

→ Essential Safety
Measures
Maintenance
Manual



*The Building Commission is a professional, supporting
and forward thinking body. It strives to create better*

Foreword by the Building Commissioner

Essential safety measures are central to ensuring a safe and healthy built environment in Victoria, and their maintenance is vital for the life, safety and health of occupants over a building's lifetime.

To this end, the *Building Regulations 2006* regulate to ensure adequate levels of fire safety and protection of people in a building or place of public entertainment.

It is important that all those with responsibilities in owning, managing and operating buildings – large or small – are fully aware of, and understand, their responsibilities in the ongoing maintenance of the essential safety measures in their buildings.

It is the role of the Building Commission to ensure the safety, liveability and sustainability of Victoria's built environment, and the *Essential Safety Measures Maintenance Manual* sets out in detail what is required and within what parameters building owners and managers must work to meet their regulatory obligations.

This fourth edition of the manual has been designed to be easy-to-use: it is set out in four sections, within which comprehensive information is provided on each essential safety measure. It is also available in electronic form, with a CD-ROM in a plastic sleeve inside the folder.

It is not expected that owners or building property managers will need to read the entire manual. The four sections are clearly defined, enabling users to identify and read only those parts of the manual, including parts of individual safety measures, that are relevant to their building's essential safety measures needs.

It is important for all building owners and managers to be informed of their obligations regarding maintenance of the essential safety measures in their buildings. Good maintenance practice of buildings not only makes good sense from a health and safety point of view, it is also a good risk-management business decision.



Tony Arnel
Building Commissioner

Introduction

WHAT IS CONTAINED IN THIS MANUAL?

The Essential Safety Measures Maintenance Manual is designed to aid building owners, building property managers and other persons interested in the regulatory requirements relating to maintenance of essential safety measures.

The manual provides detailed information on each essential safety measure listed in Part 12 of the *Building Regulations 2006*. It has been divided into four parts:

- **Part 0 – Building Code of Australia – Use of alternative solutions and their associated maintenance requirements**
- **Part 1 – Buildings constructed from 1 May 2004**
 - Building Fire Integrity
 - Means of Egress
 - Signs
 - Lighting
 - Fire-Fighting Services and Equipment
 - Air Handling Systems
 - Automatic Fire-Detection and Alarm Systems
 - Occupant Warning Systems
 - Lifts
 - Standby Power Supply Systems
 - Building Clearance and Fire Appliances
 - Other Measures
 - Building Use and Application
- **Part 2 – Buildings constructed between 1 July 1994 and 30 April 2004**
 - Egress and Access
 - Electrical Services
 - Fire-Detection and Suppression Equipment
 - Fire-Resistance
 - Mechanical Services
- **Part 3 – Buildings constructed prior to 1 July 1994**
- **Appendices**
 - Appendix A – Annual essential safety measures report
 - Appendix B – *Building Regulations 2006* Extract, Part 12 – Maintenance
 - Appendix C – Sample Log Sheets

This manual provides the following information:-

- Reference clause of the *Building Code of Australia (BCA) 1990* where applicable
- The performance requirement of *BCA 1996* and later published versions up to *BCA 2007*, including the deemed to satisfy clause where applicable
- The relevant Australian Standard for installation and maintenance (if applicable)
- A brief description of the purpose, equipment, requirements and method of operation
- Recommendations on maintenance programs and record-keeping.

Where a relevant building surveyor has approved the installation of an essential safety measure based on a performance requirement i.e. *BCA 2006* Volume 1 Performance Clause CP1, then he or she may specify on the occupancy permit or in writing where no occupancy permit is required, a differing or additional level of maintenance. Differing or additional maintenance may include additional maintenance procedures specific to that safety measure or prescribed maintenance to comply with another country's building codes or standards.

HOW TO USE THIS MANUAL

As noted above, the manual is set out in four sections in which comprehensive information is provided on each essential safety measure. It is not expected that owners or building property managers would need to read this manual from cover to cover. The manual is set out so that each part may be read individually or an owner or building manager may only read the relevant part for an individual essential safety measure without the need to read the entire section.

