



Domestic & Residential Sprinkler Systems

The Challenge

Lymm Water Tower, Cheshire

Lymm Water Tower is a 130-year-old grade II listed landmark of special architectural and historical interest. It was purchased by the Harris family six years ago with the idea of rescuing the derelict building, creating a design-led, minimalist family home of the future and, at the same time, making a contribution to safeguarding local heritage.

Initially, planning permission to start the project was rejected by the local Fire Authorities and Building Control department. The project failed to meet both current "adequate means of escape" criteria and fire compartmentation requirements.

With their dreams shattered, and faced with the prospect of spiralling budgets to meet the proposed fire safety requirements, the family turned to Tyco Fire & Integrated Solutions for advice.

"Tyco were brilliant" recalls Russell Harris. "They put together an integrated fire protection design that was instantly accepted by the Fire and Building Control Authorities".

"The most important aspect was that we did not have to add expensive compartmentation, fire doors and obtrusive escape ladders". "Being able to adhere to our original design concept enabled us to put the project firmly back on track".

"From an aesthetic perspective nobody would even know that a combined sprinkler and fire detection system was present within the house". "It is barely visible to the human eye and fits in perfectly with our aim to blend contemporary design with the building's traditional features, resulting in simple, powerful detailing."

The new open plan wrap-around extension following the shape of the octagonal tower tested the ingenuity of the Wormald Fire Systems installation team, who rose to the challenge and produced an innovative solution. Copper and CPVC pipework was used to construct the sprinkler distribution pipework allowing it to follow the unique contours of the building.



Concealed sprinkler heads were fitted into the distribution pipework and are barely visible against the white ceilings. In the event of a fire, the sprinkler concealment plate is designed to fall away at 57°C and the sprinkler head will operate when it reaches a temperature of 68°C.

The aesthetics of the sprinkler system are equally complimented by the fire detection and alarm system. Tyco specified a Very Early Smoke Detection and Alarm system. The VESDA system comprises of a highly efficient aspirator continually drawing air into a concealed pipework system. The air is constantly analysed for the presence of smoke.

When smoke is present, light is scattered within the detection chamber and is instantly identified by the highly sensitive receiver system. The signal is then processed and the information is communicated to a fire alarm control panel.

For further information contact your local Tyco Fire & Integrated Solutions office on: tfis.marketing.uk@tycoint.com or visit our website at www.tycofis.co.uk

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