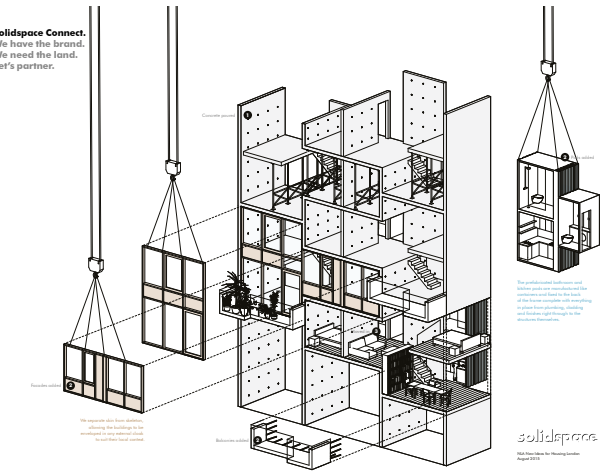
The frame is cranked in section to make the split-level and internal volumes possible, but is rectangular in plan, as if extruded and cut. The prefabricated pods are manufactured like containers and fixed to the back of the apartment plan complete with everything in place – from plumbing, cladding and finishes, right through to the structures themselves.

The rainscreen technology we use for the facade permits variation over choice of materials, textures and colours, all sitting within the distinctive and familiar tessellated concrete frame.

Who it’s for

As developer of the product, we offer a different supply pathway; not of speculative development, but of branded housing that can be both bought and sold as institutional investment stock. As producer, we are then able to manage the customer choice as well as the product’s design quality right through from conception to realisation.

The establishment of a London Land Commission tasked with identifying public sector-owned brownfield land to meet with housing demand could not act as a better opportunity to provide the land and the consents that would allow this new type of housing to flourish.



Rational House

Robert Dalziel, Rational House® and Simon Kaufman, AECOM

Rational House and AECOM aim to deliver urban housing that displays the best generic qualities of both past and of contemporary residential communities, but also achieves higher build quality and much greater speed of delivery than is possible using conventional construction techniques. Quality and speed may seem to be contradictory attributes, but they are reconciled with offsite manufacture (OSM), which creates precision components under ideal conditions in the factory, designed to be assembled quickly on-site.

We employ a panelised rather than a volumetric approach. The concept is to deliver a hard shell suitable for urban contexts such as terraced or courtyard-based, medium-rise high-density development. The shell is composed of standardised components that can be configured in a variety of ways to suit different sites. The interior is entirely free-span flexible space. The shell components are adaptable to local constraints, and also scalable – in other words, capable of taking different forms including houses, flats, and maisonettes, up to more than 10 storeys in height, and can also be extended, and adapted to other uses. Our prototype is warranted with Premier Guarantee, carries a Nationwide BS mortgage and has been occupied without defects for over two years.

Rational House is delivered by One AECOM, a single organisation that encompasses all of the required professional skills (including planning, architecture, interiors, landscape design, engineering, and project management), and construction. Our clients have one point of contact for all design responsibilities and an efficient single-minded team with no sub-contractual complications. Significantly, the construction team is also involved early in the design process.

Speed and scale

Using an architectural precast sandwich panel system, Rational House offers dwellings whose shell can be assembled very rapidly: less than a week per dwelling unit. Other benefits include the simplification of site operations, and the reduction in complicated construction sub-contracts.

Affordability

Rational House promotes a range of standardised parts that are used repeatedly but in different ways, to create different architectures in different locations. This approach holds the promise of significant cost savings because there is a progressive reduction in component design, engineering and mould costs with each new project.



The Helix

SimpsonHaugh and Partners

The ‘Helix’ is a design proposal that offers a solution to one of the main issues in London’s housing crisis: how can the young generation, starting out on their careers without wealthy backgrounds or savings, get onto the housing ladder?

The new typology is a community of affordable one-bedroom apartments which will increase the housing stock at the bottom of the private residential market with high-quality desirable accommodation designed for a very specific purpose with a finite shelf-life of ownership.

Design and product

The ‘Helix’ takes eight prefabricated modular one-bedroom apartments and stacks them in a helical spiral to form a doughnut. Each unit has an access ramp set at an angle of ‘1 in 21’ bridged off the front of the unit. The angle of the ramp is set so that, as far as building regulations are concerned, it is considered to be ‘external works’, i.e. the same inclination as could be found on a street and therefore it does not require intermediate ramps, nor handrails. The minimum radius of the circle is set at 10.3 metres, meaning that a full rotation of the spiral will have travelled through a full storey of 3 metres.

The first full circle requires structure to support the units. However, once completed, subsequent rotations can be built on top of each other and can, in theory, spiral indefinitely. The building could then be built to a height which is considered reasonable to walk around; six floors would be just over a 500-metre walk or cycle from top to bottom.

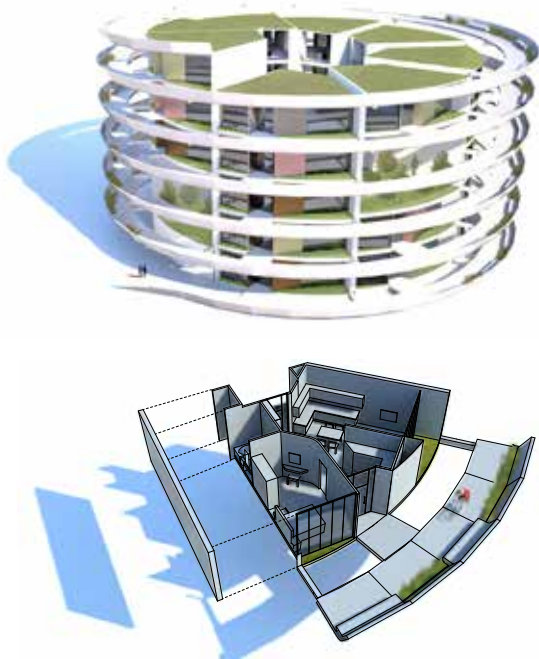
The apartments would be constructed from three pods that would be transported to site and connected to the prefabricated ramp section, making the apartment unit which would be craned into position to be plumbed and connected to form the tower.

Financial proposal

Whilst construction costs could be minimised through the use of prefabrication and standardisation, and maintenance costs are avoided by the omission of the core, the issue of land costs is crucial to the viability of the concept. The proposal would require the support of the GLA and the boroughs to offer unused brownfield sites or force landowners sitting on land-banked sites to make them available for medium-term use.

A company could be formed with GLA subsidy and or private investment/sponsorship which would support the capital outlay to construct the units and would then sell shares to say 80 per cent of the value of the apartments, keeping 20 per cent as a trust.

The rate of appreciation in the value of the shares could be capped to follow a figure above – but in line with – the rate of inflation. Owners could sell their shares when they choose to move on. The guaranteed increase in the value of the shares would mean that during their time in the apartment, the owners would have accrued wealth allowing them to move up the housing ladder. The control on the rate of increase in the value however, would ensure that the model in itself wouldn’t become unaffordable for the next first-time buyer of the property.



Umbrellahaus

Chapman Taylor

With London’s population set to rise by 1.6 million in the next 20 years, ‘Umbrellahaus’ is an affordable and sustainable offsite housing system, which can be constructed at scale and speed to provide much needed housing for communities within London.

Aimed at those who are finding it hardest to get a step on the housing ladder, the Umbrellahaus concept also proposes a new funding and delivery model.

In order for the Umbrellahaus model to work, we propose that a New Homes Commission (NHC) is established by the GLA, having a particular focus on growth and providing clear and accountable commitments to meet London’s housing demand. Their delivery partner ‘The Umbrella Group’, would comprise private developers, housing associations, investment partners and consultants, led by award-winning architects Chapman Taylor, who will provide a holistic solution to fund, construct and deliver affordable, sustainable modular homes.

Design and product

Umbrellahaus housing modules range from one-bedroom to three-bedroom family units, and provide a choice of homes to reflect peoples’ ability to pay and the different stages in their lives. All unit sizes generally follow the London Plan space standards. With Umbrellahaus, it is possible to upgrade to a one-bedroom from a micro, or downsize to a one-bed from a three-bed when circumstances change.



The modules are thermally efficient, maximise daylight, minimise maintenance costs and encourage recycling. They are constructed from highly insulated sustainably sourced cross-laminated timber and designed to match Passive House standards.

Umbrella Modular Housing will have LABC-type approval to fast track through building regulation approval procedures and be backed by the Building Offsite Property assurance scheme.

Modules are scaled for easy transport to site, with off-site construction providing factory conditions encouraging clean, energy-efficient and accurate assembly.

Land and planning

The proposed NHC will play a proactive role in assembling and identifying surplus land and preparing it for housing development. In our financial model, the Government will transfer this land to the NHC. In return, it will gain equity in partnership with the developer and share in the uplift in land values once planning approval has been granted and the development built out.

The NHC will work in collaboration with local authorities and communities to develop a design code for the Umbrellahaus and thus speed up planning.

Funding and finance

We propose a new funding model which will raise equity through a 30 year government-backed bond. Zero land costs will dramatically increase investment returns, from which the Government will benefit. It will also allow rents to be charged at affordable levels thus reducing dependency on housing benefit.

Construction and procurement

The Umbrellahaus model will not displace existing development activity but will commit to supplying the shortfall of 25,000 homes per year for the next 20 years.

The Infinite House

Openstudio Architects

The Infinite House is a way to address London’s housing supply and the critical shortage of construction materials and skills. By addressing construction and procurement as well as design, it offers a way of improving the speed, scale and quality of housing provision.

Housing development in Georgian London relied on a series of standardised house types, which have proved to be robust and enduring. We have brought that tradition up-to-date with a family of flexible modular units, which can be customised to suit the requirements of different sites.

Modular units are prefabricated from cross-laminated timber panels. Design and construction are unified. Units can be supplied as shells or completely fitted-out. By limiting the module to a single repeatable unit, we can achieve the economy of scale that makes off-site construction feasible, resulting in a high quality of construction across multiple sites, large and small.

The fully detailed modular unit can accommodate all aspects of everyday life – from accessible bathrooms to ample storage spaces, from privacy needs to outdoor space. Floor to ceiling heights are generous at 2.8 metres. Windows are large, circulation is flexible, living spaces are open-plan, and balconies can be incorporated.

While a double unit forms a one-bed flat for two people (50 sqm), a single unit forms a microflat (24 sqm) suitable for a single person. The same modular unit has the potential to be opened or closed to adjacent units to create a variety of apartment types, with two- (76 sqm), three- (from 76 sqm to 103 sqm), or four-bedrooms (109 sqm). The balconies can be varied to provide private outdoor space. The units (excluding the microflat) all meet or exceed London space standards. A larger flat can also be split into smaller units. For example, a larger family unit can be refitted and rented out as a microflat, and the remainder adapted to suit an elderly couple. The flexibility of the units allows homes to truly be for a lifetime, and the size and type of dwelling can vary to accommodate both changing needs of inhabitants and demographic requirements.

The Infinite House can be integrated into tested, robust, quality-controlled, standardised buildings, which meet space standards. This could enable planning consents to be more straightforward, or even agreed by a central London body.

High street infill on smaller sites allows for existing densities to be supplemented while improving local communities with high quality design.

Infill units on existing housing estates could be accommodated at roof level (as the units are light-weight), or used to define or enclose communal landscapes at ground level.

Next steps:

- Identify a series of real sites on which the Infinite House can be tested
- Work with a manufacturer or manufacturers to develop the optimal modular unit and refine costs for all the internal and external components
- Consult with housing suppliers on the design and flexibility of the unit



Tric-Trac players
PROJECT2

In our opinion, key problems common for many metropolises are:

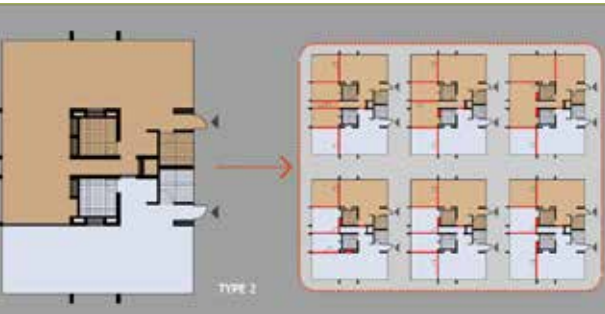
- Unavailability of housing for people with different income levels, ages and social statuses
- Inflexibility of the housing structure – its inability to adapt to any changes in financial, social and economic spheres
- Regulatory and legislative bases requiring revision to cater for new realities

The project goal is to ‘grow’ a housing structure that:

- Will be affordable for people with different income levels, ages and social statuses
- Will be as flexible as possible, capable for ongoing transformations
- Will use prefabricated elements
- Will provide for high quality of living environment

The scope of freelancing and working at home is growing. The structure makes it possible to incorporate such spaces into apartments as home office, private galleries, exhibition spaces and areas for startups.

All the planning variants (except options with studios) conform to the London Housing Design Guide (interim edition). Planning options with studios may turn to be fairly acceptable for accommodation of a large group of users to whom such space is sufficient for living, but this may require introduction of supplements to regulatory documents – probably designating a separate section governing design standards for the transformable housing.



Financing
A buyer of first housing is often limited in funds and obtaining a mortgage loan is a challenging task for him/her. It is assumed that a citizen will be able to use an opportunity through participation in this programme to pay the apartment cost through revenues from letting the second part of his/her apartment to lease. He/she will be simultaneously present on the rental market with an apartment whose planning opportunities meet all the demands for the time being.

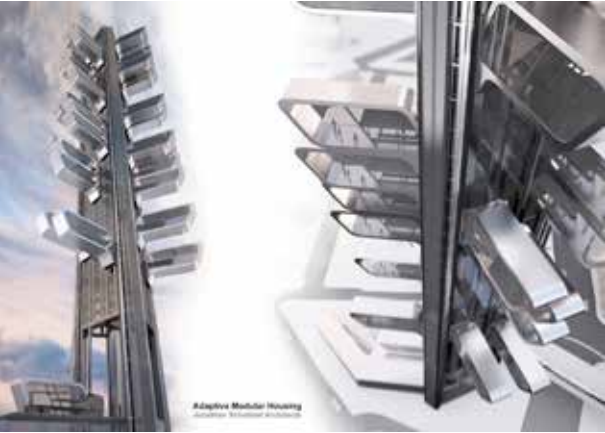
Structures
The structure consists of two elements: structural framework and transformable panels – the former is performing structural and engineering functions, and the latter space planning functions.

The structural framework is the first element with the unchangeable segment – pylons, ceiling disks and the core comprising lavatories, utility lines and parking niches for the second changeable element. The structural framework and the core can be made with any structures – including prefabricated and installed on-site – and enable designing a building with any number of storeys. It provides for different options of sections grouping, balconies, terraces and different configurations of structure’s external skyline. The façade-filling depends on a specific design and also provides for use of various materials

Transformable panels are the second element. They provide an opportunity of adjusting the living space according to needs and the lifestyle scenario of the resident. Existing designs of transformable partitions are used, with required characteristics of noise protection and fire ratings. Panels are equipped with sealing and fixing retractable elements. Doors and glazing can be made in panels.

Tric-Trac players housing strategies helps the citizen to buy housing, develops the rental market, assists individuals of different ages and social groups in selecting optimal housing for themselves, and is capable of planning transformations throughout the lifecycle.

Other ideas...



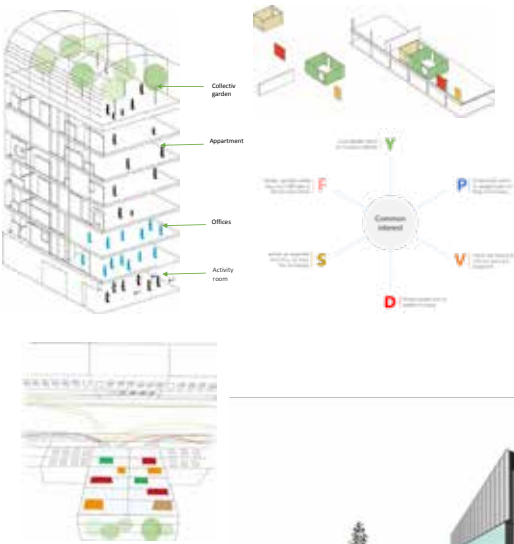
‘Adaptive Modular Housing’ by Jonathan Schofield Architects is a new type of residential proposal with modular units to house 1-3 inhabitants, which can be added or subtracted from a permanent tower core in line with demand.



‘LIFE_PRINTS’ by David Hernández Falagán offers a model for building inhabitants to collectively participate in open source design, custom printing and final assembly.



‘Let’s Build Housing Like Offices’ by Jeanteur Paul suggests that new homes should have floorplans that work like a LEGO system, which can be adapted by renters after construction.



‘A Quality Off-Site Solution to London’s Housing Crisis’ by BLP Insurance proposes an energy efficient offsite home which receives BOPAS accreditation and a BLP New Home Warranty



Affordable housing: Defined by the government as “social rented, affordable rented and intermediate housing provided to specified eligible households whose needs are not met by the market”. Eligibility is determined with regard to local incomes and local house prices.

Build to Rent: The delivery of housing for the purpose of long-term income – with developers retaining properties to rent out, rather than recouping the construction outlay through initial sales.

Compulsory Purchase Order (CPO): A legal function that allows certain bodies which need to obtain land or property to do so without the consent of the owner. The greatest users of CPOs are Local Authorities and the Highways Agency.

Community Infrastructure Levy (see also Section 106): A planning charge that acts as a tool for local authorities to help deliver infrastructure to support the development of their area.

Custom build: A single one-off home commissioned by an individual and built by a developer, through to a group of homes – built by a developer – but with the offer of bespoke design for the individual.

Green Belt: The Metropolitan Green Belt prohibits the development of designated land surrounding the capital to curtail suburban sprawl.

Help To Buy: A mortgage guarantee scheme that supports both first-time buyers and home-movers on new-build homes, with a purchase price up to £600,000.

Housing Association: Independent societies, bodies of trustees or companies established for the purpose of providing low-cost social housing for people in housing need.

Housing Zone: A GLA initiative to provide extra housing and jobs in a number of key locations across London, created through a collaborative effort between the GLA, the government and local boroughs to streamline approval processes and fast-track development.

Landbank: A large area of land held by a public or private organization for future development or disposal.

London Plan: Setting an overall strategic plan for London, it sets out a fully integrated economic, environmental, transport and social framework, and forms part of the development plan for Greater London. Boroughs’ local plans need to be in general conformity with it, and its policies guide decisions on planning applications by councils and the Mayor.

Modular housing: Allowing for quick construction, the use of modules to create sectional prefabricated buildings. Built in a factory setting, the modules are then placed on a pre-made foundation, joined, and completed by a builder.

NIMBY: an acronym for the phrase “Not In My Back Yard”, used to denote the opposition by residents to a proposal for a new development because it is close to them.

Offsite construction: Refers to structures built at a different location than the location of use, whereby individual modules of the building are constructed in a manufacturing plant, then transported to the site.

Permitted Development: Homeowners have the right to make certain types of minor changes to their house without needing to apply for planning permission, derived from a general planning permission granted by Parliament.

Prefabricated: Manufacture sections of (a building or piece of furniture) to enable quick assembly on site.

Private Rented Sector (PRS): A model that creates discrete, serviced blocks, whereby the developer benefits from their rental stream over the long-term. The schemes promote long-term renting, with dedicated spaces for communal activities purpose built for modern needs.

Public Transport Accessibility Level (PTAL): A method to measure the density of the public transport network at any location within Greater London. It hinges on the distance from any point to the nearest public transport stop, and the service frequency at those stops, with areas graded between 0 and 6b: a score of 0 is very poor, whilst a score of 6b indicates excellent access to public transport.

Right to Buy: A Government scheme that helps eligible council and housing association tenants in England to buy their home with a discount of up to £103,900 in London.

Section 106: An agreement between a local authority and a developer to make a proposal acceptance in planning terms, which can include: ensuring the development of a certain provision of affordable housing, increased public transport, or compensation to fund the development of local authority schemes, such as schools.

Self build: The process of an individual obtaining a building plot and then building his/her own home on that plot.

Shell and core: Reducing the developer’s scope of works to the design and construction of the base building only, allowing for the tenant to personalise their internal fit-out according to their own needs.

Social rented housing: Owned by local authorities and private registered providers, for which guideline target rents are determined through the national rent regime.

References all refer to the introduction by Claire Bennie

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New London Architecture (NLA) was founded in 2005 to provide an independent information resource and a forum for discussion and debate about London’s built environment for professionals, the public and politicians. Since that time it has successfully established itself as an influential locus for discussion about architecture, planning, development and contruction in the capital with a year-round programme of events, research and exhibitions, and a core mission – bringing people together to shape a better city.

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Since 1981, Argent has delivered some of the best mixed-use developments in the UK: major commercial, residential, education, cultural and community developments in the country's largest cities. It is involved in the full development process – from identifying and assembling sites, developing designs and obtaining planning permission through to financing, project management of the construction process, letting, asset management and (sometimes) selling. It also manages and maintains buildings and estate.

Argent has a team of over 130 people. In March 2015 it entered into a joint venture partnership with respected US developer Related, forming Argent Related, to pursue future opportunities for urban development, with a focus on the residential sector, including build-to-rent.

BARRATT — LONDON —



Barratt London is a market-leading residential developer, with over 30 years' experience in the Capital, delivering over 2,000 new homes in London each year. Barratt London is committed to providing an unbeatable customer experience and developing exceptional homes for all Londoners – with a vision is to make London an even better place to live. Barratt are committed to providing an unbeatable customer experience and developing exceptional homes for all Londoners, and have crafted their portfolio of residential developments and partnerships to deliver a wide range of homes, from state-of-the-art penthouses in Westminster and riverside communities in Fulham, to complex, mixed-use regeneration schemes in Hendon.

Barratt London is part of Barratt Developments PLC, the UK's largest housebuilder and a member of the FTSE100. Barratt London became a standalone brand in January 2014 in celebration of its dedication to the London market.

Barratt Developments PLC has developed 16,447 new homes in the last year to June 2015, making it the biggest housebuilder by volume in Britain. Winner of a maximum five star rating for the sixth consecutive year in the 2015 Home Builders Federation Customer Satisfaction Survey, Barratt Developments PLC is committed to building the highest quality homes in places people aspire to live.

Carter Jonas



Carter Jonas is steeped in history, but is not a traditional property consultant. The firm is partner-led, yet not hierarchical. For Carter Jonas it's all about their clients.

Carter Jonas was founded as an auctioneer in 1855, built from managing the estates of the future Marquess of Lincolnshire. Carter Jonas today is a modern partnership business. The people managing the firm and working with clients are some of the most respected practitioners in the industry. In fact, throughout the UK in all of their 36 offices and at every level, Carter Jonas is a community of proven property expertise.

The service offered by Carter Jonas is very personal – never losing sight of the individual needs of their clients. Perhaps not surprisingly, some of the biggest land owners in the country have retained Carter Jonas for many years, to look after the property interests of private land owners, high net worth individuals, international companies, major institutions and many of the large London estates such as the Howard De Walden, Portman and Grosvenor Estates. Carter Jonas spearheads major schemes for public bodies, are leaders in farms and estates, development land, science parks, town centres and act for colleges, cathedrals, charities and developers.

With every instruction, Carter Jonas begin by asking what their client wants to achieve. From that moment, the team and the services provided are shaped to deliver the desired result. It's simply the way that Carter Jonas have always done things.

CONRAN+ PARTNERS



Conran and Partners' team of architects and interior designers have been improving the built environment for over thirty years. With offices in London and Brighton, they have a wealth of local and national experience; from new-build community-led regeneration masterplans such as Green Man Lane in West Ealing, to singular high-end housing in Knightsbridge.

Their team are well-recognised for breathing new life into historic buildings; from disused greyhound tracks to banana factories. Noted renovation projects include the Butler's Wharf Masterplan, The Design Museum, Bibendum, the Barbican's Blake Tower, Saltdean Lido and Centre Point Tower.

Their design skills have been endorsed by over fifty design awards and commendations, including Civic Trust Awards and RIBA Awards for their work in sensitive contexts.

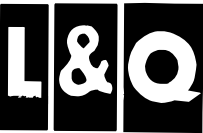


GL Hearn is a leading property and planning consultancy providing commercially driven advice to developers, investors, local authorities and occupiers. GL Hearn has a strong record of delivery in London, as well as across the rest of the UK – which it serves from seven regional offices, including Glasgow, Manchester and Southampton.

GL Hearn's property services provide specialist advice across a range of sectors, including planning, asset management, investment, residential development, viability, and affordable housing. The overall vision of GL Hearn is to understand its clients business, bringing its expertise and enthusiasm to provide an integrated service to clients from site assembly and CPO, through planning and development appraisals, affordable housing to project monitoring and end disposal.

In July 2015, GL Hearn was acquired by Capita and as a result GL Hearn, as part of the 500 plus strong Capita Real Estate team, is able to act as an integrated specialist property and infrastructure business which spans the full spectrum of strategic, financial, operational and development-related consultancy. GL Hearn and Capita can provide end-to-end planning, design and project/programme management of social, affordable and high-end residential developments.

Overall, GL Hearn alongside Capita Real Estate can provide a service that is more than just delivering projects – with a focus on being a strategic partner, clients are provided with a service that extends beyond bricks and mortar to creating communities where people want to live; boosting economic activity, aspiration and opportunity – a total housing solution.



L&Q is one of the leading residential developers in London and the South East, with a commitment to creating a pipeline of a further 50,000 new homes by the end of the decade. For over 50 years L&Q has been driven by its mission to create places where people wants to live.

L&Q creates high quality homes for people across a whole range of incomes, and leads major residential and mixed-use developments across the capital and beyond. Over half of the new homes it develops are for sale or rent on the open market, alongside homes people can afford - including help onto the housing ladder through options such as shared ownership. It also manages more than 70,000 homes across London and the South East, making it one of the largest residential landlords in the capital.

L&Q focuses on the long term, using high quality design to create thriving places that delight the people who live in them. Partnership is at the core of their approach, as they work to deliver the sustainable communities that Londoners need and deserve. As a charitable housing association, every penny of any surplus is invested back into providing more new homes and services for its residents.



Pinnacle Group transform communities, regenerating their social and physical fabric to create better places to live. They do this through responsible, long-term management, sustainable power and enabling people to find employment.

Investing in communities and their regeneration is at the core of the business. Successful regeneration involves not only improving the physical environment, but also creating a strong sense of community for the people who live there.

Pinnacle Group are a family of businesses providing a comprehensive and integrated range of services to communities and their private and public sector partners, with a focus on delivering bespoke solutions with positive outcomes for the communities and creating value for all stakeholders.

The company's activities range from physically transforming housing estates to finding lasting employment for residents. Pinnacle Group manage housing stock on behalf of public bodies, maintaining the grounds, public realm and local schools, and also install District Energy Networks into new regeneration schemes, as well as managing rental properties within those developments.



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From their Central London base in Soho, their team of over 80 planning and design professionals understand the opportunities and barriers to development throughout the city and beyond, enabling them to provide bespoke solutions and advice at every stage of the development process from concept to completion. Their teams of experts are focused on providing insightful, commercial and innovative advice to help clients gain support and approval for proposals and to maximise value from investments.

In an environment of both housing and land shortages they work to improve the quality and capacity of London’s housing, retail and commercial offerings, working on significant redevelopment and regeneration projects including Kidbrooke Village, Royal Arsenal Riverside, Aldgate Tower and Southall’s historic Arches.

cgl

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Founded in 1992, Child Graddon Lewis have been designing and delivering residential and mixed-use projects across all tenures for a wide range of clients in the private and public sectors.

At Child Graddon Lewis, they they believe that their experience can add value and fresh thinking to the development process. The practice produces a full range of architectural services from inception to completion on every project, utilising their experienced staff to obtain planning consents, coordinate design teams and prepare production information and employer’s requirements documentation.

Child Graddon Lewis are innovators and carry out their own research projects such as ‘Find the Gap’ which uncovers housing potential in Outer London brownfield sites. This research includes projects that identify the opportunities, constraints and solutions within London to the challenges of intensification on brownfield sites within Zones 3 to 6.

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Stitch is a London-based design studio of architects and urban designers established in 2012 by Sally Lewis. The practice’s growing portfolio of large-scale urban housing and regeneration projects demonstrates their broad vision to ‘bring back the street’ in a new generation of housing delivery in the capital. Their approach to design is inclusive and collaborative, and they seamlessly integrate architecture and urban design to create a unique narrative for every project.

Stitch has had a leading role in the regeneration of the South Acton Estate in Ealing, advising the Council and Acton Gardens (Countryside and L&Q) on the evolving masterplan and designing two of the development phases. Their first project in Dagenham – 149 new homes at Goresbrook Village – is now complete and occupied, and the practice was responsible for the regeneration masterplan and detailed proposals for 436 homes and a mixed use Plaza at Marlowe Road in Walthamstow.

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PROJECT SHOWCASE
NEW IDEAS FOR HOUSING

Project Showcase

The following schemes represent the best new housing developments currently taking place across the capital, whether recently completed, under construction or at design stage. These schemes show how different tenures are accommodated across the city, and how some are breaking into new typologies and management structures to harness London's needs.

This showcase forms a part of NLA's Autumn 2015 Insight Study, New Ideas for Housing, which investigates how we can meet the demand for housing within the capital.



A New House For London

Prototype installed at The Building Centre, Camden, WC1

Status: Temporary project, in place September-October 2015

A New House For London presents a model for how under-used city plots could be sites for high-spec, adaptable spaces, suitable for modern urban living.

Using two converted shipping containers, the project suggests that a partly prefabricated, highly adaptable and moveable house can be part of the solution to the housing crisis. The project is inspired by how we use narrow boats increasingly in the city – and suggests this house size and rental format could be extended beyond the canals. Challenging land-use thinking, the project would utilise inner-city brownfield sites waiting for development to start – or sites kept dormant for speculative increased land value – as these can, and should, be unlocked for short-term use.

The use of shipping containers is a proven method for quickly constructing durable, adaptable buildings around the world. However, it has not been seriously applied to how the London housing crisis calls for faster, more flexible solutions to inhabit under-used land. The raw material is there in ready supply: recycled shipping containers exist by the million worldwide, while new forms (such as a high-strength steel model) may be the future, creating containers that are designed for re-use. The focus for the project is innovation and flexibility, and new ways of making compact live/work space – and, it costs just 5 per cent of the average London property.

