Construction Site Fire Prevention Checklist

A guide for insurers, surveyors and construction industry professionals

Third edition: May 2009

Fire Protection Association
London Road, Moreton in Marsh, Gloucestershire GL56 0RH
INTRODUCTION
Every year there are numerous major fires on construction sites and in buildings undergoing refurbishment. All have serious consequences: people are injured; buildings, plant and equipment destroyed; work delayed and completion dates missed.

Objective of the Joint Code
The majority of fires can be prevented by designing out risks, taking simple precautions and adopting safe working practices. It was with these objectives in mind that a group of interested organisations, including the Fire Protection Association and Construction Confederation collaborated in the preparation of the Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation, published with the title Fire Prevention on Construction Sites (first published in 1992). The principal purpose of the Joint Code is to reduce the incidence of fires in the course of work in the construction industry.

Purpose of the Checklist
This Checklist has been prepared for use alongside (but not instead of) the Joint Code of Practice, Fire Prevention on Construction Sites. It converts the Joint Code of Practice into a series of questions which an insurer or site fire safety coordinator should ask to find out whether or not fire precautions on a site are comprehensive and adequate in relation to the requirements of the Joint Code. The Checklist has been produced in a format which enables it to fulfill two functions (see below).

Using the Checklist
(1) The Checklist works on a tick-box principle for a satisfactory response to a question, but contains adjacent space for notes about findings made in the course of a survey. Its questions are arranged in sections which replicate the coverage of the Joint Code and they attempt to investigate compliance with the detailed measures of the Joint Code.

(2) The Checklist permits the accumulation of information about adherence to fire precautions and best practice at work on a site. This is particularly important because it provides information about earlier findings when practices are being checked – possibly by a different person than originally – in the course of site re-inspection.

In the course of time, therefore, the Checklist can present a complete fire precautions history of a construction site or building under refurbishment.

Its format permits the addition of extra sheets, via tags through the top corner, so that features which require more extensive treatment can be catered for. By the same method, additional notes and documents of interest/importance, for example unique design features, can be accommodated. On a very large, fragmented site, separate folders can be used for separate parts of the works.

The Checklist does not, however, negate the need to complete fire risk assessments as required under current legislation, or to formulate the fire safety element of the construction phase plan.

Resurveys
The date for a resurvey may depend upon the purpose of the resurvey. It may be to enable an assessor to re-inspect a problem area or it may simply be a scheduled visit. Whatever the reason, the assessor should check that all the features that were ticked as satisfactory on the previous visit are still satisfactory. The Checklist helps achieve this goal.

The safe-site philosophy
Construction sites are dangerous workplaces and the Joint Code, if properly applied, can help make them safer. It is important to remind those who are responsible for site activities of a cautionary note which appears near the beginning of Fire Prevention on Construction Sites:

‘If compliance with this Code forms part of the insurance contract, non-compliance with this Code could possibly result in insurance ceasing to be available or being withdrawn, resulting in a possible breach of a construction contract which requires the provision of such insurance.’

If an insurance policy provides cover for a site where the Joint Code is in operation, such policy should normally contain an endorsement noting this and outlining the respective rights and responsibilities of Insured and Insurer. While there is no mandatory version of such policy endorsement and no requirement for any endorsement to be used, a model form is shown on page 30 of the Joint Code of Practice.

Conclusion
Care has been taken to match the questions of the Checklist to the measures in the Joint Code but, if in doubt, the user should give precedence to the latter. It is anticipated that this Checklist will play its part in securing compliance with the Joint Code, thus reducing the numbers of construction site fires and their attendant problems.

Availability of the Joint Code
Copies of the Joint Code may be purchased from: Publications Department, Fire Protection Association, London Road, Moreton in Marsh, Gloucestershire GL56 0RH. Tel: +44 (0)1608 812 500. Fax: +44 (0)1608 812 501. Email: sales@thefpa.co.uk.
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Important notice

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### SITE DETAILS

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5. Design phase

- Where the project is notifiable to the Health & Safety Executive (HSE) under the Construction (Design and Management) Regulations (CDM Regulations), has the client required that client-appointed parties – designers, CDM co-ordinator and the principal contractor – are co-operating and discharging their duties to identify and eliminate hazards and reduce the likely risk from hazards where elimination is not practicable?

- Where the project is not notifiable to the HSE under the CDM Regulations, has the client identified who is responsible for ensuring fire risk and potential for damage has been fully considered and kept to a minimum during construction and use?

- Has consideration been given to all potential fire hazards which have been identified at the design stage?

