

BUILDING OUR WAY OUT OF A CRISIS -

CAN WE CAPITALISE ON LONDON'S PUBLIC ASSETS TO PROVIDE HOMES FOR THE FUTURE?

NOVEMBER 2014

#BRAINSTOPICK

WSP

Foreword

From the wheel to the railway, from the rocket to the potato peeler, most creative solutions are born in response to need. And with London's housing supply in dire straits, WSP's thinking caps are working overtime.

As well as having a profound effect on people's lives, according to recent London housing policy the shortage of new and affordable housing threatens the capital's ability to compete against its global rivals. Two out of five Londoners are considering taking their households – and talents – to other UK cities. If rents and house prices continue to increase, this is predicted to rise to half of all London employees – particularly younger people seeking a foothold on the housing ladder.

We've had an idea which could not only help ease the housing problem but also raise the game of our public facilities, improving the community experience across London's boroughs – and all without joining the scrap for building land. The housing issue is hugely complex, with political, environmental, infrastructural, financial and sustainability aspects to consider. This white paper is where we open the debate. Take a look, tell us what you think.

Our most trusted clients and associates know we are the #brainstopick, and there is a lot to talk about if we are going to find a workable answer to the housing question. Like you, we want London to remain Europe's largest – and one of the world's greatest – cities for generations to come.



Mark Naysmith
UK Managing Director, WSP

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Things are looking up – an answer to London's housing crisis

London. Home to London fashion week, over 300 spoken languages – and a population set to swell by one million by 2021, bringing the current housing shortage to crisis point.

With demand outstripping supply and prices soaring, a projected 488,000 homes will be needed in the next decade. Existing inhabitants are priced out of each Borough in turn, with the average London property snapped off the market at £400,000 – 16 times the average Londoner's salary. However, WSP has an idea that could help ease the housing problem – and buff up our vital public buildings at the same time.

According to our survey*, 57 per cent of Londoners think that London's public facilities are in need of regeneration and refurbishment. Many are lagging behind in terms of energy efficiency and don't occupy their site effectively. It's a simple idea - make the improvements or rebuild the facility, and at the same time help alleviate the housing crisis by building homes on top. No land development rows required. It's already being done elsewhere, for example in the USA, with great success.

According to our calculations, across London you could provide around 630,000 residential units (based on 100m^2 a unit) by developing London's municipal building sites to include residential apartments above. Even the redevelopment of one in two municipal buildings could go a long way towards solving the housing crisis, providing 315,000 homes.

As part of a call to start thinking creatively about how to solve the current crisis, this paper addresses the political, financial, planning, design and environmental challenges of meeting housing needs in a city where the only way is up.

PEOPLES' WILLINGNESS TO LIVE ABOVE DIFFERENT TYPES OF PUBLIC BUILDING



63%
A library



59%
Other flats



44%
Government administration buildings



31%
A legal court



23%
A hospital



23%
A school



19%
A fire station



8%
A prison



Our recent survey of over 1000 Londoners turned up some surprising results:

- **Most Londoners (57 per cent) think that London's public facilities are in need of regeneration and refurbishment**
- **Building new homes above publically owned buildings is the third most popular method of improving housing affordability in the city,** behind restricting foreign investment and providing tax breaks for property developers who build homes.
- **There is a willing market.** Over 60 per cent of Londoners would happily live above a library, while 44 per cent would be willing to live above a government administration building, about a third would live above a legal court and around a quarter of Londoners would be willing to live above a school or hospital.
- **Three in five (61 per cent) of those questioned support the idea of allowing private developers to refurbish government buildings,** allowing them to make their money back by building additional housing on top of the refurbished building, which they could sell for profit.

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

London is home to 15 per cent of the population of England and Wales but only occupies one per cent of the UK's land mass.
(Office of National Statistics, 2011)

Industry views

In October, WSP held a roundtable discussion with the Architect's Journal to identify the industry's views on the idea of capitalising on existing land by building homes above fire stations, hospitals, government administration buildings and other facilities.

The consensus of the group was that while the idea has merit, and there are several examples of similar schemes already underway, there are some specific challenges to address.

Stepping up to the table

Joining WSP to debate the pros and cons were:

Jonathan Seager, London First
Andy von Bradsky, PRP Architects
Caroline Harper, Jones Lang Lasalle (JLL)
Colin Wilson, Greater London Authority (GLA)
James Stevens, Home Builders Federation
Emma Cariaga, British Land
Roger Madelin, Argent
Julia Park, Levitt Bernstein Architects
Simon James, NHS Property Services
Bill Price, WSP.

For sale or for rent?

