

BAA | HEATHROW TERMINAL 4



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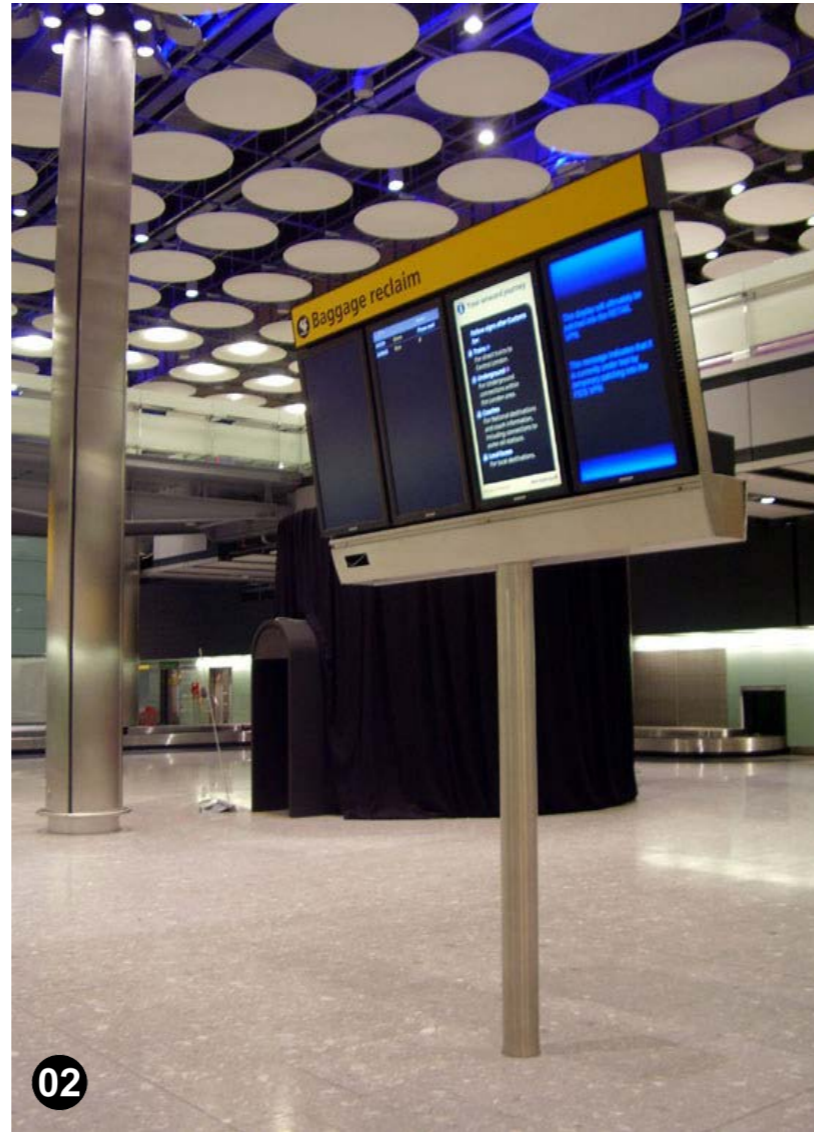
Project
the redevelopment of Heathrow Terminal 4 Departures.

Scope
Integration of Departures extension concourse, Check-in, security and International Departures Lounge. Concept, Options reports, design development, technical leadership, product development and design integrators.

Value
£16.4 million

Heathrow Terminal 4 is one of the 5 terminal buildings forming part of Heathrow Airport. It is located in London, England, and is the principal and biggest airport serving the United Kingdom. Heathrow is the world's third busiest airport for passenger traffic, and handles more international passenger traffic than any other airport in the world. Heathrow is owned and operated by BAA, which also owns/operates six other airports and is itself owned by an international consortium led by the Spanish Ferrovial Group. With the opening of Terminal 5 in March 2008, and the construction of Heathrow East due for completion in 2012, it became necessary to refurbish Terminals 3 and 4.

The concept work for these projects has been completed and part of the construction has already begun in line with a completion date to correspond with the construction of a new third runway for the airport. The key project driver is post 2008 Airline Moves around the airport, when British Airways move to T5. T4



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develops from a seven airline terminal to a terminal serving 46 different airlines, providing the opportunity to redevelop the identified areas to create a new and exciting environment for the travelling public and the airline occupiers. This in turn will help support the BAA long-term development strategy and airline growth plans.

In addition BAA has expanded the proportion of terminal space allocated to retailing activities and invested in the development of retail activity. This has necessitated expanding the terminal areas to provide more shops and restaurants, and routing passengers through shops to maximise their exposure to the retail offer.

The open area of Terminal 4 with the integration of new flooring required the use of movement joints visible across the surface of the floor finish applied in grids that correspond with the gridlines of the entire building. This is required due to the size of the structure requiring some flexibility to contain movement caused

