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SUBMISSION TO THE COMMONWEALTH GOVERNMENT INQUIRY INTO 2003 BUSHFIRES

The following is a submission into the cause and effects of the various fires started on 8 January by lightning in the areas to the northwest, west and southwest of the ACT. These fires subsequently combined to have a devastating effect on 18 January in the rural, forested and urban areas to the west of Canberra and as they continued to burn over a number of days, and in the Kosciuszko National Park and rural areas to its east.

My personal history and credentials

During the last four years, from March 1999 to March 2003, I was the NSW Member for Monaro. Previous to this, from 1995 to 1999 I was a councillor on Yarrowlumla Shire Council, and member of the District Bushfire Management Committee, the Council's representative on the ACT Bushfire Council and Mayor of Yarrowlumla Shire from 1997 to 1998. I am a former Captain of the Fairlight Bushfire Brigade, in the Yarrowlumla Shire, and continue to be a brigade member, with some thirty years service. I was a volunteer with the brigade during the January fires. Before becoming part of the Brindabella National Park, the McIntyre's Hut area was in the Fairlight brigade area.

I come from a family, which has owned land in the Tidbinbilla and Uriarra areas on the eastern side of the Brindabellas for over 170 years. For decades the Fairlight Bushfire Brigade covered a huge area from the Goodradigbee River in NSW north of Brindabella to Duffy in the ACT, and from Kambah to Belconnen in the ACT, and from north of Mt Coree to the Yass Shire boundary in NSW. Because of the dual jurisdictions and the overstretching of resources, as Captain and President, I called for the Brigade to be split into the NSW Fairlight Brigade and the ACT Rivers Brigade, in the late 1980s. I remained Captain of Fairlight Bushfire Brigade in NSW until the beginning of 1999. My brother Tim Webb is the current Captain. My brother and I are also members of the Mullion Bushfire Brigade to the north and the Rivers Bushfire Brigade in the ACT.

I have been a member of the ACT Bushfire Council for two separate periods, one in the 1980s as a representative for the volunteer brigades and again, from 1995 to 1999 as the representative for Yarrowlumla Shire Council.

HISTORY OF EVENTS LEADING TO THE JANUARY 2003 BUSHFIRES

There are a number of factors that I believe contributed to the severity of the 2003 fires. I will describe these factors and ask that I be given the opportunity to expand on them in the future.

Earlier warnings

I have had grave concerns for some time concerning the possibility of a fire scenario much like the one experienced in January 2003. I called for more hazard reduction in the area, well-maintained fire trails and better co-ordination between agencies and the ACT and NSW Authorities. During the eighties and on through the nineties, some members of the ACT Bushfire Council, myself included, were concerned by the build up of slash and combustible fuels in the pine forests, adjacent to the urban perimeter and in native bush areas. I remember on several occasions discussing the potential for an urban conflagration resulting from spot fires in streets close to the bush areas. One area of concern was the suburbs to the east of Black Mountain, namely, Turner and O'Connor. However, suburbs such as Holt, Isaacs, Curtin and Duffy were also considered due to their close proximity to higher fuel load areas to their west.

Justification to do less hazard reduction

Authorities gave several reasons why comprehensive broad scale prescribed burning hazard reduction in the areas to the west of the urban area was not required on the scale suggested. These reasons included the quick identification of lightning strike locations by electronic means and the comprehensive summer daylight hours fire tower smoke spotting system. (This uses fire towers on Mt Coree, Tennent, Kowen, and One Tree Hill along with other towers in NSW to give accurate locations, weather reports and description of smoke plumes). These factors should enable quick effective response and control in almost all cases.

Reasons were given such as high levels of preparedness and training, likelihood of NSW support, good coordination between agencies and services and planning and hazard reduction on the urban interface have effectively reduced the local risk and damage levels for some time. They have been used to allay the concerns and fears of those promoting a more active fire prevention case. However, the 2001/2002 and January 2003 fires proved that these factors did not work well, and in fact, failed to protect the community.

During my time with the ACT Bushfire Council, members were told of the budget and initiatives deployed regarding Hazard Reduction, this mainly involved mapping and computer modelling. In 2003, much of this work proved to be unreliable and disastrously inaccurate. We were told that the major impediment to prescribed burning was the EPA regulations regarding smoke over urban areas. This fact alone virtually stopped all hazard reduction burning in the bush to the west of Canberra.

Recent history of hazard reduction, Fairlight Bushfire brigade

There were a few prescribed hazard reduction burns between the mid eighties and 2000. I was involved in two successful burns, one in 1989 in an area on the western and southern sides of Pig Hill. There the fuel levels were described by Dave Thompson the FCO of Yarrowlunla as being up to 50 - 60 tonnes per hectare! The second burn was in 1995 in

the Wombat range area, where some 3000 ha were burnt. There was a major spot over to the east. This was because of the inaccuracy of aerial incendiaries and insufficient time for effective control lines. However, they were effective in reducing fuel levels and for training purposes.

