# **PERSPECTIVE**



A perspective of some of London's landmark buildings and structures by Jan Levy

# Perspective.

The intention of the piece is to draw attention to some of London's landmark tall buildings and structures. The artist's aim is to depict the buildings, both historic and new and to give a different perspective of these architectural magnificent feats.

If it is possible from an artistic initimable style to do justice and pay homage to the history, architecture, prominence, and significance of the buildings, then that is the goal.

The buildings have been redrawn by means of graphic manipulation and hand drawing which is then amalgamated onto the image. Generally, colours are bold in order that the viewer strives to recognize the familiar.

The graphical drawing perspective is generally with one vanishing point upwards.

#### ROW 1

# Big Ben



Big Ben is the nickname for the great bell of the clock at the north end of the Palace of Westminster in London and often extended to refer to the clock and the clock tower. The tower is now officially called the Elizabeth Tower, after being renamed in 2012 (from "Clock Tower") to celebrate the Diamond Jubilee of Elizabeth 11. The tower holds the largest four-faced chiming clock in the world and is the third-tallest free-standing clock tower. The tower was completed in 1858 and had its 150<sup>th</sup> anniversary on 31 May 2009 during which celebratory events took place. The tower has become one of the most prominent symbols of both London and England and is often in the establishing shot of films set in the City.

#### **Lloyds**



The Lloyd's Building (sometimes known as the inside-out building) is the home of the insurance institution Llloyd's of London. It is located on Lime Street in the City of London, the main financial district of London. The building is a leading example of radical Bowellism architecture in which the services of the building, such as ducts and lifts, are located on the exterior to maximize space in the interior.

Twenty five years after completion in 1986, the building received Grade I listing in 2011; it was the youngest structure ever to obtain this status. It is said by English Heritage to be "universally recognised as one of the key buildings of the modern epoch.

# St Pauls Cathedral



St Paul's Cathedral, London, is a Church of England cathedral, the seat of the Bishop of London and mother church of the Diocese of London. It sits at the top of Ludgate Hill, the highest point in the City of London. Its dedication to Paul the Apostle dates back to the original church on this site, founded in AD 604. The present church, dating from the late 17th century, was designed in the English\_Baroque style by Sir Christopher Wren. Its construction, completed within Wren's lifetime, was part of a major rebuilding program which took place in the city after the Great Fire of London.

The cathedral is one of the most famous and most recognisable sights of London, with its dome, framed by the spires of Wren's City churches, dominating the skyline for 300 years. At 365 feet (111 m) high, it was the tallest building in London from 1710 to 1962, and its dome is also among the highest in the world. In terms of area, St Paul's is the second largest church building in the United Kingdom after Liverpool Cathedral.

St Paul's Cathedral occupies a significant place in the national identity of the English population. It is the central subject of much promotional material, as well as postcard images of the dome standing tall, surrounded by the smoke and fire of the Blitz. Important services held at St Paul's include the funerals of Lord Nelson, the Duke of Wellington, Sir Winston Churchill and Margaret Thatcher; Jubilee celebrations for Queen Victoria; peace services marking the end of the First and Second World Wars; the wedding of Charles, Prince of Wales,

and Lady Diana Spencer, the launch of the Festival of Britain and the thanksgiving services for the Golden Jubilee, the 80th Birthday and the Diamond Jubilee of Elizabeth II. St Paul's Cathedral is a busy working church, with hourly prayer and daily services.

# **Centre Point**



Centre Point is a substantial concrete and glass office building in central London, occupying 101–103 New Oxford Street, WC1, close to St Giles Circus and almost directly above Tottenham Court Road tube station. The site was once occupied by a gallows. One of the first skyscrapers in London, it is now the city's joint 27th tallest building. Since 1995 it has been a grade II listed building. An aggressive use of the "flashy and international style of crystalline concrete" that Richard Seifert developed with his partner H.G. Marsh, the 380-ft tower stood empty for five years after its completion in 1967

Centre Point was built as speculative office space by property tycoon Harry Hyams, who had leased the site at £18,500 a year for 150 years. Hyams and Seifert engaged in negotiations with the London County Council over the height of the building, which was much taller than would normally be allowed and was highly controversial; eventually he was allowed to build 32 floors in return for providing a new road junction between St

Giles Circus, Oxford Street and Tottenham Court Road, which the LCC could not afford to build on its own. Hyams intended that the whole building be occupied by a single tenant.

