bushfire CRC

Bushfire risk perception: a study of the perceived vulnerability of domestic architecture in bushfire prone areas

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Bushfires as Natural Hazards - Risk Perception

- Amenity values can outweigh risk perception by residents
- Perceptions of personal risk may be inaccurate
- Undertaking bushfire preparation activities can modify risk perception
- Trust between residents of bushfire prone areas and fire authorities
- Competing hierarchy of risks

Residents perception of safety

A questionnaire will be delivered to residents living in a variety of bushfire risk locations in the Blue Mountains, NSW.

The sample for the questionnaire will be selected streets that represent the urban rural fringe and low, medium and high bushfire risk areas

Following the questionnaire a smaller sample of respondents will be interviewed using both closed and open questions to ascertain the risk that the construction of their individual house presents

Image from: cover of *Fire Australia*, summer 2008-09

Research Questions

For residents living in bushfire prone areas, what attributes of domestic architecture and the immediate environs impact on their perception of safety? Do these reflect the risk as assessed by fire authorities and do these perceptions influence behaviour before and during a bushfire attack?

Can architectural interventions change resident's perception of risk? Do these changed perceptions reflect the risk as assessed by fire authorities and would these changed perceptions influence behaviour before and during a bushfire attack?

Architectural Interventions that prevent

Ember entry through:
- roof cavity
- skylights
- eaves
- windows and doors
- vents and weep holes
- subfloor

Fire and direct flame contact from:
- re-entrant corners of combustible window and door frames / doors
- combustible decks and verandas
- combustible fences
- vegetation adjacent to a building
- gas meter flaring
- car fire adjacent to building
- spot fires
- outbuildings
- building to building ignition
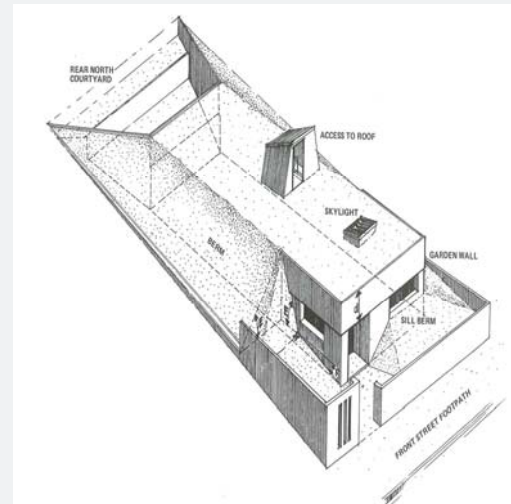
Asset protection zones that preserve amenity through vistas and view corridors
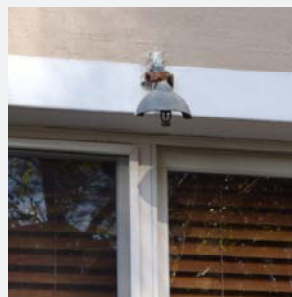
Window sprinkler
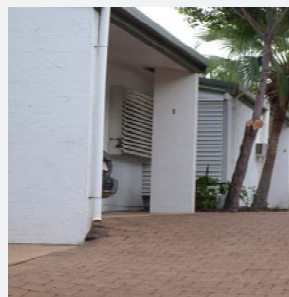
External louvered shutters

Partly underground house
(Baggs 1991)

Pebbled garden
adjacent to building

Internal safe room / potential adjacent bunker option
(FEMA 2003)

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NSW RURAL FIRE SERVICE

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