

Fire Safety Standard Guidelines

Inspection and Maintenance Options



Queensland Government

Department of Local Government and Planning
Department of Emergency Services

Purpose

This guideline provides information on the inspection and maintenance options for fire safety systems in budget accommodation buildings. This guideline is intended to assist building owners, local government officers, fire officers, consultants and designers, in bringing budget accommodation buildings into compliance with the Fire Safety Standard. It should be read in conjunction with the legislation, Fire Safety Standard and the other guidelines listed at the back of this guideline.

Introduction

On 1 July 2002, new laws (legislation) introduced by the Queensland Government took effect to ensure the safe evacuation of occupants if a fire occurs in a budget accommodation building. The new legislation requires all budget accommodation buildings built, approved, or for which an application was made prior to 1 January 1992 when the Building Code of Australia was introduced into Queensland to comply with the prescribed Fire Safety Standard.

The legislation requires the installation of early warning and emergency lighting by 30 June 2003 and compliance with the other provisions of the Standard within a 2 year period. Owners and occupiers of all existing budget accommodation buildings are also required to prepare and implement a Fire Safety Management Plan by 30 June 2003. For further information on what constitutes a budget accommodation building refer to the guideline "Budget accommodation buildings".

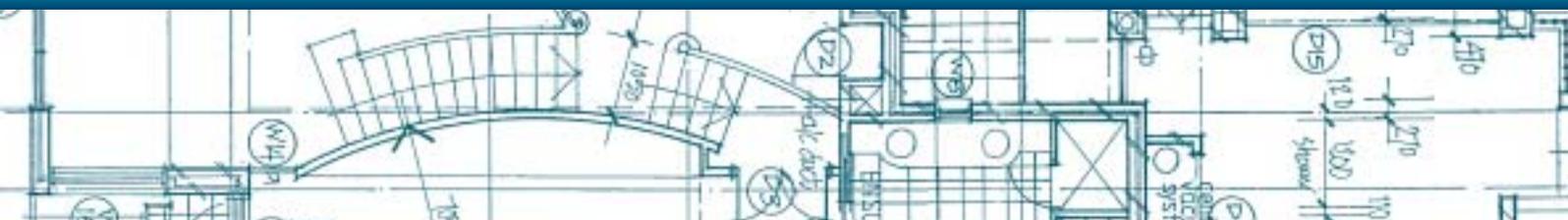
This guideline is intended for building owners and managers who have an ongoing responsibility to ensure the continued performance of all fire safety systems installed in their buildings. The guideline provides a list of the different fire safety systems that may be required under each provision of the Fire Safety Standard. Details are provided on who can maintain these systems,

including the type and level of maintenance and testing which must be performed. Where this testing and maintenance has to be performed by a licenced contractor, the guideline summarizes some of the key features of the system(s) to be tested so owners can witness and confirm the testing.

The importance of maintaining installed fire safety systems

Budget accommodation buildings require a range of fire safety systems to ensure that the building provides an acceptable level of safety in the event of a fire. The types of systems required in a building vary with the hazards associated with the building. Consequently, the number and type of fire safety installations which form part of the building's total fire safety system is usually controlled by the size, height and type of material from which the building is constructed. However, even a small building requires some essential fire safety systems such as smoke alarms and emergency lighting.

Unlike other building features, such as lighting and water, which are used daily, a building's fire safety system may remain largely dormant until required to perform. If the lights fail to operate at night, residents of a building will become aware of these failures as soon as they try to use them, and arrange to have them fixed as soon as possible. Because smoke alarms, emergency lights and other such fire safety systems are not used daily their failure may not be noticed until they are inspected and tested, or worse when a fire occurs and they are needed to perform. The situation of fire safety systems not working when required may in turn severely compromise the safe evacuation of the occupants of the building. Hence it is very important that these systems are maintained and tested regularly to ensure that they will operate if a fire occurs.



From time to time fire safety systems, such as smoke detection and alarm systems, may require repairs or servicing, which renders the system temporarily out of order. In these circumstances, building owners have an additional obligation to ensure contingency plans are put in place to address the fire safety shortfall. An example may be to install battery smoke alarms for the time the smoke detection and alarm system is out of order. All building occupants should be informed when such contingency plans are put in place, and the fire safety management plan amended to reflect the changes.

In small buildings containing only a few smoke alarms and emergency lights it may be possible for the building owner or manager to test and maintain these themselves. However, for a larger building with more complex fire safety systems, such as automatic sprinklers systems and smoke ventilation or extraction systems, owners will not be able to test these systems on their own. Regardless of the size of the building, owners and managers are still responsible for ensuring that these systems are maintained.

Maintaining fire safety systems in budget accommodation buildings

The testing and maintenance required for the following fire safety systems are described in this guideline. The following outlines a summary of the systems and the type of maintenance required.

Note: AS is an abbreviation for Australian Standard.

