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# Fire Prevention on Construction Sites

*The Joint Code of Practice on the  
Protection from Fire of Construction Sites  
and Buildings Undergoing Renovation*

With the support of:  
The Association of British Insurers  
The Chief and Assistant Chief Fire Officers Association  
The London Fire Brigade

This joint document was stimulated by a wide group of leading clients, developers, contractors, insurers and regulating bodies who lend their support to both its contents and its implementation throughout the industry.

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**Fifth edition: January 2000**

## Notes to the fifth edition

The following is a synopsis of the principal alterations to the fourth edition. The Working Party has also taken the opportunity to incorporate a number of minor textual changes throughout the document.

- Paragraph 1 Objectives of the Code**  
Redrafted and includes a statement of the contract value of works to which the Code applies.
- 2 Compliance with the Code**  
Contract value stated in 2.2.
- 4 Definitions used in this Code**  
Sub-paragraph 4.3 now includes definitions of both Temporary Buildings and Temporary Accommodation.  
Minor revision of 4.4(a) with regard to sites whereon break glass call points are required.  
Sub-paragraph 4.6 has been revised.  
New 4.8 added, to provide the value of a Large Project.
- 6 Construction phase**  
Sub-paragraph 6.1(a) now includes a reference to arrangements for keeping records of training of site operatives as an item of the site fire safety plan.  
Sub-paragraph 6.1(b) has been extended to incorporate within the duties of the Principal Contractor or the Site Fire Safety Co-ordinator the keeping of a written record of the training of site operatives.  
Sub-paragraphs 6.1(d), 6.1(h) and 6.2(b) have been revised.  
In 6.3 the reference to Temporary Accommodation has been expanded.
- 8 Fire protection**  
The new 8.1(h), formerly 8.5, has been moved to its more appropriate position here.  
First sentence of 8.2, concerning the availability of water supplies for fire fighting, has been rephrased.  
The new 8.5, formerly 11.5, has been moved to its more appropriate position here.
- 9 Temporary covering materials**  
The first sentence of 9.2 has been simplified.
- 11 Site security against arson**  
Sub-paragraph 11.2 has been split into two, the new 11.2 and 11.3.  
Former 11.3 and 11.4 are renumbered 11.4 and 11.5.  
Former 11.5 has become 8.6 (see above).
- 12 Temporary buildings and temporary accommodation**  
The paragraph has a new, expanded title and section 12.1 has been revised, with a cross reference to 4.3. The clarified definitions of Temporary Buildings and Temporary Accommodation are now used throughout this paragraph.  
The word "appropriate" has been inserted preceding the reference to Building Regulation in 12.4(d).  
The first sentence of 12.7 has been revised.
- 13 Site storage of flammable liquid and LPG**  
Sub-paragraph 13.7 has been revised.
- 16 Waste materials**  
Sub-paragraph 16.3 has been reworded.
- Reference documents**  
The list has been revised.

## FURTHER COPIES AVAILABLE FROM:

### CIP Limited

Construction Confederation, Lyndon DRC,  
60 New Coventry Road, Sheldon, Birmingham B26 3AY

Telephone: 0121 722 8200  
Fax: 0121 722 8201

### Fire Protection Association

Bastille Court, 2 Paris Garden, London SE1 8ND

Telephone: 020 7902 5300  
Fax: 020 7902 5301

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## CONTENTS

	Page
1 Objective of the Code	2
2 Compliance with the Code	2
3 Introduction	2
4 Definitions used in this Code	2
5 Design phase	3
6 Construction phase	3
7 Emergency procedures	4
8 Fire protection	5
9 Temporary covering materials	6
10 Portable fire extinguishers	6
11 Site security against arson	6
12 Temporary buildings and temporary accommodation	6
13 Site storage of flammable liquids and LPG	8
14 Electricity and gas supplies	9
15 Hot work	9
16 Waste materials	10
17 Plant	10
18 Materials' storage	10
19 Smoking	11
Reference documents	11

### **Note on drafting**

Where this Joint Code of Practice uses the word “must” then the procedure to which it applies is compulsory. Where the word “should” is used then the procedure is recommended best practice.

