

# The Palestra Building

London, England ~ Rebecca Allen, Mechanical Option

Project Team

•OWNER: Blackfriars Investment and Royal London Asset Management
•ARCHITECT: Alsop Architects
•MEP ENGINEERS: Buro Happold Ltd.
•GENERAL CONTRACTOR: Skanska UK
•ELECTRICAL CONTRACTOR: Buro Happold Ltd.
•STRUCTURAL CONTRACTOR: Buro Happold Ltd.



- Good BREEAM Rating (equivalent to LEED rating)
- Gas-Fired central boiler system
- Centralized Chiller Plant
- Mechanically Ventilated due to Urban location

•4-pipe fan coil system with units placed within structural grids to achieve most versatile open space floor plan available

### Lighting/Electrical

- •4 MVA Substation servicing Palestra and surrounding buildings
- •2 1600 amp, 1000 KVA transformers feed Landlord roof plant
- •4 800 amp, 500 KVA transformers feed Tenant Load
- •415V 3 Phase Service to Tenant areas.



#### Architecture

- Size: 37,098 m<sup>2</sup>
- •Floors: 12
- Cost: £68 million
- Features:
- 'Dancing' Columns
- 3-9m cantilevers
- 11 degree slant on façade
- Floating Box Effect
- Completion Date: June 2006



## Mechanical Structural



- •Two-story raked columns at Ground and 7th levels
- Steel Construction with Concrete Slab Flooring

•9m cantilever achieved through fully fixed Vierendeel girder from 9<sup>th</sup> to 12<sup>th</sup> floors tied to cores.



#### Construction Features

•The proximity to the Jubilee line on the Underground required all lifts to be under 8.5 tons, resulting in the use of composite steel beams, structurally efficient, lightweight, and easy to assemble on site.

•More steel used in the 7<sup>th</sup>-9<sup>th</sup> floor than the 3<sup>rd</sup>-6<sup>th</sup> levels combined.

www.arche.psu.edu/thesis/eportfolio/current/portfolios/rsa126/