

Fire Risk Assessment: Frequently Asked Questions

Below is a list of 51 questions that will guide you through your Fire Risk Assessment. The answer to all of the questions should attract a 'yes' (or 'not applicable') response. If however, the answer to any question is 'no', you will be advised what steps should be taken to rectify the deficiency as soon as is practicable.

Q1: Is there a system for controlling the amounts of combustible materials and flammable liquids and gases that are kept in the workplace?

Advice: Only such quantities as are required for the day's production needs should be taken out of store. The remaining stock should, if small, be kept in flameproof metal cabinets and, if large, in a dedicated flammable liquids store.

Q2: Is that waste control system operating effectively?

Advice: Do not allow waste materials such as partly-used containers of paint, flammable solvents, or flammable-solvent-based adhesives to accumulate in the workplace.

Q3: Are all the combustible materials and flammable liquids and gases stored safely?

Advice: Stores for flammable liquids and stores for combustible materials should be sited at secure locations, and they should carry No Smoking signs and signs such as "Flammable Liquid", "Flammable Gas" etc. as appropriate. The arrangements for the storage of flammable liquids should conform to the guidelines published by the Health and Safety Executive. The storage of highly flammable liquids and liquified petroleum gases should conform to the requirements of The Highly Flammable Liquids and Liquified Petroleum Gases Regulations 1972.

Q4: Are all heaters fitted with suitable guards and fixed in position away from combustible materials?

Advice: Faulty heaters are an obvious, and common, source of ignition. The use of portable heaters is not recommended because they may be placed near to combustible or flammable materials.

Q5: Are all items of portable electrical equipment inspected regularly and fitted with correctly rated fuses?

Advice: Regular inspection of such equipment is a requirement of the Electricity at Work Regulations 1990. Check the condition of all the cables and check that the appliances are fitted with correctly rated fuses; a fuse of too high a rating can lead to a fire in the appliance that it is supposed to protect.

Q6: Is the wiring of the electrical installation inspected periodically by a competent person?

Advice: The wiring should comply with the requirements of the IEE Wiring Regulations.

Q7: Is the use of electrical extension leads and multi-point adaptors kept to a minimum?

Advice: Extension leads may constitute a tripping hazard and their use should be kept to a minimum. Extension leads and socket outlets should not be overloaded, and reel-type extension leads should be fully unwound if the appliance that they supply is of a wattage that is greater than that which may be used with an unwound lead.

Q8: Are flexes run in safe places where they will not be damaged?

Advice: Where cables and leads could constitute a tripping hazard their routes should be indicated with hazard warning tape, and where they may suffer damage by being walked upon they should be run in protective flexible plastic sheathing.

Q9: Is the upholstery of furniture in good condition?

Advice: Old and dilapidated furniture can contribute to the spread of fire and torn upholstery exposes combustible filling material that may be used as kindling material by a potential arsonist. All new upholstered furniture for non-domestic use should comply with the requirements of British Standards 7176, 1995 and BS 7177, 1995.

Q10: Is the workplace free of rubbish and combustible waste materials?

Advice: The accumulation of rubbish and combustible waste materials is a hazard to the workforce in that it adds to the fire load of the building. Also, because arson is often an apparently motiveless crime, prompted merely by the availability of combustible materials, its presence will increase the likelihood of an arson attack. All rubbish and combustible waste should be cleared from the building on a daily basis and securely stored, preferably in lockable metal skips, outside the building and away from fire exits and not under any overhanging structure.

Q11: Is there a designated smoking area provided with adequate ashtrays?

Advice: Careless disposal of smoking materials is a common cause of fire. If it is enforceable, institute a total no smoking policy. However, such a policy may encourage furtive smoking in out-of-the-way places such as storage areas and this can have disastrous consequences. It is probably safest to set aside designated smoking areas that are provided with an adequate supply of large metal or glass ashtrays, the contents of which are regularly and safely disposed of throughout the working day. The smoking area should be provided with a suitable fire extinguisher and be separated from the rest of the building by fire doors that are kept shut.

Q12: Have suitable measures been taken to protect against the risk of arson?

