

NLA London Tall Buildings Survey 2017

#NLATallBuildings



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GL Hearn
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Foreword



Peter Murray, Chairman, New London Architecture

Each year the NLA London Tall Buildings Survey has generated a healthy debate about the benefits, as well as the negative impacts, of tall buildings. It has given a voice to those that propose them as well as those that are more critical. At NLA we remain of the view that in a growing city, well designed tall buildings in the right place are appropriate, a view reiterated by the Mayor of London at his Question Time on March 23.

This year's data will assist the Mayor as he prepares his new London Plan, with drafts expected this autumn. We are encouraged that the Mayor is now actively pursuing the idea of a 3D computer model of London, something we have been pressing for since our first survey in 2014. Developers will be able to place virtual images of their buildings into the wider model so that planners, the public and the Mayor can fully understand their impact. All too often the debate takes place without a clear understanding of the individual and the cumulative impact of proposed tall buildings. The City of London has been using such a model for the past year to great effect.

The French technology company Dassault Systems will launch the Virtual Singapore project later this year which will show what the future city will look like, as well as containing comprehensive data about the city's management. It is high time that London became smarter and used modern digital technologies to deliver a better planning service and help shape a better city.



James Cook, Head of Residential Planning, GL Hearn

Tall buildings remain a critical part of London's remarkable ongoing development and for many, both within and outside of the development industry, represent the most telling visual manifestation of the contemporary chapter in London's growth. The interest in tall buildings over the year since our last report has not waned.

Over the course of the year London has had a new Mayor – a position of real significance for tall buildings proposals as most are referable to him. Since the Election, we have seen early indications of new Mayoral policy and we think that the in principle support for tall buildings, in the correct location and of the highest design quality, will remain. Indeed, the new Mayor is keen to increase density in highly accessible suburban locations which may provide further support for tall building proposals. There have been other very significant political events since the last report, but these events do not appear to have had a marked impact on the tall building pipeline. Given the lead in time associated with this form of development this is not surprising and any impact may be evidenced in future surveys.

A number of prominent tall buildings have been topped out and/or completed during 2016 and as construction continues at similar levels to previous years we are now seeing the real transformation of parts of London through a rapidly changing townscape with new landmarks being created. Whilst not an area of research for this study, we have been interested by press reports of a growth in tall building proposals in regional cities (in particular Manchester and Liverpool) and we will follow emerging trends in these locations with some interest. There has been controversy this year, notably the emergence of a tall building in a strategic protected view of St Paul's Cathedral from Richmond Park.

With the benefit of four years research, we are now able to see some key trends emerging. We think that the research has led to a greater understanding of tall buildings in London in terms of their benefits and impact and has stimulated a healthy debate. The risk and reward associated with tall buildings is a good indication of market confidence and we are pleased to report continued growth in this sector. We hope you enjoy this year's report.

Contents

Executive summary	2
Introduction	4
Tall buildings pipeline	5
Map	10
Analysis	12
Industry comments	16
NLA recommendations	19
Research team	20

Executive summary



A record number of **26 tall buildings completed in 2016**, compared to 10 in 2015. Over the last decade, the average number of tall building completions has been just six per annum

A record number of starts – almost 1 a week. **48 tall buildings started construction in 2016**, an increase of 68% on 2015, when it was 29

83 new tall buildings were submitted for planning this year – down 30% on the year before at 119, which saw 40+ tall buildings submitted in Greenwich Peninsula

The **total pipeline** of tall buildings in London which are proposed, approved and under construction **has increased marginally to 455** in 2016, up from 436 in 2015

24 of London's 33 boroughs have a tall building pipeline. We are seeing a small shift towards outer London, with 82 tall buildings in zones 3-4 and 25 in zone 5

60 new tall buildings have completed in the three years since the first London Tall Buildings Survey, and 91 are currently under construction. **By 2019, we estimate 152 new tall buildings** to have completed since the original Survey

An estimated **30% of homes currently under construction in London are in tall buildings**

256 tall buildings currently have planning permission to go ahead and are awaiting construction. But 31 tall buildings which received planning over 5 years ago are still not on site

100,000 new homes are estimated across the entire tall buildings pipeline, or two years' worth of housing need based on GLA requirements of 50,000 new dwellings per annum

The entire **pipeline is estimated to cover 38 hectares**

Introduction

Now in its fourth year, the NLA London Tall Buildings Survey provides an annual overview of the pipeline of tall buildings in London, giving a wide-ranging picture of the changing shape and scale of the capital.

When the Survey launched in 2014, it provided the first ever comprehensive overview of tall buildings of 20 storeys or more that were planned for the capital – promoting debate and discussion about the appropriate location, density and design of tall buildings for a fast growing city.

Three years later, NLA and our research partner GL Hearn are now able to start analysing the trends year-on-year, assessing the impact of changing policies, economic forecasts and political priorities on the type, location and number of tall buildings coming forward. Working with data partner EG-London Residential Research, we can now provide the most accurate picture yet, even going back to see how the pipeline compares to 2004, when the then Mayor Ken Livingstone published the first London Plan. With Sadiq Khan currently developing the next London Plan, this is a crucial time to debate the future role for tall buildings in the capital.

Tall buildings pipeline

By Nigel Evans and Paul Wellman, EG-London Residential Research

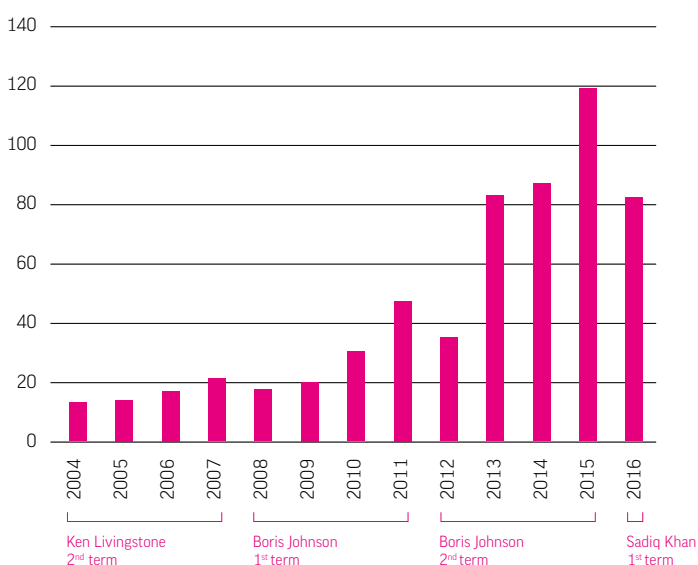
Applications

The number of tall buildings submitted across all 33 London boroughs in 2016 was down 30% on the previous year – 83 compared to the historic high of 119 submitted in 2015.