6. Construction phase

6.1 Responsibilities

- Has a ‘responsible person’ been identified as defined in the Regulatory Reform (Fire Safety) Order 2005 or equivalent legislation in Scotland and Northern Ireland?

- For notifiable projects, has the CDM co-ordinator ensured that project-specific suitable management arrangements for health and safety are in place, including the production of a suitable health and safety construction phase plan (which includes a fire safety plan)?

- Where the client has only partial control, are they co-operating with other responsible persons to ensure fire safety measures for the site are co-ordinated and do not conflict?

6.1.1 Responsible person

- Has the responsible person taken such general fire precautions as will ensure, so far as is reasonably practicable, the safety of his employees and, in relation to persons who are not his employees, taken such general fire precautions as may reasonably be required in the circumstances, including:

  (a) all procedures, precautionary measures and safety standards as laid down in the site fire safety plan are clearly understood and complied with by all those on the project site(s)?

  (b) where necessary, a system using hot work permits is established, and compliance monitored?

  (c) checks of firefighting equipment are carried out and all alarm and detection devices installed on site are tested?
(d) weekly inspections are conducted of escape routes, fire and rescue service access, firefighting facilities, temporary emergency lighting, the routing of temporary electrical cables and work areas. The requirements laid down in the site fire safety plan should also be monitored?

(e) liaison is maintained with the local fire and rescue service and they are invited to undertake site inspections and familiarisation tours?

(f) liaison is maintained with site security personnel where they are employed?

(g) a proper maintenance regime for fire protection equipment is instituted, including the keeping of a written record of all checks, inspections and tests?

(h) a written record of training of site operatives and of all fire patrols and fire drill procedures is maintained?

(i) the detailed arrangements and actual procedures for calling the fire and rescue service are regularly monitored and checked?

(j) during an alarm, those duties required for the safe evacuation of the site are executed, and all staff and visitors report to the assembly points?

(k) a fire safe working culture is proactively promoted at all times?

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**6.1.2 Fire marshals**

- On high fire risk sites, has the principal or main contractor appointed a fire marshal and deputy fire marshal(s) that are permanently based on site to assist in the implementation of the site fire safety plan?

- Where circumstances dictate that the fire marshals’ role shall be part-time, has the fire marshal(s) been afforded sufficient time to execute their fire safety role?

- Have they been adequately trained in fire safety matters, and do they have sufficient status and authority for the effective execution of their duties and responsibilities?

- Has the fire marshal(s) liaised with the emergency services?

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**6.2 Fire safety plan**

- Does the fire safety plan detail, as a minimum, the following requirements stated in the Joint Code of Practice:

  (a) the organisation of, and responsibilities for, fire safety and arrangements for recording all training given to site operatives?

  (b) general site precautions, fire detection and alarm systems, temporary emergency lighting and fire points?
(c) the locations of designated smoking areas where they are provided in compliance with no smoking legislation? □

(d) the requirements for a hot work permit regime where hot work cannot be avoided by other means? □

(e) temporary buildings and temporary accommodation, including location, fire protection, construction and maintenance? □

(f) fire escape and communications (including an effective evacuation plan and procedures for calling the fire and rescue service)? □

(g) fire and rescue service access, facilities and co-ordination? □

(h) instructions given to those on site of the required actions in case of fire? □

(i) security measures to minimise the risk of arson? □

(j) a materials storage and waste control regime, with particular reference to flammable and highly flammable materials? □

(k) the maintenance of temporary electrical installations? □

7. Liaison with the emergency services

- During the design phase, has the CDM co-ordinator ensured that designers have contacted the fire and rescue service to identify requirements for access? □

- At the commencement of the construction phase, has the principal contractor contacted the fire and rescue service, provided an initial site plan and agreed provision for water supplies? □

- Thereafter, have updated site plans been made available for the fire and rescue service to use, detailing the following requirements stated in the Joint Code of Practice:
  
  (a) fire and rescue service access, firefighting shafts, fire lifts and temporary hoist facilities? □
  
  (b) dedicated emergency escape routes and staircases? □
  
  (c) sprinkler installations? □
  
  (d) floor loading limitations? □
  
  (e) positions of hydrants on or near the site, dry riser inlets and wet risers? □
  
  (f) fire points? □
  
  (g) temporary buildings and temporary accommodation? □
  
  (h) hazardous items (eg flammable liquids, gas cylinders, gas mains, electrical risers, temporary holes in floor slabs)? □

