

# Bushfire CRC Research Response to 2009 Victorian Bushfires

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## Timeline for the Establishment of the Research Response Initiative

Date	Activity
Saturday 7 <sup>th</sup> February	Fires occur
Monday 9 <sup>th</sup> February	Victorian agencies agree to support Research Response Taskforce
Tuesday 10 <sup>th</sup> February	Meeting of lead researchers and industry representatives.  First Interstate Research Teams despatched to Victoria.
Thursday 11 <sup>th</sup> February	First research teams enter the field



## Agreed Focus

*The collection of time critical data that could be destroyed though the passage of time or the impact of weather.*

## Three Key Research Areas

- Fire Behaviour
- Buildings and Land Use Planning
- Human Behaviour
- (Integrated Studies)

## Six Fire Complexes



Thursday 12 February – Rotation 1 deployed to field



## Managing the Research Response Taskforce: An Incident Management Approach

1. For the next 8 weeks teams of both academic and industry based researchers from across the country worked in the field to collect data.
2. These researchers were supported by a team of workers at the AFAC/Bushfire CRC office managing deployment, logistics, data consolidation and the multitude of issues involved in having a team of this size in the field.



Research Taskforce





## Challenges for the Taskforce Deployment

1. Many areas still active fire grounds
2. Some areas closed, some areas designated crime scenes
3. Potential for new fire starts in the area
4. Rotating teams - briefing new researchers
5. Physical and psychological health of the researchers
6. Data management
7. Ethics clearance for academic researchers



The list goes on -

*it was a learning experience for us all*





## Data Outcome

More than 1800 staff days of data collection provided

1. Building/vegetation profiles from more than 2000 houses properties.
2. Indicators of fire behaviour (e.g. leaf freeze) across the affected areas.
3. More than 600 qualitative interviews with residents (fully transcribed).
4. More than 21,000 photographs



## In short a data set that

1. Can form the underpinning of many research projects into the future.
2. Was able to provide some quick insights into key questions being asked of the agencies.



## Key Outcomes: Interim Report

1. Interim Report providing initial analysis of the data collected for agency consideration.
2. Executive Summary Available from Bushfire CRC Website.
3. Full report provided to the Victorian Royal Commission by the agencies.



## Highlights from the Interim Report: Buildings and Land Use Planning

1. Active defence of structures has a major influence on house survival.
2. Building quality, detail and possibly house age appear to be factors in determining the likelihood of house loss.
3. Brick houses performed significantly better than mud brick and light weight construction clad with timber or cellulose cement sheet.
4. The potential for wind damage of structures should be a key factor in future building standards consideration for bushfire prone areas.
5. Approximately 20% of house losses in the chosen study areas appear to be directly related to their immediate proximity to adjacent forest fuels.
6. House loss occurred at distances more than 380m from continuous bush.
7. Metal and concrete water tanks are more effective in maintaining a water supply for house defence than polyethylene or fibreglass tanks.



## Highlights from the Interim Report: Human Behaviour

### 1. Planning and Preparedness

- a) Residents not prepared for the severity of the bushfires.
- b) Considerable last-minute planning and preparation on the day.

### 2. Information and Warnings

- a) Agencies only modestly successful in informing the community about effective preparation and planning for bushfires.
- b) Only modest community awareness of the implications of the message '*a day of unprecedented fire danger*'.
- c) Environmental cues were important and prompted an active search for more information or a decision to leave or initiate defence.





## Highlights from the Interim Report: Human Behaviour (2)

### 3. Intentions and Actions:

- a) A significant number of residents **intended to wait and see** what the bushfires were like before deciding whether to stay or go.
- b) Less than half reported that a household member stayed to defend. Some of those who intended to stay and defend left because of the severe conditions.
- c) There appear to have been many late evacuations.
- d) A very small number of interviewees took no defensive action and sheltered throughout the fire.
- e) Some of those who stayed to defend may have exposed themselves to considerable danger by moving around fire affected areas.



## Highlights from the Interim Report: Human Behaviour (3)

### Emerging Issues and Themes - familiar now but initially unexpected

1. Many residents appeared to endeavour to return to their properties as soon as possible after the main fire danger had passed.
2. Many community members regarded public buildings, ovals and emergency services facilities as safe places of refuge during a bushfire.