Advice: Arson is a major cause of fires in industry and commerce; some 40% of all fires in non-domestic premises are started deliberately. Good security is probably the best protection against arson and therefore it is important to ensure that all means of

access to the premises – doors and windows – are locked at all times when the building is unoccupied. All visitors to the premises should be signed in, issued with visitor's badges, and be accompanied by their host at all times. Staff should be trained to challenge anybody whose presence or behaviour gives cause for concern and to immediately report any suspicious behaviour.

Q13: Have measures been taken to ensure that smoke and flames cannot spread from one compartment with-in the building to another?

Advice: The principle structural means for limiting the spread of fire is compartmentation – dividing the building into compartments that are separated from each other by fire resistant walls and doors. The integrity of the compartmentation will be compromised if the fire doors have been badly hung, or if the compartmentation does not extend into the floor and ceiling voids that are created by suspended floors and ceilings. Penetration of fire walls by ducting or building services greatly reduces the effectiveness of the wall unless the spaces between the ducting or services and the hole through which they pass are completely filled with fire-resistant stopping. Full list of questions/advice

Q14: Is there a sufficient number of exits of suitable width for the people likely to be present?

Advice: In any building for which a fire certificate has been issued under the Fire Precautions Act 1971, and in any building whose construction or modification has been undertaken in conformity with the requirements of the Building Regulations, the number and size of the exits from the building will be sufficient for the use to which the building is put. Any proposed change of use and any proposed structural changes must be reported to the fire authority, and all exits must be totally free from obstruction on both sides of the door. Exit doors must never be locked shut during working hours.

Q15: Do the exits lead to a place of safety?

Advice: A place of safety is a place beyond the building in which a person is no longer in danger from fire. The designated place of safety must not be a dead-end situation from which people are unable to move further away from the building.

Q16: Are all gangways and escape routes free from obstructions?

Advice: Gangways and escape routes must never be obstructed. Obstructions such as unwanted furniture, unattended tea trolleys, coat racks, stocks of stationary, cleaners' equipment, newly delivered goods, or goods awaiting collection all reduce the available width of escape routes and make it more difficult to evacuate people sufficiently quickly in the event of fire. Sources of heat or electrical equipment such as portable heaters, automatic vending machines, photocopiers etc. must never be sited on escape routes.

Q17: Are the escape routes free from tripping and slipping hazards?

Advice: Changes of level, electrical extension leads, unstuck flooring tiles, and small items – such as empty drink cans or contractors tools – left on the floor are all capable of causing people to trip. Changes of level should be indicated by use of warning tape. Wet floors and loose mats or runners constitute slipping hazards.

Q18: Are steps and stairs in a good state of repair?

Advice: Loose handrails, raised or loose floor tiles, and damaged nosings on steps may all cause people to trip whilst escaping from fire; on a staircase this could have disastrous consequences.

Q19: Are final exits always unlocked when the premises are in use?

Advice: Final exit doors must always remain unlocked when-ever the premises are in use. If, for reasons of security, final exit doors have to be locked shut when the premises are not in use they may be secured by means that do not require the use of a key in order to release the door.

Q20: Are the devices securing final exits capable of being opened immediately and easily without the use of a key?

Advice: Break-glass bolts (Redland bolts), which are released by breaking a glass tube with a small hammer, are an acceptable way of keeping a fire exit door securely shut, provided that clear instructions as to how to release the bolt are displayed on or adjacent to the door and that a suitable hammer is attached by a chain that is anchored on or adjacent to the door. The ideal fastening for a fire exit door is a panic latch or lock that may be released by pressure upon a bar that runs across the full width of the door.

Q21: Are internal fire doors labelled as such and normally kept closed?

Advice: All fire doors should carry a sign, on both faces of each leaf, bearing the legend "Fire door keep shut", "Automatic fire door keep clear", or "Fire door keep locked" (this last sign applies to fire doors on cupboards or service shafts that open onto escape routes) as appropriate. Fire doors are the principle means whereby flames, smoke, and toxic gases are prevented from spreading into escape routes but they are only effective if they remain shut at all times except when people are passing through the door opening that they protect. All employees must be made aware that practices such as the use of wedges, doorstops etc to hold fire doors open is a serious offence at law precisely because it puts peoples' lives at risk in the event of fire.