Fire safety system	Type of maintenance	Who can undertake the maintenance?
Early warning systems - residential smoke alarms	Testing of each smoke alarm, cleaning and replacement of back-up batteries	Building owner or manager
Early warning systems - commercial smoke detection systems	In accordance with AS 1851.8 or AS 1851.15	Licensed contractor (Fire Detection Systems)
Emergency lighting	In accordance with AS 2293.2	Licensed contractor (Electrical Licensing Board) or (Fire Detection Systems)
Occupant density	Inspection	Building owner or manager
Travel distances	Inspection	Building owner or manager
Emergency escape	In accordance with AS 1851.7	Licensed contractor (Passive Fire Equipment)
Exit paths	Inspection	Building owner or manager
Exit signs	In accordance with AS 2293.1 & 3	Licensed contractor (Electrical Licensing Board)
Fire extinguishers	In accordance with AS 1851.1	Licensed contractor (Fire Fighting Appliances)
Fire hose reels	In accordance with AS 1851.2	Licensed contractor (Fire Hydrants and Fire Hose reels)
Fire hydrants	In accordance with AS 1851.4	Licensed contractor (Fire Hydrants and Fire Hose reels)
Smoke hazard management	In accordance with AS 1851.6	Licensed contractor (Refrigeration, Airconditioning and Mechanical Services)
Sprinkler systems	In accordance with AS 2118.4	Licensed contractor (Fire Sprinkler Systems)



How to identify whether a contractor is licensed to perform a particular task

As a building owner or manager, you need to ensure that the contractor maintaining components of the building's fire safety system is appropriately qualified. Contractors that maintain fire safety systems are required to be licenced by the Building Services Authority (BSA), and they have a BSA Licence Card. Licences can be checked by contacting any BSA office or by visiting the BSA website (www.bsa.qld.gov.au).

Currently there is not a specific BSA licence class for emergency lighting and exits signs as this generally requires an electrician who is licenced by the Electrical Licencing Board. However, BSA licenced fire detection system contractors can generally maintain emergency and exit lighting systems. Thus, for exits signs and emergency lighting the Australian Standard requires a person that has "qualifications and experience suitable for the work" and this may be either an electrician licenced by Electrical Licencing Board or a BSA licenced fire detection system contractor.

The results of maintenance tests must be recorded in the fire safety management plan kept on site.

The value of regular fire safety system maintenance

In summary, maintenance of your building's fire safety system is important because you have:

- a legal statutory obligation to comply with the Fire Safety Standard; and
- a duty of care to the building's occupants; and
- the peace of mind that the mechanisms for safe evacuation from fire have been maintained.

Rights of owners to enter rooms for inspections and maintenance

The Fire Safety Standard requires building owners and/or their representatives to carry out certain inspections and maintenance of the fire safety installations in the building. Where services such as boarding houses, supported accommodation and aged rental accommodation are covered by the *Residential Services (Accommodation) Act 2002*, residents have a right to quiet enjoyment and privacy in their room.

The *Residential Services (Accommodation) Act 2002* places certain rights and responsibilities on service providers in relation to entering a resident's room (ss.65 - 71).

Service providers can enter a resident's room with their agreement for any purpose (s.66). This agreement can be made orally or in writing as a part of the residential service agreement.

Service providers can enter a resident's room at a reasonable time to make routine repairs and to carry out maintenance. The service provider must give a notice of the proposed entry 24 hours before that entry. If the service provider wants to enter more than one room, they can post the notice to a notice board or other place, where it is likely to be seen by the affected residents (s.68).

Immediately before entering the resident's room the service provider must tell the resident they are about to enter their room if the resident is in or near the room at the time. Once the service provider enters the room, they should preserve the resident's privacy and not remain in the room any longer than is necessary to carry out the inspection or maintenance.

If service providers have any questions regarding their rights and responsibilities in relation to entering a resident's room, please contact the RTA's call centre on 1300 366 311.

Service providers can obtain copies of a Notice to Enter Form R9 from the Residential Tenancies Authority by:

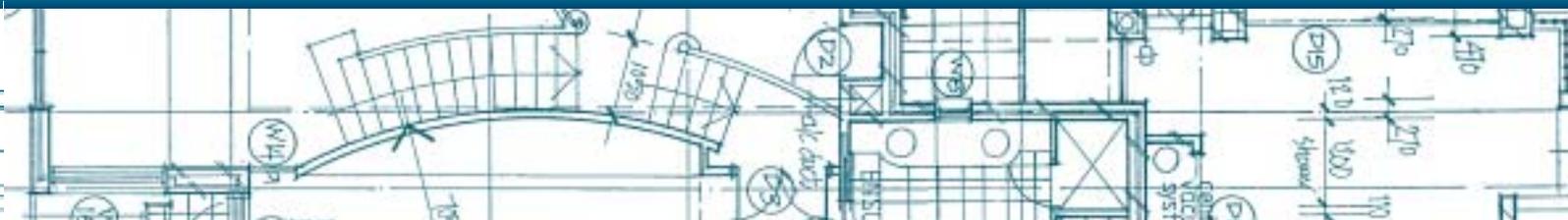
- Visiting the RTA's website at www.rta.qld.gov.au
- Calling the RTA's forms distribution service on 1300 136 939
- Using the RTA's fax back service on 1300 366 311 and pressing '2' in the opening greeting.