The building was designed by Richard Seifert with engineers Pell Frischmann and was constructed by Wimpey Construction from 1963 to 1966. It is 117 m (385 ft) high, has 34 floors and 27,180 m<sup>2</sup> (292,563 sq ft) of floor space.

On completion, the building remained empty for many years. With property prices rising and most business tenancies taken for set periods of 10 or 15 years, Hyams could afford to keep it empty and wait for his single tenant at the asking price of £1,250,000; he was challenged to allow tenants to rent single floors but consistently refused. The prominent nature of the building led to it becoming a symbol of greed in the property industry. Some campaigners demanded that the government of Edward Heath should intervene and take over the building, and at one point in June 1972 Peter Walker (then Secretary of State for the Environment) offered £5 million for the building. Eventually Hyams agreed to let the building by floors but the arrangements were stalled.

A more intriguing speculation was that the government was paying Hyams "a heavy but secret subsidy to keep it empty" for its own purposes. Various conspiracy theories circulated about what those purposes might be. One common theme was that since the building was 100% air-conditioned (a rarity in London at that time), and sited over Tottenham Court Road tube station and its deep tube lines, this would somehow make it useful to the government in the event of nuclear war.

Since July 1980, the building has been the headquarters of the Confederation of British Industry (CBI). In 1995 Centre Point became a Grade II listed building. In 2009, the building won the Concrete Society's Mature Structures Award.

# **20 Fenchurch Street**



20 Fenchurch Street is a commercial skyscraper under construction in central London. It has been nicknamed *The Walkie-Talkie* and *The Pint* because of its distinctive shape. Upon completion in 2014 the building will be 160 m (525 ft) tall with 37 storeys.

On 2<sup>nd</sup> September 2013, it was reported that the building is being blamed for reflecting light which melted parts of a car parked in a nearby street. It is also blamed for damaging shops in the vicinity. The architectural team are working on a solution to this. Some have now nicknamed the building *The Walkie-Scorchy*. Perhaps the architect should have thought about placing the building where the sun doesn't shine!

Costing over £200 million, it is designed by architect Rafael Viñoly and will feature a highly distinctive, top-heavy form which appears to burst upward and outward. A large viewing deck and 'sky gardens' will be included on the top three floors; these will be open to the public.

The tower was originally proposed at nearly 200 metres tall but its design was scaled down after concerns about its visual impact on the nearby St Paul's Cathedral and Tower of London. It was subsequently approved in November 2006. Even after the height reduction there were continued concerns from heritage groups about its impact on the surrounding area. The project was subsequently the subject of a public inquiry. In July

2007, this ruled in the developers' favour, and the building was granted full planning permission.

In their preliminary results for 2007, joint-developers Land Securities and Canary Wharf Group said 20 Fenchurch Street would be completed in 2011, however in 2009 this date was pushed back to 2014.

It is one of a number of new tall buildings for the City of London financial area; others include The Pinnacle, the Leadenhall Building, and an as yet unnamed project at 52-54 Lime Street. Several insurance companies have agreed to become tenants of 20 Fenchurch Street upon its completion.

# **Royal Albert Hall**



The Royal Albert Hall is a concert hall on the northern edge of South Kensington, in the City of Westminster, London, England, best known for holding the annual summer Proms concerts since 1941. It has a capacity (depending on configuration of the event) of up to 5272 seats, however standing areas and stage specifications can increase or decrease this. The Hall is a registered charity held in trust for the nation and receives no public or central and local government funding.

Since its opening by Queen Victoria in 1871, the world's

leading artists from several performance genres have appeared on its stage and it has become one of the UK's most treasured and distinctive buildings. Each year it hosts more than 350 events including classical concerts, rock and pop, ballet and opera, sports, award ceremonies, school and community events, charity performances and banquets.

The Hall was originally supposed to have been called The Central Hall of Arts and Sciences, but the name was changed by Queen Victoria to Royal Albert Hall of Arts and Sciences when laying the foundation stone, as a dedication to her deceased husband and consort Prince Albert. It forms the practical part of a national memorial to the Prince Consort – the decorative part is the Albert Memorial directly to the north in Kensington Gardens, now separated from the Hall by the road Kensington Gore.

