



# Smoke alarm laws

The Building Regulations 2012 (the Regulations) in Western Australia require the owner of a dwelling to have compliant smoke alarms installed:

- prior to the sale or transfer of ownership;
- where a dwelling is rented under a residential tenancy agreement or made available for such rental; and
- where a dwelling is made available for hire.

## What is a compliant smoke alarm?

To comply with the Regulations, owners must ensure that the smoke alarm(s):

- are in accordance with the Building Code of Australia (BCA) applicable at the time of installation of the alarms. (The BCA specifies the relevant edition of the Australian Standard for residential smoke alarms (AS 3786) and location the smoke alarms must comply with);
- are not more than 10 years old at the time of the transfer of ownership, or making the dwelling available for rent or hire;
- are in working order; and
- are permanently connected to consumer mains power (hard-wired).

The BCA requires smoke alarms to be interconnected where there is more than one alarm. However interconnection of smoke alarms is not applicable to dwellings that were approved for construction **prior to 1 May 2015**.

## What types of dwellings need to comply?

The Regulations apply to the following residential buildings as classified in the BCA:

**Class 1a** – A single dwelling being a detached house, or row houses, duplexes, town houses, terrace houses or villa units where attached dwellings are separated by a fire resisting wall.

**Class 1b** – Includes the following:

- boarding houses, guest houses, hostels or the like in which not more than 12 people would ordinarily be resident and with a total area of all floors not exceeding 300m<sup>2</sup>; or
- four or more single dwellings located on one allotment and used for short term holiday accommodation. This includes dwellings in tourist parks, farmstays, holiday resorts, cabins in caravan parks and similar tourist accommodation.

**Class 2** – Dwellings such as apartments and flats in a building containing two or more units.

**Class 4** – A residential unit in a non-residential building if it is the only dwelling in the building, for example, a caretaker's residence.

## Do park homes need to comply?

All dwellings with the above classifications, that are subject to sale, transfer of ownership, rent or hire, need to comply. The relevant local government (Shire/Council) can advise you on the classification of the particular 'park home' in question.

## Smoke alarm location

The location of smoke alarms must be in accordance with the BCA applicable at the time of installation of the alarms. The number of smoke alarms to be installed depends on the classification of the dwelling and its general layout and size.

In order to reduce the likelihood of nuisance alarms, the smoke alarm should not be located near cooking appliances and bathrooms. However if it is necessary to locate alarms in these positions, an ionisation type alarm is more suitable near bathrooms, while a photoelectric alarm may be used near cooking appliances.

The smoke alarm requirements for a Class 1 building can be found in Part 3.7.2 of BCA volume two. A reference to a Class 1 building includes a Class 1a dwelling and a Class 1b dwelling (refer to diagrams at the back of this document).

**In a Class 1a** dwelling smoke alarms must be installed on or near the ceiling in:

- (a) any storey containing bedrooms –
  - i) between each part of the dwelling containing bedrooms and the remainder of the dwelling; and
  - ii) where bedrooms are served by a hallway, in that hallway; and
- (b) any other storey not containing bedrooms, even if those storeys consist only of carparking, bathrooms, laundries and the like.

**In a Class 1b** dwelling smoke alarms must be installed on or near the ceiling:

- (a) in every bedroom; and
- (b) in every corridor or hallway associated with a bedroom, or if there is no corridor or hallway, in an area between the bedrooms and the remainder of the building; and
- (c) on each other storey, even if those storeys consist only of carparking, bathrooms, laundries and the like.

The favoured location for smoke alarms on other storeys (not containing bedrooms) is in the path of travel that people will most likely take to evacuate the building.

For the proper mounting of smoke alarms, electricians and installers should refer to Part 3.7.2 of the BCA volume two.

## Class 2 and Class 4 dwellings

The smoke alarm requirements for a Class 2 dwelling unit and a Class 4 dwelling can be found in Specification E2.2a of BCA volume one. In general the location of smoke alarms inside the dwelling/unit is similar to the examples for a Class 1a dwelling.

You must always refer to the BCA for smoke alarm requirements. Further explanatory information on smoke alarms can also be found in the BCA which is available free of charge at [www.abcb.gov.au](http://www.abcb.gov.au).

If you are unsure whether your dwelling complies, you may wish to engage the services of a qualified building surveyor, either employed by a local government or a private registered building surveying contractor.

