ABCB

Code of conduct for fire safety engineers

Model guidance on BCR recommendation 8

2021

abcb.gov.au/BCR

Copyright

Enquiries about this publication can be sent to:

Australian Building Codes Board
GPO Box 2013
CANBERRA ACT 2601
Phone: 1300 134 631
Email: ncc@abcb.gov.au
Web: abcb.gov.au

Attribution

Use of all or part of this publication must include the following attribution:

© Commonwealth of Australia and States and Territories 2021, published by the Australian Building Codes Board.

Disclaimer

By accessing or using this publication, you agree to the following:

While care has been taken in the preparation of this publication, it may not be complete or up-to-date. You can ensure that you are using a complete and up-to-date version by checking the Australian Building Codes Board website (abcb.gov.au).

The Australian Building Codes Board, the Commonwealth of Australia and States and Territories of Australia do not accept any liability, including liability for negligence, for any loss (howsoever caused), damage, injury, expense or cost incurred by any person as a result of accessing, using or relying upon this publication, to the maximum extent permitted by law. No representation or warranty is made or given as to the currency, accuracy, reliability, merchantability, fitness for any purpose or completeness of this publication or any information which may appear on any linked websites, or in other linked information sources, and all such representations and warranties are excluded to the extent permitted by law.

This publication is not legal or professional advice. Persons rely upon this publication entirely at their own risk and must take responsibility for assessing the relevance and accuracy of the information in relation to their particular circumstances.

Version history

Original

Publish date: 10/10/2021

Print version: v1.0

This version

Publish date: 10/12/2021

Print version: N/A

Details of amendments: N/A

Preface

The Building Confidence Report (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 Building Confidence National Framework 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 *Code of conduct for fire safety engineers* represents a nationally agreed response to BCR recommendation 8. This recommendation states "that, consistent with the International Fire Engineering Guidelines, each jurisdiction requires developers, architects, builders, engineers and *building surveyors* to engage with fire authorities as part of the design process."

This recommendation is being progressed in two parts. The first is this code of conduct, the second is model guidance on a nationally consistent process for engaging fire authorities in the *building approval process*.

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

Figure 1 – Building Confidence Implementation Framework - Outputs

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

Contents

Preface ..... **ii**

Purpose ..... **v**

Relationship of this Code to other documents vi

Scope of work of a fire safety engineer vii

Structure viii

Obligations **1**

Obligations with explanatory notes **4**

Comply with the law and act in the public interest 4

Good practice fire safety design practices 7

Professionalism 12

Honesty and integrity 18

Transparency and accountability 22

Adoption of model guidance

As a model, this code 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 document 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

This model Code of conduct for fire safety engineers (the Code) sets out minimum expectations of *fire safety engineers* when providing *fire safety engineering services* in relation to building and structures to which the NCC applies. The Code is prepared in response to the Building Confidence Report.

The Australian Fire Engineering Guidelines (AFEG) state:

> "The practice of fire engineering has been facilitated by continuing advances in computing technology, digital models and the introduction of performance-based codes with specific provision for the acceptance of fire engineered solutions.
>
> Despite these advances, fire engineering is still an emerging discipline. Our knowledge of fire science is still quite limited compared to our basic understanding of other fields of engineering. For example, we still cannot predict from first principles the fundamental heat release rate of simple office furniture or combustible wall cladding during a fire. Our ability to predict the emission of toxic gas is extremely limited at best. Our understanding of human behaviour is still crude.
>
> As a result, engineering judgement (or the use of engineering estimates) is a key part of fire engineering practice. **No fire engineering design can be developed without the use of engineering judgement;** based on data, experience, and current understanding of fire science and human behaviour."

This description reflects the emerging nature of this engineering design discipline and the need to develop regulatory tools to support consistent approaches that are ethical and grounded in the need for acceptable public safety outcomes.

The services of *fire safety engineers* are associated with statutory *building approval processes* that are intended to ensure that the built environment has levels of safety and amenity that the public expect. For this reason, *fire safety engineer*s hold a position of trust. They apply specialist knowledge to ensure that the fire safety Performance Requirements of the NCC are met. This is intended to result in buildings that achieve an adequate level of fire safety for occupants, facilitate the operations of emergency services personnel and prevent the spread of fire to other buildings. In performing their

services and acting as professionals, *fire safety engineer*s must adhere to accepted codes of conduct.

This Code is intended to boost competence and build trust and public confidence in the fire safety engineering profession. It will also educate other practitioners about the role of the *fire safety engineer* and to promote and define that role.

The Code establishes a consistent basis for education, audit and compliance activities undertaken by regulators. It also assists *fire safety engineer*s to meet their obligations and manage the expectations of others.

Relationship of this Code to other documents

Codes applying to professional engineers

As stated above, the Code applies to *fire safety engineers* providing *fire safety engineering services* which will include those *registered* under professional engineering schemes operating in Australia.

Registered professional engineers will be subject to codes of conduct or codes of ethics that apply to the provision of engineering services generally. Such codes have been considered in the development of this Code to ensure alignment where possible between the obligations in this Code and those in codes that apply to professional engineers.

