Kiwa Fire Safety Compliance, UK

Case Study: Randolph Hotel

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Built in 1864, the celebrated Randolph Hotel is a 5 star hotel in Oxford, England. It's situated at the corner of Magdalen Street directly opposite the famous Ashmolean Museum. Often featured in television dramas, the site is an iconic part of the Oxford skyline, treasured by locals and tourists alike for its splendour, impeccable service, revered appearance and historical importance.

The Challenge

Kiwa Fire Safety Compliance (KFS) were asked to assess and recommend suitable fire safety solutions by McBains for two separately located hotels, both undergoing comprehensive refurbishment projects.

The Randolph Hotel is a Grade II listed building, and the client required RIBA stage 2/3 advice and support from KFS Fire Safety Engineers with specialist heritage experience. The client also needed special sensitivity to fire safety, as it had suffered from extensive fire damage during a past point in its history.

A specific challenge to overcome was that the majority of the building was comprised of a timber structure, incorporating a main central staircase (a heritage timber feature) that wouldn't provide an adequate escape route.

Contracting Client:

McBains

Location:

Oxford, Oxfordshire, UK

Sector:

Hospitality

Key Elements:

- Grade II listed building
- Fire safety strategy
- Engineered water mist system
- Operational hotel

The Outcome

Following KFS's submission of the Fire Safety Strategy and additional suppression system specifications, the client commissioned an Active Systems Specialist to design a bespoke water mist system for the hotel.

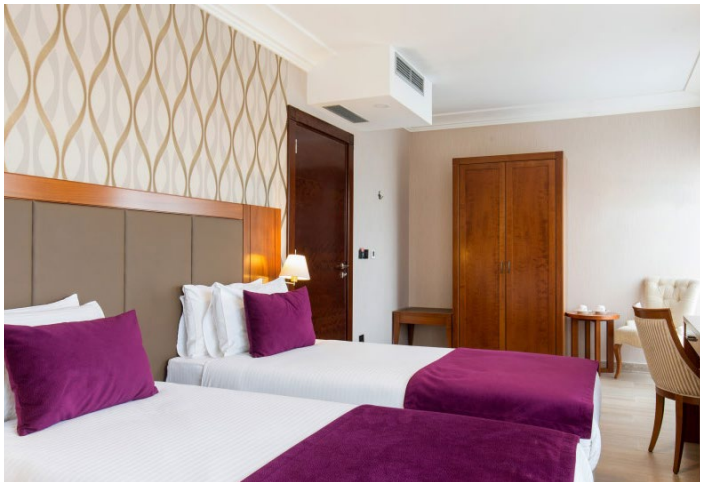
KFS expertly reviewed the designs and provided assurances for them. The hotel refurbishment project was able to continue with a high level of confidence. With minimum impact on the hotel, escape routes and fire safety requirements for the building were met and the safety of residents and staff (should a fire break out) was uncompromised.

The Solution

Initial investigations and multiple site visits were carried out by KFS to assess and catalogue the various materials used in the makeup of the building. This showed many were not suitable for modern safety recommendations and highlighted that any fire safety strategy could not rely on the premise of fire resisting compartmentation. This meant that evacuation must be able to start without any delays.

An evacuation model was generated to help determine how quickly occupants could escape the building and whether this met required safety standards. Data analysis indicated that this was within acceptable levels and the focus should be on improving compartmentalisation.

The recommendations concluded that rooms within a defined radius of a stair court would require an engineered suppression system. It was determined that a water mist system should be used to ensure adequate escape routes remained viable and that the lower volume of water discharged would be less damaging to the historic timbers and hotel contents. The engineered water mist system and fire safety strategy ensured that any preceding refurbishment work would not overly compromise the historic fabric of the building.



"Since our foundation, we have continued to deliver robust, innovative and cost-effective fire safety solutions.

Indeed, we have lent our expertise to developments right across the built environment spectrum, from the necessities of Residential, Education and Healthcare to the more iconic buildings of the past, such as historical royal palaces and stately homes."

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