

# The Swiss Re

A photograph of the London skyline featuring the Tower Bridge, the Gherkin, and other skyscrapers. The image is used as a background for the text.

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**Tiffany Robinson**

**Jon Toffer**

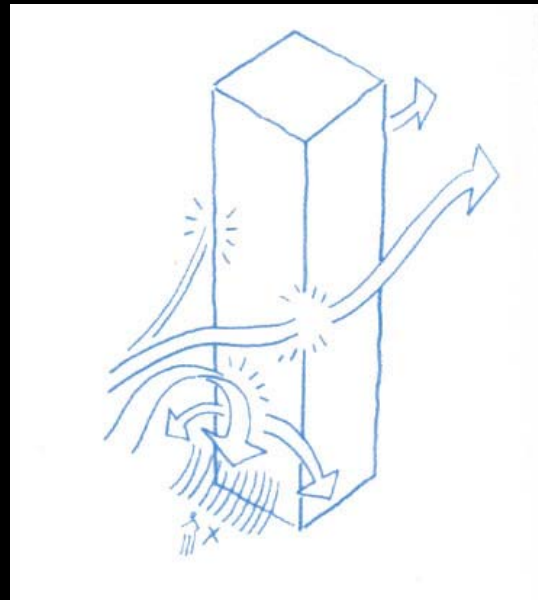
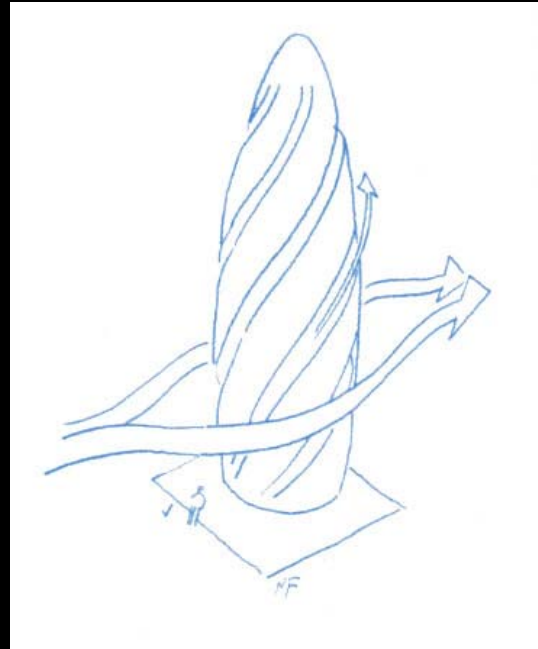
**Jeremy Trimble**

# The Swiss Re

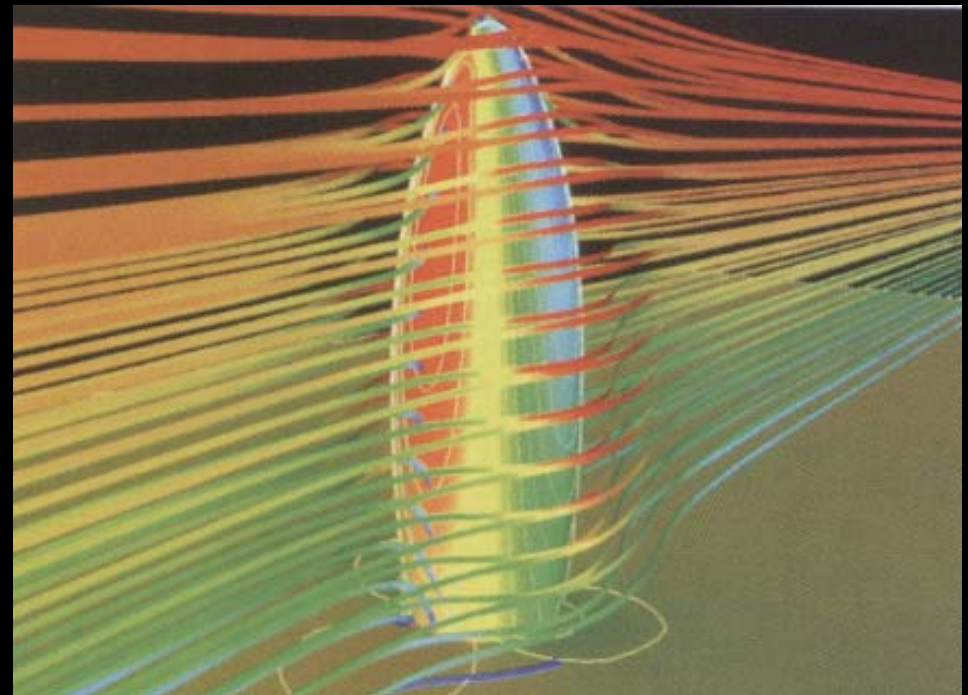
- **Location:**  
**London, England**
- **Construction date:**  
**2001 – 2003**
- **Architects:**  
**Foster & partners**
- **Height:**  
**40 stories**
- **Capacity:**  
**3,500 people**
- **Net office area**  
**500,000 sq. ft.**