ROW 2

**Natural History Museum** 



The Natural History Museum was established in 1881 in London and is a museum exhibiting a vast range of specimens from various segments of natural history. It is one of three large museums on Exhibition Road in South Kensington, the others being the Science Museum and the Victoria and Albert Museum. The Natural History Museum's main frontage, however, is on Cromwell Road.

The museum is home to life and earth science specimens comprising some 70 million items within five main collections: botany, entomology, mineralogy, palaeontology and zoology. The museum is a world-renowned centre of research specialising in taxonomy, identification and conservation. Given the age of the institution, many of the collections have great historical as well as scientific value, such as specimens collected by Charles Darwin. The museum is particularly famous for its exhibition of dinosaur skeletons and ornate architecture — sometimes dubbed a *cathedral of nature* — both exemplified by the large *Diplodocus* cast which dominates the vaulted central hall. The Natural History Museum Library contains extensive books, journals, manuscripts, and artwork collections linked to the work and research of the scientific departments; access to the library is by appointment only.

Although commonly referred to as the Natural History Museum, it was actually officially known as British Museum (Natural History) until 1992, despite legal separation from the British Museum itself in 1963. Originating from collections within the British Museum, the landmark Alfred Waterhouse building was built and opened by 1881, and later incorporated the Geological Museum. The Darwin Centre is a more recent addition, partly designed as a modern facility for storing the valuable collections.

Like other publicly funded national museums in the United Kingdom, the Natural History Museum does not charge an admission fee. The museum is an exempt charity and a non-departmental public body sponsored by the Department for Culture, Media and Sport.

The Natural History Museum of London, as is likely the case for other prominent British museums, enjoys the patronage of prominent Britons and others; one of them is Catherine, Duchess of Cambridge, wife of Prince William, Duke of Cambridge.

**One Canada Square** 



One Canada Square (often incorrectly called Canary Wharf, after its location) is a skyscraper in Canary Wharf, London. It was the tallest building in the United Kingdom from 1990 to 2010, standing at 235 metres (770 ft) above ground level and containing 50 storeys. In late 2010, it was surpassed by The Shard (completed in July 2012) which stands at 309.6 metres (1,016ft).

One Canada Square was designed by principal architect Cesar Pelli, who based the design and shape mainly on the World Financial Center and the Elizabeth Tower. One of the predominant features of the building is the pyramid roof which contains a flashing aircraft warning light, a rare feature for buildings in the United Kingdom. The distinctive pyramid pinnacle is at 240 metres (800 ft) above sea level.

One Canada Square is primarily used for offices, though there are some retail units on the lower ground floor. It is a prestigious location for offices and as of January 2013 was 100% let. The building is recognised as a London landmark and it has gained much attention through film, television and other media when its status was the tallest building in the United Kingdom and continues to gain attention.

#### The Royal Exchange



The Royal Exchange in London was founded in 1568 by Thomas Gresham to act as a centre of commerce for the City of London. The site was provided by the City of London Corporation and the Worshipful Company of Mercers, and is trapezoidal, flanked by Cornhill and Threadneedle Street which converge at Bank Junction.

The Royal Exchange was officially opened by Queen Elizabeth I who awarded the building its royal title and licence to sell alcohol, on 23 January 1571. During the 17th century, stockbrokers were not allowed in the Royal Exchange because of their rude manners, hence they had to operate from other establishments in the vicinity, such as Jonathan's Coffee-House. Gresham's original building was destroyed in the Great Fire of London in 1666. A second exchange was built on the site, designed by Edward Jarman, and opened in 1669, but was also destroyed by fire on 10 January 1838.

The third Royal Exchange building, which still stands today, was designed by William Tite and adheres to the original layout - consisting of a four-sided structure surrounding a central courtyard where merchants and tradesmen could do business. The internal works, designed by Edward I'Anson in 1837, made use of concrete - an early example of this modern construction method. It features pediment sculptures by Richard Westmacott (the younger), and ornamental cast ironwork by Henry Grissell's Regent's Canal Ironworks. It was opened by

Queen Victoria on 28 October 1844, though trading did not commence until 1 January 1845.

Also in 1844, a statue of Arthur Wellesley, the first duke of Wellington, was inaugurated outside the Royal Exchange. It was sculpted from enemy cannon captured during Wellington's victorious battles.

With the outbreak of the Second World War, trading at the Royal Exchange virtually ended. At the war's end, the building had survived the bombing, albeit with some near misses.