Early warning systems

Fire alarms



Early warning systems (fire alarms) for budget accommodation buildings can range from self contained smoke alarms (such as 240Volt AC mains powered) through to commercial smoke detection systems connected to the fire service.



Emergency lighting



Emergency lighting, essential to the evacuation of occupants not familiar with their surroundings, includes all lighting that will aid evacuation should the mains power fail. This ranges from upgrading existing lighting to a fully monitored emergency lighting system.

Existing lighting

Existing lights can form part of the building's fire safety system by being automatically switched on by the activation of a smoke alarm. Building owners therefore will need to maintain these lights in the building, which are being used for the dual purpose of everyday lighting and emergency lighting.

The following testing and maintenance is required each month:

- whilst testing the smoke alarms ensure that the existing lights (which form part of the emergency lighting system) turn on when the smoke alarm operates, and that adequate light is discharged to illuminate the exit pathway;
- check that the bulbs are fully operational. If showing signs of age it may fail before you can check it again. This means that you may need to change the bulbs in these specific lights more frequently than the other lights throughout the building; and
- replace any faulty bulbs.

Self contained and central lighting (central battery supply) systems

The Australian Standard AS2293.2 requires that these systems are maintained by a suitably qualified and experienced person, which is likely to be an electrician licenced by the Electrical Contractors Board or a BSA licenced fire protection system contractor. The extent of testing and maintenance for these systems is defined by AS2293.2 for emergency lighting systems. The appropriately qualified and experienced person that undertakes this maintenance should be familiar with this AS2293.2 and carry out the inspection and maintenance work in accordance with the Standard's requirements.

What to expect during the inspection and maintenance of these systems

Self contained lighting system

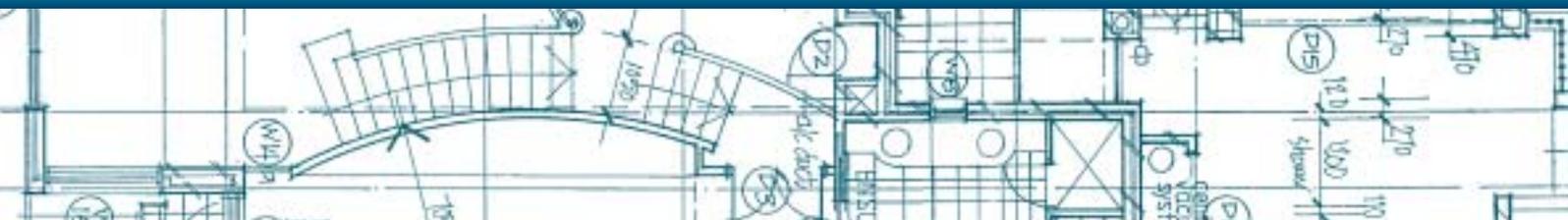
These systems are tested at six and 12 monthly intervals. Part of the six-month testing requires the contractor simulating a power failure by using the "test timer" in the electrical distribution board (for systems installed since 1997) or via isolating the lighting circuit (e.g. circuit breakers or similar). This will check that the lights activate and that they maintain their operation for 60 minutes (the test duration is 60 minutes).

Yearly inspections require the contractor to do all tasks performed at the six monthly inspections as well as visually checking and cleaning the emergency lights (e.g. clean the reflective surfaces, light diffusers etc). The results of maintenance tests must be recorded in the Fire Safety Management Plan kept on site.

Central lighting system

The testing of these systems is similar to the testing of the self-contained systems and are tested at six and twelve monthly intervals. Monthly inspections require the contractor to thoroughly check the backup battery condition as well as battery chargers, central inverters and distribution and control equipment. A system check will be undertaken via either manual or automatic discharge facilities.

Yearly inspections require the contractor to do a more thorough check of the batteries, central inverters and distribution and control equipment, as well as discharge test by simulating a power failure. The discharge test is conducted for 60 minutes. The results of maintenance tests must be recorded in the Fire Safety Management Plan kept on site.



Occupant density

The Fire Safety Management Plan (FSMP) for the building will identify the maximum number of people allowed in each bedroom (based upon the floor area divided by 2.5 m²/person). This means that a space of 2.5m² must be provided and maintained for each person occupying a bedroom, and this space must also be in conjunction with maintaining, at all times, a clear exit path of 900mm wide throughout the bedroom.

