

Press release

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30 St Mary Axe, London

30 St Mary Axe is London's first environmental skyscraper. Located in the heart of the City of London, its distinctive form is an instantly recognisable addition to the skyline and has already become a landmark in Europe's leading financial centre. The tower embodies a highly progressive environmental strategy, with its aerodynamic shape maximising the amount of natural lighting and ventilation to significantly reduce the building's energy consumption. Equally important is its improved working environment with better views for everyone. It is a bold intervention in the urban landscape and is set in a generous public plaza that encourages a lively mix of urban life with shops, cafes and a restaurant.

St Mary Axe is an environmentally progressive building. Its uncompromising modernity is allied toward a sensitivity to the natural environment. A comprehensive range of sustainable measures mean that the building will use 50% less energy than a traditional prestige office building. Fresh air is drawn up through the spiralling light-wells to naturally ventilate the office interiors and minimise reliance on artificial cooling and heating. The light-wells and the shape of the building maximise natural daylight, moderate the use of artificial lighting and allow views out from deep within the building. The balconies on the edge of each light-well provide strong visual connections between floors and create a natural focus for communal office facilities. The interior atria are expressed on the exterior by the distinctive spiral bands of grey glazing.

A number of complex fluid dynamic studies of the local environmental conditions suggested a strategy for integrating the building with its site and allowing it to use natural forces of ventilation. The 180 metre, forty-storey tower breaks with the conventions of traditional box-like office buildings. Its circular plan is tapered at the base and the crown to improve connections to the surrounding streets and allow the maximum amount of sunlight to the plaza level. The circular plan enables much of the site area to be used as a landscaped public plaza, with mature trees and low stone walls that subtly mark the site boundary and provide seating. Half of the tower's ground level will be shops and a separate new building houses a restaurant serving an outdoor café spilling out onto the plaza.

The exterior form of 30 St Mary Axe explores a series of progressive curves with the aid of parametric computer-modelling techniques. The shape and geometry have affinities with forms which recur in nature. The pinecone for example, has a natural spiral and, like this building, opens and closes in response to changes in the weather. The building's smooth shape also directs air movement around the building and minimises the amount of wind at plaza level to improve pedestrian comfort. The external diagonal steel structure is by virtue of its triangulated geometry, inherently strong and light, permitting a flexible column-free interior space.

The exterior cladding consists of 5,500 flat triangular and diamond shaped glass panels, which vary at

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each level. The glazing to the office areas consists of a double-glazed outer layer and a single-glazed inner screen that sandwich a central ventilated cavity which contains solar-control blinds. The cavities act as buffer zones to reduce the need for additional heating and cooling and are ventilated by exhaust air which is drawn from the offices. The glazing to the light-wells that spiral up the tower consists of openable double-glazed panels with a combined grey-tinted glass and high-performance coating that effectively reduces solar gain.

The design of the entrance lobby connects the outside experience to the interior scheme. Seven metre high panels of extruded aluminium flow from the plaza into the heart of the lobby in one continuous sweep. This design continues to the lift lobbies for the kitchen facilities and private dining rooms at Level 38, restaurant at Level 39, and the bar at Level 40. The dining areas have a spectacular western view of St Pauls Cathedral and the bar offers a unique 360 degree panoramic view from the Citys highest occupied viewpoint.

30 St Mary Axe is a radical building: socially, environmentally, technologically, spatially, and architecturally. Foster and Partners design for Swiss Res London Headquarters is a striking symbol for one of the worlds leading reinsurance companies, and a paradigm of the responsible environmental practice that is a quest for both the client and architect.

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