

Fire Prevention and Risk Control Measures

Electrical safety

Electrical installation, appliances and equipment all present potential hazards that require ongoing management. The risk of fire is obviously reduced if installations are properly designed and installed in the first instance. However, installations may subsequently be modified or extended. These alterations, if not anticipated in the original design, may increase fire hazards. Installations can also deteriorate due to age, misuse or adverse environmental conditions.

It is, therefore, essential that all installations are properly installed, maintained, inspected and tested if the dangers of fire are to be avoided or minimised.

Electrical equipment should be designed and installed to a suitable standard – e.g. British Standard BS 7671 (The Institution of Engineering and Technology Wiring Regulations) – regarding electrical installations and maintaining safety. All those who carry out work on electrical systems should be confirmed as competent to do so.

Fixed electrical installations

There is a legal duty for all electrical installations in workplaces to be designed, constructed and maintained to be safe and prevent danger. The following measures should be implemented when installing/maintaining electrical installations:

- All work involving installation, modification, testing and inspection should be carried out by a competent person who should have sufficient technical knowledge and the appropriate experience
- If using outside contractors, it is recommended that they should be approved by the National Inspection Council for Electrical Installation Contracting (NICEIC) and the Electrical Contractors' Association (ECA)
- Fixed wiring should be tested and inspected at recommended maximum intervals not exceeding five years; less, if necessary

(Note: older installations and/or particular site conditions may necessitate more frequent testing)

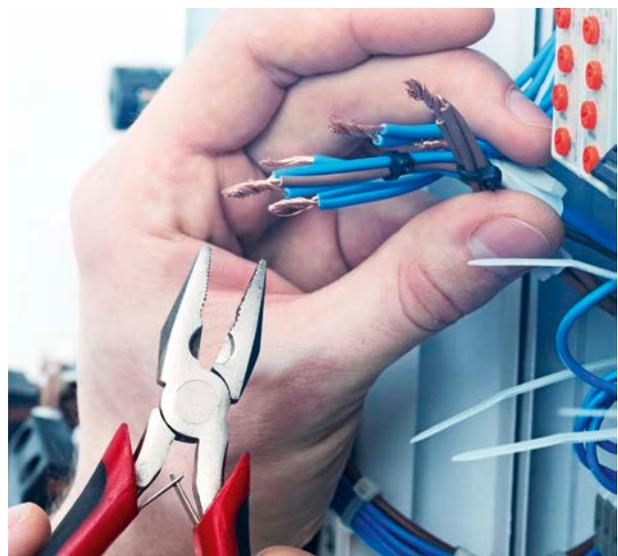
- Any faults or defects identified in wiring or fittings must be remedied as soon as possible
- Records should be kept of inspections, tests and routine checks, including descriptions of the extent of the work, the parts of the installation inspected and details of what the inspection and testing covered

- A review process should be initiated to determine the suitability of existing electrical installations, given the increase of both personal and household electrical equipment. The findings should be incorporated into planned and preventative maintenance programmes

Portable electrical equipment

Within communal parts of accommodation, there is a duty to maintain such equipment. 'Portable equipment' refers to any equipment that is not part of a fixed electrical installation and is fed by cable and plug systems. The following considerations should be taken into account when maintaining portable electrical appliances:

- Portable appliances must be used and maintained in accordance with the manufacturer's instructions
- Portable appliances must be inspected and tested periodically – it is an employer's responsibility to conduct a risk assessment determining the frequency of inspection and testing required for different items of equipment
- Testing should be carried out by a suitably trained person
- We would strongly recommend that formal records of tests be maintained. This will help to monitor when the re-inspection and testing of your equipment is necessary. It will also, if required, demonstrate the existence of an inspection regime to the relevant authorities; particularly in the event of an incident and subsequent claim
- The use of multi-point electrical adapters should be avoided as this practice may result in overloading and subsequent ignition



Gas safety

All boilers and central heating systems should be installed and serviced regularly under contract by competent persons only. Such work on gas-fired boilers should only be done by businesses that are members of the accrediting body for installers, currently Gas Safe.

Consideration should be given to the appropriateness of gas services for tenants who may be considered vulnerable. It may be appropriate to consider alternative heating and cooking provision in such situations.

Managing contractors and hot works

Contractors are regularly used in the housing sector to carry out routine maintenance and emergency repairs. Examples include plumbers, electricians, window cleaners, roofing repair companies and anyone else who is asked to carry out work on the premises.

