

Risk management

Construction site fire safety plan - guidance for site managers

A guide to loss prevention



The construction process involves significant fire hazards and risks. Adequate planning and assessment of the fire risk is a legal requirement and would need to be demonstrated to the appropriate authorities in the event of a significant construction site fire. The formulation of a Site Fire Safety Plan is a key step towards demonstrating compliance and controlling the fire risk to property and personnel.

A guide to compliance and loss prevention

This document aims to provide a best practice guide for construction site managers in the formulation of a Site Fire Safety Plan (SFSP). The SFSP is applicable to construction sites and buildings undergoing renovation and is often a requirement of construction contracts and insurance policies. This guide is designed to highlight the key aspects that need to be considered when compiling a project-specific SFSP.

It is essential to ensure proper planning and thought has been applied to considering the fire hazards and risks on site. To demonstrate this, a project-specific fire risk assessment must be carried out to formally assess and record all potential fire hazards, risks and personnel affected. Any residual risks and their control measures can

then be communicated to those affected using the SFSP.

The tables in this document provide a checklist and quick reference guide to aspects to be included in the SFSP.

For more detailed guidance, reference should be made to the Fire Protection Association document, 'Fire Prevention on Construction Sites - the Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation'. The document can be obtained from their website at www.thefpa.co.uk and is currently in its 10th edition (January 2023). HSG 168 'Fire safety in construction' should also be referred to for detailed guidance (also available on their website).

Table key:

JCoP	- Fire Prevention on Construction Sites - 'The Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation'
TF	- Timber Frame
RA	- Risk Assessment
STA	- Structural Timber Association (formerly the UK Timber Frame Association)
RRO	- Regulatory Reform (Fire Safety) Order 2005

Item	Aspects for inclusion in the SFSP	Reference	Reviewed
Responsible person	Identify 'responsible person' and outline their responsibilities, to include; implementation and maintenance of the SFSP, liaison with authorities, daily/weekly checks of site conditions (housekeeping, fire-fighting equipment), promotion of a fire-safe working culture, communication of fire safety procedures/practices in inductions and toolbox talks, maintenance of fire safety records (training), etc.	JCoP (Para. 6.1.1) and CDM and HSG 168.	
Fire marshalls	Identify 'fire marshalls' and outline their responsibilities, ensure appropriate training is provided, ensure numbers are adequate for size/complexity of site.	By RA in line with JCoP (Para. 6.1.2), CDM and HSG 168.	
Liaison with the emergency services	Outline arrangements for liaison with fire and rescue service regarding initial site inspection and regular familiarisation updates. Compile an 'Emergency Response Pack' on a site layout plan, to include: locations of hydrants, fire escape staircases, floor loadings, fire protection installations, sprinklers, roof vents, access for firefighting equipment. Identify any hazardous materials stored on site (e.g. fuel stores), etc.	JCoP (Para. 7).	

Item	Aspects for inclusion in the SFSP	Reference	Reviewed
Emergency procedures	Document emergency procedures and how they will be communicated to all. Outline arrangements for regular checks and testing, including: fire instructions, fire alarms, fire escape signs and lighting, escape routes, travel distances, fire detection and fire drills. Regularly review and amend as site evolves.	JCoP (Para. 8).	
Fire protection	Document a fire strategy; outlining arrangements for fire protections, including: early provision of sufficient fire escape staircases, fire compartmentation, fire stopping, automatic fire alarms, fire points, adequate water supplies, early installation of fixed firefighting systems, etc. Note: Partial occupancy should be prohibited, otherwise permanent fire segregation and fire protection is required before occupancy commences.	JCoP (Para. 9), CDM and HSG. Special requirements for partially-occupied buildings and high-risk sites.	
Temporary covering materials	Outline requirements for protective covering materials and arrangements for compliance with LPS 1207 and LPS1215 (e.g. architectural features, completed works, scaffold netting/sheeting, etc).	JCoP (Para.10).	
Portable fire extinguishers	Outline arrangements for portable firefighting equipment and include: location of 'fire points' (with numbers of extinguishers determined by RA); expectation is at least one on each floor on fire escape staircases plus adjacent to fire hazards (generators, petrol-powered equipment, high hazard storage areas, hot work areas, etc).	JCoP (Para. 11). More specific details in HSG 168.	
Security against arson	Outline arrangements for site security. Considerations: perimeter hoardings (minimum height of 2.4m), locked gates, secure doors and windows, security guards and/or CCTV depending on combustibility, values at risk, surrounding areas. TF risks present the highest potential for loss and require higher standards of security/protective measures. Useful information supplied by the STA's '16 steps to fire safety' (available on their website: www.structuraltimber.co.uk).	JCoP (Para.12), CDM and HSG 168. Some security measures are mandatory for TF risks.	
Temporary buildings/accommodation	Outline arrangements for site set-up (subject to separate RA). Considerations: units may need to be fire rated, multi-cabin sites subject to RRO (or equivalent), fire alarms and detection required in canteens and drying rooms, heaters fixed and fitted with metal guards, coat stands and clothes drying racks must be a safe distance from heaters.	JCoP (Para.13). Location, construction and fire protection measures detailed.	
Site storage of flammable liquids and LPG	Outline arrangements for storage, including: requirements for purpose-built containers, steel cages, signage, sign-out procedures, controls during use within buildings, removal from buildings out of hours (applies to Paslode cylinders).	JCoP (Para. 14) and other legislation applies specifically.	
Acetylene	The use of acetylene should be avoided where possible. Where unavoidable, outline arrangements for control. Considerations: the number of cylinders must be kept to a minimum and removed from site as soon as work is complete.	JCoP (Para. 15) and other legislation applies specifically.	
Hot work	Outline arrangements for hot works, to include hot work permit system (with permits controlled by site management), work areas free of combustibles, work areas to have dual fire extinguishing appliances (FEAs), training for operatives in use of FEAs, equipment adequately maintained, fire watch periods during and after hot works, etc. Hot works may be banned on TF sites.	JCoP (Para. 16). Example hot work permit shown in JCOP.	

