

## FIRE AND TIMBER FRAME CONSTRUCTION – A CASE STUDY

The Sorting House is one of Manchester's most central and desirable residential developments, providing 104 one and two-bedroom duplex apartments around a central courtyard garden and with basement car parking.

The development is a conversion and substantial extension of one of central Manchester's landmark buildings, the turn of the century Royal Mail Sorting Office.

Working with the developers, Pace Timber Systems designed, manufactured and erected a four storey timber frame extension on top of the old building. The development was completed in 2003.

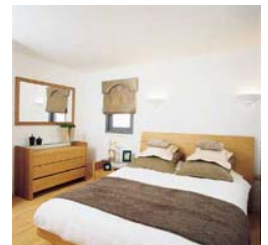


The Sorting House  
Manchester

### Disaster strikes at 2am

Very early on a Tuesday morning in July 2005, the tenant in one of the top floor apartments discovered that fire had broken out in the bedroom – almost certainly a result of candles left unattended on a ledge.

The fire was very serious, consuming furnishings and personal belongings within just a few minutes and creating an extremely ferocious fire that blew out the windows and destroyed pretty much everything in the room.



A typical interior

Thankfully, the tenant escaped with her life although she suffered from the effects of smoke inhalation – by far the most common and dangerous effect of most house fires.

### Reassured residents

The fire brigade was able to contain the fire within just one part of the apartment and extinguish it. Within a short time, loss adjusters and fire investigators arrived to examine the apartment and assess the extent of the damage.

What they saw was not pretty. But to their delight, they found that the walls and ceiling had remained completely intact – behind the burned plasterboard they found the timber frame structure and insulation in pristine condition, completely unaffected by the inferno.



The ferocious fire blew out the window and destroyed almost everything inside the bedroom

The concierge at The Sorting House said: "It's amazing. When we pulled away the damaged plasterboard, we realised that the fire had failed to damage the timber frame structure underneath. Repairs are starting and will be completed pretty quickly and easily, I expect. It has been a huge reassurance to many of the residents – nobody can tell us that timber frame buildings are any more vulnerable to fire than any other buildings now. I'm really impressed."

The experience in Manchester confirms the results of fire tests by independent scientists at the Building Research Establishment (BRE), which show that the fire resistance of a modern timber frame structure is achieved by a combination of the timber structure itself, the internal lining material and the insulation. In all these elements, a well built timber frame home will meet all current Building Regulations and Standards in the UK.



Burned plasterboard is ripped away to show no damage to the timber frame structure at all