- Where work on the site may have an impact on traffic movements in the vicinity, has liaison been established with the local police? □
8. Emergency procedures

- Has a means of giving warning of fire been established on site and is it readily identifiable as being a fire alarm?
- Is the sound of the fire alarm audible above background noises in all areas?
- Where manually operated devices are used, have these been provided in multiple locations to ensure they can be accessed at all times?
- Has a specific fire risk assessment been conducted where there are manually operated devices inside an enclosed building?
- Where a remotely monitored or wireless fire alarm system is used, has consideration been given to ensuring that the signal system remains uninterrupted throughout the duration of the work?
- Are written emergency procedures prominently displayed and also given to personnel on site?
- Is clear access to the site and buildings maintained at all times?
- Have nominated personnel (such as security guards) been briefed to provide clear access to the site in the event of an emergency?
- If necessary, is temporary emergency lighting provided prior to the installation and commissioning of a fixed system?
- Are clear signs installed and maintained in prominent positions to indicate the locations of:
  - fire and rescue service access routes?
  - escape routes?
  - dry riser inlets?
  - fire extinguishers?
  - manually operated devices used to raise a fire alarm?
- Are signs reviewed regularly and replaced or repositioned as necessary?
- In the case of a fire, are procedures in place to ensure contractors determine that all personnel on site have been accounted for, and that they pass this information to site security staff at the earliest opportunity?
- Has the principal or main contractor ensured that all members of the workforce are aware of the emergency procedures and their duties, via inductions, refresher courses or other suitable processes; and has particular care been taken where people do not speak English as their first language?
9. Fire protection

- Have the employer and the designers – in conjunction with the CDM co-ordinator – ensured, so far as reasonably practical, that the project is designed and planned in conjunction with the contractor and their programming of the works to achieve the early installation and operation of:
  
  (a) permanent fire escape stairs, including compartment walls?

  (b) fire compartments within the building under construction, including the installation of fire doors, and the completion of fire-stopping, with special attention given to lift shafts, stairwells, service ducts and voids which offer a passageway to heat and smoke?

  (c) fire-stopping, especially as work on buildings of modular construction progresses?

  (d) fire protective materials to structural steelwork?

  (e) planned firefighting shafts duly commissioned and maintained?

  (f) lightning conductors?

  (g) automatic fire detection systems where planned?

  (h) automatic sprinkler and other fixed firefighting installations where planned?

  (i) automatic fire detection and extinguishing systems, where these are to be installed to protect large or costly items of equipment or plant?

- Have adequate water supplies for firefighting been made available at the earliest opportunity as follows:

  (a) have rising and temporary mains been provided where planned?

  (b) have water supplies been tested periodically?

  (c) as the building increases in height, have temporary caps been used to seal the riser as necessary?

  (d) if necessary, has the fire brigade inlet point been moved as work progresses?

- In the case of high fire risk sites, following the agreement for water supplies with the fire and rescue service, has on-site water flow been tested and recorded before work commences? Every three months thereafter, have all valves be exercised?

- Are all hydrants clear of obstruction and suitably marked?

- Are appropriate extinguishers (such as those containing carbon dioxide) provided close to distribution panels and items of electrical equipment?

- Is a fire check undertaken at the end of each working day or shift, particularly in areas where hot work has been undertaken?
• Where 24-hour security is provided, are fire checks undertaken throughout the night, during holiday periods and at weekends? □

• Has permanent occupancy of any part of a building site been prohibited until all fire protection measures and installations are complete and, where appropriate, have been commissioned? □

• Have the insurers, local authority building control department and fire and rescue service been informed where occupancy is to be permitted? □

• Have construction workers been prohibited from living within the structure on which work is being undertaken? □

• Are caravans or similar purpose-built accommodation separated from the structure under construction or refurbishment, and enclosed by a palisade, fence or hoarding such that there is no interconnecting route between the two areas? □

10. Temporary covering materials

• When selecting a temporary protective covering material for finished surfaces, fittings or expensive items of plant and machinery, is regard paid to the relative fire load and potential for fire growth and spread? □

• Where flexible protective covering materials are used:
  (a) do they conform to the requirements of LPS 1207 or equivalent standard? □
  (b) are the materials manufactured in accordance with a quality assurance and certification programme? □
  (c) is the manufacturer certified by a third-party approval body accredited by UKAS? □
  (d) is the relevant approval mark printed on the material? □