The key difference between this Code and codes that apply to professional engineers is that this Code includes obligations directed to the provision of *fire safety engineering services* using examples to promote and define the specific and unique role of *fire safety engineers*.

Where a state or territory adopts this Code, it should make any necessary modifications to address any potential inconsistencies between other codes or to set out whether one code will have precedence over any other applicable code. It is otherwise expected that *fire safety engineers* will be able to comply with the Code and professional engineering codes that may also apply to them through state and Territory laws.

The Australian Fire Engineers Guidelines

The AFEG provides information for the *fire safety design* of buildings to achieve compliance the NCC. It is a process document intended to support the use of the NCC. The AFEG includes guidance about the process of fire engineering, methodologies and philosophy. In contrast the purpose of this Code is to define ethical standards for *fire safety engineers*. The AFEG has been considered in the preparation of the Code and the two documents are intended to be aligned and able to be applied to the practice of fire engineering together.

Scope of work of a fire safety engineer

A *fire safety engineer* includes an individual *registered* in accordance with the BCR National Registration Framework as a *registered fire safety designer*.

While this Code applies the taxonomy set out in the BCR National Registration Framework and is intended to apply to *registered fire safety designers* as defined under that framework. It also covers the provision of related services.

Collectively the services that may be provided by a *fire safety engineer* that are covered by the Code include:

- undertaking *fire safety design* which includes:
  - preparing *Performance Solutions* relating to fire safety,
  - issuing a certificate or declaration in relation to a *fire safety design* or a building or *building work* relating to *fire safety design*,
  - the inspection of fire safety measures in buildings under construction or post construction as the designer or as part of an *independent construction or installation inspection*,
  - undertaking quality assurance or *independent design review* of the work of another *fire safety engineer*;
- the provision of expert opinion or advisory services related to *fire safety design* or fire safety in existing buildings, and
- assessing proposed designs and/or applications as an employee of, or contractor to, a fire authority or other government entity.

This Code is not intended to apply to design services provided by *registered fire system designers* as that term is defined under the BCR National Registration Framework.

The Code is intended to apply to any *registered fire safety engineer* employed by or contracted to a fire authority as relevant to its role. That role is to review the proposed *fire safety design* for operational suitability and community safety to mitigate the risk of low probability, high consequence events. Such review by fire authorities necessarily occurs in collaboration with the input of others who are not *fire safety engineers*.

Structure

The Code contains obligations and explanatory information. Numbered paragraphs are the obligations that are intended to be adopted by state and territory governments, if a corresponding and equivalent obligation does not already exist. The unnumbered paragraphs are explanatory and non-binding.

Obligations

Obligations for fire safety engineers	
Comply with the law and act in the public interest	
1.1	A fire safety engineer must comply with laws relevant to their work, conduct and organisation.
1.2	A fire safety engineer must act in the public interest when providing advice or making decisions relating to the provision of fire safety engineering services.
1.3	A fire safety engineer must notify the relevant government authority where in the course of their work they become aware of, or hold a reasonable suspicion of, unlawful activity or a matter that creates an immediate or imminent risk to health and safety.
Good practice fire safety design principles	
2.1	When performing fire safety engineering services, a fire safety engineer must have due regard to good practice fire safety design principles which includes consideration of the following: a. the Australian Fire Engineering Guidelines; b. holistic fire safety design; c. identifying and examining potential hazards including the potential for arson; d. common and known behaviours of building occupants and users; e. egress by persons with a disability or vulnerable occupants and having regard to necessary evacuation management procedures for these occupants; f. the building design objectives of the client such as asset protection, resilience, environmental protection and sustainability which may require fire engineering designs that go beyond the minimum fire safety requirements of the NCC.
2.2	A fire safety engineer must engage respectfully and collaboratively with fire authorities and should as far as practicable, ensure that triggers for statutory consultation with fire authorities are not avoided through restrictive interpretations.
Professionalism	
3.1	A fire safety engineer must only perform fire safety engineering services that are permitted under their registration and within their professional competency.

Obligations for fire safety engineers

3.2	A fire safety engineer must not falsify, misrepresent or exaggerate their qualifications and experience.
3.3	A fire safety engineer must maintain their professional competency to ensure their knowledge and skills are current for the work they undertake.
3.4	A fire safety engineer must have a system that provides for quality assurance of their work and cooperate with any independent design review of their work.
3.5	A fire safety engineer must take reasonable steps to inform a client and their employer, if employed, of their professional concerns and the likely consequences for affected parties if their advice is modified, overruled or disregarded.
3.6	A fire safety engineer must clearly document their assessments and designs, including their scope, objectives, limitations and any assumptions on which they have relied.
3.7	A fire safety engineer must take reasonable steps to ensure they obtain and assess all relevant information.
3.8	A fire safety engineer must ensure any people that they use to assist with their work are properly trained and supervised to undertake tasks assigned to them.
3.9	A fire safety engineer must work cooperatively with regulators, building surveyors, fire authorities, other fire safety engineers, and other building practitioners avoiding derogatory and insulting language and behaviour.
Honesty and integrity	
4.1	A fire safety engineer must act with honesty, impartiality and fairness.
4.2	A fire safety engineer must not engage, whether by act or omission, in misleading or deceptive conduct in connection with the performance of fire safety engineering services.
4.3	A fire safety engineer must: a. take all reasonable steps to avoid actual or potential conflicts of interest; and b. not perform a fire safety design service where a reasonable person would conclude there is a real risk that their decision could be influenced by conflict of interest.
4.4	A fire safety engineer must disclose to a client or prospective client: a. if the fire safety engineer receives, is likely to receive, or has been promised any payment, gift or other material advantage to