## 1 OBJECTIVE OF THE CODE

Every year there are numerous major fires on construction sites and in buildings undergoing refurbishment. All have serious consequences: people are injured; buildings, including those of historic interest, are destroyed. Plant and equipment is damaged, work is held up and completion dates are not met.

The objective of this Code is the prevention of fires on construction sites. The majority of fires can be prevented by designing out risks, taking simple precautions and by adopting safe working practices. All parties involved must work together to ensure that adequate detection and prevention measures are incorporated during design and contract planning stages; and that the work on site is undertaken to the highest standard of fire safety thereby affording the maximum level of protection to the building and its occupants.

The Code applies to activities carried out prior to and during the construction and design process, not the completed structure, and should be read in conjunction with the Construction (Design and Management) Regulations 1994 (the CDM Regulations) and the Construction (Health, Safety and Welfare) Regulations 1996 where applicable.

The Code applies to projects with a contract value of £2.5 million and above. A Large Project is one with a value of £20 million and above. There may be exceptional circumstances where due to a high fire risk nature of a project these thresholds are reduced.

## 2 COMPLIANCE WITH THE CODE

2.1 Compliance with this Code, which applies to construction sites, including those where demolition, alterations, fitting out, renovations, refurbishment or repair work is being carried out, will minimise the risk of accidental or malicious fires.

2.2 Insurers will require compliance on all projects with an original value of £2.5 million or above. For certain higher risk projects application may be required at a lower threshold. All parties should always check with their insurance advisers.

NB: Non-compliance with the Code by the Construction Industry, by those who procure construction and by construction industry professionals could result in insurance ceasing to be available or being withdrawn resulting in a possible breach of construction contracts which require the provision of such insurance.

## 3 INTRODUCTION

Proper planning for fire, safety and health must be an integral part of overall preparation and budgeting for the efficient running of construction projects. Clear procedures and standards must be laid down and adequate resources, in terms of time, materials and money, must be committed to the prevention of fires, accidents and ill-health by all concerned with the project.

## 4 DEFINITIONS USED IN THIS CODE

4.1 **Fire Resistance:** the ability of an element of building construction, component or structure to fulfil, for a stated period of time, the stability and fire integrity requirements of BS 476 Parts 20, 21 and 22;

4.2 **Refurbishment:** the alteration, renovation or repair of an existing building or structure;

4.3

(a) **Temporary Buildings:** includes prefabricated cabins, site huts, cargo containers, caravans, portable and sectional buildings brought onto site for use as offices, stores, workshops, welfare facilities etc during the course of the works.

(b) **Temporary Accommodation:** areas that are segregated within the building under construction or undergoing refurbishment and occupied as offices, stores, workshops etc during the course of the works.

4.4

(a) **Fire Alarm System:** any means utilised for giving warning of fire on a site. The most basic system may be no more than a hand-held siren or manually operated gong. Certain sites by

their size and nature may require “break glass” call points which, when broken, electronically operate bells, klaxons or sirens;

- (b) **Fire Detection System:** system comprising components for automatically detecting a fire, initiating an alarm and initiating other action as appropriate.
- 4.5 **Central Station:** continuously manned remote centre in which information concerning the state of intruder or fire alarm systems is displayed, recorded and passed to the emergency services.
- 4.6 **Hot Work:** operations requiring the use of open flames, grinding, welding or the local application of heat.
- 4.7 **Employer/Client:** the person for whom the project is being carried out, or the person named as the employer in the contract and/or Articles of Agreement.
- 4.8 **Large Projects:** projects where the original contract value is £20 million or above.

## 5 DESIGN PHASE

- 5.1 **Assessment of the Fire Risk During Design and Construction:** The Employer shall require the Designers, Planning Supervisor and Principal Contractor properly to discharge their duties under the terms of the CDM Regulations to ensure that the fire risk and potential for damage have been properly assessed and are kept to a minimum during construction. If the CDM Regulations do not apply to the project the Employer, in conjunction with those undertaking the design responsibility, e.g. Architect, Engineer and Contractor, must appoint a Co-ordinator for the design phase to discharge this function.