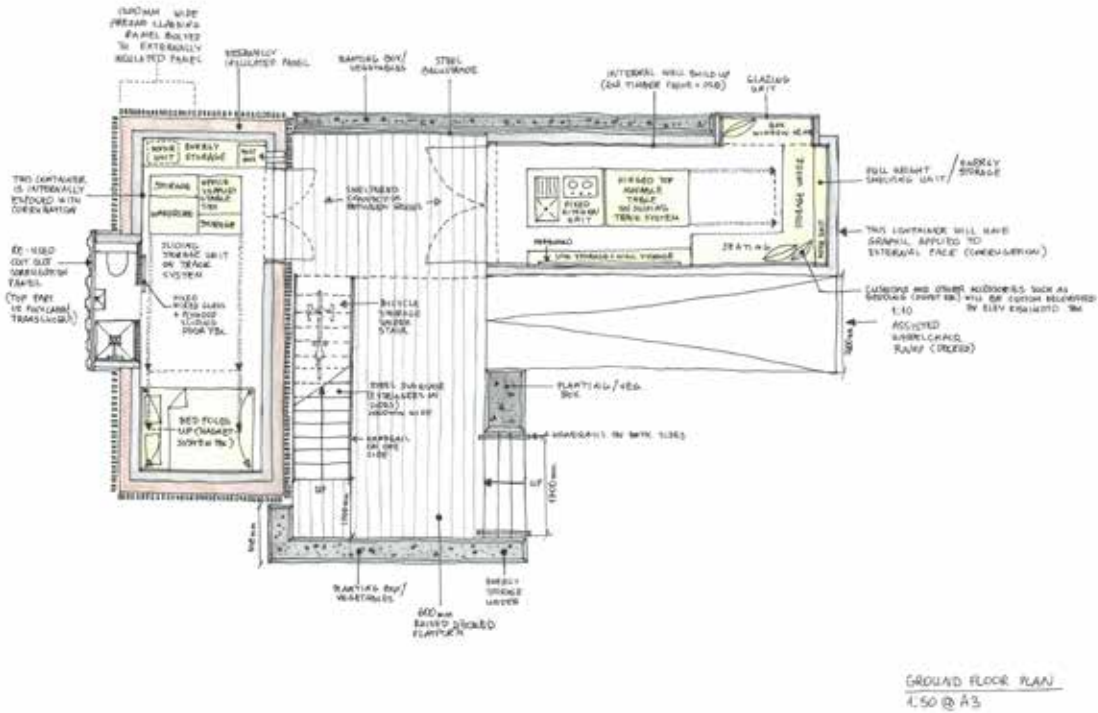
The benefits of this concept is demonstrated to the public through the installation of two 20-foot demonstration container units with

‘link’ unit outside The Building Centre. Brought to site fitted-out with minimal on-site construction, the scheme replicates the process of a live project.

The design and engineering has been skilfully developed to maximise space, and contains innovative technology to support the relatively new typology of container living. One container is clad externally in larch, behind which insulation can be fitted, and the other is clad and insulated internally, with a linking covered area and a staircase to a spacious roof terrace and garden. The components can be easily re-jigged to configure more containers and make a more dense or complex urban development. The structure saw Arup advance ideas on stacking containers for housing with minimum additional structure, using the inherent strengths of the original container. An innovative DC-power system was installed and “Smart” surfaces were created by using touch gestures and capacitive sensing, helping to bring simplicity and flexibility to the use of the space. With graphics from fashion designers Eley Kishimoto and edible planting from Urban Growth Learning Gardens, the resulting installation is homely and inviting.

A New House For London will be the world's first shipping container house with open source designs shared freely.

It is hoped that this concept could be replicated across brownfield sites in suburban areas of London – where land is awaiting development or kept dormant – unlocking housing for short-term occupancy.



Sponsor: CBMM
Architect: Carl Turner Architects
Engineer: Arup
Project Curator: The Building Centre

Viewpoint
“The origin of this project came from The Building Centre and Arup collaborating last year on the Wikihouse 4.0 installation. From that we decided to do a further explorative structure that could feed into discussion around new approaches to housing. We wanted to take further the work Arup had done on advanced services and we were particularly interested in prefabrication and portability. This led us to think there was more that could be done with recycled shipping containers than we had seen elsewhere. We invited Carl Turner Architects to work with us, as they had terrific experience in both award-winning housing and the recently created multi-container mixed-use development of Pop Brixton. This could not have been done without the support of CBMM.

Our next steps would be to find a developer keen to offer a medium-term location for a larger application of the design approach.”

Lewis Blackwell, Executive Director of Strategy and Development, The Building Centre



Aberfeldy Estate Masterplan

East India Dock Road, Tower Hamlets, E14

Status: Under construction, masterplan due to complete 2021
Units: 1,176

Following a developer-led competition in 2010, the Aberfeldy Estate in east London has been transformed by a radical redevelopment, with substantial demolition allowing for new build mixed-use structures. The regeneration proposals create 1,176 new mixed-tenure homes with a retail and community centre, primary care trust and faith space, to form a new residential quarter adjacent to East India Dock Road. At the centre of the high-density development is a new public park – East India Green – structured around an urban swale, play spaces and a grid of trees.

Working closely with the existing community to bring forward the regeneration proposals, the project has been progressed by Levitt Bernstein working with the initial Maccreanor Lavington and Casey Fierro masterplan for the area.

Within the masterplan, the residential buildings are responsive to the urban context, varying in character and scale, ranging between a 10-storey tower at the east end of the park, a series of linear, muscular buildings along the A13, and lower-rise courtyard housing on the north side of the new park. The architectural approach draws on the history of the site, creating a ‘modern warehouse’ aesthetic, with open plan interiors, generous glazing, high ceilings and dramatic, light-filled circulation cores. All homes achieve Code for Sustainable Homes Level 4 and comply with London Housing Design Guide standards, across all tenures. Non-residential elements achieve BREEAM excellent rating. The key drivers and aspirations for the redevelopment of

- Aberfeldy comprise:
- Distinctive architecture which responds to and enhances the local area and signals regeneration
 - High quality public realm throughout
 - Green, tree-lined routes, which delineate a central spine running along the entire length of the development, providing a large new park for all
 - A new civic square which creates a focal point at the main entrance to East India Green
 - Imaginative play and doorstep play areas
 - A low-speed road environment where the pedestrian is priority, and walking and cycling is encouraged
 - A sustainable social mix through mixed-tenure
 - Sustainable, low carbon buildings
 - Biodiversity through intelligent use of landscape, amenity spaces, terraces and roofs.

The development is designed to be tenure blind in selection of external materials and elevational treatment, despite distinct differences internally.

The design of the later phases of Aberfeldy demonstrates the use of new housing typologies for new tenure models, such as private rented types. These include the development of bespoke plans which respond to the ‘sharing’ philosophy – with generous, light filled central living spaces and equally sized bedrooms, generous walk-in wardrobes and double bathrooms. Careful design of entrances and cores with the provision of a concierge, shopping drop off areas and additional storage spaces for rent are all integral to the design of this innovative tenure form.



© Levitt Bernstein 'Phase 3 view C'

Client and Developer: Aberfeldy New Village LLP (JV between Poplar HARCA and Willmott Dixon)
Masterplan: Maccreanor Lavington / Casey Fierro
Architect, Landscape Architect, Masterplanner: Levitt Bernstein
Contractor: Willmott Dixon
Planning: Tibbalds / Leaside Planning
Structures: Campbell Reith
Services: Tom Harris Associates
Employers Agent: KSA

Viewpoint
“Four years ago, Aberfeldy was the most deprived ward in London. The Aberfeldy New Village project is an ambitious vision to start afresh. Working with the residents, we have created a truly mixed community, providing high quality, well-designed new homes in place of the old. The new homes are tenure blind and provide a sustainable mix of market sale, shared ownership, market, affordable and social rent. These are all built around a beautiful new linear park and gardens, which together with new shops and community facilities, all residents can enjoy. A new urban village in the making.”

Neal Hunt, Director of Development, Poplar HARCA/Aberfeldy New Village LLP



© Levitt Bernstein 'Aberfeldy New Village masterplan'



Recently completed Block B



© Levitt Bernstein 'Block H north elevation'



© Levitt Bernstein 'Phase 3 landscape view'

Agar Grove Estate Regeneration

Camden , NW1

Status: Design stage, first phase due to complete Spring 2017, full completion 2025
Units: 493

The Agar Grove regeneration project is the largest in Camden’s Community Investment Programme (CIP). The estate will double in density from 247 to 493 homes, replacing failing building stock with new homes for Camden tenants, cross-subsidised by new homes for sale.

The residents at Agar Grove are a cohesive community and the masterplan has been developed with a phased single-decant strategy. The residents of the central tower in the estate, Lulworth House, elected to stay together and will relocate to a new tower with community facilities and workspace within the masterplan.

The masterplan aims to ‘stitch in’ with the surrounding townscape, with home zones reconnecting the historic street pattern. Mansion blocks are located toward the Victorian and post-war townscape to the north, and taller buildings look toward the emerging density of the King’s Cross quarter to the southeast. Maisonettes at ground level ensure bedrooms are lifted above the street, so that the public realm is overlooked by ‘active’ spaces such as kitchens and

dining areas, in addition to carefully positioned commercial and community spaces.

LB Camden is promoting Passivhaus at Agar Grove as an effective way of combating ever-increasing fuel costs on behalf of its residents, addressing fuel poverty. Currently, when completed, Agar Grove will be the largest Passivhaus scheme in the UK. Passivhaus focuses on high levels of air tightness and thermal insulation, coupled with access to sunshine to help heat homes in the winter months. The energy savings through Passivhaus are significant with dwellings needing only minimal heating in the winter. The detail design was developed in collaboration with Passivhaus specialist Peter Warm Associates.

Max Fordham developed a site-wide reduced energy strategy that avoided the need for centralised heat and energy generation – normally a GLA requirement for projects of this size.

The final phase of the project includes the conversion of 18-storey Lulworth House into market apartments after residents move to their new tower. The building will be stripped back to the concrete frame and retrofitted with a relocated core, extended floorplates and additional storeys.

Client: LB Camden, Community Investment Programme Team
Lead Architect: Hawkins\Brown
Collaborating Architect: Mæ
Landscape Architect: Grant Associates
Contractor: Hill Construction
Structural / Highways / Acoustic Engineer: Peter Brett Associates
Services Engineer, Passivhaus Designer and Energy Consultant: Max Fordham
Passivhaus Designer / Energy Consultant: Max Fordham
Passivhaus Architect (Phase 1): Architype
Client Design Advisor: Urban Splash

Viewpoint
“Agar Grove has been a particularly rewarding project for us, mainly because of Camden’s aspirations as a client and the social mission of the project. In contrast with many (but not all) private sector developers, Camden’s Community Investment Programme team has a longer-term interest in quality and an intention to build. Their advantage over private developers, of course, is not having to make a profit margin large enough to secure bank funding – enabling a greater balance of tenure and investment in material quality. The client’s commitment to trialling Passivhaus on such a large scale and keeping the community together via a single decant strategy is evidence of this.”

Seth Rutt, Partner, Hawkins\Brown



© Hawkins\Brown



© Forbes Massie 'New central playspace'



© Forbes Massie 'Approach from the east'



© Forbes Massie

2 Old Jamaica Road and 168 Abbey Street, Southwark, SE16
Status: Due to complete December 2015

Units: 51 | **Client:** Notting Hill Housing | **Architect:** Child Graddon Lewis
| Structure: Price & Myers | **M&E / Sustainability:** Calford Seadon | **Archaeology**
& Heritage: SLR | **Planning Consultant:** Rolfe Judd



35 Whitechapel High Street, Tower Hamlets, E1
Status: Under construction, due to complete Spring 2018

Units: 463 | Client / Developer: Barratt London | Architect: Allies & Morrison |
Landscape Architect: Townshend Landscape Architects



Hanbury Road, Ealing, W3
Status: Under construction, due to complete Autumn 2016

Units: 107 | **Client:** L&Q / Countryside Properties (Acton Gardens LLP) | **Lead Designer:** PCKO Ltd | **Structural / Civil Engineer:** CTP | **M&E / Sustainability Engineer:** Mendick Waring Ltd | **Landscape Architect:** LUC | **Planning Consultant:** Terence O'Rourke | **Contractor:** Countryside Properties



50 Marsh Wall & 63 Manilla Street, Tower Hamlets, E14
Status: Due to complete April 2018

Units: 636 | Client: Drakar/Far East Consortium International Limited | **Developer:** Southern Grove | **Architect:** Pilbrow and Partners LLP | **Structural Engineer:** WSP | **Parsons Brinckerhoff | M&E / Sustainability Engineer:** Grontmij | **Planning Consultant:** JLL | **Project Manager / Cost Consultant:** Tower8 | **Landscape Architect:** Outer Space



Coverdale Close, Harrow, HA7
Status: Planning permission granted

Units: 120 | Client: Notting Hill Housing | Lead Designer: PCKO Ltd | Transport Consultant: Campbell Reith | Landscape Architect: Allen Pyke | Engineer: RSK | Planning, Daylight and Sunlight Consultant: Nathaniel Litchfield and Partners | Communications and Consultation: M&N Place | Cost Consultant and Employer's Agents: Silvers | Sustainability and Energy: CBG



Suttons Lane, Havering, RM12
Status: Design stage, due to complete August 2018

Units: 49 | Client: Private | Architect and Landscape Architect: Tonkin Liu



83 Anson Road, Tufnell Park, Islington, N7
Status: In use, completed February 2015

Units: 10 | **Client:** Zebra Housing Association | **Architect:** Emrys Architects
| **Structural Engineer:** Heyne Tillett Steel | **MEP Engineer:** SGA Consulting |
Quantity Surveyor: Pierce Hill



Barking Road, Canning Town, Newham, E16
Status: Under construction, due to complete September 2015

Units: 165 | **Client:** English Cities Fund (ECF), a joint venture between Muse Developments, Legal & General Property and Homes and Communities Agency
Architect: CZWG Architects LLP | **Structural Engineer:** Ramboll | **M&E Engineer:** Hilson Moran | **Planning Consultant:** Longboard Consulting | **Quantity Surveyor:** Rider Levett Bucknall | **Transport Consultant:** Peter Brett Associates
Environmental Consultant: Ramboll | **Landscape Consultant:** Churchman Landscape Architects



Alpine Place

Honeypot Lane, Brent, NW9

Status: Completed July 2015
Units: 144

Conceived as a mixed-tenure, ‘open’ residential development accessible to all, Alpine Place has redeveloped a former light industrial estate to create a mixed-use scheme that provides high-quality housing for the local community.

The development is made up of 144 residential units, arranged in four blocks and includes 1,800 sqm of B1 office accommodation, five live/work units, and underground car parking spaces.

The project consists of a variety of unit types and housing tenures to create an inclusive and thriving community. The scheme has been designed to Lifetime Homes standards and also adheres to the London Housing Design Guide. A mix of 2-, 3- and 4-bedroom units have been provided, including 3-bedroom duplexes and 4-bedroom houses. All units exceed London Housing Design Guide spatial standards and feature large balconies and rooftop terraces.

Creating a variety of safe spaces to encourage residents to come together was integral to the design. The scheme’s landscaped avenues are car-free and prioritise residents. Car parking has been located underground to minimise all but essential vehicular access, thereby creating a safe environment for children’s play.

Throughout the design process, improvements were made to the wider public realm, as well as the creation of a new residential frontage to Westmorland Road. These improvements to the

highway – adding parking zones, pavements and planting more trees – have improved the local area to benefit the existing community and the scheme’s new residents.

The architectural and material quality has created buildings that are contextual and contemporary, reflecting the industrial urban history of the area. Buff brick is the primary component for three of the blocks, while the fourth is clad in wooden veneered panels (Parklex). These materials bring a timeless quality to the buildings.

The buildings’ main facades are made up of a carefully considered rhythm of recessed balconies and feature perforated brick screens (jali). To avoid stacked repetition in the elevation, the apartments have been designed so that they are able to flip in plan. The ‘jali’ perforated brick screens add visual interest to the façade and also act as a privacy device for the residents.

All ground floor units have been elevated above the external landscaping to provide privacy, while carefully positioned circulation cores ensure passive surveillance. High-quality lighting – carefully designed to minimise light pollution – also features throughout the development, creating a safe and secure environment for residents.

The housing exceeds Code for Sustainable Homes Level 4 with 30 per cent carbon dioxide reduction in Dwelling Emission Rate over 2010 building regulations, whilst the commercial spaces achieve a BREEAM ‘Very Good’ rating.



Client: Signia
Architect: Ayre Chamberlain Gaunt
Structural Engineer: Pindoria Associates
Mechanical & Electrical Engineer: Bannerman Consulting
Contractor: Jaysam Contractors

Viewpoint
“To create a truly sustainable scheme that would benefit the residents and existing community, we knew we had to look beyond the site itself. By focusing on achieving a high-quality public realm and incorporating adjacent highway land, we were able to create an accessible scheme that features large public and private amenity spaces that the residents love. Alpine Place is a perfect example of the positive benefits brownfield regeneration can bring – it not only redeveloped this former industrial site but has become a catalyst for the development and change for this area of Brent.”

Gaurang Velani, Director, Signia



Ambassador Building, Embassy Gardens

51 Nine Elms Lane, Battersea, Wandsworth, SW8

Status: Under construction, due to complete September 2015
Units: 314

The Ambassador Building is a central feature in the redevelopment of the Nine Elms area. The building forms part of a phased masterplan to create an urban grain that is integrated with the proposals for the new US Embassy, along with a new green space connecting Vauxhall and Battersea Park. When completed, it will form a dramatic backdrop to the new US Embassy. The first phase of construction consists of three buildings, designed by separate architects who have worked collectively from an early stage, that aims to kick-start a development consisting of landmark high-density residential buildings with a careful blend of cohesion and variety.

The blocks of the building are arranged around a raised courtyard, with a varying building mass to maximise views, daylight and amenity space. The range of building heights creates variety whilst ensuring that overshadowing and overlooking is minimised. This framework also establishes key frontages to the river and Nine Elms Lane, as well as to the Linear Park to the south and the major new civic space around the Embassy itself. The scale and height of the structures link with the varying scales of the surrounding buildings.

The use of contrasting brick cladding creates strong piece of urban architecture, whilst allowing a sense of identity and a residential scale for each individual block.

Active retail and commercial frontages at ground level connect the Embassy Square, Linear Park and River Frontage with a network of streets and a central square. Designed as a group, this masonry clad building draws inspiration from 19th century American high-rise buildings and London's classic mansion blocks.

The aspiration for the development includes maximising active uses at ground floor level, establishing strong frontages to key elevations along Nine Elms Lane and the Thames, articulating frontages to secondary routes to ensure variety, and creating differing building heights to minimise overshadowing and overlooking, and to emphasise key corners and waypoints.

The building contains 314 high-end apartments, a grand residents' lobby, a grocery store and a number of small café/retail units. A swimming pool, spa, gym and lounge facilities will serve all of the first phase buildings.

Winter gardens and balconies further articulate the solidity of the overall mass, while each of the tower elements is characterised with an open glazed head piece. The layout of the building allows for an array of generous and pleasing amenity spaces, including communal courtyards, roof terraces and private balconies.

Client: Ballymore
Masterplanner: Farrells
Architect and Lead Consultant: Feilden Clegg Bradley Studios
Landscape Architect: Camlins
Structural Engineer: Walsh Associates
Cost Consultant and Quantity Surveyor: Gleeds
Structural Engineer: Walsh Associates
Services Engineer and Sustainability Consultant: OCSC
Planning Consultant: CBRE
Planning: LB Wandsworth
Transport Consultant: Morgan Tucker
Daylight Consultant: Buro Happold
Acoustic Consultant: Hann Tucker
Fire Engineer: Hoare Lea
Energy Consultant: Waterman
Energy Environment & Design Ltd
CDM: Perry Scott Nash

Viewpoint
"I have been fortunate enough to work on the Ambassador building from the early stages and have watched it go from receiving planning permission to nearing completion. Throughout the process the client has been passionate about producing a landmark high quality building which will set a benchmark for the rest of the development. The building scale suits the emerging context with the striking brickwork creating a sense of identity. I think that this project has been successful in achieving its goals and will play a key part in a new vibrant community in Battersea."

Amanda Whittington, Associate,
Feilden Clegg Bradley Studios



Arthouse

One York Way, King's Cross Central, Camden N1

Status: Completed October 2014
Units: 143

Located within the new King's Cross Central area, 'Arthouse' defines the masterplan's eastern edge, bounded by York Way, Handyside Gardens to the west, and The Regent's Canal to the south. The building sits within the historic strip that traverses the site, occupied by the West Handyside Canopy, Midlands Good Shed, The Granary Building (University of the Arts), Coal Drops Yard and the Gasholders.

The building is composed of a series of mini-towers, subdividing the building into four residential clusters, with the aim of fostering a sense of neighbourliness. The mini-towers and courtyards create a saw tooth arrangement along the edge of the Handyside Gardens, increasing its width and enhancing the quality of the public realm. Extending the length of the west elevation allows many more apartments to benefit from a parkside aspect. The resultant thinner building enables a higher proportion of apartments to be true dual aspect, with views looking east and west.

Arthouse is home to 143 apartments, of which 29 are General Needs Social Rented for One Housing Group. The scheme is tenure-blind, with all homes enjoying the same high quality façade elements. There is a range of units with a high proportion of family-sized, 3- to 4-bed apartments. The saw tooth arrangement

delivers 65 per cent dual aspect apartments, with 97 per cent having private amenity space. Cores 1 to 3 are 'private sale' apartments, accessed from a residents' lobby next to Regent's Canal. A glazed cloister runs up the side of the park, linking the three cores and providing residents with a series of places to relax and meet. Core 4 enjoys a dedicated glazed residents' lobby on the north-west corner of the park.

Apartments are planned to maximize usable space and minimise circulation space, with clusters of four to six units achieving a highly efficient floorplate design (84 per cent NIA/GIA). High ceilings, typically 2.6m with full-height glazed panoramic windows, provide big views and the feeling of space and light. Solar gain is addressed passively with cross ventilation and sliding solar control.

The expression of the mini-towers is brought through onto the York Way façade, which creates an articulated crown with private roof-top terraces enjoying impressive views. Façades are glazed terracotta in monochrome palettes, with mirrored elements to the face of the towers.

The residential accommodation sits on a glazed plinth of commercial units that provide transparency and activity at street level. Commercial units open out onto a south-facing terrace as well as park-side outlets that cater for the visitors to Handyside Gardens, whilst York Way has been transformed with delivery bays, high quality paving and trees.



© Daniel Romero

Client/Developer: King's Cross Central Limited Partnership
Concept Architect: dRMM
Executive Architect: Weedon
Structural Engineer: Arup
M&E Engineer: Hoare Lea
Contractor: Kier Construction

Viewpoint
"Our largest challenge at Arthouse was the constraint of tunnels underneath the building: those of the Piccadilly Line and also fragile 19th century gas works tunnels. Our engineer's solution was to offload the weight on the tunnels with a basement and to levitate the entire building by mounting it on spring bearings, physically separating it from the ground-borne vibration.

New sustainable methods used in this project were the application of a highly efficient building fabric minimizing energy use coupled with district heating that provides site wide green energy, roofs transformed into solar arrays to harvest free energy, and full height glazing providing ventilation and capturing solar energy."

Philip Marsh, Director, dRMM



Exterior from Handyside Street

© John Sturrock



© Daniel Romero



Penthouse interior

© Daniel Romero



© John Sturrock

Avant-garde

Bethnal Green Road, Hackney, E2

Status: Completed May 2014
Units: 360

Regenerating a key site in the heart of Shoreditch, the scheme has provided 360 private and affordable homes across three blocks, together with roof terraces, sky and winter gardens, bars, restaurants, a gym and extensive public realm improvements. The high quality finishes of this new development take inspiration from its location – both at the edge of the City and at the heart of fashionable and artistic Shoreditch. The design juxtaposes the sleek anodised aluminium and glass finishes of the 25-storey City-facing tower with the lower-level brickwork buildings on Bethnal Green Road.

The scheme includes a variety of home types, from one-bedroom apartments to penthouses and large family duplex units. All homes have private amenity space, many of which offer residents stunning views across the capital. In addition, the development features a ground-level square and series of courtyards that extend the buzz of Brick Lane through to Boxpark, positioning Avant-garde as a hub of activity within the area.



© Morley von Sternberg

Client: Telford Homes and Genesis Housing Association
Architect: STOCKWOOL
Microclimate/Wind Consultant: Cambridge Architectural Research Ltd.
Social Impact Assessor: SKM Enviros
Planning Consultant: CMA Planning
Structural Engineer: Jenkins and Potter
Environmental Designer: Camco (The Edinburgh Centre for Carbon Management)
Acoustics Consultant: Hepworth-acoustics
Landscape Architect: Standerwick Land Design

Viewpoint
“For me, Avant-garde represented a very exciting time at our practice, both during design and construction. We developed the design closely with the client and there was shared excitement about the internal spaces, roof terraces and the quality of materials (the use of ‘mystique’ brick and anodised aluminium unitised façade panels). The design of the fully-glazed winter gardens projecting from the south facade was a first for our practice.

Many structural challenges were also new – the tower is structurally cantilevered over the London Underground tunnel for the Central Line.”

Ewout Vandeweghe, Project Architect, STOCKWOOL



© Morley von Sternberg



© Morley von Sternberg



© Morley von Sternberg



© Morley von Sternberg

Avonmore Road Housing

Hammersmith and Fulham, W14
Status: Design stage, due to complete 2017

This project seeks to convert the existing building, Leigh Court – built in the early 20th century by J Lyons & Co Tea Houses as housing for their workers – into 11 apartments and four lateral penthouses and replace the warehouse with a mews of five contemporary houses. The accommodation is arranged around a series of courtyards, terraces and balconies with communal facilities managed by a concierge. The Edwardian façade will be restored and the mews will be a contemporary interpretation of the brick and sandstone detailing predominant in the area.

Units: 20 | **Client:** The Leading Properties of the World | **Architect:** KCA architects | **Structural Engineer:** Hardman Structural Engineers | **M&E Engineer:** Carnell Warren Associates



Battersea Exchange

Battersea, Wandsworth, SW8
Status: Under construction, due to complete 2018

This residential-led mixed-use development consists of 290 residential units, a 2-form entry primary school and 3,500 sqm of commercial space, all organised around a new pedestrian-friendly public realm network. The site is located in a transitional zone at the western edge of the Vauxhall Nine Elms Battersea Opportunity Area, connecting the very new to the more established residential neighbourhoods. The scheme has been designed to connect to its surroundings by stitching in at a range of scales, with the key design driver of establishing a sequence of routes from east to west.

Units: 290 | **Client:** Taylor Wimpey Central London | **Architect & Lead Designer:** Feilden Clegg Bradley Studios | **Structural Engineer:** Pell Frishmann | **M&E Design:** Ingleton Wood LLP and SVM Consulting Engineers | **Project Manager & Cost Consultant:** Rider Levett Bucknall | **Landscape Architect:** Planit-ie Ltd | **EIA Consultant:** Waterman Energy, Environment & Design Ltd | **Cladding Consultant:** Wintech



Barnet and Southgate College

Grahame Park Way, Barnet, NW9
Status: Under construction, phased completion between December 2015 and 2017

The proposed new homes follow the Colindale AAP by safeguarding a Primary School site and financing the relocation of the current College. Responding to its context, the development includes a sustainable mix of apartments, maisonettes and houses, ranging in tenure and size, all designed to meet LHDG, LTH, SBD and CfSH4. The public realm and amenity within and around the site will be greatly enhanced through the retention of trees and creation of new squares, courtyards, roads and pathways.

Units: 396 | **Client:** BDW NORTH THAMES | **Contractor/ Developer:** Barratt, David Wilson Homes | **Architect, Landscape Architect, Light Assessment:** HTA Design LLP | **Structural Engineer:** Building Design Consultancy | **M&E / Sustainability:** Vector Design | **Civil Engineer:** Jubb Consulting | **Planning Consultant:** Savills (pre-planning), HTA (post-planning)



Belsham Street

16 Belsham Street, Hackney, E9
Status: Design stage, due to complete November 2016

This brass-clad rooftop extension to a Victorian warehouse creates four apartments above the existing building, which is to be refurbished to provide a further five flats. The tough urban site, with many buildings in a state of disrepair and a lack of coherence, has informed the perforated brass cladding that provides privacy and mediated views from the apartments – a contemporary reinvention of the net curtain. The diamond pattern continues in the rooftop residents' garden, with planting set out in coloured diamonds, forming a fifth elevation readable from the adjacent towers.

Units: 9 | **Client:** Wecca Limited | **Architect:** Architecture for London



Bentley Priory

Stanmore, Harrow, HA7
Status: Ongoing

In the grounds of Bentley Priory, a Grade II* Listed house designed by Sir John Soane, 92 apartments and houses have been built in a gated development on the site of disused RAF structures. The low-density development provides a broad mix of new luxurious homes in four distinct areas. Each area has its own unique architectural style, character and layout, relating sympathetically to the historic landscape and the simple, restrained architecture of Soane's mansion. All properties achieve a Code Level 3 in the Code for Sustainable Homes. Facilities include concierge service, 24-hour security, tennis courts and basement parking.

Units: 92 | **Client:** Barratt Homes | **Developer:** Barratt Homes, City & Country | **Architect:** ADAM Architecture | **Project Architect:** Giles Quarme Associates



Bradwell Street

Tower Hamlets, E1
Status: Under construction, due to complete September 2015

This project demonstrates the scope for small infill developments on housing estates, replacing under-used parking areas with affordable housing and public realm improvements. The 12 homes include wide-frontage houses with courtyard gardens, and are being built with GLA funding.