One of the first issues raised during the discussion was around ownership of the apartments and the difficulties this can present to the owner of the facility below should they wish to alter the building or the primary use. The nature of leasehold land ownership in the UK means that if you were to sell the apartments privately the owners would have 120 year leases. Even minor amendments to the ground level facility could be difficult to progress within this approach, and so it was suggested that private rental accommodation would allow more flexibility for the landlord to retain control of the asset management.

"There's an increasing number of schemes coming forward for rented accommodation above, and I think that's probably the way to approach it because it just gives you as a developer and ultimately the investor that flexibility on the ground floor use, to adapt and change your scheme, which you would have to do over the lifetime of the lease of the residents."
Emma Cariaga, British Land

"I think it is very exciting, building things on top of buildings all over the place, it sounds a great idea. I came here because I felt these are creative ideas about solving the housing problem."
Peter Murray, NLA

Who would live there?

What type of person would be happy to make this their home and would appreciate the benefits of being near to transport links and public facilities the most?

The table's view was that the accommodation leant itself very well to a few key demographics:

Key workers

Accommodation above a public facility, whether it be a school, police station or hospital has obvious appeal for staff already employed by the facility, or those nearby.

"I see some potential in what Julia was saying, in which you ask the question, 'Why doesn't the NHS actually redevelop its own estate, to provide units of accommodation for its own staff?'"
James Stevens, Home Builders Federation

Older people

It isn't hard to imagine that housing older people above a health facility or relevant council building – such as a community centre – could provide a clever solution to caring for the elderly within communities.

"Compatibility uses, you've got such a big need for housing for older people, I think the projections are something like a quarter of a million by 2030 shortfall housing for older people, it's a huge issue, and why not integrate health and housing in a way that is compatible?"
Andy von Bradsky, PRP

Students & young professionals

Providing accommodation for shorter-term student lets could allow more flexibility for the landlord.

There may also be an opportunity to ease the housing headache of young professionals, who are working but earning low wages and are often found crammed sardine-like into flatshares well into their thirties.

"I think we need something up from student housing which is like a form of student housing for young professionals who are working but are on very low wages and who are flat sharing.

Some kind of shared housing whereby you have a sort of hotel-like suite and maybe four of those suites share a kitchen and a living room and it's designated for people on low income."
Julia Park, Levitt Bernstein

Planning ahead

In terms of planning, the panel concluded that this was less a case of needing to invent the wheel than of working out how to roll with it. Current policy exists for this type of development, but the diverse nature of the sites and demands of each local environment creates added complexity.

"**The planning policy framework is already there for mixed use development and protection of certain uses, it's effectively how it's manipulated to deliver something that's needed by the market and the public.**"
Caroline Harper, Jones Lang Lasalle (JLL)



Building on a political landscape

The need to plan for the additional housing and economic capacity required for London's sustainable development has seen the housing crisis rise to the top of the government's rapidly-changing policy agenda.

This focus comes in the wake of the unexpectedly high growth trends revealed by the 2011 Census. The 2011 London Plan – the Mayor's overall strategic plan for London – assumed that London's population would grow by an average of 51,000 per year to 2031. However, the 2011 Census results showed that the recent growth rate has been much higher at an average of 87,000 per year.

London's growth projections have now been revised from 8.2 million in 2011 to:

- 9.20 million in 2021
- 9.54 million in 2026
- 9.84 million in 2031
- 10.11 million in 2036

This jump in London's population forecasts has prompted a flurry of policy-drafting and consultation, including:

NOVEMBER 2013 - THE MAYOR'S NEW DRAFT LONDON HOUSING STRATEGY FOR CONSULTATION

JANUARY 2014 - FURTHER DRAFT ALTERATIONS TO THE LONDON PLAN

APRIL 2014 - THE MAYOR'S FURTHER REVISED DRAFT OF THE LONDON HOUSING STRATEGY

JULY 2014 - THE DRAFT LONDON INFRASTRUCTURE PLAN 2050

One of the key headlines to emerge from this accelerated policy-making process is the Mayor's new target to increase housing delivery in London to 42,000 homes per year. This is a huge challenge – the latest house building figures show that only 18,380 new homes were built in 2012/13.

The 42,000 annual supply still falls short of the full demand – which has been forecast by the Greater London Authority (GLA)'s 2013 Strategic Housing Market Assessment as being 48,800. The 42,000 new homes a year target is taken from the GLA's Strategic Housing Land Availability Assessment of London's capacity within the existing London Plan policies and constraints. This means there will be an ongoing housing deficit, accumulating at the rate of around **7,000 homes every year.**

However, the draft London Housing Strategy highlights that there is scope for delivering London's housing needs if the density of new schemes and the potential of infill – the use of land within a built-up area for further construction – can be maximised. This is why overbuild opportunities should be considered seriously – they can provide a way of achieving the additional housing delivery which London, and Londoners, desperately need.