At least once a year, the owner or manager of the budget accommodation building will need to check that the maximum number of people in any bedroom does not exceed the limit defined in the building's FSMP. Ideally, owners or managers should check the occupant density of each bedroom every time new tenants take up short-term residence.

Travel distances

It is important that occupants in any part of a budget accommodation building have enough time to escape a dangerous situation. One way this can be achieved is to maintain the *evacuation routes*. Maintenance of the evacuation routes includes ensuring that the travel distances have not increased due to any alterations to the floor layout of the building. Any alterations should not result in an increase in travel distance, and/or obstacles, which could hinder or confuse evacuating occupants trying to reach exits in a safe amount of time.

Travel distances to fire exits

Every three months the owner or manager of a budget accommodation building should inspect the paths occupants use to get to the exits and outside of the exits where people will evacuate from the building. These areas should be kept free from hazards and obstructions so that a safe evacuation can be made during an emergency.

This may mean:

- walking via the route occupants will use from bedrooms, dining areas, etc so that any obvious problems will come to your attention;
- checking that alterations will not hinder the evacuation of occupants; and
- making sure the areas in front of and behind the exit doors are not cluttered with stored material.

Emergency escape



Emergency escape paths must be kept clear when leaving the building and all doors or devices for opening the doors or holding them open are maintained in working condition.

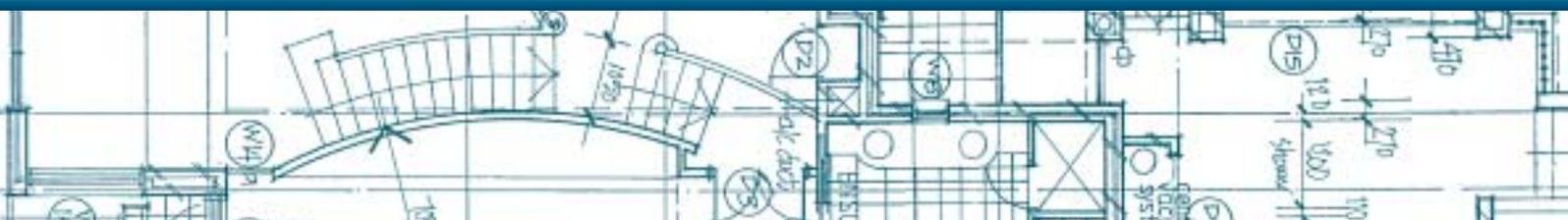
Fire-resistant doorsets (fire doors)

These systems must be maintained by a BSA contractor who holds a passive fire equipment licence. The extent of testing and maintenance for these systems is defined by AS1851.7 and requires maintenance tests be conducted once every three months and a more thorough inspection once a year. Three monthly inspections involve checking, and if needed:

- removing obstructions, both inside and outside, the fire door;
- devices used to hold the door open if not the same as the items installed with the door or non approved additional devices are present, will be removed;
- if approved devices are present these devices will be tested to ensure the release of the door in the event of a power failure;
- doors must also be able to be opened without the use of a key; and
- latches will be checked to ensure they still fit properly and are attached securely.

Annual inspections involve ensuring the doors have not been removed or changed for non-approved items. The hinges, doorframe, labels, latches, and door closers are checked more closely for secure fitment, correct clearance or corrosion.

Owners and managers of budget accommodation buildings should maintain these areas as a clear area. Should the door, associated equipment or fittings show any signs of degradation or corrosion between inspections, the relevant licenced passive fire equipment contractor should be contacted.



Once the inspection has been completed the contractor will inform the building owner/occupier that they have finished. The contractor will go through the inspection report with the owner/occupier highlighting any observations. The report will be recorded in the FSMP kept on the premises in a fire safe environment.

Doors with self closing mechanisms

Self-closing door mechanisms allowed for under Schedule 3 of the Fire Safety Standard should be maintained in accordance with AS1851.7 A2.4 and recorded in the FSMP. Building owners should also check whether these doors have a close fit to the door frame. Where doors do not achieve a close fit with the door frame, those door frames should be fitted with a smoke seal. Where owners are undecided about this assessment they should consult with a licenced passive fire equipment contractor or fire engineer. Seals suitable for use as a smoke seal are available from most hardware stores.

Protection of exit paths

When required, occupants using evacuation routes need to be protected from the dangers caused by fire. Occupants who use exits that pass through multiple storeys in the building, or travel over extensive distances to escape the building have a heightened risk of being exposed to the products of a fire such as smoke and heat. The Fire Safety Standard recognises this fact and requires fire isolation of stairs and passageways where exit travel distances are large and where stairs connect or pass by multiple storeys.

Fire isolated areas

Every three months, owners or managers of budget accommodation buildings will need to inspect the paths that occupants use to get to exits. These areas should be kept free from hazards and obstructions so that a safe evacuation can be made during an emergency. Fire isolation maintains the evacuation path for a longer period in the event of a fire.

