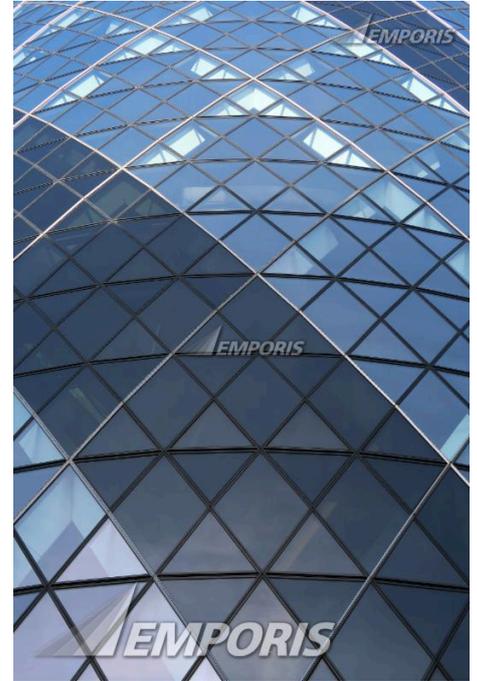


30 St. Mary Axe



Identification

EBN	100089
Name	30 St. Mary Axe
Alternative Name	Swiss Re Tower, The Gherkin
Construction Type	skyscraper
Current Status	existing [completed]



Location

Continent Name	Europe	District (1st level)	City of London
Country Name	United Kingdom	Postcode	EC3
State Name	England	Address (as text)	30 St Mary Axe
Metro Area Name	London Metro Area	Main Address	30 St. Mary Axe

City Name London

Map



Description

Structural Material	steel	Architectural style	structural expressionism
Facade System	curtain wall	Main Usage	commercial office
Facade Material	glass	Side Usage	shop(s) restaurant bar

Spatial dimensions

Height (structural)	589.9 ft	Floors (underground)	1
Height (tip)	589.9 ft	Floors (overground)	41
Height (roof)	589.9 ft	Elevators	23
Height (floor-ceiling)	8.99 ft	Gross Floor Area (GFA)	Contact us

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Height (floor-floor)	13.62 ft	Usable Floor Area (UFA)	Contact us
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Years and costs

Year (construction start)	2000	Year (construction end)	2003
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Features & Amenities

- One of the city's famous buildings
- City landmark
- Handicapped accessible
- Observation floor is available
- Raised floors are available

Facts

- This site was formerly occupied by the Baltic Exchange, an historic building damaged by an IRA bomb in 1992.
- The office space inside has the capacity to accommodate up to 4,000 workers.
- The lightwells, which penetrate deep into the tower's interior, reduce dependency on electric lighting and result in savings on electricity costs.
- Sold in early February 2007 for a price in excess of £600 million which at the time was a record for an office building in Britain.
- The building's height above ordnance datum (AOD) is 194.9 metres (639 feet).
- Die Glasfassade des Gebäudes ist fast identisch mit der des Westhafen Tower in Frankfurt am Main.
- The floor plan is rotated for each successive floor, creating a series of spiraling 5-storey atria that stretch the full height of the building.
- External cleaning and maintenance below level 36 is achieved by a telescopic gib and cradle system whilst the top of the tower above level 36 is maintained by a Teupen unit cherry-picker on a powered trolley. Both units run round the tower on two parallel tracks.
- The building's shape has earned it numerous nicknames in the British press, including 'erotic gherkin' and 'towering innuendo'.
- The 23 lifts vary in velocity from 1 metre per second to 6 metres per second.

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- Windows in the lightwells open automatically to augment the air conditioning system with natural ventilation, an occurrence anticipated to save energy for up to 40% of the year.
- The floorplans are shaped like flowers, with a circular perimeter indented by 6 triangular light courts. The indentations remain a constant size at each level, while the space between them diminishes.
- 30 St Mary Axe was the winner of the Emporis Skyscraper Award 2003.
- The outside of the building consists of 24,000 square metres of glass arranged in diamond-shaped panes.
- The lobby and elevator area at ground level are clad in light-colored aluminum with deep ridges that emphasize the verticality of the high space.
- 30 St Mary Axe is the first environmentally sustainable skyscraper in London.
- The atria are arranged in a spiral so that air drawn into the tower via the lightwells circulates around the building due to the differences in external air pressure.
- Floors 38 to 40 hold restaurant, private dining and bar facilities, and are the highest eating establishments in London.
- The maximum circumference of the tower is only 2 meters less than its height.
- The ground floor elevator lobby consists of three lobes with gently curving walls, giving the impression of a high silvery cave.
- The tower is aerodynamically designed to reduce wind load on the structure, whilst the lower part tapers so that wind wraps around the tower and reduces the incidence of downdraught on the surrounding plaza.
- The tower's exterior cladding consists of roughly 5,500 flat triangular, diamond-shaped glass panels.
- A 2000 m² public plaza fills out the building's lot, and is enclosed by a low stone wall.
- Since its completion, 30 St Mary Axe has become not only an instantly recognisable landmark on London's skyline but an overnight icon of London itself.
- The curved, tapering structure is realised through the use of a diagonal steel structure called a diagrid, made from intersecting tubular steel sections which give vertical support to the floors, rendering them column-free. The grid is highly resistant to wind loading and weighs 2,500 tonnes.
- The lightwells' glazing comprises openable double-glazed panels and a high-performance coating which effectively reduces solar gain.
- Entrances to the building are through high triangular archways cut out of the diamond grid of the facade.
- 30 St Mary Axe was a RIBA Award winner 2004.
- In 2006 the building was given the Civic Trust Award.
- The tower's topmost panoramic dome - which has glamourously been likened to the lair of a James Bond villain - recalls the glass dome which used to cover part

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of the ground floor of the Baltic Exchange which was bombed and subsequently demolished to make way for 30 St Mary Axe.