The significance of meeting housing requirements is also seen as an imperative by business membership organisation London First. Their March 2014 report 'Home Truths - 12 Steps to Solving London's Housing Crisis' describes the situation:

"London is in the midst of a housing crisis. Demand is growing and far outstrips supply....This is hampering the capital's economic and physical growth."

> "London is booming. Our economy is growing. The result - more jobs, more prosperity, and more people- puts even greater pressure on infrastructure, and in particular housing."
>
> Mayor of London Boris Johnson's foreword to the draft London Housing Strategy

> “Increasing London’s housing output to 42,000 per year is a huge challenge. The latest house building figures show that only 18,380 new homes were built in 2012/13. This gulf between population growth and house building is unsustainable.”
>
> Ian Liddell, UK Head of Development, WSP

Wider economic benefits

London First also highlights the opportunity to realise wider economic benefits from new housing, as well as the benefit of providing good quality homes for Londoners. It notes, for example, that *‘building 50,000 homes a year between 2015 and 2031 could generate £18 billion in additional Mayoral and borough income and add £43.2 billion in (direct and indirect) Gross Value Added to London’s economy.’* In addition, there would be further economic benefits through:

- Council Tax
- Resident expenditure
- New Homes Bonus
- Community Infrastructure Levy

London First’s approach sets out the argument for London’s councils to have more freedom to leverage their balance sheets to support new housing development; *‘There are good examples of parts of the public sector bodies, such as the Metropolitan Police, proactively reviewing their estates and making disposals where necessary. However, in general, progress remains slow. There are obvious examples of empty sites or redundant buildings owned by the public sector and many public buildings that are poorly utilised.’*

The report advocates a *‘comprehensive asset management strategy … to assess buildings and land within the public sector and identify scope for shared space and consolidation,’* with a new approach to disposal.

So, it is clear that London needs all the help it can get in order to solve the housing crisis. WSP’s idea can provide part of the answer to this problem by identifying redundant or under-used public sector buildings and proposing innovative designs to maximise the potential of infill development sites.

Housing shortage threatens London’s competitiveness

In their recent report ‘Moving out: how London’s housing shortage is threatening the capital’s competitiveness,’ London First polled London employees, employers, general public and local councillors to gauge their views about housing and understand how each group responds to lack of supply and rising prices. A disturbing new ‘reverse brain drain’ threat was revealed:

- While London is famed for attracting the best UK and international talent, it is in danger of losing workers due to lack of homes and rising prices
- Over half (56 per cent) find their rent / mortgage costs make it difficult to live and work in London, whilst 24 per cent think it is easy
- Nearly three in four (73 per cent) of London business decision makers think London’s housing supply and costs are “a significant risk to the capitals’ economic growth.”



The sky’s the limit - or is it?

To determine whether the idea of re-using public land to provide homes for the hundreds of thousands of Londoners who will flood into the city over the next decade and beyond has legs or not, WSP worked with University College London (UCL) to analyse the potential sites it could apply to.

The findings show the vast potential for reaching housing targets by applying this idea to sustainable regeneration schemes across London, particularly where both more housing and an upgrade of local public facilities is needed.

In fact, across London you could provide over 630,000 residential units by developing all the sites to include residential apartments above the facilities (based on a mixed height strategy of six and twelve storey extensions, and 100m^2 a unit).

To put this into perspective, the full London Provisional Monitoring Target for 2021 is 274,500 new homes and the full requirement in London over the next decade is 488,000 new homes.

Of course it’s unlikely that all sites would be available for redevelopment but even if one in every two was targeted, it could still provide a substantial proportion of the future demand, with 315,000 homes.

How many homes do we actually need?

As mentioned earlier, the Mayor's target of 42,000 new homes a year is going to come up short each year by some 7,000 homes.

Assuming an even distribution of new homes across all London boroughs, just to meet this housing shortfall of 7000 homes per year, 210 additional new homes would be needed per borough per year – and 1,470 by 2021.

