

Installation of fire safety systems in residential buildings

1. Summary

This Practice Note provides advice about fire safety regulations first introduced in Victoria on 14 June 2005. Failure to comply with these regulations may result in enforcement procedures - including the issue of infringement notices or a building order by the relevant building surveyor (RBS), and prosecution.

These regulations require the installation of hard-wired smoke alarms or detection systems and automatic sprinkler systems in some existing buildings. The *Building Regulations 2006* (the Regulations) commenced on 13 June 2006 and contain similar provisions to the previous requirements. This practice note is written to explain the new 2006 regulations.

2. Background

Smoke detection and automatic fire suppression systems in residential accommodation buildings can significantly reduce the incidence of injury or death to occupants, or damage to property, in the event of a fire. Many such buildings are old and built to different standards than those required today.

Correct installation, combined with proper maintenance of smoke detection and automatic fire suppression systems, greatly lessens the risk of a fire spreading beyond the room of origin. Early fire detection enables occupant warning, evacuation and can also allow for manual extinguishment of a fire, at an early stage.

The Regulations governing the installation and maintenance of fire safety systems in existing buildings are contained in Division 2 of Part 7 of the Regulations.

3. Description of the Regulations

The regulations can be summarised as follows:

- ▶ Regulation 709 requires hard-wired smoke alarms or smoke detection systems to be installed in Class 9a residential care buildings and Class 1b or 3 buildings constructed or

approved before 1 August 1997. This regulation is required to be complied with by 14 June 2006.

- ▶ Regulation 710 requires fire sprinklers to be installed in Class 3 shared accommodation buildings constructed or approved before 1 July 2003 unless they meet specific exemptions. The requirements are for an AS 2118.1 or 2118.4 sprinkler system to be installed by 14 June 2009.

4. Definitions - Building Code of Australia - Volume One

“Shared accommodation building means a Class 3 building having-

- (a) *more than one sole-occupancy unit of which any sole-occupancy unit has sleeping facilities capable of accommodating 3 or more unrelated persons; or*
- (b) *sleeping facilities capable of accommodating 13 or more unrelated persons,*

that is a boarding-house, chalet, guest house, lodging-house, backpacker accommodation or the like, or a residential part of a hotel offering shared accommodation but does not include a residential care building, a motel or a residential part of a school, health-care building or detention centre.”

“Residential care building means a building which is a place of residence where 10% or more of persons who reside there need physical assistance in conducting their daily activities and to evacuate the building during an emergency (including any residential care service, State funded residential care service or supported residential service as defined in the Health Services Act 1998 and an aged care building) but does not include -

- (a) *a hospital; or*
- (b) *a dwelling in which 2 or more members of the same family and not more than 2 other persons would ordinarily be resident; or*
- (c) *a place of residence where only one resident needs physical assistance in conducting their daily activities and to evacuate the building during an emergency.”*

“Class 3: means a residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living for a number of unrelated persons, including -

- (a) a boarding-house, guest house, hostel, lodging-house or backpackers accommodation; or
- (b) a residential part of a motel or hotel; or
- (c) accommodation for the aged, children or people with disabilities; or
- (d) a residential part of a health-care building which accommodates members of staff; or
- (e) a residential part of a detention centre.”

“Sole-occupancy unit means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or occupier and includes -

- (a) a dwelling; or
- (b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
- (c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
- (d) a room or suite of associated rooms in a Class 9c aged care building, which includes sleeping facilities and any area for the exclusive use of a resident.”

“Hotel offering shared accommodation means a hotel which has any sole-occupancy units that can be shared by unrelated persons.”

4.1 What is meant by “offering shared accommodation”?

Building owners who intend to provide accommodation where a person(s) pays board for (or rents) a bed within a room containing a number of beds for rent individually, would be considered to be offering shared accommodation. If an entire room is always rented out to the one occupant, or as a group booking then usually this would not be considered to be shared accommodation.

