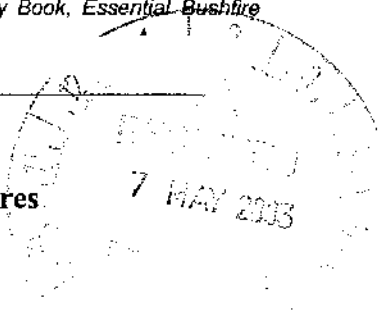


Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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Sub 89



**SUBMISSION TO  
House Select Committee on the recent Australian Bushfires**

**From:**

**Joan Webster, Author of :**

**Essential Bushfire Safety Tips (Random House 2001)**

**The Complete Bushfire Safety Book (Random House 2000)**

**The Complete Australian Bushfire Book (Thomas Nelson 1986 Viking O'Neil 1989)**

Excerpts from *The Complete Bushfire Safety Book* on [www.bushfiresafety.com](http://www.bushfiresafety.com)

**This submission contains:**

- \* A proposal for maximising householder knowledge to minimise the impact of bushfires on life, property by wider use of *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips*.
- \* An outline of the contents of these books.
- \* Aim of this Submission.
- \* Examples of confused community messages given by fire authorities that may well contribute to the impact of the bushfires on life and property.
- \* Examples of wrong understanding and attitudes by the public that contributes to the impact of the bushfires on life and property.
- \* Examples of misinformation promulgated by the media that may well contribute to the impact of the bushfires on life and property.
- \* Examples of mismanagement by authorities in designation of community bushfire refuges that contribute to the impact of the bushfires on life and property.
- \* Examples of inconsistent and minimum effort by bushfire authorities to inform the public of the known (and in-house-acknowledged) usefulness of my books in mitigating the impact of the bushfires on life and property.
- \* Quotations of acclaim of my books by bushfire authorities (Appendix A).
- \* Quotations of acclaim of my books by householders (Appendix B).
- \* Examples of use of material from my books by the Country Fire Authority, Victoria (Appendix C).
- \* Refutation of an intermittent reason given for non-endorsement (Appendix D).
- \* A copy of *The Complete Bushfire Safety Book* by Joan Webster (Random House 2000)
- \* A copy of *Essential Bushfire Safety Tips* Joan Webster (Random House 2000)

**This submission addresses the following Terms of Reference:**

- a) Measures that can be implemented by governments, industry and the community to minimise the impact of bushfires on life, property and the environment with specific regard to:
  - i) some causes and risk factors contributing to the impact of the bushfires
  - ii) alternative bushfire mitigation and prevention approaches
  - iii) ongoing facts, options, arguments and recommendations for action

Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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**Re: a proposal for maximising householder knowledge to minimise the impact of bushfires on life, property by wider use of *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips*:**

Much anger has been directed at a lack of hazard reduction in forests as the perceived main cause contributing to the impact of bushfires on lives and property. Hazard reduction in forests is a necessary tool to help minimise the impact. But pre-burning of bushland is not the determining factor in preventing life and property losses.

The main hazards that need to be reduced are those in property owner's heads. These mental and emotional hazards can best be reduced by:

- 1. Maximising householder knowledge. (See below).**  
These hazards have been brought about, accumulated and allowed to remain there by:
- 2. Muddled messages from bushfire authorities. (See below).**
- 3. Misinformation accumulated by the public through generations of 'folk-tales'. (See below).**
- 4. Media melodramatics (See below).**
- 5. Mismanagement by authorities in designation of community bushfire refuges (See below).**
- 6. Minimum effort by bushfire authorities to impart to the public any awareness of hazard mitigation resources other than the authorities' own. (See below).**

**b) some causes of and risk factors contributing to the impact of the bushfires:**

**1. maximising householder knowledge – the effects and means:**

The over-riding factor that minimises life and property loss during bushfire is householder knowledge. Knowledge of what to do, when to do it and why it needs to be done. Bushfire tragedies happen to people *who don't know enough about what to do*. Research by eminent bushfire scientists has found that 90 per cent of homes can be saved from even the fiercest wildfires when defended by one or more people over the age of 10 who *know what to do*.

On Ash Wednesday, 1983, bushfires throughout Victoria and South Australia were among the worst ever experienced anywhere in the world. Winds reached 100 kph with bursts of up to 178 kph.

In Victoria's south-western Otways region, where 788 buildings were destroyed, the biggest and most thorough post-bushfire scientific investigation of its type ever conducted was carried out by the CSIRO's Division of Building Research and the National Centre for Rural Fire Research. Data elements collected included studies of the actions of occupants during or immediately after the bushfire.

Results showed that *'people played a significant role in the survival of houses by extinguishing small ignitions before they became unmanageable'*<sup>1</sup>. And conversely, people also played a significant role in the destruction of their houses, *'very few people having stayed with these houses during the fire'*<sup>2</sup>. And *'Overall, it appears that a house attended by people able to extinguish the many small fires which occur outside and inside (it) will survive most bushfires. This is particularly true if attention has been given to eliminating or protecting access points for embers and minimising ground fuel around the house'*<sup>3</sup>.

- A combined University of Melbourne and National Centre for Rural Fire Research survey of Mt Macedon houses conducted by Andrew A.G. Wilson found that the survival rate for attended houses was 82 per cent, 90 per cent for those attended by one or more persons over the age of ten, and the more people who were there, the better the chances of building survival. The survival rate for houses with three or four people at home was found to be 100 per cent. The rate of unattended houses was found to be 60 per cent.
- Lazarus and Elley in their joint paper *A Study of the Effect of Household Occupancy During the Ash Wednesday Bushfires in Upper Beaconsfield, Victoria*, (February 1983), found that those householders who had prepared their home before and on the day of the fire were definitely safer, and saved more homes, than those who made little or no preparation or *who did not know what to do*.
- A study by Norcen Krusel and Stephen Petris in 1992, *'Staying alive: Lessons learnt from a study of civilian deaths in the 1983 Ash Wednesday bushfires'*<sup>4</sup>, pointed out victims as:

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<sup>1</sup> Talk by Dr G. Caird Ramsay (CSIRO Division of Building Research), *House Survival in Bushfires* (1983), p 4

<sup>2</sup> Talk by Dr G. Caird Ramsay (CSIRO Division of Building Research), *House Survival in Bushfires* (1983), p 3.

<sup>3</sup> Vince Dowling (CSIRO Division of Building Research), *Bushfire Disasters*, newsletter of the CSIRO DBR, Vol 8, No 2, April, 1983.

<sup>4</sup> CFA *Fire Management Quarterly* No 2, December 16, 1992

- those who did not recognise the threat to their safety in time to implement an effective survival strategy, and
- those who recognised the threat to their safety in time to save their lives, but chose an ineffective survival strategy *because of a lack of understanding*. (My emphasis).
- Krusel and Petris<sup>5</sup>, quoting from G. Silberbauer<sup>6</sup>, that despite the fact that *'experience has shown that no suppression force is capable of halting, or even hindering, the progress of a major fire' ... .. 'people can, by their behaviour, dramatically influence whether or not they and their assets will survive its passage'*.

Firefighters in the ACT (19-01-03) may well have been helpless to stop the fire moving into suburbs, but those who live there ought not have felt helpless to prevent their homes burning down<sup>7</sup>.

- CSIRO researcher Justin Leonard (27-02-03) in a preliminary examination of Canberra house destructions pointed out on ABC television that, despite the unusual intensity of the fires, many homes were saved by the actions of their householders<sup>8</sup>.

These studies show that a lack of knowledge by householders of appropriate behaviour during a bushfire threat is a vital risk factor contributing to the impact of the bushfires.

With the knowledge that can be provided by wider use of my books, the ability of householders to modify their behaviour so as to *dramatically influence whether or not they and their assets survive a bushfire's passage* can be dramatically enhanced.

I am the author of two books on bushfire safety that can provide this necessary knowledge to householders and property owners: *The Complete Bushfire Safety Book* (Random House 2000) and its pocket version, *Essential Bushfire Safety Tips* (Random House 2001). (See below for details).

<sup>5</sup> CFA *Fire Management Quarterly* No 2, December 16, 1992

<sup>6</sup> G. Silberbauer, *'Community Participation in Bushfire Defence'*, paper presented to the Australian Fire Protection Association's Twelfth National Conference on Fire, 1990.

<sup>7</sup> *'The frightening speed of the fire's advance left the available firefighters in the ACT helpless to stop it ripping through suburbs, including Duffy.'* Canberra Times 19-01-2003 story, *Our most serious test* by John-Paul Moloney. And - *'Rural Fire Service spokesman John Winter (19-01-2003) said there was virtually nothing crews could do to stop the fires.'* - The Sun-Herald (Sydney) 19-01-2003 *Two dead, 100 homes lost in nation's capital* story by Kerry-Anne Walsh and Jim O'Rourke.