NSW Government policies opposed to hazard reduction

Many environment protection policies of the NSW Government have made it virtually impossible to carry out effective hazard reduction. Not only through prescribed burning in cooler seasons, but also through clearing and vegetation disturbance. The Native Vegetation Conservation Act, the Threatened Species Act, the protected lands provisions and the EPA Regulations governing pollution all predominated to hinder hazard reduction proposals. The Wilderness Act has also had a major influence on the implementation of effective control and preventative measures. Over the last eight years there have been numerous occasions of litigation where the NSW Government and its agencies prosecuted individuals, businesses and corporations for breaches.

No consent for hazard reduction proposals

In many instances, when substantial fire risk was identified and calls made for prescribed burning to reduce the risk, the consent authorities, namely the NSW NPWS, denied them. A typical case was the recommendation to remove the very high fuel loads of the timber windrows adjacent to the Dingo Road west of Brookvale. These posed a significant threat to fire control operations and the security of the road as an escape route. The problem was identified to the FCO Yarrowlumla RFS, but permission was denied by the NPWS, even though the areas of excessive fuel loads were on private property. There have been many other similar cases right throughout NSW.

Fire Trails

The lack of effective maintenance of wide fire trails and closing down of much of the fire trail network caused many delays in effective response and back burning. There are many examples where pre-existing trails have been closed off or only maintained with a single blade width. Many of these trails have tree branches inter-connecting overhead and very high fuel loads on either or both sides of the track. The National Parks and Wildlife Service classifies many of these as management trails, not fire trails. I suggest that these definitions serve different purposes, and management trails are simply no use as fire trails in many instances. Fire trail location needs to relate to the topography, fuel and fire history of the local area and the consideration of safe escape routes. There also needs to be an adequate network of effective fire trails in wilderness areas.

Transgrid and fire trail clearing

A case in point: The 330,000-volt HT Transgrid power line clearing to the west of Canberra. Transgrid was fined for over-clearing. However, ironically, the cleared wide easement provided an effective break used by controllers of the fire between 10 and 17 January. The issue of the NSW Government's prosecution of Transgrid through the EPA needs to be re-opened. The protection to the environment, fire fighters and the region's electricity supply afforded by the clearing was, and remains, significant. Any shorter-term so called "environmental damage" caused by the clearing works were temporary in

the first place and much less than the costs and environmental damage caused by the fires through the neglect of fire management plans and insufficient hazard reduction burning by the NSW Government through its agencies. One machine operator committed suicide after the penalties came down. Two long-standing employees with some 48 years experience were sacked as scapegoats. The fire burnt most of the timber removed during the clearing process and was subsequently required to be replaced on the easement.

Problems during the fire

There was a demonstrable lack of on the fire ground coordination in the lead up to 18 January. Again, the interagency and State/Territory factors precluded effective fire control. This resulted in poor or delayed decision-making remote to the fire ground. Radio frequency problems NPWS/RFS/UHF/ACT and logistic control removed from the fire ground resulted in long delays in deployment and back burning operations.

Delays in moving Fire Control to Yarrowlumla/Queanbeyan Regional Centre

The fact that the NPWS tried to retain control from their own building in Queanbeyan for some time before going to the RFS Regional Centre was clearly an error. In a briefing I received from Tony Fleming on 9 January he said the NPWS, 'parks control', were going to re-assess the control situation on 13 January. I understand that the Yarrowlumla/Queanbeyan Fire Control Centre did become operational on 10 January. This is a state of the art, modern regional centre and should have already been in full fire control operation, due to the potential lightning risk and very high fire dangers, at the very height of the 2002/2003-bushfire season. Further to this, the mistaken belief that one incident controller and one control centre could control numerous large fires spread out over hundreds of kilometres, was courting disaster.

Delays and consequences

The focus on saving or protecting threatened species hindered vital decisions, allowing the fire to gain frontage and momentum. This occurred in the McIntyre's Hut fire with the Corroboree Frog habitats to the north of Mt Coree and also the Pygmy Possum habitats in Kosciusko National Park. There are many instances where indigenous sacred sites, canoe trees and specific trees, (old, unique etc) were the subject of delays in decisions for proposed trail work or back burning operations or indeed were to become the subject of large aerial operations to protect them. The decision to create fire trails or maintain existing trails was often delayed or the work not done because of the perceived risk of erosion or siltation. In most cases, the species, habitats and artefacts were severely damaged or destroyed and the erosion and soil degradation resulting from the fires and control works was, in the end, far worse than any potential loss or damage prior to the fire.

Mild weather obscured threat

Weather conditions in the week from the 8 January to 15 January provided ideal control and back burning conditions. The mild easterly weather was not really capitalised on. Ironically, these mild easterly weather patterns may have acted to negate warnings to Camberrans. Since the wind prevailed from the east for this crucial period, many people, and indeed even the authorities, were almost unaware that there were several large fires

burning between 30 to 50 km to the west of the capital in very high fuel loads. No smoke was coming over the city, no heavy smoky mornings, no wind, firebrands or charred embers to warn people.

Briefing with FCO

Prior to 18 January, I met with the Incident Controller and FCO. I questioned whether the Army had been called in. I was told no, even though it had been called to the Bendora fire in the ACT. I also asked whether a Media Relations Officer had been appointed. This arrangement would seem to be very sensible in the week prior to 18 January. Again I was told no, with the FCO's comment that "I suppose I will have to answer the media calls myself."