Q22: Are the self-closers on fire doors operating correctly?

Advice: As with the use of wedges, fire extinguishers, or door stops to hold fire doors open, faulty self-closing devices or, those in which the tension has been incorrectly set, will not automatically close fire doors. This will put lives at risk in the event of fire. Employees should be made aware of the importance of reporting any self-closing devices that are not operating correctly.

**Q23: Do the doors on escape routes open in the direction of travel?
(ie. towards the escape route)**

Advice: Normally, doors on escape routes should open in the direction of travel. They must do so if they lead from an area from which more than 50 people may be required to escape, or if they lead from an area of high fire risk such as, for example, a kitchen.

Q24: Are escape routes clearly signed?

Advice: Escape routes that do not constitute a normal means of leaving a building should be properly signed with signs that conform to the requirements of the Health and Safety (Safety Signs and Signals) Regulations 1996. These make use of pictograms employing the running man, an open door, and directional arrows. These pictogram signs may be augmented by the older text signs, but these text only signs are no longer acceptable on their own.

Q25: Are escape routes adequately lit?

Advice: Fire escape routes should be provided with artificial lighting and, because the mains electricity supply may fail in a fire, with emergency escape lighting if required. In general, it is required in underground parts of the premises, in windowless parts of the premises, in core stairways or those serving storeys more than 30m above ground level, in internal corridors more than 30m long, and in open plan office areas of more than 60m². Emergency escape lighting should conform to the requirements of BS 5266 Part 1 1999 and be regularly maintained.

Q26: Have plans been made and rehearsed regarding assisting disabled staff and visitors to evacuate the premises?

Advice: Disabled employees may require additional assistance to escape in the event of fire. A plan of how best they may be helped should be drawn up, and tested in the course of the regular fire drills. Are lightweight evacuation chairs available? Has each disabled person a personal "buddy" who is assigned to stay with them throughout the evacuation? Is the building equipped with evacuation lifts that may be used by people in wheelchairs in the event of fire? Are there ramps in place at all changes of level on escape routes? Does the fire alarm system give a visual warning of fire for those who are profoundly deaf? As an aid to those who are blind, are there tactile thresholds at the top and bottom of each flight of stairs?

Q27: Do procedures and practices avoid the use of combustible materials or processes that use heat?

Advice: All processes and procedures should be reviewed in order to ensure that they are safe. Important points to consider include the following:

- Is any heating equipment or electrical equipment left on for longer than is needed?
- Are there reminders in place to turn off all heat producing equipment at the end of the work period?
- Could any process involving the use or production of heat be replaced by a low temperature alternative?
- When solvent-based adhesives are in use is the area well ventilated in order to prevent the build-up of flammable vapours?
- Could the solvent-based adhesives be replaced by water-based alternatives?

Q28: Has consideration been given to all cost-effective measures that could be taken to prevent the occurrence of arson?

Advice: As well as the measures referred to in the answer to Q12, the following additional measures should be considered:

- improve perimeter security – mend broken fencing, don't leave ladders, or things such as piles of palettes that may be used facilitate the scaling of fences, next to fencing,
- introduce perimeter lighting and the lighting of all external doors,
- install a CCTV system,
- install an intruder alarm system,
- fit all letterboxes with fireproof metal boxes on the inside of all letter flaps,
- train post room staff in the spotting and handling of suspicious packages.

Q29: Have staff been trained in how to call the fire brigade, the use of the fire extinguishers and basic fire prevention?

Advice: The Management of Health and Safety at Work Regulations 1992 require employers to supply employees with adequate health and safety training and this must include general fire safety, and the Fire Precautions (Workplace) Regulations 1997 require that employees are trained, so that they know:

- how to operate the fire alarm system,
- how to use the fire fighting equipment provided,
- how to call the fire brigade,
- the location and use of the escape routes,
- the location of the assembly points,
- how to assist visitors and members of the public in evacuating the workplace.

Q30: Have you asked your insurers for advice regarding the fire protection of your premises?