Obligations for fire safety engineers	
	recommend, endorse or comment on a product or service that is or is likely to be used in connection with the provision of fire safety engineering services to the client or prospective client; and b. any arrangement entered into where the client or prospective client has been introduced or referred to the fire safety engineer by a third party who the fire safety engineer has given or offered to provide a fee or reward for the referral of a client or a prospective client.
4.5	A fire safety engineer must not disclose confidential information obtained while performing a fire safety design service except where the relevant person has granted consent, or there is a legal or professional duty to disclose the confidential information.
4.6	A fire safety engineer must notify regulators in each state and territory where they are registered if they have: a. been found to have breached the code of conduct in another jurisdiction; b. had registration or another type of authorisation as a building practitioner suspended or cancelled in another jurisdiction; c. been found to have breached laws related to planning, building, or development in any jurisdiction; or d. had a professional indemnity insurance policy refused, cancelled or conditions applied that are inconsistent with state and territory laws.
Transparency and accountability	
5.1	A fire safety engineer must take all reasonable steps to ensure any agreement or contract for performing fire safety engineering services is consistent with this Code and requirements set by the regulator.
5.2	A fire safety engineer must retain records and be willing and able to provide reasoning for decisions made as part of providing fire safety engineering services.
5.3	A fire safety engineer must take reasonable steps to minimise and resolve complaints or disputes about their services.

Obligations with explanatory notes

Comply with the law and act in the public interest

*Fire safety engineer*s must comply with relevant legislation and regulations, act in the public interest and notify authorities if they become aware of unlawful activity or immediate or imminent risk to health and safety in the course of providing *fire safety engineering services*.

1.1 A fire safety engineer must comply with laws relevant to their work, conduct and organisation.

Laws enacted in each jurisdiction may govern the licencing of *fire safety engineer*s, the services they perform and legislative functions they may undertake. *Fire safety engineer*s must provide *fire safety engineering services* in accordance with the laws that apply in the jurisdiction in which they work.

For example, a *fire safety engineer* must not issue a declaration or certificate unless they have a reasonable basis to conclude the design or building complies with relevant legislation and with relevant provisions of the NCC. In meeting this obligation, the relevant provisions are those that relate to the *fire safety engineering services* being performed.

*Fire safety engineer*s, like most professionals, are subject to a range of other laws that govern their conduct and that of their business. These include, but are not limited to, consumer protection, work health and safety, anti-discrimination and privacy laws.

*Fire safety engineer*s will meet their obligation by being aware of the Federal and jurisdictional laws applicable to their work and taking proactive steps to ensure they comply with these.

1.2 A fire safety engineer must act in the public interest when providing advice or making decisions relating to the provision of fire safety engineering services.

Building legislation and the NCC contain a number of objectives such as health and safety, amenity, accessibility and sustainability in the design, construction,

performance and liveability of buildings. In relation to the NCC Performance Requirements relating to fire safety, the general objectives are to:

- protect building occupants
- facilitate the activities of emergency services personnel, and
- protect other buildings from being affected by a fire in the building in question.

*Fire safety engineer*s must balance and apply these objectives when performing *fire safety engineering services*. This requires *fire safety engineer*s to give greater weight to the objectives generally considered to be of higher concern to the public, those being health, safety and amenity.

In some cases, this may mean recommending against the use of a deemed-to-satisfy solution or a *Performance Solution* that is equivalent to a deemed-to-satisfy solution on the basis that it will not achieve an adequate level of safety even though it is deemed compliant. Such recommendation may be appropriate where the proposed use of *Performance Solutions* gives rise to a need for additional active *fire safety systems*.

Examples include:

A *fire safety engineer* may recommend the installation of a fire sprinkler system in a 3 storey residential building because of the life safety benefits even though not required by the NCC's deemed to satisfy provisions.

Where the design features of a proposed building are very close to triggering additional fire safety requirements under deemed to satisfy requirements, the impact of *Performance Solutions* on overall risk are likely to be greater. An example of this would be in the preparation of *Performance Solutions* for a building that is proposed to be slightly less than 25 metres in effective height. Whilst the deemed to satisfy requirements applying to a building that is 25 metres in effective height would not strictly apply, the *fire safety engineer* should not ignore the deemed to satisfy requirements merely because the 25 metre effective height trigger has not been met. Similarly, a building proposed to be slightly taller than 25 metres in effective height should not be assessed against a reference building that is less than 25 metres in effective height using comparison with deemed to satisfy on the basis that the minor height difference is of little significance to fire safety.