## Are battery powered smoke alarms permitted?

Battery powered smoke alarms may be installed without local government approval where:

- mains power is not connected to the dwelling; or
- where there is no hidden space in the existing dwelling in which to run the necessary wiring for hard wired smoke alarms and there is no appropriate alternative location, for example where there is a concrete ceiling.

The use of battery powered smoke alarms in any other circumstance must be approved by the local government. Battery powered smoke alarms must have a non-removable 10-year life battery.

Where a two-storey dwelling is permitted the use of a battery powered smoke alarm because the ground floor ceiling is concrete, the owner must not (for the sake of convenience) install a battery powered smoke alarm on the upper floor ceiling where there is sufficient roof space to run the electrical wiring.

## What type of smoke alarm is acceptable?

There are two types of residential smoke alarms, ionisation and photoelectric. Both types are acceptable providing they comply with the relevant edition of AS 3786 as referenced in the BCA at the time of installation of the smoke alarms.

Ionisation smoke alarms use a small amount of radioactive material to create an electrical current, when smoke enters the detection chamber it impedes the flow of the current and causes the alarm to sound.

Photoelectric smoke alarms have a chamber with a light source. As smoke enters the detection chamber it interferes with the light beam which causes the alarm to sound.

The Department of Fire and Emergency Services recommends the use of photoelectric smoke alarms.

In circumstances where the BCA requires a smoke alarm in a Class 10a part of a Class 1 building (such as in a private garage) it is permitted to use any other alarm, such as a heat alarm, that complies with Australian Standard AS 1670.1 provided that smoke alarms complying with AS 3786 are installed elsewhere in the Class 1 building.

This is because a smoke alarm can give spurious alarms if the atmosphere contains particles which obscure vision, which may occur in a private garage for example.

A Class 10a building is a non-habitable building such as a private garage.

## Will a smoke alarm in a home security system comply?

Smoke alarms that are powered through a home security system in dwellings that are subject to sale, transfer of ownership, rent or hire may not comply with the smoke alarm laws. While the home security system may be on 240 volt from the consumer mains power, a feed of 12 volt to the smoke alarm would not comply with the

requirement for smoke alarms to be permanently connected to consumer mains power.

In other words, the power for the smoke alarms must be separate to the power source for the home security system and the smoke alarms permanently connected to consumer mains power.

## Who can install smoke alarms?

Smoke alarms required to be permanently connected to the mains power supply require a licensed electrician to either connect or disconnect the smoke alarm. Where the Regulations permit a battery powered smoke alarm to be fitted instead of one connected to mains power, a licensed electrician is not required to fit the battery powered smoke alarm.

## Requirement to maintain smoke alarms

Owners who rent or hire their dwelling are required by law to maintain the smoke alarms. This includes ensuring the smoke alarm:

- is in working order;
- is permanently connected to mains power;
- is less than 10 years old, or has not reached its expiry date if one is provided on the alarm; and
- if the use of a battery powered smoke alarm has been approved under the Regulations, the alarm has a 10-year life battery that cannot be removed.

## How to maintain smoke alarms

For smoke alarms to remain in working order they should be tested and maintained regularly. The Department of Fire and Emergency Services recommends the following maintenance routine:

- Testing once per month to ensure the battery and the alarm sounder are operating.
- Check the smoke alarm for any build-up of dust and cobwebs and clean with a vacuum cleaner at least every six months.
- Vacuum with a soft brush attachment around the smoke alarm vents.

- Use a surface insect spray around the smoke alarm to prevent insects nesting inside.
- Replacing batteries annually (mains powered smoke alarms generally have back-up batteries).
- Smoke alarms should never be painted.

## Are there penalties for non-compliance?

Yes, local governments have the power under the *Building Act 2011* and the Regulations to either issue an infringement notice or prosecute an owner who fails to have compliant smoke alarms installed prior to selling, transferring ownership, renting or hiring the dwelling.

