



Submission

in response to the

ABCB Discussion Paper:

Involvement of Fire Authorities in Building Design

July 2021

Response ID ANON-B9JE-SJBC-C

Submitted to Discussion paper: Involvement of fire authorities in building design
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Information Collection

Important: Please ensure that you have read and understood the below statements before proceeding

By making a submission to this consultation you agree to the collection of the information you provide in your submission; and the use and disclosure of the information you provide in your submission as outlined above.

Publish response

Personal information

What is your name?

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What is your email address?

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On whose behalf are you making this submission?

I am making this submission on behalf of an industry body

What is your organisation?

Organisation:
Lighting Council Australia

Which best describes your industry sector?

Which best describes your industry sector?:
Building and plumbing products

Please select your State or Territory

State or Territory:
Vic

Questions about a Code of Conduct for Fire Safety Engineers

1. Do you agree with the proposed benefits of a Code of Conduct for Fire Safety Engineers?

No

Why? :

A code of conduct will not address all issues with Fire Safety Engineers and the compliance of performance requirements.

In our experience, as documented in our submission to the NSW Government building standards inquiry and available here, the current arrangements in many jurisdictions allow for private certifiers and fire safety engineers alone to determine building compliance without being questioned by a higher authority regarding building compliance. When issues arise, building regulation authorities make determinations on certifier conduct alone and not building compliance.

Regarding building compliance, there is no authority to hold certifiers and engineers to account for their decisions relating to performance solutions and this gap is resulting in lower building safety standards being applied compared to those required by the National Construction Code 'deemed-to-satisfy' provisions for critical life safety aspects such as emergency and exit lighting.

2. Are there drawbacks to implementing a Code of Conduct for Fire Safety Engineers?

Yes

What are they and how can they be mitigated? :

The Code may not be implemented by all states and territories and there may be differences in the implementation of the code in each state and territory. For effective regulation to take place a harmonised code of practice is required across all Australian jurisdictions.

This could be addressed through consultation and agreement through the building minister's forum as well as with relevant industry stakeholders.

3. Do you agree with the proposed scope of the Code?

No

If you do not agree with the proposed scope, what improvements would you suggest?:

Further requirements are needed to enable an authoritative determination of the compliance of fire safety performance solutions such as emergency and exit lighting that is critical to occupant safe egress in an emergency. As above, most jurisdictions have no established building compliance authority that is empowered to make a determination regarding the compliance of performance solutions.

At best, authorities simply assess the process undertaken by certifiers – i.e. has the certifier obtained a documented performance solution for emergency and exit lighting from a fire safety engineer and does the documentation claim compliance?

Therefore, fire safety engineers are not facing any independent authoritative review and evaluation of their performance solutions to determine whether those solutions meet or exceed the 'deemed-to-satisfy' provisions or the performance requirements of the National Construction Code (NCC). In short, fire safety engineers are currently not accountable for the performance solutions they implement.

The documentation requirements established in Obligation 15 are meaningless unless an authority is established to make compliance determinations of fire safety engineers' designs against NCC requirements. We suggest that each state and territory establish a mechanism or regulatory body that is empowered to make these assessments.

We suggest that commercially independent, state-based fire authorities may be suitable for this role.

Questions about model guidance – fire authority role and triggers

4. Are there benefits to a nationally consistent role for fire authorities?

Yes

If so, what are they? :

A nationally consistent role for fire authorities will improve safety outcomes and accountability across fire safety solutions in the Australian building industry.

Lighting Council Australia has observed many examples of emergency and exit lighting performance solutions implemented by fire safety engineers that fail to meet the deemed-to-satisfy and performance requirements of NCC 2019 (e.g. E4.8 and EP4.2).

However, when we have questioned the compliance of particular installations through state government agencies (e.g. the New South Wales Building Professionals Board (NSW BPB)), only the conduct of the certifier is assessed rather than the compliance of the performance solution design.

When we pressed further to inquire regarding the existence of an authority to determine performance solution compliance, we were told by NSW BPB that no such authority exists.

We believe that the lack of an ultimate compliance authority is a major flaw in the current system that is exposing building occupants to increased risk of injury and death.

We suggest that the involvement of fire authorities as an independent surveyor for non-DTS performance solutions (especially those implemented through the expert judgement pathway) would be appropriate and would help to improve safety and accountability across the Australian building industry.