Units: 12 | **Client:** Tower Hamlets Homes | **Architect:** Pollard Thomas Edwards | **Contractor:** Bulger Developments | **Structural Engineer:** MLM



Blenheim Grove

56-64 Blenheim Grove, Southwark, SE14
Status: Design stage, due to complete Spring 2016

London's first custom build development, the pilot scheme aims to establish the model's speed through its offsite manufacture, quality through sustainable materials and scalability through desirability created amongst the public. The scheme also breaks the developer mould by focusing on offering customers real choice over the floor plans and finishes, and offering a potential saving of up to 25 per cent to those willing to do some work themselves. Customers can buy a plot of land, a watertight shell or a fully customisable home.

Units: 5 | **Client / Project Manager:** Inhabit Homes | **Architect:** Poulsom Middlehurst | **Quantity Surveyor:** Measur | **M&E Engineer:** KUT | **Warranty Provider:** Buildzone | **Approved Inspector:** ACT Surveyors | **CDM:** AGA | **Planning Consultant:** AZ Urban Studio | **Planning Consultant:** Curtain & Co | **Land Contamination:** GEA | **Arboricultural Consultant:** Landscape Planning | **Acoustics:** Apex Acoustics | **Ecology:** SES ECO | **Code for Sustainable Homes:** Code Consultancy



Brentford Lock West

Commerce Road, Brentford, Hounslow, TW8
Status: In use, completed June 2014

Located along the waterfront, the design brief was informed by a contextual consideration of site, community, ecology and above all the core fundamentals of the outline consented masterplan. Promoting greater links to the high street and places such as the conservation area to the east was vital, enabled by linking the now-improved tow path with the public realm to open up the site up to celebrate Brentford's waterways whilst promoting links between the Great West road businesses and the town centre.

Units: 45 | **Client:** ISIS Water Regeneration | **Architect:** Duggan Morris Architects | **Contractor:** Wilmott Dixon | **Structural Engineer:** Expedition | **Environmental Engineer:** Thornton Reynolds | **Cost Consultant:** Appleyard and Trew | **Approved Building Control Inspector:** Premier Guarantee



Blackfriars Circus

128-150 Blackfriars Road, Southwark, SE1

Status: Under construction, due to complete Autumn 2018
Units: 336

Blackfriars Circus is made up of 336 new homes, including studios, one-, two- and three-bedroom apartments and penthouses, all built around two new public squares. The development will feature on-site amenities such as a concierge and roof-top garden, giving residents views across London, and will include shops, cafés and small business at ground level. Anticipated prices range from £495,000 to £2.4 million.

Blackfriars Road is changing. New proposals from Transport for London (TfL) will see the road transformed into a tree-lined boulevard, breathing new life into the area with new homes, shops, cafés, restaurants, bars and offices. It is set to become more amenable to pedestrians, with pavements being widened and a new cycle superhighway taking cyclists from Elephant & Castle to King’s Cross, safer and speedier than ever before. The Superhighway will create a safe cycle route though St George’s Circus and transform Blackfriars Road into a beautiful tree-

lined urban boulevard. Work on this section of the highway is anticipated to be completed as early as December 2015.

The development is situated at the southern end of Blackfriars Road next to St George’s Circus, and well-positioned for residents to absorb and take part in the very best of what the local area has to offer; from art galleries, theatres and historic pubs to numerous cafes, artisan food markets and some of London’s best restaurants.

The apartments have been designed in accordance with Code for Sustainable Homes, Lifetime Homes, Secured by Design, and Barratt Design Standards, in addition to the applicable legislative and statutory regulations. 34 apartments will be marketed as units for wheelchair residents.

The development includes limited car parking (78 spaces) provided by the basement car park. It will be supplied by all new mains services and an energy centre, which will provide a communal heating system to the scheme.



Aerial view

Client/Property Developer:
Barratt London
Architect: Maccleanor Lavington
Landscape Architect: Outerspace
Interior Designer: Tienda

Viewpoint
“The most striking aspect of Blackfriars Circus is the rich use of external materials and the decorative language of the facades which reference the local Victorian warehouse. We believe this ambitious approach – using fine materials and introducing real depth to the modelling of the façade – is pioneering in contemporary London residential development, and we hope it will set a new quality standard.

One of the greatest challenges as we have developed construction information has been to emulate the craft, ornament and mass of precedent buildings that we admire, but also to reinterpret this to achieve an authentic aesthetic that suits current standards and modern methods of construction. We have enjoyed the enthusiastic support of LB Southwark and Barratt London’s team in developing the, often complex, construction details which achieve this aim.”

Dominic Milner, Associate Director,
MaccleanorLavington



Rooftop view



Ellis apartments

Buccleuch House

Clapton Common, Hackney, E5

Status: Completed May 2015
Units: 107

Buccleuch House replaces a derelict 1940s block of studio flats, fronting onto Clapton Common. The building consists of an extra-care facility of 41 homes and associated communal facilities for Hanover; 28 affordable rent and shared ownership apartments for Agudas Israel Housing Association (AIHA), meeting larger family housing need for the local Orthodox Jewish community; and 38 private sale apartments for Hill. The latter two partners provided cross-funding for the construction of the extra care facility.

With three separate clients providing three distinct briefs, requiring three separately accessed and managed building elements, our approach was, conversely, to design the building to be read as a single integrated entity. On closer inspection, subtle differences are noticeable through the balcony design, which differs to reflect practical and cultural requirements of the different residents. The private flats have simple stacking balconies. The AIHA flats have balconies which stagger in plan and projection to provide the clear view of sky required for the Sukkot festival. The extra-care homes have single-glazed winter gardens providing more shelter and an extra living space for residents who will spend more time inside.

Brick was chosen as the predominant material, to weather gracefully and provide a calm backdrop to the common. Within the single material we have animated the facades with different colours and textures, with a distinct two-storey plinth and with recesses and flush windows. The building is articulated with

a clear base, middle and top to reflect the proportions of the previous Georgian terrace, yet detailed and interpreted in a crisp contemporary way.

The new dwellings are arranged around three entrances and circulation cores, and all family homes are dual aspect. Apartments all meet or exceed London Housing Design Guide standards, as well as Lifetime Homes. Limited parking is provided to the front and rear, at a lower level to the ground floor flats, so that views and terraces look over the top of the cars.

The extra-care facility provides accommodation for older people in Hackney. Design follows the HAPPI recommendations from overarching principles through to detailed design - with a prominent entrance leading to a light, double-height reception space, with glimpses through to the clubroom and gardens beyond. A café and kiosk front on to the square, with outdoor seating space. Incorporating progressive privacy, the design gives residents comfort and the ability to choose to be on their own or with others, including a secondary entrance which leads directly up to the apartments. A proportion of the apartments are designed to a flexible HAPPI layout, giving opportunities to open up bedroom and living areas with sliding partitions, to give a more open, airy feel to the spaces.

The building meets Code for Sustainable Homes Level 4, with a highly efficient building envelope, PV panels, green roofs and MVHR systems.



© Tim Crocker

Client: Hill, Agudas Israel Housing Association and Hanover
Architect: Levitt Bernstein
Landscape Architect: Area
Planning Consultant: CMA Planning
Structures: Conisbee
Services / Contractor: Hill

Viewpoint
"The key to the success of obtaining planning, which was unanimous, was the close working relationship we enjoyed with the local community, the support and guidance from the planning and housing departments, as well as the tripartite partnership between Hill, Hanover and AIHA. We can now focus on regenerating and breathing life into this site that has been an eyesore for so many years."

Jamie Hunter, Development Director, Hill



HAPPI' flexible 1B2P apartment layout

© Levitt Bernstein



© Levitt Bernstein

© Tim Crocker

Brentford Lock West – Plot J

The Arbor, Brentford, Hounslow, TW8
Status: In use, completed April 2015

This scheme for the second phase of the Brentford Lock West development provides a mix of 27 houses, duplexes and flats within a linear block that forms the edge of the new development and existing industrial buildings. Circulation is kept to a minimum, with flats and duplexes stacked around two cores. All flats are dual aspect, with generous gardens and balconies that all get southerly light. The street is lined with front doors and kitchen windows, for privacy and surveillance. Robust brick facades and pared back detailing reference the surrounding canal-side architecture.

Units: 27 | **Client:** Muse Developments (formally Isis Regeneration) | **Architect:** Riches Hawley Mikhail Architects | **Contractor:** Willmott Dixon | **Structural Engineer:** Expedition Engineering | **Planning Consultant:** Tibbalds | **Project Manager / QS:** Appleyard & Trew



© Mark Hadden

Brook Avenue

Brent, HA9
Status: Completed July 2015

Located on the site of a former car park, this new housing development has created four apartment blocks and two semi-detached houses. The design adopted a parking strategy which overcame local concerns regarding the loss of commuter parking. Designed to meet Code 4, the unit's flexible layouts seek to meet the changing needs of residents. Mature trees already on site were retained or replanted to encourage local biodiversity, screen the development from the road and provide a pleasant outdoor amenity space for residents.

Units: 111 | **Client:** Network Housing Group | **Lead Designer:** PCKO Ltd | **Structural Engineer:** Conisbee | **M&E / Sustainability Engineer:** Calford Seaden | **Planning Consultant:** JLL | **Landscape Architect:** Allen Pyke Asociates | **Aboricultural Consultant:** Broad Oak Treet Consultants | **Contractor:** Mullaleay Construction



© Allen Pyke

Bronte & Fielding House

Cambridge Road, Kilburn, Brent, NW6
Status: Under construction, due to complete 2017

This new 'mansion terrace' has a classic layout of two apartments per floor, arranged with central stair and lift cores at frequent intervals, providing direct access to the communal gardens. The top floor is set back, reducing the apparent scale of the building and allowing two-storey dormers or studio balconies to animate the block's roofline. A new tree-lined Kilburn Park Road frontage, along with the new 'Roundabout site' development, demonstrates the area's potential to add to London's tradition of great residential streetscapes, increase the standard of housing in Brent and the wider Kilburn community.

Units: 229 | **Client:** LB Brent / Network Housing | **Architect:** Lifschutz Davidson Sandilands with Alison Brooks Architects | **Structural Engineer:** WSP | Parsons Brinckerhoff | **M&E Engineer:** FPH | **Main Contractor:** United House Ltd | **Project Manager:** John Rowan & Partners | **Transport Consultant:** Motion Transport Planning | **Fire Engineer:** FDS Consult | **Landscape Architect:** Fabrik



Cambium, Southfields

Victoria Drive, Wandsworth, SW19
Status: Under construction, due to complete March 2018

Responding to the site orientation and surrounding context, this scheme aims to balance usable private space within an overall structure of high quality public space; including an urban meadow, an eco-play area and communal gardens set around ancient oak trees. Designed to CfSH Level 4, the development incorporates several sustainable innovations, including rooftop gardens, air-source heat pumps, energy-saving lighting and appliances and rainwater harvesting to water communal planters. The scheme meets the Life Time Homes standards and the Mayors' Housing Design Guidance.

Units: 110 | **Client, Project Manager, Cost Consultant:** Lendlease | **Architect:** Scott Brownrigg | **Structural Engineer:** Walsh Group | **Planning Consultant:** Scott Brownrigg Planning



Camley Street

103 Camley Street, Camden, NW1
Status: Completed 2014

With its ground floor permeability and sky-level forms, Camley Street improves the physical and visual connectivity between Camley Street to Regent's Canal, and between King's Cross to Camden Town. Three brick volumes rise up to mark the site's southerly apex. The brick skin reveals a contrasting palette of glazing and metal cladding to articulate the different spaces within the building. The 'city sandwich' scheme offers a rare mix of 320 rooms of student accommodation, 40 residential dwellings, incubator office space, retail units and a café.

Units: 320 student rooms and 40 residential units | **Client:** Urbanest | **Architect:** Allford Hall Monaghan Morris | **Contractor:** Balfour Beatty | **Structural Engineer:** Walsh Group | **Services Engineer:** Dimension Data | **Planning Consultant:** DP9 | **Acoustic Design:** RBA Acoustics



© Timothy Soar

Chelsea Waterfront

90 Lots Road, Hammersmith and Fulham & Kensington and Chelsea, SW10
Status: Under construction, due to complete in Hammersmith and Fulham June 2018, and Kensington and Chelsea June 2020

Chelsea Waterfront will regenerate an important brownfield site with a residential-led mixed-use scheme comprising a dancing pair of slender towers elegantly poised on the river's edge, seven middle range buildings and the conversion of the Lots Road Power Station. Straddling Chelsea Creek, the development includes three new pedestrian bridges, a water garden and a new 600-metre section of Thames side footpath. Chelsea Waterfront will provide a range of housing including larger family units and allows future tenants to control the choice of material palette.

Units: 711 | **Client:** Hutchison Property Group UK Limited | **Architect, Lead Consultant, Contract Administrator:** Farrells | **Power Station Architect:** Formation Architects | **Affordable Architect:** BPTW | **Landscape Architect:** Randle Siddeley Associates | **Mechanical, Electrical and Public Health Engineer:** URS (AECOM) | **Structural Engineer:** Buro Happold | **Quantity Surveyor:** AECOM



© Farrells

Chambers Wharf

Hartley House & Jacobs House, Chambers Street, Southwark, SE16
Status: In use, completed March 2015

Forming Phase 1 of the re-development of Chambers Wharf, these two buildings provide a new community of comfortable, high quality homes and a community centre, within an urban design strategy that terminates the scale of the nearby wharf buildings. High quality durable materials are used in a subtly textured composition to respond to the area's industrial heritage. Each building is fractured in plan and section to create a series of interlocking forms, culminating in cantilevered, glazed 'bookend' elements and grounded by pre-cast concrete panels. Fifteen duplex townhouses offer 'ownership' and activity to the new streetscape.

Units: 182 | **Client:** St. James Group Limited | **Architect:** SimpsonHaugh and Partners | **Structural & Civil Engineer:** PTA (Powell Tolner and Associates) | **MEPH Engineer:** Hoare Lea | **Landscape Architect:** CHARNWOOD Landscape Design Ltd. | **Code for Sustainable Homes:** Richard Hodgkinson Consultancy | **Acoustic Consultant:** WSP | Parsons Brinckerhoff



© Simon Kennedy

City Pride

15 Westferry Road, Tower Hamlets, E14
Status: Design stage, due to complete 2020

Located at the western end of South West India Dock, the 239m tall, 75-storey residential tower is directly adjacent to The Landmark – a residential collection of buildings rising to 44 storeys – and is planned to link the two developments together. A triple-glazed façade provides a continuous skin, behind which all apartments enjoy private winter gardens. The scheme provides three floors of shared amenity space, including a landscaped roof garden, gymnasium and children's play areas as well as a public café with indoor and outdoor play space for families at ground level.

Units: 984 | **Client:** Chalegrove Properties | **Architect:** Squire and Partners | **Planning Consultant:** GVA



Camden Courtyards

79 Camden Road, Camden, NW1

Status: Under construction, due to complete June 2017
Units: 164

On the corner of Camden Road and St Pancras Way, Camden Courtyards gives an opportunity to live in the heart of this exciting community, filled with culture, vibrancy, markets, canal walks, bars, nightlife and top class education.

The 164 apartments and duplexes will be 50 per cent private and 50 per cent affordable, and will be built around two new courtyards providing a retreat from the world outside.

Local architects, Sheppard Robson, have come up with a design that optimises space, light and views. Six blocks are arranged in an S shape wrapped around two tranquil courtyards, allowing natural light into the apartments and views out.

Planted 'living roofs' have been designed to provide bio-diversity and the communal roof terraces offering a space to relax.



Camden Courtyards from the corner of Camden Road and St Pancras Way

© Sheppard Robson

Client / Developer: Barratt London
Masterplanner, Architect and Interior Design : Sheppard Robson
Landscape Architect: Exterior Architecture

Viewpoint
“Camden is an area of London that Sheppard Robson knows very well: the practice's London office has been based in a former piano factory with a small internal courtyard on Parkway since the mid-1970s. Whilst designing Camden Courtyards' high-quality and modern homes we sought to create a peaceful environment to contrast the busy urban location, whilst celebrating the area's energy and industrial heritage – the brickwork, robust detailing and rawness of the corten steel is a nod to this, whilst also signalling the architectural ambition of the scheme and the client.

By creating these quiet courtyards at the heart of the project, as well as shared rooftop terraces, we have introduced some very high-quality social spaces that will encourage a sense of community in the development.”

Dan Burr, Partner, Sheppard Robson



Affordable housing roof terrace

© Sheppard Robson

Centre Point

101-3 New Oxford Street, Camden, WC1

Status: Under construction, due to complete Summer 2017
Units: 82 apartments

Arising from the ground between New Oxford Street and Charing Cross Road, Centre Point was born at the epicentre of 1960s social change: a once grey and gloomy post-war London had evolved into a bright and confident capital of style. Centre Point Tower, with its rhythmical façade, quick construction and fearless height, represented the people and their newfound creative energy.

Centre Point is the work of prolific English architect Richard Seifert, who understood planning policies better than the planners themselves, and was able to design a sculptural pinnacle that could be admired from all corners of the city.

For many years after its construction, Centre Point was an unused office building. It gained unwelcome ‘white elephant’ status, as it remained partially empty and cut off by the busy gyratory system that was formative in its creation.

Centre Point is now set for an imaginative new lease of life, with an adaption the 34-storey office tower into 82 high-end apartments, whilst the lower buildings and public realm is transformed into restaurant, retail and commercial space with a public plaza. Improvements are also being made to the road network which from part of the new Crossrail station under Tottenham Court Road.

The apartments will range from 80 sqm homes to a 750 sqm duplex apartment. The movement from shadow to light informs

the new journey through the tower, moving from the robust entrance level, up and through enfolding entrance lobbies and hallways into living spaces with their incomparable views across the city.

The office floor plates were originally designed in an era of typing pools and cellular offices and are no longer of the proportion sought after. Coincidentally, they are of a very good proportion for double-fronted residential use. Whether the apartments are single aspect or the larger dual aspect types, the floor depths are just right to allow daylight to reach the backs of the habitable rooms, whilst the fenestration pattern ensures minimum habitable room widths of about 5 metres and at least two large windows facing across the city.

The tower will be upgraded to cut energy consumption with a new high performance glazing system, internal high performance insulation, and a central combined heat and power system: bringing the building up to modern standards whilst taking a conservation approach in its appearance.

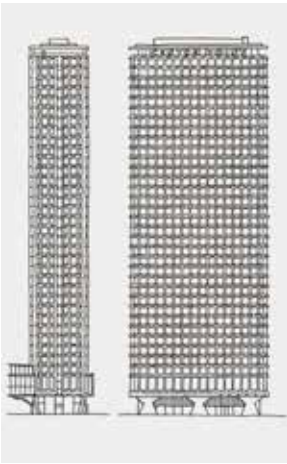
This transformation of the tower into high quality apartments enables the wider redevelopment and rejuvenation of the Centre Point buildings and its public realm. In addition, a new affordable housing element has been designed on the south-east end of the site, with balconies facing the equally extraordinary views of the Grade I listed St Giles Church.



Client: Almacantar
Architect and Lead Designer: Conran and Partners
Main Contractor: Brookfield Multiplex
Structural Engineer: Pell Frischmann
MEP and Fire Engineer: Grontmij
Façade Consultant: Wintech
Acoustic Consultant: Sandy Brown
Glazing: Lindner
Kitchens: Boffi
Façade Cleaning: PAYE
MEP: Lorne Stewart
Joinery: Brown & Carroll
Stone: Marmi

Viewpoint
“With the site being in the heart of the cultural centre of possibly the most important cultural city in the world, and its distinctive architectural personality, it made the conceptual task of creating an extraordinary residential address almost self fulfilling. The technical task of physically converting a building of this type and construction, on the other hand, poses a significant challenge that requires unceasing creativity. The project will demonstrate that alongside the need to develop on open land, there is great potential to increase residential capacity in our city through the reuse of even the least obvious existing buildings.”

Tim Bowder-Ridger, Managing Director, Conran and Partners



Chobham Manor

Stratford, Newham, E20

Status: Phases 1-2 under construction, Phase 3 design stage.
Due to complete July 2020
Units: c.850

Chobham Manor is the first new neighbourhood on Queen Elizabeth Olympic Park. Set between the former Athlete’s Village (now East Village) and Lee Valley VeloPark, it runs alongside the Park’s 111 acres of green open space.

By 2030, Queen Elizabeth Olympic Park will be home to more than 10,000 new households. The scale of this development is so large that the Park has its own postcode, E20, and has given the London Legacy Development Corporation the opportunity to take a thought-out, strategic approach to addressing London’s housing needs. This means designing new areas of city that work for people throughout their whole lives, with technologies and techniques that prioritise sustainability, safe and happy communities.

When fully complete, Chobham Manor will comprise approximately 850 homes in a mix of townhouses, mews-style properties, maisonettes, mansion blocks and apartments, plus community facilities, shops and open spaces. Unlike many new developments, which focus on one- and two-bedroom flats, the mix here helps address the local need for family-size homes, with 75 per cent of properties having three or more bedrooms.

At the same time, the mansion blocks offer a mix of one- to four-bedroom apartments, including a number of duplex designs leading up to the internal podium courtyard. The communal

outdoor podium courtyard/garden can be accessed by all residents, creating a focal point for community activities. This aims to ensure that Chobham Manor becomes a thriving neighbourhood for all ages, with every home at Chobham Manor designed to the Lifetime Homes Standard.

Three large, distinct areas of green open space will run through the heart of Chobham Manor, while a series of smaller public open spaces will provide safe places to relax and play – with the additional benefit of the wider facilities of Queen Elizabeth Olympic Park on residents’ doorsteps.

All homes at Chobham Manor are designed to exacting sustainability standards. The neighbourhood will exceed Code for Sustainable Homes Level 4 with 26 ‘exemplar units’ exceeding Code 5 and featuring brown roofs and green walls, as well as on-plot cycle storage and electric vehicle charging points. Properties will connect efficient appliances and lighting to the low-carbon heat network designed for the London 2012 Olympics, and overall residential CO2 emissions are predicted to be at least 50 per cent lower than the 2010 Building Regulations target emission rate.

Locally-sourced materials along with ‘Green Guide Specification A+ to D’ ratings are used to construct the homes.

Intrinsic to the regeneration of the site is ensuring the community gains long-term positive benefit from the development. Targets for local labour in host boroughs ensure unemployed people get back to work, while local apprenticeships are supported on the project and local colleges supported in training people to be work ready.



Phase 1 - Aerial View

Client: London Legacy Development Corporation & Chobham Manor LLP
Developer: Taylor Wimpey and L&Q
Planning Consultant: Quod
Architect: Make, PRP, Haworth Tompkins, Karakusevic Carson Architects

Viewpoint
“The multi-generational home is a unique typology designed for extended families. It demonstrates how the design team, led by an enlightened client, embraced the need for homes where multiple generations can live together. Designed by PRP, it splits the accommodation into private and shared areas, so that the family can interact, yet have a degree of privacy.

Being the first scheme within the Park, Chobham Manor sets a precedent for the upcoming neighbourhoods. Although devised for Chobham Manor, the multi-generational model is applicable to any scheme with an aspiration to create quality, sustainable communities with the end user in mind.”

Peter Lancaric, Associate Director, PRP Architects



Terraces – north edge of Green



Mansion block – Western Road

Cobalt Place

Parkham Street, Wandsworth, SW11

Status: Completed July 2015

Cobalt Place has seen the delivery of the world's largest Cross Laminated Timber (CLT) residential development. This pioneering form of highly sustainable construction can bring with it significant advantages, including an accelerated building schedule and more control over the quality of the product, much of which is developed in factory-controlled conditions rather than on site. There is also the opportunity for following trades to start on site more quickly, less noise on the site, reduced impact on neighbours during construction, as well as energy and thermal efficiency improvements.

Developer: Lendlease | **Architect:** Allford Hall Monaghan Morris | **Planning Consultant:** GL Hearn | **Civil & Structural Engineer:** Walsh Group | **Landscape Architect:** Randle Siddley | **M&E Engineer:** TUV SUD | **Cross Laminated Timber (CLT) Superstructure:** Eurban



Copper Lane

1-6 Copper Lane, Springdale Gardens, Hackney, N16

Status: In use, completed June 2015

London's first completed co-housing scheme, this project supports an “intentional” community with its shared facilities. The model seeks to make home ownership more affordable, as well as shaping more convivial and sustainable neighbourhoods. The homes benefit from a shared entrance, an inclined brick-paved lane which stretches from the street deep into the Victorian suburban block, and a courtyard which is the most demonstrative manifestation of this intentional community.

Units: 6 | **Client:** Springdale Gardens Ltd | **Architect:** Henley Halebrown Rorrison | **Structural Engineer:** Rodrigues Associates | **M&E Consultant:** AJ Energy | **Quantity Surveyor:** MPA Ltd | **Planning Consultant:** CMA Planning | **Main Contractor:** Sandwood Construction



Cobalt Place & St John Bosco College

Cobalt Place, Wandsworth, SW11

Status: In use, completed July 2015

Comprising 102 apartments, two 'Zero Carbon' townhouses and Catholic Secondary School, this development establishes a new sustainable community in Battersea. Built on a site formerly owned by the Salesians of Don Bosco, the design is sympathetic to its cultural heritage, whilst its low-rise contemporary buildings blends harmoniously with the surrounding conservation area. Homes have good vantage points and sunlight, with landscaped gardens offering a tranquil retreat for residents. The scheme employs green roofs, grey water recycling, solar panels and cross-laminated timber.

Developer: Lendlease | **Architects:** Allford Hall Monaghan Morris | **Planning Consultant:** GL Hearn | **Civil & Structural Engineer:** Walsh Group | **Landscape Architect:** Randle Siddley | **M&E Engineer:** TUV SUD | **Cross Laminated Timber (CLT) Superstructure:** Eurban



Courtyard Housing

Wood Lane / Rainham Road, Barking and Dagenham, RM8 / RM10

Status: In use, completed July 2014

Commissioned to develop a housing typology for the over 55's community on two vacant sites, the scheme looks to meet the needs of today's elderly by deriving its architecture from the key elements of English Almshouses. A communal garden forms the heart of the sites that encourages social interaction, with the L-shaped plan providing accommodation around a private courtyard. The homes have been constructed of high quality robust materials to give a sense of permanence.

Units: 40 | **Client and Project Manager:** LB Barking and Dagenham | **Architect:** Patel Taylor | **Landscape Architect:** Applied Landscape Design | **Contractor:** Lakehouse Contracts | **Quantity Surveyor:** Potter Raper Partnership | **Structural Engineer:** SDP Consulting Engineers/ Conisbee | **M&E Engineer:** Ingleton Wood Sustainability: CBG Consultants



Crest Road

Crest Road, Brent, NW2

Status: In use, completed March 2015

Revitalising a disused site, a former garage previously linked to an adjacent 1930's housing estate, this project provides much needed affordable housing, creating 14 homes, eight 2-bed flats in a three-storey block, and six 3-bed family terraced houses. The flexible 3-bed 5-person houses provide private and communal external space at all levels in the house to suit family use.

Units: 14 | **Client:** Genesis Housing Group | **Architect:** Stephen Davy Peter Smith Architects Ltd | **Contractor:** Kind and Co. | **Employers Agent:** Walker Associates | **Structural Engineer:** AMA Consulting Engineers



Earls Court Masterplan

Kensington and Chelsea & Hammersmith and Fulham

Status: Design stage, due to complete 2030

The scheme transforms the Earls Court & West Kensington Opportunity Area into a new urban district based on the concept of four urban villages and a High Street. Inspired by London, the four villages are designed for sustainable urban living and will comprise new homes, offices, hotels, work-space, education and community facilities, as well as leisure and culture destinations. This proposal includes a range of open spaces, squares and gardens, with play areas for children of all ages.

Units: 6,775 | **Client:** Capco | **Masterplanner and Architect:** Farrells (London) LLP | **Structural Engineer:** Arup | **MEP Engineer:** Hoare Lea | **Transport Engineer:** WSP | **Parsons Brinckerhoff** | **Planning Consultant:** DP9



46 - 78 Dalston Lane

Dalston, Hackney, E8

Status: Under construction, due to complete 2016

Dalston Lane is conservation-led, mixed-use regeneration scheme comprising of 44 residential units, along with approximately 1,000 sqm of retail space – all to meet Code for Sustainable Homes Level 4 and Lifetime Homes Standard. The design blends historic with contemporary architecture and has been designed to achieve the BREEAM 'very good' standard by using insulated building fabric with low air permeability, glazing with suitable U-value, g-value, daylight transmittance, mechanical ventilation with heat recovery, low energy lighting and power factor correction.

Units: 44 | **Client:** LB Hackney | **Architect:** Child Graddon Lewis | **Planning:** Nathaniel Lichfield Partnership | **Quantity Surveyor:** AECOM | **Structural Engineer:** Webb Yates | **Sustainability, Daylight & Sunlight:** MESH | **Transport:** Paul Mew Associates | **Conservation Specialist:** Geoff Noble



466-490 Edgware Road

City of Westminster, NW9

Status: Design stage

The proposed scheme is comprised of a six-storey residential and retail development to Edgware Road and a street edge of eight three-storey townhouses to Lyons Place. The proposal consists of high quality homes for private tenure, shared ownership and affordable rent, with ground level uses providing retail units plus a petrol station to the south-end corner. Residential units above will be stepped back away from the main road, emphasising the existing character of the Edgware Road and its vibrant shops.

Units: 76 | **Client:** Almacantar | **Architect:** Farrells (London) LLP | **Structural Engineer:** CNM | **Services Engineer:** Long & Partners | **Planning Consultant:** Gerald Eve | **CDM Coordinator:** Lendlease | **Townscape Consultant:** Richard Coleman Citydesigner



Creekside Wharf

Land bounded by Deptford Creek, Copperas Street and Creek Road, Deptford, Greenwich, SE10

Status: Under construction, due to complete May 2018
Units: 249

Creekside Wharf is a residentially-led, mixed-used scheme, purpose designed for the private rented sector. Delivering 249 ‘Build to Rent’ homes across two buildings – including affordable discounted market rented apartments ‘pepper-potted’ across the whole scheme – Creekside Wharf offers renters in London a genuinely alternative way of living.

The underlying Build to Rent objective is to provide not just a place to live, but also a lifestyle, community and security, whilst enabling Essential Living to efficiently manage and service the development over the long-term. This relies on providing residents with an attractive and robust environment for high-quality living and a strong sense of community through each building. Therefore, apartment layouts designed specifically for rent – with features such as equal-sized bedrooms, dual-aspect living and finishes selected for robustness, alongside generous communal amenity space, an active public realm and a dedicated back-of-house area – all comprehensively aim to make Creekside Wharf a successful Build to Rent development.