Item	Aspects for inclusion in the SFSP	Reference	Reviewed
Electricity and gas	Outline arrangements for both permanent and temporary supplies. Considerations: permanently isolate/turn off supplies out of hours whenever possible (except where used for personal safety), temporary supplies installed by qualified contractors and inspected/maintained regularly (as per regulations).	JCoP (Para. 17).	
Waste materials	Outline arrangements for site waste. Considerations: waste kept to an absolute minimum and removed daily, skips to be located as far away from buildings as possible, timber cutting waste bagged twice a day, timber-cutting equipment fitted with collection bags. Waste burning must be prohibited wherever possible.	JCoP (Para 18). No burning of waste on TF sites.	
Plant and vehicles	Outline arrangements for plant and vehicles on site. Considerations: plant powered by internal combustion engine should be positioned in the open or in well-ventilated areas, plant should be stored at least 10m away from buildings out of hours, refuelling should take place at a designated area only.	JCoP (Para 19). No petrol-powered equipment within TF buildings.	
Stored materials	Outline arrangements for site storage. Considerations: materials stored internally require fire coverings subject to LPS 1207. Materials stored externally should be stored as far from buildings and boundaries. Materials on site should be kept to an absolute minimum.	JCoP (Para. 20).	
Smoking	Establish a no-smoking policy on site. Outline arrangements to include: set-up and control of designated smoking areas (away from buildings and combustibles), erection of site signage, etc.	JCoP (Para. 21).	
High rise buildings	Subject to separate fire RA in consultation with local fire and rescue service. Additional considerations: prevention of fire spread vertically and horizontally, additional requirements for fire escape staircases, wet risers, fire stopping, fire breaks, fire alarms, sprinklers, etc.	JCoP (Para. 22).	
Large timber frame structures	Subject to separate fire RA in consultation with local fire and rescue service. Additional considerations: maintain liaison during build programme. Sequencing of the build process to incorporate compartmentation and fire stopping at earliest stage. Also, eliminate smoking on site, charging of electrical equipment, hot work (where possible), and the use of petrol-powered equipment in TF buildings.	JCoP (Para. 23). Includes guidelines for the build process.	

References and guidance

- The Construction (Design and Management) Regulations 1994 (as amended 1997 and 2015) (www.hse.gov.uk/construction/cdm.htm)
- Fire Prevention on Construction Sites - the Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation' 10th edition (January 2023) (www.thefpa.co.uk)
- HSB-LCE-RGN-012 - Fire on construction sites; a guide to loss prevention (www.hsbeil.com)
- HSG 168 - Fire safety in construction (www.hse.gov.uk)
- Regulatory Reform (Fire Safety) Order 2005
- HSB-LCE-RGN-002 - Fire caused by hot works; a guide to loss prevention (www.hsbeil.com)
- Structural Timber Association - health and safety guidance notes on fire safety and fire prevention on timber-framed construction projects (www.structuraltimber.co.uk)
- RC48 Risk Control 'Arson Prevention - The Protection of Premises from Deliberate Fire Raising' available from (www.stoparsonuk.org)

Disclaimer: The guidance in this document refers to industry best practice loss control advice. Adoption of the advice contained within this document does not imply compliance with industry, statutory or HSBEI guidelines, nor does it guarantee that related losses will not occur.

HSB-LCE-RGN-016 Rev: 0 Date: 01/07/2016



© 2024 HSB Engineering Insurance Limited. All rights reserved.

HSBEI-1293-0624-2

Picture credits: Getty Images

HSB Engineering Insurance Limited, registered in England and Wales: 02396114, Chancery Place, 50 Brown Street, Manchester M2 2JT. Registered as a branch in Ireland: 906020, 28 Windsor Place, Lower Pembroke Street, Dublin 2. HSB Engineering Insurance Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority in the United Kingdom, and is authorised and regulated by the Central Bank of Ireland as a third country branch in the Republic of Ireland.

www.hsbeil.com



A Munich Re company