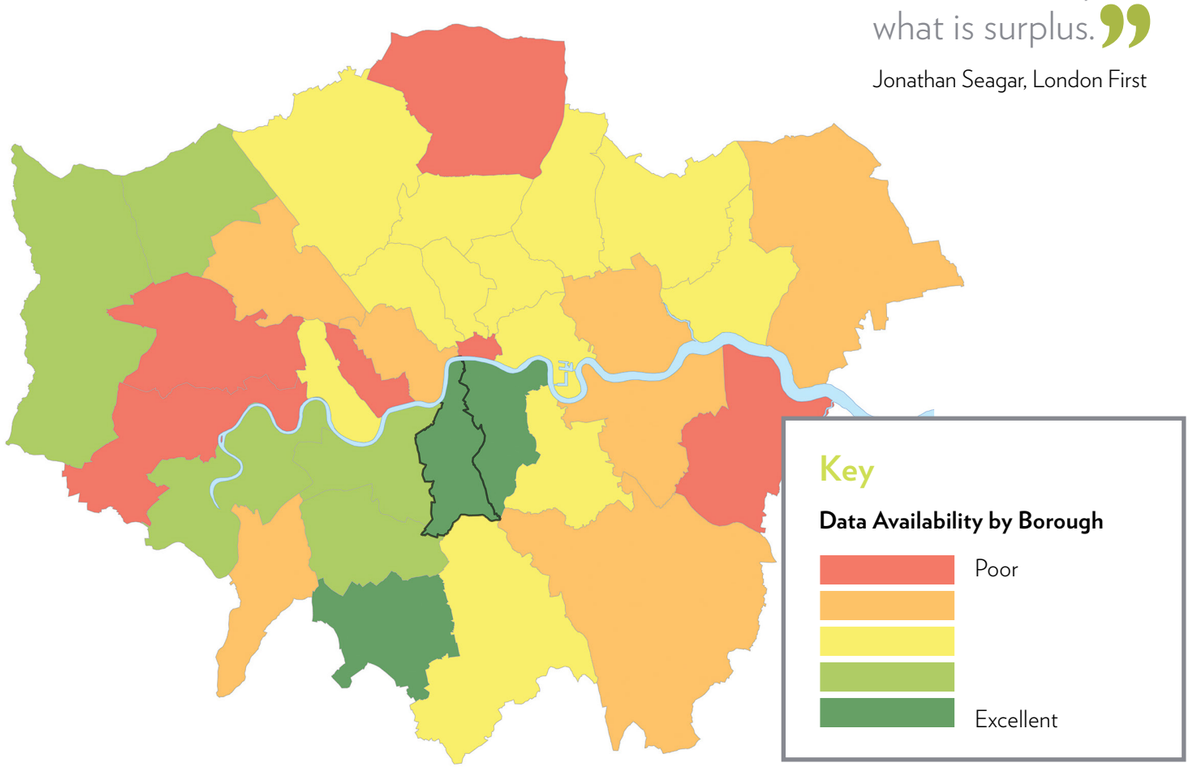
So in short, London needs a **minimum** of 274,500 new homes by 2021. In Lambeth this amounts to **9,835 homes.**

Where is all the municipal land in London?

We encountered many gaps and challenges in our research as we tried to assemble a map of London's municipal land. As a result, the study is limited to Lambeth, the only borough to provide a complete set of data in the required format.

The Central Government Property & Land Register and the Greater London Authority (GLA) are far from complete and only provided 12 per cent of our final listing for Lambeth, 332 sites in total. Many NHS and healthcare facilities, education records and local borough-owned assets also hold records, while some boroughs have their own web tool facility. However, the majority of boroughs were unable to provide data in a ready-to-use format.

> "The problem is that the public sector land ownership is so fragmented in London, even to the extent that most or a lot of the boroughs and the emergency services and through to government departments don't actually know what they own, they then struggle to say in a coherent way what is surplus."
>
> Jonathan Seagar, London First



Case study: Lambeth

UCL's research findings for Lambeth suggest an average area per municipal building of nearly 0.5 hectare for an overbuild of six storeys and 0.9 hectare for an additional 12 storeys. This could provide 45 or 94 residential units[1] respectively at a site.

Therefore the deficit in capacity in Lambeth of 1,470 by 2021 could be met by creating 16 medium rise extended municipal buildings each with 12 extra storeys, or 33 lower rise. Under a mixed height scheme of ten medium rise and 12 lower rise, only 22 buildings would need to be identified.

In Lambeth, this is the equivalent to only nine per cent of the potential supply of non-listed municipal buildings. According to the Lambeth Core Strategy Plan 2011, the following public facilities and areas in Lambeth are already ear-marked to undergo reconfiguration:

- Reconfiguration of St Thomas' Hospital estates
- Reconfigured facilities for policing the borough
- Reconfiguration of the Lambeth College estate (The college comprises three main sites located at: Clapham Common, Brixton and Vauxhall).

These designations would allow for larger redevelopment overbuilding schemes to be unlocked and the housing potential realised. St Thomas' Hospital estates also lie within the designated Opportunity Area around Waterloo, and Vauxhall Centre of Lambeth College resides in the Vauxhall Opportunity Area.

This is a good example of how an overbuild residential scheme could co-exist with the re-development of the original municipal facilities. WSP's research with UCL suggests the Lambeth deficit target of 1,470 homes could be met with just six extra storeys at these sites. If an additional 12 storeys (or mixed six and 18 storey blocks) were erected, 4150 new homes could be delivered. These sites alone could provide nearly three times the 2021 deficit target, leaving a surplus to meet local borough targets or back up for viability issues. Alternatively, these 4,150 homes could supply half the housing provision monitoring target of Lambeth until 2021, of 8,365 homes.