Creekside Wharf includes the UK’s first private rented building designed solely for families, with 60 two- and three-bedroom dual-aspect apartments which feature large balconies designed to enhance child safety, along with generous storage and high acoustic insulation to cater for ‘early bed times’. Communal areas have additional storage for pushchairs, prams and scooters, wider corridors are buggy-friendly and an amenity-focused rooftop floor provides internal and external children’s play space and ‘grow-your-own’ allotment gardens, overlooked by a fitness area for

parents, a lounge and games room, a ‘workshop’ for school projects and DIY, and a hireable space for social gatherings and children’s parties, all designed to meet the specific needs of families.

A second building comprises 21 residential storeys of one- and two-bedroom apartments, designed with young professionals in mind. To allow residents to enjoy the entire building as their home, multifunctional amenity spaces and services play an integral role in the design. Starting at ground floor with a large lobby, lounge, wi-fi, café and concierge, and extending to roof level where a dedicated communal floor provides views over London and includes a cinema, lounge, dining area, barbeques and pizza ovens, these spaces offer residents an attractive and stimulating environment, helping to create strong communities over the long-term.

A theme of connectivity prevails throughout the design, creating a permeable development which realises new pedestrian routes and destinations, while responding to its existing and emerging locality along the Creek. The orientation of the buildings maximise views along the water, sunlight and daylight into the apartments, and sheltered areas of public realm. At ground level, a concierge, restaurant, flexible commercial space and a nursery, which complements the family building, activate this enhanced public realm. This also includes a new pocket park, children’s play space, a new Creek Walk specifically designed for pop-up markets, and intertidal terracing for increased biodiversity.

It is, therefore, Creekside Wharf’s aim to serve as a gateway to Greenwich – celebrating its waterside location and the industrial heritage of Deptford while inspiring a new community fostered by the ‘Build to Rent’ concept.



Client/Developer & Operator: Essential Living
Architect: Assael Architecture
Landscape Architect: BCA Landscape
Interior Designer: Woods Bagot
Structural Engineer: Walsh Associates
M&E/Sustainability: Grontmij
Planning Consultant: BPTW

Viewpoint
“As architects, a key challenge in designing Creekside Wharf was convincing external audiences about the design differences of Build to Rent and reconciling the London Housing Design Guide, which has never included guidance for private rent protected by covenant, with the operational and lifestyle characteristics of this form of tenure. Not every resident needs a balcony, some prefer shared amenities to socialise with other residents, and their friends. Therefore, this project’s success has set a precedent for future Build to Rent developments, particularly for the individuals and families who will rent there long-term, with the aim to build sustainable communities.”

Russell Pedley, Director, Assael Architecture



67a - 71 Dalston Lane

Hackney, E8

Status: Under construction, due to complete October 2016
Units: 121

Dalston Lane will be the world’s largest building built from Cross Laminated Timber (CLT), providing 121 new homes in Hackney and nearly 3,500 sqm of commercial space in a building ranging from 5- to 10-storeys.

As well as achieving Code for Sustainable Homes Level 4 and BREEAM Excellent, it is expected that the structural timber frame will be ‘carbon negative’, meaning that the net effect of constructing the structural frame is to remove carbon from the atmosphere rather than emit it.

Above the first floor, all structural walls, floors, cores and staircases will be made from CLT – just over 3,850 cubic metres of wood. Using timber, 2,400 tonnes of carbon emissions are saved that would usually be caused by the erection of a concrete building of the same size. If we also include for the carbon ‘sequestered’ by timber – absorbed from the atmosphere as part of its natural growth cycle – then the structure can actually be considered as carbon negative.

CLT has been used for many years in the construction of buildings but is now coming of age as a viable, sustainable and high performing product. The spans available lend themselves perfectly to housing, and the large format, solid panels provide high quality living environments – regularly over-performing predictions on acoustic, thermal and air tightness targets.

The aspiration is to see this technology become normality. When Stadthouse on Murray Grove completed in 2009, a 9-storey timber building was a novelty. Now, timber buildings are springing up across the UK and new aspirations are being set for height and magnitude of timber projects.

The form of the Dalston Lane proposal is carefully composed to create two courtyards, one private and one public. Heights around the private courtyard are stepped to respond to the direction of sunlight from the south-west and provide a visual focus as approached from the north along Dalston Lane. The eastern part of the site steps down to respect the existing streetscape of terraced houses opposite.

By recessing the plan form of the building, the mass is formed into a cluster of smaller elements which are more recognisable as the scale of individual buildings in the area. However, the touchstone in this part of the borough for buildings this size is in the range of ornate brick warehouses nearby, not the small white stucco and stock brick residential buildings. For that reason, a robust red and brown brick architecture was developed, expressed in crafted brick cills and heads, and complemented by contrasting dark metalwork.

Dalston Lane aims to set new standards for structural timber construction without concession to the ‘bells and whistles’ aesthetic of stick on sustainability, whilst enhancing the townscape and providing 121 new homes for Hackney.

Client: Regal Homes
Architect / Lead Consultant: Waugh Thistleton
Specialist Cross Laminated Timber Engineer: Ramboll UK
Lead Structural Engineer / Below Ground Drainage: Pringeur James
Mechanical, Electrical, and Plumbing Engineer, Sustainability Consultant: XCO2
Landscape Architect: Tyréns UK
Planning Consultant: CMA Planning
Drainage: Pringeur James Consulting Engineers

Viewpoint
“Continuing with our commitment to sustainable design, it has been both a challenge and a pleasure to work on the logistics for delivering the largest CLT building in the world. Currently on site, we are orchestrating the creation of a new basement for one core, whilst simultaneously creating super structures for other buildings in the scheme. This, coupled with fully understanding the site logistics for CLT, has been an interesting challenge for us. Learning from our previous CLT structure, Banyan Wharf, we chose to refine the scheme to utilise a rationalised design that will be composed solely of CLT, rather than a steel hybrid.”

Simon De Friend, CEO, Regal Homes

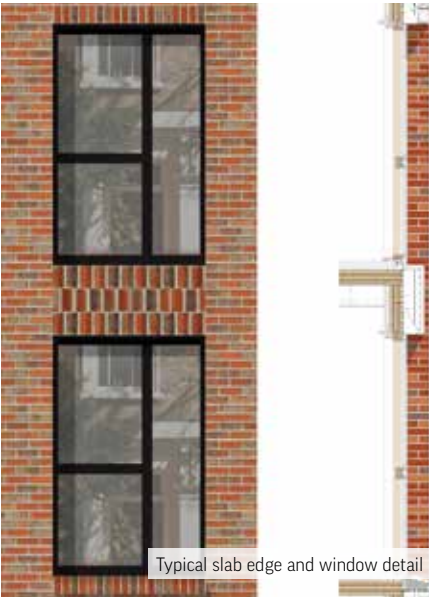


© Ramboll



Finished scheme seen from the North on Dalston Lane

© Regal Homes



Typical slab edge and window detail



Visualisation from the open central courtyard

© Regal Homes

Dalston Western Curve

10-34 Kingsland High Street and 25-33a Kingsland High Street, Hackney, E8

Status: Under construction, due to complete early 2017
Units: 106

Following a design competition by the landowner Transport for London, this scheme redevelops two constrained but important sites on either side (east and west) of Kingsland High Street. The development comprises commercial uses on the ground floor with residential development above, rising to seven storeys on the western site and six storeys on the eastern site.

LB Hackney resolved to grant planning permission for 106 units and 1,403 sqm of commercial floorspace in July 2013. The resolution followed 17 months of design evolution and discussions with a variety of stakeholders in relation to headline issues including residential density, height, mix of units, affordable housing and improvements to the public realm.

The design of the development had to reflect the differing nature of Kingsland High Street and Ashwin Street. The western site includes the corner of Kingsland High Street and Boleyn Road, and therefore represented an opportunity for additional height to mark this important corner location. The design comprises three elements: a sculptural brick wrap, a metal clad core (popping up at upper levels) and a stitch element creating a relationship with the neighbouring properties. The character of Kingsland High Street was maintained by creating a continuous commercial base providing active frontage onto the street. The corner of the

building incorporates a small seven-storey section marking the corner, with a shoulder height of five storeys and stepping down to adjacent neighbouring properties to the north.

The eastern site faced a different challenge, with two very different characters on each side of the building. The western elevation fronts onto the busy Kingsland High Street, whereas the eastern elevation faces the vibrant cultural quarter (including bars and cafés) of Ashwin Street. It was vital that this elevation had a synergy between the new building and activity on Ashwin Street. Therefore, vertical amenity has been incorporated within a framed deck access, which allows a natural interface between the elevation and the street below.

Technical constraints added another layer of complexity to the design evolution. Both sites are located above the recently completed extension to the East London Line along the ‘Dalston Western Curve’ railway line. This was a fundamental consideration in terms of construction but also in terms of viability, as both sites have undergone significant enabling works in preparation for development. A specific lightweight steel frame structure has been used for both sites to ensure that the proposed buildings can be accommodated on relatively small sites above the railway tunnels. When complete, the development will bring two long-term vacant brownfield sites back into active and vibrant use; providing new homes in the heart of East London whilst enhancing the high street and the cultural quarter of the adjoining Ashwin Street.



Client: Taylor Wimpey East London
Architect: RMA Architects
Planning Consultant: Carter Jonas LLP
Landscape Architect: Liz Lake Associates
Transport Consultant: VCL2
Structural Engineer: Clarke Nicholls Marcel (CNM)

Viewpoint
“The central (High Street) location ensured that there was significant interest in the scheme from neighbouring residents, businesses and local stakeholders. In my role as a planning consultant, striking a balance between the competing demands of the site in planning policy terms, the tight physical constraints of an urban site and the wishes of the relevant stakeholders was a difficult but rewarding challenge.

The location above a rail tunnel made this even more challenging in design terms, but the end result provides an innovative response to these two unique sites in the heart of Dalston.”

Alistair Henderson, Partner,
Carter Jonas



Dudley House

North Wharf Road, City of Westminster, W2

Status: Design stage, due to complete November 2018
Units: 197

Providing 197 apartments as part of a mixed-use development, this scheme includes a secondary school, a church, retail space and accommodation spanning over seven stories.

The residential element is conceived as affordable housing Build to Rent to meet the borough’s intermediate housing need. The apartments are a mix of micro units, studios, 1- and 2-bed apartments; with the focus of providing accommodation at affordable rent levels. Accordingly, 2-bed units are based on sharers similar to a commercial PRS development and smaller units (micro units and studios) form part of the residential mix. Shared facilities include a dry gym and meeting room, however, overall the extent of on-site management and amenities have been minimised to reflect a typical commercial PRS scheme. Extensive communal amenity space is provided in the form of two terraced areas at first and sixth floor level.

The school is located towards the quieter, southern end of the site with accommodation. External play space is provided at roof level, with a primarily vertical split between the school and the

residential accommodation, enabling the two uses to have clear, distinct identities and entrances. This allows a greater degree of separation, mitigating privacy and security issues on this tight urban site. A sharing arrangement allows the school to utilise the residential gym and meeting room during school hours.

The church re-provides space for an existing church that would be demolished as part of the re-development. The new facility is located in the same position as the current church to maintain continuity with the existing community and congregation. Currently, the church is housed in a terraced building with restricted access and occupies the area of a single floor plate, resulting in capacity limitations. The new accommodation provides in a single level at ground floor ensuring access for all residence and visitor and provides the church with flexible space that can accommodate larger groups.

The building design addresses the changing context of Paddington Basin, responding to the adjacent planned developments whilst reflecting the various uses on site. A tower faces Harrow Road with a series of vertical fins, set at angles to create a dynamic aspect to the façade.



Client: Westminster City Council,
Westminster Community
Homes and City West Home
Development Partner:
Willmott Dixon
Architect: Child Graddon Lewis
Planning: WYG
Structural Engineer: Structa
**Mechanical and Electrical
Services:** TGA
Energy and Sustainability:
Chapman BDSP
Transport: Mayer Brown

Viewpoint
“An emerging design challenge is combining different purposes in a single development. Inclusion of a school as part of a larger mixed-use development will become more common in order to meet the requirements for additional education facilities as London’s population grows. It is a challenge to provide the necessary facilities whilst maintaining security for school precincts and protecting amenity for residents. The impact of new schools for local residents can be challenging, however, generally schools that are successful are viewed as positive additions by communities.

James Felstead, Director,
Child Graddon Lewis



Embassy Gardens (Phase 1) Building A11

Nine Elms, Wandsworth, SW8
Status: Under construction, due to complete December 2015

Part of the first phase of Embassy Gardens, the scheme forms half of Building A11 and comprises 98 shared ownership 'Intermediate' homes of one- and two-bedrooms. A range of amenity spaces includes balconies and terraces, a communal courtyard, and a landscaped green ravine between the two buildings. The building frontages and linear park share an urban rigour that is articulated through robust brick architecture, metalwork balconies, and simply detailed fenestration. The shared ownership and private buildings are constructed with the same level of detail, quality of materials and space standards.

Units: 98 | **Client:** Ballymore Properties | **Concept Architect:** Arup Associates/ HAL | **Delivery Architect:** Reddy Architecture | **Landscape Architect:** Camlins | **Structural Engineer:** Walsh | **M&E / Sustainability Engineer:** OCSC | **Planning Consultant:** CBRE | **Contractor:** Ballymore Construction



Fulham Riverside

49 Townmead Road, Fulham, Hammersmith and Fulham, SW6
Status: Due to complete 2018

Set on the north bank of the River Thames, this project will comprise 472 one-, two-, three-, four-, five- and six-bedroom apartments, penthouses and townhouses. The 3.2 hectare site, previously a coal-fired power plant and brewery, is located in Fulham's Sands End Riverside conservation area and will transform derelict warehouses and a disused jetty into a thriving new community with dynamic public spaces and river frontage.

Units: 472 | **Client:** Barratt London | **Masterplanner:** Lifschulz Davidson Sandilands | **Architect:** Broadway Malyan | **Landscape Architect:** Fabrik | **Interior Designer:** Conran + Partners



Evolution Edgware

Stonegrove and Spur Road Estate, Barnet, HA8
Status: Under construction, due to complete 2017

The regeneration of the Stonegrove and Spur Road Estate seeks to create an attractive, vibrant and sustainable neighbourhood through a collaborative process, engaging existing residents, the local community and the council. The result will be a series of linked, mixed-tenure areas within a safe and well-designed public realm. The second phase of the regeneration comprises 133 houses, 146 apartments and over 1,700 sqm of public amenity space. A high quality 'pocket park' will provide seating areas and an informal play space as part of the overall play strategy.

Units: 279 | **Client, Project Manager, Contractor, Cost Consultant:** Barratt London | **Architect:** Maccleanor Lavington | **M&E / Sustainability Engineer:** Whitecode Design Associates | **Structural Engineer:** RLT | **Planning Consultant:** Quod | **Transport Consultant:** RGP | **Daylight / Sunlight:** BVP



Gasholders

One Lewis Cubitt Square, Camden, N1C
Status: Under construction, due to complete April 2017

Gasholders will consist of three residential cores housed within 123 Victorian, Grade II-listed, cast-iron frames. The concept proposed three drums of accommodation at differing heights to suggest the movement of the original gasholders, which would have risen up or down depending on the pressure of the gas within. Each residential building will be independently supported and is set back from the frame structures. Together, they will hold 145 canalside apartments, including nine penthouses and rooftop gardens.

Units: 145 | **Client:** King's Cross Central Limited Partnership | **Architect:** Wilkinson Eyre Architects | **Contractor:** Carillion Construction Ltd. | **Engineer:** Arup and Craddy Pitchers Davidson



© V1

Gillender Street

Bromley-by-Bow, Tower Hamlets, E3
Status: Under construction, due to complete 2016

Comprising of three buildings which sit adjacent to the River Lea and the Lime House Cut canal at the Bow locks, this mixed-use, residential-led development will create 63 affordable housing units, along with 46 units of market housing, and a new public realm with access to the River Lea along with improvements to the canal walk. The buildings are designed with strong references to the riverside warehouse architecture of London with the use of brick, deep reveals, and the close relationship to the water's edge.

Units: 109 | **Client:** Criterion Two LLP, Peabody Trust and Ardmore | **Architect:** Allies and Morrison | **Structural Engineer:** RLT Engineering Consultants Ltd | **Services Engineer:** Waterstone Design | **Fire Adviser:** BWC Fire Ltd



Gospel Oak Infill Sites

Lamble Street and Barrington Close, Camden, NW5
Status: Design stage, due to complete June 2017

As part of LB Camden's Community Investment Programme, three infill sites in Gospel Oak have been identified for new housing. The new homes will increase housing stock, generate funds, and improve the quality of the public realm. Providing 60 per cent affordable units and 40 per cent private sale, the buildings share a palette of materials and details, with form and massing responding to the individual site conditions. Schemes were developed in consultation with the local Tenant's and Resident's Associations.

Units: 5 | **Client:** LB Camden | **Architect / Contract Administrator:** Burd Haward Architects Ltd | **M&E Engineer:** Ingleton Wood | **Quantity Surveyor:** Moulton Taggart | **Structural Engineer:** Ellis & Moore



Gorleston Street

6-12 Gorleston Street, Hammersmith and Fulham, W14
Status: Under construction, due to complete July 2017

Gorleston Street is a new development in an L-shape footprint which completes its urban, park-bounded block. Balconies, roof terraces and a communal courtyard garden provide private outdoor amenity space for all residents, whilst green roofs, living walls, photovoltaic panels and quality material selection ensure the highly sustainable development can achieve Code for Sustainable Homes Level 4. This scheme aims to set new design standards for affordable housing, offering well-planned, flexible apartments. Under floor heating, a domestic sprinkler system and in-built storage make space layouts efficient and user-friendly.

Units: 28 | **Client:** Dolphin Living | **Architect:** Farrells (London) LLP | **Structural Consultant:** Price & Myers | **M&E/Sustainability Consultant:** Max Fordham | **Party Wall Surveyor:** GA Surveyors | **Rights of Light Consultant:** Savills Commercial Limited | **Heritage Consultant:** Alan Baxter & Associates LLP | **CDM Coordinator:** DBK Holdings Limited | **Access Consultant:** Arup Accessible Environments



© Farrells

Grange Walk

Grange Walk/The Grange, Southwark, SE1
Status: Under construction, due to complete Spring 2017

Situated in the heart of Bermondsey, Grange Walk comprises 167 apartments with 33% affordable provision. Responding to irregular site geometry and context, the design achieves an urban density whilst limiting storey heights and providing a generous living environment. Over 65% of the homes are dual-aspect and benefit from large private terraces and landscaped courtyards. The careful transition of scale, detail and materiality ensures that the scheme respects its rich context whilst making a distinctive contribution to the townscape.

Units: 167 | **Client/Developer:** Linden Homes South-East Ltd | **Architect:** Gardner Stewart Architects | **M&E/Sustainabilty Engineer:** Vector Design | **Planning Consultant:** CBRE Ltd | **Structural Engineer:** JSA Consulting Engineers | **Landscape Designer:** Murdoch Wickham (planning) / Macfarlane Associates (technical)



© Rock Hunter

Gascoigne East

Gascoigne Estate, Barking and Dagenham, IG11

Status: Design stage, due to complete May 2018
Units: 421

Phase 1 of the Gascoigne Estate Regeneration will see the creation of 421 new homes – with 88 per cent affordable – a new medical centre, and retail units, and aims to set a precedent for architectural quality for the future phases of the 1,575 dwelling masterplan.

The drivers and aspirations for the design proposals are:

- To transform an estate blighted with crime and anti-social behaviour into an integrated neighbourhood that connects with and enhances the local area
- To create distinct neighbourhoods that evoke a sense of identity and belonging
- To create new homes that will act as a showcase for exemplar design and define the quality for the subsequent phases of the masterplan
- To deliver high quality, desirable, bright, accessible and spacious homes

Gascoigne East has been driven by a holistic approach to create intimate communities on a grand scale, carefully integrating urban planning, architecture and landscape. A unifying concept underpins the design, derived from the site's history as a jute spinning mill in Victorian times. The concept of weaving, explored at different scales, defines three distinct neighbourhoods. It is articulated in the grain or 'weave' of the architecture, creating a language that responds to the macro scale of the urban design strategy to the micro scale of the detailed design.

A grid of five new streets, organised around a sequence of six distinct blocks of accommodation, transforms the existing estate, which is currently defined by dangerous dead end streets. A legible street pattern is produced, that connects the new neighbourhoods with the town centre via the principal tree lined boulevard, and links with the surrounding context through a network of permeable east west streets. The large landscaped park at the heart of the scheme provides a valuable public space and a children's play area. Phase 1 sits within the northern section of the masterplan where increased massing and smaller units are located closer to the town centre.

The four main buildings in Phase 1 are conceived as courtyard blocks enclosing first floor shared landscaped gardens, with car parking below. Innovative unit designs ensure that all dwellings are dual aspect, have high levels of natural daylight and generous private amenity space. The majority of balconies are orientated to the south and west to receive the evening sunlight.

A 'fabric first' sustainability strategy has been adopted from the outset, with strategic orientation and massing, high performance building fabric and 100 per cent dual aspect units, delivering excellent environmental conditions and energy efficiency to all homes. A new energy centre, constructed within Phase 1, will also supply the whole site with a sustainable source of power, and is supplemented with photo-voltaic cells located on the roofs and MVHR (Mechanical Ventilation and Heat Recovery) within each unit. All homes are designed to CfSH level four and commercial elements to BREEAM excellent rating.



© Forbes Massie

Client: East Thames Group / LB Barking & Dagenham
Architect / Landscape Architect: Levitt Bernstein
Masterplanner: Allies & Morrison
Planning Consultant: Icen Projects
Structures: Tully De'Ath
Services: Peter Brett Associates
Contractor: Bouygues UK

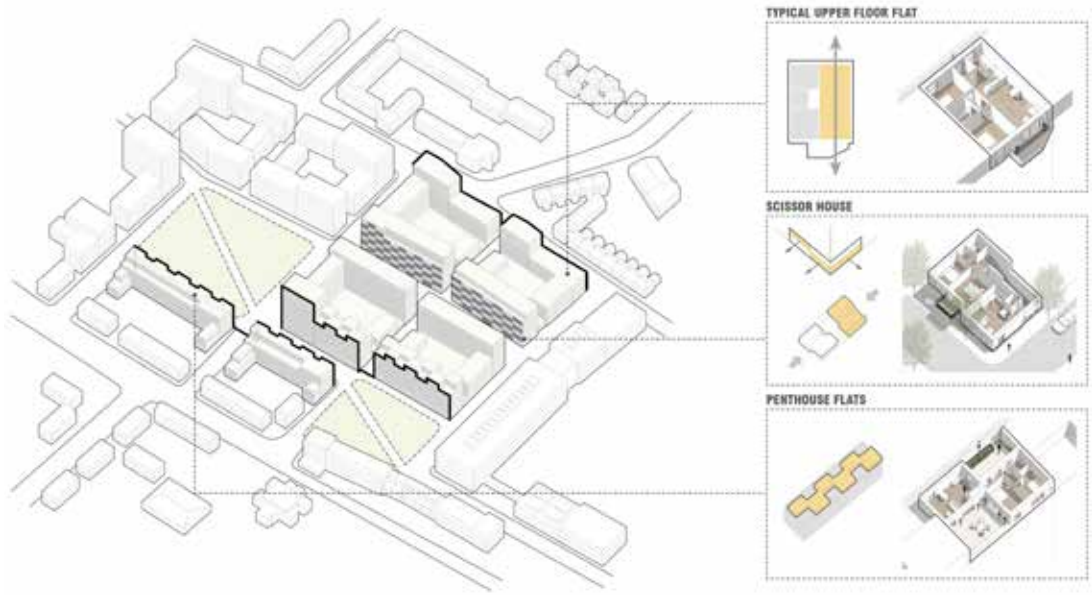
Viewpoint

"One of the key challenges is changing the perception of the Gascoigne Estate; an important part of our vision is that the Gascoigne is no longer thought of as an 'estate', with the area becoming a part of the overall regeneration of Barking town centre and providing high quality new homes. Construction partner Bouygues UK is introducing innovative new construction methods; their continental method of building maximises space inside the unit by pre-casting all components into the concrete frame. Another key challenge is ensuring that life remains as normal as possible for existing residents whilst living amongst construction work."

Dubravka Polic, Senior Regeneration Professional, LB Barking & Dagenham and Darren Parker, Head of Development and Regeneration, East Thames Group.



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© Levitt Bernstein

Goresbrook Village (now Castle Green Place)

Goresbrook Road, Barking and Dagenham, RM9

Status: Completed Spring 2014
Units: 149

Goresbrook Village is a new residential quarter that replaces three iconic, unpopular tower blocks formerly known as ‘Legoland’ on a site alongside the A13. Part of LB Barking and Dagenham’s extensive estate renewal programme that has seen the demolition of old housing stock replaced with a choice of new homes for their residents, the transformation from ‘estate to place’ at Goresbrook Village is dramatic. The group of 16-storey tower blocks stood in a sea of undefined and unloved public realm, and all 280 flats were accessed via a single front door and concierge. This has been replaced with a tightly knit network of traditional streets lined with front doors – one front door for every home. The new streets reach out into the neighbouring residential area, making new connections and creating a comfortable seamlessness with the scheme’s context.

The collective vision for the new neighbourhood was ‘a friendly place known for its green space, attractive tree-lined streets, and exemplar homes with generous gardens; a new suburban quarter that has its own distinctive personality, but also connects seamlessly with the surrounding community’. The primarily residential development includes a shop and village square on Goresbrook Road, and a new linear park incorporating ‘doorstep play’ linking the new homes to the expansive Castle Green to the east of the development, as well as ensuring that the wider community including a local school, will benefit from the scheme.

The new neighbourhood has distinctive residential streetscapes, combining traditional scale and varying rooflines with contemporary architecture and a rich mix of primarily brick tones

and textures. The terraced frontages provide regular front doors onto tree-lined streets with wide footpaths. The new mixed-tenure homes which line the streets are simple and elegant, with large windows and generous recessed entrance porches. The houses are designed to London Housing Design Guide minimum standards but enjoy a spaciousness that is achieved through rigorous attention to detail in planning. The experience of entering the home is optimised with direct views through to the gardens beyond, with corner windows in the kitchens bringing activity to the street and a friendly welcome to the entrance porch areas.

A key aspect of the project was to see the project’s impact beyond its boundaries, and how the wider, existing community would benefit from the proposals. The masterplan’s approach was therefore key to securing the buy-in of sensitive neighbours, who would obviously benefit from no longer having such tall buildings as their neighbour. Links into the existing street network, and enabling the wider community to benefit from the park, the shop and direct links into Castle Green, were key to the success of the scheme.

The use of Make Your Own models proved a great tool for making the ‘look and feel’ of the new houses accessible to local residents, stakeholders and the Council. The models encouraged ‘familiarity through touch’, and the same principle was applied in the model of the surrounding houses, where each house was identifiable by number so that local people could easily find their home and orientate themselves with respect to the proposals.



Client: Countryside Properties
Masterplanner and Lead Architect:
Stitch Collaborating Architect:
Mae Architects LLP
Structural/Civil Engineer:
Brand Consulting
Landscape Architect: HTA Landscape
Planning Consultant: Montagu Evans
Acoustic Consultant: Sharps Redmore

Viewpoint
“ Thanks to our continuing strong record of regeneration work in Barking & Dagenham, there is now a new development of highly attractive, environmentally friendly new homes for tenants and owner-occupiers along a stretch of the A13 in east London. Our involvement in Goresbrook Village was the latest of our outstanding projects in the borough. We overcame a number of challenges, including ensuring the scheme was viable. As a result, strong sales rates were achieved. By using Help to Buy and a targeted marketing campaign, the private sale homes were all sold out within six weeks.

To meet GLA funding requirements, we also had to complete within a tight time frame. Our excellent partnership with the council and our own project management approach ensured we did that. The development is yet another milestone in the regeneration of that promising part of London.”

Michael Hill, New Business Director, Countryside



Great Arthur House

Golden Lane Estate, City of London, EC1

Status: Under construction, due to complete late 2016
Units: 120

This project will create a replacement curtain wall for Great Arthur House, a Grade II listed residential tower block built in 1956, whilst the residents of the 120 apartments remain on site through the duration of the works. The 17-storey building is the principal vertical element of the architecturally significant Golden Lane Estate designed by Chamberlin, Powell and Bon, also known for designing the neighbouring Barbican estate. Influenced by the work of Le Corbusier, the design of the estate was regarded from the outset as a model of social integration, with early tenants including doctors, police officers, secretaries, cleaners and caretakers, and an emphasis on one-bedroom flats for single people and couples. The apartments are now a mixture of private and social housing, maintaining the original vision for housing in the City of London. As stakeholders, the current residents of Great Arthur House have been involved in the design review through a thorough the consultation process, as were English Heritage.

The tower is a reinforced concrete construction, with the main east and west elevations clad in distinctive golden yellow opaque and clear glass set in aluminium frames. The cladding is now ageing, resulting in uncomfortable living conditions, heat loss and

condensation. The Grade II listing and iconic design of the building compels the new design to replace the curtain wall with as close as possible replica of the original, save for advanced environmental and performance specifications. Spectrographic analysis has been carried out to ensure the correct shade of yellow is used for the covering on the panels and the original windows will be replaced to the north and south elevations. Replacement double-glazed timber balcony doors, external redecorations, localised external concrete repairs, and a cleaning and maintenance system for the new façade will assist the revival of the landmark building.

Specially designed pre-fabricated panels advanced the process of installation and allowed residents to remain in situ with minimal disturbance while the works are completed. Creating the curtain wall remotely, the panels were subject to rigorous testing, including high velocity weather simulations to ensure the highest quality specifications and minimal snagging on site. As part of the ongoing consultations with residents, a mock up was also installed next to the tower itself, allowing stakeholders to examine the proposed replacement in detail. When replaced, the original cladding will be removed in sections of three floors at a time. Residents spoken to are enthusiastic about the changes and following the improvements, look to save up to 31 per cent on energy costs, alongside the visual improvements to the building.