## 6 CONSTRUCTION PHASE

- 6.1 The Principal Contractor (if CDM applies) or Main Contractor shall appoint a competent person who will be responsible for assessing the degree of fire risk and for creating and regularly updating the site fire safety plan as construction proceeds. (The site fire safety plan may form part of the CDM construction phase health and safety plan.)

Where CDM applies the competent person must liaise with the planning supervisor regarding any relevant design information.

The plan must detail, as a minimum:

- (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 warning alarms;
- (c) the requirements for a Hot Work Permit regime;
- (d) temporary buildings and temporary accommodation - location, construction and maintenance;
- (e) fire escape and communications (including an effective evacuation plan and procedures for calling the fire brigade);
- (f) fire brigade access, facilities and co-ordination;
- (g) instructions given to those on site of the required actions in case of fire;
- (h) security measures to minimise the risk of arson;
- (i) a materials storage and waste control regime.

- 6.2 The Principal Contractor or Site Fire Safety Co-ordinator must:

- (a) ensure that 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) ensure that where necessary a system using Hot Work Permits is established and monitor compliance;
- (c) carry out weekly checks of fire fighting equipment and test all alarm and detection devices installed on site;
- (d) conduct weekly inspections of escape routes, fire brigade access, fire fighting facilities and work

- areas and monitor the requirements laid down in the Site Fire Safety Plan;
- (e) liaise with the local fire brigade and if requested by the fire brigade arrange site inspections and familiarisation tours;
  - (f) liaise with site security personnel where they are employed;
  - (g) ensure that a proper maintenance regime for fire protection equipment is instituted, including the keeping of a written record of all checks, inspections and tests;
  - (h) maintain a written record of training of site operatives and of all fire patrols and fire drill procedures;
  - (i) regularly monitor and check the detailed arrangements and actual procedures for calling the fire brigade;
  - (j) during an alarm, execute those duties required for the safe evacuation of the site, and ensure that all staff and visitors report to the assembly points;
  - (k) promote “a fire safe working environment” at all times.

### 6.3 Large Projects

- (a) On large projects, the Principal Contractor or Site Fire Safety Co-ordinator should appoint, where appropriate, a fire marshal(s) and deputy fire marshal(s) to assist in the implementation of the Site Fire Safety Plan.
- (b) Where appropriate, the fire marshal(s) should be full time but otherwise preferably combining this duty with health and safety responsibilities. However, where circumstances dictate a part-time role, it is essential that the fire marshal(s) are afforded sufficient time to execute their fire safety duties. They should be adequately trained in fire safety matters and have sufficient status and authority for the effective execution of their duties and responsibilities.
- (c) Liaison with the emergency services is essential. In particular, where requested by the fire brigade, site plans detailing the following must be provided:
  - fire brigade access, fire fighting shafts, fire lifts and temporary hoist facilities;
  - dedicated emergency escape routes and staircases;
  - positions of dry riser inlets and wet risers;
  - fire points;
  - Temporary Buildings and Temporary Accommodation;
  - hazardous items, e.g. flammable liquids, gas cylinders, gas mains, electrical risers, temporary holes in floor slabs etc.

## 7 EMERGENCY PROCEDURES

- 7.1 On all sites a means of giving warning of fire must be established. Handbells, whistles, klaxons or manually operated sounders may be practical so long as they are clearly audible above background noises in all areas and can be readily identified as being a fire alarm.
- 7.2 Written Emergency Procedures must be displayed in prominent locations and given to all employees on site. A good example of a set of fire orders is shown opposite.
- 7.3 Clear access to the site and buildings must be maintained at all times.
- 7.4 Nominated personnel, e.g. security guards, must have been briefed to provide clear access to the site in the event of an emergency.
- 7.5 Clear signs must be installed and maintained in prominent positions indicating the locations of fire access routes, escape routes and positions of dry riser inlets and fire extinguishers.

## SPECIMEN FIRE ORDERS



### ACTION IN THE EVENT OF FIRE

#### 1. Raise the alarm

Break the glass of the nearest call point (Delete whichever is not applicable)  
 Dial extension 222  
 OR  
 Shout FIRE, FIRE

#### 2. Call the fire brigade

Dial 9-999 and tell the operator that the fire brigade is required at the construction site at the junction of High Street and London Road, with access from London Road.  
 Special arrangements at night  
 Telephone using the night line in the Security Office.