These effective height examples, illustrate the expectation that the *fire safety engineer* will apply a base understanding of the relative safety levels achieved by the deemed to satisfy requirements rather than using the least restrictive deemed to satisfy safety level as a means for justifying or measuring performance. They are also consistent with the expectation that the fire engineer considers the building's *fire safety design* holistically.

1.3 A fire safety engineer must notify the relevant government authority where in the course of their work they become aware of, or hold a reasonable suspicion of, unlawful activity or a matter that creates an immediate or imminent risk to health and safety.

The *fire safety engineer* is obligated to report activities they become aware of while performing *fire safety engineering services* where they hold a reasonable suspicion of the activity being unlawful or creating an immediate or imminent risk to health and safety.

The *fire safety engineer* is not required to proactively seek out these activities, nor investigate or collect evidence to substantiate their suspicions. This obligation does not require a *fire safety engineer* to notify if they have identified a non-compliance and raised it with an appropriate person who has acted promptly to resolve the issue.

The relevant government authority that should be notified will vary depending on the jurisdiction and the matter reported.

For example, during an inspection of an existing apartment building that is 6 years old, a *fire safety engineer* becomes aware that the owner had decommissioned part of a required fire sprinkler system. If the owner is unwilling to recommission the required sprinkler system, the *fire safety engineer* must report the matter to the relevant government authority with jurisdiction over the regulation of maintenance of essential *fire safety systems* and equipment.

An example of an unlawful activity could arise where the *fire safety engineer* checks a product test report to confirm evidence of suitability. The *fire safety engineer* has concerns about the validity of the test report and checks with the company that the correct documents have been provided. The response creates a reasonable suspicion the test report has been falsified. The *fire safety engineer* must report their suspicions to the relevant government authority.

Good practice fire safety design practices

A *fire safety engineer* must have due regard to good practice *fire safety design* principles.

2.1 When performing fire safety engineering services, a fire safety engineer must have due regard to good practice *fire safety design* practices which includes consideration of the following:

a. **the Australian Fire Engineering Guidelines (AFEG);**
b. **holistic fire safety design;**
c. **identifying and examining potential hazards including the potential for arson;**
d. **common and known behaviours of building occupants and users;**
e. **egress by persons with a disability or vulnerable occupants and having regard to necessary evacuation management procedures for these occupants;**
f. **the building design objectives of the client such as asset protection, resilience, environmental protection and sustainability which may require *fire engineering designs* that go beyond the minimum fire safety requirements of the NCC.**

The Australian Fire Engineering Guidelines

The AFEG provides information for the *fire safety design* of buildings to achieve compliance the NCC. It may also assist in assessing the adequacy of fire safety in existing buildings and upgrade strategies. *Fire safety engineer*s must have due regard for the AFEG when performing *fire safety engineering services*.

Holistic fire safety design

Holistic *fire safety design* requires consideration of all aspects of the fire safety requirements of the NCC when developing a fire safety strategy and *Performance Solutions* as part of the design of a building. The greater the number of *Performance Solutions* in a *fire safety design*, the more important it is to consider holistically the combination of, and interaction between, *Performance Solutions* and deemed-to-satisfy solutions. This is to ensure that the overall fire safety strategy results in an adequate level of fire protection. *Fire safety engineer*s must have due regard for holistic fire safety when undertaking *fire safety design*.

The practice of providing fire safety engineering advice only in relation to design elements that do not meet deemed to satisfy requirements as identified by another practitioner is not holistic *fire safety design*. The *fire safety engineer* must be allowed to consider the fire safety strategy for the whole of the project and the interaction between elements that will meet deemed-to-satisfy requirements, and elements that will not, in order to develop sound *Performance Solutions* and properly perform fire safety engineering design.

The NCC details minimum regulatory requirements through its Performance Requirements and does not contain a deemed-to-satisfy solution for every design element. Therefore, applying deemed-to-satisfy provisions without considering hazards directly can result in hazards not being considered properly or at all. Holistic *fire safety design* may therefore require the *fire safety engineer* to identify unique design elements that do not have specific deemed-to-satisfy provisions and apply good practice fire safety engineering to develop *Performance Solutions* for these elements. For example, lightwells or green walls.

Holistic *fire safety design* may also include identifying, where practicable, secondary hazards which may result from the implementation of a *Performance Solution*. For example, a *Performance Solution* to reduce the distance from a hydrant booster to a high voltage substation may introduce electrocution risk to firefighters which needs to be addressed having regard to advice from an electrical engineer or other suitably qualified consultant and well as consultation with the fire authority.

The extent to which holistic *fire safety design* applies to a particular project will depend on the scope of the project. For example, if engaged to prepare a *fire safety design* for a proposed fit out to one storey of a 10 storey building, the *fire safety engineer* would not be expected to assess the fire safety strategy for the whole of the existing building. However, they would need to consider the fire engineering design holistically for the applicable floor and any egress routes from that floor.

