

# Fire safety systems

Model guidance on BCR recommendation 19

2021

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# **Preface**

The <u>Building Confidence Report</u> (BCR), published in April 2018, made 24 recommendations to Building Ministers to address systemic issues in the Australian building industry. Building Ministers established the BCR Implementation Team within the Office of the Australian Building Codes Board (ABCB) to work with governments and industry to respond to the recommendations with a focus on national consistency where possible.

The BCR Implementation Team's work aims to establish national best-practice models in response to BCR recommendations. If implemented, the responses will strengthen compliance with the National Construction Code (NCC), better protecting the interests of people who own, work in, live in and use Australian buildings.

All responses to BCR recommendations have been developed in accordance with the <u>Building Confidence National Framework</u> with input from industry and governments. Figure 1 lists the outputs developed under the Framework, and where to find them.

State and territory governments have agreed to consider implementation of all BCR endorsed responses. This process will take time depending on each government's regulatory reform agenda, and may be undertaken in stages.

The model guidance for *Fire Safety Systems* represents a nationally agreed response to BCR recommendation 19. This recommendation states "that each jurisdiction requires registered fire safety practitioners to design, install and certify the *fire safety systems* necessary in commercial buildings".

Submissions from stakeholders in response to the public comment draft, have informed the final development of this model guidance. The nationally consistent adoption of this model would provide significant benefit to a national building industry and assist those practitioners who already work or plan to work across borders.

Defined terms used in this document are shown in italics. The definitions can be found in the <u>Building Confidence Glossary</u>.

Figure 1 – Building Confidence Implementation Framework - Outputs



#### Registration and training

Nationally consistent initial and on-going registration of building practitioners incorporating training, education and experience, to strengthen implementation of the NCC.

National Registration Framework

Evidence of experience for building surveyor registration

Continuing professional development on the NCC and ethics

NCC CPD



# Building surveyor integrity

Standards of behaviour for building surveyors performing statutory functions to improve accountability and transparency, and to manage expectations of building practitioners and consumers.

Building surveyor integrity and their role in enforcement

Code of conduct for building surveyors



#### Fire safety

Better integrate fire safety into design, construction and certification processes to lift compliance outcomes.

Code of conduct for fire safety engineers

Fire authorities in the building approval process

Fire safety systems



#### Regulatory oversight

Improve regulator collaboration, ensure regulators have powers to enforce compliance with building laws, and provide transparency for industry.

Building regulator collaboration

**Building regulator powers** 

Auditing and compliance



# Design, construction and certification

Reduce non-compliance with a robust and transparent system of inspection and certification throughout the building approval process.

Design acceptance

Independent third-party review

Mandatory inspections

**Building product safety** 



# Information sharing

Enable better access to building data for regulators and building owners, and improve understanding of building and plumbing terminology.

Data sharing MOU

**Building manuals** 

**Building Confidence Glossary** 

Standards Australia's Construction dictionary

#### **Next Steps**

#### Implementation by state and territory governments

Governments have agreed to consider implementation of the responses. Contact the building authority in your jurisdiction for information on progress.

Each of the outputs listed in Figure 1 can be accessed on the ABCB website.

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### Adoption of model guidance

As a model, this guidance does not have any force until adopted by a jurisdiction. States and territories may have regard to the content of the model. This may include amending or adopting the model for application in their jurisdiction.

The model guidance needs to be read in conjunction with the relevant legislation in a jurisdiction. It is written in generic terms and is not intended to override legislative requirements.

# **Purpose**

BCR recommendation 19 relates to the installation, testing, independent certification and maintenance of critical fire safety systems in commercial buildings (NCC Class 2-9 buildings). The registration requirements for practitioners recommended by this model guidance to undertake these functions, is aligned to the <a href="National Registration Framework">National Registration Framework</a> (NRF), developed in response to BCR Recommendations 1 and 2. The <a href="NRF">NRF</a> registers the two disciplines, fire systems installers and plumbers, which are central to the development of this model guidance. The <a href="NRF">NRF</a> does not register all trades and contractors that work on fire safety systems. Electricians also undertake some of the fire safety systems installation. Electricians are not included in the <a href="NRF">NRF</a> as per BCR recommendation 1, as electrical work is generally regulated under state or territory electrical licensing laws.