#### 3. On hearing the site fire alarm

- All personnel to leave the site and assemble in the council car park.
- Foreman to take charge of teams and report to the Clerk of Works.
- Do not stop to collect personal belongings.
- Turn off generators, compressors and other powered equipment unless these provide power for emergency services.
- Turn off all heat producing equipment and shut cylinder valves.
- Attack fire with the equipment provided if it is safe to do so.
- Obey instructions from the Site Fire Safety Co-ordinator/Principal Contractor and fire marshal(s) or supervisory staff.
- Do not re-enter site until told it is safe.

## 8 FIRE PROTECTION

- 8.1** The Employer and the designers in conjunction with the Planning Supervisor or the **Co-ordinator appointed in accordance with paragraph 5.1** should ensure, so far as reasonably practical, that the project is designed and planned in sequence 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, service ducts and voids which offer a passageway to heat and smoke;
  - (c) fire protective materials to structural steelwork;
  - (d) planned fire fighting shafts duly commissioned and maintained;
  - (e) lightning conductors;
  - (f) automatic fire detection systems where planned;
  - (g) automatic sprinkler and other fixed fire fighting installations where planned;
  - (h) on particularly large or costly items of equipment or plant, the installation of Automatic Fire Detection and extinguishing systems should be considered.

- 8.2 Adequate water supplies for fire fighting should be available. Rising and temporary mains must be provided where planned. It may be necessary to use temporary caps to seal the riser as the building increases in height.
- 8.3 All hydrants must be clear of obstruction and suitably marked.
- 8.4 To protect distribution panels and items of electrical equipment, appropriate extinguishers (such as those containing carbon dioxide) must be provided close to the equipment concerned.
- 8.5 At the end of each working day a fire check must be undertaken, particularly in areas where hot work has been undertaken. Where 24 hour security is provided, fire checks should be undertaken throughout the night, during holiday periods and at weekends.

## 9 TEMPORARY COVERING MATERIALS

- 9.1 When finished surfaces or fittings incorporated into a building are to be temporarily protected during construction or refurbishment then in selecting a protective covering material regard must always be paid to the relative fire load and the potential for fire growth and spread.
- 9.2 Where flexible protective covering materials are used these must conform to the requirements of Loss Prevention Standard LPS 1207 *Fire Requirements for Protective Covering Materials* and manufactured in accordance with a quality assurance and certification programme via a certification body accredited by the United Kingdom Accreditation Service. The relevant approval mark together with the manufacturer's certificate number must be printed on the material.

## 10 PORTABLE FIRE EXTINGUISHERS

- 10.1 Personnel must be sufficiently instructed to be able to use the portable fire fighting equipment provided on site.
- 10.2 Adequate numbers of suitable types of portable extinguishers must be available throughout the site.
- 10.3 Extinguishers must be located in conspicuous positions near exits on each floor. In the open they should be situated in red painted boxes raised 500 (five hundred) mm above ground level with a sign "FIRE POINT" at a height readily seen above intervening huts or storage.
- 10.4 As work progresses the adequacy of portable fire fighting equipment must be reviewed.
- 10.5 "Ride-on" mechanically-propelled site plant should carry an appropriate fire extinguisher where reasonably practicable.

## 11 SITE SECURITY AGAINST ARSON

- 11.1 The most effective method of deterring trespassers as well as preventing malicious fires is to erect a hoarding or fence around the perimeter of the whole site.
- 11.2 Buildings must be suitably protected.
- 11.3 Flammable liquid stores, liquefied petroleum gas cylinder storage and combustible material stores must be fenced or otherwise suitably protected.
- 11.4 Illumination of the site is an additional deterrent to unauthorised access and is recommended.
- 11.5 On high risk and expensive projects the use of CCTV cameras is an option that should be seriously considered.

