ENGINEERS
AUSTRALIA
SOCIETY OF
FIRE SAFETY

30 years of the Society of Fire Safety

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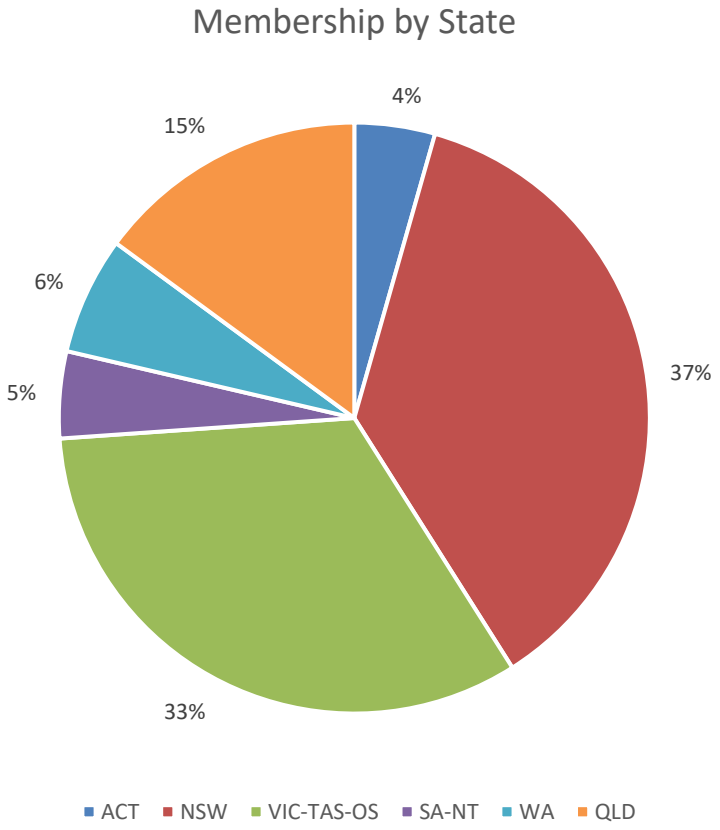
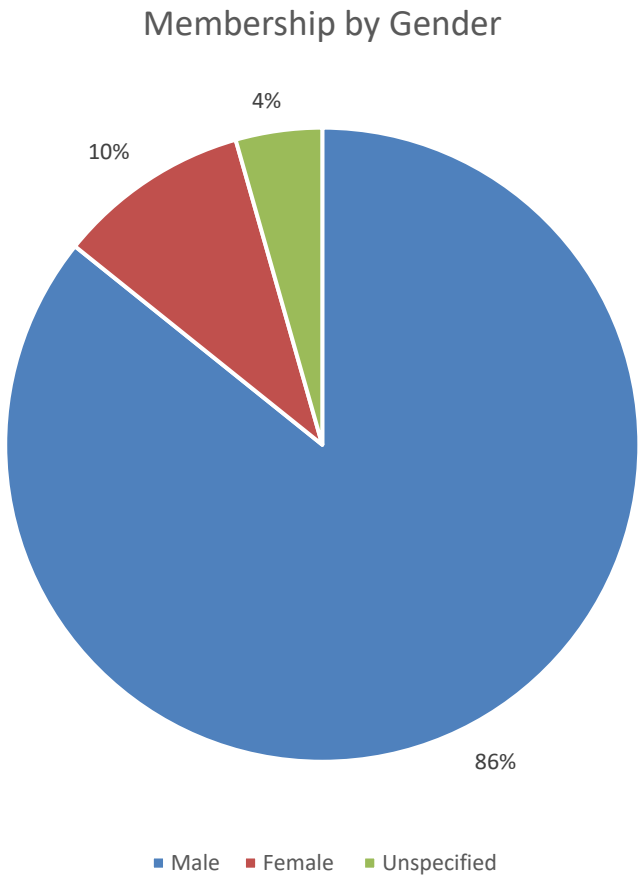
Inaugural meeting 22 August 1994