<sup>8</sup> Justin Leonard, now CSIRO Senior Experimental Scientist, Fire Science and Technology, on ABC TV program *Catalyst* 27-02-03.

It is not my opinion alone that deems the use of my books essential as an alternative, or adjunctive, bushfire tragedy mitigation and prevention approach: an inexpensive and effective measure that has been proven to minimise the impact of bushfires on life, property and the environment. Bushfire researchers and householders alike have hailed their comprehensive and easily assimilable contents as a vital bushfire safety requirement that should be promulgated and implemented by governments, their statutory bodies and their departments.

**A selection of comments from bushfire authorities:**

Senior Principal Research Scientist, Bushfire Behaviour & Management Group, CSIRO National Bushfire Research Unit, Phil Cheney (in his Forward):

*'This book is so important. ... ..I commend this book to every Australian. I urge you to consider the information and advice and put it into practice if you live or travel in rural Australia. It could save your life'*

Former Deputy, Director of the Australian Counter Disaster College and of the National Centre for Rural Fire Research, David Packham:

*'Essential for house-holders in the Blue Mountains, Dandenongs and Adelaide Hills as compulsory reading, especially by those who do not think they have a problem'*

NSW Bushfire Brigades Association (former) Secretary, Martin Pedder:

*'I want every country dweller in NSW to read and understand this book. A masterpiece'*

The 'Fireman' Journal (CFA Victoria):

1986: *'There is no doubt that anyone who reads this book, and gives due weight to the information it contains will survive their next bushfire. No household in a fire prone area should be without a well read copy ... the most authoritative publication of its type available'... ..' a book that will greatly assist fire services in making their communities aware of the risks associated with bushfires and the steps that can be taken to reduce those risks'*

The Volunteer, journal of the Country Fire Service South Australia:

*'This is an important book that cannot be overlooked – it is essential reading for every householder in bushfire prone areas...'*

(see Appendix A for fuller list)

**A selection of comments from householders:**

Penny Pendelbury, Wombat Forest, Daylesford, Victoria:

*'This book took the fear away from staying with our home'*

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Ms Lucille Bensemam, Brisbane:

*'I'm writing to compliment you on your wonderful book. Every school throughout the country and the Shire Councils as well should be given the opportunity to see it.'*

Mrs N. Gray, Mortdale, NSW:

*'In a country like Australia I can't help but feel your book should be regular information in ALL our schools.'*

Sue Winter, Central Goldfields, Victoria.

*'For a couple of city slickers who are moving to the country in just two weeks, your incredibly comprehensive and user-friendly book is absolutely essential'.*

Deborah Morgan, Bruthen

*'Your book does save lives, and when not saving lives it saves sanity. I was able to refer back to your book so many times, I'm someone who needs to know I'm doing everything I can and in the right way, your book gave me the knowledge to help myself and others.* (See Appendix B for fuller list)

**Example of home saved by use of my book:**

On January 1997 when bushfire threatened her outer-Melbourne Dandenong Ranges suburb of Upwey, 22 year-old Briony Wright was home on her own. Though others were evacuating, and twice she was ordered to leave, the young woman stayed and single-handedly saved her family's home while those of neighbours burned down, theirs being the only house left standing in the street. Her mother, Mrs Tricia Wright, gives the credit to my first edition, *The Complete Australian Bushfire Book*:

*'My daughter and son had been reared on it, involved in planning and practicing with it since they were small. Neither had any fear they would fail to save our home. They had confidence from the full knowledge and understanding that your book gives.'*

**An outline of the contents of my books:**

*The Complete Bushfire Safety Book* (Random House 2000), is the only comprehensive, in-depth, book specially written on this subject for the public. Its 300 pages were researched and written in full liaison with bushfire authorities.

Originally titled *The Complete Australian Bushfire Book*, it was first published by Thomas Nelson in 1986 and Viking O'Neil, 1989. Over these 19 years it has held its place as the most authoritative and helpful book on the subject written for the householder, acclaimed by fire-fighting authorities and householders alike. It has saved homes. (For more quotes see Appendices A and B.)

*The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips* detail every known aspect of protecting family, home, and animals from bushfire, with in-depth discussions of why, when and how they should be carried out. They enable informed decisions on suitable safety measures for individual situations. Each summer, bushfire authorities urge householders to 'prepare a plan'. These books are eminently suited to help them do that.

Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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Topics include understanding bushfire behaviour, environment and weather factors; how bushfire attacks houses; killer and survival factors for people, pets, stock; a trailblazing analysis of evacuation dangers protective features for buildings; how to make a home a haven; explains why one house burns and not next door; the vital significance of the shower of embers; a bushfire protective garden; travel in the bushfire season; when the car is and is not a refuge; the Pattern of Protection for those who stay with their home; what to do, when to do it and *why*; gives the safety criteria for community refuges.

*The Complete Australian Bushfire Book* was an official nomination for the BHP Pursuit of Excellence Awards. In 1990 I received the Australian Fire Protection Association's Community Service Award.

Many aspects of current official bushfire safety advice were originally my innovations. Shutter protection for windows, personal survival kits; fire-protection cupboards; the special needs of children, the frail and pets ... etc. etc. were new ideas devised by me and first published in my books. None of these will be found in any bushfire safety literature of brochures before the publication of my first edition in 1986.

My in-depth analysis of the evacuation enigma; questioning of the sense in denying householders the right to defend their homes; and scepticism of the safety of community refuges has helped shape official policy. In August 1989, following my 1988 investigation of hazardous areas designated as community bushfire refuges in the Dandenong Ranges, the first bushfire shelter specifically designed for schools was built at Sassafras Primary School - *The Complete Australian Bushfire Book* the resource.

*The Complete Australian Bushfire Book* was the major resource for the then Victorian Education Department's Code of Building Practice for Schools in Fire Hazard Areas 1989 and the Code Of Practice For Schools in Fire Hazard Areas for Fire Protection of School Grounds, 1989.

Prior to commencing work on the book, my underlying understanding of bushfire safety for the householder had been extensive. I had been a foundation member of Australia's first Municipal Civil Defence for Bushfire organisation, formed in 1964 by the then Shire of Doncaster and Templestowe for the safety of its extremely hazardous ward, Warrandyte. For nearly twenty years as a journalist I had, each summer, with co-operation from the Country Fire Authority, educated my readers in bushfire safety.

Nevertheless, to ensure the absolute integrity of facts and the correctness of my understanding, I arranged at the outset of researching the book for expert support and corroboration. Every insight, every idea, was discussed; every draft and re-draft was checked and vetted by senior officers of every relevant Department and Authority. (See *Acknowledgments* pages of *The Complete Bushfire Safety Book* ).

In 1991 Viking O'Neil, publisher of the second edition, planned to it, assuming that because recent summers had been mild, Australians were no longer in danger from bushfires. In order to save the resource, I used all my savings to buy the books back and marketed them myself until, in 2000, Random House published the updated and retitled *The Complete Bushfire Safety Book*.

Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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Bushfire tragedies are not caused by Acts of God, but by the lack of knowledgeable acts of humans. Unscathed houses are not saved by miracles or aerial Elvises, but by the well-thought-out plans of their householders.

It is my opinion that there is as much safety potential from the installation of correct bushfire safety knowledge in a person's head as there is from the installation of smoke alarms in a house ceiling. It is arguable that, when considered in the context for which they are used, *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips* can be to bushfire safety what smoke alarms are to house fire safety.

The danger of house fires is increased at night when sleeping householders are not alert to the start of fire, that smoke alarms prove their great benefit. Their function is to awaken and warn people to get out from an already ignited house, one which will probably be destroyed.

The danger of bushfire-generated house fires comes more often in daylight when occupants are physically awake. The awakening that these householders need is prior to the onset of the event, in order to be capable of understanding and acting upon warning signs. It is in this capacity that my books have as much safety potential as smoke alarms. And, moreover, can be the instrument of saving houses as well as lives.

We can't prevent bushfires, but we can prevent most of the tragedies that occur during them.

The government is spending huge amounts of money after the bushfires to compensate those who have suffered losses. It would be cheaper and more effective for government to make available to householders and farmers in hazardous areas the means of gaining the knowledge of how to avoid such property losses.

The initiation of some program before the next bushfire season to facilitate the wider use of the acknowledged best resources available for this: *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips*, would be an alternative bushfire mitigation and prevention approach with long-term economic advantages. Both to government funds and to the community.

Surely prevention of loss is better than compensation – which is really no cure.



Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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**Aim of this Submission:**

As alternative bushfire mitigation and prevention approaches that can be implemented by governments to minimise the impact of bushfires on life and property, I urge that this Committee recommend that:

- Government initiate, before the next bushfire season, some program to facilitate the availability to property owners living in hazardous areas, the prime bushfire safety resources, *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips*.
  - Bushfire authorities be urged to publicly fulfil their private undertakings (see below) to 'thoroughly endorse' *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips* to householders.
- and
- *The Complete Bushfire Safety Book* be taught in secondary schools. If this were done, knowledge of appropriate bushfire safety procedure would become part of the national psyche.

## Causes of and risk factors contributing to the impact of the bushfires

### **2. muddled messages from bushfire authorities.**

Bizarre conflict between official advice and official action is frequent.

The following are a few examples:

#### **On pre-fire preparation**

- ACT chief police officer, John Murray, (20-01-03) was reported as saying: *'It's almost impossible to prepare for an event this size'*<sup>9</sup>.

He is wrong. If householders prepare thoroughly, the bushfire event around their house doesn't reach that size. The intensity of any fire on a particular property does not have to equal the intensity of the approaching bushfire. Intensity immediately diminishes upon reaching any judiciously cleared property.

This is in the hands - and hoes - of the householders:

- Post Ash Wednesday research by the CSIRO Division of Building Research<sup>10</sup> found that houses were more likely to be destroyed as the vegetation around them was thicker. Conversely where gardens had their fine fuel reduced - any fire, no matter how fierce to that point - decreased proportionally in severity.
  - If gardens are properly prepared, ember load is reduced; plants don't burn in a fuse-like line; windows don't crack by shrubs burning close to them.
  - If buildings are properly prepared, the chance is reduced of embers entering windows, ceiling space, subfloor.
  - If people are properly prepared, wear protective clothing and follow the home defence Pattern of Protection, they will not suffer injury or death.
  - If at the threat of such events, authorities informed their dependent public of all the available resources, to learn how to be thoroughly prepared, the authorities would more thoroughly fulfil their protective role.
- Neville McArthur, CSIRO Senior Experimental Scientist, Fire Science and Technology (31-01-2003) *'It seems that virtually all the impacted suburban houses in Canberra were subjected to ember attack only from the bushfire. And house-to-house spread may have played a part'*<sup>11</sup>.

It is completely possible to prepare for ember attack. My book discuss every known aspect. House-to-house spread is exacerbated by the evacuation of householders, who, if they remained with their homes and knew what to do, could prevent this.

Here is an outline of possible and effective preparation:

The danger to homes (as Neville McArthur points out, above) is sparks and embers entering, not flames approaching. If an ember enters a house it flares quickly if landed on cotton, rayon, or acrylic. It dies out on slate, tile, brick, pure wool, leather or quality vinyl. Fire rushes through a house if draughts fan the flames. It creeps through when a house is well closed.

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<sup>9</sup> Melbourne Age, story *Canberra's fire hell* by Brendan Nicholson, Annabel Crabb, Josh Gordon, 20-01-2003 and Sydney Morning Herald 21-01-2003.

<sup>10</sup> CSIRO Division of Building Research and the National Centre for Rural Fire Research led by Dr Caird Ramsay.

<sup>11</sup> Personal communication Neville McArthur 31-01-2003, also Justin Leonard, now CSIRO Senior Experimental Scientist, Fire Science and Technology, on ABC TV program *Catalyst* 27-02-03.

There are 3 core vulnerable aspects to prepare: 1. The house; 2. The garden; 3. Your self.

Each of these areas has 3 core aspects to protect.

1. The house.

- *Subfloor space:* Move from here goods that could ignite. Cover vents or gap-boards with metal flywire to keep out sparks. Insulate beneath floorboards.
- *Windows:* Close them. Clear away shrubs from against them. Cover with metal flywire to prevent cracking by radiated heat or with metal shutters to prevent breaking by hurtling debris.
- *Ceiling space:* Vacuum out highly flammable roof dust and insulate. Mend loose roofing material. During bushfire leave inspection trapdoor open, ladder beside it, container of propellable water in ceiling.

2. The garden.

- *Vertical pruning:* Mow lawns very short. Cut off low branches. Remove undergrowth.
- *Horizontal pruning:* Space shrubs and trees. Move them from windows, flammable walls and each other. Intersperse with fire retardant plants.
- *Ground clearing:* Get rid of litter. Change mulch from bark to granitic sand, road crushings or pebbles. Separate plants and walls with paths.

3. Your self. The 3 killer and survival factors are:

- *Radiant heat:* Wear protective clothing. Shelter behind anything solid. Do not drive into a forest.
- *Superheated air and asphyxiation:* Wear a wetted smoke mask.
- *Dehydration:* Drink frequently.

My books provide the full and easily assimilated understanding of the causes of and risk factors contributing to the impact of the bushfires and every known aspect of protecting life and property during bushfire.

**On procedure if staying with the home:**

- NSW Rural Fire Service brochure, Fireguard Resource 7 and RFS website: *'As the fire approaches, go inside and remain until the fire has passed.'*
- News report (19-01-03): ACT Emergency Services Bureau advised all residents to *'stay indoors'*<sup>12</sup>.
- Regional Police Superintendent Rod Collins' emergency announcement, to householders during the threat in Victoria's Gippsland region (26-01-03): *'Close doors and windows, go inside, remaining inside until the fire front has passed'*<sup>13</sup>.

This is dangerous advice and not in accordance with the accepted safe practice of remaining inside only for the 10-15 minutes of the fire front. This advice leads some householders to stay passively inside for the many hours' duration of the total bushfire phenomenon. Ceiling collapse is a risk for long-duration shelterers. It appears that three Canberra people lost their lives when ceilings collapsed.

Shelterers need also to be advised:

- to have minimised possible ember entry with non-flammable door and window protectors.

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<sup>12</sup> Canberra Times 19-01-03

<sup>13</sup> ABC regional radio 26-01-03

- that it is vital during any time inside to watch for ember entry and, in particular, inspect the ceiling space for preliminary ignitions and douse these quickly.

Otherwise, they may shelter in a 'blind' room such as a bathroom. To stay sheltering inside in one room or by a door, householders would not know whether in another part of the house an ember had cracked a window and ignited curtains or swirled in and lodged, smouldering, on polyurethane furniture to give off poisonous gas. If embers blew onto a doormat or under the house or into the ceiling space householders would not see this. They could neither monitor nor impede a flare-up. A small ignition could grow unhindered to proportions that cause injury or death: people flee outside before it is safe to do so, or die inside when ceilings collapse, through smoke inhalation or heat-swollen airways; property is destroyed and pets die. Experience has shown that all this is easily avoidable with householder understanding of safe procedure.

Safe procedure is: Wear protective clothing. As the fire front approaches, if intense heat irritates hands or face, go inside and remain inside only until the peak of the fire has passed. It is what I call the Pattern of Protection:

- **outside** - defending from falling embers before the front arrives
  - **inside** - sheltering during an intense fire-front arrival- perhaps 10-15 minutes.
  - **outside** - dousing ignitions and mopping up.
- ⌚ **Evacuation plans should include a 'plan B'** to enable staying safely if the exit route is cut.

### **On Evacuation:**

On Ash Wednesday, 1983 at Aireys Inlet, Victoria with the fire front an estimated ten minutes away from the town, police advised residents and tourists to move farther up the coast towards Anglesea. The only major road is the Great Ocean Road. One side hugs high cliffs and from the other hangs sickening drops to the ocean. When they got there, Anglesea too was burning with fires on both sides of the road and was being evacuated.

Despite all the inquiries and inquests, reports and reviews, discussions and declamations, the debacles continue.

The Federal House of Representatives' Standing Committee on Bushfires and the Australian Environment 1984 recommended against the evacuation of able-bodied people, noting the uncertainty of safe evacuation routes.

The Australian Association of Rural Fire Authorities stated in its post-Ash Wednesday policy: *'life and property can be saved by able-bodied residents remaining at their homes'* and that *'evacuation must not be carried out when the fire has reached the area concerned, as experience has shown that far more lives are lost by people fleeing in the path of a serious fire than by staying in their homes.'*

Twenty years after intensive research on the procedures necessary for householder safety during bushfire, the authorities who should know of these findings still give outdated, unsafe and contradictory advice in their brochures and media announcements.