To ensure the ongoing integrity of the fire isolated areas, owners should:

- check that safety equipment (e.g. handrails, non-slip stairs etc) are maintained in good working condition;
- walk the route occupants will use from bedrooms and dining areas etc so that any obvious problems will come to your attention;
- check that alterations will not hinder the evacuation of occupants;

- ensure that the areas in front of and behind exit doors are not cluttered with stored material; and
- ensure that fire isolated stairs, passageways and ramps are not used for storage.

In some buildings, the fire isolated passageways and fire stairs etc are not used as part of the day-to-day circulation by people around the building. This means that the fire isolated stairs and passageways are only used during emergencies. As these areas are not used daily there is the potential for them to be used as storage space that could either hinder an evacuation or contribute to the fire. The regular inspection of these areas to ensure that there is no storage or accumulation of rubbish is essential to the maintenance of the building's fire safety.

Non-fire isolated areas

Similarly, the owner or manager of a budget accommodation building should inspect non-fire isolated exit paths every three months. These areas should be kept free from hazards and obstructions so that a safe evacuation can be made during an emergency.

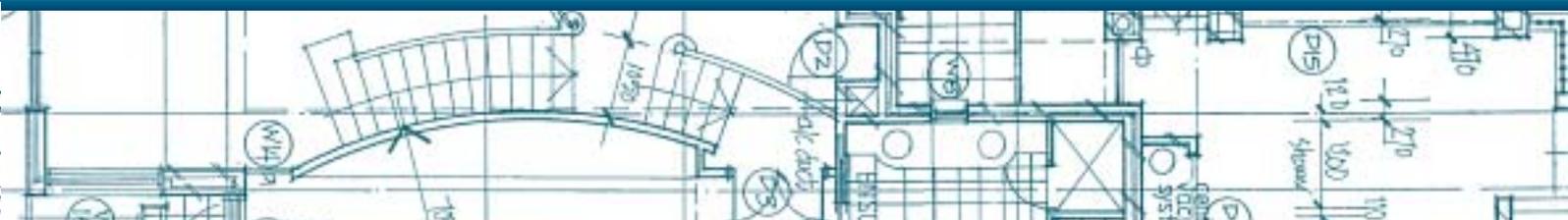
This means:

- walking the route occupants will use from bedrooms and dining areas etc so that any obvious problems will come to your attention;
- checking that alterations will not hinder the evacuation of occupants; and
- making sure the areas in front of and behind the exit doors are not cluttered with stored material.

Exit signage



Buildings owners and managers must ensure exit signs are installed in budget accommodation buildings over 300m² in size to direct evacuating occupants to the correct exits out of the building in the event of a fire. Where illuminated exit signs are used, the function of these signs relies on them being maintained so that they remain clearly visible to all occupants on approach to an exit, and that they still operate and provide the original level of illumination as when first installed.



The Australian Standard AS2293.2 requires that a suitably qualified person maintain these systems, which is likely to be an electrician licenced by the Electrical and Licencing Board or a BSA licenced fire detection system contractor. The extent of testing and maintenance of these systems is defined by AS2293.2 for emergency lighting systems. The appropriately qualified and experienced person that undertakes this maintenance should be familiar with AS2293.2, and carry out the inspection and maintenance work in accordance with the Standard's requirements.

These systems are tested at six and twelve monthly intervals. The testing requirements for emergency exit signs is similar to that required for emergency lighting (and would be conducted as part of the emergency lighting maintenance program).

However, in addition to the tests for operation, battery condition and battery discharge etc, exit signs should also be checked for obstructions and remain clear to all occupants approaching the sign. The results of maintenance tests must be recorded in the FSMP kept on site.

Portable fire extinguishers



The portable fire extinguishers are to be used by building occupants as a first attack fire-fighting tool on small fires that may occur in the building. They come in several different types to fight different sorts of fires, all of which will require regular maintenance to ensure that they work when needed.

A BSA contractor licenced for fire fighting appliances must maintain these systems. The extent of testing and maintenance for these systems is defined by AS1851.1. This Standard requires portable extinguishers to be inspected, tagged and punched every 6 months as a minimum.

Six monthly and yearly inspections will include the following:

- the extinguisher will be visually inspected, checking that it is in the correct location and has suffered no damage. A closer inspection will reveal any corrosion that may have occurred since its last inspection. The correct pressure of the contents is vital if the extinguisher is going to act reliably in the event of a fire;
- the associated equipment like brackets holding the extinguisher upright, the hose and nozzles, and anti-tamper devices will be checked to reduce the likelihood of damage from accidents. These devices are an important part of the extinguisher system; and
- the licenced contractor will check that the instructions of operation and maintenance tags are clearly visible.

Three and six yearly inspections require the BSA licenced fire fighting appliances contractor to conduct more maintenance-style tasks. These involve:

- all six monthly and yearly tasks;
- discharging and recharging extinguishers;
- replacing seals and gaskets; and
- checking for leaks.