SFS was approved by EA July 1995

About Members

ENGINEERS AUSTRALIA SOCIETY OF FIRE SAFETY





History of Fire Engineering

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- First lecture in engineering given in 1883 to 10 students by William Henry Warren
- The Warren Centre for Advanced Engineering was established in 1983 to mark the Centenary of Engineering education at the University of Sydney
- Warren Centre Project (1989) to develop an engineering basis for cost-effective design for fire safety

History of Fire Engineering

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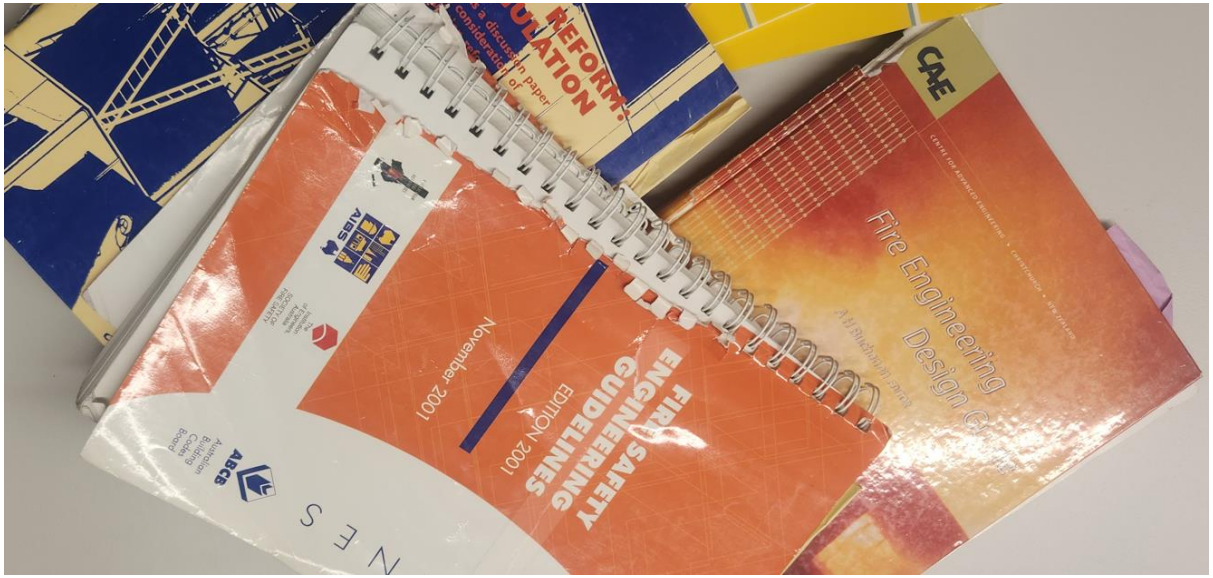
- Fire Code Reform Centre reports 1995-2001
- FEG – IFEG - AFEG
- Warren Centre Project 2018



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Code of Practice 2003

Fire Engineering Practice Guides

Published Practice Guides

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- Design fires
- Tenability criteria in building fires
- Fire and life safety in existing buildings during construction
- Fire safety in partially occupied building
- Inspections associated with fire safety engineering performance solutions
- Façade & external wall fire safety design
- Guide on the fire safety verification method

New Practice Guides

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- External glazing
- Internal glazing
- Fire severity
- Design fires (update)
- Tenability (update)
- Small batteries / Alternative energy systems and storage

New Practice Guides

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- Electric vehicles
- Holistic fire engineering
- Complex buildings

