



FIRE SAFETY IN HERITAGE SITES

Nick Goddard, Research Development Manager at Geofire looks at fire safety in heritage sites and how wire-free fire door holding devices provide a cost effective solution to fire safety in this type of building.

“Fire is without doubt the greatest threat to heritage buildings as it can sweep through a building quickly without proper precautions being in place, rapidly destroying its structure and precious artefacts. The recent fire at Notre Dame was a shock; however the sheer scale of the damage was predicted by many fire experts. In the event of a fire, the complexity of a historic building’s structure, which is often made with combustible timber, makes a fire difficult to control.

“The majority of historic buildings were built long before fire safety was a consideration, so they can appear difficult and costly to adapt to protect lives in the event of a fire. Many building owners and managers take their responsibilities to preserve the character of the building seriously and understand the conflict with modern fire safety measures. Despite the building regulation exemptions that listed buildings and other heritage assets have to protect the appearance of a building, fire safety must be considered to prevent the spread of fire. Fire

spreads easily when no defences and barriers are in place, which will hinder a safe evacuation.”

The Fire Facts

As of 2018 there were approximately 500,000 listed buildings in England with many more historic buildings in Wales, Scotland and Northern Ireland. There were 265 fires reported in English heritage buildings in 2018 according to the national database of fire in heritage buildings and 249 fires so far in 2019 with 563 near misses. Historic buildings are vulnerable to fire, and fire is a threat to both human life and our architectural heritage.

Why hold fire doors open in heritage buildings? Access for all

Accessibility is essential to allow everyone to visit and enjoy the history of ancient iconic buildings. As part of the Equality Act 2010 it is important to ensure that the corridors are clear to allow people with disabilities to access a building with no obstruction.

Above, fire at Notre dame in April 2019

Security and safety

Holding open fire doors will allow visibility of the rooms to ensure cameras and security guards can see all angles keeping the buildings contents safe from theft and vandalism. It will also provide more natural light, which will keep people safe if floors are uneven to prevent falls and accidents.

Ventilation

Air quality is a concern for building owners as they have a duty of care to ensure the health and safety of all visitors and staff. Ancient buildings where masonry walls may be damp due to no modern damp proof course and condensation will benefit from good ventilation and air flow to prevent mould from building, which could lead to damage of the room and its contents as well as ill health.

Reduces wear and tear

Holding fire doors in the open position reduces the damage to expensive fire doors in high traffic areas. Where fire doors have been tailor-made for a specific walk way, the cost can run into the tens of thousands of pounds. By keeping the doors tucked neatly away from the danger of accidental damage to the doors, it will prolong the doors lifetime.

Kick the wedge

Despite the many legitimate reasons for holding a fire door open in a heritage site, using wedges or props to fulfil this role leaves a building and its occupants in danger. A fire door must be closed to stop the spread of fire and smoke, compartmentalising the danger zone so evacuation can be safe. Installing wire-free electromagnetic fire door devices can give the benefit of open fire doors while giving the peace of mind that they will close in the event of a fire, protecting the building and occupants, and staying within fire regulations.

The wire-free solution

Nick Goddard, continues: "A wireless system is the ideal solution as it eliminates the need to run cables to each system device; ensuring minimal disruption to existing decor. Fire safety measures in heritage buildings can often be halted because of wiring challenges created by ornate ceilings or walls of stone where the thickness defeats drilling or makes running wires difficult.

"Asbestos is also often found in historic buildings which are known to be a material that can be hazardous to health if not handled and controlled in the correct way. Therefore, wire-free devices ensure that no asbestos is disturbed within the walls, as fire door closers can be installed directly onto the fire doors and offer the same fire safe benefits as hard-wired alternatives.

Salamander radio-controlled fire door system

"An example of wire-free fire door devices is the Geofire Salamander radio controlled fire door system, which has all the benefits of hard-wired electromagnetic door retainers and closers. As these devices are wire-free, they are quick and easy to install, saving time, installation costs



Above, fire door

and disruption to a building's fabric or its occupants. The Salamander free-swing door closer and door holder are suitable for all fire doors including high risk and exit routes as they cover all relevant fire safety regulations, making them ideal for heritage buildings.

"It's reassuring to heritage building owners that radio controlled fire door devices are suitable for critical actuation (Category A) installations which is the safest installation defined by BS7273-4; and these products are approved for all areas of a building including main fire escape routes.

"The Salamander system is installed by professional technicians that have received specialist training. They will conduct a survey before creating a bespoke plan depending on your buildings infrastructure."

For more information on the Salamander system,
please go to www.geofire.co.uk
or contact Steve Kew on sales@geofire.co.uk.



Above, Nick Goddard - Geofire Research and Development Manager



Radio-controlled wire-free fire door system

- Safe, legal, cost-effective solution
- Ideal for conservation and heritage sites
- Wireless radio control
- Battery operated
- Complies to BS7273-4 critical standard
- System can control up to 99 fire doors



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