

# Smoke Alarms



## Background

A high percentage of fatalities from fire occur in residential buildings. The majority of deaths occur during the period when most people are normally asleep. When people are asleep they are unable to smell smoke and therefore cannot detect a fire. A smoke alarm that is properly installed, regularly tested and adequately maintained will address this problem and provide for smoke detection and alarm for sleeping occupants in residential buildings. This early warning gives everyone precious minutes to escape a house fire and gives the fire service more time to save your property.

## Legislative and Building Code requirements

Fire safety of dwellings, which have a classification of 1 or 2 as described in the Building Code of Australia (BCA), is legislated for under Regulation 95 of the Planning, Development and Infrastructure (General) Regulations 2017.

Class 1 and 2 buildings are classified to include all residential buildings including:

- Detached dwellings, semi-detached dwellings, row dwellings, terrace houses, town house or unit etc. together with;
- Boarding houses, guest houses, hostel or the like.

Such dwellings are required to install smoke alarms. The type of alarm depends on the time of purchase on the dwelling or construction of the dwelling as follows:

### Dwelling owned before 1 February 1998.

Replaceable battery powered smoke alarm

### Dwelling purchased on or after 1 February 1998.

To be fitted within 6 months of date of purchase:

- 240V mains powered; or
- 10-year life non-replaceable, lithium, non-removable, permanently connected battery

### Dwelling built on or after 1 January 1995.

240V mains powered (required by the Building Code of Australia)

### Some building work that is exempt

All new building work, such as additions and alterations which have an impact on the bedrooms **must** have smoke alarms fitted as per a new dwelling. Carports, garages, verandas, pergolas and decks etc., or internal alterations such as renovating a bathroom or kitchen, are EXEMPT.

### Location of smoke alarms

When deciding on the position of smoke alarms it is important to remember that they are intended to detect smoke before it reaches the sleeping occupants of a building. The ensuing alarm is designed to wake the occupants and give them time to evacuate the building. The location of the smoke alarms must be shown on the floor plan when submitting plans to Council for new dwellings, additions, or alterations.

Smoke alarms should not be installed in kitchens or near open fire places. The best position for alarms is:

- Centrally in a passage and/or in the bedroom
- If a sloping ceiling then no closer than 500mm and no further than 1500mm from the apex as shown in diagram 2;
- On the ceiling at the head of the stair to the top storey;
- A minimum distance of
  - 300mm from a wall/ceiling junction – see diagram 2;
  - 1000mm from a fluorescent light;
  - 1000mm from ceiling and or air conditioning vents

A smoke alarm is also required on each storey of a multistorey dwelling that it not already provided with smoke alarms even if those storeys consist of only carparking, bathrooms, laundries and the like – see diagram 3. Smoke alarms should not be positioned in dead air space- see diagram 2.

### **Maintenance of smoke alarms**

For smoke alarms to continue to be effective it is important they be adequately maintained.

### **Testing**

The operation of smoke alarms should be tested regularly. The manufacturer's instructions will indicate whether the alarm is tested by a test button or a light beam. The test should be carried out in accordance with those instructions

### **Cleaning**

Smoke alarms should be cleared annually. This usually involves carefully vacuuming to remove dust particles which may affect the operation of the smoke alarm. The manufacturer's instructions for cleaning should be followed

### **False Alarms**

Smoke alarms are extremely sensitive and may detect smoke and moisture created by common household activities (such as burnt toast or steam from a bathroom)

### **Interconnection of smoke alarms**

Some types of alarm are capable of interconnection to other alarms so that if one alarm sounds then other smoke alarms are activated, adding an enhanced level of safety for example where an alarm is located on an unoccupied storey such as a garage. There is no legislative requirement for smoke alarms to be interconnected

### **When the alarm sounds**

- Shout 'FIRE' to alert other occupants
- Crawl on your hands and knees to the nearest exit
- Feel the bedroom door for heat, If warm or hot climb out the window, exit if possible.
- Exit to a safe meeting places outdoors for roll call.
- Once out of the house phone the fire service on 000. Do not return to the house for possessions.

### **Safety tips**

- Plan and practice your escape. Develop a home fire escape plan and regularly review the plan with all occupants of the dwelling
- Draw up a plan of your home
- Plan at least two ways out of each room
- Establish a meeting place outside of the home for all occupants (e.g. the mail box)
- Plan to give special assistance to very young aged and infirm occupants, should fire occur.
- Teach the occupants to:

- Check closed doors for fire before opening (use back of hand)
  - Crawl in smoke (smoke and heat will build up from ceiling down, air is freshest near the floor)
  - Close doors behind them as they exit (this slows the spread of fire and smoke)
- With two storey dwellings, townhouses or apartments, plan for an escape from an upper storey window, eg. Via a retractable rope or aluminium ladder, a lower roof, pergola or carport. If unable to escape by window stay by the window and attract fire service. DO NOT HIDE.

**For further advice and information please contact City of Mitcham, Development Services on 8372 8888 or email [development@mitchamcouncil.sa.gov.au](mailto:development@mitchamcouncil.sa.gov.au) Meetings can be arranged by appointment between 9am and 4:30pm Monday to Friday.**