

**REPORT OF PROCEEDINGS BEFORE**

**JOINT SELECT COMMITTEE ON BUSHFIRES**

**¾¾¾**

**At Nowra on Monday 22 April 2002**

**¾¾¾**

**The Committee met at 10.30 a.m.**

**¾¾¾**

**PRESENT**

Mr J. C. Price (Chair)

The Hon. Rick Colless

The Hon. Tony Kelly

Mr E. T. Page

Mr R. H. L. Smith

The Hon. John Tingle

Mr G. R. Torbay

**CHAIR:** Good morning, ladies and gentlemen. I apologise for our latecoming; unfortunately, we could not take account of the weather. Nevertheless, I declare the meeting open and I thank the witnesses for appearing before this Committee today. Members of the Committee look forward to hearing your evidence. I am advised that you have been issued with a copy of the Committee's terms of reference and a copy of the Legislative Assembly's Standing Orders 332, 323 and 334 that relate to the examination of witnesses.

**PETER GERRARD RYAN**, Regional Manager—South, Rural Fire Service, 2 Crown Street, Batemans Bay, sworn and examined:

**CHAIR:** Did you receive a summons issued under my hand to attend before this Committee?

**Mr RYAN:** Yes I did.

**CHAIR:** Do you wish to make an introductory statement in support of your submission?

**Mr RYAN:** Yes, a very short one. I apologise for not having my submission ready. I received notification late and I am actually on annual leave. I will make a short statement on who I am and where I come from, and I will talk in general terms of the fires in the South Coast. After a 17-year career in the New South Was Police Force I became a member of the New South Wales Rural Fire Service as a fire control officer in Kyogle in 1993. In 1995 I went to Richmond River where I was a fire control officer until 1998 and I became the central regional co-ordinator for the Rural Fire Service based at Young. In the restructure last year, I was fortunate enough to win the position of Regional Manager—South, and I took up the position during the last week in July 2001.

In relation to the fires that occurred in the region's south and in particular those that occurred on the South Coast at Moruya, or in the Moruya district or the Shoalhaven district, I will give a quick outline because I know that people following me will probably talk about this in much more detail. I will just give my understanding of how, why and when these fires began. I will talk firstly in relation to the Deua National Park because that fire started earlier and had been burning for some time prior to a section 44 declaration being made. That fire started in a place called Merricumbene some three weeks before a declaration was made in relation to it on 28 December 2001. As a result of the fire investigation was carried out, it was ascertained that that fire started as result of a lightning strike during a storm that went through the area.

A couple of weeks later a number of fires began at Eulah Creek which is north of Merricumbene and which is also in the Deua National Park. Effectively there were two fires burning in the park simultaneously for a period. Eventually those fires hooked up and became one fire and for a short period—albeit very short—there was high potential for it to impact upon the town of Moruya and possibly the more southerly villages and towns of Eurobodalla and Bodalla. However, that never eventuated, thankfully. The Merricumbene fire, even though it had been burning for three weeks, was being monitored by the National Parks and Wildlife Service as is normal in situations where the fires are in very inaccessible country. The declaration was made on my advice as a result of what had occurred on Christmas Day in the Shoalhaven and because of the fear of the potential for the fire to make a run to the coast, as did the Shoalhaven fire.

As I said, a declaration was made in relation to those two fires which eventually became one fire. I believe that there were 58,000 or more hectares that were eventually burnt out as a result of that fire. Fortunately there were no injuries and obviously there was no loss of life. To the best of my knowledge there were no property losses other than the biodiversity issues that occur within national parks and that possibly impinge upon State forests. Mr Terry Tow, the fire control officer from Eurobodalla, was elected as the incident control officer for that fire and managed the fire generally from Moruya with a backup office consisting of Rural Fire Service and National Parks and Wildlife Service personnel in the town of Braidwood which falls in the Tallaganda shire which minimally was under some sort of threat from this fire. That is a very brief rundown, and there will certainly be much more detail given later on today by the National Parks and Wildlife Service in relation to that fire.

In relation to the other five that has been named the Hylands fire, it also began as a result of a lightning strike. I believe that fire investigators from the southern region Rural Fire Service pinpointed the origin of that fire. It was caused by a lightning strike deep in the hinterland west of Nowra and that is similar to the country in the Deua National Park, that is, very rugged land and at times inaccessible land, from my observations and conversations with people who would know in the local area. On Christmas Day that fire took a run, to use the jargon, towards the coast and in its path were the villages of Falls Creek, Tomerong and eventually the towns of Huskisson and Vincentia where a substantial number of houses were lost. I count the loss of a dozen houses as a substantial loss in anyone's book. There were also losses, although minor, at Falls Creek and Tomerong, and businesses were affected as well in all those areas.

On 2 January a major run occurred and it impacted on the town of Sussex Inlet generally on the northern side of Sussex Inlet Road and towards the town as well as the beaches and villages surrounding Sussex Inlet. I witnessed the fire behaviour on that particular day myself and I must say that, although I have been in this game for only nine years and although I have seen some major fires including those in the Pilliga and in the Kyogle district in 1993-94 which were major fires, I had never seen fire behaviour like it in my life and it can only be described as frightening. The run that that fire took down Sussex Inlet Road threatened many houses and other properties and impacted on the town of Sussex Inlet and wiped out homes, businesses, scout halls and even impacted on the police station and the local rural fire brigade. It did not come under any control until things became cooler later that night. I witnessed what I can only describe as an outstanding firefighting effort from not only the Rural Fire Service members but also from members of the National Parks and Wildlife Service, the New South Wales Fire Brigade and other agencies and that were present. They virtually put their lives on the line to help to save people and their properties.

Unfortunately the fire took another run two days later from a place called Jerrawangala. I will provide a map to the Committee. That fire impacted again on Sussex Inlet but this time on the southern side of the road. It caused similar damage around Berrara and the Sussex Inlet township itself. I would like to say at this point that the fire behaviour was so bad particularly on the first run—and this can only be indicative of the weather conditions and the dryness of the land at the time—that firefighters were actually fighting crown fires, which are fires in treetops and which occur normally during the middle of the day in the worst extreme weather conditions. They were fighting those fires between 12 midnight and four in the morning and were actually doing property protection along the Sussex Inlet Road at that time of day and night. Valuable resources that could have been used to help to contain that fire were being utilised to make sure that property protection was provided.

On 7 January the fire took another very severe run. I must say that the run I saw on that particular day headed directly for the village and the hamlet of Conjola and Fishermens Paradise which sort of brought it along to Bendalong and Red Head at a place called Manyana and other places. It was probably the most extreme fire behaviour we have ever seen. It was the middle of the day and I can liken it only to an atomic bomb going off and the mushroom cloud that comes with that which I have seen from TV documentaries and the like. It took a very severe run. I do not know the timing but I did hear one quote that it took a 22-kilometre run in something like three hours which in anyone's terms from a fire perspective is just an amazing run. I believe it had a six-kilometre front and impacted upon houses in ridge country closer to the coast towards Fishermens Paradise. I can only say once again that the use of the now famous *Elvis* and five other helicopters that I witnessed, including a Squirrel helicopter from the Navy and other smaller choppers, saved numerous houses in the Conjola area. There are no two ways about that.

There were hardly any volunteers available on the ground because of the severity of the fire and they were restricted solely to property protection at that time. This was the case in each of these runs. Volunteers were not expected to fight the fires. Eventually the fire was halted again. There was a bit of a change in the weather, a southerly influence hit upon the fire very late in the afternoon, and that slowed the fire down. That then enabled the firefighters from all agencies to begin the clean-up of that fire. That is about it in a nutshell. I just thought I would paint that picture for you so that you would have some understanding of what the situation was like here. I witnessed the Conjola impact, and again I can say I have never seen anything like it. I commend, through this Committee, the outstanding dedication of the firefighters. I say that in general terms. I am not talking about just the rural firefighters; I am talking about the people in helicopters, the people on the ground, the people from all agencies, including interstate agencies, who were there on that particular day.

**The Hon. TONY KELLY:** Hazard reduction planning and implementation are primarily the responsibility of individual bushfire management committees. In this case, in the southern region, what is the current status of those plans?

**Mr RYAN:** We have 34 districts in the new region under the new structure. I would have to say as of four weeks ago all plans are now submitted and are either signed off or are currently on display.

**The Hon. TONY KELLY:** Does that involve everybody—the councils, National Parks and so on?

**Mr RYAN:** Yes. The bushfire management committees are the local authority that determine what hazard reduction will be done throughout the year. That is done to a plan. That involves people from all agencies—council, National Parks, State Forests, Nature Conservation Council, local Aboriginal land councils, police and all other agencies named in the Act. That is where the local input comes from. Volunteers are included.

**Mr TORBAY:** Mr Ryan, you have mentioned on a couple of occasions in general terms the efforts of the various firefighting agencies. Could you tell us a little bit about the co-ordination of the various systems? Was the effort co-ordinated well? Did the system, procedurally, between the agencies flow very well?