What has the impact of lack of national consistency been on you and your work, if any?:

5. How would you suggest improving the following proposed definition of the fire authority role?

How would you suggest improving the definition of the fire authority role, which is currently "During the building design process, the role of fire authorities could be defined as to provide advice on the development of Performance Solutions impacting the intervention of fire authorities at a building.":

We suggest that the role of fire authorities should be to provide mandatory assessment of the compliance of performance solution designs that will potentially impact the intervention of fire authorities at a building and impact the safe egress of occupants in an emergency evacuation scenario.

The critical nature of fire safety and emergency egress design justifies the assessment and verification of fire safety performance solutions (i.e. compliance assessment from an independent third party) compared to other components of the National Construction Code.

Furthermore, in most jurisdictions, there is no authority to hold certifiers and engineers to account for their decisions relating to performance solutions.

6. Do you believe the triggers for the involvement of fire authorities should be consistent across jurisdictions?

Yes

Why?:

The standard of safety should be consistent for all jurisdictions. This will likely improve:

- The productivity of regulatory compliance nationally;
- The consistency of building compliance nationally;
- The productivity and cost of industry solutions and market offerings; and
- The overall compliance rates of fire safety and emergency egress solutions.

We are of the view that involvement of fire authorities should be the mandatory assessment of the compliance of requirement components i.e. as defined by Appendix D, to provide consent.

"Informal consultations" or the provision of guidance advice may assist to deter non-compliant performance solutions. However, assessment and verification of performance solutions by an authority is needed to qualify compliance in this critical area.

Do you consider any of the jurisdictional models to be exemplary? If so, which jurisdiction?:

7. What are the benefits of NCC clause-related triggers?

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Clause-related triggers allow for targeted compliance checks for high-risk design components.

8. What are the drawbacks of NCC clause-related triggers?

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Any clause related trigger list should be revised periodically with a view to adding or subtracting clauses based on stakeholder feedback.

If you agree with NCC clause-related triggers, do you agree with the list below, which was provided by the National Council for Fire and Emergency Services (AFAC)?

NCC clause-related triggers - CP1 Structural stability during a fire:

NCC clause-related triggers - CP2 Spread of fire:

NCC clause-related triggers - CP3 Spread of fire and smoke in health and residential care buildings:

NCC clause-related triggers - CP4 Safe conditions for evacuation:

NCC clause-related triggers - CP5 Behaviour of concrete external walls in a fire:

NCC clause-related triggers - CP6 Fire protection of service equipment:

NCC clause-related triggers - CP7 Fire protection of emergency equipment:

NCC clause-related triggers - CP8 Fire protection of openings and penetrations:

NCC clause-related triggers - CP9 Fire brigade access:

NCC clause-related triggers - DP4 Exits:

NCC clause-related triggers - DP5 Fire-isolated exits:

NCC clause-related triggers - DP6 Paths of travel to exits:

NCC clause-related triggers - DP7 Evacuation lifts:

NCC clause-related triggers - EP1.3 Fire hydrants:

NCC clause-related triggers - EP1.4 Automatic fire suppression systems:

NCC clause-related triggers - EP1.5 Fire-fighting services in buildings under construction:

NCC clause-related triggers - EP1.6 Fire control centres:

NCC clause-related triggers - EP2.1 Automatic warning for sleeping occupants:

NCC clause-related triggers - EP2.2 Safe evacuation routes:

NCC clause-related triggers - EP3.1 Stretcher facilities:

NCC clause-related triggers - EP3.2 Emergency lifts:

NCC clause-related triggers - EP4.1 Visibility in an emergency:
Agree

NCC clause-related triggers - EP4.3 Emergency warning and intercom systems:

NCC clause-related triggers - P2.7.5 Buildings in bushfire prone areas:

NCC clause-related triggers - P2.7.6 Private bushfire shelters:

NCC clause-related triggers - GP5.1 Bushfire resistance:

Please provide your reasoning where you disagree.:

9. Do you believe any NCC clauses related to fire safety Performance Requirements are overlooked in the above list? If so, what are they?

9. Do you believe any NCC clauses related to fire safety Performance Requirements are overlooked in the above list?:

Lighting Council Australia disagrees with the exclusion of EP4.2 - Identification of Exits from the AFAC list.

Lighting Council Australia recommends EP4.2 be added to the AFAC list.

Emergency EXIT signs facilitate illumination and identification of exits during emergency egress situations. EXIT signs are essential life safety devices for both building occupants and fire safety authorities, who may not be familiar with how to navigate a building during an emergency.