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- **The aerodynamic shape directs the wind around the building improving pedestrian comfort at street level and reducing lateral loads on the structure.**
- **The tapering at the crown allows sunlight to reach down to the plaza level**



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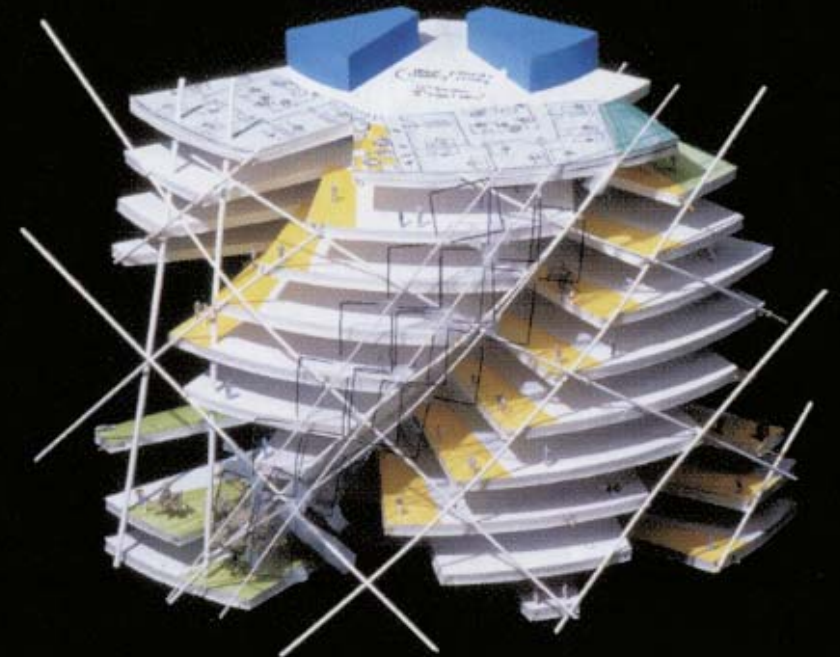


- **Dark tinting to minimize heat gain.**
- **Circular floor plans increase in diameter up to the 17<sup>th</sup> floor and then decreases to the 38<sup>th</sup>.**