• When flexible materials are used to clad scaffolding:
  (a) do these materials conform to the requirements of LPS 1215 or equivalent standard? □
  (b) are the materials manufactured in accordance with a quality assurance and certification programme? □
  (c) is the manufacturer certified by a third-party approval body accredited by UKAS? □
  (d) is the relevant approval mark printed on the material? □

• Where overprinting of materials with advertising or images occurs, has confirmation been sought through the certification body that this does not detrimentally affect their fire performance? □

• Has at least one fire escape stairway been kept free of all protective coverings (as flame retardant covering material can still burn)? □
11. Portable fire extinguishers

- Are adequate numbers of appropriate portable fire extinguishers – approved and certificated by an independent, third-party certification body – provided throughout the site in accordance with the requirements of BS 5306-8: Fire extinguishing installations and equipment on premises. Selection and installation of portable fire extinguishers. Code of Practice?

- In the case of high fire risk sites, have additional portable fire extinguishers been provided – especially on escape routes – in accordance with the fire risk assessment?

- Are site personnel trained to use the portable firefighting equipment provided?

- Are extinguishers located in conspicuous positions near exits on each floor?

- In the open, are extinguishers situated in red boxes raised 500mm above ground level with a sign ‘FIRE POINT’ at a height readily seen above intervening huts or storage?

- Is all firefighting equipment which is not designed to come into use automatically easily accessible?

- Is all portable firefighting equipment serviced annually by a qualified person in accordance with BS 5306-3: Fire extinguishing installations and equipment on premises. Code of Practice for the inspection and maintenance of portable extinguishers, and the maintenance service date recorded, including marking on the appliances?

- As work progresses, is the adequacy of portable firefighting equipment reviewed?

- Do all ‘ride-on’ mechanically-propelled site plant carry suitable extinguishers where reasonably practicable?

12. Site security against arson

- Has a separate risk assessment been undertaken to specifically consider the implications of wilful fire raising?

- Are buildings suitably protected against theft and arson in accordance with the fire risk assessment?

- Is the site secured against unauthorised entry as far as reasonably possible, ideally with a hoarding erected around the perimeter of the site, or, on refurbishment sites, by securing all access points such as windows and doors?

- Where the completed project provides for permanent security fencing, has it been brought forward in the programme and utilised during the construction phase?
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<td>Has pedestrian access points and vehicle gates been secured with high-security close or concealed shackle padlocks and chains of a commensurate quality?</td>
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<td>Where the building envelope forms the site perimeter, have all accessible openings –such as ground floor windows and doors and vulnerable higher level windows – been secured against unauthorised entry?</td>
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<td>Are doors and windows fitted with locks, and secured when the building is vacant?</td>
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<td>Are stores for flammable liquids, LPG cylinders and combustible materials fenced or suitably protected?</td>
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<td>Has the installation of site illumination been carefully considered?</td>
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<td>Are contracted security guards licensed under the Private Security Industry Act 2001?</td>
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<td>Has the installation of CCTV cameras been considered for high-risk and expensive projects?</td>
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<td>Are all personnel on the alert for fires started maliciously by on-site staff?</td>
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<td>In the event of suspension of site works, are the security and fire risk assessments reviewed and precautions agreed with the security provider?</td>
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13. Temporary buildings and temporary accommodation

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<td>Does the site fire safety plan include a suitable and sufficient fire risk assessment for all temporary buildings and temporary accommodation, and is the assessment reviewed periodically?</td>
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<td>Are temporary buildings separated from the building under construction or refurbishment and other permanent buildings to provide a fire break as great as reasonably possible?</td>
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<td>Are rows of temporary buildings separated to provide a reasonable fire break?</td>
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<td>Where the fire break is less than 6m, are temporary buildings constructed with materials that do not significantly contribute to the growth of a fire or the propagation of smoke and corrosive or toxic fumes?</td>
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<td>Where the fire break is less than 6m, are temporary buildings designed and constructed so as to meet the criteria laid down in the Joint Code of Practice (section 13.4, (a)-(d)) or to comply with the test specifications or procedures of an independent, third-party testing organisation (see Joint Code for further details)?</td>
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<td>Where floors of temporary building(s) are raised above ground level, is the space beneath enclosed to prevent accumulation of rubbish, while still allowing under-floor ventilation?</td>
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• Is temporary accommodation constructed with materials which will not significantly contribute to the growth of a fire, smoke or corrosive fumes?

• Does temporary accommodation meet the criteria of the Joint Code of Practice (section 13.6 (a)-(c))?  

• Wherever possible, do fire exits from temporary buildings and temporary accommodation lead directly to the open air and away from the structure on which work is being undertaken?

