

**John Harvey, IRIS Consulting, Article on Tall Buildings in London**

**Based on a talk given to the Society of Quantity surveyors in June 2015**

This article reviews the history of high rise buildings in London – from 1066 up to today.

First it provides some basic facts and history about London's tallest buildings

Secondly it looks back at trends and developments affecting high rise construction over the past 100 years or so

Finally it assesses what has happened in the last decade or so and looks ahead to the 250 high rise buildings that currently have been approved or are in the pipeline

So first some historical perspectives starting with the Norman invasion in 1066 and the construction of the Tower of London by William the Conqueror and his successors.

So this history of tall buildings in London begins with the completion of the [White Tower](#), a part of the [Tower of London](#), in 1098.

For over a hundred years between 1098 and 1310 the White Tower in the Tower of London was London's tallest structure. It was 90 feet high or 27 metres (of course in those days the French were not using metres!)

The White Tower's claim to be the tallest building only fell when the old St Paul's Cathedral was built and completed. Although there is some debate and no absolutely authentic measurement records there are reports that the spire of the old St Paul's was 493 feet high (160 metres). That spire was destroyed by lightning in 1561 100 years before the Great Fire of London.

But the old St Paul's still holds the longest record as the being the tallest building in London as it was still the tallest building without its spire. So when it was destroyed completely in the 1666 Great Fire St Paul's had been the tallest building for 356 years.

The table below shows the timeline for the buildings that have held the title of London's tallest up to the present day:

### Free-standing structures that have at some time been the tallest structure in London

Name	Location	Years as tallest	Height metres / feet	Floors
<u>White Tower</u>	<u>Tower Hill</u>	1098–1310	27 / 90	N/A
<u>Old St Paul's Cathedral</u>	<u>City of London</u>	1310–1666	150 / 493	N/A
<u>Southwark Cathedral</u>	<u>Southwark</u>	1666–1677	50 / 163	N/A
<u>Monument to the Great Fire of London</u>	<u>City of London</u>	1677–1683	62 / 202	N/A
<u>St Mary-le-Bow</u>	<u>City of London</u>	1683–1710	72 / 236	N/A
<u>St Paul's Cathedral</u>	<u>City of London</u>	1710–1939	111 / 365	N/A
<u>Battersea Power Station</u>	Kirtling Street, Battersea	1939–1950	113 / 370	10
<u>Crystal Palace transmitting station</u>	<u>Crystal Palace Park</u>	1950–1991	219 / 720	N/A
<u>One Canada Square</u>	<u>Canary Wharf</u>	1991–2010	235 / 771	50
<u>Shard London Bridge</u>	<u>Southwark</u>	2010—	306 / 1004	87

### Footnotes

A.△ This structure was destroyed by the [Great Fire of London](#) in 1666, allowing a shorter structure to become the tallest in the city.<sup>[247]</sup>

B.△ The exact height of the Old St. Paul's Cathedral remains unknown. Heights ranging between 140 metres (460 ft) and 150 metres (490 ft) have all been reported.<sup>[247]</sup> The spire was destroyed by fire in 1561.

C.△ If counting the tallest habitable floors in buildings, then the record would be held between 1961 and 1962 by the Shell Centre, at 107 metres (351 ft) and having 26 floors; and before it by the Victoria Tower at 98.5 metres (323 ft), completed in 1858 and having 14 floors.<sup>[248][249]</sup>

D.△ If the Crystal Palace Transmitter is excluded as a "building", then the record was held by the "Post Office Tower" (later The British Telecom Tower) from 1962 to 1980, at a height excluding antenna of 177 metres (581 feet) and containing 34 floors, and from 1980 to 1991 by Tower 42 at 183 metres (600 feet).

The first building to exceed a height of 100 metres was the [Old St Paul's Cathedral](#). It was completed in the year 1310, it stood at a height of 150 metres (492 feet).

St Paul's was the world's tallest structure until 1311, when its height was surpassed by [Lincoln Cathedral](#) in [Lincoln](#). However St Paul's regained the title when the spire of Lincoln Cathedral fell in 1549. Although the spire of the Old St Paul's was destroyed by lightning in 1561, it still stood as the tallest structure in London, while at that time the world's tallest structure was [Strasbourg Cathedral](#) in [Strasbourg](#), France.

