



Reducing the risk of timber frame fires during construction

The UKTFA represents the majority of the timber frame industry and has prepared this data sheet in order to present to main contractors, insurers and professional advisors the actions which have been put in place by UKTFA Members to reduce the risk of a fire occurring during the timber frame erection phase of a project.

The UKTFA is committed to continuous research and development of all relevant aspects of fire prevention. As this development yields better ways of working, revised guidance will be made available via UKTFA members. Please visit www.uktfa.com for the very latest information on fire safety and all other aspects of building in timber frame.

Current guidance

Sitesafe

SiteSafe has been developed by the UKTFA to ensure that manufacturing member companies work closely with Principal Contractors/Clients to give clear concise information and assistance to ensure maximum fire safety on all construction sites, primarily designed for timber frame. **Sitesafe** principles can be extended to other forms of construction.

Adoption of **SiteSafe** is a mandatory requirement of Membership of the UKTFA on 'Large' timber frame projects, sourcing your timber frame from non-UKTFA members does not guarantee the operation of **Sitesafe** on your site.

Sitesafe is a clear staged process which may necessitate actions to prevent site fires as a result of an individual risk assessment. The risk assessment should consider the items contained in a document, detailing 16 clear steps to a safe site.

Sitesafe is a 3 stage process:

- | | |
|---------|--|
| Stage 1 | Pre-construction planning stage |
| Stage 2 | Timber frame erection stage |
| Stage 3 | Hand over by UKTFA member to principal contractor/client |

The 16 Steps

The 16 steps document containing all the detail can be accessed by following this link <http://www.uktfa.com/#/uktfa-literature-downloads/4538897734>

Audit

For your peace of mind, The UKTFA has commissioned a regular number of random audits of UKTFA member sites, registered under **Sitesafe**, by independent, UKAS accredited 3rd party auditors. This helps to ensure that members discharge their obligations of members.

Stopping access to the construction site during out of hours

Key points-perimeter security-method of site entry-surveillance

Based on fact, the biggest threat to site security is the potential for malicious arson from outside the construction site, measures to minimise this threat involves controlling access to the site, robust security provision and appropriate site storage of materials, particularly potentially flammable products and equipment that might be used to initiate and spread fire.

The site security can be subdivided into three topics:

1. Perimeter fencing
2. Control points of entry onto site
3. Site surveillance.

There should be various degrees of control for each of these, dependent on the size of the development and the level of risk assessed to be mitigated.

Fencing : Consideration should be given to the type of perimeter security fencing appropriate to the site. Fencing is to stop unauthorised access therefore must be of sufficient height and style to avoid persons climbing over the fence. Recommended minimum height is 2.3m and the construction should be such that support posts are robust and not externally located. The choice to have a hoarding which is boarded that obscures vision of the site, or a fence which allows sight of the building from outside the site boundary is one to be determined by the main contractor. Fully boarded hoarding whilst making the contents of the site invisible from outside the site also affords the arson that same invisibility once within the site. An open fence does the opposite– allows the arsonist to see into the site from outside, but keeps the arsonist visible to others once access to the site has been achieved. On balance the use of hoardings which obscure the site contents is favoured by insurance companies and may reduce temptation from casual arsonists and children.

Control points of entry: All access doors and gates around the perimeter are to be appropriately locked and secured. Again non climbable gates are to be adopted and of similar height to the fencing. The use of alarms for forced entry can be considered. Clearly the building is at risk if the external perimeter security fence has been breached. Accordingly it would be helpful to ensure that all windows and doors to the ground storey and any other storey readily accessible from the ground or scaffolding, are boarded up at the end of the working day in order to increase the difficulty of access. In all cases the more time it takes to enter a building the less likely an arsonist or vandal will be prepared to start a fire.

Site Surveillance: Security guards, cctv cameras and alarm systems are options which may be appropriate depending on the individual nature of the site. Method statements on site surveillance should be reviewed such that regular site patrols are undertaken.

Removing opportunity for fires

Key points-good house keeping, temporary windows, early plasterboarding,

The first rule is to ensure that when access for construction process is not required the timber frame section of building is secured and locked.

Following on from good house keeping and clean sites care must be taken to ensure that access ladders or stairs to upper levels made secure at the end of the day to prevent potential arsonists getting into the building. Unused or discarded nail gun gas canisters should not be left around the site as these can be a source of fuel for fires, dehumidifiers, heaters and any other heat sources should be kept in a secure area, out with the timber frame.

It is appropriate to look at the construction process to include windows to be installed as early as possible or to use robust wire mesh temporary windows and doors. In addition once watertight, plaster boarding and fire proofing of the ground floor level is recommended as a further measure to reduce risk of ignition to exposed timber surfaces.

Measures to reduce flame propagation through a site

Key points- compartmentation-board types-fire curtains-future areas of interest

Compartmentation: Vertical containment measures within timber frame buildings are considered to be one of the most logical and practical solutions for high-risk sites once all the usual site security, fire detection and suppression measures have been adopted.

For smaller or low risk sites the general good housekeeping and standard approach may be more appropriate (and proven in practice). For other sites the sub-division of the frame by fire-resisting barriers may be considered as part of the strategy for minimising fire spread risk during construction.

There are a range of material options to achieve compartmentation. These include products such as cement particleboards, weather resistant plasterboard, fire curtains, specialist fire boards and fire treated timber based boards and framing. All of these products will slow down the spread of fire, thereby affording the site workers with a greater amount of time to evacuate the building and for the fire to be tackled. The compartmentation will also reduce the fire load available to the fire, which will reduce the radiant heat to other buildings, both within the site and if neighbouring occupied properties. The choice of materials for the compartmentation will depend entirely upon the specific characteristics of the development site. Containment measures may be applicable to all types and height of buildings and, if necessary, may need to start from ground floor level (or other areas most at risk from an arson attack), depending on the outcome of the fire risk assessment.

There may also be alternative means reducing the area of the building affected by a fire, such as fire suppression (use of sprinklers may be used on larger projects) which could also be used to influence the degree and nature of any compartmentation required in the building.

Above all, insisting that your timber frame provider is a UKTFA member, will ensure that **Sitesafe** is adopted on your project. Membership of the UKTFA is the sign of quality assurance in timber frame.

For further information on any aspect of timber frame please contact the UKTFA at:-UKTFA The e centre,
Cooperage Way, Alloa, FK103LP

01259 272140

office@uktfa.com

www.uktfa.com