- Rural Fire Service Commissioner Phil Koperberg (5-12-2002). *'The state's bushfire chief Phil Koperberg (asked) residents in five suburbs to stay home today and protect their property from the flames.'*<sup>14</sup>
- NSW Rural Fire Service (brochure, Fireguard Resource 7):
  - *'If you want to evacuate, leave well before smoke or fire becomes an immediate threat in your area.*
  - *'... ..those who remain ... .. if ordered by the police to evacuate ... .. must comply'.*

Police do not usually come onto the scene to do the ordering until a dangerous situation has developed. Those householders who remain, therefore, are routinely ordered to evacuate *after* a fire has become an immediate threat to the area. It is then often not possible to evacuate safely. Viz:

- Firefighters at Sydney's Glenorie evacuated Cairnes Road residents (5-12-2002) *'as the blaze flanked the top of a ridge and flames jumped from tree to tree and the suburb was ringed with flames'*.<sup>15</sup>
- Sydney's Sandy Point residents (5-12-02) were evacuated by boat when the fire was so bad and so close that exit roads had been closed. Cars packed with precious possessions were left to burn. *'The fire approached so quickly through the Holsworthy army base to the west that exit roads had been closed before any could escape by car.'* ... .. *'My car (with) all my precious things packed in it... ..is probably on fire right now. We just couldn't evacuate by road.'*<sup>16</sup>
- Berowra Heights residents were ordered to evacuate from their homes (6-12-2002) *'as the fire raced towards the community on two fronts ... .. crowning and moving towards the residential area'*.<sup>17</sup>
- Police, national park representatives and SES crews moved into Alston Street, Berowra Heights (6-12-2002) and *'door-knocked residents ... ..(as) the fire was rapidly approaching... ..telling them to get ready to evacuate'*.<sup>18</sup>
- In Canberra (19-01-2003) *'At the foot of Mt Taylor, two houses were burning and a ute was in flames, blocking the path of residents rushing to evacuate the area, witnesses said'*.<sup>19</sup>
- ACT chief police officer, John Murray, (20-01-03) was reported as saying: *'Police have forced ... .. people out of their homes ... ..'*<sup>20</sup>
- Canberra police were reported as having said (22-01-03) *'Property losses resulting from forced evacuation were balanced by the death toll being kept relatively low'*.<sup>21</sup>

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<sup>14</sup> Sydney Daily Telegraph 5-12-2002, News report, *Stay at home and be ready for fires* by Matt Sun

<sup>15</sup> Sydney Morning Herald 5-12-2002 story *Suburbs under serious threat*

<sup>16</sup> Sydney Morning Herald, 5-12-02 *Firestorms paralyse Sydney*, by Andrew Stevenson, Michael Bradley and Joseph Kerr

<sup>17</sup> Sydney Morning Herald 6-12-2002, Story by Brigid Delaney: *Residents turn away as smoke turns red*.

<sup>18</sup> Sydney Morning Herald 6-12-2002, Story by Brigid Delancy: *Residents turn away as smoke turns red*.

<sup>19</sup> Sydney Morning Herald 19-01-2003, story *One man dead, 100 homes feared lost in ACT*.

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Staying with one's home and staying alive are not mutually exclusive. They are compatible. Safety during a bushfire has been proven to be not a choice between home and lives.

- *'Canberra's northern suburbs are on alert (21-01-2003), with residents urged to prepare for possible evacuation should conditions worsen.'*<sup>22</sup>

The findings of the Federal House of Representatives Standing Committee on Bushfires and the Australian Environment, 1984 were against the standard response to bushfires being evacuation of able-bodied people, stating that *'it may be counterproductive'*, pointing out the uncertainty of safe evacuation routes and the inadequacy of safe evacuation centres. Coroners' findings on Ash Wednesday deaths are riddled with reports of people haphazardly evacuating. Newspapers are full of stories of burns and other injuries to people who drove or ran from houses, exposed to the firestorm.

With wider use of my books as an alternative bushfire mitigation and prevention approach providing the in-depth understanding to householders of evacuation during bushfire, these situations can be avoided.

#### **On returning home after the fire front:**

- Canberra police asked residents (19-01-03) *'not to try to return to their homes'*.<sup>23</sup> Returning home as soon as possible after the fire front has passed to douse any ignitions is known to be a vital time for saving homes<sup>24</sup>.

#### **On shelter in cars:**

- NSW Rural Fire Service (brochure, Fireguard Resource 20): *'... .. motorists and drivers should be aware of ... ..the added protection vehicles can afford people trapped by ... fires'*.
- Country Fire Authority, Victoria, flier, Radiant Heat: *'..... your car offers the best protection from radiant heat as the fire front passes'*.

The segment shows a car in forest. Cars can be a lethal shelter during a forest fire.

- Eminent CSIRO bushfire researchers Professor G. M. Budd and Phil Cheney pointed out two decades ago (1984): *'Cars are suitable as safe refuges only when in areas entirely clear of fuel and out of direct contact by severe flames'. ... 'Use of vehicles as survival shelters only applies to situations where average flame persistence is for less than ten seconds – that is, in grass fires'*<sup>25</sup>.

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<sup>20</sup> Melbourne Age, story *Canberra's fire hell* by Brendan Nicholson, Annabel Crabb, Josh Gordon, 20-01-2003 and Sydney Morning Herald 21-01-2003.

<sup>21</sup> The Australian, 22-01-2003, story by Martin Chulov, Steve Lewis and Monica Videnieks *Fire policies a failure, admits Carnell*.

<sup>22</sup> The Australian, 21-01-2003, story *Fires within 8km of suburbs*

<sup>23</sup> Sydney Morning Herald 19-01-03

<sup>24</sup> 1983 Otway's survey by CSIRO Division of Building Research and the National Centre for Rural Fire Research

<sup>25</sup> [G. M. Budd, Associate Professor Environmental & Occupational Health, Commonwealth Institute of Health & N. P. Cheney, Senior Research Scientist, Division of Forest Research, CSIRO, *Bushfire Safety and Physiological Stresses on Fire Fighters*, paper presented to AFPA 9th National Conference on Fire, 1984, p 4.]

- Cheney and Sullivan<sup>26</sup> (1997) pointed out: *'The shelter provided by a car does not guarantee survival in every situation. If exposed for long period to the heat from a forest fire or even from fuel accumulated beneath trees lining a narrow road, the door seals and interior linings may catch alight, filling the car with ... .. poisonous gases'*.<sup>27</sup>

The finding of a man's body in his burnt-out car after a bushfire near Cessnock, in the Hunter Valley, on Saturday, October 19, 2002, illustrates this tragically.

- Country Fire Authority, Victoria, flier Radiant Heat: *'... pull to the side of the road into a clear area'*.

The fact is that along most bush roads there are seldom any cleared areas in which this could be done.

- Budd and Cheney maintain: *'There will be many combinations of fuel and topography where survival in a car ...is impossible'*.<sup>28</sup>

My books provide detailed and comprehensive discussion on travelling in the bushfire season, so that by their wider use, car deaths and injury due to bushfire can be avoided.

#### **On roof sprinklers**

- NSW Rural Fire Service (Fireguard Resource 7): Install *'Metal butterfly sprinklers which overlap and cover the total roof area.'*
- CFA, Victoria, brochure *Living in the Bush:* *'provide continuous fine spray or mist'*.

Misting butterfly sprinklers have been known as unsuitable since the year 2000 research of Eoin Shearer<sup>29</sup>. Butterfly sprinklers mist the water, which blows away in the strong winds that accompany severe bushfires. Specialist low-flow ridge sprinkler<sup>30</sup> (minimal sprayer nozzles) should be used to direct water down like a waterfall.

My books provide property-owner-related details of the FPAA research on bushfire sprinklers, verified by Eoin Shearer.

<sup>26</sup> Phil Cheney and Andrew Sullivan, *Grassfires, fuel, weather and fire behaviour*, CSIRO Australia, 1997, p 87

<sup>27</sup> In their 1984 research Budd and Cheney's found:

- When a car is 4.5 metres from 3-metre high flames at a 40 ° angle, duco will burn after fifteen seconds.
- The upholstery of a car is likely to burn within one minute of 25kWm<sup>-2</sup> radiant heat reaching it.
- In forest fires cars can become uninhabitable before it is bearable or safe outside.
- During intense forest wildfires, flames twice tree height are usual. Radiant heat outside a car could be 80-100 kWm<sup>-2</sup>. In such conditions, even if a car were parked in a 10 metre diameter clearing, radiant heat could exceed 40 kWm<sup>-2</sup> - nearly twice that which will make a car uninhabitable.

<sup>28</sup> [G. M. Budd, Associate Professor Environmental & Occupational Health, Commonwealth Institute of Health & N. P. Cheney, Senior Research Scientist, Division of Forest Research, CSIRO, *Bushfire Safety and Physiological Stresses on Fire Fighters*, paper presented to AFPA 9th National Conference on Fire, 1984, p 4.]