New Practice Guides

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Lift doors

New Practice Guides

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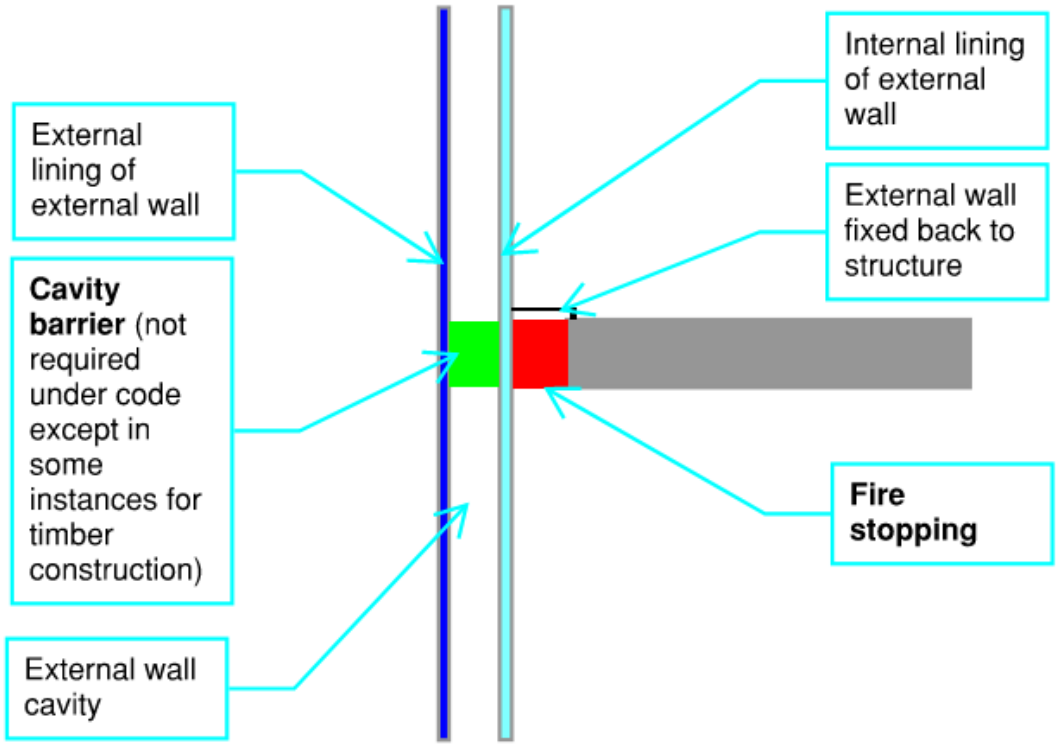
Cavity barriers & fire stopping



Grants

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11 winners in 2022-2024

- Constitutive properties of concrete in isolated fire or post-seismic fire scenario for in-fire and/or post-fire structural response evaluation
- Complete characterization of Li-ion battery fires from cell components to combustion products
- Formulation of novel high-performance fluorine-free firefighting foams using a molecular approach
- Experimental studies exploring the fire behaviour of mass timber with thin intumescent coatings
- Enhancing computational efficiency of FDS for full-scale compartment fire analysis
- Evaluating the ignition and jet flaming hazard of Li-ion cells in thermal runaway
- Phenomena governing the fire dynamics in open-plan timber compartments
- Fire safety in buildings where electric vehicles are prevalent
- Effect of multi-directional external wind on the risk of façade fire spread
- Combustible external wall cavity material fire performance - Correlation study between intermediate-scale testing and bench-scale, cone calorimeter testing
- Assessment of kinetics in smoldering of preservative-treated timber

