

IMAGE: Hutton+Crow

PRESERVING THE IRREPLACEABLE Water Mist Fire Protection for Lambeth Palace Library.

Derek Killaspy, Managing Director of Fireworks Fire Protection.

The securest way to protect libraries and archives against fire and smoke is water mist. Fireworks Fire Protection has been entrusted to safeguard several important collections, from award-winning modern buildings such as the Lambeth Palace Library, to historic libraries and museums.

■ Why use water mist fire protection for libraries and archives?

The faster and more performant generation of fire protection has moved on from sprinklers and chemical solutions.

The water mist solutions used by Fireworks are proven under controlled independent testing to offer the fastest suppression of fire and heat and they use up to 90% less water than traditional sprinklers. Water mist is also the only fire protection solution able to dramatically reduce the spread of smoke, the biggest cause of injury and damage to property during fires.

■ Best design aesthetics
In addition to its performance benefits, water mist has the advantage of being the most compact fire suppression solution, with smaller and fewer components than other systems.

Very small diameter pipes are used, and Fireworks' teams of designers and

engineers can shape and form these to fit into practically any corner, bookcase or display cabinet. Water mist nozzles can be camouflaged to blend into the surroundings, with a variety of colour, wood and metal finishes.

■ Lambeth Palace Library
For the Lambeth Palace Library, Fireworks designed a system to protect seven stories of historical archives, manuscripts and books, some of which are housed in roller-racking.

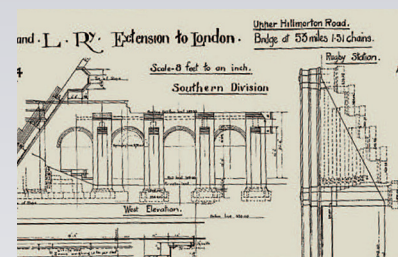
The solution includes a water mist pump and tank located in a plant room on the ground floor. The pump and tank are connected, via stainless steel pipes, to water mist nozzles in each area to be protected. We included pre-action valves in our design to ensure that all areas are kept dry at all times. In the event of fire, only the specific water mist nozzles activated by smoke sensors will operate.

■ The Central Archive Store at Network Rail

Another of the archive facilities Fireworks has protected is the Central Archive Store at Network Rail. These archives house a unique collection of architectural drawings and documents, including the first railroad and locomotive designs by George and Robert Stephenson.

As with the Lambeth Palace Library, many of these archive documents are extremely fragile and cannot be exposed to excessive heat, water or smoke. For

this reason, the project specifications set out stringent testing requirements for the fire system chosen. During these tests it was shown that fires started were quickly controlled, preventing the fire and smoke from spreading. The documents stored next to the fire sources were unaffected throughout the tests and there was no water penetration into the document containers. This system is controlled by Very Early Smoke Detection Aspirator (VESDA) detection systems in the archive areas, with heat-activated water mist nozzles in the escape routes, corridors and stairs.



■ Water mist fire protection for other sectors

Fireworks Fire Protection has been designing, installing and maintaining water mist fire protection systems across a range of sectors, from historic buildings and hospitals to offices and data centres for nearly 30 years. ■

For more information about water mist fire protection, visit www.fireworks-ltd.com or contact enquiries@fireworks-ltd.com