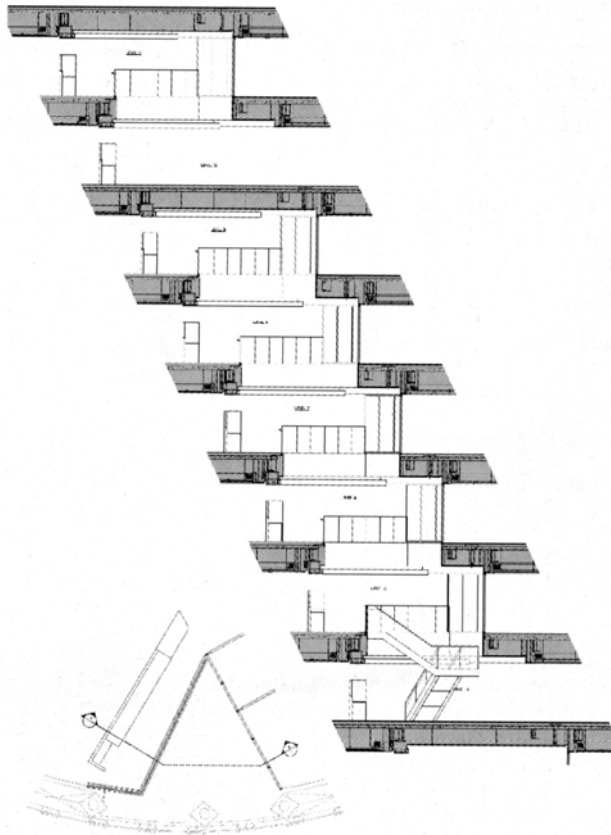
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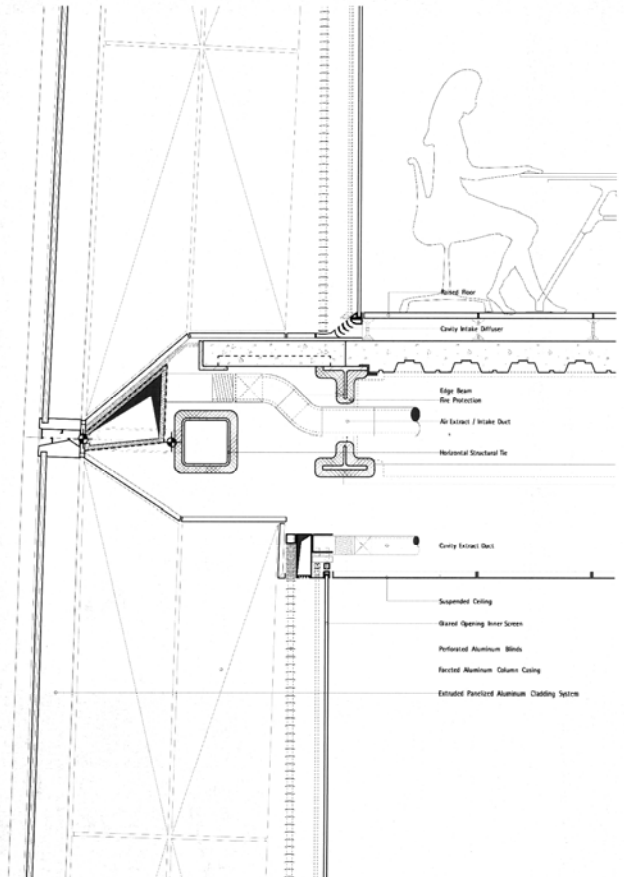
- **Each floor is rotated five degrees causing the six light wells to spiral upward.**
- **Efficient use of natural ventilation by pulling air upward and releasing it at the crown.**
- **The light wells act as terraces and encourage movement between floors.**



