8 Concluding remarks

(An attempt to answer an important question and some brief final remarks)

> Damage at present impossible of estimation was caused in the Federal Capital Territory during the weekend by bush fires which raged over a total front of 45 miles along the Murrumbidgee, and crossed it at several points close to Canberra on Saturday afternoon. It was the worst fire in the recollection of district settlers … Although more than 500 volunteers from Canberra, Queanbeyan and Captain's Flat fought desperately against the fires on a dozen fronts on Saturday, they had no hope of checking it against the fierce wind, which carried the flames along gullies and depressions at amazing speed … Burning tinder was carried five and six miles by the wind before being dropped to start fresh outbreaks in the dry grass and trees. Burning leaves from Uriarra fell on Parliament House at 11am on Saturday.
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> —*Canberra Times* Monday 16 January 1939

Were these fires unique?

A number of comments in the media, and in some submissions to the Inquiry, described the January 2003 bushfires as unique or unprecedented. It is necessary to examine this proposition because a judgment about the authorities' performance in responding to the fires is influenced by knowledge of the nature of the threat they perceived to exist.

Bushfires are a natural part of the Australian environment, particularly in the south-east of the country. They vary in intensity according to climatic conditions (for example, drought, temperature, humidity and wind) and the nature and volume of the available fuel (vegetation essentially). Their rate of spread can also be influenced by topography.

There appears to be some substance behind the proposition that the longer the period since a major bushfire, the more severe a bushfire is likely to be when it does happen. Some have postulated that historical bushfire experience can be viewed in relation to a cycle or to cycles within a cycle. In her useful publication *The Complete Bushfire Safety Book*[1], Joan Webster draws on the work of RH Luke and AG McArthur to describe possible cycles for average to mild bushfires happening every season, serious fires every six or seven years, major fires every 10–11 years, and exceptionally bad ones every 22 years. She notes that the average time between great conflagrations is 44 years and speculates that the apparent rough mathematical relationship with 11 and 22-year cycles

might be related to sunspot activity (which intensifies each 11 years), the El Nino phenomenon and other weather patterns.

When the inexact science of climatology is coupled with the science of bushfire behaviour—which is also a very challenging area to submit to scientific explanation—the prospects for speculative hypotheses are large. Nevertheless, whether the cyclical theory is correct or not, it seems well established (even if solely based on the empirical evidence of past events) that very large bushfires will occur from time to time, when the fuel and weather conditions combine in a particular way.

Chapter 1 includes a history of serious fires in the ACT. Reference to that information confirms that some very serious fires have occurred. Further very serious fires occurred in January 2003. In that sense, the most recent fires were not unique, nor were they a one-in-100-year event. They were part of a pattern of serious fires emanating from the Brindabella Range, crossing the Murrumbidgee River, traversing rural grazing properties and because of relatively recent urban development, moving into suburban Canberra.

An examination of the maps in Appendix E is instructive. They show a pattern of serious fires that have mostly emerged to the west of the site of Canberra in the last four decades. Overall, most of the ACT has been burnt by these significant fires, some parts on several occasions, although it will be noted that the 2003 fires led to a larger footprint than any of the previous major fires in the last 80 years.

Were the fires predictable? In terms of when they would actually occur, probably not. Had the fires not been ignited by lightning strikes on 8 January, the ACT community might now be in the situation it was in immediately before they broke out. The high fuel loads in the hills would have remained and the drought conditions would still have had an impact on dryness, although with the onset of cooler winter weather and some rain the immediate fire danger has diminished substantially. Come the next bushfire season, the volatility of the fuels will depend heavily on the amount of rain the ACT receives between now and then. With little rain and high temperatures, though, the extreme dryness that has characterised the drought could return quickly and bring with it a level of threat similar to that which existed in the bushfire season of 2002–03.

The extreme dryness of the soil and vegetation and the high fuel loads in the hills were known, and their significance was generally understood by the bushfire authorities. When the fires broke out, the weather conditions over

the ensuing week were relatively benign, even though the winds were unseasonably coming from the east for longer than would normally be expected.

The weather conditions on 18 January were predicted to be extreme but not at record levels. As the fires developed and their cumulative effect hit the city, fire weather indices did reach record levels in some areas.

It seems that it was the factors that combined on 18 January—very high temperatures, strong prevailing winds, high fuel loads, extremely low humidity, extreme dryness in the soil as a consequence of the prolonged drought and, possibly most significantly, the major fires merging—created a fire environment of exceedingly high intensity overall. This may have been responsible for creating extreme localised weather conditions, causing very high winds (up to force 2, tornado strength), increasing the speed of advance of the fires and increasing the extent and length of spotting. The 14-kilometre convection column of hot air and smoke that was created is thought to have collapsed, causing further wild turbulence in the fire zone as it approached Canberra.