© Tom Cronin

Client: City Community & Children's Services Department, City of London Corporation
Architect/Lead Designer and CDM Principal Designer: John Robertson Architects
Project Manager, Environmental / Structural / Facade Engineer, MEP Lead and Engineer: Mott MacDonald
Quantity Surveyor: Sweett (UK) Ltd
Main Contractor: Keepmoat
Curtain Walling Sub-Contractor: Fill Metallbau

Viewpoint
"I represent the client, with specific responsibility for the Great Arthur House curtain wall and window replacement. As a Grade II listed building, it has been challenging to find a solution that meets the needs of all interested parties. A thorough consultation process involving the residents' input and a collaborative approach from the design team have all helped to take this project forward. The phased development is designed to have as little impact on the local community while the work is undertaken and I look forward to the positive improvements the newly designed facade will have on improving the resident's lives when complete".

Lochlan MacDonald, Asset Programme Manager for the City of London



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Great West Quarter (GWQ)

Great West Road, Brentford, Hounslow, TW8

Status: Completed June 2015
Units: 897

GWQ is Barratt London's flagship regeneration project on west London's Golden Mile. The project has seen the five-hectare former factory site on the Great West Road transformed into a vibrant, mixed-use development of nearly 900 homes. The development features the awarding-winning Wallis House, a converted Grade II listed building, and a 25-storey tower with a public viewing gallery at the top to enjoy the views of central London and beyond.

The scheme is genuinely 'mixed-use', with approximately 36,000 sqm of office, small business space, hotel/apart-hotel and retail floorspace provided across the site catering for a variety of skills and jobs. The mix of uses are arranged around a landscaped, central piazza in the heart of the development.

The scheme also comprises a mix of housing types and tenures, with one of the highest provisions of affordable housing achieved on a privately-owned site in the last 10 years. The buildings are

designed as 'tenure blind' with all units benefiting from the full range of lifestyle amenities on site – gym, nursery, café/bar, dry cleaners and basket foodstore.

All car parking has been kept from view below ground and the scheme incorporates innovative landscaping, with a variety of private and public spaces provided. Westgate House, the last building to be finished in 2015, features one of Europe's largest green walls.

The project involved high level public consultation and detailed discussions with numerous statutory parties. The principal planning issue related to the site's development plan allocation as an employment site, and the implications of the tower on the nearby Kew World Heritage Site. Through a considered programme of consultation, the scheme that was granted approval in 2006 has since been delivered as an exciting sustainable community. It now stands as a prominent gateway into London from the west, and has been a catalyst for regeneration in Brentford as a whole.



Client: Barratt London
Architect: Assael Architecture
Planning Consultant: Carter Jonas LLP
Landscape Architect: Fabric
Transport Consultant: WSP | Parsons Brinckerhoff
Structural Engineer: AECOM
M&E Engineer: Whitecode

Viewpoint
"I have been involved since the pitch was first made to the previous owners (GlaxoSmithKline) back in 2003, with planning advice continuing all the way through the development process to completion in 2015. This has given me a real insight into how the scheme has had to adapt as economic conditions have changed and as new legislation and policy has emerged. It has been incredibly satisfying seeing the drawings come to life as a place to live, work and play, and even more rewarding seeing the scheme deliver the level of quality that was envisaged from the outset."

Katy Davis, Partner, Carter Jonas



Green Man Lane

Ealing, W13

Status: Phase 1 completed 2014, Phase 2 under construction.
Due to complete in 2022
Units: 820 homes

The landmark first phase to transform the Green Man Lane estate in west Ealing is now complete, and seeks to signal a fresh new start for the 1970s estate and its community. The first 168 new homes, a community arts café and central energy centre have already been delivered.

Work is now progressing on Phase two, and, in total, the regeneration will deliver 820 homes, along with a new school, an array of community facilities, play parks and green spaces.

The previous estate had been plagued by overcrowding, crime and antisocial behaviour. The regeneration team has worked closely with local residents to create an outstanding yet affordable and practical design that overcomes these challenges.

The massing and form of the new estate integrates with the surrounding neighbourhood, creates natural surveillance, links community spaces and recreates a traditional hard street edge. The estate has been phased to sensitively decant existing residents into the new buildings, causing as little disruption to their lives as possible.

Green Man Lane is a community-led regeneration project which has received overwhelming positive support from all stakeholders. There is a strong sense of community among the residents of Green Man Lane and a desire to remain in the area. From the outset, the local community has had opportunity to input at every

stage of the project, from developer team selection through to ongoing detail design. The design consultation programme included workshops, study visits, public exhibitions and presentations, while continuous contact enabled the community to input into the evolving design ensuring sustained interest and support. The arts café launched in 2014 in partnership with OPEN Ealing, a local arts organisation, to deliver a vibrant arts and cultural programme for local residents and the surrounding community.

A striking and distinctive 100 metre-long double curve is a stand out feature of Phase one, working around existing trees to give a sense of establishment and a unique identity to the development.

All homes include private balconies or gardens and are set back from the street to create a softer tree-lined edge with the pavement, better security and a convenient space to hide bikes, waste and recycling bins. Homes have been designed to have lots of natural light from large windows, and are planned to create generous spaces with considered storage areas. Quality and durable materials are used throughout.

Designed to achieve Level 4 of the Code for Sustainable Homes, the redeveloped estate will generate significantly less carbon and reduce energy consumption for residents. A single ‘green’ energy centre uses combined heat and power to produce low and zero-carbon energy to serve the new homes and school, as well as the wider neighbourhood. Buildings are constructed with exceptionally high levels of insulation and air tightness. Parts of the demolished concrete car park were re-used to create foundation build-up.



© JZA Photography

Client: A2Dominion and Rydon
Masterplanner and Architect: Conran and Partners
Structural Engineer: Ridge
M&E Engineer: URS
Planning Consultant: Savills
Project Manager / Cost Consultant: John Rowan and Partners
Contractor: Rydon
Other key team members: Green Man Lane Residents Steering Group, London Borough of Ealing, St. John's Primary School

Viewpoint
"Whilst Green Man Lane was crying out for change, we were aware from the early stages that this had to be delivered working with and around existing residents. Our design teams invested a lot of time discussing and fine-tuning the detailed proposals with resident and community groups. We also discussed with residents how best to construct the early phases on the new neighbourhood whilst residents on later phases continued to live close by. With Phase one complete and resident feedback being so good, it is clear that that early work has paid dividends."

David Price, Director of Regeneration, A2Dominion Housing Group



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Greenwich Housing

Coldbath Street, SE13 / Partridge Green, SE9 / Herbert Road, SE18 / Walnut Tree Road, SE10 / Colomb Street, SE10 / Raven's Way, SE12

Status: Completed September 2015
Units: 35

The Royal Borough of Greenwich Housing Services Department identified an acute need for genuinely affordable, single-storey dwellings for people over 60 years of age, through a strategic review of housing needs across the borough. This identified a general shortage of affordable social housing, and a specific shortage of appropriate housing for older people and specialist housing for young people. The review identified that many people over 60 are currently under-occupying large council-owned family homes, which Greenwich Council needed to release for families who are overcrowded and/or affected by welfare reforms. Consultation identified that well-designed bungalows in good locations were the attraction for older people when considering downsizing.

In parallel to this, a review of council-owned garages revealed that there were a number of small garage sites around the borough which were not well used and/or in disrepair, attracting anti-social behavior and generally having a negative impact on the area. This led to the Council prioritising funding to provide a strategic solution to both issues by constructing new dwellings on eight small, under-utilised sites. Six of the sites provide new single-storey wheelchair-accessible dwellings for people over 60, while one site will provide apartments for people over 60 and one will provide six new apartments for Care and Support Specialised Housing (CSSH) for younger people.

A prototype single-storey house has been developed that can be arranged in alternative layouts on different sites throughout the borough. A monopitch roof with extensive glazing provides a good quality of height, space and natural light, regardless of orientation. The additional height provided by this roof form also allows the houses to sit comfortably within various different urban contexts including streets of two-storey 19th century terraced houses. The relationship of the house to the street has been carefully considered – with a modest sized window to the front room which allows views and a visual connection to the street whilst retaining privacy, with a larger dormer window allowing for the room to enjoy strong daylighting and a view of the sky.

The main living spaces are open plan, with dining at the front, kitchen at the centre, and a living room at the rear which opens towards the private rear garden. The houses are flexible, allowing the dining and the living spaces to be swapped by the resident according to their personal preferences for different outlook or solar orientation.

In terms of the external form and the open plan internal spaces, these single-storey dwellings are a major departure from the image of a typical bungalow, and their design could serve as a model for future developments of single-storey homes.



Client: RB Greenwich
Architect: Bell Phillips Architects
Employer's Agent: Martin Arnold Ltd
Contractor: Newlyn
Structural Engineer: Richard Jackson

Viewpoint
“Due the intrinsic challenges of each individual site and geographical spread across Greenwich, coupled with RBG’s desire for a high quality design, it was important to mitigate issues surrounding time, cost and quality. With a fixed unit type design, we encouraged tendering contractors to look at an MMC technique to reduce the construction time on site and drive up quality.

The successful contractor used a swift to erect timber frame, which allowed them to work internally whilst works to the external cladding and roofing were ongoing. The design repetition also meant that quality levels could easily be set and maintained at a high level throughout.

Adam Woolsey MRICS, Partner,
Martin Arnold Ltd.



Greenwich Millennium Village

Bugsby's Way, Greenwich, SE10
Status: Under construction, phased completion until 2020

The masterplan for Greenwich Millennium Village generates a picturesque arrangement of buildings defined by streets and squares. The proposed urban blocks will create a rich variety of public space and dwelling types, integrated into the mix of uses which are vital to a genuine urban village. In addition to more conventional terraced houses and apartments, the scheme reprises the London mews house type, as well as creating innovative duplexes that transcend the severe acoustic challenges imposed by neighbouring aggregate wharves.

Units: 1,800 | **Client:** Countryside Properties | **Architect:** Jestico + Whiles, Peter Barber and Studio 54 | **Landscape Architect:** Turkington Martin | **Structural Engineer:** Iesis | **M&E Consultant:** AECOM | **Sustainability:** XCO2 | **Acoustics:** Sandy Brown Associates | **Planning:** SWA Planning



© Jestico and Whiles

Greenwich Wharf, Granite Apartments

River Gardens Walk, Greenwich, SE10
Status: Under construction, phased completion ongoing

This scheme aims to create a sustainable mixed-use development that integrates with the existing urban fabric and act as a catalyst for the regeneration of this part of Greenwich, providing 837 residential units, 79,675 sq ft of commercial space, studio workshops, retail units and sports facilities. Trade and raw goods which have historically been associated with the four wharves – lead, granite, slate, zinc, brick and timber – informed the materials strategy and provide an identity and character to the spaces.

Units: 837 | **Client:** London & Regional Properties | **Architect:** Squire and Partners | **Planning Consultant:** DP9 | **Project Manager:** Expedition Engineering | **Services:** Blyth and Blyth | **Structure:** Expedition Engineering



Greenwich Peninsula Riverside

Plots M0104 & M0121, Greenwich, SE10
Status: Under construction, due to complete March 2017

In the masterplan for the area east of the Greenwich peninsula, this scheme comprises two plots. Each building is arranged with two wings around a central core, ensuring all apartments are dual aspect. Contaminated ground conditions precluded full basement parking, however, this constraint has been turned to advantage by the creation of a raised ground floor above semi-recessed basement. The raised ground floor residential accommodation overlooks the public realm and a new civic square.

Units: Plot M0104: 269 units; Plot M0121: 260 units | **Client:** Knight Dragon Development LTD | **Architect:** Pilbrow and Partners LLP | **Landscape Architect:** Turkington Martin | **Structural Engineer:** CH2M | **M&E / Sustainability Engineer:** Hoare Lea | **Project Manager / Cost Consultant:** AECOM | **Contractor:** Wates



Hicks Bolton Bond

Hicks Bolton House, Denmark Road, South Kilburn, Brent, NW6
Status: In use, completed January 2015

Situated in the wider masterplan for the regeneration of South Kilburn, Hicks Bolton Bond provides 64 affordable and sustainable housing units. These are configured around two different and complementary blocks forming a unified streetscape at ground level. This builds on the aspiration of a family-orientated design concept with quality green open spaces, aiming to create a friendly neighbourhood and community feel. The buildings are predominantly brick with a setback top storey of zinc, articulated with punched windows and recessed balconies.

Units: 64 | **Client:** LB Brent and Catalyst Housing | **Architect:** Rick Mather Architects and Hester Architects | **Landscape Architect:** Forum Landscape Architects | **Structural Engineer:** Haskins Robinson Waters Engineers | **Service Engineer:** Mott MacDonald | **Acoustician:** Sandy Brown Associates



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Holy Trinity Primary School

Beechwood Road, Dalston, Hackney, E8
Status: Under construction, due to complete October 2016

The Holy Trinity project adopts an innovative but pragmatic approach to meeting the increasing demand for new homes and additional school places within London. This design solution incorporates a residential development, Vibe, above a new-build, expanded two-form entry primary school for The London Diocesan Board for Schools. The seven-storey residential element sits above the two-storey school and a double-height rooftop multi-use game area, cross-subsidising the school construction costs and providing high-quality, urban living in Dalston. The design is a metropolitan, mixed-use solution that completes the high-density surrounding urban block whilst maximising the provision of external space.

Units: 101 | **Developer & Contractor:** Telford Homes Plc | **Client:** London Diocese Board of Schools | **Concept, Design and Planning Architect:** Rock Townsend | **Working Drawings Architect:** STOCKWOOL | **Landscape Architect:** Standerwick Design | **Cost Consultant:** Sawyer & Fisher | **Rights of Light Consultant:** Waterslade



© Telford Homes Plc

Kidbrooke Village, Phase 6

Moorhead Way/Handley Drive, Greenwich, SE3
Status: Design stage (forms part of a ten year regeneration scheme)

Forming the transition between Blackheath Park and the new Kidbrooke Village, these homes will be built within the traditional street pattern reflecting the leafy character of Blackheath Park. Well-proportioned brick houses are unmistakably part of the Kidbrooke Village family, but will include details that reflect the local architectural character. The distinctive stepped form of the apartments rises from 3 storeys along the street frontage, to a maximum of 15 storeys on the parkside. Stepping the apartment buildings allows the streets to retain a domestic scale and character, whilst accommodating high-density living.

Units: 713 (+ 133 in outline) | **Client/Developer:** Berkeley Homes (East Thames) Ltd | **Architect:** Gardner Stewart Architects | **M&E/Sustainability Engineer:** URS (AECOM), Hodkinson and WSP | Parsons Brinckerhoff | **Planning Consultant:** Barton Willmore | **Project Manager/Cost Consultant:** Riley Consulting | **Structural Engineer:** Watermans | **Landscape Designer:** HTA Design



© The Neighbourhood

Hortensia Road

Corner of Hortensia Road and King's Road, Kensington & Chelsea, W8
Status: Under construction, due to complete November 2016

This residentially-led development transforms a prominent corner off King's Road into a scheme for the private rented sector. The 31 new homes include apartments for both private and discount market rent, with private balconies and access to a communal roof terrace, alongside six affordable family townhouses along Hortensia Road which benefit from a private landscaped courtyard. With flexible commercial space at ground floor and a contextual approach to design, this scheme respects the local area and meets the need for purposely-designed rented homes in the borough.

Units: 31 | **Client/Developer:** Grainger plc | **Architect:** Assael Architecture | **Landscape Architect:** Fabrik | **Structural Engineer:** AECOM | **M&E/Sustainability:** Hoare Lea | **Planning Consultant:** DP9 | **Project Manager:** EC Harris | **Contractor:** Allenbuild Ltd



Kilburn Park

Cambridge Avenue, South Kilburn, Brent, NW6
Status: Under construction: due to complete September 2015

Spanning a 2.09 hectare site, the scheme reinstates the urban form and street pattern which characterised the area before post-war development – a traditional model of villas fronting the main road with corresponding mews houses to the rear, and a restored 19th century route, Alpha Mews. This 'spine' route runs the length of the scheme providing shared surfaces, play areas, gardens and defined public and private spaces.

Units: 101 | **Client:** Brent Council / Catalyst Housing | **Architect:** Lifschutz Davidson Sandilands with Alison Brooks Architects | **Landscape Architect:** Churchman Landscape Architects | **Structural Engineer:** WSP | Parson Brinckerhoff | **M&E Engineer:** Norman Disney & Young | **Main Contractor:** Willmott Dixon | **Transport Consultant:** Motion Transport Planning | **Heritage Consultant:** Heritage DPP



Gunmakers Wharf

Bow, Tower Hamlets, E3

Status: Completed September 2013
Units: 121

This housing and regeneration scheme in east London overlooks Victoria Park and is adjacent to the Hertford Union Canal. Situated in a prime location with contrasting characteristics, it integrates into the surroundings with a strong frontage to the busy Old Ford Road and a 'softer' edge to the Victoria Park elevation. A peaceful internal courtyard opens up onto the canal, bringing views of the park into the heart of the development.

Located with the Victoria Park conservation area – characterised by low-rise residential developments and locally listed warehouse buildings – the scheme's design takes its cue from the latter, offering a contemporary take on warehouse architecture, with five distinct blocks featuring simple lines and a limited palette of materials. Brick is the dominant material, complemented by timber shingles and a glazed panel system to create a contemporary expression.

The scheme comprises 121 residential units ranging from studio apartments through to 5-bed family triplex units, with semi-basement parking wrapped by the landscaped courtyard. Commercial space, comprising 252 sqm, fronts on to, and animates, the important and significantly enhanced pedestrian link of Gunmakers Lane, which connects the wider community to Victoria Park. Address and legibility is enhanced through each of the 'five blocks' incorporating a unique elevational treatment as part of the comprehensive expression.

Planning approval was secured in 2009 for Durkan Homes and the site was subsequently sold on to A2 Dominion who built the scheme out with its completion. The scheme comprises 35 per cent affordable with an 80/20 split affordable rent and shared ownership. Notably, there is no difference in design between the affordable and private blocks, creating a sense of equality for residents.

Key to Gunmakers Wharf's success is the improvement to the public realm. Access to the canal and park – previously a narrow, inhospitable alleyway – is now a wide tree-lined thoroughfare. This historic bridge and gateway provides direct pedestrian and cycle access, and, with its active ground floor frontage ensuring natural surveillance, is significant for the wider community. This feature was recognised by both LB Tower Hamlets and residents as a positive enhancement to the quality of the immediate context.

The scheme also achieves a 20 per cent reduction in CO₂ emissions through the use of biomass and gas boilers. A high-performance building envelope reduces heat loss and excellent daylight access maximises natural heating, whilst dual aspect homes allow for natural ventilation. The scheme promotes a sustainable way of life for residents by providing extensive recycling facilities and 'A' rated appliances, low energy lighting and low water use fittings to reduce energy demand. Excellent local public transport links and 100 per cent cycle storage provision also discourage car use. The provision of brown and green roofs planted with wildflower and grass seed and the reconstructed canal wall enhance local biodiversity.



Client: Durkan Homes
Architect: STOCKWOOL
Transport Consultant: Atkins
Landscape Consultant: Standerwick Land Design
Planning Consultant: NLP
Air Quality and Acoustic Consultant: Enviro Consulting

Viewpoint
“Gunmakers Wharf presented us with a challenging planning process – a sensitive site in terms of its location within the Victoria Park conservation area and within an established residential area with articulate and vocal residents, with significant reservations towards any new development. Small focus group discussions were held with local residents and businesses throughout the design process as a means of ensuring Gunmakers Wharf's successful integration into the community. These meetings started in an adversarial manner but ended with a successful and inclusive design process.

Securing planning approval and gaining local residents' support was a significant achievement. We are proud of the design that was achieved through this collaborative process.”

Monica Coffey, Partner-in-charge, STOCKWOOL



Kidbrooke Village

Greenwich, SE3

Status: Under construction and in use. Phased completion, due to complete fully 2025.
Units: 4,800

The Kidbrooke Village Masterplan is one of the largest housing-focused regeneration schemes in Europe, transforming the former Ferrier Estate in south-east London into a revitalised neighbourhood. Described by CABE as an ‘exemplar for sustainable suburbs’, the project aims to bring back to life this part of London through a 20-year development programme, underpinned by a 109-hectare masterplan. The regeneration looks to learn from the lessons from the failure of the Ferrier Estate and create an inclusive, economically and socially viable community.

The Ferrier Estate was built by the GLC between 1968 and 1974, and, in the 1980s, became one of the most deprived estates in the country. An extensive consultation programme with the local community and stakeholder groups, supported by detailed feasibility, established the most appropriate way of dealing with the physical and social problems of the Ferrier Estate was demolition and rebuilding. Given that an estate of just 30 years old is being demolished to make way for this masterplan, the active management, longevity and sustainability of Kidbrooke Village is a priority of the development partners, the architects and the council.

The masterplan is based on the principles of the traditional English suburb: architecture at a human scale; good transport connections; parks and green open space and community and commercial facilities. Kidbrooke Village will see the creation of 4,800 new homes, with over 1,500 affordable homes

including 300 for the elderly. Additionally, this scheme creates approximately 300,000 sq ft of commercial and retail space, a new primary school, new community amenities, integrated healthcare facilities, sports pitches and leisure facilities, a new transport interchange and eight hectares of new public open space. Fifty five hectares of the masterplan will consist of parks and open spaces. The masterplan seeks to make the most sustainable and efficient use of space – developing 35 per cent of the available land and leaving a ‘spine’ of parkland with mixed-use development to the north of the site.

The starting point for sustainability is an understanding of the positive and negative aspects of the existing Ferrier estate. Safety, visibility, access and amenity are a priority. The landscaping in the first phases was heavily invested in, which has paid dividends in terms of public sentiment and popularity of the current works. The original grid layout of the Ferrier is used, maintaining the solar orientation and allowing for the re-use of existing services. Renewable energy sources include solar hot water panels and a biomass boiler, and energy-efficient building materials, whilst the new transport interchange is combined with new safe pedestrian and cycle routes to encourage greener forms of transport. The extensive new park includes swales to form the sustainable urban drainage system (SUDS) with ecology, and wetland zones to encourage wildlife and biodiversity. Existing mature trees are retained wherever possible, and living green and brown roofs also provide a valuable habitat.

The phased masterplan creates four distinct districts that relate to each other and also connect to the neighbouring areas of Blackheath and Eltham.

Client: Berkeley Homes
Masterplanner / Architect: Lifschutz Davidson Sandilands
Phase Design Architects: Lifschutz Davidson Sandilands / PRP Architects / Scott Brownrigg / Studio Egret West / CZWG / Gardner Stewart Architects
Transport Masterplanning Consultancy / Environmental Consultancy: WSP | Parsons Brinckerhoff
Planning Consultant: Barton Willmore
Landscape Architect: Townshend Landscape Design

Viewpoint
“The main challenge of this scheme fell to the residents of the Ferrier Estate who lost their homes because of the poor techniques used in its initial construction and the subsequent years of neglect.

Accordingly, and while demolition was still continuing, the first phase of the development was devoted to housing those last few hundred families still on the estate and this was very successful in maintaining their sense of continuity and cohesion.

There are around ten architects working on Kidbrooke Village, and part of the challenge is making sure the outcome of our work is coherent. Some simple design codes set up at inception, such as the use of brick for elevations, help. Another important tool has been the use of a Kidbrooke design panel (including Greenwich design officers) to review emerging schemes.”

Alex Lifschutz, Director,
Lifschutz Davidson Sandilands



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© James Brittain



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King Street Regeneration

King Street, Hammersmith and Fulham, W6
Status: Design stage, due to complete 2021

This scheme aims to revitalise the Grade II listed Hammersmith Town Hall and bring a new level of urbanity to King Street and the wider area. Rather than create another gap in the streetscape with a public square, this new scheme revitalises the building with an imaginative glass intervention with a mix of retail and cinema to create a new cultural focal point for King Street. Housing and offices complement the neighbouring historic buildings and respond to the needs of those who live and work there.

Units: 210 | **Client:** Helical Bar plc / Grainger plc / LB Hammersmith & Fulham | **Masterplanner and Architect:** Lifschutz Davidson Sandilands | **Project Manager:** GVA Second London Wall | **Quantity Surveyor:** Core 5 | **Structural Engineer:** Alan Baxter Associates | **M&E Engineer:** Hoare Lea | **Planning Consultant:** JLL



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Kipling Estate Garages

Weston Street, Southwark, SE1
Status: Design stage, due to complete August 2017

Conceived and initiated in conjunction with local residents, this scheme seeks to provide high quality new homes at a high density, creating a strong sense of community. The existing community formed the Leathermarket Community Benefit Society to develop new affordable homes in the local area, which has played an active part in an extensive local consultation process to shape the design of the project from first principles through to detailed design. The development comprises 27 affordable flats and maisonettes, including three wheelchair-accessible flats, communal gardens and a communal terrace.

Units: 27 | **Architect:** Bell Phillips Architects | **Client:** Leathermarket CBS | **Architect:** Bell Phillips Architects | **Development Manager:** Igloo Regeneration | **Project Manager:** DBK | **Planning Consultant:** Tibbalds | **Cost Consultant:** Measur | **Structural Engineer:** HRW Engineers | **M&E Engineer:** Hoare Lea | **CDM Co-ordinator:** DBK



© BPA

Kings Crescent Estate Development Zone 2

Kings Crescent Estate, Hackney, N4
Status: Under construction, due to complete November 2016

This is the first of a 2-phase scheme to regenerate the 1970s Kings Crescent Estate adjacent to Clissold Park. Phase 1 will create a total of 262 new homes and 101 refurbished flats of mixed-tenure, and will consist of a new build block of 85 units and the refurbishment of the 1970's brick buildings. The new building completes a courtyard with an existing block and brick architecture that mediates between the surrounding Victorian terraces and the more recent estate.

Units: 85 New build & 101 refurbished flats | **Client:** Higgins Construction / LB Hackney | **Architect:** Henley Halebrown Rorrison | **Landscape Architect:** muf architecture/art | **M&E Engineer:** Peter Brett Associates | **Main Contractor:** Higgins Construction



Ladbroke Grove

348 – 352 Ladbroke Grove, 26-28 St. John's Terrace, Kensington & Chelsea, W10
Status: Under construction, due to complete January 2017

This scheme will create 22 affordable apartments in an area normally out of reach for first time buyers. The site adjacent to Ladbroke Grove is extremely restricted, however, all apartments have been carefully designed to maximise useable space, are dual aspect including private balconies overlooking Grand Union Canal, and have two communal spaces. The design incorporates a layering of colours and textures with a blue/grey brick used as a backdrop to coloured glazed bricks based on canal boat motifs.

Units: 22 | **Client:** Westminster Community Homes | **Architect:** Child Graddon Lewis | **M&E and Structural Engineer:** Ramboll



© CGL

Lennard Road

Croydon, CR0
Status: Design stage, due to complete January 2017

Lennard Road is a mixed-tenure redevelopment which will see the creation of 26 new one-, two- and three-bed homes. The design includes a four- and five-storey block of apartments, with balconies and terraces, as well as three-storey townhouses and a number of two-storey mews houses. The project will deliver good quality homes, and open space on an inner-city site, whilst responding to the character of the local area. The vision also includes a 'secret garden' for residents to enjoy and provide a place for relaxation.

Units: 26 | **Client:** Family Mosaic | **Architect and Lead Designer:** Conran and Partners | **Contractor:** The Purlake Group | **Structural Engineer:** Tully De'Ath | **Employer's Agent:** Calfordseaden



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Lime Harbour

7 Limeharbour, Tower Hamlets, E14
Status: Under construction, due to complete 2018

Planning permission has been granted to build a 23-storey tower building at 7 Limeharbour. The scheme comprises 134 residential units, integrating affordable and private accommodation in a single building. The new building replaces an existing disused office building. A fully accessible public space is proposed immediately to the south of the building, with parking concealed beneath the new built structure. The design will provide a substantial increase in accessible public realm on the site.

Units: 134 | **Client:** Telford Homes | **Architect:** tp bennett | **Structural Engineer:** Walsh Group | **M&E Consultant:** Mendick Waring



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Lewisham Gateway Phase 1A

Lewisham, SE13
Status: Under construction, due to complete Summer 2016

Lewisham Gateway is a high-density mixed-use development comprising retail, leisure, office and residential, and a reconfiguring of the infrastructure and road layouts. Phase one of the development comprises 193 new homes for private sale and rent, across two towers of 25- and 15-storeys which differ in character and materials. 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.

Units: 193 | **Client:** Lewisham Gateway Developments Ltd and Muse | **Architect and Landscape Architect:** PRP Architects | **Contractor:** John Sisk & Son | **Structural Engineer:** BWB | **M&E Engineer:** Hoare Lea | **Planning Consultant:** Quod



Lime Wharf

7-14 Branch Place, Hackney, N1
Status: In use completed July 2014

Located within the Regent's Canal conservation area, this waterside regeneration scheme comprises 28 private, 6 shared ownership, and 18 social rent homes, and 1,000 sqm B1 space. Homes are clustered around three separate cores; the 'gaps between' allow sunlight to reach the canal, promoting the ecosystem, and creating dual aspects and canal views. The commercial space façade is clad in robust brickwork in deliberate contrast to the homes above, which are clad in horizontally orientated zinc cladding of varying heights to replicate the ripples of the canal water.

Units: 52 | **Client/Developer:** Family Mosaic | **Architect:** Stephen Davy Peter Smith Architects | **Structural Engineer:** Tully De'Ath | **M&E Sustainability:** Engineer Pinnacle Esp | **Project Manager/Cost Consultant:** HBW Partnership | **Contractor:** Higgins Construction | **Planning Consultant (planning):** CMA Planning | **Landscape Architect (planning):** Outerspace | **Code Assessor:** NRG Consulting



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Lodge Road

St John's Wood, City of Westminster, NW8

Status: Design stage, due to complete Autumn 2018
Units: 160

Occupying a premier London location – situated adjacent to Regent’s Park and Lord’s Cricket Club – this project redevelops an inflexible care facility which is no longer fit for purpose, seeking to create a similar number of larger apartments for older people, with significantly enhanced support and social provision promoting opportunities for residents to engage, make friends and be inspired by their surroundings.