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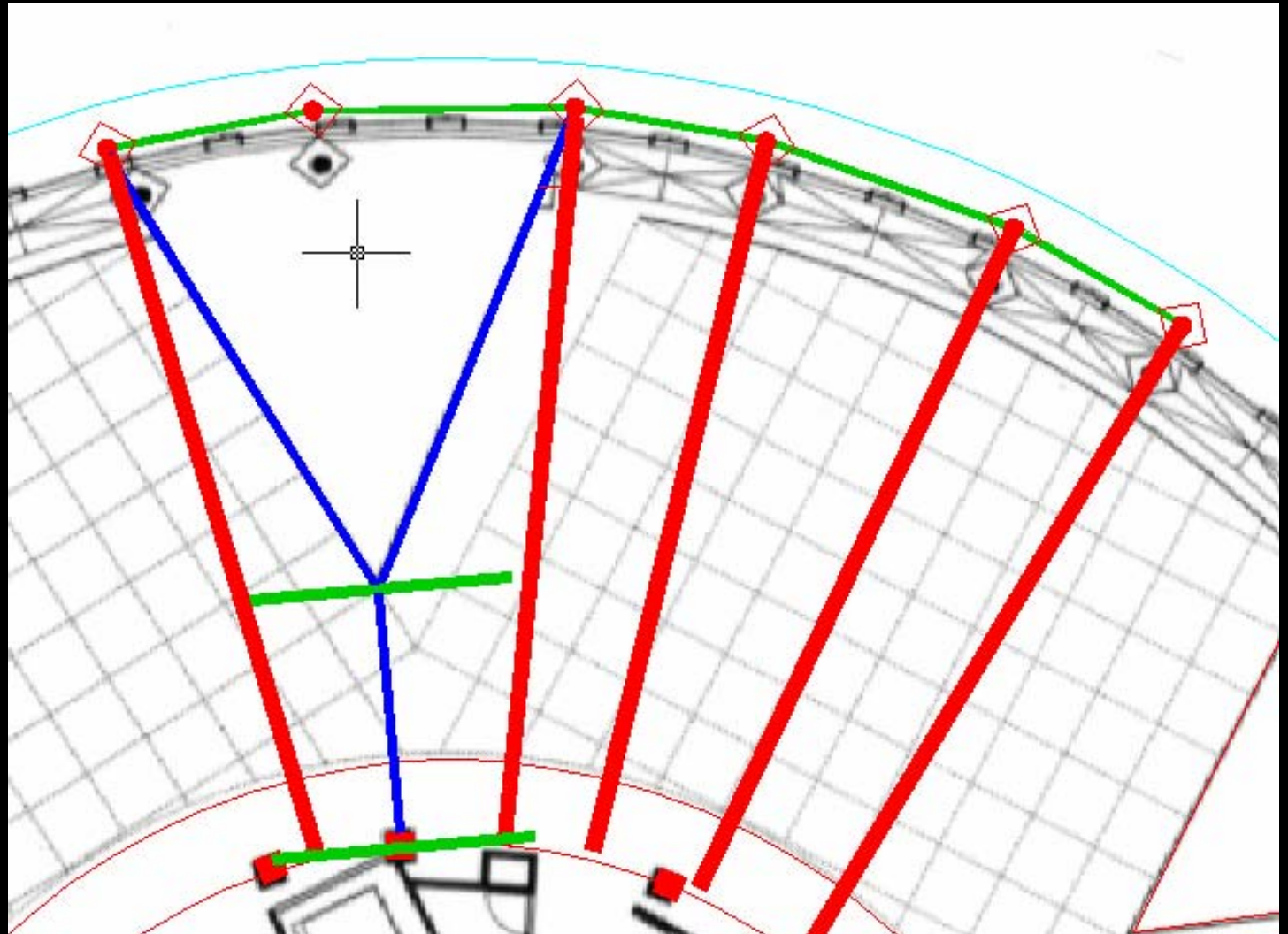


