

Heathrow Airport - Fire Alarm System Upgrades



Case Study

P&D Specialist Services delivered the installation of new fire alarm systems across two **British Airways** hangars: FSU and TBE, both used for aircraft maintenance and repair. The works involved the **removal of legacy fire alarm infrastructure** and the **installation of a new fibre-based heat detection system**, designed to improve safety and response times within these critical operational environments.

P&D Specialist Services were commissioned to deliver **fire alarm system upgrades** within **British Airways** maintenance hangars at **Heathrow Airport**.

Working inside live aircraft hangars presented a highly complex environment. Operations had to be carried out within strict safety constraints, including maintaining a minimum 20-metre exclusion zone around aircrafts, which always took priority within the space.



The scale and operational nature of the hangars - particularly the larger FSU hangar, capable of housing up to five aircrafts simultaneously - required careful planning, coordination and adaptability to changing conditions.

P&D installed a fibre-based fire detection system positioned at high level within the steel structure of each hangar. The system is divided into nine zones, enabling targeted response in the event of heat detection. When triggered, a deluge system is activated within the affected zone, rapidly flooding the area to suppress potential fire incidents and providing a significant upgrade from traditional sprinkler systems.

The project delivered a modern, fibre-based fire detection system across both hangars, significantly enhancing fire safety and response capability. All works were completed safely and in line with operational constraints, ensuring no disruption to critical aircraft maintenance activities at Heathrow Airport.

Works were delivered across both hangars while maintaining full operational continuity. In FSU, P&D installed over 1000m of heatshield, 1,800m of catenary, and 3,700m of fibre, alongside new power systems. In TBE, works included removal of existing infrastructure and installation of 3,400m of catenary and over 6,100m of fibre, with power upgrades for new fire alarm panels. Close coordination with on-site teams was required throughout, particularly in TBE where multiple activities were ongoing.



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This project highlights **P&D's** expertise in delivering fibre infrastructure for critical life safety systems in complex, live environments. Our structured, safety-first approach ensures dependable performance in high-risk infrastructure settings.

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Key Facts:

- **Live hangar delivery** – zero disruption to operations.
- **20m exclusion zone** – aircraft safety always top priority.
- **9-zone fibre detection** – targeted deluge suppression.
- **Multi-site coordination**– FSU and TBE delivered together.



Client
British Airways



Sites
FSU and TBE aircraft maintenance hangars.



Scope
Removal and installation of new alarm system.



Scale
9,800m+ of fibre, 5,200m+ of catenary installed.



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