<sup>29</sup> Fire Protection Association Australia, for the United Nations Decade for Natural Disasters Australian Bushfire Sprinkler Project

<sup>30</sup> External Water spray Systems to Aid Building Protection from Wildfire pp17-18

Submission from:

Joan Webster author *The Complete Australian Bushfire Book, The Complete Bushfire Safety Book, Essential Bushfire Safety Tips*

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### **On filling baths with water:**

The juxtaposition of two points of advice by bushfire authorities can (and, it seems, may have) led to fatalities:

- NSW Rural Fire Commissioner, Phil Koperberg (5-12-2002), urged residents in threatened areas *'to secure their properties, fill bathtubs with water ... ..'*<sup>31</sup>
- NSW Rural Fire Service (brochure, Fireguard Resource 7) and the website of the NSW Rural Fire Service<sup>32</sup> advises:

➤ (point 7) *'As the fire approaches, go inside and remain inside until the fire has passed.'*

➤ (point 8) *'Fill baths ... ..'*

- A Country Fire Authority, Victoria, media liaison officer on ABC radio advised: *'stay in your houses, close the curtains, fill up the bath, put on woollen clothing'*.
- ACT chief police officer, John Murray, (20-01-03) was reported as saying: *'People have been sitting in baths'*<sup>33</sup>.

The body of 37 year old, Mrs Alison Tener of Burrendong Street, Duffy, ACT (21-01-2003) was found by emergency workers in her bath<sup>34</sup>.

### **On sheltering beneath a blanket**

- Country Fire Authority, Victoria, Deputy Chief Officer Craig Lapsley (7-02-03) in a discussion about the wisdom of sheltering in a swimming pool during a bushfire, advised radio listeners: *'if you put a blanket over your head, don't wet it'*<sup>35</sup>.

*This is quite wrong. Wetting a blanket not only allows a person to breathe through smoke, but acts as a Coolgardie and cools the head.*

- Phil Cheney, Senior Research Scientist, Division of Forest Research, CSIRO states: *'A wet cloth will filter out toxics and sparks better than a dry cloth. The key issue is protecting the air ways and keeping a pocket of breathable air around you. Whether or not you wet something depends on whether or not it's likely to burn. If it heats up simply dip it in the pool again.'*<sup>36</sup>

### **Official Action Conflicting with Official Advice:**

#### Official Advice:

- Rural Fire Service Commissioner Phil Koperberg (5-12-2002): *'People need to realise there will not be a fire truck for every house under threat'*<sup>37</sup>.

#### Conflicting Official Advice:

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<sup>31</sup> Sydney Morning Herald 5-12-2002, story *Firestorms paralyse Sydney* by Andrew Stevenson, Michael Bradley and Joseph Kerr

<sup>32</sup> website of the NSW Rural Fire Service Prepare your Property - What to do when fire approaches.

<sup>33</sup> Melbourne Age, story *Canberra's fire hell* by Brendan Nicholson, Annabel Crabb, Josh Gordon, 20-01-2003 and Sydney Morning Herald 21-01-2003.

<sup>34</sup> Sydney Morning Herald 21-01-2003, story *Woman who packed to flee the Duffy inferno may have turned back to her death*, by Les Kennedy

<sup>35</sup> ABC Regional radio talkback 7-02-03

<sup>36</sup> Personal communication 21-02-2003

<sup>37</sup> Sydney Daily Telegraph 5-12-2002, News report, *Stay at home and be ready for fires* by Matt Sun



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- John Winter, NSW Rural Fire Service media liaison officer (19-01-03): *Basically we will have fire crews in the backyards of houses and as the fire comes up we will knock it out and move on*<sup>38</sup>.

How can householders understand safe procedure when authorities seem so confused on so many vital issues?

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<sup>38</sup> Sydney Morning Herald 19-01-2003, story *One man dead, 100 homes feared lost in ACT*

~~Other causes of bad risk factors contributing to the impact of the bushfire~~

### 3. Misinformation accumulated by the public through generations of 'folk-tales'.

Despite all the knowledge available over the past twenty years of the killer and survival factors during bushfire, householders still confront flames dressed only in shorts and thongs; they are surprised that bush or parkland near their homes could ignite and threaten loss; they believe that watering the garden can help save their homes; they do not understand that hosing down walls for hours before embers fall does nothing but waste water.

Wider use of my books will counteract this 'little learning' that can be so dangerous, and help to minimise the impact of bushfires on life and property of which this misinformation is a major cause.

#### On pre-fire preparation:

- *'I had the bobcat out in the backyard to try to shorten the grass'*.

Grass should have been kept short from the beginning of spring.

- *'We spent the day watering our gardens'*<sup>39</sup>.

Appalling waste of water, especially during drought. Time is better spent sealing the house from embers; cleaning the ceiling space; removing shrubs from walls and windows; getting rid of garden litter etc. Watch for embers fallen near or in the house. Douse them.

- *'cleaned the gutters'*<sup>40</sup> *'wet the roof'*<sup>41</sup>

These activities seem to be the only precautions known to most people. Householder are pictured standing on roofs, pouring untold litres of water onto them for hours before embers fall – if at all. This is a waste of water and time. Time could be better, and more safely, spent clearing and providing water inside the roof space, rather than wetting its outside.

- *'People unwilling to leave their homes propped ladders against the eaves and climbed up, often taking binoculars, deck chairs and radios with them'*<sup>42</sup>.

Many people treat an approaching bushfire like a side-show. As above, time can be better spent.

- *'There was little more that we could do'*<sup>43</sup>.

There a great deal more that householders could have done, had they the knowledge. It is demonstrably possible to prepare for a firestorm.

#### On the merits of evacuating or staying:

- *'We're alive, that's the main thing'*<sup>44</sup>.
- *'It's not worth dying or being injured to stay in your home'*<sup>45</sup>.

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<sup>39</sup> Sydney Daily Telegraph, 6-12-02 story Safe as houses or time to leave it all behind

<sup>40</sup> Multiple media reports, every bushfire season

<sup>41</sup> Multiple media reports, every bushfire season

<sup>42</sup> Canberra Times, 24-01-2003, story by Sharon Mathieson, *Hundreds bid final farewell to Duffy Victim*

<sup>43</sup> Canberra Times, 19-01-2003, Latham woman, story by Leanne Younes *Holt waits nervously*

<sup>44</sup> Duffy resident whose home was destroyed, quoted in Canberra Times, 19-01-2003 story by Megan Doherty *Hell comes to suburbia*.

It's not worth dying or being injured trying to 'escape' a bushfire. Being home and being safe are not incompatible. Safety during a bushfire has been proven to be not a choice between home and lives. This is fully elucidated in my books.

**On the time and procedure of evacuation:**

- 'We're leaving if the fire gets too close'.
- 'I jumped in the car as flames licked at it'<sup>46</sup>.

The only guaranteed safe time to evacuate from a bushfire is before one starts.

- 'There were heaps of spot fires starting all round the house and it was just too dangerous so I told my wife to take the babies and go'.

At this stage it is too dangerous to go. More lives have been lost by this attitude than any other<sup>47</sup>.

- 'Sharon Paten, a 42-year-old mother of four of Ballandean, on the Queensland-NSW border, died when she became trapped in her home after returning to retrieve photographs'<sup>48</sup>.

Knowledge of the risks of smoke and super-heated air-inhalation and of ceiling collapse could have prevented this tragedy.

**On speed of house destructions:**

- Huskisson, NSW resident: 'The whole place was gone in about eight seconds.'<sup>49</sup>

In almost every instance where this alleged phenomenon has been investigated, there has been an unnoticed slow build-up of fire from initially small ember-ignitions. A solid house cannot be consumed 'in minutes'? (See section 4. Media melodramatics).

**On how to save precious possessions:**

- 'We're all ready, we've got the car packed'<sup>50</sup>.

Cars have burned, destroying the precious possessions packed in them<sup>51</sup>. They are often left with doors open while embers fall<sup>52</sup>. A safer initiative of mine, first described in my books, is to take them before the fire season to a friend's house, deposit them in public or private storage facility or bury them in the garden beneath 15 cm of soil.

**On the areas subject to threat from bushfire:**

- 'You really don't believe something like this can happen in suburbia.'

You should. Two thirds of houses destroyed by bushfire in the past 15 years have been in the outer suburbs of large cities.

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<sup>45</sup> Sydney Morning Herald, 6-12-2002 story by Brigid Delaney *Residents turn away as smoke turns red*

<sup>46</sup> Sydney Morning Herald 19-01-03

<sup>47</sup> The Australian Association of Rural Fire Authorities - post-Ash Wednesday policy

<sup>48</sup> Sydney Daily Telegraph, 20-10-2002 story *Firefighters still battling blazes* by Rosemary Desmond

<sup>49</sup> Sydney Morning Herald 12-01-02

<sup>50</sup> Sydney Daily Telegraph 5-01-2002, quoting Woodford resident.