1 - Based on the assumption of 100m^2 per unit, based on unit plus an allocation of common part space per unit.

What is the full potential for Lambeth?

The research findings suggest a residential unit potential of around **31,400** new homes in Lambeth if all municipal land potential could be realised with 12 additional floors – or **15,575** 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).

Perhaps more realistic capacities can be gained from looking at the sub-categories of central government assets, council buildings, policing, libraries and education. Combined this would create 8,850 new homes with six further storeys and 17,700 new homes with 12 storeys added. With a mixed height solution this approach could also provide the required 2021 target for Lambeth.

Contains Ordnance Survey data © Crown copyright and database right 2014.

What is the full potential for London?

Based on Lambeth, estimates of London's full municipal land overbuilding potential for all categories of municipal land have been calculated and mapped. This has been derived from scaling the Lambeth total potential to each borough based on the proportion of total population of each borough, and using the assumption that supply and demand for municipal amenities are proportional to population.

London's full municipal land potential

- Using single storey additions to all municipal buildings would provide 639 hectares of developable space
- Six storey additions to all buildings would provide 4200 hectares
- 12 storey additions to all buildings would provide 8475 hectares

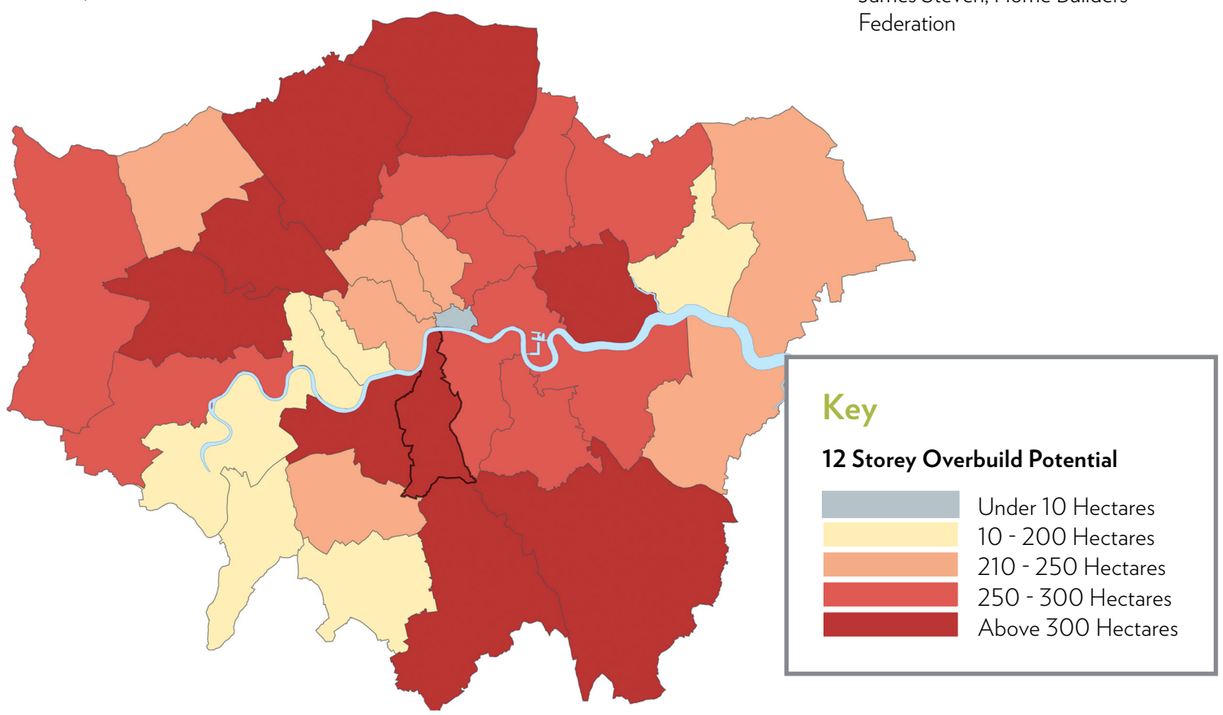
Therefore a mixed height solution (half six and half 12 storeys) would provide 6337 hectares. On this land, based on 100m^2 a unit, you could build 633,700 residential units.

London's full municipal land potential

As mentioned above London needs to meet a revised minimum target of 274,500 new homes by 2021 and over the next 10 years the full requirement in London is 488,000 new homes.

With a mixed height solution, exploiting London's municipal land air rights could provide more than twice the land required for meeting the 2021 target and the full 10 year requirement with room to spare. Of course we acknowledge that not every building will be able to be redeveloped in this way, but even targeting one in every two municipal buildings could go a long way in solving the housing crisis, providing 315,000 homes.