The purpose of this model is to outline the minimum requirements associated with the installation, testing, independent certification and maintenance of critical fire safety systems for consideration and implementation by governments. It is produced as model guidance to provide governments flexibility in implementation, recognising regulatory systems vary between jurisdictions. Implementation of this model guidance will:

- ensure that critical fire safety systems are installed in accordance with the relevant approvals, plans and specifications of the design
- ensure the building is compliant with the NCC and applicable standards, including relevant jurisdictional requirements
- ensure the building is suitable for occupation and use prior to an occupancy approval being issued
- ensure that the building continues to operate as designed through ongoing inspection and maintenance, and
- assist in detecting all non-compliance issues.

The model guidance has been developed on the assumption that all model guidance prepared in response to BCR recommendations 1 - 22 will be implemented. This is particularly important as elements of BCR recommendation 19 have been addressed by model guidance developed in response to the other recommendations.

#### Fire safety systems

The model guidance is presented as four principles which address those matters described in the BCR and as identified through public consultation. The model guidance outlines the context and objectives for each principle and provides recommended legislative provisions for consideration and implementation by state and territory governments.

# **Background**

The BCR notes that while fire safety is one of the most important elements of a building's design, fire safety can present the highest risk to occupants when subject to non-compliance. BCR recommendation 19 identified a number of critical issues including:

- There is no nationally consistent process for fire systems design, installation and certification.
- Not all fire safety practitioners require registration.
- Active fire protection systems are being favoured over passive fire systems and that proper installation and maintenance of these systems is critical to their operation and occupant safety.
- Fire safety engineers are often engaged to prepare fire safety engineering designs that include complex Performance Solutions on critical safety matters. Their involvement is often limited to specific Performance Requirements and their advice is generally not sought on an overall fire safety strategy. This has the potential to impact regulatory compliance and building occupant safety.
- Fire safety engineers are not required to inspect building work to ensure fire engineered solutions have been constructed as designed. This generally forms part of the building surveyor's role when undertaking mandatory building inspections.
- Although it is common for building surveyors to require commissioning statements from fire safety installers or the builder, only some jurisdictions (QLD, NSW, SA and Tasmania) mandate these statements be provided as part of the final sign-off of a commercial building.
- Legislation regulating the design, installation and certification of fire safety systems in commercial buildings is not sufficiently strict, as recognised in the BCR, and requires a more rigorous approach.

# **Principles**

# Principles for fire safety systems Installation, testing, independent certification and maintenance of critical fire safety systems in Class 2-9 buildings is regulated by governments. Installation and testing of fire safety systems in Class 2-9 buildings is undertaken by registered practitioners. Certification of installed fire safety systems in Class 2-9 buildings is undertaken by independent and registered practitioners. Routine maintenance of fire safety systems in Class 2-9 buildings is regulated, undertaken by registered practitioners and reported to the

state or territory building regulator annually.

# Principle 1 – Critical fire safety systems

Installation, testing, independent certification and maintenance of critical fire safety systems in Class 2-9 buildings is regulated by governments.

# **Objective**

That the installation, testing, independent certification and maintenance of critical fire safety systems in commercial buildings (NCC Class 2-9) is regulated by state and territory governments.