So might London see a major slow down in tall building applications post Brexit? To reply on these headline numbers would be a mistake. 2015 was an exceptional year as a single application proposed over 40 tall buildings at the vast Greenwich Peninsula scheme. Take that anomaly away and the 2016 figure is remarkably similar to every year going back to 2013.

For context the largest multiple tall building application submitted in 2016 was the Elephant and Castle shopping centre redevelopment which proposed six.

Application rate

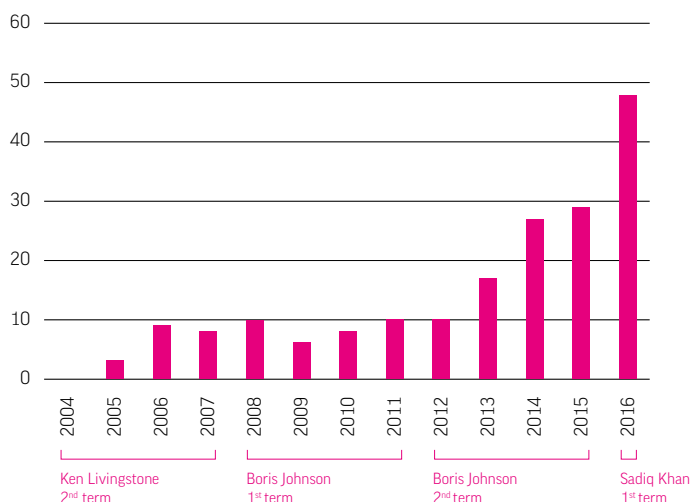


Starts

If 2016 saw applications continue their four-year plateau, the real story for this year was the activity coming out of the ground. Even with a real softening in the prime central London market, added uncertainty with stamp duty changes and its impact on foreign investor markets along with the odd geo-political shock, developers pushed the button on a new tall building nearly every week.

A total of 48 tall buildings started construction in 2016, an increase of 68% on the previous year.

Start rate

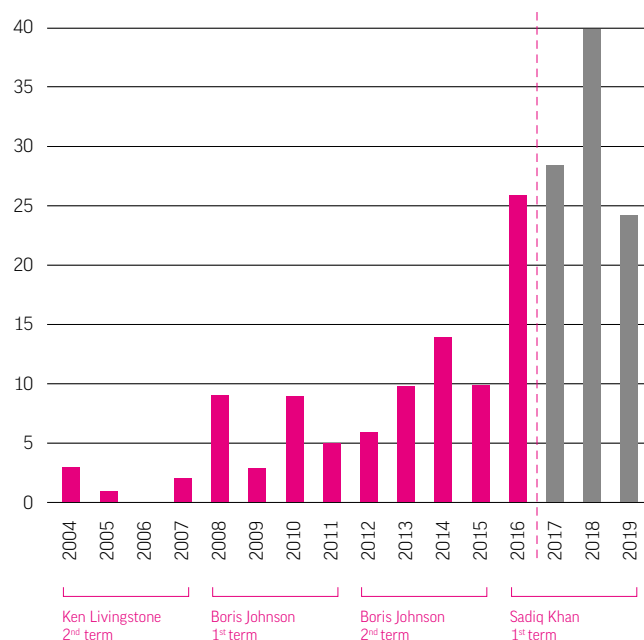


Completions

26 tall buildings completed this year, far above any level the capital has seen before. That is over a 50% increase on 2015. If we look at the preceding years as a whole, from 2004 up to 2015, the average number of tall buildings completing was just six per annum.

Further to that, if we take a glance at the number of starts having taken place over the past few years, the completion rate over the next year or so will only rise even further. For context, there are currently close to 100 tall buildings under construction at this very moment in time.

Completion rate





Above Blackfriars Circus, in Southwark, by Maccreanor Lavington for Barratt Homes. Status: under construction

Below Elephant & Castle Town Centre, in Elephant & Castle, Southwark, by Allies and Morrison for Delancey. Status: application submitted in 2016



Right Harbour Central, in Millharbour, Tower Hamlets, by Rolfe Judd for Galliard Homes Limited. Status: under construction



Tall buildings completed in 2016

Barnet

- Hendon Waterside P3a (West Hendon Estate), West Hendon Broadway
Allies and Morrison, Barratt Metropolitan

Camden

- XY Apartments (Maiden Lane Estate), Maiden Lane
PRP Architects, LB Camden

Croydon

- Ruskin Square - Phase 1
AHMM, Stanhope PLC
- Saffron Square, Wellesley Road
Rolfe Judd Architects, Berkeley Homes PLC

Greenwich

- 2 x Royal Arsenal - Phase 4 (Over Station)
Allies and Morrison, Berkeley Homes

Hackney

- Woodberry Down (Kss 3) – Skyline
Rolfe Judd, Berkeley Homes

Hammersmith & Fulham

- Imperial Wharf - Chelsea Creek, Imperial Road
Squire & Partners, St George

Islington

- Canaletto, 257-259 City Road
UNStudio, Groveworld
- Lexicon, 261 City Road
SOM, Mount Anvil

Lewisham

- Lewisham Gateway (Portrait - Phase 1a)
PRP Architects, Muse Developments

Newham

- 2 x Hoola - Tidal Basin Tower, 26-34 Tidal Basin Road
CZWG, Hub Residential
- International Quarter - Glasshouse Gardens
Allies and Morrison, Lendlease and LCR