4.2 What is meant by “unrelated person”?

Unrelated persons means those who,

notwithstanding any relationship by reason of birth, have had no previous association, connection or affiliation with each other.

5. Regulation 709 - Hard wired smoke alarms or detection system

5.1 Buildings covered by regulation 709

This regulation requires hard-wired smoke alarms complying with AS 3786, or a smoke detection system complying with AS 1670.1, to be installed in Class 9a residential care buildings and Class 1b and Class 3 buildings.

This regulation does not apply to a building that has an approved smoke alarm system powered by mains electricity supply or an approved smoke detection system installed throughout the building.

Under regulation 105 “approved” is defined as approved by the relevant building surveyor. This would mean that either system at the time of installation would have been through the building permit process.

5.2 Responsibilities of building owner

The regulation was originally introduced in the *Building (Interim) Regulations 2005* with 12 months to comply. The owner must ensure there is compliance with the regulation by 14 June 2006.

Any building work proposed to be carried out in order to comply with regulation 709 will require a building permit. A municipal building surveyor or chief officer (fire brigade) may take enforcement action against a building owner for non-compliance. The RBS will ordinarily issue a certificate of final inspection, together with a maintenance determination under regulation 1204. As with all essential safety measures in a building, the building owner must ensure they are maintained as determined by the RBS.

The location of smoke alarms must be in accordance with *Practice Note 2006-27*.

5.3 Fines for non-compliance

An owner may be liable for a fine not exceeding 5 penalty units for non-compliance.

6. Regulation 710 - Shared accommodation buildings - automatic sprinkler systems

6.1 Buildings covered by regulation 710

This regulation applies to Class 3 *shared accommodation buildings* constructed, or for which a building approval or building permit was granted, before 1 July 2003. In certain circumstances buildings are exempt from compliance with regulation 710. The Regulations will require compliance by 14 June 2009.

The Regulations introduce further exemptions which consider existing fire safety features already provided to a building including distance of travel to an exit or alternative exit, fire safety systems such as fire hose reels, emergency lighting and exit signs, fire separation and whether the building has a management plan in place.

Refer to item 6.4 for examples of when a building is exempt. Item 6.5 provides guidance as to the minimum information that must be contained within a management plan.

6.2 Responsibilities of building owner

The owner must ensure compliance with the regulation by 14 June 2009. Owners may wish to employ a suitably qualified practitioner, for example a building surveyor or a fire engineer, to assess current levels of compliance.

Any building work proposed to be carried out in order to comply with regulation 710 will require a building permit. A municipal building surveyor or chief officer (fire brigade) may take enforcement action against a building owner for non-compliance. The RBS will ordinarily issue a certificate of final inspection, together with a maintenance determination under regulation 1204 at the

completion of the building work. As with all essential safety measures, the building owner must ensure they are maintained in accordance with the determination for the life of the building.

6.3 Fines for non-compliance

An owner may be liable for a fine not exceeding 10 penalty units for non compliance. Non-compliance with a building order may attract a penalty of up to 100 penalty units in the case of a natural person and 500 penalty units in the case of a body corporate.

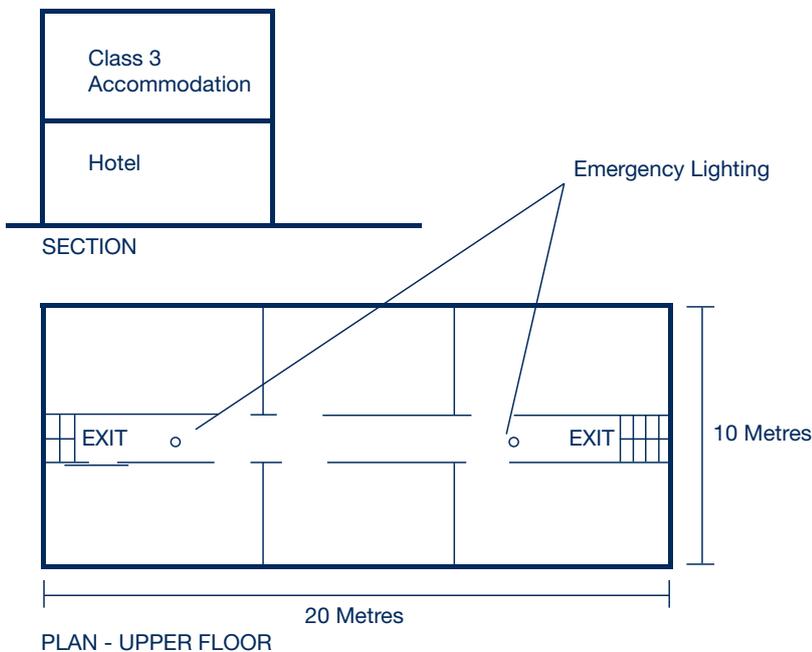
6.4 When is a building exempt?