In 2001 the Royal Exchange was once again extensively and sympathetically remodelled by architects Aukett Fitzroy Robinson with the result that today it is an appropriate home for many of the world's finest merchants. Reconstruction of the courtyard has created new boutiques and restaurants to complement the existing retailers on the perimeter. The Royal Exchange is now a luxurious retail centre with shops and restaurants. Shops include Boodles, Hermès, Haines & Bonner and Tiffany & Co.

In 2003 the launch of the Grand Café and Bar was finally finished and completed the building as a destination with both luxury retail outlets and sophisticated dining options in the heart of the city.

30 St Mary's Axe



30 St Mary Axe (widely known informally as "the Gherkin" and previously the Swiss Re Building) is a skyscraper in London's main financial district, the City of London, completed in December 2003 and opened in April 2004. With 41 floors, the tower is 180 metres (591 ft) tall and stands on a street called St Mary Axe, on the site of the former Baltic Exchange, which was extensively damaged in 1992 by the explosion of a bomb placed by the Provisional IRA.

After the plans to build the Millennium Tower were dropped, 30 St Mary Axe was designed by Norman Foster and <u>Arup</u> engineers and was erected by Skanska in 2001–2003.

The building has become an iconic symbol of London and is one of the city's most widely recognised examples of modern architecture.

The tower's topmost panoramic dome, known as the "lens", recalls the iconic glass dome that covered part of the ground floor of the Baltic Exchange.

The gherkin name was applied to the current building at least as far back as 1999, referring to that plan's highly unorthodox layout and appearance.

# **The London Eye**



The London Eye is a giant Ferris wheel on the South Bank of the River\_Thames in London. The entire structure is 135 metres (443 ft) tall and the wheel has a diameter of 120 metres (394 ft).

It is the tallest Ferris wheel in Europe, and the most popular paid tourist attraction in the United Kingdom, visited by over 3.5 million people annually. When erected in 1999 it was the tallest Ferris wheel in the world, until surpassed first by the 160 m (520 ft) Star of Nanchang in 2006 and then the 165 m (541 ft) Singapore Flyer in 2008. Supported by an A-frame on one side only, unlike the taller Nanchang and Singapore wheels, the Eye is described by its operators as "the world's tallest cantilevered observation wheel. It offered the highest public viewing point in the city-until it was superseded by the 245-metre (804 ft) observation deck on the 72nd floor of The Shard, which opened to the public on 1 February 2013.

The London Eye, or Millennium Wheel, was officially called the British Airways London Eye and then the Merlin Entertainments London Eye. Since 20 January 2011, its official name is the EDF\_Energy London Eye following a three-year sponsorship deal.

The London Eye adjoins the western end of Jubilee Gardens (previously the site of the former Dome of Discovery), on the

South Bank of the River Thames between Westminster Bridge and Hungerford Bridge, in the London Borough of Lambeth.

# The Leadenhall Building



122 Leadenhall Street is an address on Leadenhall Street in London where the 225 m (737 ft) tall Leadenhall Building is currently under construction. The skyscraper, due for completion in mid-2014, is designed by Richard Rogers and informally known as *the Cheesegrater* because of its distinctive wedge shape. It is one of a number of new tall buildings for the City of London financial district, with others including 20 Fenchurch Street (known as *the Walkie-Talkie*), the Pinnacle, and an as yet unnamed project at 52-54 Lime Street.

The site is adjacent to the Lloyd's building, also designed by Rogers, which is the current home of the insurance market Lloyd's of London. Until 2007 the Leadenhall site was occupied by a building owned by the developer British Land and designed by Gollins Melvin Ward Partnership that was constructed in the 1960s. That building was demolished in preparation for redevelopment of the site. By December 2009, the site was cleared but construction had stalled. The project, initially delayed due to the financial crisis, was revived in October 2010 and Oxford Properties is now co-developing the property in partnership with British Land.

In May 2013, the co-developers announced that the building is over 51% pre-let, with tenancy agreements reached with insurance broker Aon and insurance company Amlin.