Liaison

- ABCB
- State / Territory Governments
- Fire services
- FPAA
- AHJ

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afac

Association of Australian Certifiers

NSW GOVERNMENT

Australian Building Codes Board

FPA AUSTRALIA

Quantification

- Quantification of NCC & A8

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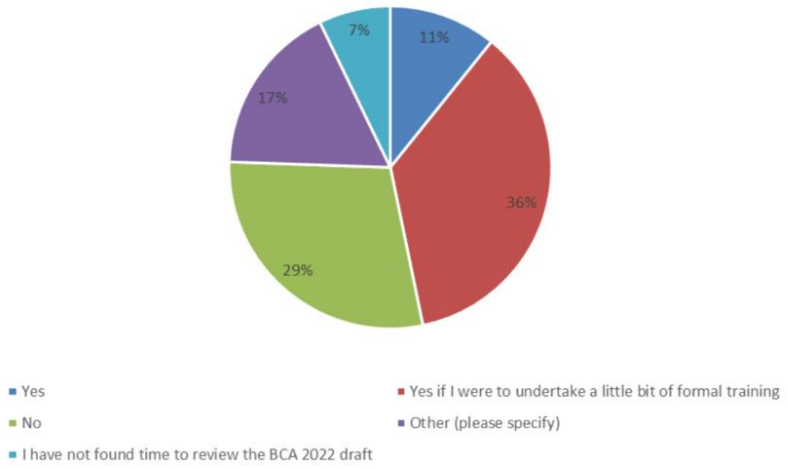
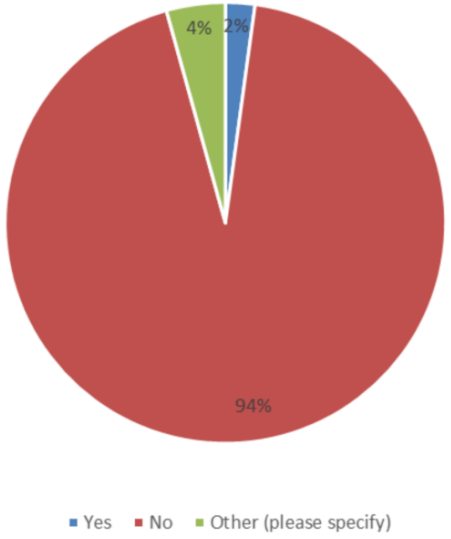
Would you (personally) be confident that you have the necessary skills and expertise to carry out a quantitative risk assessment using the proposed risk-based assessment methodology in Part A8?



Do you support the adoption of the proposed risk-based assessment methodology in Part A8, in its current (DRAFT) form?



Expert vs Engineering Judgement

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- Expert Judgement – ‘it’s ok because I’m the expert’
- Engineering Judgement – ‘it’s ok and here’s the evidence’

Future Concerns for Fire Engineering

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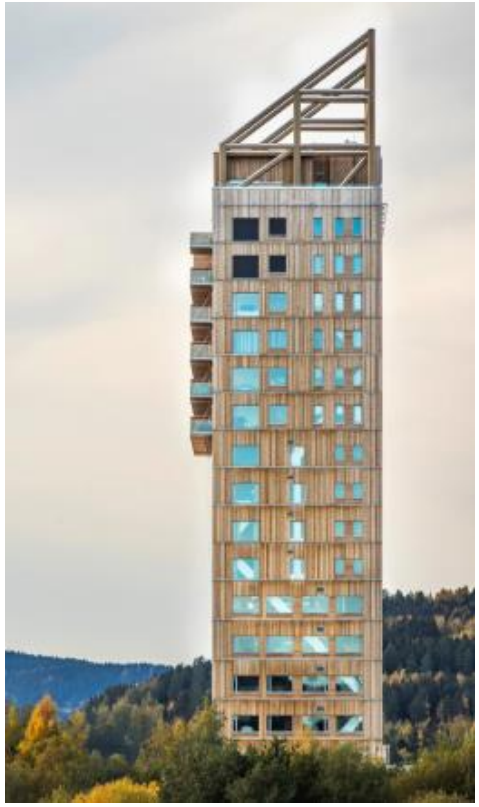
- Taller buildings, deeper basements, new materials
- More flammable contents
- Li-ion batteries
- Green façades
- Combustible cladding



Specialist Areas

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- Structural Fire Engineering
- Bushfire Engineering
- Infrastructure / Risk

How do we Improve Occupant Safety?

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- Early fire engineer involvement
- Design discussions – meetings and PBDB
- Review and comment on reports
- Question the fire engineer
- Peer review
- Work together

Stakeholder Involvement

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- Have all stakeholders been identified in the report?
- Has the report been read?
- Does it follow the AFEG?
- Has the report (relevant sections) been understood?

SFS Conference

SFS & SFPE
joint international conference on holistic fire safety design

ENGINEERS AUSTRALIA

6–8 August 2025

RACV, 501 Bourke st, Melbourne

Register now

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Society of Fire Safety

https://www.engineersaustralia.org.au/Communities-And-Groups/Technical-Societies/Society-Of-Fire-Safety