## 12 TEMPORARY BUILDINGS AND TEMPORARY ACCOMMODATION

- 12.1 Temporary Buildings and Temporary Accommodation are defined in section 4.3.
- 12.2 Where required by the Fire Certificates (Special Premises) Regulations 1976, the Principal

Contractor or other responsible person must ensure that application for a fire certificate for site offices is made to the Health and Safety Executive's area office.

- 12.3** Temporary Building(s) should be separated from the building under construction or refurbishment and other permanent buildings to provide a reasonable fire break, which should preferably be at least 10 (ten) metres.
- 12.4** Where the fire break is less than 6 (six) metres, Temporary Building(s) must be constructed with materials that do not significantly contribute to the growth of a fire or the propagation of smoke and/ or corrosive fumes. The Temporary Building should be designed and constructed so as to comply with test specifications laid down in LPS (Loss Prevention Standard) 1195 *Specification for Testing of Temporary Buildings for Use on Construction Sites*, published by the LPC. Alternatively, they should meet the following criteria:
- (a) Class 1 surface spread of flame performance in BS 476 Part 7 to all internal wall and ceiling surfaces and to external surfaces of walls. External surface of roof to meet Class AA in BS 476 Part 3;
  - (b) walls and roof to achieve 30 (thirty) minutes Fire Resistance (integrity and insulation) to BS 476 Parts 20 and 22; roof to be tested from below;
  - (c) doors and windows to achieve 30 (thirty) minutes Fire Resistance (integrity) to BS 476 Parts 20 and 22;
  - (d) where Temporary Building(s) are vertically stacked, the roof/floor assembly, and members supporting it should achieve at least 30 (thirty) minutes Fire Resistance (integrity, insulation and load-bearing capacity) to BS 476 Parts 20 and 21 and comply with appropriate Building Regulations requirements;
  - (e) furthermore, such Temporary Building(s) must be designed and constructed in such a way whereby the above fire characteristics can be demonstrated during a full-scale, real fire test of the overall assembly.
- 12.5** Where floors of Temporary Building(s) are raised above ground level, the space beneath must be enclosed to prevent accumulation of rubbish, whilst still allowing under-floor ventilation. No combustible materials should be stored under any Temporary Building(s).
- 12.6** Temporary Accommodation must be constructed with materials which do not significantly contribute to the growth of a fire or the propagation of smoke and/or corrosive fumes. It must also meet the following criteria:
- (a) It must be separated from the rest of the building by walls and ceilings which achieve 30 (thirty) minutes Fire Resistance (integrity and insulation) to BS 476 Parts 20 and 22, ceiling to be exposed to fire from below;
  - (b) Class 1 surface spread of flame performance to BS 476 Part 7 to all wall and internal ceiling surfaces;
  - (c) Doors and windows in 30 minute fire resisting walls must achieve 30 (thirty) minutes Fire Resistance (integrity) to BS 476 Parts 20 and 22.
- 12.7** It may be necessary to erect or install Temporary Buildings and Temporary Accommodation within the building under construction or refurbishment. In such instances the Temporary Buildings and Temporary Accommodation must meet the fire performance characteristics stated in section 12.4. Temporary Buildings and Temporary Accommodation should be erected in locations which provide ease of access for the fire brigade and easy evacuation for personnel. In this respect locating Temporary Buildings and Temporary Accommodation within basements or on upper floors, i.e. at a height in excess of 7.5 (seven and a half) metres from site access level, should be avoided. Where this is not practical other suitable precautionary measures must be adopted after consultation with the appropriate authorities. These measures must be maintained during the course of construction and until a time when

the Temporary Buildings and Temporary Accommodation can be relocated within the lower floors.