The redevelopment provides circa 160 residential units for the over 55s, with one- to two-bed units for those living independently, and care accommodation for those who require further assistance. There will also be a number of fully accessible units for disabled residents.

A key priority is the overriding importance of creating a sense of belonging; a place with a strong spirit of community. Designed around two independent circulation cores, the design reduces the scale of the development to a maximum of seven residential units per cluster, ensuring any one resident has at most six neighbours, to encourage the creation of communities. On-site care provision will enable residents with increasing care needs to stay within the development and remain with friends.

The scheme challenges the conventional approach to housing design for older people, drawing principles from visiting exemplar

projects in the Netherlands and working with roughly 30 residents who formed a representative group to serve as ongoing advisors to the scheme. These formed pilot studies to inform the future of over 55s and care accommodation. Alongside the ongoing medical research into dementia, there is a need to look to new, more innovative models of housing for those living with the disease.

Flexibility is vital to this approach, with the cluster arrangement allowing the building to adapt independent living clusters of one- to two-bedroom units to care accommodation, if necessary. This allows Lodge Road to evolve over time with the needs of its residents, either catering for changing demographics, or taking account of the client’s evolving business model.

The building is conceived as a series of layers, each progressively becoming more private and secure for residents. The external piazza is fronted by a public café, spa and health facilities, offering a place where local residents and the community can meet and interact. Private gardens and terraces provide relaxation and gardening activities for the residents. Balconies are protected by a framed screen that forms an ordered feature on both primary elevations, while the balconies themselves are more playful – offset to encourage interaction between residents. Local contextual materials have been incorporated in the structure, alongside the use of stone, brick and bronze metalwork as principal cladding materials.



Client: Central & Cecil Housing Trust
Architect: Ryder Architecture

Viewpoint
“The Lodge Road development offers C&C a fantastic opportunity to re-provide high quality housing and inspirational environments to our residents. Through the process of co-design, championed by Ryder Architecture and our development team, we have integrated our resident design group into the design and decision making process.

This has empowered our residents and enriched the design process, leading to a truly collaborative approach to the regeneration of this prime London location. Ryder has captured the essence of our ethos, understanding and appreciating our residents, responding to their needs and realising their vision. The regeneration of Lodge Road can offer a template for future C&C developments.”

Julia Ashley, Executive Director
Commercial Services, Central & Cecil
Housing Trust



Resident Balcony



Lombard Wharf

Lombard Road, Battersea, Wandsworth, SW11

Status: Under construction, due to complete October 2017

Sited along the riverside, the development will be surrounded by a landscaped plaza which aims to enhance the public realm, reconnect the Thames Pathway along the river and provide a landing point for the future Diamond Jubilee footbridge. The majority of apartments will benefit from view of the Thames and the rest of London.

Units: 135 | Client: Barratt London | Masterplanner: Peter Stewart | Architect: Patel Taylor



Maiden Lane, King's Cross Central

Camden, NW1

Status: Under construction, due to complete 2016

The new homes have been sensitively designed to blend with the renowned estate, with a high quality approach to architectural design and detailing. The scheme reconciles the low-rise buildings to the north with the larger emerging buildings of the King's Cross masterplan, culminating in a 20-storey residential tower to complement the King's Cross cluster on the other side of York Way. The redevelopment also includes a mixed-use development of retail and workspace to front York Way, revitalising the street frontage.

Units: 273 | Client: LB Camden | Masterplanner, Architect, Landscape Architect and Environmental Design: PRP Architects | Contractor: Sisk | Structural & Civil Engineer: WSP | M&E Engineer: BSD | Fire Consultant: BWC Fire | Acoustic Consultant: Spectrum Acoustic/Sharps Redmore



© PRP

Macaulay Walk

25-33 Macaulay Road, Clapham Old Town, Lambeth, SW4

Status: In use, completed July 2014

Transforming a 19th century industrial site, this new 'village' comprises of five new buildings woven between six retained and converted warehouses to provide 113 homes and 14,000 sq ft of flexible studio space, all brought together along a reinstated 'internal' street. Each apartment maximises space and light through intelligent open-plan design, integrating original industrial features; exposed roof trusses, high ceilings and large windows, with modern intervention; mezzanines, balconies and rooftop extensions, to provide comfortable and contemporary living.

Units: 113 | Client: Grainger plc | Architect: Assael Architecture | Landscape Architect: Churchman Landscape | Interior Architect: MMM Architects | Structural Engineer: Buro Happold | M&E/Sustainability: Hurley Palmer Flatt | Planning Consultant: DP9 | Project Manager: EC Harris | Contractor: Galliford Try



Merano

Albert Embankment, Lambeth, SE1

Status: Under construction, due to complete 2017

Located on the Albert Embankment, Merano will offer a mixed-use development, including apartments, offices and a café. The building is formed of three stepped bays, providing a skyline of varying heights in contrast to the existing developments that occupy this area. At the base of the building, a four-storey public space will be created offering a café and access through to Vauxhall Pleasure Gardens via Tinworth Street.

Units: 40 | Client: St James Group | Architect: Rogers Stirk Harbour + Partners | Structural Engineer: Ramboll | Landscape Architect: Gillespies LLP



© St James

Mint Street

Bethnal Green, Tower Hamlets, E2

Status: In use, completed March 2014

Mint Street provides 67 new mixed-tenure homes and is one of the first schemes in London to deliver affordable rented housing under the Affordable Rent Model. The development is located alongside a busy railway viaduct, with winter gardens creating a 'buffer zone' to mitigate noise of passing trains. A private landscaped courtyard with play space is to the rear of the building and includes an integrated lighting scheme.

Units: 67 | Client: Peabody | Architect: Pitman Tozer Architects | Contractor: Galliford Try Partnerships | Structural Engineer: Clarke Nicholls Marcel | Mechanical Engineer: JS Wright | Electrical Engineer: Emersons Electrical | Planning Consultant: CMA | Sustainability Engineer: Max Fordham | Employers Agent: calfordseaden LLP | Landscape Architect: Farrer Huxley Associates | CDM Coordinator: Scott White and Hookins



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Morpeth Road Housing

Hackney, E9

Status: Design stage, due to complete March 2017

Providing 50 per cent affordable homes, this scheme is arranged along a continuous garden wall with front doors, kitchen windows and garden gates facing onto the street. Pre-existing garages are replaced with a traditional 'London brick' wall with bedroom windows located above the wall. The roof is angled to retain good daylighting to the adjacent gardens. High levels of insulation and simple, durable materials will ensure efficiency and easy maintainence.

Units: 12 | Client: Peabody | Architect: Urban Salon Limited | Landscape Architect: Farrer Huxley Associates | Building Services Engineer: Ritchie Daffin | Structural Engineer: Ellis and Moore



Modular Wembley

575 North End Road / 5 Olympic Way, Brent, HA9

Status: In use, fully completed 2015

These two projects, Olympic Way and Felda House, and two others to be built nearby, demonstrate how modular manufacturing techniques can be used to design and construct high quality residential buildings in London. The buildings can be built in half the time of traditionally constructed schemes and also meet the highest current standards for environmental sustainability. Both 19-storey schemes are constructed from stacked factory-made modules, constructed from hot-rolled steel frames, infilled with a mixture of light gauge steel walls and ceilings and a concrete floor.

Units: 158 apartments / 450 student rooms | Developer: Pinnacle/Felda | Client and Contractor: Tide | Architect, Planning Consultant and Landscape Architect: HTA Design LLP | M&E / Sustainability Engineer: MTT/HTA Design LLP | Structural Engineer: Barrett Mahoney



NEO Bankside

Holland Street, Southwark, SE1

Status: In use, completed October 2014

This residential scheme is located close to the River Thames, and directly opposite the west entrance to Tate Modern and its new extension. Comprising 217 residential units in four buildings ranging from 12- to 24- storeys, the hexagonal pavilions have been arranged to provide residents with generous accommodation, wide views and maximum daylight. The steel and glass pavilions take their cues from the immediate context. A generous public realm is created with landscaped groves that define two clear public routes through the site.

Units: 217 | Client: GC Bankside LLP (a Joint Venture between Native Land and Grosvenor) | Architect: Rogers Stirk Harbour + Partners with John Robertson Architects | Structural Engineer: Waterman Structures Limited | Services Engineer / Fire Consultancy: Hoare Lea | Project Manager: EC Harris | Landscape Architect: Gillespies | Cost Consultant: WT Partnership | Contractor: Carillion | Planning Consultant: DP9 | Development Manager: Native Land



Marlowe Road Estate Regeneration

Walthamstow, Waltham Forest, E17

Status: Design stage, due to complete 2021
Units: 436 units

Regenerating the Marlowe Road Estate, which suffers from isolation, poor housing stock, and security issues, this scheme proposes to demolish the existing estate apart from Northwood Tower. The scheme aims to deliver 436 new homes, of which 150 will be social rent homes for council residents, re-providing for the existing homes to be demolished. The scheme also delivers 1,108 sqm of new commercial space, to be concentrated around the new plaza, and to re-provide existing popular shops and community facilities.

A key objective of the project was the facilitation of a ‘single move’ solution for existing residents into new accommodation in the development. The scheme has been carefully designed and phased to ensure that existing residents can be re-housed in the new development. The existing community and local stakeholders were consulted in an extensive programme of engagement, and the project enjoys the support of council residents and the strong business community in Wood Street.

The aspiration of the project is for the new Marlowe Road to be a desirable new neighbourhood, known for its plaza and attractive tree-lined streets. Its distinctive architecture, high quality landscape and public realm, and wide range of integrated housing types and tenures, seek to ensure that the new neighbourhood seamlessly integrates with the surrounding area, provides new activity along Wood Street, and creates a welcoming gateway into the Wood Street area from the station.



The masterplan is based on the simple principles of connected streets, active frontages, and well defined and overlooked public spaces. The main drivers of the masterplan are the east-west links across the development, connecting Wood Street and the station with Walthamstow Village further to the west, and the generous new plaza situated at the confluence of Wood Street, Marlowe Road and Northwood Tower. Another priority was to provide family homes with private gardens for a large proportion of the development. These are primarily houses and maisonette blocks, and collectively create a contemporary twist on traditional residential streetscapes.

The architectural expression of the scheme features brick as the primary façade material with its associations of robustness, solidity, and links with the local Victorian vernacular. This approach binds the collection of buildings and spaces together, to create an all-important new overall identity. The unifying but varied palette of brick tones and textures creates variety in the brick-clad building and a bespoke colour palette informed the use of colour in balustrades, glazed brick details and window frame details, with these more playful elements concentrated around the new plaza.

The new neighbourhood will support a sustainable mixed community, providing opportunities for a range of people to live alongside each other, share amenities and create activity in the streets. To successfully achieve this, all buildings will benefit from the same quality of appearance, creating a high quality, tenure-blind environment.

Client: Countryside Properties
Masterplanner and Lead Architect: Stitch
Landscape Architect: LUC
Planning Consultant: Montagu Evans
Structural/Civil /MEP Engineer: Brand Consulting
Energy and Sustainability Consultant: AECOM

Viewpoint
“We believe our plans and vision for Marlowe Road in Waltham Forest will transform the area, providing much-needed quality new homes, and creating a place where people choose to live, work and visit. The focus of the new scheme will be on bringing back traditional tree-lined streets that link well with the surrounding area, with attractive frontages, providing well-defined spaces for the local community to enjoy.

Our selection by LB Waltham Forest comes at a very exciting time for the borough as they continue to attract inward investment and develop the key regeneration areas. Since chosen to develop the site, we have been encouraged with the response and co-operation of the local community and stakeholders during our consultation process.”

Richard Cherry, CEO
Partnerships, Countryside



Marylebone Library and Residence

Luxborough Street, City of Westminster, W1

Status: Under construction, due to complete December 2016
Units: 9

Marylebone Library & Residence is comprised of a 1,700 sqm library arranged at ground and two basement floors, with nine apartments above. The development will provide the local community and Westminster with a replacement library, and the design demonstrates the mutual benefit of mixed-use schemes incorporating housing and community facilities, making better use of available land. High quality accommodation located above the library will provide revenue to support Westminster’s affordable housing provision within the City.

The design takes advantage of the surrounding gardens maximising views to the adjoining green spaces, and creating a direct connection from the library to the neighbouring Paddington Street Gardens. A variety of light wells and skylights over the

main circulation stair are utilised as a means of channelling light into the basements to create bright, well lit study areas. The upper floors accommodate dual aspect, private apartments with generous balconies which overlook the park.

The building form is conceived as ‘monolithic’ sculptural stone elements. The palette of materials such as red sandstone and bronzed metal were carefully selected for their robust nature and to integrate with the local red brick. Incised artwork incorporated into the stone will provide the building with a civic presence and relate to the site’s history as a former workhouse.

The Library is designed to achieve BREEAM ‘excellent’ and the development utilises a combined energy source balancing energy loads and achieving a truly sustainable building environmentally through carbon reduction and socially, through this new community facility.



Client: City of Westminster
Lead Architect: Child Graddon Lewis
Library Interior:
Bisset Adams Architects
MEP / Sustainability /
Fire Engineer: Chapman BDSP
Structure: Curtins
Archaeology: Museum of London (MOLA)

Viewpoint
“A common concern is change within established neighbourhoods, and we faced challenges designing a new building in a dense urban area and onto an old ball-court. We were involved in lengthy discussions with the local community, neighbours and a wide range of stakeholders. We designed a range of spaces to keep the local community involved long-term; exhibition space for local artists and author talks and meeting rooms which will be subsidised for local businesses. Through discussions and presentations at all stages of design development, we achieved a majority consensus locally and support from the planning committee.

Arita Morris, Director,
Child Graddon Lewis



Myatts Field North

Crawshay Road, Lambeth, SW9

Status: In use and under construction, due to complete May 2017
Units: 980

The large-scale regeneration proposals being delivered at Myatts Field North (Oval Quarter) will see the transformation of the heavily stigmatised estate through a neighbourhood-led approach into a balanced and sustainable community. The radical remodelling delivers 808 new homes (357 for private sale, 247 for social rent, 146 shared ownership and 58 re-provided for leaseholders) and refurbishment of 172 existing homes – effectively doubling the number of homes and transforming the tenure mix from predominantly social rented homes to a 50/50 split of owner-occupied and social-rented homes, creating a more mixed community.

Pinnacle provides housing management and estates services to the Myatts Field North community on behalf of Regenter Myatts Field North Ltd., a private finance company owned by Pinnacle Group and John Laing under contract by LB Lambeth to deliver the regeneration and management of the neighbourhood over a 25-year period.

The masterplan proposals resolve the isolated and disconnected nature of the existing roads, created in the 1970s by a separation of the car and pedestrians through a series of cul-de-sacs and parking courts. By re-introducing the historic street pattern to create a network of connected through routes, home zones, spaces and streets, together with new buildings fronting onto streets and open spaces this dramatically improved surveillance, creating a safe and

secure environment. These series of spaces, include public squares and the largest park to be delivered outside the Olympic Village with a unique community centre that slips under the park forming an integral part of the public space provision. The community centre provides a focal point incorporating a café, training and changing facilities, community meeting rooms and hall, and a base for the local area housing management team. All homes share communal recycling and waste storage canisters embedded under the street, together with a new district heating system which is housed in the original 'submarine' (submerged control plant and chimney).

The area is surrounded by three conservation areas and the importance of capturing and reconnecting the scheme back to the richness of the Georgian and Victorian architecture was emphasised by residents during the community design workshops. The new buildings therefore create a coherence with the simple classic features of the surrounding built form, where windows are consistent in shape and size with a vertical proportion and rhythm, horizontal banding articulates each floor, balconies are recessed within the building line and buildings have a parapet roof line.

Work started in May 2012, with around 500 new homes, works to the refurbished properties and the community centre now completed. In 2017, the redevelopment will be finished with the completion of the principal park which provides all year round fitness activities for all age groups, including trim trail, football pitch, adventure playground, table tennis tables and chess boards creating a significant community asset.



Client: LB Lambeth
Developer, Housing and neighbourhood management: Pinnacle Group
Developer and contractors: Higgins Group
Masterplanner, Architect and Landscape Architect: PRP
Structural Engineer: Tully De'Ath
M&E: RPS
Planning: Savills
CDM: Bailey Garner

Viewpoint
“I’ve been working in housing regeneration for 25 years and I feel the Myatts Field North project demonstrates how a holistic approach can be applied successfully and breath life into regeneration.

Working closely with the community on the design approach was very telling. The community had lived through a 1970s failed experiment, which resulted in a warren of housing with no heart and a layout that practically promoted anti-social behaviour. The residents wanted a solution that was tried and tested, reconnecting the estate both physically through a new street network and aesthetically through the surrounding architecture and green spaces.

Critically, the robustness of the design and structured urban form together with our dual role as developer and neighbourhood manager underpins our tenure-blind approach to design and management, creating a strong basis for the long-term stewardship of the community over the next 20 years.”

Jim Saunders, Group Director of Business Development, Pinnacle Group



30 William Road, Camden, NW1
Status: In use, completed Feb 2015

Units: 70 | **Client:** LB Camden | **Architect:** Pollard Thomas Edwards | **Contractor:** BAM Construction | **Landscape Architect:** Grant Associates | **Structural and M&E Engineer:** Conisbee/WSP | **Property Consultant:** Turley Associates



Florence Road, Newham, E6
Status: In use, completed October 2015

Units: 7 | Client: LB Newham | Architect: Bell Phillips Architects | Cost Consultant: IGM | Structural Engineer: CTP | Service Engineer: ENG Consulting | Code Assessor: STROMA



Poplar, Tower Hamlets, E14
Status: In use, completed August 2015

Units: 502 | **Client:** Bellway Homes and Family Mosaic | **Architect:** STOCKWOOL
| **Structural Engineer:** PTA | **M&E Engineer:** White Associates | **Building Services:**
NRSWA | **Planning Consultant:** Savills



22 Elephant and Castle, Southwark, SE1
Status: Under construction, due to complete April 2016

Units: 284 | **Client, Project Manager, Cost Consultant and Contractor:** Lendlease
| Architect: Squire & Partners | **Structural Engineer:** Robert Bird Group | **Planning Consultant:** DP9 | **Community Engagement:** Soundings



5b Union Street, Barnet, EN5
Status: Under construction, due to complete Feb 2016

Units: 25 | **Client:** Hanover Housing Association | **Architect:** Pollard Thomas Edwards | **Co-Housing Client:** Older Women's Co-Housing | **Affordable Housing Client:** Housing for Women London | **Contractor:** Quinn London | **Structural/Civil Engineer:** Michael Barclay Partnership | **M&E Engineer:** ACC | **Planning Consultant:** Savills | **Local Authority:** LB Barnet



Southwark, SE1
Status: Design stage, due to complete 2019

Units: 170 | **Client:** Delancey on behalf of DV4 | **Architect:** Squire and Partners
Development Manager: Gardiner & Theobald | **Landscape Consultant:** Balston
Agius | Planning Consultant: DP9 | **Structure:** AKT II | **Services:** Cundall | **Quantity**
Surveyor: Gardiner & Theobald



Packington Square, Islington, N1
Status: Phases 1 to 3 complete. Phases 4 to 6 due to complete
November 2016

Units: 791 | Client: Hyde and Rydon | Architect: Pollard Thomas Edwards |
Landscape Architect: Atkins | Structural Engineer: Ellis and Moore, Merebrook
| Sustainability Consultant: Hoare Lea | Acoustic Consultant: Sharps Redmore |
M&E Engineer: Calfordseaden | Building Control/Planning Consultant: MLM



261 Lewisham High Street, Lewisham, SE13
Status: Under construction, and will complete on 31 March 2016

Units: 24 | Client and Developer: LB Lewisham | **Architect:** Rogers Stirk Harbour + Partners | **Planning Consultant:** AECOM | **Landscape Consultant:** Landform Consultants | **Main Contractor:** SIG Building Systems | **Affordable Housing:** Lewisham Homes | **Non-residential Operator:** Meanwhile Space | **Business Incubator Operator:** Bow Arts and London Small Business Centre | **Community Consultation, Brand and Publicity:** Studio Raw



Paradise Gardens

2 Ravenscourt Road, Hammersmith and Fulham, W6

Status: Under construction, due to complete November 2015
Units: 6

This development of six contemporary townhouses has been designed as an exemplar housing model, demonstrating exceptional building performance and high quality design on a formerly redundant site in Ravenscourt Park. Built for the rental market, these houses are intended to endure multiple occupation with flexibility and robustness, whilst providing generous and refined accommodation.

Nestled within a sheltered site in the heart of the Ravenscourt and Starch Green conservation area, the scheme provides five three-storey houses arranged as a gently stepped terrace and a sixth two-storey house built within the existing walls of Latymer House – a building that once stood on the boundary of the site. The development is entered through a cobbled courtyard with six parking spaces leading to a lush landscape of private and communal gardens beyond adjoining the dwellings.

As a contemporary response to the local vernacular, the scheme is crafted in brickwork punctuated by elemental full height fenestration. Roofs are articulated with a shallow pitch and wrapped in zinc interspersed with ‘chimneys’ for extraction and ventilation. Perforated brickwork, recessed drainage and other neat detailing attest to the high degree of consideration afforded to the scheme, while aluminium glazing frames and louvres build on a material palette that defines the development.

The buildings go beyond Code for Sustainable Homes (CfSH) level 4 through the upgrade of façade performance in line with Code 5 requirements. Excellent airtightness levels and thermal performance have been achieved through the careful consideration of thermal bridging and solar gain, the use of heavily insulated wall and roof constructions and triple glazing. A high thermal mass ensures that summer and winter temperatures are kept stable, and helps reduce instances of condensation which is so often a problem in housing.

Other passive measures – such as careful solar orientation of habitable rooms within the houses and solar control measures to southern façades – were considered early on, to minimise overheating. Rooms throughout benefit from excellent daylight and natural cross ventilation, with openable skylights located to the top of central stairs to allow natural stack ventilation to take place.

Each house includes a highly efficient mechanical ventilation and heat recovery system and boiler. High levels of acoustic performance have been maintained, and the lighting design seeks to maximise the use of natural daylighting, minimising the need for artificial lighting. The land prior to development was of inherently low ecological value, and has been greatly enhanced through careful consideration and inclusion of large areas of private and shared soft landscaping, as well as bird and bat boxes that are incorporated into the façades. Rainwater is collected and used for external automated irrigation of the landscaped areas.



Client: Ravenscourt Studios
Architect: Lifschutz Davidson Sandilands
Project Manager: Walton Wagner
Quantity Surveyor: Measur
Structural Engineer: Haskins Robinson Waters
M&E Engineer: Skelly & Couch
Planning Consultant: JLL
Landscape Architect: Bradley-Hole Schoenaich
Rights of Light: Anstey Horne
Party Wall: GIA
Main Contractor: Roof Ltd

Viewpoint
“We examined a range of potential uses for this previously unbuilt land and talked extensively with the people living around the site: what emerged was a scheme for a small group of family houses, each having good quality private and communal external amenity space.

The adjoining streets of Ravenscourt Park are lined with such homes that have remained in strong demand for the past 150 years. We took from this model of spacious, robust and handsome buildings and added high environmental performance and clear span structures to allow for future flexibility. We paid considerable attention to the quality of the building fabric and engaged eminent landscape designers Bradley-Hole Schoenaich to create a beautiful setting for both the surrounding properties and the development itself.”

Paul Sandilands, Director,
Lifschutz Davidson Sandilands



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© Forbes Massie



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Poplar Business Park/Manhattan Plaza

10 Preston's Road, Tower Hamlets, E14

Status: Under construction
Units: 392

Situated just 800 metres away from Canary Wharf in a key urban area of Poplar, this redevelopment – previously comprising three two-storey warehouses over the 1.65 hectare site – will now create 392 residential apartments and double the current employment accommodation in the form of a Business Centre for small and medium enterprises, as well as creating a new key public open space. This new place and space will also contribute to the delivery of a new pedestrian link from Poplar High Street through and under the elevated Aspen Way to Docklands.

The project takes inspiration from its surroundings, where the Old London market tradition of Billingsgate meets the world's financial markets. The architectural language of the facades reflects the surrounding context, and ensures that the uses within the development are clearly understood and a strong identity and spatial structure is created.

The primary access points to the site are at the north-east corner of the site. Through this, visitors and occupants will immediately

enter a new public square. Public facing and commercial uses such as a café and meeting space, seek to ensure active use, while encouraging surveillance.

Robust landscaping and seating on a route through the development rises and falls into the ground surface, leading across the development and under an elevated Aspen Way – ensuring that it serves as both a community space and a functional, safe route are part of the scheme. Rising above the commercial uses, a range of new homes are provided, all benefiting from balconies and excellent views to the east, west and south. Four rooftop gardens and three overlooked gardens are provided and range in height, all of these have a unique mix of both play and communal garden facilities to appeal to a range of users.

The scheme sits within a rapidly changing district of east London, with the number of people working and living nearby is set to double over the coming years. The designs and public realm not only address demand issues that sit alongside this, but have sought to respond to the future character of the area to contribute to a vibrant and improving part of London.

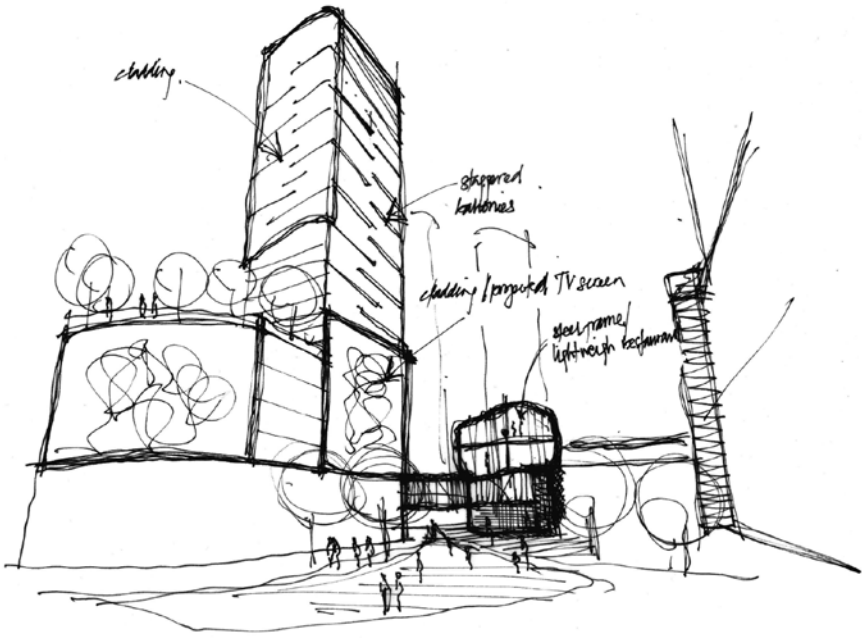


Developer: Telford Homes and Workspace Group
Architect: Barton Willmore
Landscape Designer: Barton Willmore and Standerwick Design
Planning Consultant: GVA

Viewpoint
“By exploring how we might create an urban space on a new pedestrian route, we were able to incorporate subtle way-finding so that the route could be both easily found and a desired route which was safe and thus well used.

Our solution locates the new route from Poplar High Street through the proposed urban space in front of the Workspace Business Centre which, along with the residential units above, optimises visibility and surveillance throughout the day and night. The new urban square is also designed so that it could be used for a multitude of pop-up events, really making it a place that people can enjoy.”

James Carr, Partner, Barton Willmore



Portobello Square

Kensington and Chelsea, W10

Status: In use and under construction, due to complete 2016
Units: Masterplan – 1,000

The culmination of over five years consultation with the local community, the final design solution for the redevelopment of the Wornington Green Estate offers an exemplar model for large-scale contextual urban regeneration.

The masterplan proposal included up to 1,000 new homes across the site, which represented the largest regeneration programme in the Royal Borough of Kensington & Chelsea in recent years. Great emphasis was placed on design quality, with regular peer group reviews undertaken with the Local Authority’s Architectural Appraisal Panel.

The masterplan creates a new London square, the first in London for decades, as a focal point at the heart of the new community. It also reconnects the north end of Portobello Road to Ladbroke Grove, as well as re-establishing other Victorian streets to repair the historic fabric of the area, thus reinstating historic links and establishing the new development as part of the surrounding context.

The focus on quality was driven by both the borough and the client to ensure that the private sale element realised its full potential value to contribute towards the redevelopment costs, and to ensure that high quality across all tenures would make a

positive contribution to the regeneration of this undervalued area of north Kensington.

This first phase of Portobello Square provides 324 homes with a variety of type and tenure. The design re-establishes traditional street fronting properties, drawing context from the borough’s rich traditional housing typologies to ensure that it knits into the surrounding vernacular – reinterpreting the mews house, townhouse and terrace building forms. Facades have depth and layering, achieved through careful crafting of modern materials to reflect the richness of the surrounding public realm and the relationships between streets and buildings, ensuring a feel that is consistent with the rest of the borough.

Adjoining the Oxford Gardens conservation area, the use of robust, high quality materials with careful detailing has ensured that the buildings have a crisp contemporary appearance that complements the historic context, with retained mature plane trees providing a grand sense of scale to the street and instant place-making, successfully integrating a new London vernacular in with the old.

The social housing element at Portobello Square is seamlessly integrated with the private housing to create a truly tenure blind development which has supported strong private sale values, and, in turn, subsidised the provision of the affordable housing. The project hopes to set the benchmark for mixed, tenure-blind, family housing in the capital.



View looking east along Munro Mews

©Andy Spain

Client: Catalyst Housing Group
Masterplanner and Architect: PRP Architects LLP
Contractor: Ardmore
Structural Engineer: Campbell Reith
M&E Engineer: Mendick Warring

Viewpoint
A significant challenge during the scheme development was to provide a level of density to re-house all of the existing residents whilst providing sufficient private sale dwellings to ensure viability. This was done through rational block design and provision of high value mews-type dwellings.

Another significant challenge was to translate this into a contextual architectural language that drew on traditional Kensington residential precedents and typologies. The resulting design re-establishes street-fronting properties, integrated into the surrounding vernacular. Facades were given depth and layering, through crafting of modern materials that reflect the rich surrounding public realm and their relationships with buildings.

