Fire Factsheet

How does a fire occur?

A fire occurs when a fuel is raised to ignition temperature by a heat source in the presence of oxygen. Smoke and hot gases will rise until they reach a ceiling or roof and will then spread laterally forming a layer, (mushrooming), until they reach a wall. The layer then thickens and moves downwards, continuing until it reaches an opening such as a window. Building up in intensity, the fire will spread further if unconfined, until it reaches an unobstructed upward route such as a staircase. Smoke and hot gases will discover any hidden voids or cavities, spreading the undetected fire and causing the smoke to clog areas far removed from the original source of the fire. Remember: just two or three breaths of toxic smoke in a house fire and you are unconscious.

What can you do to minimize the risk of fire?

- All smoke detectors should be placed at the highest point available, normally ceilings are most effective.
- It is essential to have smoke detectors covering staircases and bedroom corridors as these are the principle means of exit; particularly at night. Laundry rooms and boiler rooms should also be covered.
- Fixed temperature or rate-of-rise heat detectors should be used in kitchens and garages.
- All domestic smoke alarms have an average life expectancy of ten years and should be replaced within this time.

Smoke detectors – best practice

Basic: Battery operated smoke detectors are relatively inexpensive and easy to install. They should be tested regularly; **although weekly testing is the ideal, we recommend a minimum of a monthly test.**

Better: Hardwired detectors do not require batteries and can be cross-linked so that if one detector activates, all detectors alarm. This is obviously more effective in larger properties, but still requires a manual response to call out the fire brigade etc. **Again a monthly test is recommended.**

Best: Hardwired and 'wire-free' fire detection systems which are linked to a central monitoring centre, generating an external response to fire even if the property is unoccupied. The easiest method is to incorporate sensors into the intruder alarm, this then generates a keyholder response. Or, for larger properties, a stand alone system in parallel to the intruder alarm can be installed and this generates a direct fire station response. [Aspirating, (air sampling), fire detection systems are less visible but are generally more expensive to install and to maintain.] **These systems should all be maintained under contract by the installer on a quarterly basis, as well as being tested weekly.**

Fire hazards and preventative measures

Chimneys: Real or open fires should be checked by a chimney sweep annually in order to ensure that the chimney is clear before use in the winter season. Chimney flues should ideally be lined and seasoned timber should be burnt to prevent sparks and tar build up. Close fitting guards (or chain guards) should be placed around fires.

Candles: If you leave a room always extinguish all candles, even if it is just for a short period of time. Ideally, candles should be housed within storm shades.

Electric fires: P50 Maintenance free fire extinguishers are now available which have a twenty year lifespan and require no discharge testing or refilling for ten years, although regular visual inspections are recommended. Small multifunction foam fire extinguishers are recommended for the home as they offer peace of mind but are only to be used where the user is willing and able to do so.

Fire extinguishers: P50 Maintenance free fire extinguishers are now available which have a twenty year lifespan and require no discharge testing or refilling for ten years, although regular visual inspections are recommended. Small multifunction foam fire extinguishers are recommended for the home as they offer peace of mind but are only to be used where the user is willing and able to do so.

Fire blankets: Recommended for kitchens, especially those with gas range cookers as a means to smother fires.

Fire doors: Consideration should be given to fitting fire doors to separate or fire compartmentalise a home.

Inspections: **All electrical installations deteriorate with age and use**. A periodic inspection shall reveal if any electrical circuits or equipment are overloaded, find any potential electric shock risks or fire hazards and identify any lack of earthing or bonding.

Testing: Owner-occupied homes should have their electrical installations tested upon purchase and every ten years thereafter. Rented homes should be tested every five years, caravans every three and swimming pools annually. Registered electricians (NICEIC approved) shall check your electrical installations to the UK Standard, BS 7671 and then issue an Electrical Installation Condition Report.

Remember: All members of a household should be aware of where all fire extinguishers, fire blankets and outside fire hydrants are located.

10 Year Rule: Every ten years remember to have an electrician check your electrical installations, change your smoke detectors, and test or change your maintenance free smoke detectors.

Fire in any form should always be respected.