



# Application of bushfire self-evacuation archetypes

Ken Strahan<sup>1</sup>, John Gilbert<sup>2</sup>

<sup>1</sup> Strahan Research, <sup>2</sup>Country Fire Authority Victoria

People respond to bushfires in different and complex ways according to their circumstances and characteristics. A range of factors influence decision-making including prior intention and planning, threat perception, self-reliance, previous experience of bushfire, perceptions of the best protective action and perceptions of other stakeholders including neighbours and emergency services. Seven bushfire self-evacuation archetypes displaying universally recognisable, fundamentally human characteristics have been reported by Strahan (2018).

Archetype	Key Characteristics	Evacuate or Remain
<b>1 Responsibility Denier</b>	Believe they are not responsible for their personal safety or for their property	Undecided about evacuating or remaining and is reliant on direction from ES
<b>2 Dependent Evacuator</b>	Expect the emergency services to protect them and their property because they are incapable of taking responsibility for themselves	Highly committed evacuators but expect others to direct and assist
<b>3 Considered Evacuator</b>	Having carefully considered evacuation, are committed to it as soon as they are aware of a bushfire threat	Committed to self-directed evacuation
<b>4 Community Guided</b>	Seek guidance from neighbours, media and members of the community who they see as knowledgeable, well informed and providing reliable advice	Committed to evacuation on community advice
<b>5 Worried Waverer</b>	Prepare and equip their property and train to defend it but worry they lack practical experience to fight bushfire putting their personal safety at risk	Wavering between evacuating and remaining
<b>6 Threat Denier</b>	Do not believe that their personal safety or property is threatened by bushfire	Committed to remain as perceived lack of threat makes evacuation unnecessary
<b>7 Experienced Independent</b>	Are highly knowledge, competent and experienced and are responsible and self-reliant fighting bushfire	Highly committed to remaining because they are highly experienced and well prepared

Figure 1: There are 7 archetypes that characterise the diverse kinds of householders protective decisions in the face of bushfires

## THE PROJECT

- The aim of the project is to test the use of the bushfire self-evacuation archetypes in supporting a range of community safety approaches.
- The project is supported by Safer Together, a cross-agency program addressing Victoria's approach to bushfire risk reduction.
- A key question the project seeks to address is: 'how can we best use the insights from the archetypes research to enhance community engagement approaches?'
- As Figure 1 shows, each archetype is characterised by a diverse range of decisions and actions, which ultimately influence how they respond in a bushfire situation. The research has identified twenty-four characteristics for each archetype, which form the basis of the archetypes response and behaviour matrix.
- The challenge for this project is to identify, develop and test practical and accessible ways of communicating and using the key findings in the matrix with agency staff and communities to help increase bushfire safety.
- Initial stakeholder consultation helped to identify three areas where the self-evacuation archetypes had the potential to add value: supporting best practice community engagement approaches; enhancing bushfire modelling by developing a human behaviour component based on the archetypes; and integration of the archetypes into evaluation frameworks.

## THE APPROACH

Three sub-projects have been undertaken:

### Community Engagement

- Using the insights from the archetypes to support community engagement approaches.
- An iterative process drawing on the experiences and knowledge of community engagement practitioners to refine elements of the archetypes and to identify where the research can have most impact.
- Development of resources and activities that help to equip community engagement practitioners with an understanding of the archetypes and support the use of the research in programs such as Community Fireguard and Community Based Bushfire Management.

### Bushfire Modelling

- Visualising the archetypes as a layer in a bushfire simulation tool.
- The project has linked with Dharendra Singh at RMIT University to develop human behaviour modelling based on the self-evacuation archetypes to be run in conjunction with bushfire modelling in a simulation.
- The simulation includes a progression of official warnings and the influence of social cues, alongside the physical cues of fire in the landscape, ember attack and smoke.

### Evaluation and Program Review

- Building the archetypes into evaluation frameworks as an additional lens to view peoples' attitudes, perceptions and behaviours in relation to bushfires.
- The archetypes assist with the interpretation of evaluation findings and provide insights as to how and why a program is effective for some but not for others.
- Developing the key questions and data gathering tools to capture archetype information and embed in evaluation frameworks.

## NEXT STEPS

Further refinement and development of a prototype community engagement tool in the form of flash cards summarising the behaviours and responses of archetypes and action cards suggesting directions of discussion with community members.

Continued development of the prototype evacuation simulation model visualising archetype behaviour before, during and after a bushfire event. It is envisaged that the simulation tool will be an initial step in the development of a scenario-based planning exercise to support community engagement programs.

Supporting future community engagement program design and development, including using the insights from the research to inform the

development of program logics and tailoring engagement approaches to address specific aspects of archetypal behaviour.