Marco Baptista, Associate Director, PRP Architects



Block 1 terrace apartments onto Bonchurch Road

©Andy Spain



Family dwellings on Munro Mews



Portobello Square phase one plan

©Andy Spain

Portobello Square Phase 2

Wornington Road, Portobello, Kensington and Chelsea, W10
Status: Design stage, due to complete Summer 2019

Providing a mixture of private and affordable apartments, this scheme will form part of the community-focused £200 million regeneration masterplan. The restoration of old street patterns is an integral element, reintroducing the link to the historic Portobello Road that allows the development to fit seamlessly within what is already a bustling and lively urban area.

Units: 321 | **Client:** Catalyst | **Architect:** Conran and Partners | **Project Manager, Quantity Surveyor, Planning Supervisor:** EC Harris | **Planning Consultant:** CBRE | **Structural and Civil Engineer, Transport Consultant:** Campbell Reith | **Services Engineer:** Couch Perry Wilkes | **Landscape Consultant:** Ireland Albrecht



© F10 Studios

Quebec Quarter

Quebec Way, Canada Water, Southwark, SE16
Status: Under construction, due to complete 2015 for first homes

Creating a new residential district – with spacious one-, two- and three-bedroom apartments, surrounded by landscaped grounds and woodland – the development will deliver 368 well-designed homes, and up to 1,600 sqm of commercial space including a food store, coffee shop, gym and nursery. The scheme will also create a new public route between Quebec Way and the Russia Dock Woodland park.

Units: 368 | **Developer:** L&Q | **Architect:** Alan Camp Architects | **Contractor:** Quadrant Construction



Prowse Court and Lord Graham Mews

Fore St, Enfield, N18
Status: In use, completed July 2015

Led by the local authority, this urban, mixed-tenure housing regeneration scheme contributes a mix of uses with new commercial units, primary care trust and community centre – all with an emphasis on place making and making a contribution to the existing townscape. In response to the surrounding streets of modest terrace houses, the proposals step down in scale with a series of townhouses that are arranged around an internal landscaped mews.

Units: 118 | **Client:** LB Enfield | **Lead Architect:** Hawkins/Brown | **Main Contractor:** Countryside Properties (UK) Ltd | **Structural Engineer:** Brand Leonard | **Services Engineer:** Mendwick Waring | **Planning Consultant:** Savills



© Hawkins/Brown

Queensland Road

Arsenal, Islington, N7
Status: Under construction, due to complete September 2015

Part of the Arsenal masterplan, Queensland Road will help deliver regeneration to the area through the provision of new housing. The scheme consists of a terrace of housing, which mediates between the new infrastructure of the stadium and the neighbouring Victorian terraces. Five semi-circular-ended residential towers echo the curves of the terrace and step up from the street to the stadium. The new buildings' design utilise a variety of materials including long horizontal windows in London stock brick.

Units: 729 | **Client:** Arsenal Football Club, Barratt Homes, Newlon Housing Trust & Kier London | **Housing Association:** Newlon Housing Trust | **Architect:** CZWG Architects LLP | **Landscape Architect:** Townshend Architects | **Main Contractor:** Barratt Homes/ Kier London | **Project Manager:** MDA Consulting | **Planning Consultant:** Savills | **Structural Engineer:** Walsh Associates/ MLM | **M&E Engineer:** Whitecode Design Associates / MLM | **Rights of Light Consultant:** Drivers Jonas



© Anthony Coleman

Rainsborough Square

101 Farm Lane, Hammersmith and Fulham, SW6
Status: In use/under construction, full completion due November 2015

Located on an old industrial site in Fulham, Rainsborough Square aims to create a residential development that emulates the success of traditional London squares. Through the retained Edwardian entrance arches along Farm Lane, the pedestrianised square comprises 40 new three-, four- and five-bedroom townhouses surrounding a landscaped communal garden. Along Farm Lane, ten apartments for local key workers extend the existing terrace of houses with proportions and materials that reflect the local architecture.

Units: 50 | **Client /Developer:** London Square | **Architect:** Assael Architecture | **Landscape Architect:** Fabrik | **Interior Designer:** Suna Interiors | **Structural Engineer:** AECOM | **M&E / Sustainability:** Hoare Lea | **Planning Consultant:** Quod



© London Square

Riverlight

Nine Elms Lane, Wandsworth, SW8
Status: Under construction, due to complete 2017

Riverlight will transform a triangular, five-acre industrial estate – close to Battersea Power Station on the south bank of the River Thames – into a residential-led mixed-use development. The development will be delivered via six buildings, ranging in height from 12- to 20-storeys. The scheme includes 806 homes, underground parking, crèche, restaurants, bars, a food store and other retail spaces, and incorporates a river walk and landscaping, aiming to create attractive public spaces for the local community.

Units: 806 | **Client and Contractor:** St James Group Limited | **Lead Architect:** Rogers Stirk Harbour + Partners | **Co-Architect:** EPR | **Structural Engineer:** Ramboll | **Services Engineer:** Hoare Lea | **Landscape Architect:** Gillespies LLP | **Planning Consultant:** tp bennett | **Townscape Consultant:** Montagu Evans



© Paul Raftery

Reynard Mills Industrial Estate

Windmill Road, Hounslow, TW8
Status: Design stage, start on site 2016

This scheme proposes to provide 195 residential units with policy-compliant affordable housing provision and community floorspace. The site has an extensive planning history, therefore the application required negotiation with both local stakeholders and LB Hounslow in order to overcome significant local opposition to the initial proposal. The planning application culminated in support from the local action group and planning officer and a resolution to grant planning permission, subject to the completion of the Section 106 planning requirement.

Units: 195 | **Client:** Notting Hill Home Ownership | **Architect:** BPTW | **Planning Consultant:** GL Hearn | **Air Quality, Noise and Highways:** Mayer Brown | **Energy/ Sustainability:** Calford Seaden | **Geotech/Flooding:** Campbell Reith | **Strategic Communications:** Redwood Consulting | **Daylight/Sunlight:** Point 2 Point | **Marketing:** Vokins



© BPTW Partnership

387-399 Rotherhithe New Road

387-399 Rotherhithe New Road, Bermondsey, Southwark, SE16
Status: Under construction, due to complete August 2016

The project brings innovation to modern solutions to providing for growing educational needs in London, as well as an exciting new model for mixed-use living, offering outstanding community driven regeneration. The scheme includes a primary school, sixth form academy, community centre and homes with a mix of tenures; as well as unit size and types with particular emphasis on the provision of family homes. The central duplex concept is inspired by Le Corbusier's Unité d'Habitation; providing dual aspect spatial qualities and a strong environmental response for natural ventilation, daylight and sunlight.

Units: 158 | **Client:** SCCD Developments | **Architect / Landscape Architect:** HLM | **Environmental Consultancy:** HLM Green build | **Planning consultant:** Rolfe Judd



Saffron Square

Wellesley Road, Croydon, CRO

Status: In use, completed 2015
Units: 755

In the heart of Croydon, on a brownfield site of less than one hectare, Saffron Square is a mixed-use development of 755 new homes. This brownfield regeneration site under development by Berkeley Homes, comprises a landmark 45-storey residential tower alongside apartment blocks with extensive roof gardens and terraces and ground-floor commercial units – all centred on the new public square that gives it its name.

At the western entrance, the building layout retains generous views of Wellesley Road, while reducing the impact of the road on the inner space. The new civic square provides an attractive pedestrian route and encourages people to pause and enjoy the water features, planting and seating at its centre. A range of areas, at differing scales, offer informal and formal places for recreation, outdoor dining and picnics, and relate to the cafes and shops on the ground floor.

The roofscape is equally diverse. Biodiverse private and communal gardens for residents also provide ecological benefit in the city.

Informal play areas have been carefully integrated into attractive roof gardens to meet the Greater London Authority’s play-space requirement. Communal terraces have a range of spaces, with facilities such as planting, seating areas and green roofs.

Saffron Square demonstrates how providing generous, well-planted, mature gardens and sky gardens can add capital value to the developer. First, providing extensive amenities at roof level allows a significantly higher plot ratio than would normally be possible with a conventional site-planning approach. Second, incorporating water in the public realm at the entrance to the dwellings has increased sales values. Third, the landscape has created unique opportunities to attract prospective residents with the vision of a home with a garden in an urban location.

The calibre of the homes and residential amenities on offer are changing people’s perceptions of Croydon – from a concrete jungle to a desirable place to live.



Client: Berkeley Homes
Architect: Rolfe Judd
Landscape Architect: HTA Design

Viewpoint
“The landscape forms a key part of the sales journey and therefore delivering high-quality open space in the first phase has been critical in the sales process.”

Harry Lewis, Berkeley Homes
South-East London Managing Director
at Saffron Square



Royal Albert Wharf

Albert Basin, Newham, E16

Status: Design stage, full completion due 2022

Located where the Royal Docks meet the River Thames, this new residential community comprises two masterplans, and will provide new homes that respond to a variety of public open spaces and environments, including the river, the docks, protected garden squares and traditional residential streets. The public spaces form natural overlooked routes, with convenience shopping and community services close to Gallions Reach DLR station.

Units: 1600 | **Client, Developer, Project Manager, Cost Consultant:** Notting Hill Developments Ltd (Notting Hill Housing Trust) | **Architect, Masterplanner:** Maccreanor Lavington | **M&E / Sustainability Engineer:** Calfordseaden LLP | **Structural Engineer:** Campbell Reith | **Planning Consultant:** DP9 | **Transport Consultant:** JMP Consultants Ltd | **Landscape Architect:** Grontmij and Bell Fischer | **Geo-environmental / Geotechnical Consultant:** Hydrock Consultants | **QS and Viability Consultant / CDM Coordinator:** EC Harris LLP



Royal Road

Kennington, Southwark, SE17

Status: In use, completed 2013

Royal Road is a 100 per cent affordable housing development, with a design inspired by the desire to retain the mature trees on the site's perimeter, resulting in a cruciform plan which arranges the homes over four- to nine-storeys around a central community courtyard. All homes exceed space standards, with 60 per cent arranged as triple aspect, and the remainder dual. All homes have access to outdoor space, with either a roof terrace, balcony or private garden, in a built shell that is designed to last 125 years.

Units: 96 | **Client:** Affinity Sutton Homes Ltd | **Architect:** Panter Hudspith Architects | **Main Contractor:** Higgins Construction | **Structural Engineer:** Thomasons | **M&E Engineer:** Hulley & Kirkwood | **Brickwork Subcontractor:** Dax Brickwork



© Morley Von Sternberg

Royal Mint Gardens

Royal Mint Street, Tower Hamlets, E1

Status: Under construction, due to complete 2018

Royal Mint Gardens is a large-scale residential scheme formed of three blocks providing residential units and communal amenities. The design responds to the technical and spatial site constraints of building over the DLR rail tracks, cantilevering over the Network Rail viaducts as well as utilising the spaces within the existing railway viaducts. Along with the mixed-tenure residential units, the development will house new active public spaces and a series of communal roof terraces and courtyards

Units: 254 | **Client:** IJM Land Berhad/ RMS (England) Ltd | **Architect:** Farrells (London) LLP | **Service Engineer:** Hoare Lea | **Structural Engineer:** WSP | **Parsons Brinckerhoff** | **Quantity Surveyor:** Gardiner and Theobald | **Project Management:** Turner and Townsend | **Landscape Architect:** Chris Blandford | **Transport Consultant:** Entran | **Accessibility Consultant:** ARUP | **Planning Consultant:** Rolfe Judd



© Farrells

Sherwood Close

West Ealing, Ealing, W13

Status: Design stage, first phase due to complete 2017

This project is a regeneration initiative being developed with LB Ealing, the existing residents, and the West Ealing Neighbourhood Forum. The redevelopment of an existing 1970s council estate has been phased to ensure all existing residents can be re-housed within a reconfigured neighbourhood, and will be funded by the provision of an additional 166 private homes, out of a total of 305 homes, within the existing 1.44 hectare site. The new street pattern aligns directly with the surrounding urban fabric, aiming to integrate directly into the local neighbourhood.

Units: 305 | **Client:** Affinity Sutton | **Architect:** Feilden Clegg Bradley Studios | **Structural Engineer:** Peter Brett Associates | **M&E Design:** Max Fordham | **Geotechnical Engineer:** Solis Limited | **Aboricultural Consultant:** Wassells Aboricultural Services | **Landscape Architect:** Place Design + Planning | **Transport Consultant:** JMP Consulting



© AVR

So Stepney

Ocean Estate, Tower Hamlets, E1

Status: In use, completed December 2013

This scheme provides 240 new mixed-tenure homes and retail facilities. Designed around two courtyard blocks, the development is designed to a more traditional street pattern with appropriate massing, colour, materials and detailing. Projecting balconies are used in areas with view over the city and adjacent park, while, to the south, along the busier Ben Jonson Road, the balconies are semi-recessed, providing greater privacy and shading.

Units: 305 | **Client:** Bellway Homes | **Masterplanner and Architect:** Levitt Bernstein | **Contractor:** Bellway | **Planning:** Barton Wilmore | **Structures:** URS | **Services:** URS | **Employers Agent and Cost Consultant:** Rider Levett Bucknall | **CDM:** Bellway



© Tim Crocker

South Acton Phase 7.1

Avenue Road, Ealing, W3

Status: Design stage, completion to be confirmed

Phase 7.1 of South Acton's regeneration is located in northern part of the estate. The mixed-tenure homes will be focused around one of the key 'gardens' in the Acton Gardens masterplan: Avenue Road Park. The urban design approach is based on the fundamental principles of bringing back the street and creating active frontages around public spaces, creating a new frontage to Avenue Road and the park, with the façade lining Church Road making a gateway and connection with the high street beyond.

Units: 246 | **Client:** Acton Gardens (Countryside and L8Q) Countryside Properties | **Architect:** Stitch | **Landscape Architect:** LUC | **Planning Consultant:** Terence O'Rourke | **Structural/Civil Engineer:** CTP | **MEP Engineer:** Mendick Waring



Somerleyton Road

Brixton, Lambeth, SW9

Status: Design stage

Seeking to regenerate the western side of Somerleyton Road, the new development will provide 303 mixed-tenure homes, and relocate the Ovalhouse theatre at one end of the street. Ground floor uses include a flexible community space, gym, extra-care homes, flexible retail space, hairdressers, chef's school and restaurant, and children's nursery. The project will be delivered by a community-invested partnership, and ownership will be transferred to a community body, with the residential portion held by a housing cooperative.

Units: 300 | **Client:** LB Lambeth, Brixton Green, and Ovalhouse | **Lead Consultant, Masterplanner and Plot Architect:** Metropolitan Workshop | **Plot Architect:** Mæ, Haworth Tompkins, Foster Wilson and Zac Monro | **Landscape Architect:** Gross Max | **Planning Consultant:** Tibbalds | **Project Manager and Cost Consultant:** DBK | **Structural & Civil Engineer:** Consibee | **Services and Sustainability Engineer:** BWB | **Fire Consultant:** H+H | **Ecology Consultant:** Middlemarch



South Bank Tower

Stamford Street, Southwark, SE1

Status: Under construction, due to complete 2016

South Bank Tower is the transformation of King's Reach Tower, a previously unoccupied office building on London's South Bank. The scheme adds 11 storeys to Richard Seifert's original 1970s building and it is hoped will contribute to the regeneration of the area, residential, employment and leisure uses.

Units: 191 | **Client:** CIT | **Lead Architect:** Kohn Pedersen Fox Associates | **Structural Engineer:** AKT | **Services Engineer:** Grontmij | **Cost Consultant:** EC Harris | **Pre-Construction Advice:** Mace | **Planning Consultant:** Montagu Evans



© CIT Miller Hare

South Gardens, Elephant Park

Heygate Street, Southwark, SE17
Status: Under construction, due to complete Autumn 2017

South Gardens is the first phase of Elephant Park, the regeneration project in Elephant and Castle situated on the site of the former Heygate Estate. It will include 360 new homes, with 25 per cent delivered as affordable housing, and 695 sqm of retail. Designed across three plots comprised of eight buildings – including three-storey townhouses, seven- to 10-storey mansion blocks, and a 16-storey tower – every home benefits from its own outside space, with the scheme also offering new public realm and green spaces.

Units: 360 | **Client, Project Manager, Cost Consultant and Contractor:** Lendlease | **Architect:** Maccreanor Lavington | **Landscape Architect:** Churchman Landscape Architects | **M&E / Sustainability Engineer:** TUV SUD Wallace Whittle | **Structural Engineer:** Robert Bird Group | **Planning Consultant:** DP9 | **Community Engagement:** Soundings



© Lendlease

South Kilburn Regeneration Phase 2a – Bronte & Fielding

Kilburn Park Road, Brent, NW6
Status: Under construction, due to complete December 2016

The Bronte and Fielding House development forms the third phase of the South Kilburn Estate Regeneration. This 220 dwelling masterplan replaces a derelict group of towers with four residential mansion blocks framing communal gardens. The scheme draws on the character and scale of neighbouring Maida Vale and aims to re-establish Kilburn Park Road as one of the borough’s grandest tree-lined avenues.

Units: 100 | **Client:** London Borough of Brent/ Network Housing Group | **Contractor:** United Living | **Masterplan:** Lifschutz Davidson Sandilands and Alison Brooks Architects | **Architect:** Alison Brooks Architects (East/ South Blocks) | **Structural Engineer:** WSP | Parsons Brinckerhoff | **M&E Engineer:** FHP | **Landscape Architect:** Churchman Landscape Architects/ Fabrik



South Kilburn Regeneration Phase 1 – Ely Court

Chichester Road, Brent, NW6
Status: Under construction, due to complete November 2015

This 43-unit scheme for Ely Court provides 40 per cent affordable housing within a collection of three building typologies – apartment terrace, flatiron building and mews houses – that aim to restore Kilburn’s historic street pattern and frame a new garden square. The traditional model of ‘back to back’ terraces is re-interpreted to provide a higher density ‘mansion block’ format of flats over maisonettes fronting main roads. Corresponding mews houses restore a 19th century route, Alpha Mews. This route is comprised of shared surfaces, play areas, gardens and newly defined public spaces.

Units: 43 | **Client:** Brent Council/ United Living | **Architect:** Alison Brooks Architects Ltd | **Executive Architect:** Malcolm Hester Associates | **Landscape Architect:** Churchman Landscape Architects



Southbank Place

Lambeth, SE1
Status: Under construction, due to complete 2019

Southbank Place is a mixed-use redevelopment of a site overlooking the Thames on London’s South Bank. The 32-storey tower will include a variety of residential tenures, including private and affordable housing (intermediate rent and extra-care affordable rent), and a new upgraded ticket office to the existing Waterloo Underground Ticket Hall at ground floor level.

Units: 301 | **Client:** Qatari Diar and Canary Wharf Group | **Masterplanner:** Squire and Partners | **Executive Architect:** Patel Taylor | **Interior Designer:** Darling Associates | **Contractor:** Canary Wharf Group plc | **Geotechnical Consultant:** ARUP | **MEP:** Hoare Lea | **Acoustics Consultant:** Sandy Brown Associates | **Landscape Consultant:** Townshend Landscape Architects



© Canary Wharf Group

67 Southwark Street

Southwark, SE1
Status: Design stage, due to complete September 2017

This project comprises a 16-storey development on a constrained corner plot accommodating nine apartments. At its widest point, the site is 12 metres wide, narrowing to just four meters – a triangular geometry owing to the imposition of Southwark Street, built in 1860, cutting across the pre-Victorian street pattern. The building’s 360-degree design allows windows and openings on each side, whilst the ground floor includes retail uses and an improved streetscape.

Units: 9 | **Client:** Allies and Morrison PIP | **Architect:** Allies and Morrison | **Structural Engineer:** Robert Bird & Partners | **Services Engineer:** Atelier Ten | **Fire Engineer:** The Fire Surgery



© Allies and Morrison

St Edmund’s Terrace

50 St Edmund’s Terrace, City of Westminster, NW8
Status: In use, completed August 2015

St Edmunds Terrace is a set of three contemporary villas, crafted from Portland stone and bronze, within a series of landscaped gardens. The design draws inspiration from the existing Regency buildings and villas surrounding Regent’s Park. The rooftop plant is unusually located within the footprint of each of the penthouses. This strategy frees the surface area of the roofs so that solar panels could be located on the central villa, whilst local ‘acid grass’ roofs were created on the two end villas, complimenting the natural setting of Primrose Hill and Regent’s Park.

Units: 37 | **Client:** CIT Real Estate Partners Ltd | **Architect:** Squire and Partners | **Contractor:** Mace | **Quantity Surveyor:** EC Harris | **Services:** Long and Partners | **Structure:** Fluid Structures | **Landscape Architect:** Scape Design Associates



© Gareth Gardner

St Andrew’s Block D

3 Jefferson Plaza, Tower Hamlets, E3
Status: In use, completed May 2013

This 27-storey tower represents the fourth phase of a residential masterplan of 964 units. Formerly the site of St Andrew’s Hospital, the development is divided into three simple urban courtyard blocks with a tower at each of end of the site – phase four is one of these towers. Comprising of 183 residential units with ground floor retail, a site-wide concierge and a gym; the 94-metre tower has a slim footprint. The units are rotated to ensure the best orientation in terms of sunlight and shelter from noise from the adjacent road and railway.

Units: 183 | **Client:** Barratt London | **Architect:** Allies and Morrison | **Structural Engineer:** Walsh Associates | **Services Engineer:** Whitecode Design Associates | **Contractor and Quantity Surveyor:** Barratt Homes, East London | **Landscape Architect:** Townshends Landscape Architects



© Edmund Sumner

Thames View East

Eastern End Thames View Estate, Barking and Dagenham, IG11
Status: In use, completed May 2014

Replacing a high-rise estate, this scheme has created 276 new council homes using a new asset-based funding model with no reliance on subsidy. Taken through concept to construction start in just nine months, the project delivered a traditional street plan and smart modulation of house types and details within a tight budget and programme. 185 family homes with front doors and private gardens are complemented by small apartment blocks with generous light-filled stairways, overlooking a linear park and ‘vole super-highway’.

Units: 276 | **Client:** LB Barking and Dagenham, Explore Investments, and Jerram Falkus Construction Ltd | **Developer:** Explore Investments | **Architect:** Pollard Thomas Edwards | **Contractor:** Jerram Falkus Construction | **Funding Consultant:** Long Harbour | **Landscape Architect:** Plincke Landscape Architects | **M&E and Structural Engineer:** Arup | **Planning Consultant:** Savills



© Tim Crocker

South Quay Plaza

183-189 Marsh Wall, Isle of Dogs, Tower Hamlets, E14

Status: Planning approved March 2015, start on site July 2016
Units: 888

Sited in London’s docklands, this scheme is set to become the tallest residential building in the UK, rising 220 metres above South Quay.

The site currently comprises a small retail complex, two office buildings and a leisure facility in the north-east corner. These buildings cover a large proportion of the site, leaving very little space for public use, and restricting access and visibility to the waterfront, with poor pedestrian connectivity through the site to Canary Wharf and the areas to the north. As a result, there is no life or activity along the water’s edge.

Following extensive public consultation, this project will open up over 1.6 acres of the site to public use, with new landscaped gardens, and improved pedestrian connectivity to the dockside

and Canary Wharf area. Delivering 888 new homes – including 188 affordable units across two buildings of 68- and 36-storeys – the development will also include shops, restaurants and leisure facilities, and an affordable crèche in the smaller SQP2 building to the south of the site. Within the towers, residents will have access to a 56th floor lounge and terrace area, a spa, gym and 20-metre double-height swimming pool.

The scheme will deliver a range of apartment sizes to meet the varied housing needs of the area, with residents able to enjoy multiple views of London and greater access to natural light, achieved by joining two diamond-shaped structures together.

LB Tower Hamlets has an aspiration to deliver a new pedestrian footbridge across South Dock to Canary Wharf, which this development supports by safeguarding land on the northern edge of the site to ensure that there is a landing point for the bridge when it comes forward.



Client: Berkeley Homes
Architect and Interior Architect: Foster + Partners
Multidisciplinary consultant (structural engineering, building services engineering, façade and façade access, vertical transportation, geotechnical, environmental and transport planning services): WSP | Parsons Brinckerhoff

Viewpoint
“South Quay Plaza is a fantastic project to be involved in, not only for its height but also the creative, elegant design that will be of great benefit to residents who want unrivalled views of London. Our multidisciplinary approach to tall buildings means we can work collaboratively and efficiently across our business to build a world class tower.”

Guy Wellings, Project Director, WSP | Parsons Brinckerhoff



St John's Hill

St John's Way, Wandsworth, SW11

Status: Phase 1 under construction, Phase 2 design stage.
Full completion due 2020
Units: 527

The development at Peabody Estate, St John's Hill is located close to Clapham Junction, with good transport connections to central London, as well as good community and leisure facilities. The regeneration of this 1930s estate highlights the critical role of landscape in meeting the needs of future communities, providing space for play, social interaction and enhanced community wellbeing. The project represented an exciting opportunity to design high quality open spaces, which will create new links across the site, including a new promenade connecting the station with Wandsworth Common.

By designing high quality streetscapes and open spaces, the project aims to develop a new sustainable community. The project includes a range of innovative open spaces and will have a unique character that references the culture, history and geography of the area. It has been designed hand in hand with the residents

to create an environment where the whole public realm is safe, accessible and welcoming, for the enjoyment of all. Some of the features and spaces include a central public open space, entrance plazas and shared surfaces alongside semi-private residential courtyards, an ecological terrace and private gardens.

The new public 'Lavender Fields Square' aims to be more than just a setting for the housing development and community facilities; it will be a new platform for urban activities, providing a stage for a variety of events that extend the enjoyment and participation of the community. The design will provide a distinct identity for the new development and build on the culture of finely detailed open spaces in London. Whilst the surface plane will act as a unifying element, a series of modular soft landscape elements and sculptural site furniture will attract playful activities and allow flexibility in the use of the space. The open nature of the square will allow for temporary markets and events responding directly to the programme of the community centre.



Client: Peabody Housing Association
Architect: Hawkins\Brown
Landscape Architect: Farrer Huxley Associates

Viewpoint
One of the key challenges is "coordinating the different landscape phases over a long construction programme and ensuring that existing residents feel settled and comfortable as the project evolves."

"The site is very constrained and this creates pressures for residents around the phasing of the project and how it has an impact on their lives. The landscape forms a very important part of ensuring the social sustainability of the estate, but it is also, by its very nature fragile. Protecting the planting and landscape through a multiyear construction process is another major challenge"

Noel Farrer, Founding Director,
Farrer Huxley Associates



The Arches

Merrick Road, Southall, Ealing, UB2

Status: Design stage, due to complete 2017
Units: 176

The redevelopment of the Arches Business Centre aims to provide a gateway development to establish a new neighbourhood. The Arches, built in 1894, historically formed part of one of the world's largest margarine factories, and in more recent history was converted into a Wall's Sausage factory. With a new Crossrail station acting as a catalyst, the current series of small, metal-clad commercial units that sit behind the historic Arches will be transformed to create a new public frontage and green space, providing a dense urban scheme.

In total, the development will create 176 much needed homes and communal space – including communal allotments and roof top terrace gardens – alongside a new Business Centre with over 2,000 sqm of commercial space, all of which reflect the local architectural industrial identity and heritage.

The retained Arches provide a public frontage and link to the past, while their massing provides a platform for public realm and the residential blocks above. Formed across a series of four blocks, these new structures are stacked behind the Arches, giving a

sense of the new buildings 'floating' above the public frontage. Private gardens and terraces create valuable communal space set back from the busy public-facing frontage below.

Located in the wider Southall Regeneration area, the development hopes to deliver many planning benefits and act as the catalyst and first phase of the regeneration of the wider site allocation. The sustainable location is adjacent to Southall rail station and within walking distance of the town centre, meaning it will provide a valuable link to other major regeneration areas such as the Havelock Estate. The scheme will also benefit from frequent Crossrail services to key London destinations when the new line opens in 2018.

As a result of The Arches scheme coming forward, the adjacent site has also been identified as a major opportunity to re-connect the station and new development with Southall's existing south-eastern corner and the Havelock Estate. The surrounding schemes will take on a similar architectural language to that of The Arches, while also providing rejuvenated public space, meaning the project's influence and impact goes much further than its site boundaries.

Client: Workspace Group
Architect, Planning and Landscape Designer: Barton Willmore
Structural Engineer: Furness Partnership
MEP: Furness green Partnership
Sustainability: Etude
Highways: TTP Consulting
Daylight Sunlight: GL Hearn
Noise: Hann Tucker
Fire: Exova
Arboricultural: JFL
Air Quality: Waterman
Drainage: GTA
Ground Conditions: RPS

Viewpoint
"This development seeks to respect the local heritage, while allowing us to create a new public frontage and green space. Using the principle material of brickwork, the Arches themselves have influenced the design, with their rhythm repeated across the layers of the buildings."

Paul Joslin, Architectural Director, Barton Willmore



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The Biscuit Factory

100 Drummond Road, Southwark, SE16
Status: Under construction

Creating a revitalised mixed-use quarter with new residential and commercial units, the scheme seeks to restore pride and confidence to an area so far excluded from major regeneration. The majority of the residential units will be arranged around four large courtyards, with a new commercial building inserted next to the existing buildings to create a coherent and logical masterplan. A new neighbourhood park will occupy the centre of the masterplan, enclosed by the mixture of commercial and residential buildings.

Units: 800 | **Client:** Workspace Group PLC | **Architect:** Allford Hall Monaghan Morris | **Structural Engineer / MEP / Lift Engineer:** Cundall | **Landscape Architect:** Gillespies | **Planning Consultant:** Nathaniel Lichfield & Partners and Chris Horn Associates | **Traffic Engineer:** TTP Consulting | **Rights of Light / Daylighting:** Waldrams Chartered Surveyors



The COMMONS

Suffolk Estate, Broadway Market Mews, Hackney, E8
Status: Design stage

The COMMONS is a proposal to provide low rent homes for young people within existing neighbourhoods. It identifies redundant land on existing council-owned housing estates. A Community Land Trust – run and owned by residents of the estate – will identify the land and define the development proposal. Modular fast track construction will erect small-scale Hives with community uses at ground floor and residential units above. On the identified Suffolk Estate, five Hives of 40 units can be created, housing 80 young people.