• Are escape routes subject to periodic assessment?

• Where necessary, is temporary protection to provide at least 30 minutes’ fire resistance provided to ensure the safe passage of personnel to a place of safety away from the site?

• If it is necessary to install temporary buildings or temporary accommodation within the building under construction or refurbishment:

  (a) do the temporary buildings or temporary accommodation meet the fire performance characteristics outlined in the Joint Code of Practice in sections 13.4 and 13.6?

  (b) is there easy access for the fire brigade?

  (c) is there easy evacuation for personnel?

  (d) are they sited on the ground floor if possible?

• If there is no practical alternative but to site the temporary buildings or accommodation in a basement or on an upper floor:

  (a) are precautions adopted following a suitable fire risk assessment and consultation with appropriate authorities?

  (b) are these precautions maintained until the temporary buildings or temporary accommodation can be relocated to a safer position?

• Are temporary buildings or temporary accommodation which are located inside the building under construction or refurbishment, or inside another permanent building or within 6 metres of such buildings:

  (a) fitted with fire detection systems complying with a recognised Category of installation as set out in BS 5839-1: Fire detection and alarm systems for buildings. Code of practice for system design, installation, commissioning and maintenance?

  (b) in the case of high fire risk sites, fitted with fire detection systems linked to an alarm receiving centre, unless there is a 24-hour site security presence on site?
• Are heaters in temporary buildings and temporary accommodation:
  (a) fixed, preferably above floor level?
  (b) fitted with securely fixed metal guards?
  (c) maintained in a sound condition?
  (d) thermostatically controlled, with enclosed elements?
• Are coat stands and drying racks firmly positioned at a safe distance from heaters?
• Are all heaters and cooking appliances properly installed and is adequate ventilation provided?
• Where possible, are microwave ovens used to cook or heat food? Otherwise, are electrical or gas cookers chosen in preference to gas rings?
• In temporary buildings and temporary accommodation and areas where flammable liquids and gases are stored, has careful consideration been given to the installation of automatic fire detection systems and intruder alarms?
• In temporary buildings and temporary accommodation used for cooking or the drying of clothes:
  (a) are automatic fire detection systems installed?
  (b) do such systems comply with a recognised Category of system as set out in BS 5839-1?
  (c) has consideration been given to the installation of automatic sprinkler systems and intruder alarms?
• Is the amount of combustible furniture and fittings contained in temporary buildings kept to a minimum?
• Have open plan areas created by linking prefabricated units of temporary buildings and areas of temporary accommodation used for multiple purposes been sub-divided by fire-resisting construction to provide at least 30 minutes’ fire resistance where deemed necessary by the fire risk assessment of the area?

14. Site storage of flammable liquids and LPG
• Are containers of flammable liquids and LPG cylinders stored, as a matter of preference, in open compounds?
• Are stores of liquid fuels surrounded by an imperforate bund sufficient to contain the maximum contents of the largest drum stored, plus 10 per cent?
• Are water and waste material prevented from accumulating in the bund?
• Are flammable liquids and LPG stored separately?
• Where it is necessary to store flammable liquids and gases in circumstances other than in accordance with the above criteria:
(a) is the quantity so stored kept to the minimum necessary and no more than a day’s supply? □
(b) are the containers kept in a store, cupboard or bin which is of fire-resistant construction? □

- Are storage areas sited as far as reasonably practicable from permanent and temporary buildings, and at a minimum of 20m wherever possible in the case of high fire risk sites? □
- Are containers and drums not stored within 4m of any building or boundary fence unless the boundary is a wall at least 2m high and constructed to provide a minimum of 30-minutes’ fire resistance, and, in the latter case, are containers and drums at least 1m below the top of the wall? □
- Are products which could add to the intensity of a fire (such as acetylene or oxygen) or to the toxic hazard in the event of fire (such as chlorine) stored in separate compounds from flammable liquids and LPG? □
- Are appropriately worded warning signs (eg ‘HIGHLY FLAMMABLE LIQUIDS’, ‘NO SMOKING’ and ‘NO NAKED LIGHTS’) displayed prominently at the entrances to stores? □
- Are stores for flammable liquids or LPG cylinders:
  (a) paved or compacted level? □
  (b) provided with a suitable hard standing for the delivery and dispatch of cylinders? □
  (c) kept clear of all flammable materials, weeds and rubbish? □
- Are any electrical fittings within stores (such as lights and switches) suitable for the environment in which they are to be used, and selected and installed by competent persons? □
- Has the provision of automatic flammable gas detection equipment been considered for enclosed storage locations? □
- Are adequate numbers of suitable fire extinguishers provided at storage area entrances? □
- Where possible, are designated areas provided for fuelling plant and vehicles? Is the use of petrol generators in high risk structures discouraged? □

15. Acetylene

- Wherever reasonably practicable, has the use of acetylene on construction sites been eliminated and alternative methods of cutting and welding adopted? □
- Where the use of acetylene is unavoidable, is the number of spare cylinders stored on site kept to the absolute minimum? □
• Are acetylene cylinders removed from the workplace and returned to the storage area as soon as the period of work has been completed?