#### Context

The use of Performance Solutions to meet the Performance Requirements of the NCC has resulted in complex fire safety designs and active *fire safety systems* favoured over passive *fire safety systems* in Class 2-9 buildings. These *fire safety systems* are not uniformly installed, tested and independently certified across all Class 2-9 buildings in Australia. While it is common for the *statutory building surveyor* to require certificates from *fire systems installers* or the builder, only some jurisdictions (QLD, NSW, SA and Tasmania) mandate that these certificates be provided prior to occupation or 'sign-off' of a Class 2-9 building. Routine maintenance of *fire safety systems* is also not regulated in all jurisdictions and there is a risk the *fire safety systems* may not perform as intended if not regularly maintained. Proper installation, testing, independent certification and maintenance of these systems is critical to ensure regulatory compliance and ongoing occupant safety.

Stakeholders support a nationally consistent approach to the installation, testing, independent certification and maintenance of *fire safety systems* in Class 2-9 buildings. **Appendix A** details the critical *fire safety systems* that must be subject to scrutinised installation, testing, independent certification and maintenance. The list is intended to facilitate a nationally consistent approach and scope. It captures both active and passive systems that should be tested to ensure the integrity of the *fire safety system*'s design is maintained and the *fire safety system* will perform as intended. The list does not cover all fire system design matters such as fire brigade vehicular access, egress

paths and evacuation strategies as they are not considered to be systems requiring installation, testing and independent certification by registered practitioners.

# Legislative provisions

It is recommended that:

1. The installation, testing, independent certification and maintenance of the *fire* safety systems listed in **Appendix A**, and installed in Class 2-9 buildings, is regulated by governments.

# Principle 2 – Installation and testing by registered practitioners

Installation and testing of fire safety systems in Class 2-9 buildings is undertaken by registered practitioners.

# **Objective**

That registered practitioners, in accordance with the <u>NRF</u>, are responsible for the installation and testing of critical *fire safety systems*.

#### Context

Not all persons installing fire safety systems currently require registration across Australia. Where there are requirements for registration, they are not consistent. In some jurisdictions registration is obtained through accredited schemes run by industry associations (e.g. Fire Protection Association Australia (FPAA) accreditation scheme-FPAS). Nationally, there is insufficient control and accountability over the installation and testing of *fire safety systems*. This has resulted in unregistered individuals installing and testing *fire safety systems*, leading to poor and non-compliant installations.

In response to the <u>discussion paper</u>, stakeholders supported limiting the installation and testing of *fire safety systems* to appropriately qualified practitioners. The <u>NRF</u> prescribes the minimum competency requirements of practitioners installing and testing *fire safety systems*.

# Occupations

The following occupations are involved in the installation and testing of *fire safety* systems.

#### Fire Systems Installer

The NRF registers *fire systems installers* at two levels:

• Level 2 (contractor) able to operate without supervision. The qualification and experience requirements are:

- Certificate IV with four years' experience (or)
- Certificate III with five years' experience.
- Level 3 (tradesperson) required to operate under the general supervision of a level 2 fire services installer. The qualification and experience requirements is a Certificate III with three years' experience.

The <u>NRF</u> separates fire systems installers into separate sub-categories, depending on the type of work to be undertaken, as set out below.

- Water-based fire systems installer\*
- Fire detection and alarm systems installer\*\*
- Emergency and exit lighting systems installer\*\*
- Passive fire and smoke systems installer

#### Plumber

The NRF registers plumbers in two levels:

- Level 2 (contractor) able to operate without supervision. The qualification and experience requirements are:
  - Diploma (Certificate V) with four years' experience (or)
  - Certificate IV with four years' experience (or)
  - Certificate III with five years' experience.
- Level 3 (tradesperson) required to operate under the general supervision of a level 2 plumber. The qualification and experience requirements is a Certificate III with four years' experience.

In most jurisdictions plumbing registration allows *plumbers* to perform work on water-based fire safety systems such as sprinklers, hydrants and hose reels. The installation and testing of fire sprinkler systems usual requires the *plumber* to undertake additional training. *Fire system installers* will be limited to the extent of work, which can be undertaken on a system connected to a drinking water supply. In most jurisdictions, work on the drinking water supply is restricted to registered *plumbers*.