*Fire safety engineer*s need to consider the impact of *Performance Solutions* on whole of life costs to ensure an appropriate balance between the cost of construction and the post construction cost to owners. Where a client seeks to lower construction costs in favour of increased post construction maintenance and life cycle costs, the *Performance Solution* should record this approach clearly and transparently to enable

future building owners and maintenance contractors to be aware that these design objectives were applied to the design.

Identifying and examining hazards

*Fire safety engineer*s should identify and examine hazards in a building through a sound hazard analysis, including:

- consideration of the combustibility and other fire performance characteristics of all significant building materials, and
- the likelihood of arson based on research showing the types of buildings where arson is a known risk.

The absence of specific deemed-to-satisfy requirements to mitigate against arson should not be a basis for excluding consideration of the risks and consequences of arson where arson risk is known to be credible, for example in lower socioeconomic housing or schools.

Common and known behaviours of occupiers

*Fire safety engineer*s need to carefully consider fire prevention measures as part of the development of a fire safety strategy for a building and only base the fire safety strategy, and *fire safety design*, on assumptions about fire prevention which can reasonably be expected to be maintained by building owners and occupants.

For example, privately owned balconies to sole occupancy units will often be used to store items like outdoor furniture or equipment that may be an ignition source such as barbeques, condenser units and outdoor lighting. It would not be appropriate for a *fire safety design* to assume or be conditional on privately owned balconies not being used for storage given the difficulties in confirming compliance with such condition on an ongoing basis. Where common areas need to be free from obstructions, this may be able to be addressed in conditions that should be included on the *occupancy approval* and as part of ongoing maintenance obligations.

Egress for vulnerable occupants

Consideration of occupant characteristics is an essential element that informs the fire safety strategy for a *fire safety design*. A *fire safety engineer* should take into consideration egress for persons with a disability, or vulnerable occupants, having

regard to the prevalence of people affected by these conditions in the community and their use of the built environment. They should also take into account evacuation management procedures that may be required for these types of vulnerable occupants. This obligation is made having regard to disability discrimination laws. The absence of deemed-to-satisfy requirements for egress for persons with a disability, or vulnerable occupants should not be a basis for not considering this issue at all when addressed within the Performance Requirements. In meeting this obligation, *fire safety engineers*, should have due regard to resources such as the Handbook on Lifts Used During Evacuation and the design objectives for the project.

Client design objectives beyond minimum requirements

A *fire safety engineer* should make enquiries to determine and have due regard to the client*'s* design objectives for the project which may require a design that exceeds the minimum requirements of the NCC. For example, some clients will require increased asset protection because of the value of an asset, its location, terrorist risks or to meet business continuity objectives.

This obligation also requires a *fire safety engineer* to have regard to broader social and environmental objectives which may include considering matters that are beyond the fire safety requirements of the NCC. This reflects policies consistently adopted by the engineering profession in Australia and internationally that require the development of engineering solutions that repair and regenerate both natural and social capital, while maintaining economic health. See for example the Code of Ethics for Engineers Australia and UNESCO Quality Engineering for Sustainability.

2.2 A fire safety engineer must engage respectfully and collaboratively with fire authorities and should as far as practicable, ensure that triggers for statutory consultation with fire authorities are not avoided through restrictive interpretations.

A *fire safety engineer* has an obligation to consult respectfully and professionally with fire authorities. This includes developing an appreciation for matters relevant to fire brigade intervention and the risks to emergency services personnel when they respond to emergencies both during construction and after construction.

*Fire safety engineer*s should, having regard to their role in the overall design, ensure that triggers for statutory consultation with fire authorities are always met and not seek to avoid such triggers through restrictive interpretations of those triggers.

For *fire safety engineers* that are employed by or contracted to fire authorities or other government agencies, this obligation should be read as requiring mutual respect and collaboration between *fire safety engineers*.

Professionalism

Performing *fire safety engineering services* in a professional manner involves *fire safety engineer*s, at a minimum:

- acting within their scope of registration and professional competency
- not falsifying, misrepresenting or exaggerating their qualifications or skills
- maintaining their skills and competency through active and ongoing professional development
- taking *reasonable steps* to inform others about the consequences of disregarding, modifying or overruling concerns raised by the *fire safety engineer*
- applying a system of quality assurance to their work and cooperating with any *independent design review* process
- clearly documenting their *assessments* and designs
- taking *reasonable steps* to obtain reliable and relevant information
- ensuring assistants are properly trained and supervised, and
- working collaboratively and respectfully with building practitioners, *building surveyors*, other professionals, regulators and fire authorities.

A *fire safety engineer* must act in a manner that engenders confidence in, and respect for, the fire safety engineering profession.

3.1 A *fire safety engineer* must only perform *fire safety engineering services* that are permitted under their registration and within their professional competency.

*Fire safety engineer*s must only perform *fire safety engineering services* that are within their:

- registration or licence conditions in the relevant jurisdiction, and
- professional competency, that is their qualifications, skills and experience.

Laws may govern what work each class of *fire safety engineer* is permitted to do. Conditions may be applied to the licence by the regulator. The *fire safety engineer* must work within the scope of work for their registration.