Lost opportunities

The lack of early surveillance flights and RAFT attack on all the fires is a major factor that ultimately contributed to the high level of devastation. There were a number of fires also started by lightning on 8 January in State Forest areas to the west of the Goodradigbee River. By early attack and suppression these were all controlled and contained. The Gingera fire was left for several days, during which time it was only plotted. When I questioned John Winter, Media Officer of the RFS about the lack of effective use of the RAFT resource, his response was unusual and defensive. He spoke of the danger and death rates of the US-style "Smoke Jumpers". I reminded him that our RAFT operated differently and very successfully. In fact, in a recent article in 'The Telegraph' the RAFT fire control method in inaccessible areas was lauded in the Blue Mountains. This is a very effective, cost efficient and speedy control measure and should have been vigorously deployed, with Army support if necessary, in the face of the potential of the Bendora, Gingera, Stockyard, Broken Cart and MacIntyre's Hut fires.

Warnings and politicisation

Several warnings, which I made publicly, were ignored. As early as my inaugural speech in the NSW 52nd Parliament, on 23 June 1999 (Hansard page 1235) I spoke about the threat of bushfire that would inevitably result from wilderness declarations and lack of hazard reduction - "These [locked up] areas are then at great risk of being entirely decimated by wildfire, due to bad management and massive fuel build-up." I spoke subsequently on many occasions during further debates.

I gave a Notice of Motion in the NSW Parliament in November 2001 stating the potential risk (see Appendix 1). On 10 Dec 2002 (see Appendix 2) I wrote to the Minister for the Environment, and copied to the local FCO, a letter warning of the fuel build up in the Brindabellas. This letter was only ever acknowledged by the Minister's office and never responded to.

The politicisation of the fires was also an issue. As the State Member of Parliament I was only given one briefing from the NPWS on 9 January. I made all other contact. This was also the case for the Kosciuszko fire to the south of Jindabyne, which started in late December 2002. I visited and flew over that fire on 3 January with the FCO and Incident Controller. On 10 January, my colleagues, Andrew Stoner the Shadow Minister for Emergency Services, Katrina Hodginson and I travelled to Yaouk and inspected the fires

in that area, namely the Mt Morgan fire and observed the Gingera fire to the north. In a subsequent media release, the NSW Minister for Emergency Services ridiculed our initiatives.

On 14 January the Member for Burrinjuck and I were flown over the McIntyre's Hut fire. Following the inspection I issued an Urgent Media Release on that day, which warned of the severe risk to fire fighters and property owners, I was again belittled by the State Minister. Again I sought daily briefings. During the week following 18 January the Yarrowlunla/Queanbeyan FCO and Deputy Incident Controller excluded me from an Incident Management Team meeting. I find this extraordinary in my role as the Member of Parliament. I believe this is yet another serious breach of protocol.

That the Minister, the RFS Commissioner and the NPWS and the ACT Agencies ignored the warnings issued earlier and continued to think everything was OK, and some even telling people that there was no threat on 17 January and morning of 18 January 2003, was behaviour bordering on negligent.

Ignored Warnings

Many of these issues are perennial and have over the years been addressed. However, the warning that this very kind of situation would one day occur and will again occur has been repeated over and over again by many people. Namely, Val Jeffery former Chairman ACT Bushfire Council; Sandy Sandison, former Chairman ACT Bushfire Council; Dr Phil Cheney, National Bushfire Research Unit CSIRO; Peter Cochran former FCO Cooma Monaro Council and Member for Monaro; Kurt Lance, former Captain Hawkesbury Rural Fire Service area; many Captains, deputies and volunteers throughout NSW. Lindsay Franklin & Noelene Franklin, Brindabella; Tony Walker, Captain Mullion Bushfire Brigade; Laurie Norton, former Captain Adaminaby Bushfire brigade and interestingly Tim Flannery in "The Future Eaters" - who referred to the inevitable likelihood of future decimating fires following the 1994 fires in the Royal National Park. The locals in this area, myself included, had forecast the following scenario: - A series of lightning strikes burning for some time before an extreme weather day coincided with a fully committed (or exhausted) fire fighting resource deployed over a large inaccessible area resulting in widespread serious wildfire damage, and even loss of life.

NPWS spin on the history of fires

The NPWS Director General and many staff made the repeated comments to the effect that these were "one in a hundred years fires and were unstoppable". These must be seen as misleading and inept statements made by those wishing only to justify their ineffective over-protectionist policies and outdated philosophy of land management by minimum input and little or no intervention.

However, a detailed chronology of fire history in southeast Australia clearly shows that the 2003 fires were *not* a 1 in 100 year event. Accounts by early explorers from as early as Cook in the 1770s onward, plainly describe many smokes and fires and a landscape shaped by fire - "There is no part of the world in which fires cause such havoc as in New South Wales,.....The climate, on one hand, which dries up the vegetation and the wandering habits of the natives on the other, which induce them to clear the country before them by conflagration,..." (Sturt, from Dave Ryan, *Protecting our Forests*.)