**Mr RYAN:** Yes, it did. I can only put that down to the bushfire management committees having a planning process in place. They worked very well together in the pre-season on making plans. I think the proof of that was seen during the fires. Yes, they did work very well. Certainly, there were some minor issues that needed to be dealt with, as occurs in any incidents, but generally they worked extremely well. That was borne out by the fact that the volunteers and the salaried staff in particular from Queensland, New Zealand, Western Australia and other places that came here took it upon themselves to comment to me personally about how well the co-ordination ran.

**The Hon. RICK COLLESS:** Mr Ryan, I want to follow up some of your comments on hazard reduction. On page 9 of the submission is a definition, taken from the Rural Fires Act, as to what comprises hazard reduction work. I find it rather interesting that grazing is not included in that definition as hazard reduction work. Is it your understanding that grazing is not considered to be a hazard reduction work?

**Mr RYAN:** I suppose it would be, yes.

**The Hon. RICK COLLESS:** Do you see grazing as an appropriate way of reducing fire hazard?

**Mr RYAN:** I think any activity that reduces the fuel load probably should be counted as some form of hazard reduction.

**The Hon. RICK COLLESS:** Do you then see it as an oversight that grazing is not listed in that definition, and in those points talking about hazard reduction and defining hazard reduction? Do you think it would be appropriate to have grazing included in that section?

**Mr RYAN:** I was not party to the policy that was made.

**The Hon. RICK COLLESS:** I am just asking you for your opinion.

**Mr RYAN:** As I said, anything that would reduce the fuel load probably should be or could be construed to be hazard reduction.

**The Hon. RICK COLLESS:** So grazing would?

**Mr RYAN:** If it does that, yes.

**The Hon. RICK COLLESS:** I want to refer you to the orders that can be issued to land-holders under section 66 of the Rural Fires Act to undertake hazard reduction works. If an order issued under that section may be in breach of either the Threatened Species Act or the Native Vegetation Conservation Act, which piece of legislation has overriding power in that respect?

**Mr RYAN:** My belief is that it is the environmental legislation.

**The Hon. RICK COLLESS:** Not the Rural Fires Act?

**Mr RYAN:** No. That is my understanding.

**The Hon. RICK COLLESS:** So it is quite likely that you or a local authority could issue to a land-holder an order to do hazard reduction work but he could be stopped from doing that work by the Department of Land and Water Conservation under the Native Vegetation Conservation Act?

**Mr RYAN:** Yes, he probably could be, or some other arrangement could be made to ensure that that particular area is protected in some other way. That is generally the way it happens.

**The Hon. RICK COLLESS:** You referred to a fire as being "like an atomic bomb going off." Do you have any idea of the amount of fuel load that was present prior to that fire starting?

**Mr RYAN:** No, I do not. I have heard various figures between 20 tonnes and 100 tonnes per hectare, but I do not know for sure.

**The Hon. RICK COLLESS:** That is an enormous amount of fuel, isn't it?

**Mr RYAN:** Certainly 100 tonnes is, if that is correct.

**CHAIR:** But that is an unknown, and we have to be careful.

**The Hon. RICK COLLESS:** Mr Chairman, it is something we should pursue, because the whole crux of the matter is how much fuel is in some of these forests and how that issue is being managed. I would like to make note of Mr Ryan's estimation.

**Mr RYAN:** I certainly did not estimate it. I said it was hearsay to me.

**The Hon. RICK COLLESS:** Thank you. Do you do regular assessments of the amount of hazard or fuel load in some of these forested areas?

**Mr RYAN:** Me personally?

**The Hon. RICK COLLESS:** The Rural Fire Service.

**Mr RYAN:** The volunteers have the capability of doing that. They do that as part of their training regime. They can measure fuel loads. I know State Forests and National Parks do. But we do not actively go out and do that.

**The Hon. RICK COLLESS:** Do you get any reports back as the fire season approaches as to what fuel levels are in different areas of forested land?

**Mr RYAN:** The only way that I can answer that is to say that during my time as a fire control officer general discussions were always held during bushfire management committee meetings.

**The Hon. RICK COLLESS:** But there is no formal reporting process in place to allow that information to come before you?

**Mr RYAN:** Not to my knowledge, no.

**The Hon. JOHN TINGLE:** Just to follow on from what Mr Colless said, Mr Ryan. What is the situation that arises that triggers a decision that a hazard reduction order ought to be issued? Apart from normal routine work that is carried out, is it the amount of fuel, is it the prediction of what the season is going to be like? At what stage does somebody say, "That area has to be reduced in hazard." And who decides how much?

**Mr RYAN:** Normally, the land-holder who has carriage over that piece of land will come to the bushfire management committee meeting and that matter will be discussed. They may bring to the table the figures that Mr Colless referred to, and a decision will be made by way of priority. If, for example, it was a high fuel load that impacted on an urban interface, that would perhaps take priority over one where there was a farmland interface with a national park or State forest, or even vacant Crown land.

**The Hon. JOHN TINGLE:** But there is no set threshold above which hazard reduction is always carried out?

**Mr RYAN:** No. There is a lot of expertise on those committees. Many of the people have vast experience with firefighting, no matter what agency they come from, particularly the four firefighting agencies. They have a wealth of experience and they use that on those committees.

**The Hon. JOHN TINGLE:** The assessment of those conditions would apply equally to private land, national parks and State forests?

**Mr RYAN:** As a priority assessment, you mean?

**The Hon. JOHN TINGLE:** Yes.

**Mr RYAN:** Not necessarily. Our priority is always life and property, and more latterly biodiversity. If the threat is to life or property, then that is the priority. That is how it comes into being.

**The Hon. JOHN TINGLE:** You mentioned the ferocity of this fire. I think that has been pretty well documented. Is there any doubt in your mind that that basically was due to the weather conditions, or was the availability of fuel a major factor? Was it a problem of the weather or the fuel, or both?

**Mr RYAN:** I think it was a problem of the weather, which was absolutely extreme—there is no other way to describe it— and also the dryness, more so than the weather. In relation to the way the fire burnt on that day, those fires that I recounted that I witnessed were actually crowning fires. That means the fire run was going through the tops of the trees. So, whether there was a great deal of fuel on the ground or not, that is what set that atomic-looking fire off; it was the fact it was going through the tops of trees at high speed.

**The Hon. JOHN TINGLE:** If I could clarify that. Before you have a crowning fire you have to have a reasonable amount of fuel on the ground to start it, haven't you?

**Mr RYAN:** Yes, you do, to make the crown happen. But once the Crown starts to get under way and under its own steam, it will jump ahead of the main fire anyway. Again, that situation would have arisen. Depending upon how much fuel was on the ground, the rest would follow, either at a fierce rate or not at a fierce right.

**Mr R. H. L. SMITH:** In some of the submissions there has been a general criticism of what should or should not have happened in the early stages of both the Deua fire and the Shoalhaven fire as to whether in fact enough resources were put in place in the early stages to black it out. Do you know much about that?

**Mr RYAN:** In relation to the Highlands fire, due to the intensity and extremity of the fire there was no way they could black that out. The fire started as a result of a lightning strike. It smouldered overnight. The next day the weather conditions were so bad that the fire just up and ran. Even if they got a RAFFT team in there—which is a remote area firefighting team with a helicopter—

I doubt very much that they would have been able to stop that fire, due to its remote location and then following up with the conditions on Christmas Day. It was totally extreme. The resources that they threw at that fire initially were outstanding. They called upon, firstly, their local plan here in the Shoalhaven shire, and once they expended their resources they sought additional resources, utilising the regional assistance plan and later on the State assistance plan. So there were untold resources available for this fire—from a Rural Fire Service perspective anyway.

**Mr R. H. L. SMITH:** How did your equipment perform over the period of the fires that you had?

**Mr RYAN:** As a person who had control of the 1993-94 fires in the Kyogle shire, where we were using Bedford tankers and Austin tankers and all those very old petrol-driven vehicles, to come to the last set of fires in January was just a case of chalk and cheese. The equipment that was available and the equipment that was used was just outstanding. I can talk about Albury, for example, which sent five tankers up and a number of personnel on many occasions. They turned those vehicles over throughout the four weeks, and all they had to do with those vehicles when they got home was clean and service them. There was nothing wrong with them. They never broke down. They were able to be utilised throughout the whole of the campaign. As a result of the last inquiry that we held, things have improved out of sight.

**Mr E. T. PAGE:** Where there were no bushfire risk management plans, did that stop the implementation of hazard reduction activities? Were there not bushfire management committees that had no risk management or hazard reduction plans in your area?

**Mr RYAN:** Were there any?

**Mr E. T. PAGE:** Yes.

**Mr RYAN:** I cannot answer that question today. I do know that the 34 plans have been submitted. Whether each of those has a hazard reduction plan, I am not quite sure. But I can give you that answer later on.

**Mr E. T. PAGE:** The first one was: Where there were no existing bushfire management plans, did that stop the implementation of hazard reduction activities?

**Mr RYAN:** It should not. There is no reason that any of the agencies, whether part of the bushfire management process or not, could not do their own hazard reduction. That goes for any landholder, whether they be local farmers or the National Parks and Wildlife Service. They are still capable of carrying out, and do carry out, hazard reduction works of their own accord.

**The Hon. TONY KELLY:** Before I ask a question I seek clarification on one matter. I am unaccustomed to lower House inquiries and I am wondering whether you will proceed the same way as we do. If the person that we are asking questions of cannot answer totally today can he give some supplementary answers in a written form?