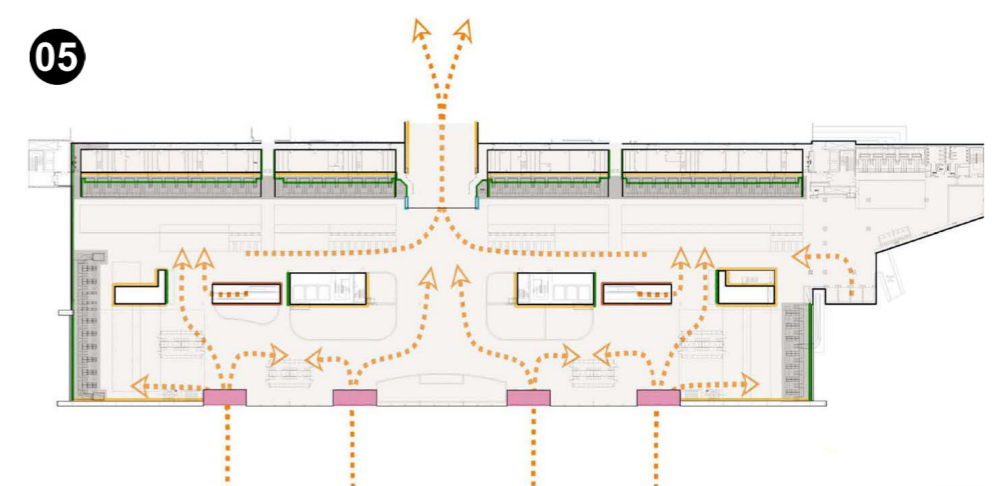


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- 01 Concepts for Security which needed to accommodate infrastructure for technology still under development
- 02 Material palette in use of stainless steel, toughened glass and conglomerate tile
- 03 Prototype for stainless steel balustrade and handrail at escalator wells.
- 04 Concept visual for International Departures Lounge indicating ceiling rafts with feature LED technology
- 05 Customer flow diagram for Departures passengers

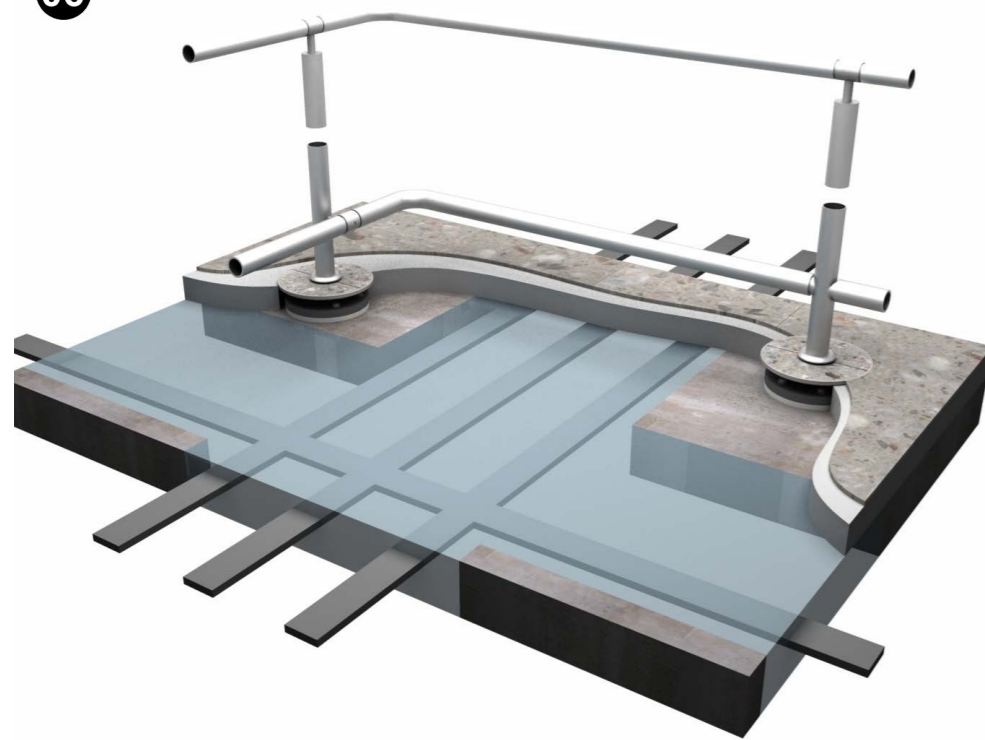


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T TRANSPORTATION AND INFRASTRUCTURE
Terminal 4 Refurbishment

- 06 Underfloor Cabling to Check in Desks
- 07 Retail Integration, Air Side
- 08 Concept visual for Check in Area
- 09 Double height Entrance to Extended departures tConcourse
- 10 Concept sketch indicating Entrance portal to security
- 11 Check in Desk prototype In situ

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by vibrations from the commercial vehicles and airplanes outside, as well as the heavy footfall of people who will pass over it during its lifetime. Several key areas are then demarcated by the use of a contrasting tile colour, such as the check in and security facilities. To this end they form an important function of providing a wayfinding device.

To the ceilings a combination of spun aluminium concave disks, ceiling rafts and bulkheads were in operation. Part of the requirement of BAA was that 30-40% of the roof surface be visible for visual inspection as well as 100% accessible for repair and maintenance without dismantling the sub-grid to which it was attached. All the layouts for the ceiling elements needed to therefore have this as a primary consideration in its design. The use of this layout could allow the transfer of natural light from skylight and clerestory windows above. By ensuring the installation of the sub-frame to be centred between existing structural steel beams allowed it to support lighting and service



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Bulkheads are also used at the entrances and exits of security as a lowered ceiling and more intensive lighting level was required to accommodate offices and ventilation equipment above. The use of toughened glass panels to a serviceable height as a wall finish is still being discussed. What is clear is that they will be required at the security area, with additional panelled glass to conceal Special Branch observation facilities.

Either side of the entrance a free standing full-height Toughened glass screen is used allowing for branding opportunities both on the departures concourse and within the International Departures Lounge. The screens can also be integrated behind the check in desks as a facility for airline branding. The scheme is under development and construction on several elements is underway

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