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<sup>\*</sup> Installation of water-based fire safety systems such as fire sprinkler systems and fire hydrant and hose reel systems are restricted to registered fire systems installers and plumbers. Fire systems installation is generally defined as commencing at the plumbing system isolation point (i.e. where the isolation device is installed to separate out the plumbing system from the water-based fire protection system). The defined isolation point can vary dependent on a number of factors including the type of system and building classification, age of the system, the relevant Australian Standard/s applying and other such variables.

<sup>\*\*</sup> Installation of fire detection and alarm systems, and emergency and exit lighting systems is restricted to licensed fire systems installers or licensed electricians. Jurisdictions may prescribe whether this work must be done by a licensed electrician, a licensed fire systems installer or either. Electricians are not included in the NRF as electrical work is generally regulated under state or territory electrical licensing laws.

#### Electrician

Electricians also undertake installation of some of the *fire safety systems*. Electricians are not included in the <u>NRF</u> as electrical work is generally regulated under state or territory electrical licensing laws. These laws and the scope of work permitted by registered electricians varies.

#### Other

Stakeholder responses recommended that mechanical air handling systems be installed and tested by registered practitioners due to their impact on the operation of a building's *fire safety systems* and facilitation of occupant egress. Mechanical air handling systems are complex systems and are not installed by a *fire systems installer* or a practitioner covered by the NRF. Similarly, emergency lifts and emergency power supplies for emergency fire safety equipment are not typically installed by a *fire systems installer* or a practitioner covered by the NRF. The installation and testing of these systems involves a number of occupations such as contractors, tradespersons and engineers.

The NRF does not include registration requirements for tradespeople and contractors installing mechanical air handling systems, emergency lifts or emergency power supply to emergency fire safety equipment. As a subsequent step to implementing the NRF developed in accordance with the BCR recommendations, consideration should be given to amending its scope to include registration requirements for practitioners that install and test these systems.

Upon completion of installation and testing of a fire safety system, a registered practitioner is to provide a *declaration of installation compliance* stating that the construction or installation work has been carried out in accordance with the *building approval* documentation and any other prescribed requirements (Figure 2). The list of fire safety systems that require installation and testing by registered practitioners is provided at **Appendix A**.

# Legislative provisions

#### It is recommended that:

- 1. The installation and testing of *fire safety systems* in **Appendix A** must only be undertaken by a practitioner registered in accordance with the <u>NRF</u>.
- 2. A registered practitioner must provide a *declaration of installation compliance* (Figure 2) to the statutory building surveyor upon completion of the installation and testing of a fire safety system listed in **Appendix A**.
- 3. The *declaration of installation compliance* forms part of the *building approvals* documentation and must be provided prior to the issue of the *occupancy approval or* final certificate.

Figure 2 – Declarations and certificates

Figure 2 – Declarations and certificates						
Document	<b>Declaration of Compliance</b>		Certificate of Compliance			
	Design	Construction / Installation	Design	Construction / Installation		
Definition	Is a document that:  (a) is provided by the registered person who is responsible for the design work; and  (b) states the design complies with the NCC and other prescribed requirements.	Is a document that:  (a) is provided by the registered person who is responsible for the construction or installation work; and  (b) states the construction or installation work complies with the building approval documentation and other prescribed requirements.	Is a document that:  (a) is provided by an appropriately registered and, where necessary independent, person who has examined and assessed design work; and  (b) states that the design complies with the NCC and other prescribed requirements.	Is a document that:  (a) is provided by an appropriately registered and, where necessary, independent person who has examined and assessed construction or installation work; and  (b) states that their examination and assessment confirms the construction or installation work complies with the building approval documentation, the NCC, and other prescribed requirements.		
Who provides?	A <i>registered</i> building practitioner responsible for the work.		level in the relevant o require an assessme registered practitioner	actitioner at an appropriate ccupation. Legislation may nt to be undertaken by a who is independent to the struction process.		
Who receives?	A person who contracted the work or who will rely on the work.			ted the assessment or who the assessment. <sup>1</sup>		
How recorded?	Must be provided to the building approval authority <sup>2</sup> when seeking a building approval or occupancy approval and kept as part of the building records <sup>3</sup> .		or other person relying	e statutory building surveyor on the certificate to make a t of building compliance <sup>4</sup> .		