**CHAIR:** I just indicated that—I may not have been heard. Certainly, those sections can be taken on notice and a further submission received.

**The Hon. TONY KELLY:** Also, if we run out of the time can we give supplementary questions on notice?

**CHAIR:** Absolutely.

**The Hon. TONY KELLY:** As Peter knows, I was the general manager of a country council that he covered at one stage so I used to have a lot to do with the Rural Fire Service [RFS] and am still a member of two brigades. Since the times that I was general manager and I was involved in the council I think the only time we used aircraft was when we went for a trip to spot where a fire was moving and they were not used for anything else. So it was quite novel to even use it for that. What changes have occurred since the review in 1994 in terms of the use of aircraft? How effective do you think they have been?

**Mr RYAN:** They are very effective. I suppose I have been one who, until the last set of fires, had not really seen the aircraft used to its best potential. The situation with the fire at Conjola, for example, was one that saved many, many houses. There is no doubt about that, despite the fact that there were no troops on the ground to assist. We now have contracts in place with the aircraft personnel. We have numerous trained staff within the RFS, both from the salaried ranks and the volunteer ranks, who can not only do the control and co-ordination of these aircraft but also there are teams that fill them up with retardant materials and other things and fuel them up. We have many hundreds of people involved in that at the moment. We also have regular spotting flights. For example, if conditions are very extreme on a particular day for this region there would be a plane stationed at Goulburn and we would get a call from State operations and they would advise us that conditions are bad and they intend to carry out a flight and they do that to a flight plan that they submit to the region.

**The Hon. TONY KELLY:** As one who used to worry about how we would pay for things, is that funded through what was called an administrative charge or a program charge?

**Mr RYAN:** The program charges, yes. It still is. I think there are some moves to have that changed a little bit but up until recently that was shared on a pro rata basis depending on how much contribution councils made to the fund.

**The Hon. TONY KELLY:** So if there was a fire in a particular area and you needed the expensive use of helicopters or other planes the local bushfire or council area would not get nobbled with the whole cost. It is a sort of averaging system across the State, is it?

**Mr RYAN:** Yes. Generally, with a section 44, the emergency fund comes into play and those things are paid for. But if it is determined that the fire would get away and cause all sorts of damage and a section 44 has not necessarily been declared, the service now has a facility whereby the council can seek compensation for the use of aeroplanes. That is done on a case by case basis. In the last three or four years the availability of aircraft has improved out of sight. It used to be very difficult to get hold of them, particularly in the more rural areas, but now that situation has changed totally and we utilised many, many aircraft this year and in the last couple of years, and obtained them quite easily.

**Mr E. T. PAGE:** How is training organised in the Rural Fire Service? What is the regional role in that and also in practical fire research?

**Mr RYAN:** If I can start with practical fire research, I know in my region currently the CSIRO is working very closely with the RFS in relation to the fire overruns where people have been burnt and injured and killed and they are experimenting with spray units and the like. In the past four or five months they have been actively involved in conducting experiments along those lines. I think the Country Fire Authority in Victoria is also involved in that. As for training in general, we have a training section in head office at Rosehill which has five or six staff. Basically, what they do is set the training agenda. They work through VTAB, which is the vocational education standard for Australia. They work closely with AFAC, which is the supreme authority firewise in the country. They supply the materials and the wherewithal to conduct training. Then at regional level, in region south for example recently I employed two development officers; one is dedicated solely to volunteer training and the other one is dedicated solely to salaried staff professional development. Those people have just come on board in recent weeks and they are currently out there doing training and urgent analysis for both volunteers and salaried staff.

They will come back to me with a training plan that is relevant to the needs. As you can imagine, this region is very diverse. It runs from Nowra to the border and out west to the border of Balranald so there will be different needs in those places and those needs will be identified in the training plans. What happens then is that once that is identified the training development officers at regional level talk to the district staff, who are the fire control officers, and get them to draw up their plans and utilise local volunteers and salaried staff to deliver the training as is required. The service does not put training demands on volunteers. The training is in place because of the demands made upon the service by the volunteers for training.



**Mr R. H. L. SMITH:** With regard to the bushfire management committees, do you know of any proposed hazard reduction that has been cancelled due to any State Government legislation?

**Mr RYAN:** Not to my knowledge, no.

**CHAIR:** There has been some comments about the need for local input to fire management strategies and tactics. How is the chief controller selected when a section 44 declaration is made?

**Mr RYAN:** We go back to the bushfire management committee again. Part of the planning process is not only to ensure that hazard reduction is carried out but also to ensure co-ordinated firefighting occurs when and if required. Part of that planning process is to identify, firstly, key personnel who would act as incident controllers in the event of a major incident and, secondly, the other people who are required such as planners, operational people, logistics people and the like. Basically, they have a list of personnel who are capable of managing this incident from a local level. A recommendation is then made to the chief co-ordinator who is the commissioner of the Rural Fire Service and he generally accepts those people.

**CHAIR:** As regional manager and an experienced fire manager, do you step in and take control automatically?

**Mr RYAN:** Me? Never, no. That is not my role. I think the bushfire management committees have enough expertise and skill to be able to manage their own resources as required. They do not need the likes of a person like me as a manager or a bureaucrat to come in and tell them how to run their fires and I do not do it. I have an operations officer who works at regional level. That person is responsible for ensuring that operations plans are in place and the like and that those nominated people are up to the standard required to be able to manage the section 44s if and when they are required. That is the only input we have, other than a monitoring role throughout the fires, which is what myself and my operations officer did during these fires. I generally looked at the Shoalhaven fire just to make sure that our staff were not going to fall over, because it was an extended operation. The operations officer mainly looked after the Deua fire. Again, that was a monitoring role and an advice giving role if and when required—nothing more.

**The Hon. TONY KELLY:** As regional manager how do you ensure that there is an equitable distribution of equipment throughout the area? I am a great believer in Phil Koperberg's decision some years ago—I was involved in a public meeting of 300 people when he first made it in my home town—about ensuring that there was no tanker less than 15 years old within a certain period of time, which is about now. I know there is a reluctance in some areas—some I visited last week—which are still happy to have the old blitz wagon and so forth. How do you ensure that despite that you get an equitable distribution of equipment throughout the region?

**Mr RYAN:** Four years ago, when I was the regional co-ordinator at Young, I identified that there was an inequity in funding. The larger councils seemed to get the lion's share of the money because they could pay the levy, more so than the poorer councils. So we set out on a path to ensure that there would be a better distribution of the money because the Lachlans of the world had 47 brigades and seven vehicles, whereas Dubbo had whatever they had and they had double the amount of vehicles. That was due wholly and solely to funding issues—nothing else. So we set about to make some cuts in relation to where men are and other things and work to the standards of fire cover. Basically, what we did was put some limitations on line items such as telephones and the like. That left us with a bucket of money that we could distribute to the 20 shires at that time by way of enhancement. If their priority was to put in a paving system we were able to say to them, "Can council come up with the 12.3 per cent?" If the answer was yes we said, "Here's the money, go and do it". And the same with vehicles.

To give an example, we did not give Dubbo a truck for one year. You probably remember that very well, Mr Kelly. I do. But what we were able to do was give four trucks to Lachlan and four trucks to bland shire so that very quickly they were able to build up their fleets. I have introduced the same thing here in this region and again I am having the same problems as I did out there. When I go to some of these meetings I have to put a crash helmet on but once the reasoning behind it is given to them and they can see that no longer will 12 shires get \$12 million but 34 shires will get a share of

\$24 million they can see the sense of that and they have been quite supportive. That is the way we have been doing it: by way of enhancement, if someone is down we can lift them up.

**Mr E. T. PAGE:** Do you think the Rural Fire Service should take over all fire management in national parks and State forests?

**Mr RYAN:** I do not. I think that would be a bad move.

**Mr E. T. PAGE:** Why?

**Mr RYAN:** We talk about the two fires we had here, for example, these two main fires. In that period of time, for example, in the national parks directorate I know there were some 30 fires. That would have meant that we would have to call upon our volunteers to attend to each and every one of those if the Rural Fire Service took full control of those fires. The fact of these two major fires impacted not only on this region but on the State and interstate, with particular use of the Queenslanders and others. I think that call upon the volunteers would just be too much. State Forests and national parks have the expertise and in most cases the resources to be able to handle fires as they occur, and they do so and they do that very well.

**Mr R. H. L. SMITH:** In your experience of the two fires do you believe that the fire trails and access into most of the areas was up to a good standard?

**Mr RYAN:** There were some issues with the fire trails. We had to create or redo some fire trails that I know of but generally they were pretty good. I know that national parks maintains its fire trails very well, as do State Forests generally. If there is a fall down anywhere in relation to fire trails, it is probably in the upkeep and maintenance of them because there seems to be a reluctance to invest money into private land. For example, if you have a national park here and a State forest here and a farm in between and you need a strategic fire trail to go through, because that farm falls on private property there is no funding available for that fire trail. It is left to the farmer to maintain a trail which could very well be a strategic fire trail for all the fire services. I think that is probably the downfall in relation to that.

**The Hon. JOHN TINGLE:** Mr Ryan, if you had your druthers and an unlimited amount of money, can you think of one piece of equipment—because this is one of the things we are looking at—which you would liked to have had available to you that you did not have when fighting these fires?