Many of their journals describe the number of fires and the open nature of the bush. Various photographs from the later 19th century show clearly a more open and scattered bush landscape with fewer, smaller trees and a far lighter shrub understorey. Indeed, the Cotter area and the Murrumbidgee at the site of Uriarra Crossing in 100-year-old photos are shown with a far sparser bush, more open, with much shorter trees than the present (Moore, B. pp. 169 & 171). These descriptions are vastly dissimilar from the heavy thick forests now present in areas that haven't seen recent hot fires or fuel reducing cooler fires for many years.

In 1927 John Gale details a series of bushfires in the Queanbeyan District from as early as 1858. There were other serious fires in 1869, followed by a twenty-year respite until 1888 when again there were extensive fires. Serious bushfires were indeed a regular feature of the Queanbeyan area, "...but on 31st December, 1904 and 1st January, 1905 the worst fire experienced in the district broke out" (Gale, J., pp. 113 - 114). Luke & McArthur confirm many of these fire years. pp. 331 - 334.

Luke and McArthur noted that "There are few records of bushfires before 1915" (p. 296). They then go on to detail the 1915/16 season, saying that most of the damage occurred on 24 January, when hot north-westerlies and 40 C took their toll. The 1925/26 and 1926/27 were very serious in many parts of south-east Australia. And, of course, the 1938/39 fire season which, reached its peak on the 14 January and was very similar in cause, duration and effect to 2003 season. The 1943/44 fire season caused a lot of concern, as did the 1951/52 season right throughout south-east NSW and the ACT. One must be cautious when making comparisons with the present day, because in 1939 and indeed right up to the post war era there were only a few, untrained ill-equipped "fire fighters" available and droughts and rabbits helped contain the fires to bush areas.

The 1952 South East fires, which also threatened Eden and Bega were probably the first where chainsaws and heavy forestry equipment was used to control the conflagration. Later, large-scale fires hit the south-east of NSW in 1967 around Goulburn. There were also many fires in the early 1970s, followed by the 1983 Namadgi fire in the ACT and, just eighteen years ago, the 1985 Canberra/Queanbeyan District fires threatened houses and resulted in the death of a volunteer fire fighter.

The very southern parts of Kosciuszko National Park were decimated in the 1988 Byadbo fire, after which there was a Coronial inquiry. Those inquiring into the 2003 fires should also look at the findings of that inquiry. The fire resulted in a "Moon Scape" still clearly visible today. The NPWS was found guilty of ineffective wild fire management. Regrettably, the recommendations of the inquiry were only ever partly implemented for a few short years before the service reverted to its non-interventionist policies.

Within the last few years there have been the 1994 and 1998 Sydney fires and the 2001/2002 Canberra and southeast fires. These last three fire seasons saw the loss of many houses in Sydney and on the south coast. The Canberra fire, deliberately lit, burnt from Huntly to the Mint.

Things have changed today. The rabbit is gone and grazing animal numbers are at historic low levels. There has been very little hazard reduction over recent years, let alone the 'management by fire' of the pre-European Australia. All these circumstances coupled with better farm management; conserved grasslands and large private bush conservation

areas along with restrictive 'anti farm' policies described earlier; massive increases in National Park, Public Reserves and Wilderness areas; the record high fuel loads; and problematic prevention suppression and control all combined to make the 2003 South East fires in NSW, the ACT and Victoria the worst on record. Unfortunately, every two or three decades much of Australia - perhaps more often for the southeast - the risk of serious wildfires is a real probability.

The most recent coronial inquiry into the deaths and injuries of the NPWS officers during a botched prescribed burn at the Ku-Ring-Gia National Park found that the NPWS has a case to answer for putting fire fighters lives at risk through ineffective and dangerous implementation of fire management plans and for the causes of the loss of life and horrific injuries to fire fighters. This finding alone should disqualify them from any further involvement in the fire control operations.

APPROPRIATE LAND MANAGEMENT POLICIES AND PRACTICES TO MITIGATE THE DAMAGE

Firstly, I see the issue of the lack of hazard reduction through the use of cooler season prescribed control burning as being the major issue. Secondly, and added to this, the issue of adequate, effective networks of well-maintained fire trails must be planned, funded and implemented. Thirdly, the acknowledgement and use of local knowledge must be given due weight. Furthermore, the co-ordination of agencies, authorities and constitutional jurisdictions must be streamlined. One authority must be in control with realistic fire management plans as the tool to coordinate responsibility, response and control. Public land authorities must bear the cost of fires that start on their lands and subsequently destroy private property. They must take, as private landowners must, every possible action to prevent fires escaping from lands under their control.

Many officers and senior personnel of the NPWS maintain a philosophy that natural wildfires, particularly hot summer fires which proliferate and cover large areas, are a natural event which shape our environment and the species that depend on it and that they should not be interfered with. They consider that the use of more numerous cooler fires (say every 5 - 8 years), would proliferate fire tolerant species and because they are man made, they are interventional and not natural. They think that these kinds of fires damage the bush ecology. They must take note of the ecological damage, decimation of species and costs of the recent hot wildfires.

