

Manchester Piccadilly Station, UK

Manchester Piccadilly station opened in 1842 and ever since has been a major gateway to the North West. Piccadilly is one of three main line stations in Manchester and handles over 83000 passengers and 1000 train movements daily.

Network Rail demanded a fire protection system that would exceed basic statutory obligations and specified an open protocol system for flexibility of choice and with a view to simple system expansion and upgrade in the future.

The fire system requirements were particularly challenging. Firstly, Network Rail wanted to provide something that had not been attempted before: a progressive managed evacuation in the event of an emergency. This would require a high degree of integration with other building services and a series of sophisticated PA/VA evacuation sequences.

A second related issue was the proximity of existing properties that needed to be included in the evacuation sequences. The new system needed to interface with two extant stand-alone systems: one protects the Metrolink tram terminus adjacent to the new station entrance and the other protects a nine-storey office block that sits above the station building.

Other factors for consideration included the fact that railway stations – however modern – present a tough operating environment for sensitive electronics. The fire detectors needed to be robust enough to withstand factors such as wide fluctuations in ambient temperature. They also needed to be capable of screening out factors that may cause a false alarm, such as transient high levels of dust or water vapour. A full study of the site was undertaken by fire consultants Tenos and a final specification was drawn up.



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The fire system that Swift Fire & Security supplied to meet the specification is based around five networked control panels and includes over 400 Apollo XP95 devices. The fire system is controlled and monitored via a PC and graphics package situated in the station's central control and security centre.

The fire detection equipment is fully interfaced with doors, access control systems and the station's PA/VA system so that a number of sophisticated fire alert response and evacuation sequences can be triggered automatically in the event of a suspected fire. It can also alert occupants of the office block and Metrolink building, or respond to alerts raised by their independent fire systems.

The Manchester Piccadilly system is configured to have eight sector-evacuate zones. If a detector in one of these zones raises an alert, the fire system runs through a series of predetermined responses, from checking the cause of the signal alert, to alerting the fire brigade and initiating a staged evacuation. If the situation demands

Summary:

Project Name:	Manchester Piccadilly Station
Location:	Manchester, UK
Market:	Transport
Products used:	400 XP95 detectors
Installer:	Swift Fire and Security

