Swiss Re Building

Project Basics

City: London, UK  
Address: 30 St. Mary Axe, London EC3  
Year Completed: 2004  
Cost: £138 000 000  
Height: 180m / 591ft  
Floors: 41  
Architect: Foster and Partners  
Engineers: Ove Arup and Partners  
Category: Office Building  
Alias: The Gherkin  
Materials: Steel/Glass  
Awards:  
2004 RIBA Stirling Prize  
2004 Special Steel Award  
2004 RIBA The London Region Award  
2003 Future Projects Award  
2003 Emporis Skyscraper Award  
2003 Best British Innovation

Background and Context

The site was originally occupied by the Baltic Exchange, which was bombed on April 10, 1992 by a truck holding 100 pounds of Semtex wrapped in a ton of fertilizer. One year later the same location was bombed again by the same organization.
Some people wanted to restore the old building, but instead they decided on a new commercial building. Interestingly enough, the remains of the Exchange building were purchased and shipped to Tallinn, Estonia with plans of being reconstructed there.

Construction of the “Gherkin” began in 2001 and was completed December 2003. It opened in April 2004.

It was programmed to be primarily an office building to several different organizations and businesses. The top levels are dedicated to private dinning, with the upper most having a circular lounge bar which includes a 360 degree unobstructed view over London.

Despite the curved form, the only curved glass is the lens on top. The exterior A-shaped steel modules form a rigid frame for the structure, allowing for column free interior

The building also includes high-speed lifts that can take up to 378 people at a time (6 metres per sec).
Design Strategies

One of first progressive, commercial high-rise buildings

Envelope
-conical shape reduces wind turbulence and creates wind pressure to assist natural ventilation
-double-glazed ventilated skin for insulation and passive solar heating
-blinds within double skin to stop solar gain before entering offices (heat is reused as needed)
-organic form provides abundant natural light in the interior
-glass windows open (even up high)
safe and efficient access to all cleanable surfaces

Natural Daylight/Ventilation
-shafts between each floor for ventilation
-lightwells for light penetration and ventilation
-light level and motion sensors

All images from: http://www.aviewoncities.com/buildings/london/swissrebuilding.htm
Design Strategies cont.

**Systems**
- primary fuel is gas
- low energy fixtures were installed everywhere possible
- utilizes a de-centralized HVAC for floor-by-floor needs

**Transportation**
- public transport surround site
- bike spaces within basement (three times the standard)

**Performance**
- said to use a third of the energy than similar sized towers.
- no need for mechanical cooling and ventilation for 40% of year due to design.

http://arts.guardian.co.uk/greatbuildings/interactive-0,2184617,00.html
http://www.aviewoncities.com/buildings/london/swisrebuilding.htm
http://www.30stmaryaxe.com/
How to get there...

Arrive by:
Car = 2.9 miles, 12 min.
Walking = 2.5 miles, 53 min.
Walking + Tube = 31 min.

Student Housing (A):
Passfield Hall
1-7 Endsleigh Place
London, WC1H 0PW

The Gherkin (B):
Swiss Re Building
30 St. Mary Axe
London EC3
References


Culture|guardian.co.uk. 02 Apr. 2009 <http://arts.guardian.co.uk/greatbuildings/interactive/0,,2184617,00.html>.