

# HEATHROW AIRPORT 100% Hold Baggage Screening

**OWNER**

BRITISH AIRPORTS AUTHORITY

**OWNER'S REPRESENTATIVE**

DAVID FRIZELL

**PROJECT MANAGER****BNP PROJECT MANAGER**

NORBERT AWLASEWICZ

**LOCATION**

LONDON HEATHROW AIRPORT  
TERMINAL 1

**COMPLETION DATE**

1996

**ENTIRE PROJECT AMOUNT**

US \$28 MILLION

**BHS CONSTRUCTION AMOUNT**

US \$28 MILLION

**REFERENCE**

DAVID FRIZELL

PROJECT MANAGER

BUILDING 1055, COURTNEY ROAD

HEATHROW AIRPORT

HOUNSLOW, MIDDLESEX TW61JH

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**SCOPE OF SERVICES**

FEASIBILITY STUDY

CONCEPT DEVELOPMENT

**RELEVANCE**

MODIFICATIONS TO EXISTING  
BAGGAGE HANDLING SYSTEM TO  
PROVIDE FOR 100% SECURITY  
SCREENING OF CHECKED  
BAGGAGE

The Heathrow Airport 100% Hold Baggage Screening Project was a result of the UK's Department Of Transportation mandate for screening of all aircraft hold baggage. The British Airports Authority (BAA) assembled a team to evaluate the feasibility of systems integration into operational airport environments and develop initial designs to allow for implementation. The team consisted of Airport Operations staff, Airline representatives and specialty consultants. BNP was tasked to evaluate the requirements for screening of all the checked baggage as well as assisting in the development of the system configurations to support the screening requirements.

BNP coordinated with the project team to establish system designs to meet the regulatory requirements and identify the equipment necessities. Service factors, flight schedules and staffing requirements were established and analyzed to allow for planning of the security screening system. Flow charts were developed by BNP to ensure appropriate equipment provisions were provided in the system schemes.

BNP's main focus was the systems of Terminals 1 and 4. BNP worked closely with British Airways staff to identify key factors for planning requirements. Critical elements of the planning were the requirements to maintain ongoing operations while scheduling the system modifications to meet the DOT timetables.

The developed systems included provisions for multi-level screening of checked baggage, from both check-in counters and transfer inputs. Bags would be scanned to identify the unique license identifier of the bags and then the bag would be tracked through security screening to its final output at the specific corresponding outbound make-up position. The security screening process consisted of level one machines which would scan the bags and then automatically evaluate the resulting information to identify potential threats. The next level of screening consisted of operators who are trained to inspect the data from the automated machines. The information on the bags that would not clear the first level, would be presented to remotely located operators for review and resolution. If the operator could not clear the subject bag at this level then the baggage handling system sortation computer would route the bag to manned screening equipment for a more detailed examination of the bags. Once the bags cleared from any of these screening levels, they were automatically routed to the outbound make-up destinations. If the bags did not clear the manned equipment screening level, then they were routed for passenger reconciliation processing. The existing BHS configuration was re-designed to include the new screening equipment as well as the required support components to achieve the DOT mandate.

The concept designs were used to procure competitive design build bids for the implementation of the baggage handling system work required to provide 100% security screening of the hold bags.