<sup>51</sup> Sydney Morning Herald, 5-12-02 *Firesstorms paralyse Sydney*, by Andrew Stevenson, Michael Bradley and Joseph Kerr

<sup>52</sup> 'Police said Mrs Tener's white sedan was found with its doors open in the driveway':

Sydney Morning Herald 21-01-2003, story by Les Kennedy,

*Woman who packed to flee the Duffy inferno may have turned back to her death*

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- Neville McArthur, CSIRO Senior Experimental Scientist, Fire Science and Technology, has pointed out that the only house losses of any magnitude since 1994 have been in major cities: *'It is a common misconception that during bushfire, house fires occur only in the bush. In the past ten bushfire seasons, around 60% of house loss has occurred in the urban-interface areas within the cities of Sydney and Melbourne'*<sup>53</sup>.

#### **On reactions after the fire has passed:**

- *'Why did this happen to me?'*
- A glance, even at the news pictures, gives many valid answers, nearly all of which point to lack of householder knowledge of pre-bushfire preparation and during-bushfire safety procedure.
- *'I lost all ... .. more. And through no fault of my own.'*<sup>54</sup>

Householders must take learn how to take responsibility for not being prepared. My books can give them the knowledge of how to avoid such heartbreak.

#### **On fencing and stock losses :**

- Some farmers whose properties suffered damage during the north-east Victorian bushfires are *'considering class legal action against the government'*<sup>55</sup>. They cite the cause of their losses as *'lack of hazard reduction by authorities with prescribed burning'*.

Hazard reduction in the bush is necessary to reduce the intensity of fires, abundance of embers and enhance the manageability of fires. But the survival, damage, or destruction of house, stock or other property during bushfire is another matter entirely.

- Fire breaks ploughed each side of fence lines can minimise fencing losses; the use of metal pickets dropped between timber posts will retain fencing if timber posts burn; fine metal mesh at ground level on fences can hinder grass and crop fires.
- Stock refuges such as fallow paddocks for cattle and sheep; low-flow sprinkler protection for poultry and stables;
- Metal flywire over outbuilding windows; flammables in metal containers; haystacks in separate paddocks and with 20 metre breaks around.

There is much that farmers can, and should, do themselves to reduce the hazard of any bushfire to their stock, fencing and buildings: My books describe in detail numerous property and stock-saving methods.

With wider use of my books, these causes of and risk factors contributing to the impact of the bushfires can be avoided.

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<sup>53</sup> Personal communication, 2000

<sup>54</sup> Sydney Morning Herald 7-01-2002

<sup>55</sup> Weekly Times February 12-02-2003

## ~~Discussion of causes and risk factors contributing to the impact of the bushfire~~

### 4. Media melodramatics

Twenty years after intensive research has authoritatively discounted so much wrong understanding about bushfire behaviour and hazards, the media still negligently parrot a great deal of hackneyed hearsay on every newscast, after every fire. It is my opinion that this engenders dangerous wrong understandings in the public, which wide use of my books can help to counteract.

#### On pre-fire preparation:

- *'The suddenness of the onslaught, caught residents by surprise'*<sup>56</sup>.

A massive bushfire had been burning within ember blow for a week. The threat to homes would have been no surprise to residents with the knowledge of bushfire behaviour possibilities that are detailed in my books.

- *'What would you pack? You've only got minutes to do it before you have to get out'*<sup>57</sup>

This indicated to listeners that this is standard procedure. Householders who have read my books know to pack and make safe their precious possessions early in the summer. This presenter's attitude, a common one, promulgates one of the most dangerous things to do - last minute packing and getting out - and sets the work of bushfire safety for the public back by decades.

- *'Pack a box with practical items such a torch, drinking water and protective clothing. This is your escape kit'*<sup>58</sup>.

A survival kit should be prepared for personal protection from radiant heat, falling embers, smoke inhalation, dehydration and eye injury, not one for 'escape'.

- *'residents were forced to flee'*<sup>59</sup>.

This pronouncement, always made with an air of inevitability, fosters the fallacy that 'fleeing' is an acceptable procedure. Most deaths and injuries during bushfire happen while 'fleeing'<sup>60</sup>.

- *'the fire is X kilometers away from homes'*<sup>61</sup>.

This wrong understanding of the direction from which bushfire danger comes to homes is repeated like a media mantra. The threat is not to be measured in linear distance. Householders should be encouraged not to look out, but up. The danger comes from above, from falling embers. The fire front can be seemingly safely many kilometers away when this commences.

#### On bushfire behaviour:

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<sup>56</sup> Canberra Times 19-01-2003, story by Peter Clack, *Canberra's Darkest Day*

<sup>57</sup> ABC radio regional Victoria, 24-02-2003

<sup>58</sup> Sydney Daily Telegraph, 6-12-2002, story by Bruce McDougall, *Safe as houses or time to leave it all behind.*

<sup>59</sup> Multiple media reports, every bushfire season

<sup>60</sup> The Federal House of Representatives' Standing Committee on Bushfires and the Australian Environment 1984 and The Australian Association of Rural Fire Authorities

<sup>61</sup> Multiple media reports, every bushfire season

Fire may seem to be the ultimate uncontrollable element. But it actually behaves in predictable ways that can explain why a bushfire jumps over one house in a street, how bushfire ignites houses. Bushfire behaviour is not, as many newspapers report a '*fiendish game of chance*'. Nor are any of these further quotes any more factual:

- '*Fortunately the fire was stopped at the back door*'<sup>62</sup>.
- '*Homes were within metres of being destroyed*'<sup>63</sup>
- '*The family missed losing their house by two metres*'<sup>64</sup>

The threat is not linear. It not the distance of flames from houses that endangers them, it's the embers that can get inside, long before a front arrives. My books explain that even should a front come 'within metres' of a house, it can be made safe from the more important ember attack.

- '*The fire front swept through... ..'consuming all in its path'*'<sup>65</sup>.

A bushfire does not destroy houses by consuming all in its path.

Look carefully at the TV news scenes of house destruction. Many show the trees around them untouched by fire. Green lawns surround others.

- '*The wind had changed just in time*'<sup>66</sup>.

A wind change will deflect a fire front. But it will not stop embers from falling. In fact, a wind change can cause embers to swirl in unexpected directions. A wind change is not a time for relaxation, but for extra vigilance.

- '*The frightening speed of the fire's advance left the available firefighters in the ACT helpless to stop it ripping through suburbs*'<sup>67</sup>.

The fastest known speed for forest fires is 15 kph and grassfire 22 kph. The threat to homes is not the speed of the front. The threat is not linear. It is vertical - from falling embers. A fire front's advance does not equate with the course of house destruction.

#### **On procedure if staying with the home:**

- '*Communities banded together with garden hoses and buckets to save their homes because firefighters were engaged elsewhere*'<sup>68</sup>.

It is the job of communities to protect their own properties. It is the job of the fire service to prevent the spread of the fire front. It is mathematically and morally wrong to expect a fire unit for every threatened house. In my books, householders can learn far more than last-minute makeshift hose-and-bucket property saving management.

#### **On evacuation**

- '*If the worst happens, if they have to drive away from the flames*'<sup>69</sup>.
- '*Thousands were forced into the streets*'<sup>70</sup>.

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<sup>62</sup> ABC radio news item

<sup>63</sup> ABC TV news item

<sup>64</sup> ABC TV news item

<sup>65</sup> Multiple media reports, every bushfire season

<sup>66</sup> Sydney Morning Herald, December 5-12-2002, story by Andrew Stevenson, Michael Bradley and Joseph Kerr, *Firestorms paralyse Sydney*

<sup>67</sup> Canberra Times 19-01-2003 story by John-Paul Moloney *Our most serious test*

<sup>68</sup> Sydney Sun-Herald 19-01-2003, story by Kerry-Anne Walsh and Jim O'Rourke, *Two dead, 100 homes lost in nation's capital*

<sup>69</sup> Canberra Times, 24-01-2003, story *Hundreds bid final farewell to Duffy victim* by Sharon Mathieson.

These statements give readers the impression that such action is appropriate. Post Ash Wednesday research found that: *'evacuation must not be carried out when the fire has reached the area concerned, as experience has shown that far more lives are lost by people fleeing in the path of a serious fire'*<sup>71</sup>.

- *'Entire populations of the towns Tylden, Trentham and Spring Hill have been told to prepare for evacuation at any moment'*<sup>72</sup>.

Only a week before<sup>73</sup>, police had told the threatened residents of Macedon, Victoria, that they would not force them to leave. The media still lagged behind, unaware.

- *'If the inferno arrives at your backyard ... you will need to bunker down. Turn your home into a "giant Esky". Drench your house with water, insulate it properly and, more than likely, the fire will wash over it'*<sup>74</sup>.