Advice: Insurance companies employ fire surveyors who have experience of all aspects of fire safety including the installation and maintenance of sprinkler systems, automatic fire detection and alarm systems, fixed fire fighting installations etc and they are always happy to offer free advice on such matters.

Q31: Where escape lighting is installed is it in working order and is it maintained regularly?

Advice: Fire escape routes should be provided with emergency escape lighting if required. The places where it is required are detailed in the answer to question 25. The emergency escape lighting system should be installed and maintained according to the recommendations of BS 5266 Part 1 1999.

Q32: Is there an automatic fire detection and alarm system?

Advice: By providing the earliest possible warning of fire, a properly installed and maintained automatic fire detection and alarm system does much to reduce the risk to life and property in the event of fire.

Q33: Is the fire alarm system in good working order?

Advice: The correct operation of a properly maintained system will greatly reduce the incidence of false alarms and, consequently, the incidence of unnecessary calls to the fire service. As well as wasting the time of hard-pressed fire service personnel, repeated false alarms may encourage the workforce to dismiss a genuine alarm as being "yet another false alarm", and the consequences of this could be disastrous.

Q34: Is the fire alarm tested weekly?

Advice: Every year, on average, the fire service receives more than 850,000 calls for assistance. Almost half of these calls are false alarms caused by faults in the design or installation of the system, or are the result of faults occurring because of lack of proper maintenance. The fire detection and alarm system should be maintained according to the recommendations of BS 5839 Part 1 1988, which recommends a regime of testing that includes weekly testing of the fire alarm.

Q35: Can the fire alarm be raised without placing anyone in danger?

Advice: Raising the alarm should ideally be done automatically. If not it should be done from a place of safety (security hut), and if this is not possible further consideration should be given to connection of the FDA system to a 24-hour remote manned centre.

Q36: Are the fire alarm call points clearly visible and unobstructed?

Advice: Manual fire alarm call points should be mounted in conspicuous positions on exit routes, on staircase landings, and at final exits. Items such as coat racks, potted plants etc should not be allowed to obscure the presence of a call point, or to hinder easy access to it.

Q37: Is the fire alarm system connected to a monitoring centre which calls the fire brigade?

Advice: Fire detection and alarm systems (FDA systems) are designed to protect either life or property. Fire safety law is primarily concerned with the protection of life and, in consequence, in many workplaces the system installed is one designed for life safety. If property is to be protected, the system must be monitored 24-hours a day so as to cover the times when there are no people present.

Q38: Is the fire alarm system, and all its components, continuously monitored?

Advice: By connecting the FDA system to a 24-hour monitoring service, even a basic life protection system can effectively be upgraded to a property protection system. The rapid response by the fire brigade that such a monitoring service will ensure will do much to minimize fire damage to buildings, stock, plant and machinery. "A rapid response by the fire service may significantly reduce fire damage by early attendance of the brigade." – Arson Prevention Bureau. "Connection to monitored telephone lines provides an effective way to monitor fire detection and alarm systems and will ensure a prompt response from the fire service reducing potential losses to fire." – Larry Stokes, Underwriting Manager, Zurich Municipal Insurance.

Q39: Is an adequate number of suitable fire extinguishers provided?

Advice: Portable fire extinguishers are probably the commonest type of fire fighting equipment to be found in industrial and commercial premises. For a floor in a building, the correct number of water extinguishers to tackle Class A fires (fires involving combustible solids such as paper, wood, cloth, plastics etc) may be determined if the fire rating of the floor is known. The fire rating is found by multiplying the floor area in m² by 0.065. Thus for a floor area of 200m² the fire rating is $200 \times 0.065 = 13$. A 9 litre water extinguisher has a fire rating of 13 therefore one 9 litre water extinguisher will be required for every 200m² of floor area. For special risks such as fires involving live electrical equipment, one should provide a suitable extinguisher, carbon dioxide or dry powder, near to the risk.

Q40: Are the fire extinguishers and fire blankets located suitably and ready for use?

Advice: Generally, extinguishers should be located at exits from rooms or storeys, in corridors that form parts of escape routes, and on landings. Extinguishers for special risks such as electrical fires, flammable liquid fires, or cooking oil fires should be located near the risk. All extinguishers, and fire blankets, should be located so as to be both conspicuous and readily accessible. Ideally, they should be mounted on either wall brackets or floor stands. It should never be necessary to travel more than 30m from a fire in order to reach an extinguisher.