Scientists are still studying the fire behaviour in order to gain a clearer understanding of its characteristics. While this endeavour may result in a conclusion that aspects of the fires on 18 January in themselves were unique—in that they helped to add to the knowledge of the characteristics of extreme fire behaviour, specifically relating to wind behaviour and the effect of large fires fusing together—it is the view of the Inquiry that it would be misleading to regard the event as a one-in-100-year occurrence, on this basis alone. Although it was probably the most severe fire experienced in the region in the last 100 years, the emergence of large destructive fires in the region, from time to time, is by no means unique.

It would be more accurate to say that the event was unique in the experience of the residents of Canberra and its surrounds, and probably of all the firefighters, because fires of this kind have never before caused such damage to the region. A house had not been lost to bushfire in suburban Canberra since 1952.

The Inquiry's view is that one of the lessons of the fires is the realisation that very serious and potentially destructive fires that may threaten the city could happen again in the future. The Canberra community must not forget this. The fires cannot be simply explained away as an unfortunate, unlucky or 'one-off' event.

Notes

1 Webster, J 2000, *The Complete Bushfire Safety Book*, 3rd edn, Random House, Sydney.

A final word

Some concluding observations are necessary so that readers gain a balanced understanding of what is said earlier in this report.

A fundamental question raised by the Inquiry's examination of the operational response to the January 2003 bushfires is whether, realistically, the fires could have been extinguished at all, before the damage to Canberra occurred. A plausible case can be argued that the effects of the long drought, the build-up of fuel levels in the mountains, the presence of commercial plantations from close to the source of the fires right up to the edge of the city, and the dangerous weather conditions on 17 and 18 January all combined to make it nigh on impossible to contain or extinguish the fires before they reached Canberra, regardless of the effort and resources that might have been applied.

The Inquiry considers, however, that there was a chance to extinguish the fires if the opportunity to put them out in the first 36 to 48 hours after the lightning strikes had been grasped more vigorously. The ACT fire authorities are criticised for not coming to this realisation quickly enough and for failing to immediately attack the fires with all the aggression they could muster. Had this occurred—while the Inquiry is not in a position to conclude unequivocally that it would have made a difference in the absence of the fullest response that was potentially available—the doubt remains that the fires that originated in the ACT could have been stopped. There would be little ground for criticism if, despite no effort being spared during those critical first days, the fires had in fact proved unstoppable. Unfortunately, in the Inquiry's judgment, this was not the case.

Many recommendations are made in this report. If they had all been implemented before the fires, would that have made a difference? The Inquiry considers that, had the improvements it recommends in relation to strengthening the initial attack capability of the Bushfire Service already been implemented when the fires first broke out, things could have been different.

Beyond that point, if the fires proved impossible to suppress or contain, they may still have been difficult to stop before they reached Canberra. The Inquiry is confident, though, that with an improved and strengthened bushfire capacity, as recommended, the ACT will be better able to deal with the range of bushfires that are more likely to be encountered in the future. There will still remain the possibility of the occasional very big fire that will fully test the available resources, but the prospect of minimising damage to the city will be improved if the measures recommended are adopted.

The Inquiry questioned at length the personnel responsible for managing the response to the fires and tried to place itself in their shoes so as to reach fair and objective judgments about the critical decision points during the long campaign on the fires. This disaster has had serious consequences for many people, and for the ACT community generally, and it needs to be analysed closely and critically.

Experience is the basis of most of the progression of human knowledge, and there is much we can learn from our mistakes. It is inevitable therefore that inquiries of this kind concentrate on weaknesses, errors and shortcomings. They do not dwell to the same extent on those aspects where systems and people performed satisfactorily or in the way intended.

The Inquiry considers that the basic structure of the ACT Public Service, which underpinned the whole operation and has responded so well during the recovery phase, is fundamentally very sound. Readers need to recognise this when reflecting on the search for improvement that pervades most of the report.

The recommendations made in this report will considerably strengthen the ACT community's capacity to withstand and recover from serious emergencies including bushfires, in the future. The Government has already made a number of decisions that involve commitment to expend considerable sums of money on improving the operational capability of the emergency service organisations. The Inquiry's recommendations, if adopted, will involve additional expenditure.

Finally, a word about the people involved. The individual government officials, employees and volunteers spared nothing in terms of their personal commitment during a long and difficult crisis, then as soon as the crisis had passed they had to cope with the demands and complexities of the recovery phase. After that, the investigators started to come along, forcing many of them to relive the experience, asking them to try to reconstruct events from their sometimes blurry recollection, and requiring them to respond to a myriad of hypothetical, and possibly at times irritating, propositions. The Inquiry is full of admiration for the way those people it dealt with who occupied positions of responsibility or authority during the fires continued to respond to the changing challenges of an event that is, in different ways, very much still the focus of their attention.

Any criticism directed at individuals because of the role they were required to perform is in no way intended to question their integrity or their honesty in doing what they felt in the circumstances was the right thing to do at the time.