Serious fires frequently occur during maintenance and construction operations. Most of these are the result of carelessness and ineffective supervision during operations requiring the use of open flames or the local application of heat. During hot work, heat is usually applied by one of the following:

- Blowtorches or blowlamps
- Hot-air guns
- Welding or cutting gear
- Bitumen or tar boilers
- Grinders

Whether hot work is carried out by your own employees, by outside contractors or by their sub-contractors, it is important that all such work is fully and effectively managed. Outside contractors working in or around premises with which they are unfamiliar present the most serious hazard. It is unlikely that they will know the particular fire risk present or the correct action to be taken in the event of a fire.

Ideally, hot work should be avoided unless essential. Contractors should always be asked whether the work can be undertaken without using hot work. Where there is no alternative, the risk needs to be assessed and suitable fire-prevention measures put in place.

Experience has shown that a satisfactory standard of care and supervision is far more likely to be achieved where a formalised system of written permits is in force. Compliance with the permit should be checked by a suitably experienced supervisor. If hot work is essential, then using a permit system – and making sure that it is rigorously followed – should reduce the risk of fire.

A hot-work permit should confirm the following:

- A competent person is doing the work
- Correct equipment is being used
- The area is clear of combustible materials
- Fire extinguishers are provided
- Fire-protection systems are working
- Set work times are authorised
- A fire watch will be enforced after work is finished

Arson prevention

The extent to which any property is at risk from arson can be gauged by carrying out a risk assessment taking the following factors into account:

- The general level of security of the premises
- The nature of the area in general, focusing on any known incidents of arson attack
- All premises are possible targets for an arson attack, but those situated in isolated locations – in troublesome inner-city areas or near football grounds and similar places where crowds gather – are particularly vulnerable. Special care is required if it is known that arson attacks have taken place in the area
- Care is even more important if there have been previous arson attacks on the premises
- Unexplained fires, however small, should be carefully investigated as large arson fires are often preceded by smaller fires
- A previous history of break-ins should be taken seriously in relation to the risk assessment. Arson is frequently used by thieves to cover their tracks or is used in frustration if they find nothing attractive to steal
- Fuel should not be available for would-be arsonists. Combustible material left out in the open is potential fuel and may appear inviting to youths

Only by conducting an assessment will the risk be fully identified and lead to the implementation of appropriate control measures.

General fire precautions

Any measures taken for the general fire safety of the site will also assist in the prevention of fires being started deliberately. The fire-safety culture of a location should be established in line with the perceived arson risk and set at a higher level than normal where an enhanced risk exists.

The following are some basic fire-safety precautions that can be adopted by housing staff:

- Responsibility for fire safety should rest with a member of the housing/estate management team
- Formal procedures should be established to ensure that the fire, security or operational precautions determined are actually carried out. Such measures could include the following:
 - Ensure that the premises are tidy and that combustible refuse has been cleared to a safe, secure area
 - Particular care should be exercised to ensure that all external storage is kept to a minimum and confined to areas away from buildings and the site boundary. As a general rule, a minimum distance of 10 metres between such materials and premises should be maintained
 - Vegetation in close proximity to the buildings should be cut back and removed as required

- Staff co-operation is necessary if the correct degree of awareness is to be achieved. Arson will not only present a danger to life, but can also threaten job security. As part of their induction and general training, employees should be made aware of the arson risk and encouraged to report anything suspicious – not only from outside the premises but also on site – such as unusual accumulations of combustible materials or windows left open

Portable fire extinguishers

With larger, more complex premises, where there may be additional facilities such as offices, large plant rooms, communal living areas and kitchens, there is likely to be a requirement to supply portable fire extinguishers. These should be provided so that appropriate provision is immediately available to deal with fire.

The following considerations should be taken into account when installing fire extinguishers:

- Subject to the fire-risk assessment, extinguishers should be evenly distributed throughout key areas of the premises and have conspicuous signs. Extinguishers should be mounted on brackets or stands, preferably close to fire exits. (If you are in any doubt as to the provision or siting of extinguishers, you should consult your local fire-safety officer). It is important to assess the suitability of fire extinguishers on floors of housing blocks. It is likely fire extinguishers will not be recommended in these areas due to incorrect or malicious use
- It is important that members of your staff are familiar with the correct use of fire extinguishing appliances, techniques in raising the fire alarm and appropriate evacuation procedures. A training programme including periodical retraining should, therefore, be established for appropriate staff. Residents should not be encouraged or allowed to use such equipment unless as part of the local policy agreed with enforcing authorities

Automatic fire alarms

As stated in the section on fire-risk assessment, it is strongly recommended that a programme of installing hard-wired automatic fire detection should be instigated in all housing units.

In the event of fire, life safety is the priority in any residential care home and consideration should be given to the installation of an automatic fire-alarm system throughout the premises with the objective of ensuring prompt detection and automatic communication with the public fire service at all times.