Q41: Are the fire extinguishers serviced annually by a competent company or person?

Advice: The Home Office recommends that routine examinations of extinguishers should be carried out on a weekly basis by members of the workforce, and it is a requirement of BS 5306 Part 8 2000 that more detailed maintenance procedures be carried out by a "competent person" on an annual basis.

Q42: Is any fixed fire-fighting installation or automatic fire detection system in working order?

Advice: Fixed fire-fighting installations such as automatic sprinkler systems, halon (or halon replacement) flooding systems in computer suites, automatic foam systems in oil-fired boiler rooms, and wet chemical drenching systems installed in the hoods above commercial deep fat fryers, all require regular maintenance by specially trained personnel, if they are to be relied upon to provide the protection that they were designed to afford. Modern automatic fire detection systems are extremely complex and must also be regularly tested and maintained by suitably qualified personnel. The British Standards Institution publishes Codes of Practice that provide the appropriate testing and maintenance regimes for all of the above systems.

Q43: If you employ five or more people, have you recorded the findings of the fire risk assessment?

Advice: It is a requirement of The Management of Health and Safety at Work Regulations 1999 that the employer shall record the findings of his fire risk assessment if he employs five or more people. Fire risk assessment need not be a complex task; simply completing this online assessment and printing it out for your records could be seen as meeting the intentions of the law. The findings will appear on screen when you have completed question 51. You can then print out the document.

Q44: Have you told your staff or their representatives about your findings?

Advice: Once the findings of the fire risk assessment have been recorded they, and any recommendations that have been made in the light of the findings, should be brought to the attention of senior members of the management, and formally distributed to members of staff or their representatives.

Q45: If you have prepared a formal report, has it been shown to your staff or their representatives?

Advice: If you have prepared a formal report it should be brought to the attention of senior managers and then formally distributed to members of staff or their representatives.

Q46: If you share the workplace with others, do they know about the risks that you have identified?

Advice: Any fire risks that your risk assessment has identified should be brought to the attention of those who share the premises with you.

Q47: If you do not have direct control over the work-place have you made your findings known to owner or landlord?

Advice: Your findings, and any formal report that you have made, should be brought to the attention of the owner or land-lord of the premises, because he may need to provide or approve any changes to systems or services that you have recommended.

Q48: Are fire action notices displayed prominently throughout the workplace?

Advice: Officers from your local fire authority, or the Fire Protection Association, can provide guidance on the contents of fire action notices and on how they should be displayed in each of the areas of risk within your premises.

Q49: Has an emergency plan been drawn up in case of a major fire?

Advice: A comprehensive emergency plan should be drawn up. The plan should include the action to be taken by staff in the event of fire, the evacuation procedure – including arrangements for the evacuation of disabled staff or visitors, the location of the assembly points, and the arrangements for calling the fire brigade. The plan should make clear who is to be responsible for the implementation of its various parts. In order to ensure its long term effectiveness, it should be rehearsed regularly, and reviewed and updated in the light of any shortcomings uncovered by the rehearsals.

Q50: Is a copy of the emergency plan kept other than at the workplace?

Advice: In larger companies, especially those with more than one building on the site, a copy of the emergency plan should be lodged at the gate house or, if one exists, in the office of the company's own fire brigade.

Q51: Has a procedure been established to review the fire risk assessment periodically?

Advice: Carrying out a fire risk assessment is not a one-off exercise. There are two reasons why it should be reviewed (repeated) on a regular basis. First, the skills of the person undertaking the assessment will almost certainly increase with time.

Secondly, the circumstances in the workplace may change with time. The introduction of new materials, processes, or machinery, and structural alterations to the premises may profoundly alter the risks to which employees are exposed. The risk assessment should:

- recommend the remedial action required to remedy all the faults identified by the assessment,
- set dates by which such action should be completed,
- make recommendations as to any new fire protection measures or systems that should be introduced,
- set dates by which the new fire protection measures or systems should be introduced,
- set the date of the next review.