Upon completing the inspection, a maintenance record will be filled out as part of the FSMP, which will be available at all times. This record should include:

- type of extinguisher (e.g. water or foam);
- date of manufacture;
- records and details of all previous inspections;
- any observations and/or actions performed; and
- whether any extinguishers have ever gone missing.

The FSMP will have facilities for records to be filled out. The contractor will complete a record of maintenance in triplicate (one for the owner/occupier, one for the maintenance contractor and one to be kept in the FSMP). The maintenance record tags attached to the extinguishers should also be punched in the appropriate section to represent the last inspection carried out.

Fire hose reels



Like portable fire extinguishers, occupants may use fire hose reels as their first attack on a fire. When adequately maintained, fire hose reels provide a near inexhaustible amount of water to control a small fire in its initial stage of growth.

Upon completing the inspection, the contractor will complete a record of maintenance in triplicate (one for the owner/occupier, one for the maintenance contractor and one to be kept in the FSMP). The maintenance record tags attached to the fire hose reel should also be punched with the appropriate number in the correct area to identify when and what type of maintenance was carried out, as per AS1851.2.

Fire hose reel

These systems will be inspected every 6 and 12 months. Six monthly inspections require the licenced fire hydrants and fire hose reels contractor to check several parts of each fire hose reel including:

- The *operating instructions* are still attached in the correct location and that they are still clearly legible;
 - Leakage from the fire hose reel is checked as it cannot exceed a certain amount;
 - The hose must be able to be pulled freely off the fire hose reel. If this doesn't occur, the licenced contractor will unroll and wind back up in an organised manner to ensure free flow; and
 - If there are any signs of corrosion, this must be recorded and if needed must be rectified.
- Twelve monthly inspections require the licenced fire hydrants and fire hose reels contractor to conduct more maintenance style tasks. These involve:
 - all six monthly tasks;
 - a more thorough inspection of the effort required to unwind the hose off the reel using measuring instruments. Alterations are made if necessary; and
 - the rate of flow from the fire hose reel is measured.

Pump set

If a pump set supplies the fire hose reels with water pressure, the pump set will also need to be inspected and tested. This requires the pump to be inspected and started once a month. On completing the inspection, the contractor will complete a record of maintenance in triplicate (one for the owner/occupier, one for the maintenance contractor and one to be kept in the FSMP). The maintenance record tags attached to the pump set/fire hose reel should also be punched with the appropriate number in the correct area to identify when and what type of maintenance was carried out.

Water supply for fire fighting purposes

Upon arriving to a fire, the Fire Brigade will need a fire fighting water supply (fire hydrant) to attack the fire. Maintenance of fire hydrants will include the actual hydrant itself and any pumps supplying the hydrant.

A BSA contractor licenced for fire hydrants and fire hose reels must maintain these systems. The extent of testing and maintenance for these systems is defined by AS1851.4.

Where systems include pump sets, the level of maintenance is more extensive, resulting in inspections and testing on a weekly basis. If there are no pumps in the system, the testing required by AS1851.4 involves monthly tests of the system.

Inspections of water supply for fire fighting purposes

Weekly inspections

- Check battery condition
- Check general fuel/water levels, pump pressure, glands etc
- Maintain spare parts with the pump
- General maintenance of a petrol driven engine (if appropriate)

Monthly inspections

- Includes all weekly tasks
- Check hydrant valves are in correction position and there are no leaks
- Check hydrant valves are accessible
- Check cabinets (for corrosion etc)

Quarterly inspections

- Includes all weekly and monthly tasks
- Check fire service alarm connection
- Check fuses
- Test and run for 30 minutes (if appropriate)

Yearly inspections

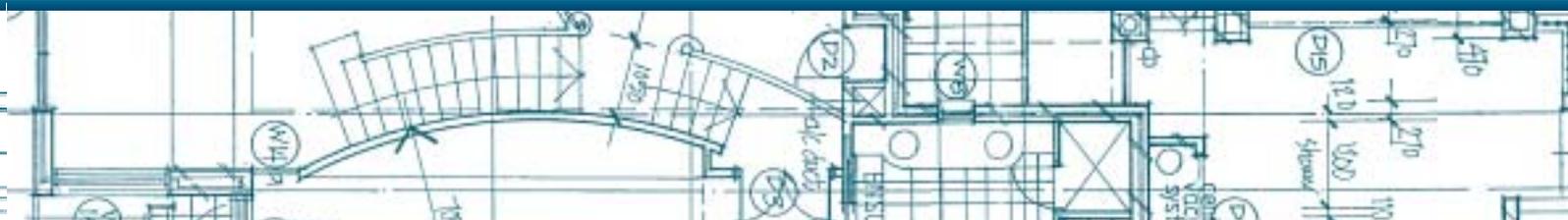
- Includes all weekly, monthly and quarterly tasks
- Inspect tank for corrosion, water presence etc
- Clean and service

Three yearly inspections

- Includes all weekly, monthly, quarterly and yearly tasks
- Conduct flow test
- Clean tanks
- Undertake overhaul of valves

Six yearly inspections

- Includes all weekly, monthly, quarterly, yearly and three yearly tasks
- Conduct a hydrostatic test



Upon completing the inspection, the contractor will complete a record of maintenance in triplicate (one for the owner/occupier, one for the maintenance contractor and one to be kept in the FSMP). The maintenance record tags attached to the fire hydrant should also be punched with the appropriate number in the correct area to identify when and what type of maintenance was carried out.