The following examples illustrate how a building could be exempt from regulation 710.

Example 1

A “pub” with hotel style accommodation above is a common scenario. The hotel accommodation part of the building would be classified as Class 3. In this instance it has been determined that the accommodation is of a shared nature as a bed can be rented by an individual and the rooms (sole occupancy unit) are capable of accommodating 4 unrelated persons.

The hotel has a rise in storeys of 2 with the accommodation area located on the first floor. The hotel has a total floor area of 400m² the distance of travel to an exit is no greater than 6 metres to a point from which travel in different directions to at least 2 exits measured from the entrance doorway of each sole-occupancy unit. The building is provided with emergency lighting, exit signs and portable fire extinguishers in accordance with AS2444 and has a management plan in accordance with item 6.5.



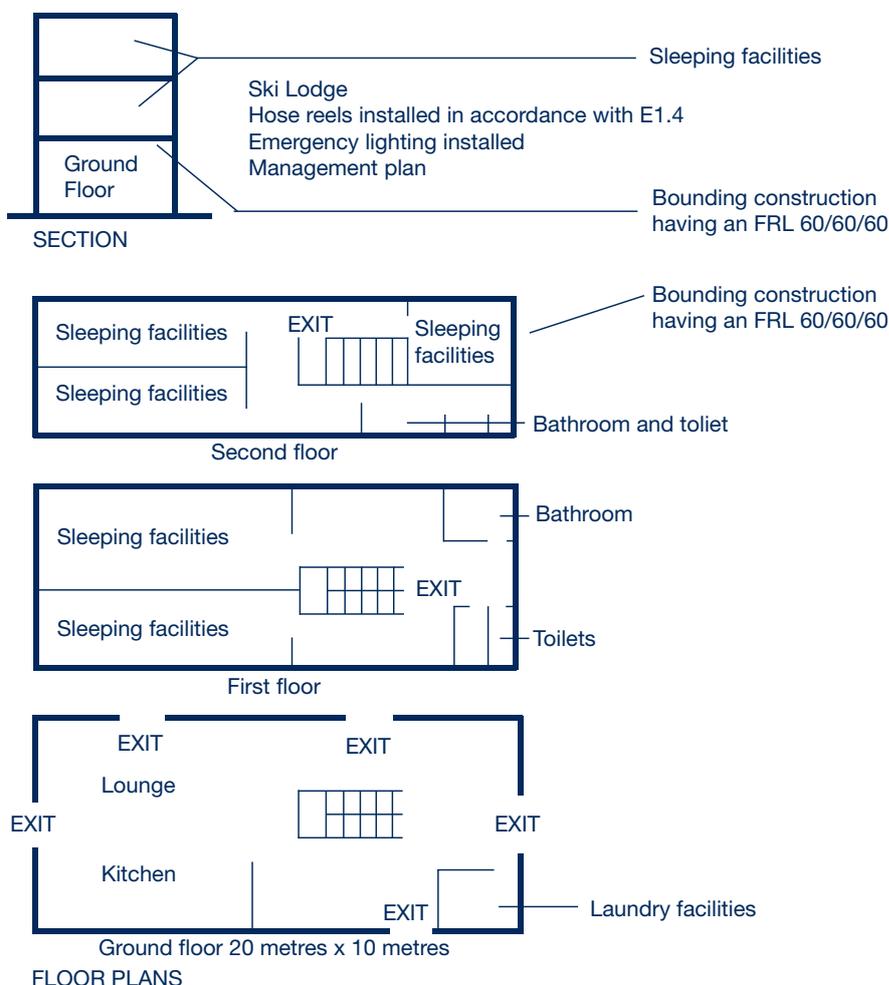
In this instance the owner of the hotel accommodation is exempt from installing a fire sprinkler system as the building meets the requirements of sub-clause (6).