Southwark

- One The Elephant (Elephant Leisure Centre),
22 Elephant & Castle
PKS Architects, Oakmayne Properties

- Elephant 1 (Elephant One)
Squire & Partners, Lend Lease

Tower Hamlets

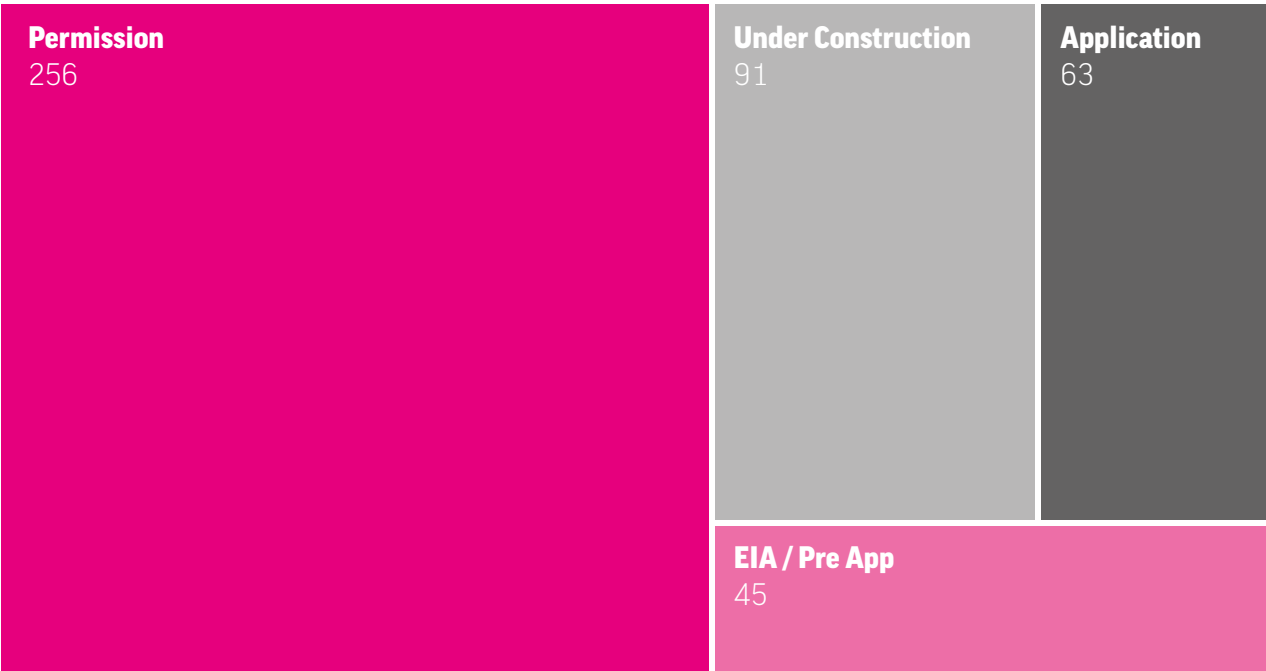
- 2 x Aldgate Place (Aldgate Union), Buckle Street
Allies and Morrison, Barratt London / British Land
- Baltimore Tower
SOM, Galliard Homes
- Dollar Bay, Lawn House Close
SimpsonHaugh and Partners, Mount Anvil
- Horizons (Former Car Park Site), Preston's Road
RMA Architects, Telford Homes
- 2 x Lincoln Plaza / Canary Quarter (Indecon Court),
20 Millharbour
BFLS, Galliard Homes
- 15-17 Leman Street
David Miller Architects, Pinehill Capital
- London City Island - Phase 1
Glenn Howells Architects, Ballymore Group
- Novotel
BUJ Architects, Accor

Pipeline

The total number of tall buildings in the 'pipeline' now stands at 455, up from 436 in 2015. Tall buildings are classed as within the pipeline if they are under construction, have planning consent, have had either an application or EIA Screening/Scoping or have gone to planning committee at pre-application stage. There are also a small number classed as 'rumour', schemes we are confident will be submitted for planning in 2017. There will of course likely be many more.

Compared with last year's data, 86 new tall buildings have been identified: 37 proposed or at EIA, 37 in the planning system, 11 with planning permission, and one proposed but since withdrawn. A number of buildings have been removed from last year's data, including those completed, with lapsed planning permission, refused, or superseded by a new scheme.