The mind boggles at the logistical impossibility of insulating a house, drenching a house with water, while simultaneously 'bunkering down'.

#### **On loss of life and houses:**

- *'Nothing could have been done to prevent the tragedy in the nation's capital which took four lives and destroyed more than 400 homes on Saturday.'*<sup>75</sup>

Knowledge of what could have been done has been available for twenty years. It is very disturbing that this attitude is promulgated, when it has been known for so long that burning bush does not have to mean burning houses.

These are tragedies that need not happen. The **unusual** intensity of the Canberra fires made no difference to the **usual** way in which the houses were destroyed. Nor to the **usual** way in which they could have been saved, had their owners cared to know. And were saved by those who tried. This fact was pointed out (27-02-03) by CSIRO researcher Justin Leonard<sup>76</sup>.

- *Many houses disappeared in less than 15 minutes'*<sup>77</sup>.

Houses may appear to be destroyed in this short time. In almost every instance where this alleged phenomenon has been investigated, there has been an unnoticed slow interior build-up of fire from initially small ember-ignitions. The burning process is hastened if house contents are highly flammable. But when has a normal (non bushfire caused) house fire consumed a house 'in minutes'? Possibly only if it was an old, small dilapidated timber or fibro shack filled with highly flammable contents or doused with petrol! These statements cause people to fear to stay with their homes.

*Burning brands and sparks, known as the 'shower of embers', can invade a house half an hour before any flame front reaches an area. They blow ahead 100 metres from grass fires, 8 kilometres from burning eucalypts, 2.5 kilometres from pines and have blown 35 kilometres on upper atmospheric winds. If no-one is there, or no-one*

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<sup>70</sup> Canberra Times, 19-01-2003, story by Peter Clack, *Canberra's Darkest Day*

<sup>71</sup> The Federal House of Representatives' Standing Committee on Bushfires and the Australian Environment 1984 and The Australian Association of Rural Fire Authorities in its post-Ash Wednesday policy

<sup>72</sup> Bendigo Advertiser, 23-03-1998

<sup>73</sup> 26-02-1998

<sup>74</sup> Sydney Daily Telegraph, 6-12-2002, story by Bruce McDougall, *Safe as houses or time to leave it all behind.*

<sup>75</sup> Sydney Daily Telegraph, 21-01-03, story by Simon Benson And Malcolm Farr, *Unstoppable*

<sup>76</sup> CSIRO Senior Experimental Scientist, Manufacturing and Infrastructure Technology, Fire Science (formerly Building Division) on ABC TV program *Catalyst* 27-02-03.

<sup>77</sup> Canberra Times 19-01-2003, story by Peter Clack, *Canberra's Darkest Day*

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*knows where to watch for and douse an initial ember ignition, it can be smouldering away in the ceiling space, in the dust of accumulated years. If a spark blows under the house and ignites flammables there joists, too, burn slowly before floor boards join in.*

Even when embers enter through broken windows and gain direct access to contents, what happens is variable (see section 2). Such internal fires are controllable by appropriate knowledge of advance preparation as well as of emergency activity. Each vulnerable entry point can be made almost impenetrable with minor modifications, as is fully described in my books.

The media appear to be obsessed with drama and melodrama, wringing from each tragedy every possible drop of pathos. Only rarely does any branch of the media use a tragedy as a vehicle for learning. By choosing not to do this, it helps to perpetuate dangerous behaviour.

It is my opinion that:

- Promulgation of these erroneous attitudes expressed constantly by all branches of the media during every bushfire crisis, is a factor contributing to the impact of the bushfires.
- Follow-up media releases from bushfire authorities correcting such false and dangerous information is a measure that can be implemented to mitigate the impact of bushfires on life, property and the environment



~~by some causes of and risk factors contributing to the impact of the bushfires~~

## 5. Mismanagement by authorities in designation of community bushfire refuges

The matter of community bushfire refuges is a schemozzole. The issue is shrouded in confusion, with the public potentially endangered by official decision-making-procrastination and lack of communication with communities on the issue.

- Within the State of Victoria, some municipalities have designated refuges, others don't. The Country Fire Authority, Victoria states simultaneously that:
  - bushfire refuges no longer exist and that
  - it is the right of individual municipalities to designate areas as refuges<sup>78</sup>.
- The public has not been told whether bushfire refuges do or do not still exist in their district and whether they should or should not still consider them a bushfire safety option.
  - On February 5, 2003 I attended a Fire Awareness meeting in the Shire of Mt Alexander, Victoria, at which the public was informed by Country Fire Authority officer that Victoria definitely no longer had any emergency refuges. That the only community assembly points now were Emergency Relief Centres – operative not as shelters from bushfire, but **after** people have been burnt out, etc.
  - Only the day before, the neighbouring Shire of Macedon Ranges – the region where so many people lost their lives on Ash Wednesday trying to reach s-called refuges – had advertised<sup>79</sup> a list of what it called bushfire refuges, most of them open space and reached by routes which would be dangerous to travel.
- Many designated bushfire refuges are not safe places to be during a bushfire.
  - In the year 2000, two buildings in Central Victoria were listed as community bushfire refuges though simultancously condemned as fire hazards!
- Persons evacuated to refuges during a bushfire have many times not found refuge there, but have been moved on by authorities to another so-called refuge.

### Some examples of disorder and danger at designated bushfire refuges:

- On January, 1994 the NSW town of Spencer was evacuated three times to different so-called refuge areas.
- On January 21, 1997 as fire swept through Ferny Creek in the heavily wooded hills of outer Melbourne's Dandenong Ranges people were evacuated to open-to-the-elements so-called refuge of the Belgrave recreation reserve, where they were showered with soot and embers.
- On 3 December 1997, the children of south western Sydney's Menai Primary School cowered in the schoolyard, choking and crying, bewildered and terrified and hurtlingly trusting. Skimpy summer uniforms kneaded to their little bodies by whipping 70kph, gale force winds. In the next street, ten houses and their gardens were spewing their dangerous products of combustion onto the little ones,

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<sup>78</sup> CFA Memorandum: Status of Fire refuges Review, 25-02-2002, page 2

<sup>79</sup> Midland Express, 4-02-2003. The Shire's advertisement suggested the use of these places as an 'absolute last resort' for persons 'who may be forced to leave their homes' or are 'caught in transit and subjected to the threat of a wildfire' – directly in opposition to official safe practice.

belching thick smoke. Four hundred and seventy five pupils were evacuated in a fleet of buses to the so-called refuge of the Menai High School 1.5 kilometres away. Within an hour police ordered the children to be moved again, to clubrooms. Imagine their terror, their trauma. How is a bus ride safer than a stationary building? Why think a clubroom safer than a school? Schools should also be modified to become safe refuges for pupils (See below).

- On January 5, 2002, at Glenorie, NSW 'Dozens of residents were brought to the Dural Country Club but as the fire front neared the centre this afternoon, the evacuees were evacuated again'<sup>80</sup>.
- On January 31, 2003, large number of Omeo, north-east Victoria, residents were evacuated from the bushfire to the town's football oval. Flames surrounded them as the grass of the oval ignited<sup>81</sup>.

For how many more years does it have to be pointed out that this sort of action can lead people to a death trap?

I have been pointing out the dangers of so-called 'refuges' since 1988. In August 1989, following my investigation of hazardous areas designated as community bushfire refuges in the Dandenong Ranges, the first bushfire shelter specifically designed for schools was built at Sassafra Primary School, with *The Complete Australian Bushfire Book* as the major resource.

The whole concept of community refuges as a safety strategy in bushfire came under review in mid-1998. The Shire of Yarra Ranges initiated the process to form a Working Party of representatives of emergency and governmental authorities. Its purpose was to come up with a set of proposals that would improve community safety; and a set of recommendations on the procedures required to *achieve effective state-wide implementation* of those proposals.

One big part of the problem is that Municipal Disaster Plan refuges are one-size-fits-all. Authorities try to cater for all types of disaster with the one set of directions. Places that are listed as refuges that might be suitable in a flood or gas leak situation, but dangerous during bushfire.

Another part of the problem arose when the Emergency Management Manual of Victoria was amended in 1997 to define a community refuge as a 'building' (whose walls and roof shield people from radiant heat), not open space.

In an open space, people are smothered in smoke, showered with burning leaves and rubbish, blown with ash and dust to irritate eyes and lungs, and exposed to hurtling boughs, rubbish and sheets of building materials. Surrounding bushland can radiate a distressing, possibly lethal, amount of heat.

Upon this announcement many municipalities disbanded their refuges altogether. Signs were taken down. No more notices about them were distributed to the public.