WHAT IS THE BUILDING LEGISLATION SYSTEM IN VICTORIA?

Victoria's building legislation system was set up under a Victorian Act of Parliament, the *Building Act 1993* (the *Act*). It has developed into a leading model for other Australian States and Territories, as well as for other countries.

The *Act* introduced major changes in building control to improve the Victorian building industry. Of particular note, the *Act* introduced the concept of building permit approvals by private building surveyors. It also introduced compulsory registration and insurance for builders and certain other categories of building practitioners.

These innovations have been designed to assist building owners, building surveyors and other industry practitioners to produce buildings that are safe, liveable and energy-efficient in a cost-effective and timely manner for all Victorians.

WHAT LEGISLATION GOVERNS BUILDING ACTIVITY?

All building work must comply with the *Act*, *Building Regulations 2006* (the *Regulations*) and the *Building Code of Australia* (the *BCA*) unless specifically exempted.

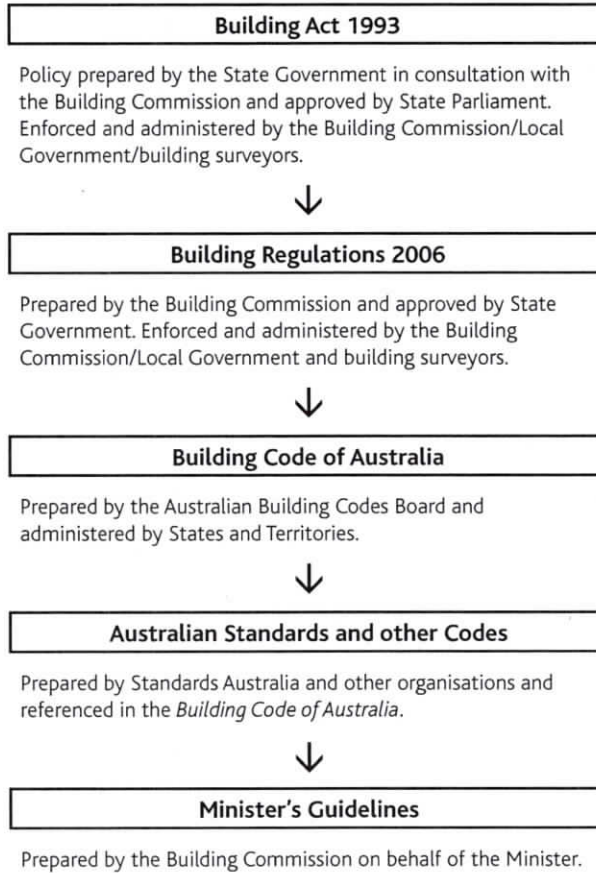
The *Act* sets out the legal framework for the regulation of construction of buildings, building standards and maintenance of specific building safety features in Victoria. The objectives of the *Act* include:-

- To establish, maintain and improve standards for the construction and maintenance of buildings
- To facilitate the adoption and efficient application of national uniform building standards and the accreditation of building products
- To enhance the amenity of buildings and protect the safety and health of people who use buildings
- To facilitate and promote the cost-effective construction of buildings
- To provide an efficient and effective system for issuing building and occupancy permits.

The *Regulations* are derived from the *Act* and contain, amongst other things, the requirements relating to building permits, building inspections, occupancy permits, enforcement of the *Regulations* and maintenance of buildings. The *Regulations* call up the *BCA* as a technical reference that must be complied with, giving it legal status.

The *BCA* is produced and maintained by the Australian Building Codes Board on behalf of the Commonwealth Government and each State and Territory Government. It is a uniform set of technical provisions for the design and construction of buildings and other structures. It is fully performance-based and includes minimal state variations. A performance-based approach defines the way of achieving a specified outcome without prescribing a particular method.

Hierarchy of building control documents



WHERE DOES THE BUILDING COMMISSION FIT IN?

The Building Commission was established on 1 July 1994 by the *Act* as a self-funded body to administer Victoria's building regulation system. Its charter is to serve industry and the community through the development and application of building law to provide for the cost-effective design, construction and maintenance of healthy, safe, habitable and energy-efficient buildings.