As we all know St Paul's was severely damaged by the [Great Fire of London](#) in 1666. The title of the tallest structure in London then passed to [Southwark Cathedral](#), which stands at a height of 50 metres or 164 feet.

No building in London again rose above 100 metres until 1710, when the current [St Paul's Cathedral](#) was completed. At 111 metres, or 365 feet, the cathedral remained London's tallest building for another 254 years until it was overtaken by Battersea Power station which was built in 1939 and whose chimneys rose 113 meters or 370 feet.

Then in 1964 came the [BT Tower](#), which was topped out in 1964 and officially opened in 1965. It stands at 193 metres or 635 feet.

Few skyscrapers were built in London before the end of the 20<sup>th</sup> century. This is sometimes attributed to restrictions on building heights originally imposed by the London Building Act of 1894, which followed the construction of the 14-storey [Queen Anne's Mansions](#) in 1888.

The story has it that Queen Victoria looked out from Buckingham Palace and was appalled at the height and bulk of the new speculative block of flats overlooking her from the other side of St James Park. So height restrictions were introduced which held force for many years. Even today any planning application within a specified distance of a Royal Palace has to be referred to the Royal Household for comments before any permission can be granted.

Other factors inhibiting the building of skyscrapers in London were:

- the unsuitable ground conditions with London clay and numerous sand and gravel deposits making for unstable footings and
- the lack of deep piling technology to overcome those conditions.

Although the London Building Acts restrictions have since been eased, (in 1954) strict regulations remain to preserve [protected views](#), especially those of St Paul's, the Tower of London and [Palace of Westminster](#), as well as to comply with the requirements of the Civil Aviation Authority.

As you will notice the table does not list the GPO Tower for the reason that the Crystal Palace Transmitter is higher and was built in 1950 – some 15 years before the GPO Tower. However some people argue that the transmitter is not a proper building (a bit like the Eifel Tower it is just a load of iron and steel girders) and should not be included in the list.

Bringing us up to more modern times the lifting of height restrictions caused a boom in the construction of tall buildings during the 1960s. One of London's first notable tall buildings was the 117-metre (384feet) [Centre Point](#), completed in 1966. I well remember the controversy that this Richard Seifert building caused – not least because it stood empty for many years with the then Conservative Prime Minister Edward Heath describing it being kept vacant as;

*“the unacceptable face of capitalism”.*

Eventually its owners, Harry Hyam's Oldham Properties, found someone they were prepared to let it to which was rather ironic given the PM's description as it was rented out to the Confederation of British Industries (CBI).

The [National Westminster Tower](#) (now called Tower 42) followed in 1980, which at 183 metres (600 feet) became London's first genuine "skyscraper" by international standards. It was followed in 1991 by 8 Canada Square, the HSBC HQ building, which formed the centre-piece of the Canary Wharf development.

So following a 10-year gap several new skyscrapers appeared on London's skyline: **show slides:**

- [8 Canada Square](#), [25 Canada Square](#) (both also at Canary Wharf)

- the [Heron Quays](#) buildings,
- [One Churchill Place](#), (Barclays HQ)
- the [Broadgate Tower](#)
- and the gherkin-shaped [30 St Mary Axe](#).
- The walkie talkie – or should we say “walkie scorchy” given its capacity to melt cars
- And of course the Shard which is currently the tallest building in London, the UK and whole of Europe
- But of course not all high rise is commercial; we had a lot of council tower blocks built in the 1960s and 70s of which Trellick Tower is the tallest at 31 storeys.

Some of the awards given to 30 St Mary Axe include the [Emporis Skyscraper Award](#) in 2003 and the [RIBA Stirling Prize for Architecture](#) in 2004.

Just to say a few words about one of the more interesting modern skyscrapers the “walkie talkie”. This new tower at 20 Fenchurch Street was designed by a [Uruguayan](#) architect [Rafael Viñoly](#) in a [postmodern style](#). The top-heavy design is partly intended to maximise floor space towards the top of the building, where rent is typically higher. It was recently voted (August 2015) as London’s ugliest building.

The building utilises double and triple-glazed panelised aluminium cladding on its exterior.