Practice Notes

Example 2

An existing ski lodge with a rise in storeys of 3, where the ski lodge has sleeping facilities that are capable of accommodating 4 unrelated persons per room. Each storey is provided with an exit that is no greater than 6 metres from the entrance door of each sole occupancy unit. The doorways from each sole occupancy unit that lead to the public corridor are

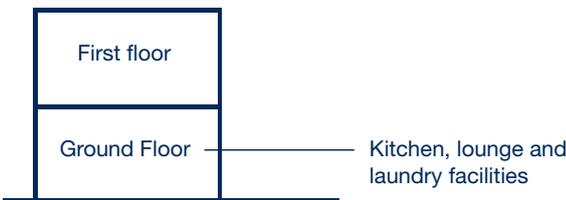
self closing -/30/30 fire doors and each sole occupancy unit has bounding walls and floor with an FRL of at least 60/60/60. Hose reels exist within the building in accordance with clause E1.4 (of BCA Vol. One) and emergency lighting and exit signs are also provided. The building has a management plan in accordance with item 6.5.



In this instance the owner of the ski lodge is exempt from installing a fire sprinkler system as the building meets the requirements of sub clause (7).

Example 3

Backpacker accommodation facility with a rise in storeys of 2, where accommodation is provided for up to 30 unrelated persons. The sleeping facilities are set up in a dormitory fashion. There is not more than 6 metres to a point from which travel in different directions to 2 exits is available. The building has already been fitted with an approved sprinkler system installed throughout the building.



SECTION



First floor



Ground floor

FLOOR PLANS

In this instance the owner of the backpacker accommodation is exempt from installing a fire sprinkler system as the building meets the requirements of sub clause (8).

6.5 Management Plans for Shared Accommodation Buildings

What is a Management Plan?

A management plan is a document which sets out instructions to help occupants of a building to deal with situations that could possibly be a threat to their safety.

The following information is the minimum that a management plan must contain. Each premises must be assessed individually and should there be specific site requirements these must be identified and added to your management plan.

What must be included in a Management Plan?

Emergency Contact Details

Emergency services contact details such as the 000 number to be listed indicating that this is the number to call for Fire, Ambulance or Police assistance. Managers contact details and location on or off site should also be provided.

Fire Protection Equipment

The plan must indicate what type of fire protection equipment is provided within the building. There must also be an attached plan showing the location of such equipment so that the occupants can easily identify it. The plan must also have a brief statement which instructs occupants/employees that the equipment must be kept clear of obstructions at all times.

If staff are employed a program of annual training must be set in place to ensure employees are capable of using fire protection equipment installed within the building; e.g. portable fire extinguishers, fire blankets, WIP (Warden Intercom Phone), call-points etc.

Evacuation Procedure

The evacuation procedure must include a plan that clearly identifies the location of all exits and the assembly point at which the building occupants are to meet. The procedure must also detail the actions staff (if employed) are to take in notifying occupants of the building in the case of an evacuation.

Where an evacuation warning system is installed through out a building the procedure must clearly detail the stages of the warning system and what actions must be taken during each stage.

Training drills must take place on a regular basis to ensure efficacy of the evacuation procedure.

Documents of assistance

Australian Standard AS 3745-2002 - Emergency control organization and procedures for buildings, structures and workplaces.