The Commission's functions include:

- Reviewing the efficiency and effectiveness of the *Act* and *Regulations*;
- Advising the Minister for Planning and the Victorian Government on building matters;
- Registering building practitioners;
- Monitoring the conduct and ability of registered building practitioners;
- Providing building product accreditation;
- Determining disputes and appeals arising from the *Act*;
- Monitoring a system of levy collection;
- Informing industry of changes to building legislation; and
- Providing comprehensive information on building activity.

The Commission also provides administrative support to four statutory bodies established by the Act:

The **Building Advisory Council** advises the Minister, through the Commissioner, on the administration and impact of the legislation and regulations on the building industry and the community, and issues relating to the building permit levy.

The **Building Appeals Board** comprises a chairperson and as many other people who have experience in the building industry or matters related to the industry as the Minister considers necessary. The role of the Board is to hear applications for modifications of the *Regulations*, hear any disputes or appeals arising from the Act, including adjoining owner disputes, determine alternative solutions and hear appeals arising from the Building Practitioners Board.

The **Building Practitioners Board** comprises building practitioners drawn from major professional organisations upon the recommendation of the Minister. It administers the regulation system for building practitioners and monitors their performance. It may also make recommendations to the Minister in relation to qualifications and insurance matters.

The **Building Regulations Advisory Committee** comprises the Commissioner, architects, builders, building surveyors, engineers, building owners, lawyers, consumers and representatives from the fire authorities, local government, State Government and the Melbourne City Council. The role of this Committee is to advise the Minister on draft regulations, accredit building products, systems construction methods, designs and components associated with building work.

PRIVATE SECTOR ALTERNATIVE

Private sector competition has been introduced as an alternative service to that which was exclusively undertaken by councils in the past. The *Regulations* set out how a private or municipal building surveyor carries out these functions. The Act places obligations on both municipal and private building surveyors in relation to their appointment, the extent of their responsibilities and imposes penalties for unprofessional conduct.

LIABILITY AND INSURANCE

The Act limits liability to a period of 10 years commencing from the date of issue of the occupancy permit or the certificate of final inspection. The Act also withdraws the common law doctrine of joint and current tortfeasor liability so that defendants will not pay more than their own share of liability. The Act also makes insurance compulsory for Registered Building Practitioners (which include engineers, building surveyors, commercial and domestic builders, and draftspersons). The Act also requires that an architect must be insured. This insurance is to be provided in accordance with the requirements set out in a Ministerial Order.

OPTIONS FOR COUNCILS

Although municipal councils maintain primary responsibility for administering the law, they now have a range of options for involvement in the building control system.

Building permit fees are de-regulated and local councils may charge fees that are competitive with the private sector.

WHAT OTHER SERVICES DOES THE BUILDING COMMISSION PROVIDE?

In addition to administering the statutory bodies, the Building Commission organises and conducts seminars for the building industry in relation to the development and amendment of the *BCA*, the Act and the *Regulations*.

The Building Commission also publishes a number of documents which cover items of general interest such as forthcoming seminars, proposed regulatory changes etc; Practice Notes, which provide clarification of particular issues relating to the *Regulations*; and Minister's Guidelines, which relate to fees charged and the functions of private and municipal building surveyors.

Building practitioners receive these publications as part of their registration fee. Other people interested in obtaining the Commission's publications should telephone (03) 9285 6400 or visit the Building Commission website at www.buildingcommission.com.au

WHERE CAN A COPY OF THE BUILDING LEGISLATION BE OBTAINED?

The *Act, Regulations* and other statutory publications are published in hard copy and electronically. They can be purchased from:

- Anstat Pty Ltd on (03) 9278 1144
- Information Victoria on 1300 366 356

An electronic copy of the *Act or Regulations* can be obtained by accessing the Statute Book on the Victorian Legislation and Parliamentary Documents homepage www.dms.dpc.vic.gov.au

The Minister's Guidelines are available from the Building Commission's website www.buildingcommission.com.au

The *BCA* can be obtained from CanPrint Communications on (02) 6295 4422 or email canprint@canprint.com.au

The Australian Standards can be purchased from Standards Australia on 1300 654 646 or www.saiglobal.com/shop

ESSENTIAL SAFETY MEASURES

WHAT ARE ESSENTIAL SAFETY MEASURES?