The following measures should be implemented with any automatic fire-detection system:

- Appropriate evacuation tests should be undertaken annually, or at more frequent intervals if determined following a risk assessment of the premises and occupancy. Detailed records of all tests should be kept

- It is vital that automatic fire-alarm systems are kept in efficient working order at all times. An annual inspection and maintenance contract must be arranged with a company that is approved by the Loss Prevention Certification Board (LPCB) or the British Approvals for Fire Equipment (BAFE)



Fire doors

Fire doors form an integral part of the fire-protection arrangements in your premises and are designed to restrict or prevent the spread of fire, smoke, heat or hot gases from one compartment or floor level to another.

The following measures should be implemented to ensure the effectiveness of fire doors in the event of a fire:

- Doors should be kept closed at all times. Doors should not be held open with hooks, wedges, fire extinguishers or other obstructions
- Alternatively, doors can be held open by the use of electro-magnetic release pads – linked into the fire-alarm system in such a way that the doors are allowed to close automatically if the alarm is activated
- Doors should have suitable notices affixed, in accordance with British Standard BS 5499 (Safety Signs, including Fire Safety Signs), warning that they are fire doors and must be kept closed
- In some cases it will be necessary to inspect the area above the ceiling over the fire door to check that there is not a void over the door that might allow fire to spread through the ceiling and over the fire door. Any voids above or around fire doors should be sealed with a material of at least the same fire resistance as the fire door, e.g. 30 or 60 minutes

Flammable liquids

The storage of flammable liquids within premises increases the potential fire risk. The following measures should be implemented where flammable liquids are stored in buildings:

- Where flammable liquids are stored in maintenance and cleaners' rooms, they should be kept in closed, non-combustible receptacles and stored in a proprietary flammable liquid storage cabinet or bin. The total quantity should always be kept to the minimum level practicable
- Whenever possible, a non-flammable, alternative product should be used so as to reduce the overall level of risk
- Residents should be advised to restrict the use and storage of any highly flammable liquids within housing units. Storage of gas cylinders within housing units should be prohibited. In this respect, barbecues should also be prohibited on balconies or decked areas

Heating

There will be an increased fire hazard where inadequately maintained or inappropriate heating devices or systems are in use. The following considerations should be taken into account for heaters and heating systems:

- Portable heating appliances increase the risk of fire. If appliances are accidentally, or otherwise, placed close to combustible materials, this may result in their ignition. In addition, they are more likely to suffer mechanical damage, malfunction and cause a fire. Any such appliances owned by the housing association should be disposed of. Residents should be advised of the hazards of portable heating and requested not to use them within housing units
- Portable gas heaters present an unacceptable risk and should be prohibited in flats
- Oil-fired boilers: in the event of a fire, the oil supply should be automatically stopped by the operation of a fusible-link fire cut-off valve or similar automatic heat-sensitive device. The fire valve should be fitted on the oil-supply pipe at its point of entry into the building
- Coal fires must be provided with suitable fireguards for use at all times when the fire is in operation. The fire should also be extinguished at the end of each day.

Hot ashes need to be properly damped down prior to removal. Only metal-lidded bins are to be used for the collection and disposal of ashes, etc. Chimneys should be swept at least annually. A robust policy, procedure and awareness programme should be introduced to facilitate this

- Boiler rooms must not be used for storage purposes and should be kept clear at all times. Furthermore, all such areas should be kept locked, secure and with access restricted to authorised personnel only
- To ensure that these standards are maintained, a regular inspection programme should be established for all plant rooms
- There is a clear legislative requirement to maintain gas and other heating appliances in a safe condition. You should, therefore, ensure that all gas heating appliances are made subject to an annual maintenance agreement with a contractor who is Gas Safe registered. Oil-fired and other forms of heating appliances should also be made subject to an annual maintenance agreement with a competent contractor

Waste control

Rubbish and waste can provide ready fuel for fire. The proper handling and disposal of waste is an important and integral part of the housekeeping process.

The following measures should be implemented to ensure waste storage is adequately controlled:

- Waste should be removed from inside buildings regularly (normally at least daily)
- Wherever possible, waste bins or skips should be kept within a purpose-built store with a lockable door or in an area specifically designated for the storage of waste
- Waste bins must not be located near windows that open, or secured against or close to combustible components, e.g. timber cladding
- Transportable waste bins other than conventional domestic wheelie bins should be kept at least 10 metres away from buildings. Bins must be either securely anchored into position by robust chains and padlocks or contained within a secure compound, the gates/doors to which are closed and locked except when in use
- Waste burning must not be undertaken on any site and should be strictly prohibited

For more information please contact us at social.housing@zurichmunicipal.com