#### Notes on figure

1. A statutory building surveyor making a statutory assessment may rely on a Certificate of Compliance. A statutory building surveyor may choose not to rely on a Certificate of Compliance if not satisfied.

Holds the person responsible for the work

liable for its compliance.

2. The legal entity that issues the *building approval*. This may be a private *building surveyor*, a local government or other body, depending on each jurisdiction's relevant legislation.

Holds an expert liable for advice.

Indemnifies the building surveyor or other person

relying on the advice.

- 3. The building records may be kept by a different legal entity from the *building approval authority*. In most jurisdictions the building records are kept by the relevant local, state or territory government.
- 4. Building approval legislation in each jurisdiction will state whether the statutory building surveyor keeps the assessment records or includes them in the building records.

# Principle 3 – Certification by registered practitioners

Certification of installed fire safety systems in Class 2-9 buildings is undertaken by independent and registered practitioners.

# **Objective**

That practitioners registered in accordance with the <u>NRF</u> who have not participated in the installation and testing of a *fire safety system* undertake independent certification.

### **Context**

As described in the BCR, it is important that installed *fire safety systems* in Class 2-9 buildings are subject to independent assessment and certification. This avoids any conflict of interest between the person who performed the installation and the practitioner undertaking the certification. **Appendix A** outlines which *fire safety systems* are to be independently certified after installation and testing.

An independent practitioner must be registered (or their registration recognised) in the jurisdiction where the work is to be undertaken. They must hold the necessary qualifications and experience in accordance with the <a href="NRF">NRF</a> to perform independent certification work. The independent practitioner must not have been involved in the installation and testing to ensure a non-biased or conflicted assessment.

Fire systems installers and plumbers registered in accordance with the NRF can undertake certification work. Stakeholder feedback strongly favoured a higher qualification for independent certification work that is nationally consistent. The recommended qualification requirement of the independent *fire systems installer* for certification work is a Certificate IV qualification.<sup>1</sup>

Electricians also undertake certification of some of the *fire safety systems*. Electricians are not included in the <u>NRF</u> as electrical work is generally regulated under state or

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<sup>&</sup>lt;sup>1</sup> Jurisdictions will need to prescribe Certificate IV qualifications where they are not available and consider any transitional arrangements.

territory electrical licensing laws. These laws and the scope of work permitted by registered electricians varies.

Some *fire safety systems* listed in **Appendix A** cannot be independently certified by a *fire systems installer* or <u>NRF</u> practitioner because they don't have the appropriate skills and competency. These systems include mechanical air handling systems, emergency lifts and emergency power supply to emergency fire safety equipment. Some of these systems include a multi-disciplinary function, for which the testing and certification is critical to ensure the entire system operates. The mechanical designer (mechanical engineer) or the *fire safety designer* (fire safety engineer) has knowledge of the operation of these systems and their impact on the operation of the other *fire safety systems* in a building.

The NRF does not specify registration requirements for tradespeople and contractors certifying mechanical air handling systems, emergency lifts or emergency power supply to emergency fire safety equipment. As a subsequent step to implementing the NRF developed in accordance with the BCR recommendations, consideration should be given to expanding its scope to include registration requirements for practitioners that certify these systems. It is proposed that a mechanical designer (mechanical engineer) or a *fire safety designer* (fire safety engineer) who has knowledge of the operation of these systems, certifies these systems until such time as the NRF is amended to include specific *fire safety systems* occupations.

The independent certifier must act in the public interest and ultimately be accountable to a state or territory's building regulator. The *statutory building surveyor*, when satisfied with the level of independence, accepts the independent certifier's *certificate(s) of installation compliance* (Figure 2) and it forms part of the *building approval* documentation required prior to occupation.