Pipeline



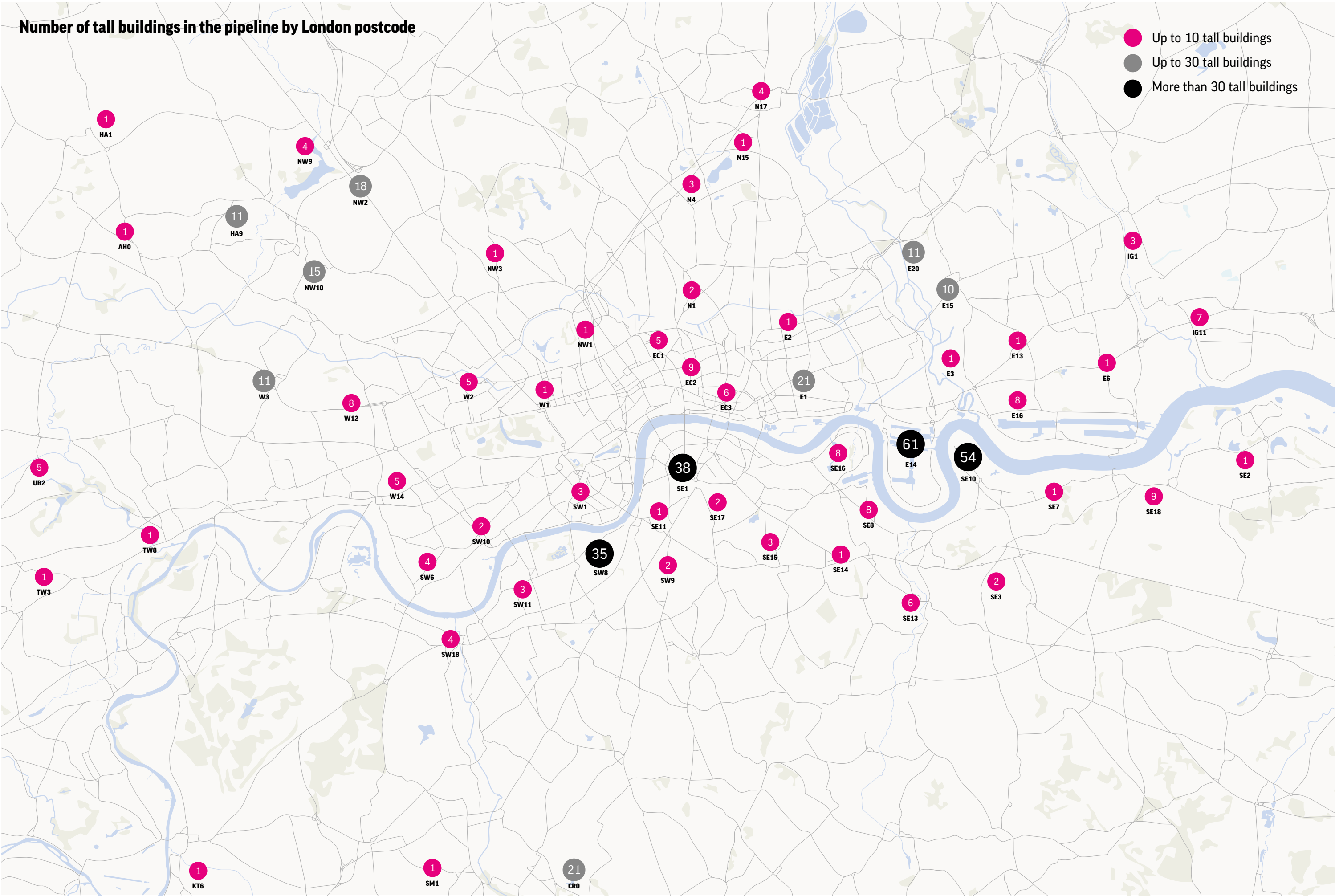


Above City Cluster, including 1 Leadenhall by Make Architects for Brookfield. Status: application submitted in 2016, permission granted in 2017

Right Elephant Park, in Elephant & Castle, Southwark, by AHMM and Panter Hudspeth for Lendlease. Status: started construction in 2016



Number of tall buildings in the pipeline by London postcode



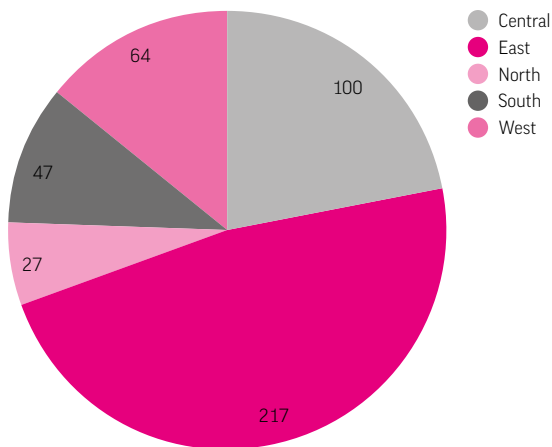
Analysis

By James Cook and Claire Graham, GL Hearn

The following sections provide an analysis of this year's results, with some comparison to previous years' findings where relevant.

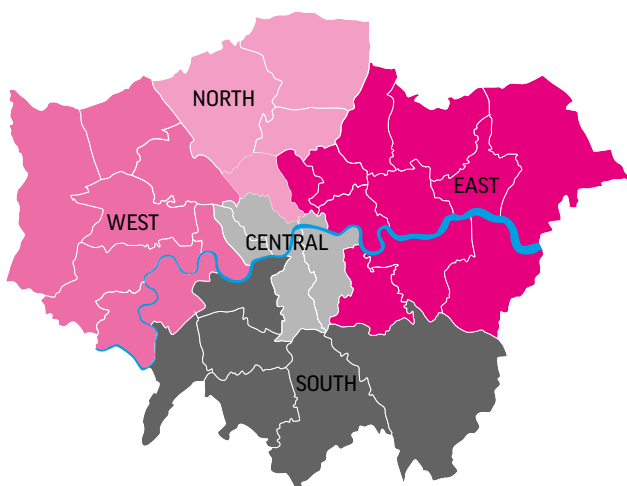
Location of tall buildings

Location of tall buildings in the pipeline by London sub-regions

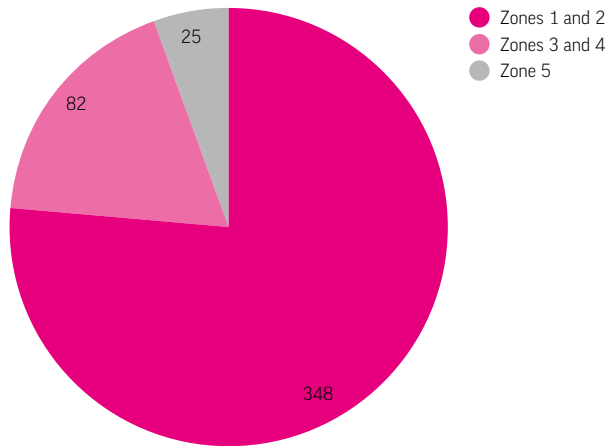


Whilst, as in previous studies, the east sub-region still has the majority of tall buildings in the pipeline (48%), this is a slight decrease from last year at 54%. Instead, it is the west sub-region that has seen a 5% increase up to 14% of the total pipeline. There has not been any change within the other sub-regions.

