

The structural steel frame is exposed throughout the internal public spaces and forms the external frontage of Thames Court, a recently completed commercial building in the City of London. Thames Court is a cross between a conventional London City Financial Institution Headquarters and a landmark building more particular to northern Europe. This is demonstrated through the size and variety of accommodation responsiveness and flexibility for now and in the future.

The brief was for a building suitable for banking or corporate headquarters operations, which should take maximum advantage of the large site area, providing a well organised plan that allows future flexibility of use. Thames Court is a 30,000 m² (net) speculative office building designed deliberately to attract an international financial services client. It is now the headquarters of Rabobank.

The steelwork dominates the building's look and performance. Unusual features include the creation of a large column free floor in the building, glass clad structure forming lift lobby floors and walls and structure cantilevering over the river.

Use of a comparatively lighter 'steel' frame minimised the size of piles needed in an archeologically sensitive area, and allowed the re-use of existing basement structures. It also responded to the need for fast delivery - the majority of the base build was completed in one year with an average spend rate of £2.4m per month peaking at £3.6m in a single month.

The building is kept low by St Paul's viewing corridor restrictions and although it is below section 20 height limits, it is voluntarily provided with full sprinkler protection. Therefore the fire period was permitted to be 30 minutes (with main elements given 60 minutes rating) and was low enough to allow a relatively thin coating of intumescent fire protection throughout the structure and this gave considerable freedom to visually express and reveal the main structural elements.

The steel frame's most dramatic manifestation is at the heart of the building where two one-storey height 30m long tapered trusses pre-cambered, and curved on plan, form the walls of the upper atrium and suspend the base of the upper atrium, below which is a huge column free dealer space. These trusses were prefabricated and brought in three sections for assembly on site. After the truss and hangers were all in place, a jacking operation transferred the loads to the trusses allowing temporary supports to be removed. The initial joints were welded late at night on the trusses' arrival - 3.00 am being the only time they were allowed into London.

The use of hangers is carried through to the north (to Upper Thames Street) and south (to the River) elevations, to allow stepped profiles with the minimum number of columns.

To the south, both corners dramatically oversail the River, giving fantastic views along the river and forming a strong enough composition to be read across the River. To the north the building steps away from the street at lower levels

to form a generous entrance lobby that collects people arriving from several possible different directions.

The front of the building is formed by a gently curved row of composite fabricated steel columns formed with back to back channels and platework, returning at the top to support a rooflight and framed by a huge stone portal. Again this responded to the scale of the context - needing to make its mark as people drive quickly by on Upper Thames Street. The curved plan means the steel reads as a dense 'palisade' when approaching, opening up when you draw level with the building to reveal a huge structural glass wall hung behind the frame.

The stone portal is supported by composite columns which behave in the same way as the curved front but at the scale of a person - as you walk towards the columns they appear large/dense but when you draw level views through break the scale down.

The shear stability is achieved by exposed cross-bracing behind the lift cores and staircases. The lift cores are clad in glass allowing views of the structure, the movement of the lifts and glimpsed views through the height of the building.

Much thought was given to how the internal public spaces could provide a contrast to the carefully controlled office environment, and how the internal spaces could vary with external conditions. Contrasting air and light are created, made possible by the openness of the steel frame. Fresh air is delivered into the space, and visually the most advantage was made of the variety given by the play of light and shadow. An innovative motorised canvas shading device under the rooflight was developed to allow as much light as possible into the building for any given shading requirement to make the most of shadows and changes in light conditions outside. The shadows of the steel rooflight supports are cast on the canvas, with the same idea repeated below with the shadows of the steel structure and castings shed on to the translucent floors, which also reveal the activity in the building.

Typically a 9m x 9m grid was used although, due to the curvature of the building, the middle bays are radial and not uniform. At the south end 9m x 12m bays help open the building out to the River. At roof level the depth of the roof is used to allow 9m x 18m spans avoiding columns in the middle of the floor plates. A 'special' truss at the mouth of the loading bay is also exposed. Inside and out the structure is painted consistently the same charcoal grey colour.

At the base of the atrium parallel beams either side of the long axis grid lines make provision for the future removal of the floor to allow a deeper atrium. The structure also has been designed to allow the atrium to be extended in length or infilled.

The structural steel forms the most essential part of the architecture of Thames Court, and has been used to dramatic and creative effect to produce an exciting building which has however conformed to the strict rigours of speculative development.





Thames Court, London

Judges' Comment:

This innovative design exposes the steel structure internally and externally to an unusual extent. The structure provides the visual framework for an exciting internal architecture and creates a high quality working environment.



Architect: **Kohn Pederson Fox Associates (International) PA**
Engineer: **Waterman Partnership Ltd**
Steelwork Contractor: **Caunton Engineering Ltd**
Construction Manager: **Mace Ltd**
Owners: **DIFA Deutsche Immobilien Fonds AG and Markborough Properties Ltd**