- 12.8** Temporary Buildings and Temporary Accommodation:
- located inside the building under construction/refurbishment or inside another permanent building;
- OR
- within 6 (six) metres of such building(s)
- must be fitted with Fire Detection Systems. In the case of Large Projects (as referred to in paragraph 6.3), the Fire Detection System must be linked to a Central Station (Alarm Receiving Centre) unless there is 24 hour site security.
- 12.9** Heaters for use in Temporary Buildings and Temporary Accommodation must be fixed, preferably above floor level, fitted with securely fixed metal guards and maintained in a sound condition.
- 12.10** Carelessly drying clothes causes fires. Coat stands and drying racks must be firmly positioned at a safe distance from heaters, which should be thermostatically controlled and have enclosed elements.
- 12.11** All heaters and cooking appliances must be properly installed and adequate ventilation provided. Electrical or gas cookers are preferable to gas rings for cooking.
- 12.12** In Temporary Buildings and Temporary Accommodation and areas where flammable liquids and gases are stored, the installation of suitable automatic Fire Detection Systems and intruder alarms is strongly encouraged.
- 12.13** Automatic Fire Detection Systems must be installed in Temporary Buildings and Temporary Accommodation used for cooking. Consideration should be given to the installation of automatic sprinkler systems and intruder alarms.
- 12.14** Temporary Building(s) should not contain more than the minimum of furniture and fittings made from synthetic materials.

## **13 SITE STORAGE OF FLAMMABLE LIQUIDS AND LPG**

- 13.1** Containers of highly flammable liquids and LPG cylinders should preferably be stored in open compounds which are securely fenced and shaded from the sun. Stores containing highly flammable liquids must be surrounded by a bund sufficient to contain the maximum contents of the largest drum stored, plus 10 (ten) per cent, and must not be allowed to fill with water or waste material. Highly flammable liquids and LPG must not be stored together.
- 13.2** Where it is necessary to store flammable liquids and gases in circumstances other than as in paragraph 13.1 the quantity so stored must be kept below 50 (fifty) litres or half a day's supply, whichever is the lesser. The containers must be kept in a store, cupboard or bin which is of fire resistant construction.
- 13.3** Ideally, storage areas should be sited at least 10 (ten) metres from permanent and temporary buildings but containers and drums must not be stored within 4 (four) metres of any building or boundary fence unless the boundary is a wall with at least 30 (thirty) minutes Fire Resistance. In the latter case, containers and drums should be at least 1 (one) metre below the top of the wall.
- 13.4** Products which could add to the intensity of a fire, such as oxygen, or to the toxic hazard in the event of fire, e.g. chlorine, must not be stored in the same compound as flammable liquids and LPG.
- 13.5** Appropriately worded warning signs, e.g. "HIGHLY FLAMMABLE LIQUIDS", "NO SMOKING" and "NO NAKED LIGHTS" must be boldly displayed at the entrances to stores.
- 13.6** The floors of flammable liquid and LPG cylinder stores should be paved or compacted level with a suitable hard standing provided for the delivery and dispatch of cylinders. The area must be kept clear of all flammable materials, weeds and rubbish.

- 13.7 Any electrical fittings, e.g. lights and switches, within such stores must be intrinsically safe.
- 13.8 The provision of automatic flammable gas detection equipment should be considered for enclosed storage locations.
- 13.9 Adequate numbers of extinguishers appropriate to the hazard should be sited at storage area entrances.

## **14 ELECTRICITY AND GAS SUPPLIES**

- 14.1 Electrical supply installations, both temporary and permanent, must be installed in accordance with the latest edition of The Institution of Electrical Engineers' Regulations for Electrical Installations (the IEE Wiring Regulations) and the Electricity at Work Regulations 1989.
- 14.2 All electrical work should be undertaken by a competent electrician.
- 14.3 Installations (especially of a temporary nature) must be inspected regularly and tested at intervals not greater than every three months. The results must be recorded in a register kept for the purpose.
- 14.4 Where possible, main switches, other than those controlling security lights, should be turned off when work ceases and all equipment unplugged when not in use.
- 14.5 All permanent gas supplies must be installed by a Council of Registered Gas Installers (CORGI) registered gas fitter. The Contractor must check that those carrying out the work are so registered.
- 14.6 Gas supply to appliances should be by fixed piping or armoured flexible tubing. Gas cylinders should be located outside buildings, secured and protected from unauthorised interference. Gas appliances should be fitted with control taps.  
NB: if the only control is on a cylinder situated outside a building, there can be a dangerous build-up of gas during the time-lapse between turning on and ignition.
- 14.7 LPG connected to an appliance by a flexible link should only be installed by a competent person.