#### ROW 3

# **The Shard**



The Shard also referred to as the Shard of Glass-, Shard London Bridge and formerly London Bridge Tower, is an 87-storey skyscraper in London that forms part of the London Bridge Quarter development. The Shard's construction began in March 2009; it was topped out on 30 March 2012 and inaugurated on 5 July 2012. Practical completion was achieved in November 2012. Its privately operated observation deck, the View from the Shard, opened to the public on 1 February 2013<sup>2</sup>

Standing approximately 306 metres (1,004 ft) high, the Shard is currently the tallest building in the European Union. It is the second-tallest free-standing structure in the United Kingdom, after the concrete tower at the Emley Moor transmitting station. The glass-clad pyramidal tower has 72 habitable floors, with a viewing gallery and open-air observation deck – the UK's highest – on the 72nd floor, at a height of 244.3 metres (802 ft) It was designed by the Italian architect Renzo Piano, and replaced Southwark Towers, a 24-storey office block built on the site in Southwark in 1975. The Shard was developed by Sellar Property on behalf of LBQ Ltd, and is jointly owned by Sellar Property and the State of Qatar.

# **Monument**



Viewing platform at the top of the Monument.

The Monument to the Great Fire of London, more commonly known simply as the Monument, is a stone Roman Doric column in the City of London, near the northern end of London Bridge, which commemorates the Great Fire of London.

It stands at the junction of Monument Street and Fish Street Hill, 202 ft (62 m) tall and 202 ft (62 m) from the place where the Great Fire started on 2 September 1666. Another monument, the Golden Boy of Pye Corner, marks the point near Smithfield where the fire stopped. Constructed between 1671 and 1677, it is the tallest isolated stone column in the world and was built on the site of St. Margaret's, Fish Street, the first church to be burnt down by the Great Fire.

The Monument comprises a fluted Doric column built of Portland stone topped with a gilded urn of fire, and was designed by Christopher Wren and Robert Hooke. Its height marks its distance from the site in Pudding Lane of the shop of Thomas Farynor, the king's baker, where the Great Fire began.

The top of the Monument is reached by a narrow winding staircase of 311 steps. A mesh cage was added in the mid-19th century at the top of the Monument to prevent people jumping off, after six people had committed suicide from the structure between 1788 and 1842.

Three sides of the base carry inscriptions in Latin. The one on the south side describes actions taken by Charles II following the fire. The one on the east describes how the Monument was started and brought to perfection, and under which mayors. Inscriptions on the north side describe how the fire started, how much damage it caused, and how it was eventually extinguished In 1681, the words "but Popish frenzy, which wrought such horrors, is not yet quenched" were added to the end of the inscription. Text on the east side generally blames Roman Catholics for the fire, and this prompted Alexander Pope to say of the area that it is:

Where London's column, pointing at the skies, Like a tall bully, lifts the head, and lies.

– Moral Essays, Epistle iii. line 339 (1733–1734).

The words were chiselled out in 1830.

The west side of the base displays a sculpture, by Caius Gabriel Cibber, in alto and bas relief, of the destruction of the City; with Charles II and his brother, James, the Duke of York (later James II), surrounded by liberty, architecture, and science, giving directions for its restoration.

# The BT Tower



The BT Tower is a communications tower located in Fitzrovia, London, owned by BT Group. It has been previously known as the Post Office Tower, the London Telecom Tower and the British Telecom Tower. The main structure is 177 metres (581 ft) tall, with a further section of aerial rigging bringing the total height to 191 metres (627 ft). It should not be confused with the BT Centre (the global headquarters of BT). Its Post Office code was YTOW.

In 1962, while still under construction, the BT Tower overtook St Paul's Cathedral to become the tallest building in London. Upon completion it overtook the Millbank Tower (which had been constructed faster) to once again become the tallest building in both London and the United Kingdom, titles it held until 1980, when it in turn was overtaken by the NatWest Tower.

The tower was commissioned by the General Post Office

(GPO). Its primary purpose was to support the microwave aerials then used to carry telecommunications traffic from London to the rest of the country, as part of the British Telecom microwave network.

It replaced a much shorter steel lattice tower which had been built on the roof of the neighbouring Museum telephone exchange in the late 1940s to provide a television link between London and Birmingham. The taller structure was required to protect the radio links' "line of sight" against some of the tall buildings in London then in the planning stage. These links were routed via other GPO microwave stations at Harrow Weald, Bagshot, Kelvedon Hatch and Fairseat, and to places like the London Air Traffic Control Centre at West Drayton.