# Legislative provisions

It is recommended that:

1. An independent and registered practitioner, in accordance with the <u>NRF</u>, is required to certify the installed *fire safety systems* specified in **Appendix A**.

- 2. The independent practitioner provides a *certificate of installation compliance* (Figure 2) to the *statutory building surveyor* certifying that the installation has been completed in accordance with the approved plans and relevant legislation.
- 3. The *certificate of installation compliance* forms part of the building approval documentation and must be provided prior to the issue of the *occupancy* approval.
- 4. The independent practitioner must declare they are independent of the originating installer and must not have participated in any component of the installation and testing.
- 5. The independent practitioner must declare any real or potential conflict of interest to the *statutory building surveyor*.

# Principle 4 – Maintenance by registered practitioners

Routine maintenance of fire safety systems in Class 2-9 buildings is regulated, undertaken by registered practitioners and reported to the state or territory building regulator annually.

# **Objective**

That *fire safety systems* are regularly maintained by registered practitioners to ensure they continue to operate as designed in Class 2-9 buildings.

#### Context

Maintenance of *fire safety systems* is not regulated uniformly across Australia. *Fire safety systems* play a critical role in ensuring life safety and should be subject to regular maintenance. The *fire safety design* for a building typically includes both active and passive systems. *Fire safety systems* rely on ongoing, periodic maintenance, most of which is detailed in Australian Standards (AS) such as the AS 1851 series.

In addition, there are often additional maintenance requirements specified by the *fire safety designer* (fire safety engineer) relating to specific Performance Solutions used as part of the fire engineering design for a building. The *fire safety designer* (fire safety engineer) must specify any additional or variations to standard maintenance, where applicable. Maintenance requirements for *fire safety systems* should be documented by the *statutory building surveyor* on the *occupancy approval* or final certificate as recommended in <u>BCR recommendations 13-16</u>. The list of systems to be maintained is expected to be broader than those systems listed in **Appendix A**. Jurisdictions often specify minimum maintenance requirements in legislation, which will be broader than the systems listed in **Appendix A**.

Maintenance refers to routine inspecting, testing and surveillance activities (i.e. validating a fire safety measure is present and performs). Routine maintenance activities must be conducted by registered practitioners. The practitioner must be registered as per the <a href="NRF">NRF</a> (or their registration recognised) in the jurisdiction where the work is to be undertaken.

Fire systems installers and plumbers undertake maintenance activities. Electricians also undertake maintenance of some fire safety systems. Electricians are not included in the NRF as electrical work is generally regulated under state or territory electrical licensing laws. These laws and the scope of work permitted by registered electricians varies.

The NRF does not include practitioner registration categories for a number of *fire safety systems* listed in **Appendix A**. These systems include mechanical air handling systems, emergency lifts and emergency power supply to emergency fire safety equipment. The contractors and/or tradespeople who maintain these systems must be qualified and have relevant experience. They will be required to maintain these systems as per the annual maintenance requirements to ensure the systems perform as intended. The NRF does not specify registration requirements for tradespeople and contractors maintaining mechanical air handling systems, emergency lifts or emergency power supply to emergency fire safety equipment. As a subsequent step to implementing the NRF developed in accordance with the BCR recommendations, consideration should be given to expanding its scope to include registration requirements for practitioners that maintain these *fire safety systems*.

Maintenance activities must be recorded and be available if requested by the state or territory building regulator. This information often forms part of a building manual. The model guidance developed in response to BCR recommendation 20 identifies the building manual information (created prior to building occupancy) be maintained by the building owner, include maintenance records and be subject to auditing and compliance activities by government.

Building maintenance must be supported by the production of annual maintenance statements for all the maintenance activities specified in the *occupancy approval*. The maintenance statements should confirm the inspections and activities performed to ensure all required systems are maintained in accordance with the *occupancy approval* or final inspection. The maintenance statements should list any defects or non-conformances that have not been rectified. It is proposed that maintenance statements be lodged with the state or territory building regulator annually.