Essential safety measures are the fire, life safety and health items installed or constructed in a building to ensure adequate levels of fire safety and protection from such things as Legionella over the life of the building.

Essential safety measures include all traditional building fire services such as sprinklers and mechanical services etc., but also include passive fire safety such as fire doors, fire-rated structures and other building infrastructure items such as paths of travel to exits.

An essential safety measure, for the purpose of the *Regulations*, is provided for the safety of people in a building or place of public entertainment.

The term 'essential safety measure' has been defined in the *Regulations* as including:-

1. *Safety measures as listed in Table 11.1 to 11.11, excluding artificial lighting contained in Table 11.4, of the BCA Volume 1;*
2. *Mechanical ventilation systems, hot water or cooling systems;*
3. *Any other item listed as an essential safety measure (e.g. result of alternative solution); and*
4. *Essential service as defined under the Building Regulations 1994 (Previous Regulations).*

This definition of essential safety measure is self-explanatory and encompasses the industry practice of referring to all safety measures, essential services, safety fittings, and equipment under the one definition of essential safety measures. You will note that Table 11.12, 11.13 and artificial lighting under Table 11.4 of the *BCA* are not included.

WHY DO THEY NEED TO BE MAINTAINED?

The objective of maintenance is to ensure that every essential safety measure continues to perform at the same level of operation that existed at the time of commissioning and issue of the occupancy permit.

The maintenance of essential safety measures involves:-

- Ensuring the service is maintained at a level of performance specified by the relevant building surveyor (RBS) (usually to the *BCA* or an Australian Standard);
- Periodical inspections and checks in accordance with an Australian Standard or other specified method; and
- Maintaining a record of the maintenance inspections and checks in the form of an annual 'essential safety measures report'.

Reasons for ensuring maintenance of various services:-

- General wear and tear — i.e. electro-magnetic hold-open devices on fire doors, shut down of air conditioning system in fire situation, replacement of emergency lighting batteries and tubes;
- Reliability of a system operating — i.e. sprinkler system, mechanical ventilation system (used as a smoke hazard management system), early warning and intercommunication system;
- Faults after commissioning of a system — i.e. emergency power supply; and
- General housekeeping — i.e. ensure paths of travel to exits are not obstructed, fire-protective coverings are maintained, portable fire extinguishers remain in place.

WHAT BUILDINGS REQUIRE MAINTENANCE OF ESSENTIAL SAFETY MEASURES?

The maintenance of essential safety measures applies to Class 1b, 2, 3, 5, 6, 7, 8, and 9 buildings as defined in the *BCA Volume 1*. These classifications include multi-storey residential buildings, hotels/motels, offices, shops, warehouses, factories and hospitals/public buildings respectively.

Buildings are classified in the *BCA Volume 1* as follows:

Class 1: one or more buildings, which in association constitute:–

- (a) **Class 1a** – a single dwelling being –
 - (i) a detached house; or
 - (ii) one of a group of two or more attached dwellings, each being a building, separated by a fire-resisting wall, including a row house, terrace house, town house or villa unit; or
- (b) **Class 1b** – a boarding house, guest house, hostel or the like –
 - (i) with a total area of all floors not exceeding 300 m² measured over the enclosing walls of the Class 1b; and
 - (ii) in which not more than 12 persons would ordinarily be resident,

which is not located above or below another dwelling or another class of building other than a private garage.

Class 2: a building containing two or more sole-occupancy units, each being a separate dwelling.

Class 3: 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 hotel or motel; or
- (c) a residential part of a school; or
- (d) accommodation for the aged, children or people with disabilities; or
- (e) a residential part of a health-care building which accommodates members of staff; or
- (f) a residential part of a detention centre.

Class 4: a dwelling in a building that is Class 5, 6, 7, 8 or 9, if it is the only dwelling in the building.

Class 5: an office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9.