cross section through levels 4-11

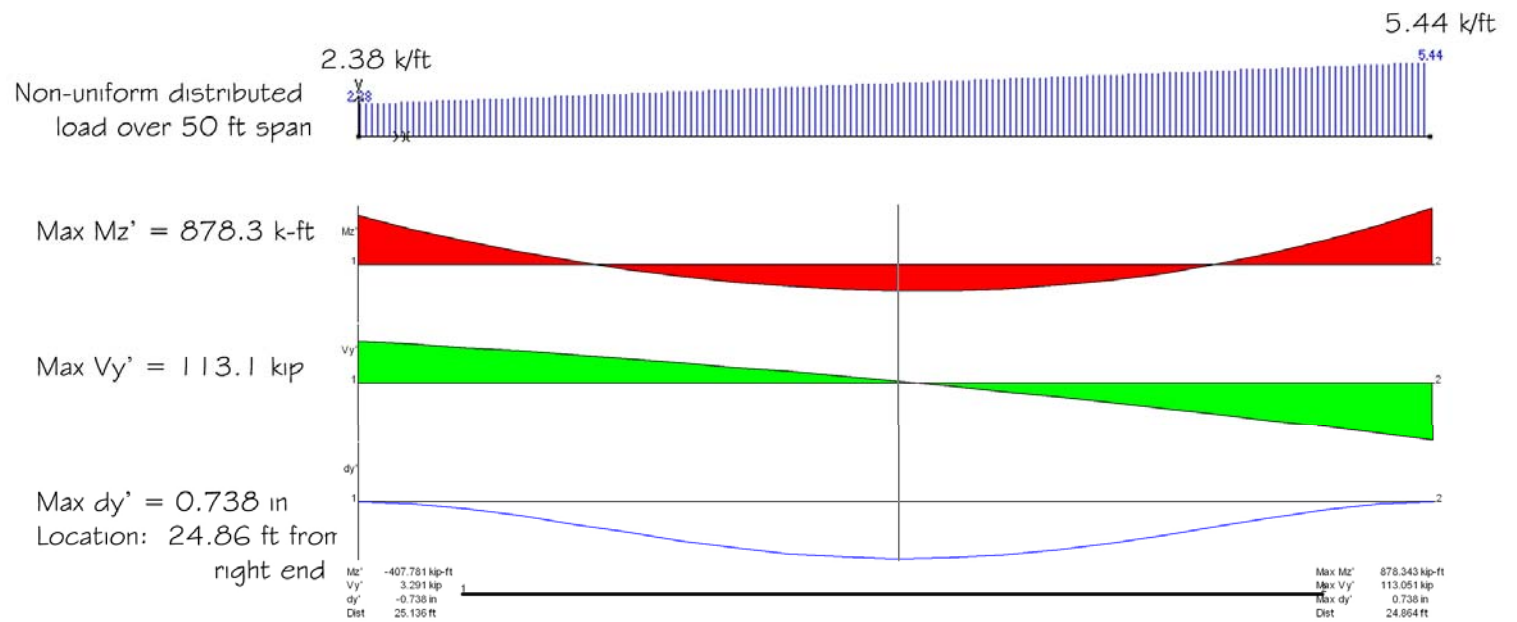


section through folded diamond cladding unit (scale approx 1:30)

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## Multiframe Analysis Results