- The tower's sustainability credentials mean that 30 St. Mary Axe will consume up to fifty percent less energy than a comparable high profile office tower.
- The shape allows for the required quantity of office space without the lower levels overshadowing the surrounding buildings when viewed from street level, whilst the top tapers inwards in the manner of an organic set-back which does not eclipse the tower's shorter neighbours.
- 30 St Mary Axe won the 2004 RIBA Stirling Prize for Architecture, Britain's most prestigious architectural accolade and for the first time in the award's history, the judges' verdict was unanimous.
- The office areas consist of a double-glazed outer layer and a single-glazed inner screen, sandwiching a central ventilated cavity, containing solar-control blinds.
- Where possible, the tower utilised both recycled and recyclable materials in its construction.
- The exterior form of 30 St. Mary Axe is achieved with the aid of parametric computer-modelling techniques.
- Each of the two main stairwells contains 1,037 stairs.
- The cavities between the outer layer and inner screen act as a buffer, reducing the need for additional cooling and heating and are ventilated by exhaust air drawn from the offices.
- Other accolades garnered: Special Steel Award (Detail 2004), Best Central London Office Development (IAS/OAS 2004), Best New London Building (The Inaugural London Architecture Biennale in Clerkenwell), Honourable Mention (The International Highrise Award 2004).
- The harlequin-patterned glass facade is similar to that of Westhafen Tower in Frankfurt, which is also a circular tower.
- The tower draws on architectural elements of Foster + Partners Willis Faber and Dumas Headquarters built in 1975.
- Other accolades garnered: Future Projects Award 2003 (Architectural Review), Best British Innovation (Walpole Award for British Excellence 2003), European Steel Structures Award (ECCS-CECM 2003), Outstanding Development Of The Year (The Variety Club 'The Props' 12th Annual Luncheon 2003).
- The tower bulges out slightly from its base, reaching its maximum width at the 16th floor.
- In spite of the tower's completely rounded shape, the only curved piece of glass is at the very top. Known as the "lens", it weighs 250kg (550 pounds) and is 2.4 metres (7.9 feet) in diameter.
- The building comprises 55 kilometres (34 miles) of steel parts weighing around 10,000 tonnes; the piles are sunk to an average depth of 27 metres (88.5 feet) and the maximum loading per diagonal column is 1,500 tonnes.

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- Plans for 30 St Mary Axe were preceded by the proposal for London Millennium Tower on this same site.
- 30 St Mary Axe was officially opened at the end of May 2004.
- Each floor is rotated 5° from the plan of the floor below.
- The apparently decorative grey-tinted glass which punctuates the spiralling lightwells not only leads the eye upwards, but exists to counter solar gain.

Awards

Name	Category	Rank	Year
Emporis Skyscraper Award		1	2003
Stirling Prize			2004

Involved companies

Architect.....

Foster + Partners

Riverside, 22 Hester Road
SW11 4AN London
United Kingdom

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Fax +44 20 7738 1107
Email press@fosterandpartners.com

Glass Supplier.....

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37697 Lauenförde
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Phone +49 5273 809 0
Fax +49 5273 809 238
Email ag@interpane.com

Sealants & Adhesives Supplier.....

Sika Services AG

Tüffenwies 16
8048 Zürich
Switzerland

Phone +41 58 436 40 40
Fax +41 58 436 55 30

Additional company data available for this building

Acoustics Consultant	Contact us	Interior Designer	Contact us
Architectural Metalwork Supplier	Contact us	Landscape Architect	Contact us
Architectural Model Making	Contact us	Lighting Consultant	Contact us

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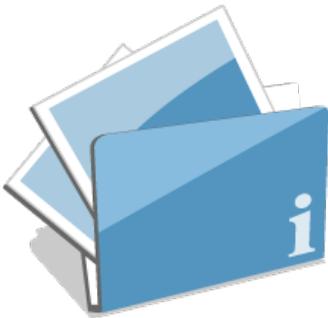
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Crane Rental	Contact us	Mechanical Systems Installation	Contact us
Developer	Contact us	MEP Engineering	Contact us
Door Supplier	Contact us	Owner	Contact us
Ductwork Supplier	Contact us	Planning Consultant	Contact us
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Elevator Supplier	Contact us	Quantity Surveyor	Contact us
Facade Consultant	Contact us	Real Estate Agent	Contact us
Facade Maintenance System Supplier	Contact us	Safety Consultant	Contact us
Facade Supplier	Contact us	Scaffolding	Contact us
Fire Protection Engineering	Contact us	Security System Consultant	Contact us
General Contractor	Contact us	Shell Construction	Contact us
Geotechnical Engineering	Contact us	Steel Supplier	Contact us
Glass Supplier	Contact us	Structural Engineering	Contact us
Hoist Supplier (construction)	Contact us	Wind Surveyor	Contact us
HVAC Supplier	Contact us		

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