London sub-regions

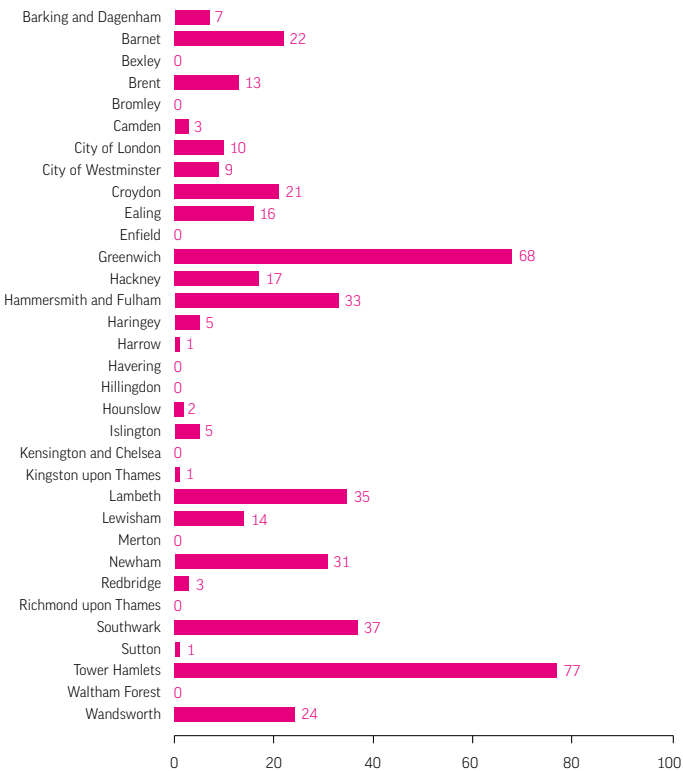


Tall buildings by TfL zone



The vast majority of the tall building proposals are located within Zones 1 and 2, and there is yet to be a tall building planned within Zone 6. However, there has been a small shift towards the outer zones from last year's data as Zone 5 now has 5% of the tall buildings pipeline (up from 4%), and Zones 3 and 4 have 18% (up from 17% last year). Whilst this is only a small change in percentages terms it does continue to suggest that tall buildings are becoming an increasingly deliverable form of development outside of the historically prime areas. This supports the prediction from last year's study given the promotion of Opportunity Areas and transport nodes in outer boroughs which in the current policy climate are considered suitable locations for tall buildings in principle.

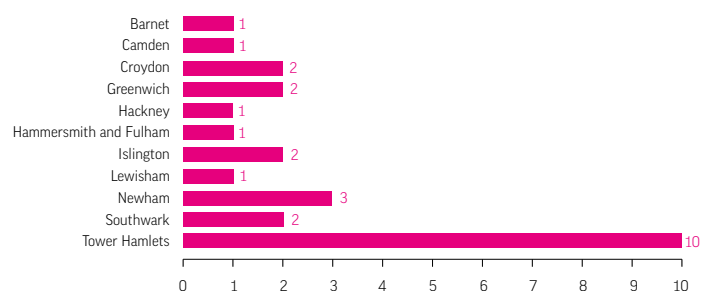
Location of tall buildings in the pipeline by borough



London Tall Buildings Survey

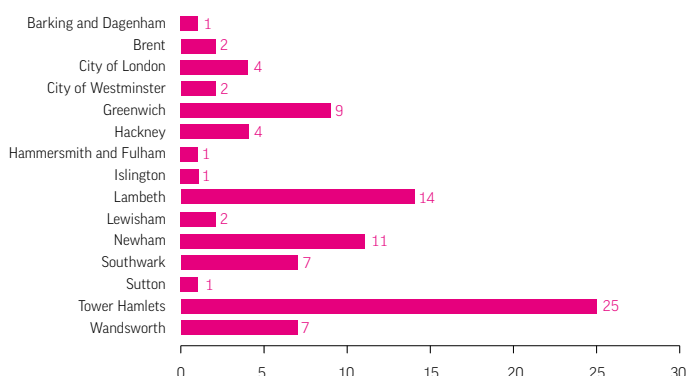
As in previous years, a significant number of the tall buildings in the pipeline are within Greenwich (68) and Tower Hamlets (77). There has been an increase in activity in Southwark with 37 tall buildings in the pipeline (up from 26 last year), and Hammersmith and Fulham (33 tall buildings compared to 14 tall buildings last year). Nine boroughs have no tall buildings in the pipeline. These are Bexley, Bromley, Enfield, Havering, Hillingdon, Merton, Kensington and Chelsea, Richmond upon Thames and Waltham Forest. Apart from Kensington and Chelsea, and Enfield, the list of boroughs with no tall buildings pipeline is consistent with last year. Looking ahead, we would expect locations like Bexley Riverside (Bexley), Meridian Water (Enfield), Hayes (Hillingdon), Kensal Rise (Kensington & Chelsea), Morden (Merton) and Walthamstow (Waltham Forest) to see some tall buildings proposed given the nature of these locations in physical and policy terms.

Location of completed tall buildings by borough in 2016



In 2016, 26 tall buildings have been completed, of which 10 are located in Tower Hamlets. In addition, there are a large number of tall buildings now at late stages of construction - 28 are expected to complete in 2017 and 40 in 2018. Since the first report, 60 tall buildings have been identified as being completed in London.

Location of tall buildings under construction



The level of current construction activity for tall buildings has remained consistent this year (91 under construction compared to 89 last year). In terms of geographic allocation, the number of boroughs containing tall buildings under construction also remains almost constant. The borough experiencing the most growth of tall buildings under construction continues to be Tower Hamlets, with Lambeth, Newham and Greenwich also experiencing significant tall building construction activity.