• Are acetylene cylinders removed from the site as soon as their use is complete?

• Are gas cylinders always adequately supported, preferably by securing on purpose-built trolleys using straps or chains?

16. Hot work

• Where possible, are alternative methods to hot work adopted?

• When there is no alternative to hot work, is the hot work undertaken – whenever possible – in a dedicated area away from the area of work or storage of materials?

• Is all hot work subject to a hot work permit:
  (a) once fitting out work has commenced on site?
  (b) in all buildings which are being refurbished?

• Do hot work permits only cover specific, identified activities and locations, and are they signed off at the end of each work period?

• Are ‘blanket’ permits (eg covering hot work activities over an extended period or several days) prohibited?

• Before starting hot work:
  (a) has the area been cleared of all loose combustible material?
  (b) if work is to take place on one side of a wall or partition, has the opposite side been examined to ensure no combustible material will be ignited by conducted heat?

• Are a suitable number of appropriate fire extinguishers at hand?

• Is a careful watch for fire breaking out maintained whilst work is in progress?

• Has exposed wooden flooring and other items of combustible material which cannot be removed been covered with sand or other non-combustible material?

• When welding, cutting or grinding, has the work area been suitably screened using non-combustible material?

• Is it ensured that equipment and hoses used with oxy-acetylene and similar equipment:
  (a) is in good condition?
  (b) is set up in accordance with the manufacturer’s instructions?
  (c) is subject to a visual inspection before each period of use?
• Are welding and cutting procedures only carried out under the supervision of trained personnel? □

• Are flashback arrestors used? □

• Are gas cylinders secured in a vertical position and fitted with a regulator and flashback arrester? □

• Are tar boilers and similar equipment placed at ground level wherever possible? □

• Are tar boilers only ever used above ground level if a risk assessment shows that using the tar boiler on the ground poses an overall greater hazard? □

• Are the following precautions applied when using tar boilers:
  (a) is a non-combustible heat insulating base provided? □
  (b) is the equipment supervised by an experienced operative who can monitor the bitumen level and temperature and ensure the lid remains on the boiler? □
  (c) is the boiler sited where spilled material can be easily controlled? □
  (d) are gas cylinders at least 3m from the burner, secured in a vertical position and connected by flexible armoured hose? □
  (e) are at least two appropriate fire extinguishers to hand? □
  (f) are hazardous materials removed from the location as soon as work is completed and before the hot work permit is signed off? □
  (g) are lit tar boilers never left unattended? □

• Are any areas specified in a hot work permit periodically examined during the hour immediately following completion of the work before the permit is signed off? □

17. Electricity and gas

• Are all temporary and permanent electrical supply installations installed in accordance with the latest edition of BS 767: Requirements for electrical installations, IEE Wiring Regulations, and the Electricity at Work Regulations 1989? □

• Does portable electrical equipment used on site carry durable labels which display that it has been inspected and tested and is in satisfactory condition? □

• Is all electrical work undertaken by a competent electrician as defined in BS 7671? □

• Are all installations (especially of a temporary nature) inspected regularly and tested at least every three months or when they have been altered, and are the results recorded in a register kept for the purpose? □

• Is electric cabling (especially of a temporary nature) protected against damage from construction site activities in its vicinity? □
### 18. Waste materials

- Is combustible waste kept to a minimum?  
- Are waste packing materials, wood, shavings and oily rags regularly removed?  
- Is special attention paid to corners, bases of shafts and other out-of-the-way places?  
- Are unwanted materials regularly collected from open areas of the site?  
- Are separate metal bins with close-fitting metal lids provided for the disposal of flammable materials such as oily rags?  
- Is all collected combustible waste materials awaiting disposal kept in an area as far as reasonably practical away from the building under construction, temporary accommodation, smoking shelters, stores and equipment?  
- Is all dry vegetation cleared regularly?  
- Is the burning of any vegetation or rubbish on site avoided unless absolutely necessary and only considered in very limited situations, such as site clearance for major roadworks?  
- In the rare circumstances when site burning is contemplated, have checks been made with clients, local authorities and the Environment Agency?
Where site burning is permitted:
(a) has a fire risk assessment been carried out? ☐
(b) is it controlled by a permit-to-burn system? ☐