## Further information

ISSUE	CONTACT
Smoke alarm location	Register online to view the BCA at <a href="http://www.abcb.gov.au">www.abcb.gov.au</a> , or engage the services of a registered building surveying contractor or local government that provides this service. You can check whether a building surveying contractor is registered on our website at <a href="http://www.commerce.wa.gov.au/building-commission/find-registered-building-service-provider">www.commerce.wa.gov.au/building-commission/find-registered-building-service-provider</a>
Smoke alarms, smoke alarm maintenance, fire safety around the home	Department of Fire and Emergency Services 9395 9816 or <a href="http://www.dfes.wa.gov.au">www.dfes.wa.gov.au</a>
<i>Building Act 2011</i> Building Regulations 2012	State Law Publisher <a href="http://www.slp.wa.gov.au">www.slp.wa.gov.au</a>
Australian Standard for residential smoke alarms – AS 3786	Refer to the BCA for the relevant edition of AS 3786 that applies to your dwelling at the time of installation of the smoke alarms. Your local government may have a copy of the Standard that you can view at their front counter or library, or you can purchase a copy from SAI Global at <a href="http://www.saiglobal.com">www.saiglobal.com</a>  The Standard can also be viewed at the Department of Commerce's WorkSafe library in Cannington

### Contact the Building Commission

Level 1, Mason Bird Building,  
303 Sevenoaks Street, Cannington  
Phone: 1300 489 099  
Email: [bcinfo@commerce.wa.gov.au](mailto:bcinfo@commerce.wa.gov.au)

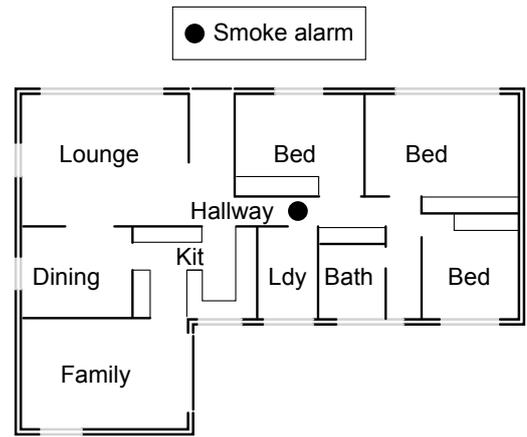
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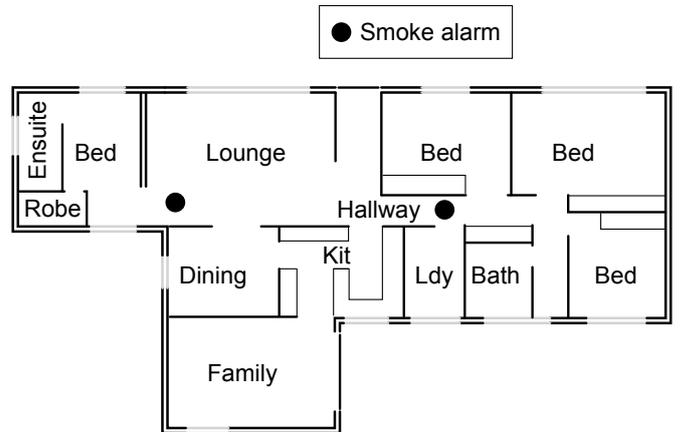
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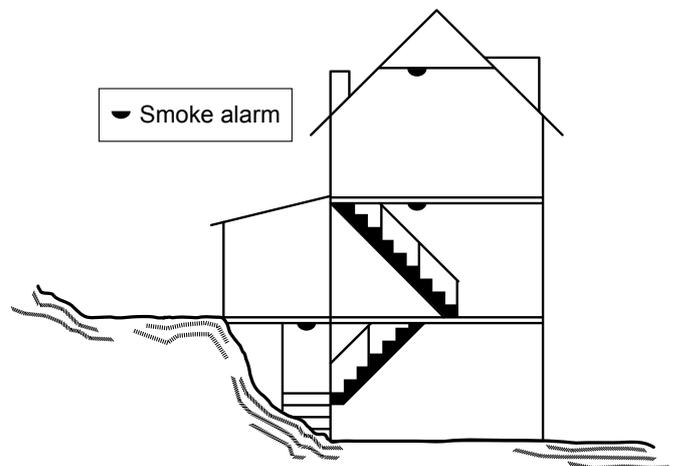
**Diagram 1.** Example of smoke alarm location in dwelling with bedrooms grouped together.



**Diagram 2.** Example of smoke alarm locations in dwelling with separated sleeping areas.



**Diagram 3.** Cross section of dwelling showing smoke alarms on every storey.



**Diagram 4.** Example of smoke alarm locations for small boarding houses, guest houses, hostels, B&Bs etc.

