



Hotel Room

Project Outline

Contractor	WBS Ltd
Location	Heathrow, London, UK
Sector	Hotels
Disciplines Covered	<ul style="list-style-type: none">Fire Alarm SystemEmergency Voice Communication
Key Points of Interest	<ul style="list-style-type: none">1,148 Fire Alarm Devices22 Fire Detection Loops21 EVC Outstations

Project Overview

Premier Inn is the biggest chain of hotels in the UK. The chain of hotels features in many towns and cities making up a network of over 800 hotels across the United Kingdom. With the continued popularity in air travel, Premier inn decided to construct a hotel at Heathrow airport terminal 4. The new hotel would enable customers to stay before capturing their flights the next day.

The construction of the hotel was an eight-storey, 613-bedroom hotel offering various size bedroom suites along with customer lounge and restaurant.

The Challenge

Protec was employed to design, supply, install and commission both fire alarm and emergency voice communication systems (EVC). The fire alarm system would comply with BS5839 Part 1 recommendations along with holding a full BAFE SP203 approval as per the client's requirement. The system, when designed, would have to take into account the use of each room. As Some rooms were accessible bedrooms, this would mean the Equality Act 2010 would also apply to the design of the system.

An EVC system was required in the hotel, to assist with the safe evacuation of the building in an emergency scenario. The disabled refuge system also had to meet the current BS5839 Part 9 recommendations.

The Solution

Fire Alarm - The system installed was a fully addressable Protec 6000 plus series fire alarm system, Offering a total of 22 detection loops across the hotel. The detection loops monitored a total of 1148 peripheral fire alarm devices such as multisensor detectors, manual call points, fire alarm interfaces and wall-mounted sounders.

The design of the system took into account the environmental conditions of the rooms. Factors like steam and aerosol spray are all types of issues which can create false alarms in a hotel, so minimising these conditions was a must.

Within the bedrooms, Protec utilised the 6000 plus optical heat detectors to cut down false alarms. The multisensor detector technology is a tried and proven method for bringing down false alarms caused by that of a shower or aerosol sprays. The multisensor technology works by using infra-red and thermal sensors, along with the Protec's algorithm technology (Algo-Tec) to differentiate between a fire and a non-fire scenario. It means environmental conditions like shower steam or aerosol spray do not create a false alarm like a standard optical type of detector would.

The hotel offered multiple bedrooms of an accessible room nature. So, the bedrooms had to be equipped with Protec's range of visual alarm devices (VADS); the high output LED devices are mounted to the wall or incorporated into the detector head. The bright LED head flashes to notify a person with hearing difficulties when there is a fire scenario.

Emergency Voice Communication System – The EVC system is used in an evacuation scenario. It is used to assist the emergency services teams with the safe evacuation of the building. The disabled

refuge intercom points offer a safe temporary waiting area for the less abled person to wait and communicate to the emergency services in a building evacuation.

The system across the hotel offered two-way voice communication between the outstations at the dedicated refuge points and the main disabled refuge control panel. The fire services use the disabled refuge main control panels to communicate with the person waiting at the refuge area in an emergency scenario.

Protec offered a fully compliant BS5839-9 system within the building and consisted of a 24-way main control panel and 21 disabled refuge outstations.

The Aftercare

Since completion of the Heathrow terminal 4 premier inn project, Protec continues to work with Premier Inn (Whitbread) as their approved supplier of fire alarm systems. Fitting out new projects and maintaining the network of existing hotels up throughout the UK, Northern and Southern Ireland.

Working closely with Whitbread the Primer Inn Portfolio benefits from Protec's fully comprehensive service and maintenance package offering a 24 hour a day, 365 days a year reactive call out service. With reporting, PPM and Reactive works allocation provided via Whitbread's web-based Ostara Systems.