> "I think this is a splendid idea and we should persevere with it, but I'm also quite wary that such strategies are often then alighted upon by boroughs and the Mayor to say that we've fixed the problem - we have closed the gap between 42,000 dwellings a year and 49,000. The need could be as high as 60,000, it could be up to about 72,000."
>
> James Steven, Home Builders Federation





The maths

The commercial and financial aspects of the concept will differ with each specific opportunity, but we believe that there are two broad themes upon which the concept can be feasibly considered:

1 Create a long-term investment opportunity by aggregating private rented sector (PRS) income; or
2 Create an affordable housing partnerships platform between the public and private sectors, using a concession based financing model offering affordable housing at between 50 – 80 per cent of private sector rents

Private rented accommodation

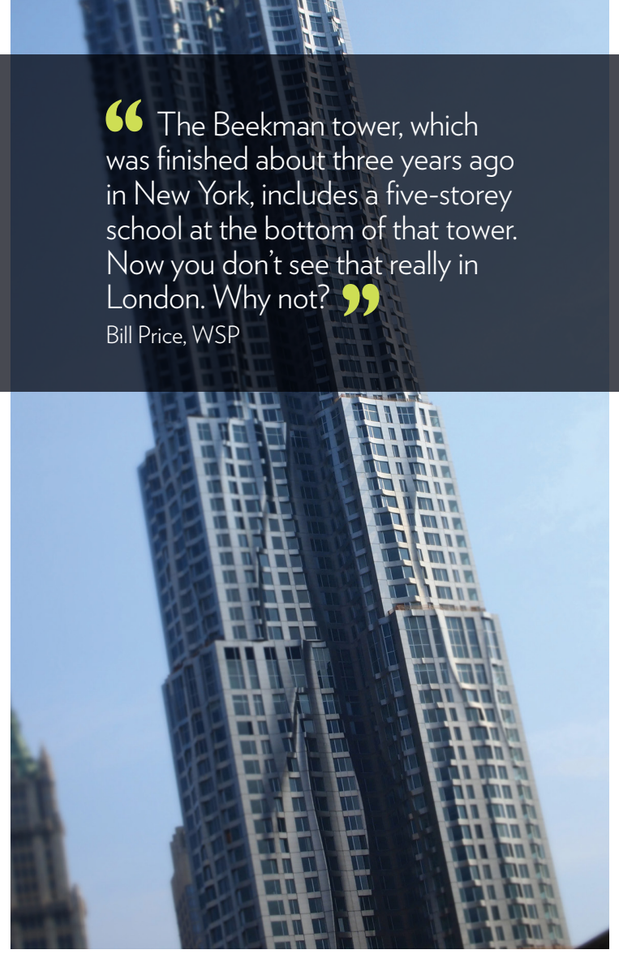
This solution follows the traditional private rented sector (PRS) model but with the public sector land owner acting as the project developer working with a funding partner to forward fund the project. Based on our initial calculations there is potential for an income yield on the development costs of around 4 per cent per annum, on the assumption of an all equity investment. Clearly each site will have different cost, income and yield drivers but the concept is that generating rental income and balance sheet value from existing land assets within London whilst also adding to the stock of housing on the face of it seems to make obvious sense to explore in further detail.

Affordable housing partnership

The idea for this solution comes from project experience with Long Harbour Ltd who recently delivered the first fully privately financed affordable housing solution in the UK, providing 477 units in Barking & Dagenham. The basic theory is that the project development is forward funded by investors on a concession financing basis and once completed, each property is rented out at between 50-80 per cent of local market rates, with the investors being paid after voids, insurance, management charges, life cycle and service charges from the net rental income generated over the concession term.

Whilst there are many commercial nuances, this model removes the construction development risks and obligations from the public sector. At the same time this enables the retention of freehold ownership of the asset for the entire investment period, together with complete control over its operation and management. In addition, the public purse will also benefit from surplus rental income after all servicing costs, including finance have been made. There is a further benefit in that when the concession expires, the residential units remain unencumbered to the public sector, retaining 100 per cent of the capital value created.

There is a potential risk that any significant changes in the rental market could reduce the rental yield for the public sector, although with the flexibility to reduce the rental discounts and move toward a full PRS model, this can be significantly offset. Clearly this theme requires a more complex commercial and contractual transaction but it has already been proven to work and represents an innovative solution to the challenge of delivering more affordable housing in London.



> The Beekman tower, which was finished about three years ago in New York, includes a five-storey school at the bottom of that tower. Now you don't see that really in London. Why not?
>
> Bill Price, WSP

WSP's towering success in New York

The approach of developing homes above municipal buildings recently provided New York with 898 luxury new residential units, a public school and space for hospital offices, all wrapped up in a classic 76-storey Manhattan skyscraper.