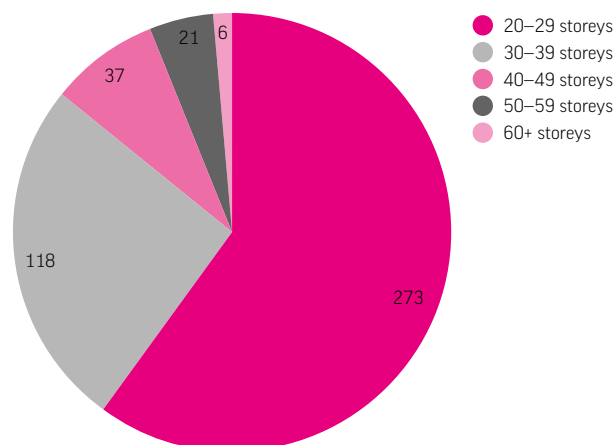
Overall, the boroughs experiencing construction activity remains consistent, although there has been an increase in Wandsworth from 3 tall buildings under construction last year to 7 this year, and a similar increase in Lambeth from 11 under construction last year to 14 this year. The majority of these tall buildings are concentrated within the Nine Elms Opportunity Area where the townscape is now rapidly changing.

Three boroughs now have tall buildings under construction which had none last year. These are Westminster (2), Sutton (1) and Barking and Dagenham (1).

Heights of tall buildings

The definition of whether a building is considered to be tall relates directly to its surroundings, but for the purpose of this report, and consistent with all previous years' research, a tall building has been defined as a building of 20 storeys or more. The mean average height of the tall buildings in the pipeline across London remains at 30 storeys as seen in previous years, and the number of tall buildings between 20 and 29 storeys also remains at 60% suggesting that the generally accepted "sweet spot" in terms of building heights remains in this range. This relates to a number of factors including construction economics, "buildability", development risk, viability and financing of the building, and also policy and political influences.

Comparison between the number of storeys of tall buildings





Above Vicarage Field, in Barking and Dagenham, by Studio Egret West for Benson Elliot and Londonewcastle. Status: application submitted in 2016, permission granted in 2017

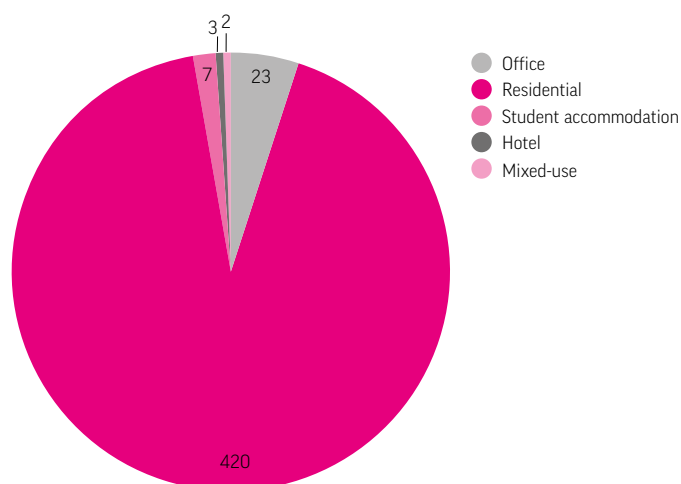
Left 54 Marsh Wall, in Isle of Dogs, Tower Hamlets, by Rolfe Judd for Freshwater Group. Status: application submitted in 2016, permission granted in 2017

Since the start of data being collated for this report in 2014, 64% of the buildings started and completed are between 20-29 storeys. This year 13% of the buildings currently under construction will be 50-75 storeys high, a marked increase since 2014 when approximately 9% of the buildings under construction were above 50 storeys, demonstrating that taller buildings are proving to be deliverable in the London context.

When comparing the inner and outer boroughs, only 53% of the tall buildings within inner boroughs are 20-29 storeys, compared to 69% within the outer boroughs, meaning that almost half of tall buildings in the inner boroughs are over 30 storeys. The tallest building currently recorded within the outer boroughs is 55 storeys in Croydon, compared to 75 storeys within the inner boroughs.

Tall buildings' contribution towards London housing needs

Comparison between primary uses of the tall buildings pipeline



As identified in the research previously, the primary use of the tall buildings is residential (92%) which suggests that residential need demand and values remain the main drivers for the continued requirement for tall buildings across the capital.

It is estimated that approximately 100,000 new homes could be provided by the tall buildings in pipeline [estimated by assuming 8 homes per storey at an average of 30 storeys within the 420 residential buildings], which is approximately two years supply of the housing need for London based on the London Plan requirements of some 49,000 dwellings per annum.

Using approximate plot ratios for typical tall buildings, the total land take to provide these 100,000 dwellings will be around 38 hectares.

Note this is calculated on an assumption of:

- Average unit at 60 sqm x 8 units per floor x 1.2 (gross/net) + 50% for plot size
- Then multiplied by 420 tall buildings in primary residential use

Looking ahead

There has been press coverage referring to some of London's tall buildings proposals being 'paper towers', suggesting that even when planning permission is granted the tall building will never actually be constructed and that the planning has been a "theoretical" process. The research does not however suggest that this is a common occurrence.

The research does show that tall buildings take an average of 2.3 years to start construction from planning permission, which takes account of negotiating section 106 agreements, providing for detailed design work and discharging any pre-commencement conditions. Once work is under way then a tall building takes an average 2.5 years to complete.

Currently, the report has identified 31 tall buildings which received a resolution to grant planning permission 5 or more years ago but have not yet started (it should be noted that the actual granting of the planning permission may have been more recently if completing the section 106 agreement after the resolution to grant was drawn out for example). Our research suggests that all of these towers benefit from a live planning permission, but given that the average time to commencement is 2.5 years, it is fair to assume that some of these tall buildings may not come forward – overall however they represent a fairly small proportion of the potential pipeline.

The wider market

It is expected that 2016 will be remembered as a year of uncertainty, and market disruption with Brexit and the new US President as two key unexpected democratic outcomes. We do not believe this has had an immediate impact on the overall tall building pipeline given the time it takes to work through the planning system, and the long-term investment each one requires. For these reasons, any impact would likely manifest itself in coming years.