Their philosophy is at odds with the firestick farming history of indigenous Australians who regularly lit many small fires in the cooler seasons to manipulate the environment. Firestick fires resulted in the more open grass and woodland areas described by Sturt, Banks, Mitchell and Cook. In those days, entirely different species were predominant along with much, much lower fuel levels across most of the landscape. Its only really in the last twenty or so years that the fuel levels have been allowed to build up; the forest has thickened; shrub species proliferated; run off to water courses has dramatically reduced and the potential for very hot damaging wild fires has resulted

The astute application of aerial and ground incendiaries, both for back burning during control and suppression and also for broad scale hazard reduction, is a major tool available for use today. Training during large and small scale prescribed burns is a very

important side effect, and usually takes place in more benign conditions than that experienced in hot summer blazes. Mechanical removal of debris and high fuel levels is often very expensive and labour intensive and only really successful in smaller areas or adjacent to high value assets. Slashing around buildings, on road verges and the sides of fire trails is very effective. The planting of fire resistant species, lucerne paddocks, and grazing areas around urban developments may potentially prove to be a cost effective long-term solution. Planning for fuel-reduced buffers, where possible, is extremely important and must have an ongoing priority. Penalties for not removing high fuel loads, which pose a risk to property, could be used as an incentive but must be equally applied to public bodies as well as to private people and corporations.

Natural Resource management should come completely under the control of the Commonwealth. Alternately, consistent complimentary State legislation should be enacted to ensure that large scale hot bushfires, such as those in January 2003, are prevented as far as possible in the future. I agree with leading wildfire expert, Dr Steve Pine, who on a recent '60 Minutes' program came down strongly on the side of those who promote prescribed burning as the only really effective broad scale hazard reduction tool available to us.

However, since land management, and therefore bushfire mitigation and rehabilitation, lies within the States bailiwick there should be urgent Commonwealth, State and Territorial constitutional changes to bring about proper protection and bushfire control. Systems need to be simplified along with the mass of conflicting regulations hindering effective natural resource and land management over the whole ecological geographic area. This should be repeated over adjacent differing environments irrespective of State or Territory borders until all land types - coastal, temperate and subtropical, tablelands, slopes, plains, heath lands, montane, subalpine and alpine - are covered by a comprehensive interwoven strategy.

ALTERNATIVE OR DEVELOPMENTAL BUSHFIRE MITIGATION AND PREVENTION APPROACHES – RESEARCH

Greater use of fire resistant species and building materials should be investigated as a preventative approach. Research into fire control methods, equipment and safety gear along with fire behaviour in a large range of varying country types and weather conditions must be adequately funded and resourced. Effective training methods and better ways to keep volunteers interested and motivated also need attention.

The strategic location, design, width and gradient of fire management trails are major tasks. The National Bushfire Research Unit has played a great role in this kind of research along with very valuable fire behaviour analysis. The privatisation and potential breaking up of CSIRO is of concern for the future of this valuable work.

APPROPRIATENESS OF EXISTING PLANNING, BUILDING CODES

Generally, materials are of a lower combustible index today than those from previous times. Brick, concrete and steel are more common today than timber. Tree species, gutter design and garden types are probably more important in the urban context. Insurance companies policy exclusions and education in the community must be considered

alongside building codes. Proximity to fuels, risky locations on top of steep westerly slopes and accessibility problems need to be addressed with adequate buffer areas and localised fire fighting protection, pumps, water, protective equipment and training. But all these factors must be considered as complementary with ongoing, adequate and effective hazard reduction strategies.

THE ADEQUACY OF CURRENT RESPONSE ARRANGEMENTS FOR FIREFIGHTING

Clearly this is an area where there must be constant improvement. Many of the problems that did occur resulted from the poor coordination between State and Territory authorities at the highest level, right down to the critical interaction between replacement crews each morning and night. Equally important is the breakdown in communication between out of area crews, crews from different agencies and local brigade members and landholders. Generally, co-ordination is better closer to the fire ground.

Contrary to statements made by the NSW Minister for Emergency Services to the effect that "every Rural Fire Service unit was in direct radio contact through the PMR network and units were just a click away", there were still many communications problems with non-compatible radio frequencies, stuck transmit buttons and the difficulty in monitoring up to four radios in a vehicle. Both the ACT and NSW networks froze to static on many occasions on 18 January.

It was apparent that there were many more problems up the line to the incident controllers and even further to the distant hierarchy of the RFS and NPWS, complicated by interference from the governments. People directing the fires remotely had no idea of the topography, terrain, fuel levels, flame heights, accurate up-to-date fire front locations, local weather and unit strength. In the past many ACT fires were controlled by the CFO or DFCO in a helicopter.

THE ADEQUACY OF DEPLOYMENT OF FIREFIGHTING RESOURCES ETC

Ignored recommendations, operational problems, volunteers

The recommendations of the NSW Parliamentary enquiry into the 2001/2002 fires have largely been ignored. These include the auditing of fuel loads; the auditing of fire trails and the fact that the NSW RFS should control fires, not the NPWS. The NSW NPWS has demonstrated that it lacks the specialist fire control knowledge, equipment and philosophical viewpoint to implement fire management plans, large-scale hazard reduction programs or urgent and vital large-scale control and suppression strategies.

The removal and non-replacement of 4wd fire tankers for Fairlight Brigade and the lack of a command vehicle were also significant factors. Radio communications between visiting units again caused delays. Coordination between the ACT Emergency Services and NSW authorities was lacking.