Where a permit-to-burn system is used:
(a) have prior approvals and necessary permits been obtained from all of the relevant authorities? ☐
(b) are fires only lit on open designated ground that is far enough removed (typically 50m) from adjoining material, storage areas, flammable liquid stores, plant, structures or neighbouring property? ☐
(c) are materials only burnt in a properly designed incinerator, which is sited and maintained in accordance with the manufacturer’s recommendations, and are regular checks made to ensure that the spark arrestor and flue do not become clogged or corroded? ☐
(d) is the fire extinguished at least 60 minutes before the site closes? ☐
(e) is a permanent fire watch maintained by a nominated person at all times? ☐
(f) does the nominated person have the correct fire extinguishers or other suitable equipment to hand and are they trained in their use? ☐
(g) has material to be burnt been checked for dangerous items such as empty cylinders, aerosol cans and flammable substances, and have such dangerous items been removed and safely disposed of before the material is brought to the fire? ☐
(h) are incinerators located to avoid overhead cables? ☐
(i) are flammable liquids prohibited from being used to assist fires? ☐

19. Plant and vehicles
(a) Is all stationary plant with internal combustion engines:
 positioning in the open air or in well-ventilated, non-combustible enclosures? ☐
(b) sited so that exhaust pipes and exhaust gases are kept clear of combustible materials? ☐

If plant and vehicles are to be refuelled on site:
(a) are fuel tanks filled only when engines are switched off? ☐
(b) are vehicles only fuelled in designated areas? ☐
(c) is fuel stored in accordance with section 14? ☐

Are compressors housed singly away from other plant and in separate enclosure(s)? ☐

Are plant and equipment protected against accidental impact? ☐
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### 20. Stored materials

- Where reasonably practicable, are combustible materials stored outside the building under construction or undergoing refurbishment and far enough from it to prevent fire spread from the materials to the building?

- Where combustible materials are stored inside the building, are the areas used for storage:
  - (a) controlled in terms of access?
  - (b) not in an area where hot work is being carried out?
  - (c) covered by the site fire detection system or included on the route of regular fire checks?
  - (d) located with firefighting equipment close by?

- Is all non-essential combustible wrapping and packaging removed to a safe place away from the working area and disposed of at the earliest opportunity, at least once per day?

- Has the protection of combustible materials with a layer of material conforming to the requirements of LPS 1207 been carefully considered?

### 21. Smoking

- Is a no-smoking policy established on site with the exception of designated smoking areas?

- Where a smoking shelter is provided, is it:
  - (a) subject to a specific fire risk assessment?
  - (b) constructed of non-combustible materials?
(c) situated as far as reasonably practicable from any building or structure, but at least 20m on a high fire risk site, where possible?

(d) provided with suitable metal ashtrays and a separate metal waste bin with a fitted metal lid?

(e) provided with a suitable fire extinguisher?

• Is the immediate area around the shelter, and the shelter itself, kept clear of combustible materials, including windblown debris and vegetation?

• Are concealed or semi-open spaces sealed to ensure combustible debris cannot accumulate beneath the shelter, and are raised, slatted floors and decking avoided?

• Is the use of combustible curtains, canopies and drapes to protect smokers from the elements avoided?

• Is the shelter sited away from:

  (a) windows?

  (b) ventilation intakes or extracts?

  (c) entrances and exits from the premises?

  (d) hazardous materials?

  (e) waste storage containers (such as skips or bins)?

  (f) a canopy or low-slung eaves?

• Where no shelter is provided, are areas where smoking is permitted free of combustible materials and equipped with firefighting equipment, metal ashtrays and a separate metal waste bin with a fitted metal lid?

• Is a ‘no smoking’ policy established in outside areas where fire hazards exist (such as refuse and storage areas containing combustible materials, flammable liquids – including refuelling supplies – gas cylinders, foam plastics, fibreboard and timber)?

• Are ‘NO SMOKING’ notices displayed prominently in these areas?

### 22. High-rise construction sites

• Where construction progresses at heights at which normal fire protection measures may not be applicable, has a specific fire risk assessment been undertaken to develop appropriate provisions, primarily to ensure that people working in the structure can escape safely and without undue delay?

