



## WHAT YOU NEED TO PRESENT TO COUNCIL

You must present a preliminary report in the following format, whilst liaising as necessary with a Council Building Development Project Officer.

- 1 Submit qualifications and experience of expert. Note: Only qualified fire engineers will be accepted.
- 2 Provide appropriate details/written description of the building or part of the building that is impacted upon by the deviation. For example, a building that does not have the required FRL for its floors will need the following details to be submitted:
  - a An A4 section through the building showing relevant details such as floor/wall construction, any atria, stair location, level of street, etc.
  - b Indicate adjacent to each floor, the proposed classification(s).
  - c Show reduced levels (RL's) for all finished floor levels, ceiling levels and street level.
- 3 List all the clauses of the deemed-to-satisfy provisions of the BCA that have not been complied with.
- 4 Make a clear statement as to the objective(s) of the report. These will incorporate both cause and effect, with the latter being related to the objectives of the BCA. For example:

"The objective of this report is to investigate the impact of the absence of fire dampers within the toilet exhaust ducts (the cause), on the spread of fire and smoke from one room to another (the effect), and the likely impact of this on the safety of occupants in an emergency (drawn from C01, D0, E01 and E02)."

Other objectives of the building code can be found at the beginning of each part of the BCA.

- 5 Detail all the performance criteria that are impacted upon by each area of non-compliance. It is important to note for example, that a failure to comply with the FRL's required for a certain type of construction, necessitates more than compliance with CP1 and CP2. A reduction in passive measures may require further active measures to be provided and/or egress provisions to be re-evaluated. Consideration must therefore be given to the impact on Parts D and E of the BCA also.
- 6 Outline the "Assessment Method(s)" proposed to be used to develop an appropriate Alternative Solution. In accordance with A0.9 of the BCA, the Assessment Method must be any one or a combination of the following:
  - a Evidence of Suitability as described in A2.2 of the BCA.
  - b Utilisation of verification methods.
  - c Comparison with deemed-to-satisfy provisions.
  - d Expert Judgement.

It should be noted that a solution based wholly or in part on item (d) would require the submission by the applicant of the relevant qualifications and experience of the expert.

- 7 Where assumptions are required to be made, such as nature of occupants, fire scenarios, special hazards, describing untenable conditions or simply defining terms in the objectives, these shall be outlined clearly. Similarly, calculation procedures, software to be used and references shall be identified. For performance assessments that use the "Fire Engineering Guidelines" a Fire Engineering Design Brief (see below) shall be submitted in addition to the above.

It is then recommended that the applicant present the above to Council for agreement before proceeding with the analysis.

## Disclaimers

This information was believed to be correct at the date of its publication.

This information is for general information purposes only and should not be relied upon for legal advice.

## FIRE ENGINEERING DESIGN BRIEF

You may choose to prepare a fire-engineered design as an alternative solution, where the areas of non-compliance relate to fire safety matters. To this end Council requires that a qualified fire engineer carry out that design in accordance with the "Fire Engineering Guidelines" prepared by the Fire Code Reform Centre Limited. These have been endorsed by:

- Australian Building Codes Board (ABCB).
- Australian Fire Authorities' Council (AFAC).
- Australian Institute of Building Surveyors (AIBS).
- Institution of Engineers Aust. (IE Aust) (Society of Fire Safety).

To prepare a Fire Engineering Design Brief the following steps must be followed:

- 1 Submit qualifications and experience of expert.
- 2 Define design objectives:
  - BCA objectives (B01, C01, D01, E01, E02, E03, E04, F01, F02 etc).
  - Loss control objectives (not a matter for Council to assess but include for information).
  - Fire Brigade objectives.
  - Environmental/Community Protection (eg hazardous materials/goods).
- 3 Define acceptance criteria (before any design or analysis is carried out):
  - Council requires that the risk to life be equal to or less than that inherent in the BCA.
  - The level of evaluation must be established (Level 1, 2 or 3).
  - The limiting hot layer height.
  - The limiting condition for heat radiation.
  - The limiting conditions for tenability caused by convected heat.
  - The limiting conditions for tenability caused by toxicity.
  - The limiting conditions for tenability caused by smoke obscuration/visibility – any other criterion deemed appropriate.
- 4 Undertake hazard identification – ie consider such factors as the following:
  - General layout
  - Potential ignition sources – nature of activities
  - Anticipated or existing occupancy
  - Materials of construction
  - Combustible contents
  - Any unusual factors
- 5 Establish fire scenarios:
  - This is the complete description of a building fire from ignition to burn out, including the times off occurrences of all key events.
  - Establish most significant fire scenarios, including the possibility of failure of protection and/or management systems.
  - Include the basis for selecting fire scenarios.
- 6 Establish trial concept design:
  - These are fire protection strategies such as changing the architectural design of a building or proposing additional fire safety measures that will achieve required level of safety.
- 7 Establish methods of evaluation:
  - Determine the degree of quantification that is required.
- 8 Submit findings of Fire Engineering Design Brief to Council.