**Mr RYAN:** It would be unlimited money.

**The Hon. JOHN TINGLE:** I am waving a magic wand. Obviously when you come away from something like that, you must occasionally think, "It would have been good if we had had that". For instance, what about all-terrain vehicles?

**Mr RYAN:** We are heading that way anyway. Even the western grassland vehicles are now going to be four-wheel drive anyway.

**The Hon. JOHN TINGLE:** But I am talking about real all-terrain vehicles—the dual axles type of thing.

**Mr RYAN:** It is a catch-22 situation. If we have to go to that sort of terrain, I believe that we should not be going in there, for a start.

**The Hon. JOHN TINGLE:** Fair enough.

**Mr RYAN:** If a good Isuzu Category 7, which is a mid-range tanker, cannot get there, I think that perhaps we should not be going there with personnel, but if a helicopter can do that job, fine. If you are asking me whether I need more *Elvises*, I do not know. I do not think that is the solution. I do not think we can ever get away from the fact that we need the personnel on the ground to do the stuff that helicopters and planes cannot. The helicopters and planes can only do so much and it needs someone to go down there and black it out at the end of the run, anyway.

**The Hon. JOHN TINGLE:** Exactly.

**Mr RYAN:** You have asked me a very hard question. I personally think that if we need anything, we need good protective clothing for firefighters because there are always minor injuries to them. I am also aware of the implications of that as well and the opposition to that in some quarters, but that is something that I believe will change in time. If we are going to build trucks and we recognise through proper research processes that we need more, then that is what we need. What I have found with my funding formula is that currently we do not have enough money to be able to supply the number of vehicles referred to by the Hon. Tony Kelly, for example, on a yearly basis. Part of my formula meant that I provided two trucks a year but that equated to only one in reality. In the first instance when I did that formula four years ago, the result was that by putting a scientific submission forward and saying to the commissioner that we need more money, we got more money to do what we needed to do in the central region. The same thing will have to happen here in the southern region, I would imagine. All I would ask for is enough money to do what we have to do.

**The Hon. JOHN TINGLE:** That is a good answer.

**The Hon. TONY KELLY:** You have spoken about bringing resources in from other areas and people from Queensland and so forth. Do you have a role in doing that when there is a serious fire?

**Mr RYAN:** I have a management role in that. Earlier I alluded to an operations officer who is au fait with the planning process and generally that person would be the person who manages that, but I have a supervisory role just make sure that that happens. In the case of the recent fires, I stepped into the operational role just because of the enormity of the crisis. Generally I probably would not do anything more than sit back and make sure that everything is working smoothly.

**Mr E. T. PAGE:** Has it been established in actual fact that fire trails have given access to arsonists?

**Mr RYAN:** I cannot answer that straight out.

**Mr E. T. PAGE:** It is just that there has been a lot of discussion about arsonists.

**Mr RYAN:** Yes.

**Mr E. T. PAGE:** I am just wondering whether some of them have actually gone in along fire trails and started the fires in the centre.

**Mr RYAN:** My experience with that probably goes back to Dubbo a couple of years ago. There has been an active arsonist out there for some years and that person utilises the trails that are out there. Whether they are fire trails or something else, they use them. Yes, they do.

**Mr TORBAY:** In respect of conflict priorities, policies and procedures in the middle of a crisis, are there any areas where you suggest procedures should be streamlined?

**Mr RYAN:** I must say that I did not see any such conflict. There were some issues that arose that were dealt with at the local level anyway between the managers who were there. There was an issue with the Deua fire. There were two offices, one at Moruya and one at Braidwood. I am not going to say that the Braidwood office was lobbying to become a section 44 in its own right, but certainly they wanted some status within that crisis whereas the incident controller at Moruya was trying to control that. In Pilliga in 1997-98 where they had an emergency control centre at Coonabarabran and another one at Narrabri, I saw it happen that some conflicts arose, as there would have to be because they were all trying to share the one resource. All I would like to see in future is that when these major fires or major incidents occur and incident control teams are set up, they should work out of one office only. That would assist in resolving the conflict that could arise.

**The Hon. TONY KELLY:** Some of the conflicts that have occurred on occasions in the past have concerned the radio system. I know a lot of work has been done on the radio system over the past

few years. How is that going? I know that it is never going to be perfect. Some people have suggested that we use satellites but that will not work under cover. Is it getting pretty reliable now?

**Mr RYAN:** Absolutely. As the fire control officer in Kyogle, I was one of the first people to implement the public mobile radio [PMR] system which is the one we use now. It is a UHF system and I put four repeaters up in the Kyogle shire. If you know the northern rivers district at all, you will know that Kyogle is very similar to the Shoalhaven: It has mountains all over the place. We achieved approximately 98 per cent coverage, which is all that you are ever going to achieve. I thought that was fantastic. There are now 112 districts across the State that have that implemented and it works extremely successfully. If you do not want it to work, it will not work.

**CHAIR:** I have just one wrap-up question and it is to do with the asset protection zones. Do you believe that they are accurately and consistently provided within the region? What is the impact on small holdings and the absent landlord situation in some of the villages here, as far as the service is concerned?

**Mr RYAN:** I visited around the place with the Premier when he came down on two occasions and we looked at the houses that were burnt in the villages and towns. The common denominator in all those things was that people generally had not cleaned out their roofs and their gutters and they had not protected their asset as well as they probably could have. As far as general land-holders are concerned, most of those people, whether they own five acres or 500 acres, tend to have an idea about fire generally. Absentee land-holders are going to be a problem and they always will be. The only way to deal with those people is through the section 66 process and by issuing notices to them to make sure that if they do not do what is required, we do. The legislation is there to make it happen and I believe it is happening. Whether it needs tightening up or not is a matter for the Committee to decide.

I think that we have to be very firm with it particularly in relation to absentee land-holders. They present problems not only here but also in Dubbo. It is an issue that has been raised so it is a statewide issue. I know that the same thing occurs on the North Coast. People have to be responsible. If I may, I will take the liberty of relating a story to the Committee. The deputy fire control officer from Shoalhaven had his house go under threat. He lost some stock and the place actually caught on fire. His father and he went to the house to try to save it, and they did save it. His father said to him, "When is the fire truck coming?" Mal turned around to his father and said, "The fire truck is not coming." He is a person whom one would expect would have access to all the resources that he would require. The fire truck was busy doing other things and was helping other people. The point I am trying to make is that the public has a responsibility to maintain and look after their own properties. If they do not do that, the red fire track is not going to be there. It will be impossible for it to be there. If you drive down Sussex Inlet Road there are probably 100 or 200 houses along the road, maybe more. There cannot be 200 fire trucks there to look after them, so the people have a responsibility.

When the fires impacted on Christmas Day, I made an inspection of the area in which I live in Bateman's Bay, in particular little places such as Lilli Pilli and Rosedale. I was horrified by what I saw. I tried to have a media campaign instigated to advise people to go and clean out their gutters and clean up around their homes but I was met with no response by the media because, I believe, places were not burning down. We need to ensure that the community has a better understanding. We have employed a community safety officer at regional level and we are going to try to flow that onto district level so that people can get an understanding of the very real danger they are placing themselves in. The proof of the pudding is in the eating with the number of homes that were lost in the Shoalhaven.

**(The witness withdrew)**

**ANTHONY IAN FLEMING**, Executive Director, Southern, National Parks and Wildlife Service, 6 Rutledge Street, Queanbeyan,

**TIMOTHY GEORGE SHEPHERD**, Regional Manager, Far South Coast, National Parks And Wildlife Service, Corner Merimbula and Sapphire Coast Drive, Merimbula, and

**DIANE JEAN GARROOD**, Regional Manager, South Coast, New South Wales National Parks and Wildlife Service, 55 Graham Street, Nowra, affirmed and examined:

**CHAIR:** I am advised that you have been issued with a copy of the Committee's terms of reference and also a copy of the Legislative Assembly's standing orders 332,333 and 334, which relate to the examination of witnesses. Is that correct?

**ALL WITNESSES:** That is correct.

**CHAIR:** In what capacity are you appearing before the Committee?

**Dr FLEMING:** I am leading for the National Parks and Wildlife Service.

**Mr SHEPHERD:** I appear before the Committee representing the National Parks and Wildlife Service.

**Ms GARROOD:** I appear for the National Parks and Wildlife Service.

**CHAIR:** Did you receive a summons issued under my hand to attend before this Committee?

**ALL WITNESSES:** Yes.

**CHAIR:** Mr Fleming, did you wish to make an opening statement?

**Dr FLEMING:** Yes. I have a presentation that involves the use of overhead transparencies, and I have also circulated some maps that we will show to make the presentation easier to follow.

**CHAIR:** Bear in mind that if you need to describe anything on your slides, you should narrate that in sufficient detail for Hansard to note what it is.

**Dr FLEMING:** I will do that. The presentation that I will give will focus on the southern directorate of the National Parks and Wildlife Service. I understand you will be talking with our Director-General, Brian Gilligan, at a later date, so I will keep my comments to the fire season in the southern area.