Whilst this report relates purely to Greater London, it is evident from recent press reports that there is an increasing interest in tall buildings within the regional cities, particularly Liverpool and Manchester. Plans have recently been revealed for what would be Liverpool's tallest building, a 48 storey tower. In Manchester it has recently been reported that approximately 15 tall buildings of 30 storeys or more are planned within the city centre including a 66 storey tall building which will be the largest building outside of London.

Although London clearly has the most mature market for tall building development in the UK, it will be interesting to monitor whether there is an increasing demand for tall buildings in other cities around the UK, particularly as investment continues in strategic infrastructure improvements and new Government policy encouraging higher density development at transport nodes.

Industry comments

Colin Wilson

Strategic Planning Manager, GLA

The Greater London Authority (GLA) and Transport for London (TfL) own the licenses to 3D digital models of large parts of central London and parts of outer London. These models have been procured to cover works on the London Plan Opportunity Areas and to support TfL operations. The GLA and TfL are currently investigating ways in which the model can be provided on a London-wide basis and could also be made available online to further engage Londoners in the planning process, including the production of the new London Plan, so that the future shape and form of London can be more clearly articulated.

Developers of individual sites would be expected to provide 3D models of their schemes in an agreed format which will be used to populate the GLA's models as schemes come forward. Developers would also be expected to contribute to the cost of locating their schemes within the wider GLA model.

Emily Gee

London Planning Director, Historic England

London is a wonderfully diverse and thriving historic city that enjoys ancient streets and sweeping views. Historic England believes tall buildings can make a positive contribution to urban life when they are in the right place and well designed. We haven't objected to several tall buildings and we have advised that some of the very best should be listed. However, we think they should not harm cherished views, or ruin the settings of listed buildings and conservation areas.

By their very nature, tall buildings affect a wide area, and we have long argued that views belong to everyone. London has guarded views of St. Paul's since the 1930s and we now benefit from the London View Management Framework. Historic England is delighted that the Mayor is reviewing this important planning tool.

London must grow sustainably but this does not mean just upwards. We should start by asking what Londoners want and build this into character-led local plans. We believe strongly that growth should be informed by London's recognised heritage and character and we commissioned a study of Good Growth to illustrate ways of doing this. The study indicates the range of London's character areas and historic buildings that can accommodate greater density. We think all Londoners deserve characterful places to live and work and quality public realm.

Throughout London's ongoing evolution, we must continue to respect its heritage, the enduring profiles of our skyline, the breathing space of the Thames and parks, and the distinctive character of each neighbourhood. We welcome early conversations with stakeholders and Londoners to keep this specialness alive – for everyone.

Pat Hayes

Executive Director of Regeneration and Housing, LB Ealing

The edge of the Park Royal industrial estate at North Acton is a location where tall buildings are playing an important role in meeting London's need for housing which is affordable to ordinary working people, particularly young ones.

Hemmed in between railway lines and the A40 but with its own tube station North Acton is an area with potential for relatively low cost housing by London standards but is somewhere you have to build up not out.

The tall buildings which are already there at North Acton include halls of residence for Imperial College & the University of the Arts and have recently been joined by the Rehearsal Rooms, M&G's 16 storey build-to-rent scheme.

Close by in Portal Way there are further consents for 42 storeys of rental apartments and a 32 storey tower on the Perfume Factory site as well as similar height towers on the Carphone Warehouse site. As well as creating imposing visual features in an otherwise rather drab area the new buildings will provide thousands of homes affordable to people on average incomes while the student accommodation has brought vitality to an area which was previously dominated by empty offices.

The new and planned tall buildings are contributing over 2,500 new residential units and there are more in the pipeline as well as nearly 2,000 student rooms. This high density development is bringing significant new infrastructure with S106 contributions of more than £10m for transport improvements, public realm and open spaces, education and health.

Below Portal Way, in North Acton, Ealing, by Crosstree Real Estate Partners. Status: permission granted in 2015



Heather Cheesbrough

Director of Planning and Strategic Transport,
LB Croydon

The rehabilitation of tall buildings as an acceptable place to live has continued apace over the past 20 years. Croydon's skyline has evolved accordingly with the new additions of Saffron Square and Altitude 25 joining the loved (or loathed) icons of No. 1 Croydon, the Nestle Tower and Leon House.

In Croydon we welcome well designed architecture, but start from the ground up, not assuming that a tower is the only or right solution. We believe in the street, connections, context and character, considering the impacts as the building climbs. The more prominent a tower on a place's skyline the more it will contribute to the 'image' of the place and how people perceive it. It's a long term civic duty for towers to be high quality and add value, rather than testaments of architectural faux pas and folly.

Tall buildings do not necessarily mean poor viability but affordable housing must be designed in from the outset, with separate cores and larger units. The use of plinths can accommodate the lower value units

whilst providing roof terraces for amenity. Slender towers can then rise above creating value and elegance, whilst avoiding the detrimental impacts of clumsy slab blocks from wind, overshadowing and harm to heritage assets.

As Croydon's renaissance flourishes we will continue to work with serious developers to deliver not just architectural joy for the professional audience but by creating buildings that bring lasting pleasure and pride for the people of our city too. Tall buildings are Croydon, an essential component of past, present and future, unashamedly urban and bold but also much loved homes and workplaces of choice for our residents.

Sandra Roebuck

Assistant Director, Investment and Growth,
LB Lambeth

Lambeth's Local Plan promoted change and growth in Vauxhall. It is intended that a sustainable mix of high density development, defined by taller buildings, will provide at least 8,000 new jobs, and construction of 3,500 new homes as part of a diverse and balanced community. This growth is manifesting itself in two areas; as a new district centre at Vauxhall Cross, and as a series of mixed use developments of exceptional quality along Albert Embankment.

The scale of change allows the dividends of growth to meet the challenges. Growth is driven by commercial development, Vauxhall is a place of business, but it is recognised that it is stimulated too by the development of new homes. This is resulting in more people living, working and visiting the borough. Bringing these activities together in a coordinated way is achieving maximum impact including forward delivery of major infrastructure such as the Northern Line Extension and the removal of Vauxhall gyratory.