## **15 HOT WORK**

- 15.1 A "permit-to-work" system must be adopted where Hot Work is being undertaken unless there is no risk of damage to any surrounding property.
- 15.2 Before starting hot work, the area must be cleared of all loose combustible material and, if work is to take place on one side of a wall or partition, the opposite side must be examined to ensure no combustible material will be ignited by conducted heat.
- 15.3 Suitable extinguishers of appropriate type must be at hand with a careful watch being maintained for fire breaking out whilst work is in progress.
- 15.4 Exposed wooden flooring and other items of combustible material which cannot be removed as in 15.2 must be covered with sand or other non-combustible material.
- 15.5 When welding, cutting or grinding, the work area must be suitably screened using non-combustible material.
- 15.6 Gas cylinders must be secured in a vertical position and fitted with a regulator and flashback arrester.
- 15.7 "Tar" boilers, lead heaters and similar equipment should only be taken onto roofs in exceptional circumstances, when a non-combustible heat insulating base must be provided to prevent heat igniting the roof. Such equipment must always be supervised by an experienced operative and be sited where spilled material can easily be controlled. Gas cylinders must be at least 3 (three) metres from the burner and at least one appropriate extinguisher must be to hand.
- 15.8 Any area specified in a hot work permit must be thoroughly examined one hour after the work has finished.

## 16 WASTE MATERIALS

- 16.1 Good housekeeping is essential on all sites. Waste material, if allowed to accumulate, provides an excellent starting point for fire. Therefore all waste, packing materials, wood, shavings and oily rags must be regularly removed. Special attention should be paid to corners, bases of shafts and other out-of-the way places.
- 16.2 Unwanted materials from the more open areas of a site must also be collected at regular intervals.
- 16.3 Separate metal bins, with close-fitting metal lids, must be provided for flammable materials, for example, oily rags.
- 16.4 All collected waste materials awaiting disposal must be kept in an area away from Temporary Accommodation, stores or equipment.
- 16.5 All dry vegetation must be cleared regularly.
- 16.6 Rubbish must not be burned on site.

## 17 PLANT

- 17.1 Stationary plant powered by internal combustion engines, such as compressors and generators, should be positioned in the open air or in a well-ventilated non-combustible enclosure. They must be sited so that exhaust pipes and exhaust gases are kept clear of combustible materials and should wherever practicable be separated from working areas and other buildings.
- 17.2 Fuel tanks must not be filled whilst engines are running.
- 17.3 Compressors should be housed singly away from other plant and in separate enclosure(s).
- 17.4 Plant and equipment must be protected against accidental impact.
- 17.5 Air intakes must be situated so that the air is cool, uncontaminated and free from flammable gases or vapours.
- 17.6 Where appropriate, sand trays should be provided to absorb drips of fuel or lubricant.

## 18 MATERIALS' STORAGE

- 18.1 Where it is reasonably practicable to do so, combustible materials should be stored outside the building under construction or undergoing refurbishment, and should not be so close to it that fire is able to spread from the materials to the building.
- 18.2 Where combustible materials are stored inside the building the area used for storage should:
  - (a) be designated a "no smoking area" and signposted accordingly;
  - (b) have controlled access;
  - (c) not be in an area where hot work is being carried out;
  - (d) either be within the area covered by the site Fire Detection System or be included on the route of regular fire checks;
  - (e) have fire fighting equipment located close by.
- 18.3 All non-essential combustible wrapping and packaging should be removed and disposed of at the earliest opportunity, and in any case not less than once per day.
- 18.4 In addition, the protection of combustible materials with a layer of a material conforming to the requirements of Loss Prevention Standard LPS 1207 *Fire Requirements for Protective Covering Materials* is strongly recommended.

## 19 SMOKING

- 19.1 A “no smoking” policy should be established on the site with the exception of designated areas where smoking will be allowed.
- 19.2 Such areas must be free of combustible materials. They must not be located inside the building under construction or undergoing refurbishment unless it occupies the whole of the area of the site, in which case they must be located in an area which is supervised through all or most of the day and is within the area covered by the site Fire Detection System.
- 19.3 Areas where smoking is allowed must be equipped with fire fighting equipment, ash trays, sand buckets or other receptacles for the safe disposal of smokers’ materials.
- 19.4 A “no smoking” policy must be established in areas where fire hazards exist, e.g. carpenters’ workshops, refuse areas and storage areas containing combustible materials, flammable liquids, gas cylinders, foam plastics, fibreboard and timber.
- 19.5 “NO SMOKING” notices must be displayed in areas where smoking is not allowed.