Class 6: a shop or other building for the sale of goods by retail or the supply of services direct to the public, including:–

- (a) an eating room, cafe, restaurant, milk or soft-drink bar; or
- (b) a dining room, bar, shop or kiosk part of a hotel or motel; or
- (c) a hairdresser's or barber's shop, public laundry, or undertaker's establishment; or
- (d) market or sale room, showroom, or service station.

Class 7: a building which is:–

- (a) **Class 7a** – a car park; or
- (b) **Class 7b** – for storage, or display of goods or produce for sale by wholesale.

Class 8: a laboratory, or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing, or cleaning of goods or produce is carried on for trade, sale, or gain.

Class 9: a building of a public nature:–

- (a) **Class 9a** – a health-care building, including those parts of the building set aside as a laboratory; or
- (b) **Class 9b** – an assembly building, including a trade workshop, laboratory or the like in a primary or secondary school, but excluding any other parts of the building that are of another Class; or
- (c) **Class 9c** – an aged-care building.

Class 10: a non-habitable building or structure:–

- (a) **Class 10a** – a non-habitable building being a private garage, carport, shed, or the like; or
- (b) **Class 10b** – a structure being a fence, mast, antenna, retaining or free-standing wall, swimming pool, or the like.

The maintenance provisions of Part 12 of the *Regulations* are divided into two divisions: Division 1 outlines the requirements for maintenance of essential safety measures and Division 2 outlines the maintenance and operation requirements for swimming pools and spas.

Division 1 is further divided into three subdivisions:–

- Subdivision 1 deals with the maintenance of essential safety measures, as determined by the relevant building surveyor, in buildings where building work is, or has been, carried out under the Act on or after 1 July 1994 and for Class 4 buildings after 14 June 2005.
Excluded from the application are smoke alarms to dwellings in Class 1b, 2, and 4 part of a building.
- Subdivision 2 outlines the maintenance of essential safety measures for buildings and places of public entertainment constructed before 1 July 1994.
- Subdivision 3 sets out the requirements for maintenance of exits and paths of travel relating to buildings or places of public entertainment.

OWNER'S RESPONSIBILITY

BUILDINGS BUILT ON AND AFTER 1 JULY 1994

Part 5 of the *Building Act 1993* (the *Act*) sets out the requirements for occupation of buildings and places of public entertainment. Among other things this Part specifically details when occupancy permits are required and the form and effect of those permits. This Part also details the decision-making responsibilities of the relevant building surveyor (RBS). Most importantly Section 40 of the *Act* requires that a person must not occupy a building in contravention of the occupancy permit. This also includes any conditions, such as the requirements of maintenance, that occupation may be subject to. There are substantial penalties which may be applied, such as 100 penalty units for a person and 500 penalty units for a body corporate, where contravention of the *Act* occurs.

The current regulations have made it mandatory for the RBS to list the required essential safety measures on the occupancy permit. The level of performance to which the service is to be maintained must also be specified on the occupancy permit. In the case of an essential safety measure being provided where no occupancy permit is required, the RBS must determine the level of performance which must be specified in writing and given to the owner.

The *Regulations* require that the owner:–

- (a) Display in an approved location a copy of an occupancy permit including any conditions required under regulation 1008;
- (b) Prepare an annual essential safety measures report in accordance with regulation 1209 before each anniversary of the date of occupancy permit or determination made under regulation 1204; and
- (c) Keep all annual essential safety measures reports and records of maintenance checks, service and repair work on the premises for inspection by the municipal building surveyor or chief officer at any time on request.

The carrying out of maintenance procedures is dependent on the complexity of the service and the experience of the person carrying out the inspection. Systems may be maintained where appropriate by the owner, service installer, maintenance contractor or internal maintenance personnel. Where the owner appoints a person to undertake the maintenance they must ensure that the person is appropriately qualified and competent to undertake the work.

It is the purpose of this manual to aid in the understanding, preparation and completion of an essential safety measures report. An example of an essential safety measures report is included in Appendix A.

Who is a competent person?