A significant proportion of development is new homes, which the Council supports, provided that the increase in population drives new employment opportunities to support the economic success of Vauxhall and the Borough as a whole. Vauxhall is essential to establishing Vauxhall Nine Elms as a Central London commercial district. 3,900 new homes have been given planning permission to date with 700 of these being affordable, reflecting the Council's absolute ambition for inclusive growth.



Left Ruskin Square in Croydon,
by AHMM for Stanhope PLC.
Status: completed in 2016

Industry comments

Cllr Andrew Wood

Councillor Canary Wharf ward & Secretary at Isle of Dogs Neighbourhood Planning Forum

The Isle of Dogs has the tallest and densest residential developments in western Europe and much of London's new office space is here in Canary Wharf.

The average density of recent developments is equivalent to 900 homes per hectare, twice as dense as the London Plan recommends. Millharbour is already the densest area in the UK with a density equivalent to 92,700 people per square kilometre (ONS). By comparison Manhattan is 28,000 people per square kilometre.

The Isle of Dogs, unlike other development areas, has no masterplan yet for how this all works with so many different developers active.

We are a unique place which requires unique solutions which is why we set up the Isle of Dogs Neighbourhood Planning Forum to plan for how such a dense place works and how it can remain one of the best places to live in London.

We have made the use of 3D models mandatory in our Neighbourhood Plan, not just in the planning process but also demonstrating the post development impact on the local community. Whether it is mapping underground utilities or providing emergency services with access information we believe that 3D models are a tool to positively manage our area.

Gwyn Richards

Head of Design, City of London Corporation

Although a defined policy area, the Eastern Cluster of tall buildings historically evolved incrementally as development proposals came forward.

The City decided that it needed to develop a robust and holistic understanding of the complexities and dynamics of the cluster to inform future planning decisions through 3D modelling.

Initially designed to assess the wider visual impact of the cluster and the complex layers of view constraints, the modelling work has developed to model the impact of consented and proposed schemes and scenarios on wind patterns and sunlight at ground level. The work is being further developed to assess the impact of the cluster on air pollution and other factors.

The 3D model is intended to establish a robust basis for planning decisions to avoid unforeseen and undesirable impacts on views or adverse impacts on the public realm such as wind, overshadowing etc, providing a robust basis for proactive planning to establish a holistic vision for the future cluster.

The model allows the City to understand future capacity to intensify the cluster and development opportunities by modelling and assessing future massing scenarios and thus the opportunities within the cluster to absorb new commercial floorspace to maintain the City's international position.



Above 3D model of Isle of Dogs tall buildings pipeline by the Isle of Dogs Neighbourhood Planning Forum.

NLA recommendations

For the first time the NLA London Tall Buildings Survey shows a shift of activity from central to outer London. This is in line with expectations that London's towns and suburbs will need to densify in order to accommodate the capital's continuing growth and with policies regarding development around existing and new infrastructure. Increased density can help to regenerate the economies of London's towns as well as support the Mayor to fulfil his pledge of protecting the capital's Green Belt.

Outer London densification is a sensitive issue and it is essential that the impact is properly communicated to local communities – in particular the impact of tall buildings – an issue that the NLA will be exploring in some detail this autumn with an Insight Study looking at zones 3-6. In this respect Local Plans must be reinforced with better information about how areas of densification will be shaped. This should include analyses that respond to the Mayor's undisputed statement that "higher densities can be achieved through a range of building design, including courtyard blocks and mid-rise building" and to his desire that development should respond to character and context.

The Local Plans Expert Group which reported to the Government last year recommended the use of "propositional planning" methods which give greater three dimensional information about the form of new developments and help to explain "the consequences of proposed plans in order to stimulate easier engagement". The latest Housing White Paper says that it is important "that people have a say over where new homes go and what they look like through the planning process". If people are to have a say, then they need to be given a clear idea of what is proposed and the impact it will have on the places where they live and work.

Local plans show how much development is needed and where it will be; they give little clue of what it will be like. In the NLA's view, whilst detailed design should be left to the normal application process, frameworks should be in place that set out the placeshaping policies of the area. Propositional planning and light touch design codes can deliver greater certainty for local communities as well as for developers and provide the appropriate balance between the negotiated planning process that generally exists in the UK and more formal masterplans more common in other parts of Europe.

It is particularly important that tall buildings are designed with regard to their wider impact both visually and environmentally. The drastic reduction in capacity of local planning departments has made it more difficult for authorities to take a proactive role in placeshaping – it is hoped that the Mayor's London Place Agency will have the resources it needs to ensure that these much needed skills can be deployed to the areas they are most required. While the increasing use of Design or Quality Reviews is to be commended, it is important that such advice does not come too late in the process. Greater use should be made of the design workshops and charrettes delivered by organisations like Design South East and Design Council Cobe which can provide support to local authorities, developers and communities throughout the planning process.

These approaches would be given added clarity with the implementation of the Mayor's virtual 3D computer model which can not only provide a visual reference of buildings' impact on the skyline and ground plane, but also large amounts of data that assist in city management and planning, including the effects of shading, overlooking, wind and population. It can also be used to manage the view frameworks that protect sightlines of St Paul's, the Palace of Westminster and other key vistas. This would help to avoid embarrassments like the Stratford tower that has been constructed within the view corridor from King Henry's Mound in Richmond and would provide a much more sensitive tool for planners than the current outdated 2D system.

In summary, to assist the Mayor in delivering his plans for "good growth", NLA recommends that the emerging London Plan includes:

- The widespread use of digital 3D modelling to assist in placeshaping, as well as in the delivery of smarter methods of planning, including the management of protected views.**
- A requirement that areas of densification are subject to placeshaping strategies and that propositional plans are prepared by local planning authorities, if necessary with the assistance of the GLA's London Place Agency team.**
- Greater use of ongoing quality and design review panels, which provide support throughout the planning process.**

Research team



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New London Architecture (NLA) is London's centre for discussion, debate and information about architecture, planning, development and construction in the capital. Our mission is to bring people together to shape a better city.

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