#### *NPWS Commitment to Fire Management*

Just generally, to preface what I will say, might I say that the National Parks and Wildlife Service has fire management responsibilities under the Rural Fires Act. We are a firefighting authority under that Act, which imposes on us certain obligations. Also, in a general sense, we are a major landholder in New South Wales, and with that comes a set of obligations to be responsible fire managers. We take those obligations very seriously. Our objectives in relation to fire management are first and foremost the protection of life, property and community assets. We also have objectives in relation to the maintenance and enhancement of biodiversity and the protection of cultural heritage which influence our approach to fire management. It is very important to us to take a strategic and co-operative approach to fire management, working with other agencies and with the broader community.

#### *NPWS Southern Directorate map*

The area covered by the directorate is shown in the first map. There were a number of fires during the fire season, but I will concentrate on the two referred to today. The one to the north, which

is in red, is to be known as the Hylands fire, and the one to the south is the Deua fire. That gives the location.

#### *NPWS Southern Directorate*

Within the directorate are 142 conservation reserves, about 1.6 million hectares in the reserve estate, and we engage about 300 permanent staff and a number of temporary staff. The size of the staff fluctuates throughout the year. There are four regions, with Diane representing the South Coast region, which includes the area where the Hylands fire occurred, and Tim representing the Far South Coast region, which includes the area where the Deua fire occurred. We have both on and off park responsibilities within that area, and we have at this stage a recurrent budget of approximately \$32 million. About 10 per cent of that budget is spent on fire management, including the costs of the salaries of our own staff.

#### *Hylands and Deua fires*

What we should focus on today in this presentation are the two major fires that occurred. I will make a couple of opening points about those fires. They were, as Peter Ryan from the Rural Fire Service said, very large and complex fires. The Hylands fire was 97,000 hectares in total, and about half of that was on national park; the Deua fire was primarily on national park, with approximately 45,000 hectares in total.

It is really important to make the point upfront that the multiple agency and volunteer response that occurred in the fighting of these fires worked well. The control of the Rural Fire Service was certainly appreciated by our agency and I know by other agencies as well. That is saying quite a lot when we are dealing with such difficult fire circumstances. It really is, I think, a testimony to the value of the procedures fire management which have evolved particularly since 1994, and to the very constructive role that the RFS can play in guiding and controlling those major incidents. While there was loss of property, and loss of property is always regrettable, it must be noted that it was only through the actions of all those involved in the firefighting, particularly including the volunteers, but all the agencies involved, that there was not more loss of property. It is quite startling, once you have seen the areas that were covered by fire, that more property was not lost. There was also an absence of serious injury and death, and that was an amazing achievement. I do not think we should lose sight of that, because these are extremely unusual and extreme fires that tested everybody.

#### *Why were these fires major?*

The question then is, Why were these fires major? I guess there are two points that I would emphasise and that I would like to talk a little about. The first is the severe fire weather over a prolonged period. I will show the Committee some statistics about that in a moment. As far as the parks service is concerned—and I think this is reflected in the comments of other agencies as well—severe fire weather was the prime cause of the size and severity of those fires. It is true to say that the conditions in the Christmas period were of the worst possible kind. In the Hylands fire, where there was significant asset loss, the risk of asset loss in these severe conditions was compounded by the pattern of urban development that has occurred over a long period.

The presence of highly flammable environments and urban development surrounded by bush added to the risk that asset loss would occur in the event of a severe fire. The weather played a role all the way through. I guess there is a pattern here particularly evident. The fires were started by lightning strikes. In the case of the Deua fire there were two lightning strikes, one in the Merricumbene area on 3 December and another in Oulla Creek which I think was on 27 December. As was stated earlier, those two fires joined. The Merricumbene fire had been controlled but in the severe weather conditions flared up on Christmas day I think it was.

In the case of the Hylands fire the ignition was again lightning near the Hylands Lookout on vacant Crown land. That lightning strike occurred as part of dry lightning strikes in a number of areas and followed a very long dry period. Then what happened after that was a very rare pattern of extreme and very high fire danger repeated weekly. It was possibly a one in 50 year event. In addition to that, or as part of that, there were very high wind speeds, and I will show figures in a moment. With the rate of that fire spread very much dependent on those wind speeds and the sort of winds we had on the

days when it ran very fast, the fire on Christmas day travelled something like 15 kilometres in four hours, which is very fast, and you heard higher figures quoted earlier.

Just to show you the fire danger index during that period, the figures at HMAS Albatross in Nowra show that over the Christmas period you had extreme and very high fire danger indices for a period of three days and then on a weekly basis, and this was one of the characteristics of both fires. You had these weekly severe conditions and in between the conditions were not mild enough to be able to control them completely but you kept getting these extreme conditions. It is worth noting that in relation to the Hylands fire the major property losses occurred on 25 December and 2 January, both during those very extreme conditions, and that was one of the characteristics. Just to show you the sort of wind speed figures that were recorded at particular points in time, in Braidwood, Moruya and Nowra you can see those wind speeds, which are basically early afternoon, were very high and gusts much higher. In the Deua fire, it is very deceptive country, you would have got wind speeds significantly higher than that in certain areas.

So there was a very high wind and a very high fire danger index. These are things which overwhelmingly contributed to the severity of the fires that occurred in that period. I am sure that the same information will be seen for the Sydney fires as well. It was a very difficult set of climatic conditions. One of the things that happens because of such severe weather is that you get spotting of embers over long distances, up to five kilometres. In those sort of conditions it can render, and does tend to render, any fire suppression efforts and fuel breaks which may be in existence pretty much ineffective when you are getting those most severe conditions. The next map I will show you shows how in those severe conditions the Hylands fire, which is indicated by black line—the thick black line indicates the extent of the Hylands fire, the fire being to the left of that line moving towards the coast. The coloured areas represent previous wildfires which have occurred in those areas in recent years. You have fires which occurred back from 1995-96 through to 2001-02 represented on that map.

That is indicative of what can happen in these severe weather conditions. Those wildfires represent quite significant hazard reduction burning in periods which are not that far historically within the normal cycle of hazard reduction activity and the wildfire was able to come in over the top of those burnt areas. There are other examples around the State but that serves to make that point in that area. Having said that severe weather was the real factor driving the intensity of these fires, that is not to say that fire prevention measures were not important in these fires or will not be important in most fire circumstances which do not represent the extremes that we experienced at Christmas.

I guess the first point is the obvious one and it is one that needs to be made sometimes. You will not prevent all wildfires from occurring. Unfortunately you will not prevent all arson attacks. You will not prevent lightning strikes. So it has to be accepted that wildfires will occur and the role of fire management is to give maximum control over fires that occur subject to the prevailing conditions, with the priority very clearly being on minimising risk to life, property and community assets. That is critical and that drives the approach that is taken to fire management by our agency and by other agencies as well.

An important point to recognise here is that there is a distinction between hazard and risk. There are hazards in many places in terms of the levels of fuel for example. The question is: What risk does that pose to the protection of assets? You need some way of identifying your priorities for action and that is usually via risk. The park service refers to strategic fire management. It is all about identifying those areas where hazards present significant risk of loss of assets, endangerment to dwellings, risk to life or in some cases risk to the park service's key biodiversity objectives. Within fire risk management there are a number of elements, and I want to talk about a few of those in a bit of detail and leave the others just noted. I will come back to co-operative fire management in a moment. That is paramount. We see that as particularly important and since 1994 we see a significant advance in the area of co-operative fire management. As I said, that is paramount in effective fire management.

We see strategic hazard reduction as very important as well, and I will talk about that in a moment, as well as the establishment of asset protection zones and a fire trail network. I will not go into the other items on the list in detail today but I am happy to answer questions: Surveillance and monitoring, both the concept of things like fire towers which we staff during fire seasons in certain areas, and the use of aircraft after a significant lightning storm for example. If conditions warrant it, we might get an aircraft in the air to see if there is any sign of fire in areas where the lightning has

moved through. Rapid suppression is a very important part of fire risk management. It is something the service has a lot of experience in.

We work in remote areas and we have skilled up our staff to be able to move quickly into remote areas to try to contain fires while they are small. The statistics show that the vast majority of fires that start on park are contained to a very small area. Public education is also very important to us. The point was made in the previous evidence that it is a joint effort. The community needs to understand what it can do to protect its assets and to work with agencies. Agencies need to know what communities need to understand, and we need to provide that education and support to the community so that people are empowered to look after their own assets alongside the agencies that have that responsibility.

There are also in the areas of development and building controls important measures that can be put in place, as well as the whole area of preparedness, ensuring that you have staff that are ready and able, well equipped and well trained to undertake the fire management duties for which they are responsible. Both the fires demonstrate the importance of co-operative fire management. By co-operative management we are talking about cross tenures. As we will see in the next overhead, many of the fires moved across different land tenures, and you need to ensure that your fire management strategies are co-ordinated. Also, there are many agencies that need to get involved—not just the more obvious agencies like ourselves, the Rural Fire Service and State Forests but other agencies like the police and community services.

A whole range of organisations, government departments, get involved in major fire incidents, and effective co-operation is a key to success. We take that very seriously. We are an active participant in all the district bushfire management committees that come within our area and we play a very active role in those committees. I guess the section 44 controller's report from Eurobodalla for the Deua fires has acknowledged the co-operation and professionalism of National Parks and Wildlife Service [NPWS] staff. That is certainly gratifying and it reflects the reality of how that fire was managed on the ground. It also reflects the approach that was taken in the Hylands fire as well.