Units: Flexible; 40 proposed | **Client:** Tenants of existing housing estates | **Architect:** Cazenove Architects



The Colville Estate Masterplan

The Colville Estate, Hackney, N1
Status: Under construction, due to complete January 2020

This masterplan hopes to deliver a viable mixed tenure, mixed-use neighbourhood of 925 new homes, replacing 432, and creating a public realm strategy locked into the wider neighbourhood. The masterplan is the result of a collaboration with the residents association and local authority, delivering a tenure-blind neighbourhood with additional social and affordable housing. The scheme demonstrates how meeting the demands of higher density communities requires a well-structured street plan, appropriate scale of building plots, and suitable housing typologies.

Units: 925 | **Client:** LB Hackney | **Lead Architect and Masterplanner:** Karakusevic Carson Architects | **Architect:** Karakusevic Carson Architects / Mæ Architects / David Chipperfield Architects | **Landscape and Public Realm:** Muf architecture/art / Vogt | **Planning:** Tibbalds Planning and Urban Design | **Multi-disciplinary Engineer:** Peter Brett Associates | **Structural Engineer:** Momentum



The Eagle

187 City Road, Hackney, EC1
Status: Under construction, due to complete November 2015

Refurbishing an existing building as well as redeveloping the adjacent car park site, the residential-led mixed-use development's design was strongly influenced by the art deco design of the 1930s building. The scheme created a 6-storey podium block around a central courtyard, which responds to the scale of the adjacent buildings on City Road, whilst the tall element – sited on the south-eastern corner of the site – acts as a marker for the shift in the City Road urban axis.

Units: 276 | **Client, Quantity Surveyor and Contractor:** Mount Anvil | **Client:** Eagle House Developments Ltd. | **Masterplanner, Architect and Interior Design:** Farrells (London) LLP | **Structural Engineer:** Watermans Structures | **M&E Engineer / Fire Engineer:** Hoare Lea | **Landscape Architect:** Hassell



The Exchange

17 Spa Road, Southwark, SE16
Status: In use, completed Spring 2015

The Exchange is the last piece of the Bermondsey Spa regeneration masterplan, and combines high quality dwellings with a variety of commercial uses including a local supermarket. The design has achieved a clear architectural identity that fosters a sense of place, whilst the masterplan for the site responds to the form and character of the surrounding network of streets, thereby creating a pattern of development that re-introduces this former island site back into the urban fabric and communal life.

Units: 205 | **Client:** Notting Hill Housing / United Living | **Lead Designer:** PCKO Ltd | **Structural and Civil Engineer:** RSK | **M&E / Sustainability Engineer:** United House Building Services | **Landscape Architect:** Allen Pyke Associates | **Planning Consultant:** DP9 | **Projects Manager / Cost Consultant:** AECOM | **CfSH / BREEAM / Energy Consultant:** Upton McGougan



The Scene, Walthamstow

Arcade Site, Waltham Forest, E17
Status: In use, completed March 2015

This development is located in the town centre and aims to create a leisure economy around a cinema, restaurants and shops. 121 apartments – 50 affordable and 71 private – surround a shared roof-garden on top of the nine-screen multiplex, and seek to demonstrate the viability of creating homes for Londoners within a complex mixed-use development.

Units: 121 | **Client:** Islington and Shoreditch Housing Association Hill Residential | **Architect:** Pollard Thomas Edwards | **Contractor:** Hill Residential | **Landscape Architect:** Area Landscape Architects | **Structural Engineer:** Price & Myers | **M&E Engineer / Sustainability Consultant:** MLM



The Ladbroke Grove, Grand Union Studios

West Row, Kensington and Chelsea, W10
Status: Under construction, due to complete November 2015

Creating mixed-tenure homes and 10,000 square feet of flexible workspace units, the development's form has evolved in response to the scale and pattern of the wider context – composed of a series of bays of brick piers and projecting balconies that line the quieter back streets. Ground floor shop fronts, restaurants and a generously scaled entrance portal activate the Ladbroke Grove street face, whilst providing a dynamic route through for residents to a large central courtyard that brings green amenity space to the area.

Units: 130 | **Client:** Taylor Wimpey | **Architect:** Allford Hall Monaghan Morris | **Structural & Drainage Engineer:** CTP LLP | **M&E Consultant:** mTT Consultants | **Contractor:** John Sisk & Sons | **CDM Coordinator:** C-Mist | **Access Consultant:** David Bonnett Associates | **ROL:** Dixon Payne | **Planning Consultant:** DP9 | **Landscape:** Fabrik



The Telegraph Works

Christchurch Way, Greenwich SE10
Status: Under construction, due to complete Autumn 2016

The Telegraph Works housing scheme is located in one of London's strategic regeneration zones, delivering 272 new homes in the western part of the existing Alcatel-Lucent Greenwich site. With a group of 16 low-rise courtyard housing close to Mauritius Road, the main part of the scheme comprises three mid-rise and one taller building, set around a raised podium providing a variety of residents' gardens and children's play spaces.

Units: 272 | **Client:** Weston Homes Plc / Cathedral Group Ltd | **Architect:** Allford Hall Monaghan Morris



The Plimsoll Building

One Handyside Street, Camden, N1C

Status: Under construction, due to complete October 2015
Units: 255

The Plimsoll Building is a mixed-use development comprising 255 apartments (private and discount market rent) located above a community centre, nursery and a two-form entry primary school, King's Cross Academy, co-located with Frank Barnes School for Deaf Children.

The building's massing and orientation responds to the clear sightlines looking south across central London, whilst maximising natural daylight into the residential living areas.

A 7.5 x 7.5 x 3 metre tartan grid arrangement – derived from adaptable modules which work for the planning of living and bedroom spaces and for the classroom teaching spaces within the school – forms a unifying framework that fits tightly within the site boundary and provides a unifying structural solution that works for the both the residential apartments, school spaces and undercroft car park, mitigating the need for large zones of transfer structure between the different demises.

The application of this tartan grid and imaginative interpretation of the site wide daylight cone rules – to prevent non-cavernous streetscapes at pedestrian level – creates a unique form, expressed as a series of vertical towers with tiered external terraces serving as roof gardens in between. On the south-west corner, the massing cuts away to accommodate the school playground and, above, the school demise in the deepest part of the plan hollows out to create an internal courtyard and podium garden for the residents. The orientation of this courtyard receives direct sunlight,

amplifying the natural daylight levels into each of the surrounding apartments, whilst large sculptural roof lights placed within the garden landscaping provide a source of natural daylight into the school below.

Three internal cores, shared with the school for fire egress purposes, provide vertical circulation for the residents. Two of these serve the open market units and are accessed via a glazed colonnade around the central garden, which in turn is linked to street level by a feature helical staircase and glass elevator. Communal winter gardens and sky terraces at level 12 provide further amenity space for the residents. A third core gives access to the rental units and is accessible from its own unique street entrance.

Brick, metal and glass are the predominant materials used on the external perimeter, taking direct reference from the Victorian industrial heritage of King's Cross and the rich urban grain of the immediate context. In contrast, the internal courtyard treatment is expressed in a softer material palette using lightly coloured reconstituted stone panels and glass to create a calm and light reflecting background to the lush podium garden foliage.

A unique building model, the long-term vision of the scheme is to create a lasting new place that engages and inspires by combing high-quality, dense inner city living with community facilities. This development provides a fantastic living quarter of open market and key worker accommodation that is matched by the Academy's desire to create London's best teaching and learning environment for both mainstream and deaf and hard of hearing children.



© Philip Durant

Client / Developer: King's Cross Central Limited Partnership
Architect: David Morley Architects
Engineer: Ramboll
Contractor: Carillion Construction Ltd.

Viewpoint
“The Plimsoll Building is a pioneering model for high-density mixed-use placemaking.

We were challenged to maximise provision of high-quality residential accommodation within the constraint of the planning height parameter. This required pushing the structural approach to its limits, such as use of post-tensioning to provide minimum depth flat slab construction.

We made use of prefabrication to achieve cost, programme and quality benefits, and sought early collaboration with multiple stakeholders to inform the design brief.

We learnt that it was essential to build mock-ups and procure sample materials early in the process to iron out design details and any potential issues of buildability.”

Frank Drew, Project Director, King's Cross Central Limited Partnership



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© John Sturrock



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The Television Centre

Wood Lane, Hammersmith and Fulham, W12
Status: Under construction, due to complete 2019

Providing new homes within a mixed-use development, this scheme revitalises a historic West London landmark. Residents will benefit from a range of amenities with independent cafés and restaurants on the famous forecourt, and a four-screen cinema. The masterplan also provides 500,000 square feet of new offices, a 47-bedroom hotel and new club, as well as the refurbishment of world famous television studios, open to visiting audiences and continuing the BBC’s legacy.

Units: 950 | **Client:** Stanhope | **Architect:** Allford Hall Monaghan Morris with Duggan Morris and Maccreanor Lavington | **Services Engineer (Pre-contact), Structural Engineer:** Arup | **Planning Consultant:** Gerald Eve | **Cost Consultant and QS:** Drivers Jonas Deloitte | **Project Manager:** Blue Sky Building | **Landscape Architect:** Gillespies



© Hayes Davidson

Thurston Road

Lewisham, SE13
Status: Design stage

Located in central Lewisham, the development regenerates a linear brownfield site adjacent to a railway embankment and forms part of the wider town centre masterplan. Providing 611 student bedrooms and ground level commercial space in two 12-storey blocks, all student rooms comprise innovative self-stacking volumetric modular units constructed off-site, allowing rapid construction on-site. The ground floor is raised due to the flood plain and the space created between the blocks forms the entrance to the communal student areas, with landscaped space above.

Units: 611 | **Client:** Trademark Homes | **Architect:** WestonWilliamson + Partners



The Wharves

Crown Wharf, New Baltic Wharf, Park Wharf, Bridge Wharf and Victoria Wharf, Lewisham, SE8
Status: Design stage, phase 1 due to complete March 2018

The project sets out a masterplan for a 4.5 hectare semi-derelict site, and involves the detailed design of the first phase, which will deliver around 570 mixed-tenure apartments, workspace and retail. The masterplan creates a series of new public spaces, connecting existing streets and public spaces, including Deptford Park and Pepys Park, with a major new public space known as the Surrey Canal Way included at the heart of the scheme.

Units: 1,132 | **Client:** Lendlease | **Lead Architect:** Hawkins\Brown | **Plot 1 Architect:** HOK | **Landscape Architect:** Vogt | **Structural and Services Engineer:** AECOM | **Infrastructure Engineer:** Peter Brett Associates | **Transport Consultant:** Vectos | **Fire Engineer:** Buro Happold | **Access Consultant:** Lord Consultants Ltd



© Forbes Massie

Trafalgar Place

Rodney Road, Southwark, SE17
Status: In use, completed Summer 2015

Trafalgar Place will be the first completed project in the regeneration of Elephant & Castle, which is being delivered in partnership with LB Southwark. In total, Trafalgar Place will provide 235 new homes – of which 25 per cent will be affordable. Taking the lessons learnt from the site’s history, the scheme aims to deliver better connectivity and access, a safer and more active environment, and a design that relates to the area’s existing architecture and uses.

Units: 235 | **Client, Project Manager, Cost Consultant and Contractor:** Lendlease | **Affordable Housing Partner:** L&Q | **Architect:** dRMM | **M&E / Sustainability Engineer:** TUV SUD Wallace Whittle | **Structural Engineer:** Robert Bird Group | **Planning Consultant:** DP9 | **Community Engagement:** Soundings



Vaudeville Court

St. Thomas’s Road, Islington, N4
Status: In use, completed December 2014

Providing 100 per cent affordable homes, the scheme realises the full potential of its 1,300 sqm site, by utilising a courtyard form with large family dwellings at ground level and apartments above. Every possible surface is used to provide amenity space, either shared or private. The adaptable plans are based around a fixed core, allowing the concept to be replicated with variations to suit other inner-city sites. All homes exceed CfSH level four, and can be upgraded to Level 5 – primarily achieved by adopting ‘Passivhaus’ principles.

Units: 13 | **Client:** LB Islington | **Architect and Landscape Architect:** Levitt Bernstein | **Contractor:** Roof Ltd | **Structures:** Campbell Reith | **Services:** AECOM



© Levitt Bernstein

Vivo

Ocean Estate, Tower Hamlets, E1
Status: In use, completed January 2014

Vivo is a new-build element on the transformation of the Ocean Estate. The mixed-tenure homes are arranged around three courtyards, which provide a new public open space, activity spaces for play, relaxation and community events. The massing of the three blocks varies, responding to the scale of adjacent terraced housing and maximising views over Shandy Park and Trafalgar Gardens. A new legible street layout has been introduced, with enhanced permeability through shared surface streets. All homes exceed LHDG standards and achieve CfSH level four.

Units: 467 | **Client:** East Thames Group | **Masterplanner, Architect and Landscape Architect:** Levitt Bernstein | **Contractor:** Wates Living Space | **Planning:** Barton Wilmore | **Structures:** Tully De’Ath | **Services:** Designbrook | **Employers Agent and Cost Consultant:** Rider Levett Bucknall | **CDM:** Levitt Bernstein



© Tim Crocker

Vista Chelsea Bridge

348 Queenstown Road, Battersea, Wandsworth, SW8
Status: Under construction, due to complete September 2017

Situated opposite Battersea Park, these two buildings of 6- and 16-storeys provide 456 residential units, with 15 per cent affordable provision. The concept behind the design is a building of penthouses, each with a generous garden terrace. The design ensures that with increased height, the buildings step back to create an organic built form, sensitive in scale and massing to the setting.

Units: 456 | **Client:** Berkeley Homes | **Architect:** Scott Brownrigg | **Structural Engineer:** O’Conor Sutton Cronin | **Planning Consultant:** Scott Brownrigg Planning (DP9 original consent) | **Project Manager, Cost Consultant, Contractor and Construction Management:** Berkeley Homes (West London) Limited | **Landscape Designer:** Barton Willmore



Vyner Street

Bethnal Green, Tower Hamlets, E2
Status: Under construction, due to complete March 2017

This scheme is a mixed-use development offering homes and jobs for the local community, transforming an existing warehouse into 23 high-quality homes and 410 sqm commercial space. Situated within a conservation area, the plans were led by the local historical context, with elevations reflecting adjacent Georgian terraces by maintaining a similar composition, while a set-back top floor replicates traditional warehouse architecture with a distinctive roof. The development features two blocks of three- and five-storeys with office space on the ground floor.

Units: 23 | **Client:** MURA Estates | **Architect:** STOCKWOOL | **Project Manager:** Aitch | **Building Services Consultant:** Chris Evans Consulting | **Civil and Structural Engineer:** Richard Watkins & Associates



Walthamstow Stadium

Chingford Road, Waltham Forest, E4
Status: Under construction, due to complete 2016

This scheme involves the redevelopment of a disused greyhound stadium. It is a residentially led mixed-use scheme comprising 294 one to four bed new build dwellings of mixed-tenure, designed to meet current design standards, Code for Sustainable Homes level 4, Lifetime Homes standards and current GLA London Plan. The scheme also provides a mix of uses to support existing and new communities. These include retention and restoration of the listed buildings, a new leisure centre, a children's nursery providing up to 80 child places, a cafe and crèche.

Units: 294 | **Client:** L&Q | **Architect:** Conran and Partners | **Planning Consultant:** AKA | **Structural Engineer:** Knapp Hicks and Partners Ltf | **Heritage Consultant:** Montagu Evans | **Civil and Flood Risk Engineer:** MLM



Waterside Park Phases 3 & 4

Booth Road, North Woolwich Road, Newham, E16
Status: In use, phased completion between March 2013 and November 2014

Regenerating 4.6 hectares to the north of the Thames Barrier, this development provided 780 mixed-tenure dwellings, together with retail, community and leisure facilities. Phases 3 and 4 contain three urban blocks that define the eastern edge of Waterside Park. Five- and eight-storey apartment buildings face the park, and the southern end of the development is terminated by a 13-storey tower that has views up and down the river. The garden courtyards created between the blocks incorporate high quality landscaping and pedestrian routes across the site to the park and river.

Units: Phase 3 – 178, Phase 4 – 91 | **Client and Contractor:** Barrett London | **Architect:** Allies and Morrison | **Structural Engineer:** URS Corporation Ltd | **Services Engineer:** Whitecode Design Associates | **Quantity Surveyor:** Rider Levett Bucknall | **Landscape Architect:** Townshend Landscape Architects



© Fisher Hart

Warriner Gardens

Battersea, Wandsworth, SW11
Status: Design stage, due to complete June 2017

Comprising a terrace of nine high-end townhouses, on a portion of the site of the Old Imperial Laundry, this scheme avoids overlooking issues through the use of angled protruding bays to the front and rear, and tall panes of patterned glazing. Externally, the five-bedroom units reference the architecture of the neighbouring properties, whilst internally, the scheme provides accommodation within a formerly industrial setting. The units include south-facing courtyard patios and gardens backing onto a communal parking area.

Units: 9 | **Client:** Marsa Holdings Ltd | **Architect:** Child Graddon Lewis | **Structural Engineer:** Conisbee | **M&E/Sustainability Engineer:** Hodgkinson Consultancy



17-21 Wenlock Road

Hackney, N1
Status: In use, completed June 2015

This scheme comprises 17 affordable and 33 private units on a cruciform plan, creating four courtyards with direct visual connections to the city, and dual and triple aspect apartments. The building was constructed using a sustainable solid cross-laminated timber/steel hybrid structure, manufactured off-site, which uses steel reinforcement where necessary, and is the tallest of its kind in Europe. The cross elevations are clad in slatted western red cedar, whilst, along the Wenlock Road elevation, a dark brick screen completes the street elevation and forms a clean edge to the conservation area.

Units: 50 | **Client:** Regal Homes | **Architects:** Hawkins\Brown | **Planning Consultant:** Signet Planning | **Structural Engineer:** Pringuer James Consulting Engineers | **Main Contractor:** Eurobuild | **CLT subcontractor:** B+K Structures | **CLT Engineer:** Engenuiti | **Sustainability Consultant:** Greenguage | **Transport Consultant:** i-Transport



© Jack Hobhouse

West Brompton Square, Earls Court Village

Kensington & Chelsea, SW6
Status: Design stage, due to complete December 2018

The proposals for West Brompton Square will be the first phase of the main Earls Court Village masterplan's realisation, and aim to link this major regeneration site back to its historic context by providing a gateway to the Lost River Park from the Old Brompton Road. Its design references traditional community squares, such as Orange Square in Belgravia, with a cluster of neighbourhood shops and cafés around a central green. The buildings serve to provide a coherent definition to the new public space, whilst acknowledging the varied scale of the wider context.

Units: 95 | **Client:** Capital and Counties | **Architect:** Pilbrow and Partners | **Structural Engineer:** Arup | **M&E / Sustainability Engineer:** Hoare Lea | **Planning Consultant:** DP9 | **Project Manager/Cost Consultant:** EC Harris | **Landscape Architect:** Andy Sturgeon Landscape and Design and Arup | **Rights of Light/Daylight:** Gordon Ingram Associates



West Hendon Phase One

West Hendon, Barnet, NW9
Status: Under construction, due to complete July 2016

The masterplan for West Hendon has been developed in partnership with LB Barnet, Barratt London and Metropolitan Housing Trust, in order to regenerate a 1960's housing estate to create 2,000 new homes adjacent to a Site of Significant Scientific Interest – the Welsh Harp reservoir. The masterplan incorporates affordable housing, new public parks, primary school, community centre and commercial space for small cafés or shops. This phase will deliver 358 new residential units, of which 74 are affordable.

Units: 358 | **Client and Quantity Surveyor:** Barratt London | **Architect:** Allies and Morrison | **Structural Engineer:** RLT Engineering Consultants Ltd | **Services Engineer:** RHB Partnership LLP | **Landscape Architect:** Allen Pyke Associates



© Allies and Morrison

West Grove

Walworth Road, Southwark, SE17
Status: Design stage, due to complete July 2018

West Grove is the second phase of Elephant Park, the regeneration project in Elephant and Castle that sits on the site of the former Heygate Estate, comprising 593 units, with 25 per cent affordable housing, located across eight buildings. The architecture offers a mix of mid-rise mansion buildings and towers that vary from five to 31 storeys, and includes the tallest planned building for the whole of Elephant Park.

Units: 593 | **Client, Project Manager, Cost Consultant and Contractor:** Lendlease | **Affordable Housing Partner:** L&Q | **Architect:** Allford Hall Monaghan Morris and Panter Hudspith Architects | **Structural Engineer:** Robert Bird Group | **Planning Consultant:** DP9 | **Community Engagement:** Soundings



White City

54 Wood Lane, Hammersmith and Fulham, W12
Status: Design stage / under construction, due to complete 2026

This scheme regenerates a 4.2 hectare site in White City, west London, and provides 1,500 residential and mixed-use units, along with 2 hectares of public realm. The residential units will include a 20 per cent affordable provision, split between social, affordable intermediate and extra-care. Located opposite the former BBC Television Centre, the site will include a new park that links with the surrounding sites, along with private courtyards for residents. The development sits within the wider, 110 hectare White City Opportunity Area planning framework.

Units: 1,500 | **Client:** St James Group | **Architect and Landscape Architect:** Patel Taylor | **M&E Engineer:** Hoare Lea | **Structural Engineer:** AKT II | **Planning Consultant:** Boyer Planning



Whitechapel Square

1 Cambridge Heath Road, Tower Hamlets, E1

Status: Design stage, due to complete March 2018
Units: 608

Whitechapel Square is a project that seeks to fulfil the ambitions of LB Tower Hamlets 'Whitechapel Vision' by regenerating the site of an existing supermarket into a major mixed-use scheme centred around new public realm. The proposals include retail, cafés, restaurants, education facilities, and over 600 mixed-tenure homes.

Perhaps the most significant part of the scheme are the landscape proposals for the public realm: over a third of the development area has been designed to create a series of spaces that draw on historic street patterns and emerging desire lines, to form new places and connections whilst defining new settings to the historic and contemporary neighbouring buildings. A new civic piazza connects the Idea Store into the proposals, whilst five smaller squares – punctuated by trees and soft planting – form an avenue

to connect Brady Street to the west with Cambridge Heath Road to the east.

Around the public realm, the scheme has been broken down into 17 different buildings. A landmark residential tower draws on the typology of the campanile, referencing Whitechapel's historic bell foundry, whilst its glazed terracotta piers echo the materiality of the Whitechapel Gallery. Three 'palazzo buildings' form a backdrop to a new tree-lined avenue. Each re-interprets the rational openings; brickwork and stone banding of the listed Albion Yard Brewery buildings, whilst their crenelated crowns are an abstraction of the brewery's clock tower pediment. Six mansion blocks form a central quadrant, whilst two warehouse buildings drop down in height to register the lower scale of the existing context. The composition of built form is completed by a series of townhouses that are based on the simple articulation of terraced houses that once existed on the site.



Client: Sainsbury's Property Investments
Architect, Lead Designer and Landscape: UNIT Architects Limited
Structural and Civil Engineer: Buro Happold
Highways Engineer: Vectos
Services Engineer, Fire, Acoustics and Public Health Consultant: Hoare Lea
Quantity Surveyor: Henry Riley
Planning Consultant: Turley
ROL Surveyor: Point 2 Surveyors
PR Consultant: JBP
Agent: Knight Frank
CDMC: 3CRisk

Viewpoint
'With their attention to detail and ability to root a proposal in its social, historic and physical context, UNIT have ensured a thus far smooth journey through the planning process for our Whitechapel Square project. Key to this has been community and stakeholder engagement, which, through their clear and concise presentations, the project has garnered the support of not just the local population.'

Jonathan Rawnsley, Development Partner, Sainsbury's Property Investments



Whitechapel Central

Tower Hamlets, E1
Status: Design stage, due to complete December 2017

This 1.4 hectare industrial site on the City fringe will provide 609 new homes, 3,000 sqm commercial space and extensive public realm improvements, and aims to bridge the gap between the surrounding neighbourhood scales. A 25-storey tower will act as a marker building for new public space at the heart of the site, with lower blocks around the perimeter. Part of the wider Whitechapel Masterplan, the proposals apply the principles of this strategy by providing residential and commercial space while improving connectivity and the public realm.

Units: 609 | **Client:** London & Quadrant | **Architect:** STOCKWOOL | **Construction Project Manager:** AECOM | **Structural Engineer and M&E Consultant:** MLM | **Planning Consultant:** DP9



Wood Wharf

Tower Hamlets, E14
Status: Design stage, due to complete 2019

Situated within a larger masterplan for the eastward development of Canary Wharf, this scheme is conceived as a single sculpted architectural form with two main components: A3, a 42-storey building containing 345 apartments; connected at ground level to A2, a 13-storey building. All apartments and circulation spaces are designed to optimise natural daylight, with balconies or terraces and access to terraced roof gardens and allotments. The building aims to create a sense of place, using the highest quality materials, both complementing and responding to the neighbouring buildings in the masterplan.

Units: Building A3 – 345, Building A2 – TBC | **Client:** Canary Wharf Group | **Architect:** Stanton Williams | **Executive Architect:** John Robertson Architects | **Interior Designer:** MAKE Architects | **Structural Engineer:** Ramboll | **MEP:** Grontmij | **Planning Consultant:** GVA Grimley | **Cost Consultant:** Gleeds



© Canary Wharf Group

William Street Quarter

Linton Road, Barking and Dagenham, IG11
Status: In use, completed June 2014

The second phase of William Street Quarter is the first totally privately funded affordable social housing scheme in the UK. Three mews streets lined with family-sized brick terrace houses define the perimeter of the site once occupied by the Lintons Estate, while a central 10-storey tower is located at the end of a mansion-block lined boulevard. The design utilises horizontally-banded precast concrete panels to define the upper levels of the tower, with balconies breaking down their mass.

Units: 201 | **Client:** LB Barking and Dagenham with Laing O'Rourke | **Architect:** Allford Hall Monaghan Morris and Maccreanor Lavington | **Contractor:** Laing O'Rourke | **Structural, Services and Civil Engineer:** Arup | **Planning Consultant:** Savills | **Landscape Architect:** Plincke



© Timothy Soar

12-20 Wyvil Road

Lambeth, SW8
Status: Design stage

12-20 Wyvil Road falls within the Vauxhall Nine Elms Battersea Opportunity Area, London. It will create 219 mixed tenure homes (1,806 habitable rooms per hectare) and office and retail space. The 37-storey tower is flanked by several lower elements, defining a north-south pedestrian route which connects the viaduct with the wider Vauxhall Nine Elms Masterplan and the converted railway arches. 'Sky courts' cut into the tower at differing levels providing amenity spaces.

Units: 219 | **Client:** Wyvil Road Limited and Network Rail | **Architect:** Stephen Davy Peter Smith | **Landscape Architect:** Spacehub | **Townscape Consultant:** Peter Stewart Consultancy | **Acoustic Consultant, Flood Risk & Drainage, Transport & Travel Plan Consultant:** Ardent | **Building Control Consultant:** MLM | **Daylight Consultant:** Savills | **Ecology Consultant:** The Ecology Consultancy | **Energy, Fire Engineer, Building Services and Sustainability:** Buro Happold | **Planning Consultant:** CgMS Consulting | **Structural Engineer:** Conisbee



© Miller Hare

Y:Cube

Woodstock Way, Merton, CR4
Status: In use, completed September 2015

Y:Cube provides self-contained and affordable starter accommodation for young people previously living in hostels. Using volumetric technology and offsite manufacture, it provides a bespoke solution for single people and couples in housing need, with rent set at 65 per cent below market rate. The units are 26 sqm one-bed studios, for single occupancy, that arrive on site as self-contained units. Each unit is constructed in the factory with all the services already incorporated, so that the water, heating and electricity can be easily connected to existing facilities or to other Y:Cubes already on site.

Units: 36 | **Client:** YMCA | **Architect:** Rogers Stirk Harbour + Partners | **Services Engineer:** PBA | **Project Manager:** AECOM | **Landscape Architect:** Landform | **Contractor:** Insulshell by SIG



19-27 Young Street

Kensington and Chelsea, W8
Status: Under construction, due to complete August 2017

This development seeks to mediate between the residential houses of Kensington Square and the retail centre of Kensington High Street, and will be one of the first in London designed for the Private Rented Sector. The scheme provides a mixture of apartments and family mews houses for private rent and penthouses for sale. At the heart of the scheme, a landscaped courtyard provides residents with external communal space, linking to the greenery of the conservation area.

Units: 53 | **Client/Developer:** Grainger plc | **Architect:** Assael Architecture | **Landscape Architect:** Fabrik | **Interior Architect:** MMM Architects | **Structural Engineer:** URS | **M&E/Sustainability:** Hoare Lea | **Planning Consultant:** DP9 | **Project Manager:** EC Harris | **Contractor:** Ellmer Construction



York Place – Royal Academy of Dance

198 York Road, Wandsworth, SW11
Status: Design stage, due to complete 2020

This proposal for the Royal Academy of Dance's (RAD) new Battersea home comprises of a residential-led development combined with education space. A podium building will house the RAD and three buildings will be erected above, providing 254 residential units, including affordable and market housing, and 5,710 sqm of education space and a café area. Two mansion blocks will be located to the east and west of the site, and a 21-storey building will be situated centrally. The design also includes landscaping and public realm improvements.

Units: 254 | **Client:** York Place Buildings | **Architect:** Patel Taylor | **Project Manager, Quantity Surveyor and M&E Engineer:** Silver Energy Management Solutions Ltd | **Transport Consultant, Air Quality Assessment, Flood Risk Assessment:** WSP | **Parsons Brinckerhoff** | **Structural Engineering:** Waterman Structures



Zenith House

Edgware Road, Colindeep Lane, Barnet, NW9
Status: In use, completed July 2014

Occupying a corner site on the Edgware Road, this scheme combines family houses, mansion flats and a 16-storey tower to create over 300 mixed-tenure homes around a new garden square and street network. The development shows how a combination of typologies can achieve high density with generous public spaces and a wide range of homes. These include mews houses, each with an entrance courtyard and roof terrace, forming a low-rise boundary to the neighbouring suburban gardens.

Units: 309 | **Client:** Genesis | **Architect:** Pollard Thomas Edwards | **Landscape Architect:** Area Landscape Architects | **Contractor:** Hill | **Structural Engineer:** Campbell Reith | **Sustainability Consultant:** Baily Garner | **M&E Engineer:** Ramboll



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