The tower was designed by the architects of the Ministry of Public Building and Works: the chief architects were Eric Bedford and G. R. Yeats. Typical for its time, the building is concrete clad in glass. The narrow cylindrical shape was chosen because of the requirements of the communications aerials: the building will shift no more than 25 centimetres (10 in) in wind speeds of up to 150 km/h (95 mph). Initially the first sixteen floors were for technical equipment and power. Above that was a 35 metre section for the microwave aerials, and above that were six floors of suites, kitchens, technical equipment and finally a cantilevered steel lattice tower. To prevent heat build-up the glass cladding was of a special tint. The construction cost was £2.5 million.

Construction began in June 1961, and owing to the building's height and its having a tower crane jib across the top virtually throughout the whole construction period, it gradually became a very prominent landmark that could be seen from almost anywhere in London. In August 1963 there was even a question raised in Parliament about the crane. Doctor Reginald Bennett MP asked the Minister of Public Building and Works how, when the crane on the top of the new Post Office tower had fulfilled its purpose, he proposed to remove it. Mr Geoffrey Rippon replied, "This is a matter for the contractors. The problem does not have to be solved for about a year but there appears to be no danger of the crane having to be left in situ.

The tower was topped out on 15 July 1964 and officially opened by the then Prime Minister Harold Wilson on 8 October

1965. The Main Contractor was Peter Lind & Co Ltd.

The tower was originally designed to be just 111 metres (364 ft), and its foundations are sunk down through 53 metres of London clay and are formed of a concrete raft 27 metres square, a metre thick, reinforced with six layers of cables on top of which sits a reinforced concrete pyramid.

A bomb, responsibility for which was claimed by the Provisional IRA exploded in the roof of the men's toilets at the Top of the Tower restaurant on 31 October 1971. The restaurant was closed to the public for security reasons in 1980, the year in which the Butlins' lease eventually expired. Public access to the building ceased in 1981. The Tower is sometimes used for corporate events, but the closure of the Tower restaurant to the public means London has no revolving restaurant of the type common in major cities throughout the world; although reports that the restaurant would re-open emerged in 2009

The tower is still in use, and is the site of a major UK communications hub. Microwave links have been replaced by subterranean fibre optic links for most mainstream purposes, but the former are still in use at the tower. The second floor of the base of the tower contains the TV Network Switching Centre which carries broadcasting traffic and relays signals between television broadcasters (including the BBC), production companies, advertisers, international satellite services and uplink companies. The outside broadcast control is located about the former revolving restaurant, with the kitchens on floor 35.

A renovation in the early 2000s introduced a 360-degree coloured lighting display at the top of the tower. Seven colours were programmed to vary constantly at night and intended to appear as a rotating globe to reflect BT's "connected world" corporate styling. The coloured lights give the tower a distinctive appearance on the London skyline at night. In October 2009, a 360-degree full-colour LED-based display system was installed at the top of the tower, to replace the previous colour projection system. The new display, referred to by BT as the "Information Band", is wrapped around the 36th and 37th floors of the tower, 167m up. The display comprises some 529,750 LEDs arranged in 177 vertical strips, spaced

around the tower. The display is the largest in the world of its type occupying an area of  $280\text{m}^2$  and with a circumference of 59m. On 31 October 2009 the screen began displaying a countdown of the number of days until the start of the London Olympics in 2012.

In October 2009, *The Times* reported that the rotating restaurant would be reopened in time for the 2012 London Olympics. However, in December 2010, it was further announced that the plans to reopen had now been 'quietly dropped' with no explanation as to the decision.

The BT Tower was given Grade II listed building status in 2003. Several of the defunct antennas located on the building could not be removed unless the appropriate listed building consent was granted, as they were protected by this listing. In 2011 permission for the removal of the defunct antennas was approved on safety grounds as they were in a bad state of repair and the fixings were no longer secure. In December 2011 the last of the antennas was removed leaving the core of the tower visible.

Entry to the building is provided by two high-speed lifts which travel at 7 metres per second, reaching the top of the building in under 30 seconds. An Act of Parliament was passed to vary fire regulations, allowing the building to be evacuated by using the lifts - unlike other buildings of the time<sup>4</sup>

The tower is being used in a study to help monitor air quality in the capital. The aim is to measure pollutant levels above ground level to determine their source. One area of investigation is the long-range transport of fine particles from outside the city.

### Tower 42



Tower 42 is the second-tallest skyscraper in the City of London and the seventh tallest in Greater London. Its original name was the National Westminster Tower, having been built to house the National Westminster Bank's international division. Seen from above, the tower closely resembles the NatWest logo (three chevrons in a hexagonal arrangement).