#### *Hylands Major Fire Runs*

This map demonstrates why co-operation is needed in terms of tenure. It shows a fire that started its life on vacant Crown land and then moved across national park, private land, State forests and it was continually crossing borders within those different tenures. It was a very complex fire and there was a really strong need for the agencies to be able to work together under the leadership of the Rural Fire Service [RFS]. This fire is a classic case study of why you need that co-operation and what can be achieved with co-operation. That is the point of the map which is the one to which Peter Ryan referred earlier. I mention that in case the Committee wants to cross-reference that to his presentation. The other information it shows is when the fire ran in certain areas.

#### *Homes and Commercial Buildings Destroyed*

This map shows the property loss that occurred. The issue here is what is the nearby tenure in terms of the protection measures that could be put in place to prevent the loss of that property. You will see from this map that a variety of tenures are nearby properties that have been lost in the fire. This is based on current information and we are still refining that information as part of gathering the facts in the aftermath of the fires. That is the best available information that has been provided to us. It shows that it is not a simple picture. All tenures were adjacent to houses that were lost during this fire and it emphasises the fact that we need co-ordinated approaches to achieve effective protection.

#### *Deua National Park Fire History*

This map is also one to which Peter Ryan referred. It just shows the location of the Deua fire and it shows that it crossed State forests and private land boundaries and that multiple tenures were involved. For your information it shows also the two ignition points and the history of the hazard reduction works which have occurred in that area in the recent past. I can come back to that if you want me to. The point in terms of this point in my presentation is the multitenured nature of this fire. Though very substantially in a national park, it did have impacts in other tenures and reinforces once again why we need a co-operative approach to management.



### *Hazard Reduction*

This is another matter I want to emphasise and I will conclude my presentation shortly. We undertake strategic prescribed burning and the point is that we focus our hazard reduction burns where they will achieve significant risk reduction for assets. We do not work in isolation. The burns that we undertake are agreed through the district bushfire management committees and are based on plans that exist. If plans are in draft form, we work from the drafts and when there are final plans, we work from those final plans. There is an annual program of burns which is agreed by each committee. We are very active in that burns process, both on and off park. All the different tenures work through those committees. Over the past four years we have done approximately 22,000 hectares of burning in the southern directorate. Burning is still going on, subject to weather conditions.

Autumn is the time when we do most of our burning so we have not finished the season yet. It is important to note that hazard reduction burning is not a simple exercise. There are a number of factors which constrain the windows of opportunity, weather being the most significant one, in getting to a situation where the fuel loads are dry enough to effectively carry out a hazard reduction burning without the conditions being too severe so that the burn risks getting out of control. There are other issues to do with what constrains hazard reduction burning and I am happy to go into them, but we work very hard to achieve the burns which are agreed through the district bushfire management committees. We often work in collaboration with RFS, particularly the volunteers. It is important that we acknowledge at this point the role that volunteers play in support of our operations. We certainly appreciate that role.

What quite often happens with these burns at a very practical level is that they get done on weekends because that is when people are free. That means that those volunteers are giving up their time on weekends in support of the work we are doing as a firefighting agency, and that is greatly appreciated. It is important to note that hazard reduction burns have a limited life span in terms of their effectiveness. In many circumstances you start seeing a reduction in the benefit of those burns after two years. That means we have to be very focused on where we do those burns to achieve the greatest effect. Maintaining asset protection zones involves hazard reduction burning but also involves other forms of fire prevention and hazard reduction.

Slashing and maintenance of fire breaks are important components of that, and preventing hazard accumulation is also important. Unfortunately there are times when rubbish is dumped within the asset protection zones which are supposed to be fuel-free zones. That is one of the reasons why we sometimes have locked gates which have been referred to. To achieve effective asset protection, that is where you really do require close co-operation among all the land management agencies and residents involved. If you just look, for example, at the Shoalhaven fire down the coast, the mix of tenures is quite dramatic in the areas surrounding the urban interface. All the agencies tend to work together to create what are called strategic fire advantage zones and then work co-operatively to maintain those zones.

### *Fire Trail Network*

As an important part of our fire risk management we also maintain an extensive network of fire trails. Within the southern directorate there are 7,000 kilometres of fire trails and that incorporates virtually, maybe not all, of the new parks which have come across in recent Government decisions. Those fire trails are regularly maintained. The figure you have in the overall submission for the service is a very conservative estimate of the kilometres maintained each year. For the southern directorate this year, our figures indicate that approximately 1,200 kilometres of those trails would have been maintained during the course of this financial year. As I have said, there are issues associated with trails. Some trails are gated and when they are gated and locked, keys are provided to RFS brigades and to all those who need to be involved in emergency responses for fire management.

Gating occurs to achieve benefits and is more often than not related to improving our capacity in fire management rather than hindering it. It can help with the maintenance of trail conditions under certain circumstances. There are not many trails that are locked but in certain areas that is a necessary action. There is evidence to suggest—and you will see a map in the submission relating to the Royal National Park—that a lot of arson activity occurs along trails. In some

circumstances, gating and locking of trails can be important in reducing the opportunity for arson. Particularly in the urban bushland interface, it is sometimes used to prevent the illegal dumping of rubbish.

### *Impacts on Biodiversity*

This matter is referred to in the Committee's terms of reference, particularly in relation to the two fires which we have seen. Some of the media—and this inevitably happens after a lot of fires, although I think it occurs less over time—make comments about how the parks and reserves are destroyed by fires. That is not the case. The key issue with the impact of fire on the environment is really the combined effect of the frequency and intensity of fires. The Australian environment has evolved with fire being present and in fact many of the individual plant species have mechanisms for reproduction which in some ways rely on the presence of fire. It is the combined effect of frequency and intensity of fires that is significant. The occasional wildfire is generally not going to cause significant environmental problems, although it may in specific areas.

It is important to remember that in both the Deua and Shoalhaven fires, and in virtually any fires of significant size, they tend to be patchy. You will find significant areas that are unburnt and significant areas that might have been burnt to a hazard reduction intensity, and some areas which have been burnt very hot. That patchiness is important for fauna particularly because it gives them an opportunity to migrate from area to area. There are refuge areas where they will still find food and the capacity to survive while other areas of the bush regenerate. Rainforest gullies are a classic example; it is unusual for rainforest gullies to completely burn in wildfires, although it can occur. There are certainly some areas in the Hylands fire where there was very severe fire over significant areas.

There are some areas where we will be watching closely—and one of those are in Jervis Bay National Park—where there is a lot of history of fire, particularly through arson, and wildfire on top of that. Again the issue is the frequency of fire. Perhaps the fires are at such an interval that they do not allow the natural process of regeneration of the plant through to the age where it can seed. If you start getting shorter than those sorts of time cycles, you can see the elimination of species and that can lead to changes in animal populations as well.

### *Lessons Learnt*

You cannot have fires of the magnitude and seriousness of the ones in this district without learning things. They are rare events and inevitably we learn from them. I have listed some of the points and they are not all of the points. We go through a quite intensive process as one of the government agencies and as the National Parks and Wildlife Service individually to debrief after these fires to identify in open forums the things that could have worked better and the things that we need to focus on in the future. The list shows some of the lessons that we have already identified and the process is ongoing. It is really important in terms of the firefighting efforts that there is good mapping of assets along park boundaries. We can only hope to see that improved. Mapping has improved a lot over the past few years and this just reinforces the need to continue that process. We need to be able to map bushfires in a way which enables them to be translated onto maps in the fire room and which enables decisions to be taken during the course of a fire to satisfactorily protect assets where that is possible.

The point that we have made continually throughout this presentation is an approach based on the whole-of-landscape fire management. No tenure can operate in isolation. Co-operative measures are really important. Out of the 1994 fires was born the whole revised process of incident management teams and the structure of firefighting. In our view, that made an enormous difference to the quality of the firefighting efforts this time round. Our comments just reinforce that. The fact that we are getting standardised procedures means that it was possible this time to slot in staff who came from interstate and have them operating effectively and productively virtually straightaway, particularly within those incident management teams. I think that is extremely difficult to achieve in the circumstances of a bushfire crisis. The fact that it could be achieved speaks volumes for the incident controllers and the systems in which they operate.

Ongoing fire research is critical. The parks service plays quite an active role in understanding both fire behaviour and its impacts on biodiversity. We believe that is an important thing for us to

continue to do. We cannot just be reactive; we need to be at the forefront in understanding fires and in adapting management to achieve our objectives. I think it is widely recognised that the whole development approval [DA] process needs to consider as well as possible fire risk, and reforms have been announced by the Government, which I am sure the Committee is aware of, to improve consideration of the planning area of fire matters. In general I think there is an ongoing requirement to educate and make the community aware. As government agencies, we have an obligation to ensure that the community has the information it needs to be able to undertake effective fire management on its own account and to understand the role that the government agencies are playing. That is a very important role that we must continue. That concludes our presentation. We are happy to answer as many questions as the Committee likes.