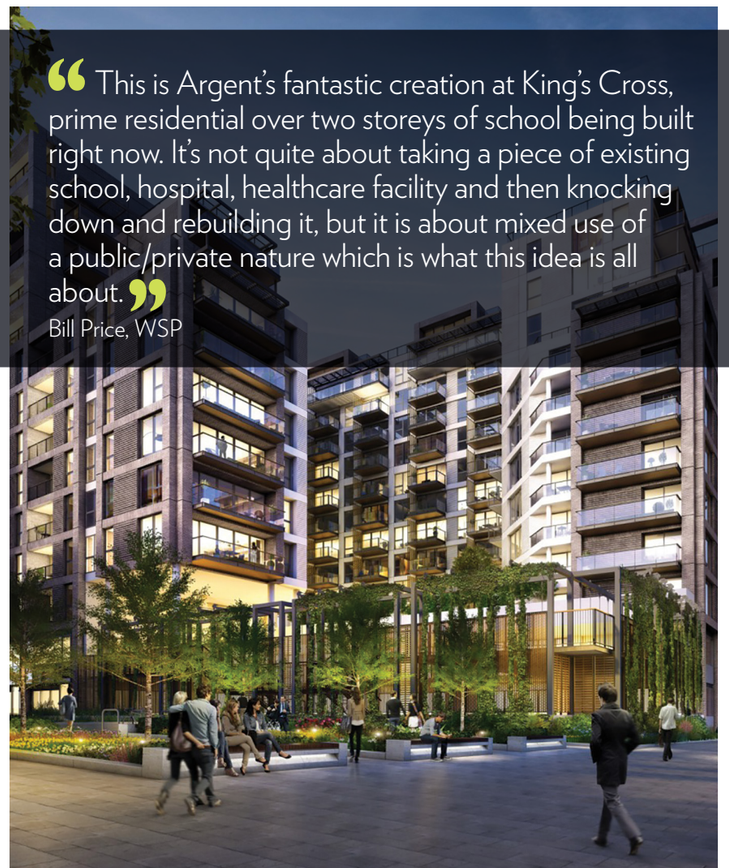
- Completed in February 2011 in New York with WSP as structural engineers
- The tower's developer Forest City Ratner agreed to incorporate the school into the project, in an agreement with New York education officials
- Forest City was responsible for the construction of the school and the Department of Education then bought the building from the developer

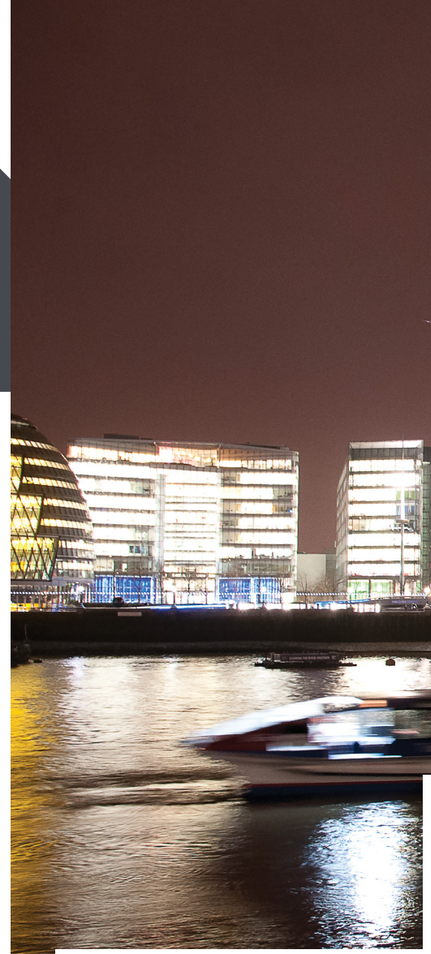
Line up for the new Plimsoll building, King's Cross, London

The thirteen-storey Plimsoll development at Kings Cross will be home to a mix of uses. The development consists of a cluster of domestic scaled towers, rising to 13 storeys above ground and arranged around a landscaped central garden. Designed by David Morley Architects, the building houses two schools on its lower two floors – a new Academy primary school and the Frank Barnes School for Deaf Children, both with outdoor play space.

www.plimsollkingscross.co.uk.