## REFERENCE DOCUMENTS

Construction (Design and Management) Regulations 1994, HMSO.

Construction (Health, Safety and Welfare) Regulations 1996, HMSO.

*Fire Requirements for Protective Covering Materials*, Loss Prevention Standard 1207, issue 1, 1994, Loss Prevention Council.

*Specification for Testing of Temporary Buildings for Use on Construction Sites*, Loss Prevention Standard 1195, issue 3, 1994, Loss Prevention Council.

*Guide to Fire Safety Signs*, 1996, Loss Prevention Council.

*LPC Recommendations for Hot Work*, RC7, 1994, Loss Prevention Council (includes sample hot work permit).

*Security on Construction Sites*, LPC data sheet SEC13, 1993, Loss Prevention Council.

Requirements for Electrical Installations (IEE Wiring Regulations), BS 7671, British Standards Institution, 1992.

*Fire Safety in Construction Work*, HS(G)168, 1997, Health and Safety Executive.

*Protecting the Public - Your Next Move*, HS(G)151, 1997, Health and Safety Executive.

### **Insurance Provisions Related to the Joint Code of Practice**

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.

There is no mandatory version of such Policy endorsement, although the Association of British Insurers has issued a recommended form. This is shown below.

It is important that each party should consult their insurance advisers when considering any insurance implications of the Joint Code of Practice.

#### **Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation**

The following endorsement is added to the Policy.

The insured undertakes to comply with the Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation dated November 1999 or any subsequent amendment thereto or revised edition thereof current at inception or subsequent renewal of the Policy hereinafter referred to as The Joint Code

The appointed representative of the Company shall have the right at all reasonable times to enter and inspect any construction site insured under the Policy for the purpose of checking whether the conditions thereon in all respects comply with The Joint Code

In the event of the Company becoming aware of a breach of The Joint Code the Company will inform the Employer or his representative and the Main/Management Contractor's Construction Site management of the nature of the breach specifying the remedial measures required by the Company (the Remedial Measures) and the period within which these must be completed

Where the Company considers such a breach is of sufficient importance the Company will confirm the same by notice in writing to the Employer and Main/Management Contractor at their respective addresses nominated by the Insured at the inception of cover or as subsequently amended

Under the terms of this or any subsequent notice the Company may suspend or cancel all cover under the Policy from the date named in the notice not being a date earlier than the date named for the completion of the Remedial Measures it being understood that upon suspension such cover shall be reinstated when the Company is satisfied that the Remedial Measures have been completed. Such notice shall be given by registered post recorded delivery facsimile transmission or by hand

The reference to suspension or cancellation of all cover shall apply only to the contract specified in the notice

This endorsement shall not in itself be considered a condition precedent to liability but its inclusion shall not prejudice waive or remove the rights of the Company under the terms of other Policy exclusions and conditions

This endorsement does not apply to any Public Liability Employer's Liability or 21.2.1 insurance provided by the Policy

In the event of cancellation only the Company agrees to return to the Insured a pro rata proportion of the relevant part of the Policy premium

Subject otherwise to the terms exclusions and conditions of this Policy



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## Fire Prevention on Construction Sites

*Fifth edition*

This Joint Code of Practice on the protection from fire of construction sites and buildings undergoing renovation contains a series of measures which, if adopted, will ensure that adequate detection and prevention systems are incorporated during the design and planning stages and that work on a site is undertaken to the highest standard of fire safety.

*Contents:* Objective of the Code; Compliance with the Code; Introduction; Definitions used in this Code; Design phase; Construction phase; Emergency procedures; Fire protection; Temporary covering materials; Portable fire extinguishers; Site security against arson; Temporary buildings and temporary accommodation; Site storage of flammable liquid and LPG; Electricity and gas supplies; Hot work; Waste materials; Plant; Materials' storage; Smoking; Reference documents.

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