**The Hon. TONY KELLY:** Before I ask a question, I point out that the honourable member for South Coast who is the local member in this area, Wayne Smith, got approximately three Country Labor members to come to the area and make an inspection of the fire areas afterwards. I did not want to interrupt your presentation, but the map, "Homes and Commercial Buildings Destroyed", shows about four red dots below Sussex Inlet. Is that where the auto maintenance shed and house were burnt down?

**Ms GARROOD:** Yes, that is right.

**The Hon. TONY KELLY:** First I have a question on notice, and there will be others. You mentioned that a lot of the fires involving national parks were usually small and were put out fairly quickly. You might have statistics on that. I have served already on a number of committees to do with bushfires. Some statistics produced for the Committee showed the number of fires that originated in national parks and went outside those parks, and the number of fires that originated outside national parks and then entered and destroyed parts of national parks. I do not expect you to have that information now, but would you provide that information for me on notice?

**Dr FLEMING:** I will take that on notice. As I mentioned at the beginning, I understand the director-general will be giving evidence before the Committee in Sydney.

**Mr R. H. L. SMITH:** Perhaps the area involved could be included as well.

**Dr FLEMING:** We can give you that breakdown into the directorates, et cetera.

**The Hon. TONY KELLY:** What is the National Parks and Wildlife Service problem with prescribed burning? There is a lot of talk about hazard reduction. What does that mean to you?

**Dr FLEMING:** I guess that reinforces some of the points made in the presentation. There has been comment in the media that the parks service has a problem with prescribed burning. It has been portrayed that we simply resist it. That is wrong. We actively participate through all the district bushfire management committees and undertake prescribed burning each year. But we try to focus that on areas that are strategically important. It is not enough to merely identify the hazard. This is the point I was making earlier. You have got to define where the risks are. All agencies have limited resources that they can apply to the task of managing the land for which they are responsible. You have to focus that in the areas where it will actually have an effect. That is what we do.

When we talk about strategic hazard reduction burning, we really are talking about focusing our attention on the assets that we need to protect, recognising that that must be our primary responsibility, and ensuring that our hazard reduction burning and other forms of activity are focused on achieving the protection of those areas. Earlier on in this presentation I provided some examples that I think illustrate that point. So, as I said in the presentation, we have done about 22,000 hectares of hazard reduction activity within this directorate over the past four years. Our program for this year is still under way. We do that in conjunction with various other forms of hazard control, such as slashing and maintenance of cleared fire trails and fire breaks in certain areas.

**Mr E. T. PAGE:** I asked this question of the previous witnesses. There were some submissions saying that the Rural Fire Service should have complete control of fire management in national parks. What is your response to that?

**Dr FLEMING:** I take the same position as the Rural Fire Service representative did earlier on. I think it is important that we maintain that responsibility. We are a significant land-holder in New South Wales, and I would not accept a situation where we abrogate that responsibility. We work very closely with the Rural Fire Service. The whole process of incident management is co-ordinated by the RFS, and we are very happy with that arrangement. But it is important that we maintain our skills as a firefighting authority. We have obligations under the Act currently, and we believe it is appropriate that we retain those obligations. We have an obligation to our neighbours, to the community that lives around us, to have the skills, equipment and the training to be able to undertake fire management and firefighting control. We feel very strongly that that should continue, and that we should continue to have that obligation.

The other point is that we know these parks well. We know where fire is likely to occur. We have that knowledge of the environment and of the characteristics of the environment that influence fire. When we work co-operatively with other agencies, as we do, we can combine our strengths and their strengths, and we believe that is the most appropriate way to undertake fire management.

**The Hon. RICK COLLESS:** Mr Fleming, in your opening statement you commented that the National Parks role is to maintain and enhance biodiversity. You also made comments about the combined effects of frequency and intensity of fires on the biodiversity of the parks. Which scenario do you believe would do more damage to the biodiversity, a cool burn every three to four years, or a holocaust such as Peter Ryan described as like an atomic bomb going off say every 15 to 20 years—on the same parcel of land? Forget the landscape model, and assume the same parcel of land.

**Dr FLEMING:** There are a few points in relation to that. Firstly, we also made the point upfront that our primary objective is the protection of life and property, and that drives the way we approach fire management primarily. In terms of your question about, given a parcel of land, which will have greater impact on the ecological integrity of that parcel of land, the biodiversity of that area: It will depend on what existed in that area. Some areas of land, some plant communities, will change over time if you have regular, low to medium intensity fires. You might get, for example, in a community dominated by acacias, a change if you burn frequently enough that those acacias do not reseed. That might move to a community, say, where banksias are more prevalent. So you will get changes depending on the intensity and frequency of the fire.

**The Hon. RICK COLLESS:** Surely, if you were planning to do a regular burn you would be able to plan for those sorts of changes. In fact, you could use it as a tool to bring about those changes that you might see as appropriate.

**Dr FLEMING:** Yes, we do plan and we do use it as a tool in that way. In terms of severe wildfires, such as those that happened over Christmas, they do not necessarily have a big impact on a lot of the vegetation communities within the areas that were burnt. Many of those communities have evolved in the presence of very large fires that occur intermittently. If you look at the biology of a lot of the species involved, they have mechanisms to survive and regenerate from fire. Even after these most severe fire conditions that we went through, which were about as hot as you are likely to expect, places like Palmer Creek Nature Reserve or some of the State forest areas, you are now seeing regeneration of trees that many people believed could not survive. So this vegetation has made lot of mechanisms to survive even those fires.

There are some communities that will be significantly damaged if fires get into those areas. I guess rainforest is the classic example. Severe wildfire will kill rainforest species, and those species will then probably, in many rainforest gullies, be overtaken by eucalypts that regenerate more quickly. It would be a very long time indeed before you would see rainforest return. One of the heartening things, having gone over these fires on a number of occasions, is to be seen in both the Deua and Shoalhaven area: rainforest gullies that are untouched. You get burning on the ridge lines, and those communities remain untouched. It is part of that mosaic of burning which inevitably occurs.

**The Hon. RICK COLLESS:** On page 19 of your submission you make the point that there is no significant relationship between fuel condition and trends in wildfire incidents and size of the landscape scale. What are the parameters that you include in "fuel condition" in making that statement? Do they include the quality and energy in the accumulated fuel on the forest floor?

**Dr FLEMING:** I cannot tell you the detail of the equation on fuel condition. It will be to do with the rates of cure, how cured the fuels are, the volume of fuel, or whether it is on the ground or suspended. Again, some details of that we could take on notice, and I could ensure that the presentation in Sydney gives you more details.

**The Hon. RICK COLLESS:** Thank you. Another question in that regard is that, you having said that there is no significant relationship between fuel condition and trends in the wildfire incidents and size, I would like to know if there is any trend or relationship between the fuel load and the starting ferocity of the fire.

**Dr FLEMING:** That is interesting. What happened in the Hylands is, I guess, a good example of that. The Hylands fire started down slope and moved quickly. One of the first areas it burnt through was an area that had been hazard reduced not so long before. So, even in those circumstances, when the weather was severe enough that fire picked up speed very quickly and became an intense fire very quickly. So the fuel load on the ground was not particularly important, as an example, in the way that fire then spread.

**The Hon. RICK COLLESS:** Do you have any idea what sort of fuel loads were there?

**Dr FLEMING:** I cannot tell you. I would need to refer to another agency that has responsibility for that patch of land. Again, I can seek to find out and get that information forwarded to you.

**The Hon. RICK COLLESS:** Thank you.

**Mr R. H. L. SMITH:** You said in your opening address that you were very committed to hazard reduction burning. Over the past five or so years your estate has increased dramatically. The statewide figures that I have indicate that, in area, you have reduced your hazard reduction area by a significant amount from the early to mid-90s. I presume you are going to say you are now protecting life and property and that your effort is more strategically aimed. I wonder if that mosaic type of hazard reduction burning that used to happen—and I think State Forests still does it—should be cut out, because it would be very economical to do that by aircraft and incendiaries. I do not say you are wrong in doing your hazard reduction as far as property and life goes, but I think there should be a corollary in your overall program.

**Dr FLEMING:** We do do some large area burning where we believe it will be valuable in terms of managing risk. I guess your point is about it being cost effective. It only becomes cost-effective if it achieves an end. That is what we try to do through our process: identifying where the risks are and focusing our burning in those areas. Even though broad-area burning can be cheaper per hectare to do—using aerial incendiaries, for example—it does not necessarily end up being cheaper if it does not achieve the result that we wanted to achieve.

Historically, you will not find a very good confluence of the existence of big broad-area burning and the prevention of severe wildfire conditions. I guess that is a really important point that we are trying to emphasise today. The sorts of conditions that the Christmas bushfires represented were not going to be changed to any significant extent by hazard reduction burning. Weather was the driving force—the extreme weather conditions, the cycling of those extreme weather conditions. That is not to say it is not important, because these are exceptional circumstances. From my point of view, it is important that the Committee not just focus on the exceptional circumstances of these fires. What is the average season you are likely to expect? And what effective fire prevention measures can you put in place for those average seasons?