In addition, *fire safety engineer*s must critically self-assess their knowledge, skills and experience for work within their registration. For example, if a *fire safety engineer* holds an unrestricted licence, but has never worked on a Class 9a building or has not done

so for many years, then undertaking the fire safety engineering design for a hospital could be outside their experience and therefore beyond their professional competency.

This obligation is not intended to prevent *fire safety engineers* from building on their knowledge incrementally or to suggest that unique or rare projects cannot be undertaken by highly experienced and competent *fire safety engineers* merely because they are unique and rare.

If a *fire safety engineer* is unsure as to whether they have the competencies required to perform a particular *fire safety engineering service,* they should refuse the engagement. This does not prevent a *fire safety engineer* from working to gain experience for future projects, for example, by assisting a colleague whose professional competency is appropriate for the work.

3.2 A *fire safety engineer* must not falsify, misrepresent or exaggerate their qualifications and experience.

Following from the above requirement (obligation 3.1), a *fire safety engineer* must not advertise or claim to have skills or qualifications that they do not have or misrepresent or exaggerate their qualifications and experience to others.

3.3 A *fire safety engineer* must maintain their professional competency to ensure their knowledge and skills are current for the work they undertake.

*Fire safety engineer*s work in a complex and dynamic environment, often interpreting and applying multiple laws to building processes and products, all of which change over time. Because of this, *fire safety engineer*s must continually work to maintain the currency of their professional competency to perform *fire safety engineering services* effectively.

Participating in a *Continuing Professional Development* (*CPD*) course or scheme either voluntarily or as required under legislation will assist to meet this obligation, as will assisting more experienced *fire safety engineer*s on projects to extend or maintain the currency of experience and skills.

Where a *fire safety engineer* has not maintained a professional competency, they should cease to personally perform related *fire safety engineering services* and cease any promotional activities or advertising that offers a related service.

3.4 A *fire safety engineer* must have a system that provides for quality assurance of their work and cooperate with any *independent design review* of their work.

It is expected that a *fire safety engineer*'s work will be subject to a system and processes for that provides for quality assurance.

The purpose of quality assurances is to mitigate against mistakes, test and challenge engineering judgment and enhance the quality and accuracy of the final design document or report.

A process for quality assurance should provide for another *fire safety engineer* with at least equivalent qualifications and experience to review work including designs, calculations, reports and *assessments*. The reviewer's comments should be documented and must be considered and result in adjustments being made to the work reviewed where necessary.

Where a *building surveyor* or client requires *independent design review*, the *fire safety engineer* must engage co-operatively with the independent reviewer. This includes responding to each issue raised by the independent reviewer and adjusting work accordingly before presenting it to others.

Model guidance on independent third party review was prepared in response to BCR recommendation 17.

3.5 A *fire safety engineer* must take *reasonable steps* to inform a client and their employer, if employed, of their professional concerns and the likely consequences for affected parties if their advice is modified, overruled or disregarded.

The work of a *fire safety engineer* may be subject to approval by the client or another body or person such as a *building surveyor*. The *fire safety engineer*'s advice can be modified, overruled or disregarded by others. It is important that where this occurs the *fire safety engineer* clearly sets out the consequences of modifying, overruling or disregarding their concerns so that the other person or body can make an informed decision. This may include advising the other person that failure to accept the advice of the *fire safety engineer* may result in the design not complying with the NCC.

3.6 A *fire safety engineer* must clearly document their *assessments* and designs, including their scope, objectives, limitations and any assumptions on which they have relied.

This includes:

- complying with the requirements for documenting *Performance Solutions* in provision A2.2(4) of the NCC and having due regard to related guidance material and any limitations, and
- actively seeking all necessary information required to apply sound engineering judgement and to meet all requirements of this Code.

Assumptions about matters which can be readily determined based on inspection of a building, *building work*, related documentation or after reasonable enquiry should be avoided. For example, when undertaking a risk *assessment* of combustible cladding on an existing building and proposing retention of combustible cladding, assumptions should not be made about the combustibility of other elements that may make up the as built wall system. Instead, the *fire safety engineer* should insist that an inspection and/or sample testing of other elements within the wall system such as insulation, should be carried out.

3.7 A *fire safety engineer* must take *reasonable steps* to ensure they obtain and assess all relevant information.

*Fire safety engineer*s must assure themselves that a proposed design or completed *building work* is compliant. This requires them to obtain relevant and reliable information. This includes complying with the requirements for determining evidence of suitability in provision A5.2 and having due regard to related guidance material.

Relevant and reliable information is information that relates to the *fire safety engineering services* and the project that the *fire safety engineer* is engaged on. For example, if engaged to prepare a *fire safety design* relating to a proposed office fit out, the fire safety engineer would be expected to request and consider information relating to the materials proposed to be used which could impact fire load and the ability of occupants to egress.

Where relying on a *certification* or test report for a product, system or method of construction, the *fire safety engineer* must examine any conditions set out in the

certificate or report and consider whether the fire safety strategy and proposed design will meet those conditions, and if it will not, address this in their *assessment* or design.