Cooperation between NPWS staff and volunteers also caused friction. The paid NPWS staff also received overtime payments. Regrettably, there are again instances where the

employment conditions of the Parks service proved to be at odds with the volunteer contribution. Command and control parameters were clouded, as were the standby arrangements for volunteers who had committed themselves to fighting fire and saving life and property and then were told simply to stand by or return to base. This is even of more concern when the volunteer resources have been deployed away from their own areas, which may have also been subject to fire threat. This unfortunate situation resulted in the loss of property in the Naas Valley.

Even the operations of the aerial fire fighting resources were often wasteful and ineffective. There are many instances when chartered aircraft on stand-by rates sat idle for hours and days because of bad weather or lack of constant co-ordinated operations. There were also many examples when out-of-area brigade task forces were called out, travelling great distances in some cases, and then were turned around and stood down.

I have some concern over the accuracy of definitions of fire prone areas. Many farm areas adjacent to bush areas and National Parks have, in fact, been declared as Low or Medium Fire Risk areas when clearly, proximity to high fuels, inaccessible locations and potential for fires to spread to urban/built up areas or pine forests should surely mean higher risk classifications.

Provisions of Standards of Fire Cover as well as suitable brigade vehicles for the terrain must be addressed. The deployment of private vehicles and use of 2WD/4WD in mountainous areas must be investigated. Better-equipped brigades add incentive to active brigade membership.

The roles of SES, Police and Town Fire Brigades, power, water and telecommunications providers along with Centrelink and DoCS must be fully evaluated. There were clearly problems with the speedy flow of information from the Fire Control Centre to the Emergency Control Centre at the Yarrowlumla Council offices. On a larger scale, there were major co-ordination, briefing and communications problems, not only between the ACT and NSW, but also between the Cooma and Yarrowlumla and Snowy River Shire and NPWS (Jindabyne) Control Centres. This hindered expedient decision-making processes.

LIABILITY, INSURANCE COVERAGE AND RELATED MATTERS

Cost recovery should not come out of rates or compulsory levies on ratepayers. Homeowners insurance should perhaps become compulsory like Third Party Motor Vehicle TPI insurance. Governments should provide incentives for people to insure and protect themselves. Ex-gratia payments should be reduced, or not provided, if an individual is not insured, increased if they are. The costs of proactive prevention and education could be borne by the community at large. This would be far less expensive than the immense costs incurred by those unfortunate to be burnt and far, far less than the overall costs incurred by taxpayers due to the loss of irreplaceable public assets like the 1929 Stromlo Observatory, the many High Country Huts, other heritage structures and the Tidbinbilla Nature Reserve.

Since Government Agencies with their direct responsibility for land management and bushfire prevention and control were unable to contain the fires or restrict the damage,

then the Government is liable for massive compensation. This is not new. The SA Government, Telecom, power transmission companies and State Rail have all paid large amounts in compensation due to fires in the recent past. Conversely, the NPWS have pursued costs and damages from private landholders who 'allowed' fire to escape on to public lands. It is only fair that the government should also be liable.

The provision of emergency funding under section 44 should be changed to reward early suppression and control and penalise States and authorities for slow, inappropriate responses, which end up weighing heavily on the public purse. Prevention is far better than cure, reducing the risk is far cheaper than high control costs and severe damage.

Real and long term costs and consequences

The costs and losses as a result of the fire are beyond my ability to quantify. Losses on my family's property, 'Fairlight' included over 480 ha of pasture and bushland burnt (two burnt pasture paddocks were sown just last year); at least 24 km fencing; a small shed; sheep yards and a quantity of poly pipe and fencing materials; 11 ha pine plantations; many shade, shelter and amenity plantings; numerous 100 year old plus native paddock trees and a 500 tonne stock pile of yellow box and red gum fire wood. This alone totalled well over \$200,000. Brookvale, to the south of Fairlight, lost almost all its pastureland, most fences were damaged, hay sheds and yards lost. Many neighbouring properties suffered similar losses. 'Huntly', a few kilometres to the east of 'Fairlight' in the ACT, lost some 23 structures including a soldier settler's house, manager's house, two woolsheds, three haysheds and fifty kilometres of fencing (*Heritage in Trust*, p. 14 & 18).

Property losses as a direct result of the fire are one thing - secondary losses due to back burns often many kilometres ahead of the main fires, another. There are many examples in the northern and eastern areas of the Kosciuszko National Park where large losses were suffered. Standing dry feed, particularly during drought, is a very valuable grazing resource. Many hectares were lost throughout the region. Farm buildings and most stock are insured for fire loss or damage. However, fences, tree plantations, grass/feed, water supply infrastructures and amenities are often not insured, yet these losses contribute to major long term personal losses.

The losses of public infrastructure included road damage; power lines and outages; telecommunications; the Stromlo forestry depot containing irreplaceable forestry records; the Stromlo, Uriarra and Pierces Creek settlements; Tidbinbilla Nature Reserve; Mt Franklin Chalet; YMCA Camp Sturt; Greenhills and Stromlo Observatory. These assets were all entirely lost. Although the Observatory was insured for some \$55 million, this will not cover the heritage loss. The buildings decimated in the fire included the 1926/29 Administration Building; the 1929 Director's House; the 1929 Reynolds 30 inch telescope; the 1950s 50 and 74 inch telescope buildings; the 1911 Oddie telescope building and several other buildings (*Heritage in Trust* p.7).