> This is Argent's fantastic creation at King's Cross, prime residential over two storeys of school being built right now. It's not quite about taking a piece of existing school, hospital, healthcare facility and then knocking down and rebuilding it, but it is about mixed use of a public/private nature which is what this idea is all about.
>
> Bill Price, WSP





> I think this is a little glimpse into the future of sharing land, sharing space and overcoming problems with the paperwork in terms of leases and ownership. Because we can definitely build the buildings, that's not the problem.
>
> Bill Price, WSP

Living the high life – a unique design challenge

For maturing cities with burgeoning populations and diminishing space, using existing land parcels more effectively or building above existing properties, to provide quality, high level homes is a natural progression. While construction could be costly – especially in the case of building directly on top of an existing building where foundations need to be strengthened and the majority of work is done at height – this extra cost should be more than offset by eliminating the need to develop new land.

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 a structurally independent apartment building** on top of an existing building.
3. **Redevelop from scratch** the existing facility with the residential apartments on top.

All options for this type of project will include all the normal residential development issues associated with urban development – planning policy, poor air quality, high levels of ambient noise, stretched utility capacities, climate change impacts – as well as its own unique engineering challenges. However, these are unlikely to restrict the project if addressed at the start and in our experience it is best to call on design expertise from the earliest stages to avoid prohibitive expense or delays.

Design considerations include:

- Utility services – most urban sites have restricted utilities so it's likely that larger overbuild schemes will require off-site reinforcement and space on site at ground level for supporting utility equipment.
- Combined Heat and Powerplant, (CHP) and boiler flues – it's very likely that new residential schemes will require either CHP/boilers on site or a connection into an existing heat network.
- Foundation space – where applicable, all sites will need adequate space beyond the existing building to safely install new foundations for the overbuild facility.
- Over cladding – to look good, and for planning purposes, for options one and two (see page 17) the new development will need to appear as a whole integrated building.
- Layout considerations – provision will need to be found for car parking, reception and alternative means of escape, bike storage, an energy centre, electrical substation, water storage and booster sets, waste handling and storage.
- Roof space – the new roof will need to accommodate relocated roof mounted plant and equipment from the existing building.

High hopes for the environment

Improving the use of existing urban land by building above public buildings is in line with the objectives of the National Planning Policy Framework (NPPF) which aims to promote sustainable development. However, it does pose a number of challenges to the built and natural environment.

All new residential developments need to achieve the Code for Sustainable Homes (CSH) Level 4 or better throughout. To do this it must achieve 68 points across nine design categories – energy and CO_2 emissions, water, materials, surface water run-off, waste, pollution, health and well-being, management and ecology.

This type of project will have some specific environmental considerations:

- Noise and vibration – because hospitals, council buildings and libraries are usually located by main transport arteries, noise and vibration will be a big consideration. Investment will be required to ensure noise levels meet the requirements of the British Standard for sound insulation and noise reduction for buildings (BS 8233).
- Air quality – residents are likely to experience elevated pollution levels because many of these sites are in close proximity to roads and rail. New developments need to minimise carbon dioxide emissions to achieve at least a 25 per cent reduction over Building Regulations Part L 2010 so the design of the new properties would need to include adequate ventilation and filtration to mitigate the effect of vehicle emissions on concentrations.
- Water usage – with an increasing number of people using the local utilities and infrastructure, strategies to reduce the use of water would be particularly important. These could include water saving fixtures and fittings, optimised water management through metering and leak detection, and collection of rainwater for irrigation.

As well as the future residents' comfort and the sustainability of the apartments, we also need to consider the impact on the surrounding occupants and neighbouring properties. For example, neighbours may experience loss of sunlight, daylight, or privacy – or an increased sense of enclosure and micro climate. The effect of taller buildings on the character and appearance of neighbouring buildings on conservation areas – both on heritage assets and in the context of connectivity with surrounding areas – must also be considered.



Onwards and upwards

We are confident you will agree our research shows that our idea of regenerating our essential municipal resources and building upwards to provide the homes Londoners desperately need is worth exploring further. Lack of housing is a problem we all share – as London First's recent report showed, it is now a desperate matter of protecting and sustaining the talent our city has attracted from around the globe for centuries. The solution to London's housing crisis is unlikely to be a single or a simple one. There are many more financial, political, planning, engineering and environmental discussions waiting to be had – this is just the start.

If you are as excited about this idea as we are, you will be keen to keep talking. Join the conversation by following us on twitter @WSP_UK, LinkedIn or email us your feedback pressoffice@wspgroup.com.

ABOUT WSP

WSP, in combination with Parsons Brinckerhoff, is one of the world's leading professional services consulting firms, with 31,500 staff, based in more than 500 offices, across 39 countries. Together we provide services to transform the built environment and restore the natural environment, and our expertise ranges from environmental remediation to urban planning, from engineering iconic buildings to designing sustainable transport networks, and from developing the energy sources of the future to enabling new ways of extracting essential resources. In the UK, WSP has been involved in many high profile UK projects including the Shard, Crossrail, New South Glasgow Hospital, the Bullring shopping centre in Birmingham and the re-development of London Bridge station.

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