The tower, designed by Richard Seifert and engineered by Pell Frischmann, is located at 25 Old Broad Street. It was built by John Mowlem & Co between 1971 and 1980, first occupied in 1980, and formally opened on 11 June 1981 by Queen Elizabeth II.

The construction cost was £72 million (approximately £261 million today). It is 183 metres (600 ft) high, which made it the tallest building in the United Kingdom until the topping out of One Canada Square at Canary Wharf in 1990. It held the status of tallest building in the City of London for 30 years, until it was surpassed by the Heron Tower in December 2009.

The building today is multi-tenanted and comprises Grade A office space and restaurant facilities. In 2011 it was bought by the South African businessman Nathan Kirsh for £282.5 million.

The National Westminster Tower's status as the first skyscraper in the City was a coup for NatWest, but was extremely

controversial at the time, as it was a major departure from the previous restrictions on tall buildings in London. The original concept dates back to the early 1960s, predating the formation of the National Westminster Bank. The site was then the headquarters of the National Provincial Bank, with offices in Old Broad Street backing onto its flagship branch at 15 Bishopsgate.

# **Heron Tower**



The Heron Tower is a skyscraper in the City of London, the historic centre and main financial district of London. It is owned by Heron International and stands 230 metres (755 ft) tall including its 28-metre (92 ft) mast (202 metres (663 ft) excluding the mast) making it the tallest building in the City and the third tallest in Greater London, after the Shard in Southwark and One Canada Square at Canary Wharf.

Construction of the building started in 2007 and was completed in 2011. It is located on <u>Bishopsgate</u> and is bordered by <u>Houndsditch</u>, Outwich Street and <u>Ca.momile Street</u> The Heron Tower has struggled to attract tenants since its inauguration, with only 60% of the available office space let.

Designed by architects Kohn Pedersen Fox, the height of the Heron Tower was planned to be only 183 m, identical to that of Tower 42, the City of London's then tallest building since 1980.

It attracted some controversy when first announced due to its proximity to St Paul's Cathedral when viewed from Waterloo Bridge. English Heritage was notably vocal in expressing concerns. A public inquiry was subsequently held, the outcome of which was decided by deputy prime minister John Prescott, who ruled in the developers' favour. The tower was given final approval for construction in July 2002.

Three years later, the project had yet to begin construction. In September 2005 the Heron Property Corporation submitted a planning application to increase the height of its approved building. Heron's revised plans now proposed a 202-metre (663 ft) tall tower topped by a 28-metre (92 ft) mast, giving it a total height of 230 metres (755 ft). Although the design was largely identical to the previous scheme, the tower's crown and southern façades were refined. In January 2006, the revised project was approved by the City of London Corporation.

In February 2013 it was revealed in *The Times* that backers of the Heron Tower included Prince Abdul Aziz bin Fahd, a son of the late King Fahd of Saudi Arabia.

#### Interior

The Heron Tower was designed to feature a concierge-style entrance and reception area, incorporating a 70,000 litre aquarium containing around 1,200 fish. The aquarium is the largest privately owned example in the United Kingdom and contains over 60 species of fish in an entire sustainable ecosystem; the species were selected by expert biologists and animal curators to ensure compatibility and adaptability to the environment. The tank is attended to by a team of two full-time fish attendants, who feed the fish a diet rich in natural ingredients according to their requirements and monitor the tank for water chemistry and fish health, and two to three part-time divers who clean the rockwork and glass regularly.

A bar-restaurant called The Drift occupies part of the ground

and first floors. There is a restaurant and "sky bar", both open to the public, on floors 38–40. Situated 175 metres (574 ft) above the City and accessed by scenic lifts from a dedicated entrance on Bishopsgate, the restaurant and bar also have external terraces.

The building uses photovoltaic cells to generate renewable energy, allowing it to achieve a BREEAM rating of 'excellent' in January 2010.

In March 2007, it was confirmed that Heron had signed a funding deal with the State General Reserve Fund of Oman to provide the equity for the development. Following the appointment of Skanska, the firm that erected the gherkinshaped 30 St Mary Axe building, as main contractor, work began on the site at No. 110, Bishopsgate, in mid-2007.