The botanical gardens at the top of the building were claimed to be London's highest public park, but since opening there have been debates about whether the gardens can truly be described as a 'park', and whether they are truly 'public'. The City of London's former chief planner Peter Rees, who approved the structure, is reported as saying:

*"I think calling it a sky garden is perhaps misleading. If people [are] expecting to visit it as an alternative to [Kew](#), then they will be disappointed."*

The gardens span the top three floors, are accessible by two express [lifts](#), and include a viewing area, terrace, bar and two restaurants. Fourteen [double-deck lifts](#) (seven low-rise up to the 20th floor, seven high-rise above the 20th floor) serve the main office floors of the building.

The south side of the structure is ventilated externally to improve efficiency and decrease solar gain, whilst the east and west faces incorporate extensive solar shading. There is a southern entrance in addition to the main northern entrance set back from Fenchurch Street.

The building's architect, Rafael Viñoly, also designed the [Vdara](#) hotel in Las Vegas which reportedly has a similar sunlight reflection problem that some employees called the "Vdara death ray".<sup>[29]</sup> The glass has since been covered with a non-reflective film.<sup>[30]</sup>

**So finally** a look ahead; what does the future have in store for London and its skyline?

It is claimed that another 250 skyscrapers are planned, approved or in the pipeline.

The new data finds 263 tall buildings over 20-storeys proposed, approved or under construction within Greater London. This figure includes 76 proposed or in the planning system, 117 with planning approval but not yet on site, and 70 under construction. Compared to last year's data, this shows a significant increase in the number of towers under construction, up 36% from the 45 projects contained in the 2014 survey. It shows only a small increase of 3% in the number of proposed towers (up from 72), and a 6% decrease in the number of towers with planning approval but not yet on site (down from 113).

In the last 12 months 72 towers over 20-storeys have been submitted for planning approval, 64 of which are residential. Of these, 27 (37%) have been granted planning permission, 4 (6%) have been refused, and 41 (57%) remain undecided.

These numbers and estimates come from New London Architecture (NLA) and GL Hearn have released the results of their annual London Tall Buildings Survey 2015.

As London faces an all-time population high of 8.6 million people, and a continuing housing crisis, 62 of the 70 towers currently under construction are residential and could provide approximately 14,800 new homes for the capital.

80% of all 263 towers in the pipeline have a primary residential use, a number of which are likely to have ground floor commercial use.

Will they go ahead as planned? The answer depends on the state of the economy and the demand for office space. Also much depends on the decisions of town planners in each Borough. Also I would suggest there is an emerging back-lash amongst the Londoners against the loss of our historic skyline; anybody can build Bahrain or Abu Dhabi – they started with no skyline to lose.

Back in 2002 the GLA commissioned a study by DEGW called: "London's Skyline, Views and High Buildings"

Among many of its interesting findings and recommendations were the following extracts;

*"In the USA building high has largely been market driven, as developers and landowners attempt to maximise realisable land value, and policy in this*

*condition has evolved to facilitate this while tempering negative impact. In Europe, the more complex urban condition has resulted in far fewer high buildings, and a more diverse and contextually specific policy framework. However, the pressure on European cities to build tall increased towards the end of the last century.*

*Globalisation has played a key role in this, with 'global' cities increasingly in competition with other 'global' cities on the other side of the world to attract trade and investment"*

*"Given the inherently more complex conditions of European city structure, the insertion of high buildings requires a strategic approach to their location and size that embraces several factors. European cities tend to have more defined identities as well as well defined character areas, which have evolved over hundreds of years, and so require policy responses that are tailored to suit local conditions."*

## **Conclusion**

Ken Livingston was Mayor of London at the time of this report and he embraced a policy in support of high-rise partly to keep London global world calls but also he believed to help solve the housing shortage. But experience from the 1960s has shown that high-rise living can be the slums of the future; so many tower blocks built in the 1960s and 1970s have been demolished.

Evidence shows that high-rise living can work for those who are well-off, can afford the service charges – such as the Barbican, and penthouse accommodation for the super wealthy. But these are not the people in housing need. High rise flats do not provide suitable housing for families with children, or people with dogs and cats. We need to learn from the lessons of the past as well as looking forward to the future with hope and ambition. London now has enough high-rise and needs to retain its distinctive low-rise character which give sit its unique friendliness and accessibility.