



## Domestic & Residential HMO Sprinkler Fire Protection

### The Challenge

The term HMO (Houses of Multiple Occupancy) relates to any property where more than one family or a number of residents share communal facilities. These could range from a shared access corridor, lift and waste disposal area or kitchen, bathroom and toilet facilities.

In the case of HMO's it is important to be aware of two inherent risks. Firstly, the structural safety and compartmentation are significantly lower than those for commercial structures.

This is particularly true of some occupancies that cater for Department of Health & Social Service funded residents.

Secondly, the risk of fire can come from residents themselves, especially those with social problems such as drug and alcohol abuse, violence and learning disabilities.

Experience has shown that perhaps the most vulnerable members of society are those who live in HMO's. Fires are random and the probability of a fire is quite low, but the inherent risks involved with HMO's and the devastation and loss of life a fire creates makes it imperative for sprinklers to be fitted in HMO's as a matter of course.

### Community Children's Home , Gateshead

Tyco Fire & Integrated Solutions were approached to design and install a life safety sprinkler system due to concerns that one of the residents had a history of fire setting. The system was designed in accordance with BS DD25 1:2000 & The Loss Prevention Council BS 5306 Rules section TB14.

Whilst the children were on holiday, Concealed Flush Residential sprinkler heads with only a neat white disc were fitted in all rooms including bathrooms and toilets. All CPVC thermal sprinkler pipework was concealed.

Control equipment comprising Stop Valve, Check Valve and Flow switch was housed in a neat lockable cabinet. A bypass arrangement was used around the stop valve to charge pipework with water to the control equipment supplied by the Towns Main. A 4-zone fire alarm panel was supplied with sounders to indicate damage to sprinkler heads.





### Heron Quay, Bedford

The innovative use of residential sprinklers installed by Tyco Fire & Integrated Solutions solved a dilemma for property developers, Saxon, and Bedfordshire and Luton Fire & Rescue Service.

Saxon's 4-storey apartment towers were part of a large, exclusive development of 55 two-bedroom timber-framed properties, but as Saxon wished to install wooden stairs in the latter phases, adequate means of escape for residents became an issue.

The location of the apartment towers meant the fire service could not gain access as required by the Building Regulations Approved Document 'B'. This was because there is no access on the river side, and the land-approach involves a raised area with a weight limit covering an existing underground car park that was deemed unsuitable for fire appliances.

Saxon Homes discussed the dilemma with the fire service, and two options emerged: the installation of a complex and expensive dry riser system, or a less expensive but more effective residential automatic sprinkler system. The sprinkler systems installed by Tyco solved all the problems at a stroke. The sprinklers satisfy a number of requirements including life safety, the Building Regulations, and Saxon's desire to use wooden stairs.

The sprinkler systems were specifically designed for this application, and are fed by the town's water main. They feature concealed CPVC pipework that is especially fire-rated and that leads to unobtrusive sprinkler heads that do not detract from the aesthetics of these exclusive apartments.

Each block has an integral control panel and sprinkler stop valve, together with an internal siren that will alert residents if the sprinklers are activated.

This particular case shows clearly how these systems can help architects, builders, contractors and developers to overcome specific fire-related problems, while at the same time providing a safer building for the residents.

### Rochdale Drug Rehabilitation Hostel

It is increasingly recognised that there are potential benefits to treating drug users in the hostel environment. Unfortunately, many drug rehabilitation residents have a number of social problems, particularly economic deprivation and social exclusion.

These factors can lead to anti-social patterns of behaviour such as the return to drugs, delinquency and crime because many drug users place their own health and social needs as a low priority.

With all these factors in mind, Tyco Fire & Integrated Solutions was approached by the Rochdale Drug Rehabilitation Hostel to protect the residents from the threat of fire. This particular project was quite demanding in that Tyco had to design a sprinkler system that could be installed in an existing building without disturbing the original fabric and structure whilst the Hostel remained fully occupied.

Tyco Fire & Integrated Solutions appointed a Project Management Team that designed a sprinkler system for the bedrooms, communal living areas and access corridors utilising Sidewall Extended Throw Sprinklers. The pipework to these sprinklers was discreetly "boxed-off" to provide an unobtrusive appearance throughout the Hostel.

The Team then worked in close partnership with the Hostel Managers to develop an installation programme that allowed the installation engineers to fit the sprinklers within the resident's bedrooms whilst they were at work or undertaking hospital or counselling appointments.



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

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