Full construction began in April 2008, with foundation piles and steel rebar cages being installed, while the first tower crane was erected in June. In August a second tower crane was erected, followed by a third and final crane in September. In early October, the first steel beams appeared on site, with the core visible above street level. In November, steelwork temporarily finished, and concrete was poured for the base slabs.

Steelwork recommenced on 19 January 2009. The speed of construction then increased, with floors being constructed in sets of two, with each set taking a planned fortnight to construct. The first cladding was applied on 22 May.

In July, Heron, Skanska and Kohn Pederson Fox held a time capsule ceremony at the site, marking the sealing of the building's foundations. The capsule contained a number of items of significance to the Heron Tower and also included an ethically sourced tortoise shell, in line with Feng Shui principles. In October 2009 the tower stood at 34 floors and just over 150 metres (492 ft), meaning it was defined as a 'skyscraper'. In mid-October, construction reached the tower's first 'setback' – the 'three-storey village' construction over, and the last 50 metres (164 ft) of the building to be constructed, forming the top of the tower, followed by the spire to top out the building. In early November 2009 it overtook the 164-metre (538 ft) Broadgate Tower, making it the third-tallest building in

the City of London. By the end of 2009, construction reached the 44th floor, overtaking Tower 42 as the City's tallest, a record it had held for 30 years. Christmas lights were also added to the cranes in December.

On 12 April 2010, Heron held a 'topping out' ceremony to celebrate the building's structural completion, attended by the Lord Mayor of London. On 22 July 2010, the spire was added, taking the height of the building to 230 metres (755 ft). In January 2011, the aquarium was delivered and installed.

As of April 2013, 60% of the available office space in the Heron Tower is let. The most recently agreed new tenants are pensions company Partnership Assurance, investment fund manager Securis Investment Partners, stockbroker Westhouse Securities, and Salesforce, the software firm.

# **Westminster Abbey**



Westminster Abbey, formally titled the Collegiate Church of St Peter at Westminster, is a large, mainly Gothic, church in the City of Westminster, London, located just to the west of the Palace of Westminster. It is one of the most notable religious buildings in the United Kingdom and is the traditional place of coronation and burial site for English and, later, British monarchs. The abbey is a Royal Peculiar and between 1540 and 1550 had the status of a cathedral.

According to a tradition first reported by Sulcard in about 1080, a church was founded at the site (then known as Thorn Ey (Thorn Island)) in the 7th century, at the time of Mellitus (d. 624), a Bishop of London. Construction of the present church was begun in 1245, on the orders of Henry III.

Since 1066, when Harold Godwinson and William the Conqueror were crowned, the coronations of English and British monarchs have been held here. Since 1100, there have been at least 16 royal weddings at the abbey. Two were of reigning monarchs (Henry I and Richard II), although before 1919 there had been none for some 500 years.

The first reports of the abbey are based on a late tradition

claiming that a fisherman called Aldrich on the River Thames saw a vision of Saint Peter near the site. This seems to be quoted to justify the gifts of salmon from Thames fishermen that the Abbey received in later years. In the present era, the Fishmonger's Company still gives a salmon every year. The proven origins are that in the 960s or early 970s, Saint Dunstan, assisted by King Edgar, installed a community of Benedictine monks here.

The Abbey's two western towers were built between 1722 and 1745 by Nicholas Hawksmoor, constructed from Portland stone to an early example of a Gothic Revival design. Purbeck marble was used for the walls and the floors of Westminster Abbey, even though the various tombstones are made of different types of marble. Further rebuilding and restoration occurred in the 19th century under Sir George Gilbert Scott.

A narthex (a portico or entrance hall) for the west front was designed by Sir Edwin Lutyens in the mid-20th century but was not built. Images of the Abbey prior to the construction of the towers are scarce, though the Abbey's official website states that the building was without towers following Yevele's renovation, with just the lower segments beneath the roof level of the Nave completed.

Until the 19th century, Westminster was the third seat of learning in England, after Oxford and Cambridge. It was here that the first third of the King James Bible Old Testament and the last half of the New Testament were translated. The New English Bible was also put together here in the 20th century. Westminster suffered minor damage during the Blitz on 15 November 1940.

In the 1990s two icons by the Russian icon painter Sergei Fyodorov were hung in the Abbey. On 6 September 1997 the funeral of Diana, Princess of Wales, was held at the Abbey. On 17 September 2010 Pope Benedict XVI became the first pope to set foot in the Abbey.