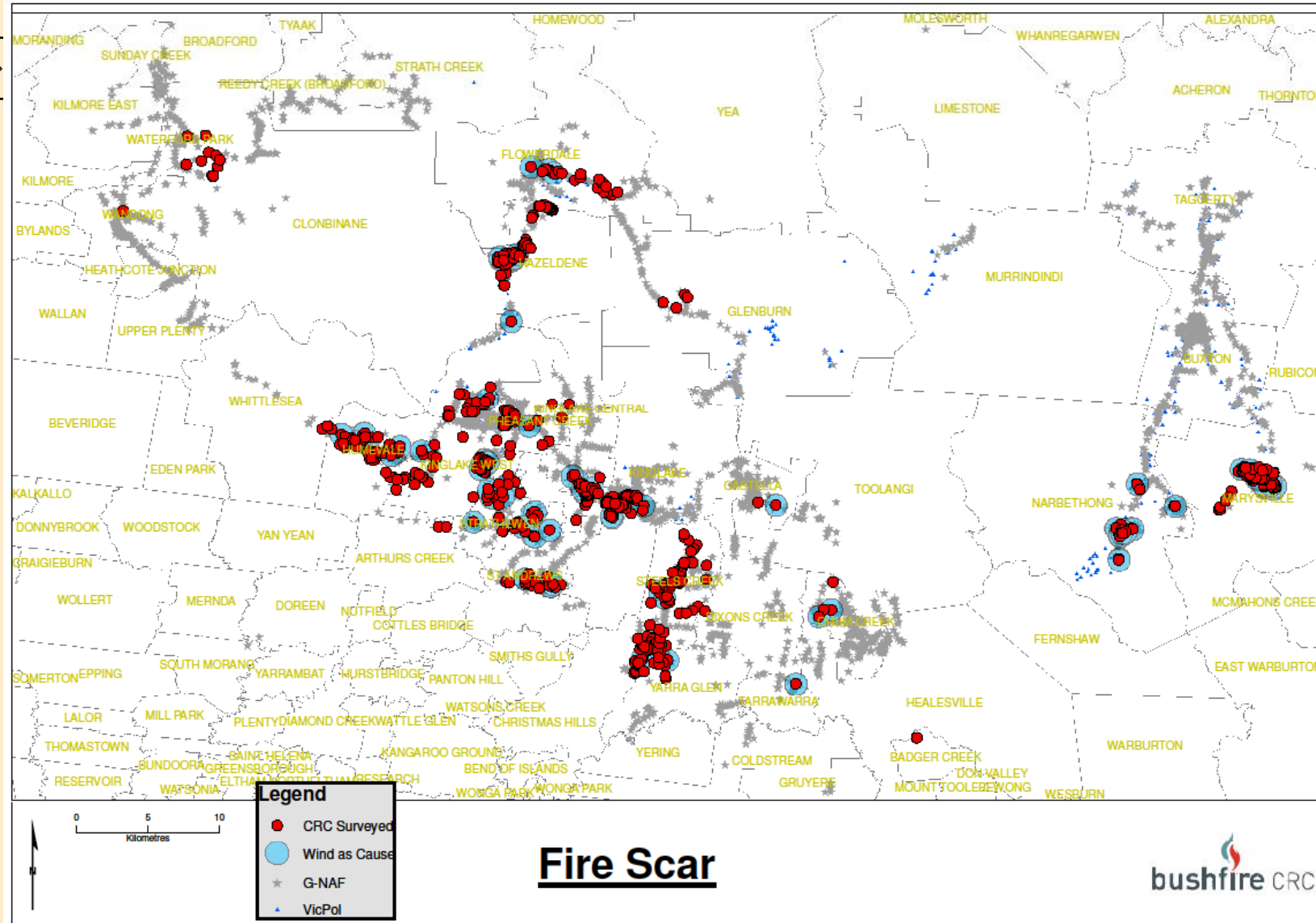


## Interim Report : Fire Behaviour

1. Now extensively incorporated into Agency reconstruction work











# Participants



Office of the  
Emergency  
Services  
Commissioner

