

# Building Information Sheet: Smoke Alarms

The installation of smoke alarms in residential buildings safeguards occupants from smoke induced illness or injury and can limit financial loss by alerting residents, particularly when asleep, of a fire in the building.

## Why install them?

Toxic smoke is a more serious threat to life than heat and flames. Many fire fatalities occur at night when people are asleep – smoke can put people into a much deeper sleep and often fire victims never wake up. Smoke alarms in the home are not a new concept, with 85% of homes in the USA and nearly 75% in the UK now protected. The likelihood of fire deaths overseas has been reduced by nearly 50% though the installation of some alarms – a figure that could be much higher if all alarms were properly maintained.

## WA fire statistics

Fire and Rescue Service estimates that around two-thirds of West Australians who have perished in house fires since 1992 may have been saved if the homes had working smoke alarms fitted.

## Is it compulsory to fit alarms?

It is now compulsory to fit smoke detection and fire alarm systems in all new residential buildings and when a dwelling is undergoing alterations or additions which include electrical works.

### Existing Homes

***From 1 October 2009 all existing residential dwellings that are subject of a sale, lease or rent are required to be fitted with hard wired smoke detectors. The responsibility for ensuring alarms are installed lies with the vendors, or landlords in the case of rental dwelling units.***

***Where the roof construction does not provide for concealment of wiring, battery powered smoke alarms with a ten year battery life may be installed, subject to prior Council approval.***

## Where must alarms be located

Smoke alarms need to be installed in accordance with the Building Code of Australia (Class 1 and 10 Buildings), Part 3.7.2. This includes on each and every storey and between each part of the dwelling containing bedroom/s and the remainder of the dwelling.

## Nuisance Alarms

Smoke alarms that are extremely sensitive and may detect smoke and moisture by common household activities, such as burnt toast or steam from a bathroom. To reduce false alarms, the smoke detector should not be located near bathrooms or cooking appliances.

## What types of alarms are there?

- Photoelectric** Operates on a photo cell detecting a light source enters the alarm chamber, interrupting the light beam and activating the alarm.
- Ionisation** Operates by an electric current passed through ionised air. Smoke enters the chamber, impedes the flow of the current and activates the alarm.

## How should they be installed?

Alarms should be installed to Australian Standard AS 3786, by a qualified licensed electrical installer. All alarms must be interconnected, hard wired to the consumer mains power and must have battery back-up power.

## Maintenance

1. Alarms require regular cleaning and maintenance to ensure adequate operation. Refer to the manufacturer's instructions.
2. Testing of alarms should be carried out in accordance with manufacturer's specifications.
3. Replace batteries annually or check as specified by the manufacturer.

## Battery powered smoke alarms

Section 61 of the Building Regulations 2012 permits the local government to approve the use of battery powered smoke alarms in specific instances. Please refer to the Application form for further details.

### Disclaimer

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