The Snowy Hydro Infrastructure suffered some \$10 million in direct losses. Country Energy suffered high losses. The real and heritage losses of the Huts of the High Country and the buildings in the Tidbinbilla valley, many of which are simply irreplaceable are very, very high. The negative impact and direct costs to roads as a result of excessive use during fire times and lack of water during grading and maintenance during hot dry times resulted in many gravel roads and tracks being irreparably damaged. Some gravel roads

and many trails were literally cooked when the fire passed over them or burned furiously in the adjacent windrow of timber.

Many hundreds of kilometres of fencing have been lost. There is little compensation to help replace this vital private property and grazing industry infrastructure. Indeed the NPWS are only paying for half the material costs and then only for fences on their boundary. The provision of plain wire and posts is not sufficient as it doesn't take into account clearing costs of the damaged fence and fallen timber, netting replacement, gates and end assemblies or labour costs. Many fences are in fact on private property because of the lie of the land and the nature of the useful grazing areas; they in fact fence much private bushland into the National Park area, however the Parks refuse to pay for their replacement.

Impact on businesses and tourism

The losses to the tourism industry in the ACT, NSW and Victoria both during the times of the fires, but also in the months and years ahead, will add up to hundreds of millions. Many tourism, hospitality and service businesses in the Snowy Mountains have suffered crippling losses. The Thredbo Road was closed for some 21 days. Jindabyne and Thredbo area tourism businesses lost almost all patronage from early in January, through the Australia Day long weekend up to and including Easter, a major percentage of their summer trade. Fishing businesses, the motel and pub along with almost all the other businesses in Adaminaby suffered almost complete loss on income for some weeks when the Snowy Mountains Highway was closed due to the Yarrangobilly fire.

Public roads remained closed for weeks when there was no real risk after the fires and no real danger other than smoke over the road. Many public roads provide the only real access to private property and yet a closed road sign may have prejudiced an insurance claim in the event of accidents.

Environmental damage

The costs of environmental and ecological damage are also astronomic. The loss of species, timber resources, habitat and the amenity and beauty of the bush and parks for some time is beyond calculation. The costs of pollution to water catchments for urban use and to the dams, creeks and rivers and damage to aquatic species and habitats need to be calculated so that the high losses can be used to put a case for better prevention of future fires. Similarly, the loss of millions of tonnes of soil and humus through direct burning and as a result of inevitable erosion through the actions of wind, rain, exfoliation, frost heave and snow melt should be calculated.

The flow on effect to the oceans fish reserves and aquatic biota from very hot fires over vast areas, perhaps even more devastating due to the drought and influences of El Nino and the Southern Oscillation index, will be significant and long lasting. Another factor not considered but which must be taken into account, is the release into the atmosphere of the hundreds of millions of tonnes of carbon and the effect on the global weather systems and warming. Australia's stance on the Kyoto Protocol again may well be vindicated because of the lack of protection provided by the States with ineffective wildfire prevention and control strategies.

The carbon credit trading plans and sequestration models must surely be revisited in light of the effects of the 2003 fires. This scale of degradation of the natural resources belittles any impact of the grazing or forestry industries over the duration of white settlement.

Control, mitigation and costs

The substantial direct and indirect costs of helicopter and aircraft hire must be noted. Aircraft damage and losses are probably covered in hire charges and insurance, but the damage to airfields, Jindabyne and Polo Flat in particular, must be rectified. The issue of water conservation is very relevant. The NSW 'Harvestable Right' legislation, and Farm Dams policy ignores water storage for fire control. The Act must be amended.

Long-term suppression and containment costs must be weighed against the benefits of quick response, effective RAFT attack and local area brigade autonomy, control and ability to call for resources. Effective fire management plans that are up-to-date and implemented at a very early stage must be put in place. Immediate control and suppression strategies, must be investigated, implemented and monitored. In rare cases, these may even include "let it burn for a few days" provided the threat to life and property is negligible and conditions are mild and fuel levels low.

Control and containment must generally be of a higher priority than trying to save individual threatened species, individual habitat trees or individual local area ecological communities. These species, relics, artefacts and ecological factors must all be lumped in together and protected by buffers within the parks, hazard reduction and other control/prevention methods. The costly and futile pre-occupation with trying to preserve these threatened species and artefacts while the front of the fire raged around and moved on is an issue that must be addressed. The ultimate control of the fire must rest with the RFS. The NPWS must not have a fire control, incident controller or deputy incident controller role.

THE ROLES AND CONTRIBUTIONS OF VOLUNTEERS

Regrettably, the lowly volunteer and the even lowlier farmer with private equipment have been looked down upon. And yet it is these very people who put the fires out. Often it was meddling from the remote control rooms that prevented timely action. In other case the volunteers just went ahead and made their trails and lit their back burns despite being told not to. In most cases this resulted in best on-ground judgement at the time and resulted in effective fire control.