Owners may appoint a person in certain situations to undertake maintenance, testing, or preparation of the annual report. An owner must ensure that the person they appoint is suitably qualified and competent in the task that they are performing.

A competent person is a person who has acquired – through training, qualification or experience (or a combination of them) – the knowledge and skills enabling the person to perform the task correctly. In the context of this manual, that person would need to be competent in inspecting, testing and maintaining essential safety measures. Whoever is responsible for ensuring a particular task is carried out must determine that the person engaged to carry out that task is competent to do so.

In determining a person's competency, due consideration must be given to their qualifications, the training they have received relevant to the task at hand, and their previous experience in doing similar tasks. Some tasks, for example electrical or plumbing installation, inspection and testing, will require a particular competence, such as a formal qualification and/or licence. Therefore, a qualified and licensed person can only undertake such work. Where other tasks can be carried out by a 'competent person' who does not have formal qualifications, such a person must still be able to demonstrate they have the necessary training, qualification or experience, (or a combination of them), to carry out the inspecting and testing task in a competent manner.

BUILDINGS BUILT BEFORE 1 JULY 1994

The *Regulations* require the maintenance of safety equipment, safety fittings and safety measures within existing buildings built prior to 1 July 1994. These items are defined as essential safety measures, similar to those requirements for buildings built (issued with occupancy permits) on and after 1 July 1994.

The owner is responsible for ensuring that the safety equipment, safety fittings and safety measures are maintained in a state that enables them to fulfil their purpose.

The safety equipment, safety fittings and safety measures that are to be maintained are the items installed or constructed in the building that were required by the *Regulations* at the time of construction. These will typically be similar to those listed as essential safety measures.

The *Regulations* require that the owner of a building built prior to 1 July 1994:–

- a) Prepare an annual essential safety measures report in accordance with regulation 1209 before each anniversary of the date of occupancy permit or determination made under regulation 1215; and
- b) Keep all annual essential safety measures reports and records of maintenance checks, service and repair work on the premises for inspection by the municipal building surveyor or chief officer at any time on request.

Maintenance of exits

Occupiers are also responsible for the maintenance of exits and paths of travel to exits. The exit paths must be "...*maintained in an efficient condition and kept readily accessible, functional and clear of obstruction so that egress from the building or place is maintained*"; that is, to ensure proper housekeeping of the paths of travel to exits and keep exit doors and door hardware functioning.

Maintenance and inspection records

The *Regulations* do not specify a level of documentation to be kept by the owner. It is recommended that records of maintenance should be completed and made available to the building owner or agent at the time of conducting the system and equipment maintenance.

It is recommended that records should contain the following information:

- a) Record reference.
- b) Name of building or site.
- c) Address of building or site.
- d) Date of maintenance/inspection.
- e) System or equipment identification and location (Possibly a location plan).
- f) Frequency of maintenance activity undertaken.
- g) Defects identified.
- h) Name of property owner or the agent.
- i) Name and signature of the service person.
- j) Date the record was completed.

Form of records

If a person, such as a building surveyor, has been used to inspect and nominate essential safety measures, that person should provide advice as to the level of record-keeping required to satisfy the level and frequency of maintenance, but as a minimum should include the information provided above.

Maintenance records may be electronically based. Hard copy records should be kept on site and be available at all times. Technology in regard to the preparation of maintenance records has advanced considerably in recent years with the advent of purpose-designed software. As a minimum, hard copy of records of maintenance are to be made available to organisations such as regulators, fire authorities, insurance surveyors, fire auditors, etc. at all times. However, the hard copy records required may be prepared utilising electronic recording systems and this manual acknowledges such technology is designed to deliver an accurate, accountable, consistent and timely level of service.

Maintenance records can be in the form of maintenance record tags (in the case of hydrant landing valves, hose reels, portable and wheeled fire extinguishers and fire blankets), or log books (in the case of sprinkler, pumpset, fire hydrant, detection, smoke and heat alarm, fire alarm monitoring, sound, intercom, gaseous, aerosol, water mist, passive fire and smoke and HVAC and evacuation systems).

The use of maintenance record tags or labels shall not preclude the need for a separate maintenance record system.