For example, a combustible acoustic insulation applied to a wall or ceiling could satisfy the applicable NCC deemed-to-satisfy provisions for fire hazard properties, but it may not be suitable for use in all areas of a building. Vulnerable or critical areas of a building may require products with a higher level of fire performance. The *fire safety engineer* may conclude that non-combustible products are required in this part of the building to achieve the fire safety strategy.

If a *fire safety engineer* is unsure whether a product, system or method of construction is compliant, they should actively seek out information, such as test reports or expert opinion, they need to be satisfied that the product or method is compliant. For example, if a *fire safety engineer* is told that a new or unfamiliar product has been tested to an Australian Standard, they should request a full copy of the test report to confirm that the product was tested by an appropriate testing facility and conforms to the Standards relevant to the intended use of the product.

3.8 A *fire safety engineer* must ensure any people that they use to assist with their work are properly trained and supervised to undertake tasks assigned to them.

*Fire safety engineer*s may rely on employees and contractors to help them gather information, assist with design work including fire safety engineering analysis needed to perform *fire safety engineering services*. *Fire safety engineer*s must ensure that anyone who assists them is properly instructed, competent and supervised to the level necessary for them to provide this assistance to the standard expected of the *fire safety engineer* themselves.

3.9 A *fire safety engineer* must work cooperatively with regulators, building surveyors, fire authorities, other *fire safety engineers* and other building practitioners, avoiding derogatory and insulting language and behaviour.

The obligation for *fire safety engineers* to be professional extends to their interactions with fellow practitioners, the fire authorities, and regulators. This includes the language and commentary in publications, social media and during presentations.

Fire safety engineers must also be responsive to requests and instructions from regulators related to their services, including participating cooperatively in audits and providing documents or information as requested.

Honesty and integrity

Fire safety engineers perform their services based on specialist expertise and knowledge which places them in a position of trust. Requirements of registration generally require the applicant to be of good standing and a fit and proper person. This is usually demonstrated by an absence of findings, convictions or other penalties for offences related to behaviours expected of those performing *fire safety engineering services*.

4.1 A *fire safety engineer* must act with honesty, impartiality and fairness.

These attributes underpin the professional standing of *fire safety engineers* and the obligations set out below.

4.2 A *fire safety engineer* must not engage, whether by act or omission, in misleading or deceptive conduct in connection with the performance of *fire safety engineering services*.

Fire safety engineers must be honest and fair at all times when performing *fire safety engineering services*.

Examples of misleading of deceptive conduct by a *fire safety engineer* include:

- presenting designs, reports, certificates or declarations that are known not to be compliant with relevant laws
- presenting conclusions in a truncated, selective or incomplete way
- falsifying records of their decisions or the supporting evidence
- misrepresenting the requirements for compliance under the NCC and relevant state or territory legislation
- misleading other building practitioners as to their role in the *certification* process, and
- seeking to deceive regulators and auditors appointed by the government or an association.

The Australian Competition and Consumer Commission advises that conduct is considered misleading or deceptive if the overall impression created by the conduct is false or inaccurate or is likely to mislead or deceive. This means that conduct can be

misleading and deceptive even if it was not intended to be. Any misunderstanding that creates a false impression that someone may rely upon must be corrected.

4.3 A *fire safety engineer* must:

a. **take all *reasonable steps* to avoid actual or potential conflicts of interest; and**
b. **not perform a *fire safety design service* where a reasonable person would conclude there is a real risk that their decisions could be influenced by a *conflict of interest*.**

A conflict of interest can arise where the private interests of a person, or their immediate friends and family, conflict with their obligations or affects their ability to carry out their work impartially and without bias. Because of this, conflicts of interest need to be judged objectively, that is, by what a reasonable person observing the situation would consider to be a conflict.

There are two aspects to this obligation. The first is to actively avoid situations that could give rise to a real or potential *conflict of interest*. The second is to stop acting if a conflict arises, that is resign or transfer their work to another *fire safety engineer*.

For example, a *fire safety engineer* should:

- refuse offers that could be seen as influencing their decisions, such as accepting payments from a product supplier for recommending their product
- refuse to provide services where the *fire safety engineer* has a personal or family interest in the project, including a business they hold shares in directly (as opposed to shares held through a superannuation fund or managed trust), and
- avoid undertaking testing and preparing a performance based fire engineering report for a material or system that is intended for use as evidence of suitability then later relying on that report when preparing a fire engineering design.

It is prudent for a *fire safety engineer* to document the management of *conflicts of interest.* In some cases, it may be possible to continue to provide services if disclosure of the potential or perceived conflict is made to affected persons. Where this occurs, written confirmation should be obtained from those affected. The confirmation should refer to the nature of the conflict disclosed and state that the person consents to the services continuing.

