

Lifting Hanger Roof - Heathrow Airport for British Airways

Client: Sparrows Contract Services Ltd.

Consulting Engineers: P.G. Taylor and Partners

Main Contractor: French Kier Ltd.



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At Heathrow Airport it was necessary to extend existing aircraft servicing hangars to give the capacity for handling Boeing 747 Jumbo jets. In the past this has usually involved the erection of heavy steelwork at heights up to 45 metres above ground level.

The 30 metre lift took place over a three day period to allow time for steel bracing installation as the lift proceeded. The actual rate of lift being provided by the jacking equipment was 9 metres per hour.

For the East Pen hangar, it was decided to assemble the 800 tonne roof at ground level and lift it into its required position as one complete unit. To facilitate this proposal, the permanent roof support columns were designed in two pieces with a slot running the full length through which the roof end truss projected. Two Fagioli PSC strand jacks were mounted on the top of each support column such that the lifting cables passed either side of the roof end truss to a fixed anchor at the bottom chord level. A single L2/70 D power pack was positioned at ground level at each end of the structure to control the two pairs of jacks at that end.