In the closed-for-years compartments of worried minds, hazy mental red-flags respond to 'Where do we go?' with 'Oh, yes. *The football oval*'. *The race track*'. *The Community Hall*'. No-one has told the people to throw out these redundancies.

<sup>80</sup> Sydney Daily Telegraph, 5-12-2002 story *Evacuees gather at local RSL* by Roz King

<sup>81</sup> Age 31-01-03

Submission from:  
Joan Webster author *The Complete Australian Bushfire Book, The Complete Bushfire Safety Book. Essential Bushfire Safety Tips*

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No-one has told the people: *'That's no longer policy – well, not everywhere, so far, we think'*.

If the authorities are in two (or three) minds, no wonder householders are confused.

And all this is not counting the fact that there is seldom a guaranteed safe route from one's home to any type of community bushfire refuge. Evacuating householders need to be sure that their planned refuge destination is really safer than their own home.

My books *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips* contain a step-by-step discussion to help householders reach a safe decision on this matter. They detail the approved requirements for a safe community bushfire refuge.

Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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~~6. Minimum effort by bushfire authorities to impart to the public any awareness of hazard mitigation resources other than the authorities' own.~~

## **6. Minimum effort by bushfire authorities to impart to the public any awareness of hazard mitigation resources other than the authorities' own.**

Of late, the disposition of bushfire Authorities' HQs towards my books has evinced a distinct push-me-pull-you effect. Though my books have received consistent official acclaim, they have not received consistent official support.

### Country Fire Authority, Victoria

On the one hand my books continue to receive written assurances of endorsement and much heart-warming acceptance – even accolades – from individual officers.

- *'Without doubt the best book of its type published.'*<sup>82</sup>
- *'... ..greatly admiring your work... ..particularly those involving vehicle losses'*<sup>83</sup>
- *'I held a copy of The Complete Australian Bushfire Book up in a crowded newsagent's and said: "This is the best book ever written! Everybody in Australia should read it'*<sup>84</sup>

On the other hand, instructions seem to come from some invisible higher power, some insidious sub-committee in the sky, that no, or only rare, public mention be made of the usefulness of my books.

### **Examples of divergent dispositions towards public recommendation my books:**

- In 1986, following first publication, the CFA:
  - gave public endorsement by picturing my book in media advertisements.
  - commissioned me to write the material for a wall-hanging 'brochure' which also featured endorsement of my book and a photo of its cover.
- In 1990, the CFA nominated my work for the AFPA Community Safety Award.
- The CFA (as does the South Australian Country Fire Service) continues to use *The Complete Bushfire Safety Book* as a training resource for its officers.

The CFA has written to me:

- *'We recognise the value of your work'*<sup>85</sup>
- *'An excellent public reference. Ideal for further reading. We will certainly continue to recommend the reading of your excellent publication'*<sup>86</sup>
- *'I will bring to the attention of those CFA personnel responsible for the development of or public education material, for inclusion (of your book) as a reference'*<sup>87</sup>
- *'The CFA has the utmost respect for your work'*<sup>88</sup>
- *'I will endeavour further to bring (your book) to the notice of the CFA's members who routinely deal with the community in the matter of wildfire survival'*<sup>89</sup>

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<sup>82</sup> Country Fire Authority Brigade Captain, Strathbyn, Victoria.

<sup>83</sup> Retired Captain, Ourimbah, NSW, Bush Fire Brigade, Don Cameron

<sup>84</sup> Ex-captain Country Fire Authority Brigade, Emerald.

<sup>85</sup> Robert Dixon, Deputy C.O., 1988

<sup>86</sup> B.V. Potter, C.O. 1990.

<sup>87</sup> John Nicholson, Deputy C.O., 1994

<sup>88</sup> Arthur Farn, C.O. 1995.

<sup>89</sup> Trevor Roche, C.O. 1999

Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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But the action these assurances give of bringing to public notice the usefulness of my books seldom eventuates. The CFA publicly recommends them only erratically:

- For the past two summers on its web-site, this summer occasionally in its print media releases, seldom at talks, not at all on radio.
- In 2000, when the new edition of *The Complete Bushfire Safety Book* came out, I was told by the HQ Community Education that all officers answering ABC phone-ins for Fire Awareness Week would recommend my book and that its flier would be in every Information Pack. But none did and none were.
- In 2001 it drafted for a media release: '*Joan Webster has made a significant contribution to bushfire safety education ... .. is renowned for her ability to provide important and easy-to-read information on bushfire safety*' - but edited this part out for publication.
- In the summer 2001-02, CFA HQ's Community Safety manager<sup>90</sup> stated he was:
  - '*very happy to thoroughly endorse your books*'<sup>91</sup>
  - I was asked would I be available for radio interviews.
  - Assured that fliers on my books it had asked me to provide would be inserted into the House Survival Kits.
  - Stated the Authority's intention to promote my book.

But there was no public endorsement; no promotion. Instead, there was active dis-endorsement, denial that my books existed:

- A media liaison officer told a radio interviewer there were *no* resources other than CFA literature available to help householders formulate their bushfire safety plans. However:
- In the summer of 2002-03 just passed, both *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips* were recommended in *Bushfires - A Survival Guide*, a liftout in the Age newspaper.

If they can be recommended once, why not as a routine?

- CFA Community Fireguard facilitators use *The Complete Bushfire Safety Book* as a resource; Bushfire Blitz presenters' talks echo back to me my words.

This use show the merit of my books. However, I have been present at officially organised talks during which:

- not only has credit not been given to the books from which the talks have been composed, but the information that these books are approved, available and very useful has been withheld from the public attending the meeting.

This is no help to communities or firefighters.

Most Community Fireguard facilitators are appreciative and supportive of my work and many individual officers do recommend my books whole-heartedly at their householder meetings. But this is not routine. It has not part of official policy. Whether acknowledgment, mention or recommendation is made seems to depend entirely on the personality of the presenter.

**Suitable as resource but not for recommendation:**

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<sup>90</sup> Neil Bibby, emails

<sup>91</sup> Neil Bibby, phone communication

Submission from:

Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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While the CFA has not been happy to overtly recommend my books to the public in its education programs and in other ways, it has been happy to covertly use *The Complete Australian Bushfire Book* and *The Complete Bushfire Safety Book* as resources for its promotional material; to lift passages, concepts and phraseology without acknowledgment. The Authority evidently sees no anomaly in this.

Many of the safety ideas printed in CFA brochures and spoken in radio announcements come directly from my books and were first devised by me. Such as:

- window shutters to protect houses from hurtling debris
- personal survival kits and special fire cupboards
- the special care of children, the frail and pets
- eye drops and goggles to protect eyes
- estimating a timing schedule before for evacuation – ‘*will you have time to*’ -
- that evacuees shelter in a substantial supermarket or public building rather than an open air or dilapidated designated refuge building.
- My turns of phrase have been recycled in its brochures and broadcasts (See Appendix C).

Read any brochure before publication of my first edition, *The Complete Australian Bushfire Book* (1986) and you’ll not find any reference to these matters. Even to give acknowledgment where due, would help in communities’ awareness of my books as self-help bushfire-safety accessories.

#### NSW Rural Fire Service

On publication of the first edition, NSW Rural Fire Commissioner, Phil Koperberg, said he would ‘*do everything in his power to promote it*’<sup>92</sup>.

All that has happened is its inclusion in a list of Books on Bushfire: a list for teachers and students.

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<sup>92</sup> June, 1987, personal verbal communication at the NSW Rural Fire Brigades Association Annual General Meeting, at which I was guest speaker.

Submission from:  
Joan Webster author *The Complete Australian Bushfire Book*, *The Complete Bushfire Safety Book*, *Essential Bushfire Safety Tips*

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It is my opinion that this lack of standard official support hinders householders from awareness of these proven resources, and that if given the consistent support they warrant –comparable to the official support given to the usefulness of smoke alarms - (see Appendix D), the impact of bushfires on life, property and the environment would be greatly diminished and lives and property would be saved on a much larger scale.

For a bushfire authority to withhold official notice of my books to householders is self-defeating. In my opinion, it is a cause of and risk factor contributing to the impact of the bushfires on life and property.

As the Fireman journal wrote, 'Every household that has a well read copy, is one less household about which fire units need worry.'

Routine appraisal of the public by bushfire authorities to *The Complete Bushfire Safety Book* and *Essential Bushfire Safety Tips* as suitable for reading in addition to official publications, is a measure that can be urged by governments, to minimise the impact of bushfires on life, property and the environment. It is an inexpensive alternative bushfire mitigation and prevention approach. I believe this action would contribute greatly to the safety of the public and to their possessions, pets and stock during bushfire.

I urge that members of the House Select Committee on recent Australian Bushfires consider this to be a worthy recommendation.