Smoke hazard management

Smoke hazard management systems are designed to prevent harmful products of a fire spreading into areas where people are trying to escape. These systems include fan systems that pressurise stairwells, as well as those that exhaust air and smoke from the compartment of the fire's origin to create a negative pressure compared with other pressurised compartments. There are several different elements that can make up a smoke hazard management system such as ductwork and dampers, and all of these require different maintenance procedures.

The owner or manager of a budget accommodation building can undertake a limited amount of the inspection and maintenance required for these systems themselves. However, the majority of work needs to be undertaken by a BSA licenced contractor. Aspects of the inspection and maintenance that can be undertaken by the owner or manager include monthly inspections of the outdoor air intakes to check for corrosion, vandalism and damage. Any combustible material should be cleared away from the exterior air intake. The building owner or manager should also check and where necessary replace, the insect screens. These actions are essential to maintain a clear path for the mechanical ventilation system to draw in the full amount of fresh air when needed.

The remaining elements of these systems must be maintained by a BSA contractor licenced for refrigeration, air-conditioning and mechanical services. The extent of testing and maintenance required for these systems is defined by AS1851.6. The smoke detection element of the smoke hazard management system will need to be inspected by a BSA contractor licenced for fire detection systems.

There are many elements to a smoke hazard management system that require regular inspections to ensure the system is maintained in a reliable working condition. The following table outlines a summary of what needs to be inspected at different times.

Inspection of smoke hazard management systems

Monthly inspections

- Check fan and motor components
- Inspect filters
- Check kitchen exhaust for grease accumulation

Quarterly inspections

- Check fan and motor components more extensively
- Check interfaces between fire safety systems (e.g. smoke detection to start exhaust)
- Inspect stair pressurisation

Half-yearly inspections

- Check dampers for any deterioration in condition since installation
- Check fan motor operation

Yearly inspections

- Check fire dampers
- Check electric duct heaters
- Check fan components
- Check the interface between the smoke detection system and the mechanical ventilation system in fire mode
- Check the interface between the smoke detection system and the stair pressurisation system in fire mode
- Check filters (both normal and kitchen duct filters)
- Inspect the kitchen exhaust duct for grease build up and if needed, clean this build up off

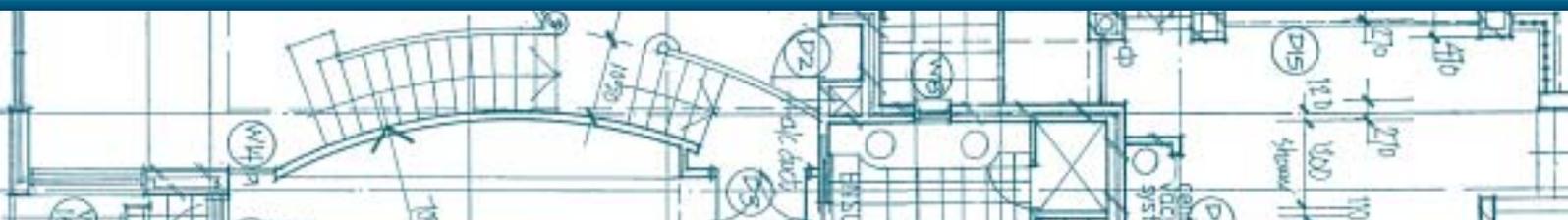
Two-yearly inspections

- Inspect the electric duct heaters (including measurement tools, the condition of components and the accumulation of substance on these components)
- Inspect the condition of fan motor components
- Check pressurised escape routes by simulating fire conditions to check various operations

Five-yearly inspections

- Check the fire dampers for corrosion, mounting, integrity and correct operation etc
- Inspect the electric duct heaters (including measurement tools, the condition of components and the accumulation of substance on these components)

Upon completing the inspection, the contractor will complete a record of maintenance in triplicate (one for the owner/occupier, one for the maintenance contractor and one to be kept in the FSMP).



Fire sprinklers



Fire sprinkler systems are based upon a series of pipes with heat activated heads that are located on or near the ceiling spaces in the roof areas of the building. At a certain temperature (well above the likely ambient temperatures for the building), the heat will cause the sprinkler head to release the water and control the spread of fire.

