COMMISSIONED RESEARCH

Key Topics:
- fire severity [1]
- planning [2]
- response [3]

Severe fire behaviour - improving planning responses [4]
This project was commissioned and funded entirely by the Department of Environment, Land, Water and Planning, Victoria.

Project: detail Notabs

Research team

Research leader

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A/Prof Kevin Tolhurst
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Research team

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Dr Derek Chong
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RESEARCH TEAM

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End User representatives

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END-USER

Department of Environment, Land, Water & Planning

Description

This project was commissioned and funded entirely by the Department of Environment, Land, Water and Planning, Victoria.

The project had two primary aims:

- better describe the characteristics of bushfires that have the greatest impact on house loss and the effect of land use planning responses in reducing bushfire risk; and
- validate the model against documented fire events.

These aims were met by providing:

- quantification of convective strength across the landscape and validate it against documented fire events;
- an algorithm to improve convective updraught strength to calculate maximum local wind strength;
- a better ember launch and transport model;
- a relationship between the modelled ember attack levels on dwelling ignition and spotfire development; and
- an improved PHOENIX RapidFire characterisation and improved understanding of bushfire risk and the assessment of treatment options for improved planning responses through the development of specific planning modules.

Presentations & Resources

DATE [10]	TITLE [11]	DOWNLOAD	KEY TOPICS
18 Jun 2019	Interactions between climate, vegetation and fuel [12]	3.16 MB	[13] Environments [14],

Linked Projects

Bushfire climatology in Victoria [17]

BUSHFIRE PREDICTIVE SERVICES [18]

Dr Sarah Harris
Country Fire Authority [19]

[19]

2009 Black Saturday and other large fire events - moisture content project [20]

BUSHFIRE PREDICTIVE SERVICES [18]

Prof Ross Bradstock
University of Wollongong [21]

[21]

Analysis of RapidEye imagery to map fire severity and ground truthing [22]

BUSHFIRE PREDICTIVE SERVICES [18]

Dr Sarah Harris
Country Fire Authority [19]

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Smoke transportation and emissions modelling [23]

BUSHFIRE PREDICTIVE SERVICES [18]

Dr Martin Cope
CSIRO [24]

[24]

Landscape moisture modelling [25]

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Dr Stuart Matthews
New South Wales Rural Fire Service [26]

[26]

Probability of fire ignition and escalation [27]

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Prof John Hearne
RMIT University [28]

[28]

Fire transitions across urban boundaries [29]

BUSHFIRE PREDICTIVE SERVICES [18]

Dr Andrew Sullivan
CSIRO [24]

Links
[1] https://www.bnhcrc.com.au/research/topics/fire-severity [2] https://www.bnhcrc.com.au/research/topics/planning [3]
https://www.bnhcrc.com.au/research/topics/response [4] https://www.bnhcrc.com.au/research/understanding-and-mitigating-hazards/1755 [5]
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