4.4 A *fire safety engineer* must disclose to a client or prospective client:

a. **if the *fire safety engineer* receives, is likely to receive, or has been promised any payment, gift or other material advantage to recommend, endorse or comment on a product or service that is or is likely to be used in connection with the provision of *fire safety engineering services* to the client or prospective client; and**
b. **any arrangement entered into where the client or prospective client has been introduced or referred to the *fire safety engineer* by a third party who the *fire safety engineer* has given or offered to provide a fee or reward for the referral of a client or a prospective client.**

4.5 A *fire safety engineer* must not disclose confidential information obtained while performing *fire safety engineering services* except where the relevant person has granted consent, or there is a legal or professional duty to disclose the confidential information.

Information can become confidential in a number of ways. For example, a *fire safety engineer*'s contract may specify that certain information is confidential.

Alternatively, information may become confidential due to its content and the context in which it is provided. For example, if a *fire safety engineer* is provided, by a supplier, with product *specifications* labelled "confidential" it would be reasonable to assume this is confidential information. If a *fire safety engineer* is unsure whether information is confidential, they should check with the owner of the information.

Confidential information can be disclosed with consent. Consent may be explicit or implicit. Implicit consent can arise when it is obvious the owner expected it to be passed on to others. For example, if a *fire safety engineer* is provided with a confidential test report to demonstrate compliance it is reasonable to assume that the test report may be provided to a permit authority or fire authority as evidence that the building complies.

Confidential information can also be disclosed when it is ordered by a court or required as part of a *fire safety engineer*'s professional duties, such as when being audited. This also includes the obligation under the Code to disclose reasonable suspicions of unlawful activities or risks to health and safety to regulators (see obligation 1.3).

4.6 A *fire safety engineer* must notify regulators in each state and territory where they are *registered* if they have:

- **a. been found to have breached the code of conduct in another jurisdiction;**
- **b. had registration or another type of authorisation as a building practitioner suspended or cancelled in another jurisdiction;**
- **c. been found to have breached laws related to planning, building, or development in any jurisdiction; or**
- **d. had a professional indemnity insurance policy refused, cancelled, or had conditions applied that are inconsistent with state and territory laws.**

In most jurisdictions, registration as a *fire safety engineer* is contingent upon proof that the applicant is of good standing in addition to other criteria. As mentioned previously, this is usually determined by the absence of findings, convictions or other penalties for offences related to their *fire safety engineering services*.

This obligation requires building practitioners to notify state and territory regulators when they no longer meet certain criteria associated with their registration. It applies in jurisdictions where a *fire safety engineer* is currently *registered*, including any suspended registration.

Audit or investigation in one jurisdiction does not need to be reported unless the audit or investigation finds a breach, and a sanction is applied. It would then need to be reported to the other jurisdictional regulators. Cautions do not need to be reported.

The obligation to notify under 4.6 d. would not arise where a professional indemnity insurance policy is cancelled because an insurer is no longer offering insurance to the market. However, notification of the new insurer's details may be required under State or Territory laws.

Transparency and accountability

Transparency and accountability of all practitioners involved in the *building approval process* is essential to its integrity and proper functioning. This group of obligations requires transparency about terms of engagement and fees, sharing information with other *fire safety engineers*, and reasons for decisions when providing services.

5.1 A *fire safety engineer* must take all *reasonable steps* to ensure any agreement or contract for performing *fire safety engineering services* is consistent with this Code and requirements set by the regulator.

Provisions in the Code are intended to provide for and protect the independence, integrity, professionalism and transparency of *fire safety engineers* when performing *fire safety engineering services*. This obligation requires that those protections are not compromised in contracts or agreements entered for *fire safety engineering services*. For example, contracts and agreements should:

- clearly state the services that will be provided, ensuring these are within the scope of an individual's registration and professional competency, the costs and possible additional costs, and
- describe the services to be provided in a manner consistent with the obligations on the *fire safety engineer* to apply the good practice *fire safety design* principles set out in this Code.

5.2 A *fire safety engineer* must retain records and be willing and able to provide reasoning for decisions made as part of providing *fire safety engineering services*.

Good practice is to record the reasoning along with the decision. The obligation to provide reasons for decisions is not intended to cover routine or administrative decisions, rather those that are critical to the services being provided, that are based on engineering principles.

State and territory regulators may have specific requirements for record keeping, including the documentation that must be produced, how long those records must be retained or to whom they must be submitted for retention. However, at a minimum, records (including photographs, videos, electronic or handwritten notes), should be

legible, stored in an accessible format and have sufficient detail to enable another *fire safety engineer* or a regulator to understand reasoning and replicate conclusions.

5.3 A *fire safety engineer* must take *reasonable steps* to minimise and resolve complaints and disputes about their services.

A *fire safety engineer* must take *reasonable steps* to minimise and resolve complaints and disputes arising in relation to the provision of their services.

Where a complaint is made, a *fire safety engineer* should:

- have in place a reasonable process for managing and responding to enquiries and complaints in a fair and timely manner (complaints process)
- advise the complainant about the complaints process, and
- follow, and refine the complaints process as necessary.

Having documentation that sets out reasons for a decision based on engineering principles will assist with developing accurate responses (see obligation 5.2).

The obligation for transparency does not mean that *fire safety engineers* need to accept every complaint or tolerate abuse. It does mean they must try to resolve enquiries and complaints in a fair and timely manner.