



Heathrow, Terminal 5

THE TASK

Working in partnership with BAA and other Framework Suppliers, TPS provided project management and design support across many aspects of this high profile project.

THE DESIGN AND SERVICE

Landside, we provided design leadership and support for the highways infrastructure, ancillary buildings and external services coordination. We also provided specialist security advice.

The landside project comprised a 4000 space multi-storey car park, a 600-bed hotel, multi-modal passenger interchange plaza, forward coach park, control posts, terminal basement delivery access, landscaping, a petrol filling station and over 10km of carriageway. The multi-storey car park accommodates a bus station at ground level and the set down forecourt on the roof. It spans the Underground Piccadilly Line and Heathrow Express T5 rail station. The Landside Campus is accessed directly from the M25 via a new spur road and is located to the west and outside the front of the terminal building where it forms the main entrance to T5. This is a complex area with many interfaces with other design teams from the terminal building, rail station, M25 spur and site logistics.

Airside we provided master planning, civil engineering design leadership and support for the bulk earthworks, aircraft taxiways and 46 new aircraft stands, and service coordination and design.

The bulk earthworks comprised over 6 million cubic metres of excavation and required the design of a site-wide dewatering system, together with major temporary retaining structures up to 22m high (equivalent in height to a 7-storey building). The earthworks are intrinsically linked to the Aircraft Pavement design. In addition to

PROJECT PROFILE



CLIENT

BAA

PROJECT VALUE

£4.3bn

SERVICES

- Aircraft pavements design -
- Taxiways and parking stands
- Landside interchange design including access, parking and forecourts
- Twin rivers diversion design
- Foundation design
- Drainage master planning and design
- Apron systems
- Bulk earthworks (support)

SECTOR

Aviation

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predicting the performance of over 650,000 m² of pavement over its 30-year design life, our pavement engineers have played an integral part in developing the use of high strength concrete capable of supporting the loads from the new generation Airbus A380.

The stands are heavily serviced and incorporate automated baggage delivery tunnels, all of which have been master planned and coordinated by TPS engineers.

THE RESULT

The overall construction programme was completed in 2007 when commissioning and testing commenced ready for handover and the opening of Terminal 5 on 28th March 2008 to the first passengers.

Business benefits:

- Cost savings in pavement construction and bulk earthworks
- Revenue maximisation from flexible stand layout
- Client's brief met and exceeded

Specific benefits:

- Highly effective airside system
- Major engineering contribution giving client confidence and cost savings
- Flexibility to meet changing future demands

THE CLIENT'S VIEW

Sir Nigel Rudd, Chairman of BAA Ltd says:

"The Terminal 5 project represents a £4.3bn investment by BAA. It has been a landmark construction project, running on time and budget since building work began in 2002, and is a showcase of architectural, engineering and construction excellence. When it opens to British Airways' passengers on 27 March 2008, it will provide the UK with a stunning new gateway to the world. Terminal 5 represents the start of a new era for Heathrow. The 30 million passenger capacity terminal will significantly ease pressure on our existing facilities. It affords us the opportunity to transform older terminals and create a truly world class airport of which the UK can be proud. This journey of transformation is underway with the redevelopment and refurbishment of Terminals 1, 3 and 4 and the replacement of Terminal 2. BAA will continue to invest significantly in Heathrow throughout the next decade.

"Terminal 5 is a fabulous building designed to provide a great passenger experience. Its success is borne from the vision and willingness embraced by many, to approach this project differently, and like all at BAA I am extremely proud of what has been achieved. It is a testament to the hundreds of organisations and thousands of people whose expertise and determination has culminated in making this a hugely successful airport development".



COMPLETION DATE

March 2008

ARCHITECT

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FURTHER DETAILS

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