

are installed. The additional cost involved will be more than off-set by the life-saving potential of a more reliable system.

## LOCATION OF ALARMS

A smoke alarm should be installed within 7.5 meters of the door to every habitable room. This should provide sufficient time for the occupants to react and leave the building following activation of the alarm.

For minimum protection to ensure that reliable early warning is given at least two inter-linked alarms should be used.

## SINGLE STOREY DWELLINGS

A smoke alarm should be sited in the circulation space within 7.5m of the door to every habitable room.

## TWO STOREY DWELLINGS

For minimum protection smoke alarms need to be situated in the hallway and the upstairs landing.

For maximum protection in all dwelling house types a range of mains operated interconnected alarms should be used.

## POSITIONING OF ALARMS

- May be ceiling or wall mounted.  
If wall mounted positioned between 150mm and 300mm below the ceiling and at least 150mm away from corners.
- If ceiling mounted positioned at least 300mm from corners and walls.
- Must be at least 300mm from any light fitting or obstruction.
- If on a sloping ceiling or one where the ceiling follows the angle of the roof (such as in a loft conversion) the alarm should be installed at the highest point possible.

## REMEMBER

- Do not fit a smoke alarm in a kitchen, bathroom or garage.
- If you do fit a battery operated alarm regularly check the battery.
- Smoke alarms require regular cleaning.
- If mains operated alarms are fitted select those which have a built in re-chargeable battery in case of mains failure.
- If more than one alarm is fitted interlink them.

*This advice is given in outline only, it is not intended to be comprehensive or a substitute for taking proper advice. We hope it will help you consider some of the issues which may not have otherwise occurred to you.*

# Smoke Detection & Fire Alarms



# Working together to provide the Best in Building Control

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## SMOKE DETECTION AND ALARM SYSTEMS IN DWELLINGS

Each year in England and Wales about 800 people die as a result of fires in buildings. A large proportion of these deaths occur in very ordinary domestic homes and could have been avoided if an automatic fire alarm system had been installed.

In most houses the installation of smoke alarms or automatic fire detection and alarm systems, can significantly increase the level of safety by automatically giving an early warning of fire.

In most instances the occupants die due to breathing in poisonous smoke and gases given off by the fire.

A substantial proportion of house fires involve furniture. These are characterised by an initial period of smouldering followed by copious amounts of smoke, gas and intense heat as the fire develops.

Frequently fires start in unoccupied rooms for a variety of causes and very often will smoulder and develop undetected. If a fire occurs at night then there is an increased risk that the heat and smoke may kill you and your family before it is noticed.

Building Regulations require that ALL new buildings (and those converted into dwellings and where a loft space in a one or two storey house is converted into habitable accommodation) are fitted with an automatic fire detection and alarm system.

## THE TWO TYPES OF SMOKE ALARMS EXTENSIVELY AVAILABLE FOR USE IN DOMESTIC PROPERTY ARE:

Ionisation alarms

Optical alarms.

### IONISATION ALARMS:

These are the most popular alarms due in part to the fact that they are cheap to produce. They are activated by a wide range of fire situations and are particularly sensitive to fast flaming fires where little visible smoke may be produced. They have a tendency to activate accidentally in non-fire situations such as cooking, the use of portable gas fires etc.

### OPTICAL ALARMS:

These are activated by a wide range of fires but are particularly sensitive to smouldering fires and the dense smoke produced by foam filled furnishings. They are less likely to be activated accidentally by non-fire situations eg cooking, as they can be activated by dust or insect contamination and it is therefore important to keep them clean.

### MAINTENANCE OF ALARMS

Battery powered alarms are widely used, however it is estimated that at least 1/3 would not activate because the battery has been removed or is flat.

Building Regulations now require that all new properties have mains operated alarms which overcome these potential problems.

It is therefore strongly recommended that mains operated alarms with rechargeable battery backup