• Has the fire risk assessment been undertaken after consulting with the fire and rescue service, and before work commences at a height at which mechanical rescue by the fire brigade is no longer viable?
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<tr>
<td>Are fire doors with self-closers fitted to protect the escape stairs in accordance with the findings of the fire risk assessment, and are these in place when the structure reaches the criteria for a high-rise construction site?</td>
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<td>Is at least one staircase designated as the firefighting stair, for the exclusive use of the fire service during the course of an emergency, and have any firefighting lifts included in the building been commissioned and brought into service at the earliest opportunity?</td>
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<td>Where reasonably practicable, is the building horizontally fire compartmented at intervals not exceeding 10 floors? Is this being done using temporary fire-stopping materials having no less than 30-minutes' fire resistance, until the permanent fire-stopping arrangements can be put in place? Are all holes, shafts and openings closed off, including service risers, lift shafts and stairwells?</td>
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<td>Where temporary fire-stopping is removed to allow construction operations in the area to be carried out, is it replaced whenever work stops and outside normal site working hours (eg at nights and at weekends)?</td>
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<td>Are all openings to floors (from atriums, stairways, lift shafts and shafts used for crane towers) fitted with doors with self-closers to provide at least 30-minutes' fire resistance?</td>
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<tr>
<td>Are all other openings between floors and stairways, lift shafts and crane tower shafts fire-stopped as indicated above?</td>
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<td>Are risers, shafts, ducts and similar openings between floors closed off with doors having 30-minutes' fire resistance, and are these doors treated in the same way as the temporary fire-stopping mentioned above (ie only opened on any given floor when work is actually in progress inside the shaft at that level)?</td>
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<td>Are electrically operated fire alarm systems provided throughout the height of the building? Do these comprise break-glass (or similar) call-points and sounders on all levels, plus a link to a permanently occupied security office (or similar) from where the fire and rescue service can be summoned, firefighting system activated and other appropriate actions instigated?</td>
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<td>Do all components or all parts of the system have battery back-up to ensure continuity of operation in the event of a loss of power supplies?</td>
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<td>When work reaches a height at which the site is termed a high-rise construction site, is a wet riser provided fed by duplicate pumps as set out in BS 9990 so as to provide water in sufficient quantities and at sufficient pressure for effective firefighting?</td>
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Annex A

Best practice advice for the construction of large timber frame buildings

- Has the use of timber with appropriate fire protection treatment been seriously considered during the design phase of all timber buildings?

- Where multiple large timber-framed structures are being built on one site, the period of maximum vulnerability is when structures are incomplete. Has this hazard been considered in detail and minimised as part of the fire risk assessment?

- Has the building been compartmented at the earliest stage possible?

- In order to reduce the spread of fire up a building through unstopped ducts and shafts, has consideration been given to fitting temporary horizontal fire retardant boarding as work progresses?

- Have permanent fire-resisting doors, panels and fire-stopping been installed as early in the construction process as possible?

- Has the final cladding to a building been put in place at as early a stage as possible?

- Has the proximity of an incomplete structure to the site boundary and to surrounding buildings been considered as an important element of the fire risk assessment?

- Has serious consideration been given to mitigating the spread of fire to adjacent structures, by facing exposed timber construction and combustible insulation with non-combustible materials at the earliest opportunity?

- Has the use of non-combustible materials been extended to window and door openings not required as a means of escape, as appropriate?

- Has access to the building under construction been denied when work is not in progress, even when the perimeter of the site is secure?
Construction Site Fire Prevention Checklist

Third edition

This Checklist complements the Joint Code of Practice, Fire Prevention on Construction Sites, published by the Fire Protection Association and the Construction Confederation. It is aimed at those who have responsibility for assembling and implementing the Site Fire Safety Plan, an essential feature of the Joint Code. It can be used to accumulate a record of the fire precautions history at a particular construction site or building undergoing refurbishment. The Checklist takes the form of a series of questions, all representing requirements of the Joint Code, and all of which demand a positive response if the works being surveyed are to comply with the Joint Code.

Contents:

Introduction; Site details; Requirements of the Joint Code of Practice: Design phase; Construction phase; Liaison with the emergency services; Emergency procedures; Fire protection; Temporary covering materials; Portable fire extinguishers; Site security against arson; Temporary buildings and temporary accommodation; Site storage of flammable liquids and LPG; Acetylene; Hot work; Electricity and gas; Waste materials; Plant and vehicles; Stored materials; Smoking; High-rise construction sites.