# Legislative provisions

#### It is recommended that:

- 1. The *statutory building surveyor* prescribes on the *occupancy approval* those *fire safety systems* requiring routine maintenance, including the necessary maintenance intervals and the standard to which maintenance must be undertaken.
- 2. Routine maintenance of *fire safety systems* in **Appendix A** must only be undertaken by practitioners registered in accordance with the <u>NRF</u>.
- 3. The owners of all Class 2-9 buildings are required to lodge, with the state or territory building regulator, annual maintenance statements confirming that maintenance has been undertaken as per the *occupancy approval*.

# **APPENDICES**



# Appendix A - Fire safety systems requiring installation, testing, and independent certification

**Appendix A** is a list of critical active and passive *fire safety systems* that require installation, testing and independent certification by registered practitioners.

The list identifies which practitioners are responsible for particular actions. It also nominates which systems require installation, testing, and independent certification. Maintenance of *fire safety systems* is not limited to the list of systems in Table 1.

Table 1 – Fire safety systems requiring installation, testing and independent certification

Fire Safety System	Installation and Testing	Independent Certification
Building occupant warning systems for emergency purposes	Yes, appropriately qualified fire detection and alarm systems installer	Yes, appropriately qualified fire detection and alarm systems installer
Emergency lighting and exit signage	Yes, appropriately qualified emergency and exit lighting systems installer	Yes, appropriately qualified emergency and exit lighting systems installer
Fire and smoke rated construction (for tested systems includes all access panels, doors, penetrations and fire protection coatings)	Yes, appropriately qualified passive fire and smoke systems installer	Yes, appropriately qualified passive fire and smoke systems installer
Fire alarm monitoring connection	Yes, appropriately qualified fire detection and alarm systems installer	Yes, appropriately qualified fire detection and alarm systems installer
Fire detection and alarm systems	Yes, appropriately qualified fire detection and alarm systems installer	Yes, appropriately qualified fire detection and alarm systems installer
Fire extinguishers	No*	No
Fire hose reel system	Yes, appropriately qualified water-based fire systems installer or appropriately qualified plumber	Yes, appropriately qualified water-based fire systems installer or appropriately qualified plumber
Fire hydrant system	Yes, appropriately qualified water-based fire systems installer or appropriately qualified plumber	Yes, appropriately qualified water-based fire systems installer or appropriately qualified plumber
Fire sprinkler system including special hazard suppression systems	Yes, appropriately qualified water-based fire systems installer or appropriately qualified plumber	Yes, appropriately qualified water-based fire systems installer or appropriately qualified plumber

Fire Safety System	Installation and Testing	Independent Certification
Mechanical air handling systems (impacting fire systems design including smoke exhaust system, dampers and air pressurisation systems)	No**	Yes, mechanical designer (mechanical engineer) and/or fire safety designer (fire safety engineer)
Emergency lifts	No**	Yes, mechanical designer (mechanical engineer)
Emergency power supply to emergency fire safety equipment	No**	Yes, mechanical designer (mechanical engineer)

#### Notes on table

- \* The installer of this system is not registered under the NRF. The building surveyor may request a declaration of installation compliance from the practitioner undertaking the installation and testing of this system.
- \*\* Based on the complexity and multi-disciplinary nature of this system, the installation and certification of this system involves a number of occupations such as contractors, tradespersons and engineers. The NRF provides no registration requirements for trades except fire systems installers and plumbers. The building surveyor may request a declaration of installation compliance from the practitioner undertaking the installation and testing of this system.

The NRF provides a model for expanding registration to other occupations which could include registered practitioners for lifts, emergency power supply and mechanical air-handling systems. The inclusion of these occupations in the NRF will require separate consideration and consultation.

'Appropriately qualified' means the relevant qualification and experience requirements to perform the scope of work.