The value and historic success of the volunteer resource, particularly when coupled to the input from farmers and landholders, cannot in my opinion ever be entirely replaced by a paid service. A couple of wet years would undoubtedly break the bank as well as enthusiasm levels of any paid fire fighting resource.

Authorities and the media quickly forget that it is usually volunteers and farmers who patrol the blacked out fire perimeters for weeks after the 'bad' day, putting out restarts, chimney trees and underground fires. They bare the cost. Fires were still burning 4 weeks after 18 January on Fairlight.

Failure to use local knowledge

There was a failure to use local knowledge and information during the fires. This is a major concern and was also evident throughout the fires to the west of the ACT and in Kosciuszko National Park. Incidentally, this appears to be an endemic problem in NSW and was also evident in the 2002 fires in the Deua, Araluen and Krawarree areas around Braidwood. A former Group Captain of the area to the west of the ACT in NSW, who has very good local knowledge, was told to 'get out of the control room and stop meddling'. He had called both the Captains of the Brindabella and Fairlight brigades shortly after the lightning strikes. This action was destabilising and upset the captains who had built up a very good rapport with Neil Donoghue.

The case of the Mullion Bush fire brigade which effectively slowed down the northern perimeter of the McIntyre's Hut fire in the period 19 to 25 January, and also the work done by Will Goggin and Liam Cotter south of Michelago, prove that local knowledge is a very powerful resource often overlooked. It is often the case that those in the HQ controlling the incident have no idea of the local areas or local knowledge. This was the case for the McIntyre's Hut fire and the fire, which came through Namadgi from Bendora, Gingera and Stockyard.

The excellent local knowledge of Barry Aitchison as FCO Snowy River Shire and the Deputy Incident Controller in the Kosciuszko National Parks fires testifies to this. Unfortunately, Barry was not made incident controller when Dave Darlington went on leave. Instead a NPWS Senior Manager, Tim Sheppard, from the south coast was made incident controller. This ignored Barry's extensive local knowledge, personnel management and fire fighting skills. It also meant that the NPWS and not the RFS remained in charge.

It is ironic that many stories of hindrance, wrong deployment, delays or inaction come from these very volunteer fire fighters, yet, and rightly so, they were lauded as the saviours and heroes after the event.

Fire is a major shaper of the environment, it must be properly managed

Tim Flannery's book, "The Future Eaters", details many instances where fire is the main cause for species change and the evolution of our eco-systems during a period of tens of thousands of years. Flannery stated that firestick farming resulted in a patchwork of burned country to the extent that widespread wildfires could not take hold. History has demonstrated that this is, in fact, a correct hypothesis. Another interesting idea that Flannery expounds is that due to predation a lot of fauna destruction occurs following the fires. This means that even for those animals lucky enough to escape the fire itself, then having to forage and survive on a much-reduced food resource and face the dangers of scavenging and predatory birds and mammals remains a distinct threat to their lives for some time after the fire.

This situation poses yet a further significant cost, that of lost or decimated species, which has not been recognised as being a consequence of widespread hot wildfires. Strangely the NPWS seem unaware of this. Shortly after the fires they called for people to come and see the fire-decimated areas - 'nature at its most awesome' – was the catch cry, pointing out that many animals and birds, predominantly raptors (predatory birds) were to

be seen! Apparently, entirely missing Flannery's point that these aggressive predatory animals were now preying on any survivors.

In his groundbreaking book, 'Firestick Farming', Prof. Rhys Jones writes about the use of fire by the aborigines and gives them credit for moulding the Australian landscape through the varied use of fire as a tool. Jones also wrote about the role and management of fire in our national parks. Now is the time to revisit these proposals.

Josephine Flood in her book, 'The Moth Hunters', stated that Aborigines, when visiting the high mountain ranges from the Brindabellas down to the main Kosciuszko range, lit fires to create smoke that caused the moths to fly within a metre of the ground, rather than higher, making them far easier to catch. These annual pilgrimages by the aborigines resulted in a mosaic of burns along the ranges.

Speaking at the 1994 Symposium on Biodiversity and Fire in North Australia, Tony Press concluded by saying ".....fire is probably the most visible expression in the landscape of Aboriginal land management: fire is an essential ingredient in the proper management of flora and fauna in Northern Australia" (p. 23 *Country in Flames*). I agree with this statement, and believe it holds true for the south-east of Australia as well. I don't think Mr Press is referring to the kind of fires witnessed in January this year.

Speaking in the NSW Parliament on 20 June 2000 (Hansard page 7176) during a Matter of Public Importance debate following the injuries and unfortunate deaths of NPWS fire fighters during the botched Ku-Ring-Gia National Park hazard reduction operation, I said - "Fires are an inevitable consequence of our environment following lightning. Rain from time to time, and good seasons cause a build-up of fuel. If [wildfire] it is not properly managed fire fighters are placed in great danger."

Fires know no land tenures, if left alone they are uncontrollable and destroy life, property and the environment. Their control is immediately paramount and should not be jeopardised by factors like those present within the protection philosophy of the NPWS. Unless the lessons are learnt and the necessary changes made, the cycle will surely repeat itself and rather than quick effective responses limiting the very costly fires and damaged environments, we will see again wild fires of the scale, magnitude and devastation of those most recent January 2003 fire.