# The Swiss Re



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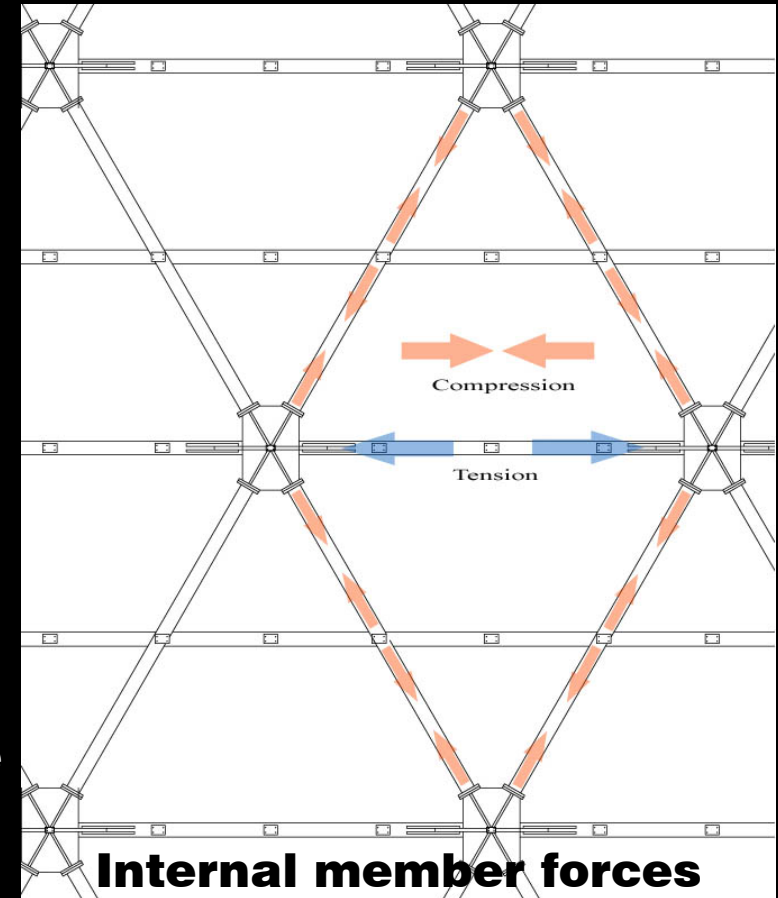
- **During construction the central core was constructed four stories in advance of the other floor levels allowing the structure to be built inside out.**



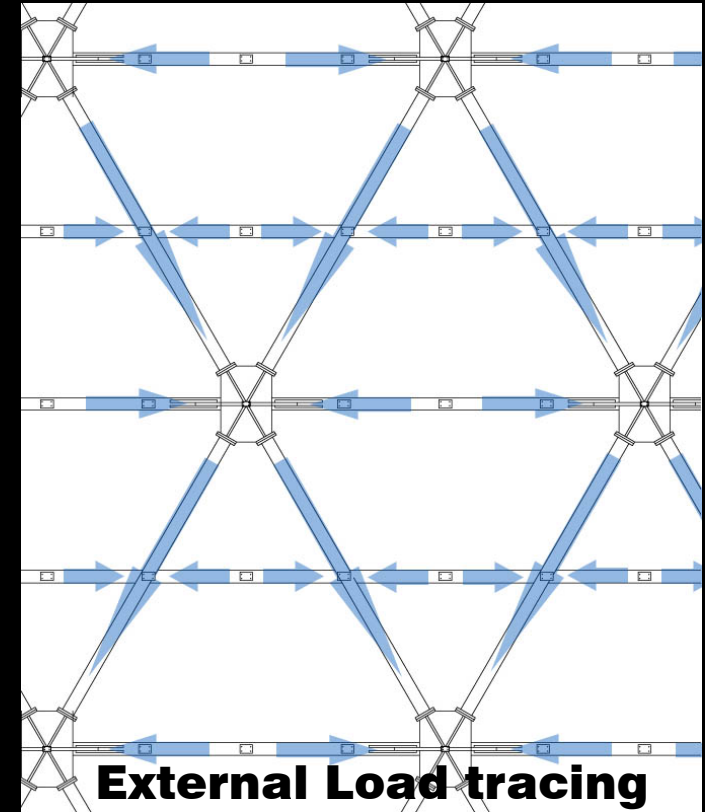
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- **The Diagrid, consists of diagonal columns and horizontal hoops to resist the lateral thrust.**
- **The external diagonal steel structure is by virtue of its triangulated geometry, inherently strong and light, permitting a flexible column-free interior space.**
- **The Diagrid consists of intersecting tubular steel sections that provide vertical support to the floor and an additional benefit of the column-free office space.**



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- **The external diagonal steel structure is by virtue of its triangulated geometry, inherently strong and light, permitting a flexible column-free interior space.**
- **The Diagrid provides all the lateral structural stability, so the floor plates are free from any Diagonal bracings. The central core does not need to provide any lateral stability.**