Performance solutions that do not meet or exceed the deemed-to-satisfy requirements of E4.8 or the performance requirements of EP4.2 are currently being built and certified for occupancy due to the lack of an oversight authority.

In this case there is no authoritative verification that the performance provisions are being met and no Australian Standard for some of the products being used in performance solutions.

In this case, the NCC deemed to satisfy provisions and the performance requirement are clear. Our understanding is that the performance solution designs that are being implemented do not meet either the deemed to satisfy (E4.8) or the performance provision (EP4.2). Yet there is no authority to make a determination.

Emergency and exit signage and illumination is a high risk area that warrants the inclusion of EP4.2 as an essential addition to the fire authority clause-related triggers.

EP4.2 is currently referenced in performance solutions. Compliance in this area is critical to the safe egress of occupants and emergency personnel in an emergency. Yet, there is no oversight or authoritative determination of the performance solutions purporting to comply with EP4.2.

10. An alternative to an NCC clause-related trigger model is a risk-based model? What are the benefits of a risk-based model?

10. An alternative to an NCC clause-related trigger model is a risk-based model? What are the benefits of a risk-based model? :

11. What are the drawbacks of a risk-based model?

11. What are the drawbacks of a risk-based model? :

A risk based model would be more open to interpretation and may not capture all high risk design areas.

If you agree with a risk-based model, do you agree with using the definition of building complexity at Appendix F of the discussion paper? :

Questions about model guidance – early advice

12. Do you agree there is a need for fire authorities to provide guidance at the conceptual stage of building design?

Yes

Why?:

It would be beneficial if fire authorities were to publish guidance examples on acceptable and unacceptable performance solution designs. E.g. An interpretation of the necessary design requirements for photoluminescent exit signage that complies with EP4.2 as well as unacceptable design examples.

As publicly accessible information this would be an effective use of resources and help to clarify any uncertainty prior to construction.

It should be the responsibility of the Fire Safety Engineer to produce a compliant design and the responsibility of the fire authority to verify the

compliance of designs.

If you agree with fire authorities providing guidance at the conceptual stage of building design, should this requirement be set out in legislation, occur at the request of the building designers or through another trigger?

Legislation

If other, please specify.:

Why? :

Guidance on the identification of exits in an emergency is critical to safe egress and compliant building designs and should be accommodated in a legislative provision.

It would not be enough to simply rely on requests from building designers.

13. Do you believe fire authorities should be advice authorities or consent authorities?

Consent

Why? :

Guidance advice material would be somewhat valuable.

However, all fire authorities should have the power to act as consent authorities and so make determinations regarding the compliance of performance solutions.

In most jurisdictions there is no authority to hold fire safety engineers to account for their decisions relating to performance solutions and this gap is resulting in lower building standards being applied compared to those required by the National Construction Code for critical life safety aspects such as emergency and exit lighting.

Questions about model guidance – education and experience

14. Do you agree that fire safety experts who assess applications on behalf of fire authorities should be similarly educated, competent and experienced as fire safety engineers?

Yes

Why? :

The high-risk nature of fire safety design requires specialist knowledge and warrants a high degree of competency and experience.

Questions about model guidance – advice to industry

15. Should fire authorities provide guidance on their websites on any additional matters to help building designers meet the needs of fire authorities?

Yes

If yes, what should the advice cover as a minimum?:

It would be beneficial if fire authorities were to publish guidance examples demonstrating acceptable and unacceptable performance solutions in various performance areas.

E.g. An interpretation of the necessary performance requirements for photo-luminescent exit signage that complies with EP4.2 would be beneficial. Examples of non-compliant performance solutions in this area would also improve clarity for designers.

As publicly accessible information this would be an effective use of resources and help to clarify any uncertainty prior to construction.

Do you consider any of the jurisdictional models to be exemplary? If so, which jurisdiction? :

16. Please provide any other comments you have about the involvement of fire authorities in building design processes and the issues covered in the discussion paper.

16. Please provide any other comments you have about the involvement of fire authorities in building design processes and the issues covered in the discussion paper. :

1. We suggest that EP4.2 is an essential inclusion in the AFAC list of NCC clauses that are reviewed by fire authorities.

2. An authority should be established in each jurisdiction that is empowered to verify the compliance of performance solution designs produced by fire safety engineers.

3. Guidance information showing compliant and non-compliant performance solutions should be published and publicly available.