There are several important components making up a fire sprinkler system that need to be maintained to ensure the operation and performance of the system.

A BSA contractor with a fire sprinkler systems licence must maintain this system. Budget accommodation buildings with sprinklers could have a commercial system (AS2118.1), a residential system (AS2118.4) or a domestic system (AS2118.5). The BSA contractor maintaining the system will require a licence appropriate to the type of sprinkler system, which would be either a licence class "Fire Sprinkler Systems Commercial and Industrial" (AS2118.1) or "Fire Sprinkler Systems Domestic and Residential" (AS2118.4).

The extent of testing required for either system is defined by AS1851.3. The following table outlines a brief summary of what needs to be inspected at different times. The full inspection routine for a fire sprinkler system is too detailed and thus, a comprehensive list of all aspects would not benefit the reader.

Summary of maintenance

Some components of a building's fire safety system are used daily and thus, their operation and performance is checked daily. However, the majority of a building's fire safety system components are not used regularly, and are only intended to be used when there is a fire (including systems such as sprinklers and portable fire extinguishers).

If some part of the building's fire safety system fails to operate when required, the consequences of their failure could be catastrophic.

As the building owner or manager it is your responsibility to ensure that all components of your building's fire safety system are fully maintained so that in the unlikely event of a fire they will operate as required. If the systems are not maintained you could be liable for the consequences.

Inspection of fire sprinklers

Weekly inspections

- Check that the pump areas are clear
- Check the record readings from gauges (and adjust if necessary)
- Check the correct operation of several components
- Check that the correct literature is present

Quarterly inspections

- Undertake all weekly inspection tasks
- Inspect the accompanying system connections (e.g. detection systems, brigade connection etc)
- Check that the valves are still in working condition
- Inspect any special hazard or environmental areas

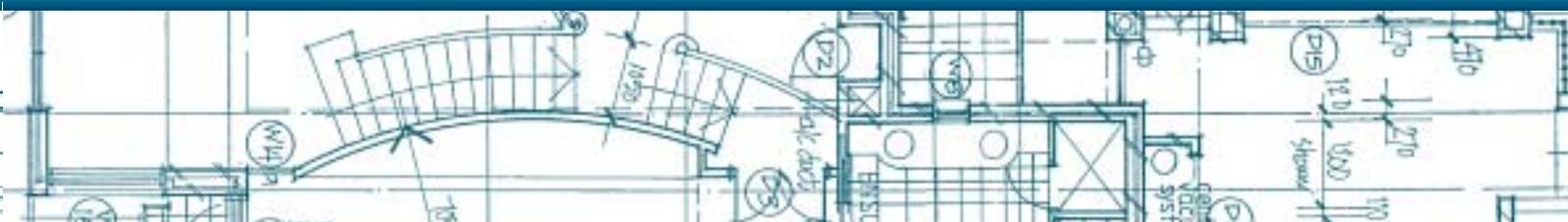
Yearly and three-yearly inspections

- Undertake all weekly and quarterly inspection tasks
- Inspect kitchen areas (including ducts and special hazards etc)
- Check components for corrosion
- Check all switches and sensors
- Inspect pipe work

Five-yearly inspections

- Test a sample of the installed sprinkler heads (note: this sample cannot be of less than 10 sprinkler heads)
- Replace all 'special' (nominal temperature rating above 182°C) sprinkler heads

Upon completing the inspection, the contractor will complete a record of maintenance in triplicate (one for the owner/occupier, one for the maintenance contractor and one to be kept in the FSMP). The maintenance record tags attached to the fire sprinkler system should also be punched with the appropriate number in the correct area to identify when and what type of maintenance was carried out.



Use of guidelines

These guidelines are intended for use by-

- Building owners;
- Local governments;
- Building certifiers for acceptable solutions;
- Building certifiers with competence in fire safety for performance decisions; and
- Fire engineers, architects and building designers.

Associated guidelines

Other guidelines relating to fire safety in budget accommodation buildings provide specific guidance on various parts of the legislation, as well as illustrative examples using actual buildings as case studies.

The list of guidelines includes:

- Overview of the Fire Safety Standard;
- How to Comply with the Fire Safety Standard;
- Development Application Process;
- Budget Accommodation Buildings;
- Smoke Alarms & Emergency Lighting;
- Enforcement, Appeals, Extensions of Time;
- Application of the Fire Safety Standard;
- Fire Safety Audits; and
- Fire Safety Management Plans.

Case studies on actual buildings include:

- Fully compliant building;
- Large single storey building;
- Small supported accommodation building;
- Two storey timber hotel;
- Three storey boarding house; and
- Two storey backpacker hostel.

Guideline and case studies are available on the following websites:

www.dlgp.qld.gov.au

www.fire.qld.gov.au/building-safety

A copy of the legislation and the Fire Safety Standard are also available from these websites.

For further information

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