We will still argue strongly that the sort of hazard reduction burning we do—which does include some broad-area burns—is effective in achieving the objectives that we laid out at the beginning: life and property protection as a paramount objective but also the protection of biodiversity and protection of cultural heritage. If I could expand on that. It is often portrayed that these two things are at odds. I have seen it in the media, and it frustrates me to see comments that the parks service is concerned about the protection of biodiversity and therefore that must be at odds with the protection of life and property. We simply do not accept that proposition. We believe it is possible to achieve effective fire management which has the paramount objective of protecting life and property,

recognising that you may sometimes—and we do sometimes—compromise our overall biodiversity objectives to achieve that paramount objective of life and property protection, but that on the whole you can achieve both things. It is a really important point. We believe we can demonstrate that point. But I don't believe you can demonstrate it by talking about the complete absence of wildfire, the complete absence of severe wildfire, or the complete absence of any assets ever being lost. I think that is unrealistic.

**Mr R. H. L. SMITH:** Do you believe if you had done more mosaic type hazard reduction burning in the two fires, the Deua and the Hylands, that would have in any way reduced the extent of the fire?

**Dr FLEMING:** I do not believe it would have made any difference to either fire.

**The Hon. TONY KELLY:** That is because of the weather conditions.

**Dr FLEMING:** The weather conditions were the paramount force at work in those fires.

**Mr R. H. L. SMITH:** Do you believe there is a conflict in any of the legislation, the Wilderness Act, the Native Vegetation Act, the Endangered Species Act, with regard to your hazard reduction burning?

**Dr FLEMING:** Yes. I will answer that question in a moment. I think my colleague wants to make a point.

**Ms GARROOD:** It is just a quick point in relation to whether mosaic burning would have been of assistance. The slide that Dr Fleming put up about the wildfire history behind the Huskisson area shows that the most recent wildfire through there was August 2001, four months before the Christmas fires. It made no difference in terms of the spread of that fire.

**Mr SHEPHERD:** For the Deua fire, the same sort of issues apply—the major runs of the fire on those three days of extreme weather conditions. Also with the Deua fire, when you are dealing with extremely rugged terrain, the major thing which determines the ultimate fire perimeter is where there are ridges of sufficiently benign terrain in which fire trails can be constructed. That was the thing that determined the ultimate size of the Deua fire.

**Dr FLEMING:** Returning to the question you asked about the legislation, I think you named wilderness, threatened species and the native vegetation Act. Dealing with wilderness first, there is no impact on our fire management activity from a wilderness declaration. We manage wilderness areas for fire in the same way as we manage other areas of the park estate for fire. That is in relation both to where we undertake hazard reduction activity, where we maintain a fire trail network, and how we fight fires once they have commenced if they either commence in those areas or move into those areas. Some wilderness areas were burnt in the Deua fire and I think also in the Hylands fire. The firefighting practices during those fires were not influenced at all.

The fire trail network moved from wilderness to outside of wilderness and you would not be able to tell the difference on the ground in terms of the quality of the trails and the way the fire was fought. So I am quite comfortable that the existing wilderness and any new wilderness declarations that the Government may make into the future will not affect our capacity to manage fires in those areas. The threatened species legislation, similarly I am not aware—and I stand to be corrected—of any hazard reduction burning which has been stopped by a threatened species issue within my directorate.

**The Hon. RICK COLLESS:** What about the native vegetation Act?

**Dr FLEMING:** The native vegetation Act is outside my area of responsibility so I would refer you to the agency responsible for administering that legislation. But certainly for the threatened species act I am not aware. If you are aware, then let me know. It is also important to note that recently the Government announced reforms in the way it will handle a number of aspects in relation to fire management: the introduction of a SEPP and other changes which aim to streamline the environmental assessment and approvals process needed for hazard reduction burning to occur. The

park service chaired the interdepartmental committee [IDC] which made recommendations which led to those sorts of changes. So the park service has not been brought kicking and screaming to the table.

We are in fact a very active player in looking for responsible solutions to any issues which inhibit the way the Government approaches fire management. We are very happy with the sort of reforms the Government is talking about. We are a very active player, as I said, chairing the IDC which identified a lot of these reforms. We are satisfied that those reforms will not only improve the effectiveness of fire management—the efficiency with which hazard reduction burns can be undertaken for example—but also not diminish our capacity to protect biodiversity. We will never walk away from the fact that we have those twin obligations but we believe both those obligations can be satisfied.

**Mr R. H. L. SMITH:** I hear regularly that when land is transferred, particularly from forestry to national parks, a number of fire trails and roads are closed by national parks on that transfer. Do you know of any roads or trails that may have been closed on the transfer to national parks?

**Dr FLEMING:** In a moment I will refer to my colleagues to see if they want to comment because they are more directly involved. However, I would say that when land is handed over—and it is a relevant point in terms of these fires, particularly the Hylands fire—half of the park estate which was burnt in the Hylands fire came across to national parks only one year ago. That is relevant also in issues about hazard reduction history in some of these areas. A lot of those areas such as in Conjola and Jerrawangala are very new national parks. So we are faced in those areas, as we have been in other areas, with the questions of how we maintain the trail network and what part of the trail network it is appropriate to maintain.

It is true that when lands are transferred from State Forests to national parks some trails over time are often closed. That has nothing to do with fire management. The reality is that the lands were used for different purposes and some elements of those trail networks are about the harvesting of timber. They do not necessarily provide strategic fire trails in terms of fire management. They are quite often dead ends. They are quite often in areas running down slopes where you could put yourself in a dangerous situation. From a fire management perspective, there are trails which are necessarily closed when you do a transfer, but the process of deciding the road network is one we do not do quickly and we do it in consultation. We develop a roading plan for a reserve. We generally consult publicly and with other agencies about that roading plan. One of the primary objectives in designing the roading plan for that reserve is the effective achievement of fire management. It is one of the first things we look at and we do not look at it alone. We look at it with the other members of the district bushfire committees.

**Mr SHEPHERD:** As well as that, there are times when we have made quite significant capital investments in the fire trails we have inherited via land use decisions. Examples include in South-east Forest National Park where we have had now a multi-year program for it. It would certainly be well in excess of \$100,000 of bridge replacement, replacing old timber bridges with concrete bridges. A lot of that is aimed at making sure that there is secure fire access into the areas concerned. Our fire management trail expenditure has risen with the new areas at a rate greater than the proportional increase in area and we are certainly very committed to keeping the strategic trail network well maintained and operational.

**Ms GARROOD:** I suppose a high-profile trail in the Shoalhaven that was closed following transfer from State Forests to national parks is the Yalwal trail that went along Yalwal Creek. There was a fire in that area back in 1997-98. At a following coronial [the service explained] the trail was closed because it was rutted, unsafe and not strategic. The coronial verified that indeed that was correct.

**The Hon. TONY KELLY:** The government is looking at declaring more wilderness areas. How are you equipped or how do you propose to manage any newly declared areas?

**Dr FLEMING:** We will wait and see what the Government's final decisions are. I guess the point I would emphasise again is that the management of those wilderness areas will not be different from the rest of the park estate, just as it is with existing wilderness. If there are new areas of

wilderness, then we will manage those for fire to achieve our objectives. Once again, the paramount objective is the protection of life and property. The protection and enhancement of biodiversity is also a key objective, as is the protection of cultural heritage. Those objectives will remain the same tools that are available to us in wilderness as in other areas. The use of an extensive fire trail network will continue, and the use of hazard reduction techniques in appropriate areas will continue. There will be no difference.

You will be able to walk from one side of the park to the other through the wilderness area and out into non-wilderness lands and you will not detect a difference in the way we approach fire management. A point which Tim mentioned earlier was that government has been providing resources to support the management of new lands added to the park estate. The proportional increase in resources has been greater than the proportional increase in the area of new lands. Wilderness will not represent any new lands. Any new wilderness declarations will be over already existing national parks but it will be over lands we already manage, and will continue to manage, for fire.

**The Hon. TONY KELLY:** The Deua fire started well before Christmas and it appeared to go out but then it started up again on Christmas Day. What happened?

**Dr FLEMING:** Let me refer that question to Tim Shepherd as the regional manager.

**Mr SHEPHERD:** The Deua fire started in early December. We put in a large and sustained remote area firefighting effort leading up to about 20 December. It involved the use of three or four helicopters and winching in to construct helipads in the normal back country operations that we do. By 20 December the fire had been contained using strategies we had discussed and agreed with the fire committee and with the Rural Fire Service. We did a number of reconnaissance flights from 20 December to 24 December. By 24 December the reconnaissance flights had picked up just one smoke, as we call it, and it was a log on the ground about 300 metres in from the line, from the actual edge of the fire which in that terrain—in fact, anywhere—is well inside where anyone would go in and do work. In fact, it would have been quite dangerous in that terrain. On 25 December, on Christmas Day—and Tony and others have talked about the weather conditions—the fire did escape. It did reignite from a position which was at least a kilometre from the last reported smoke.

**The Hon. TONY KELLY:** From sparks?

**Mr SHEPHERD:** The probability is that it was from something that you just could not detect even with the best surveillance somewhere closer to the line, because a kilometre is a long distance. It also reignited and ran against the prevailing wind. It ran to the west and there must be some very strong circulatory effects happening and some very unusual and extreme weather conditions. No-one could have done anything about the reignition. Superintendent Terry Toll told the Eurobodalla fire controller for the section 44 said that he attaches no blame to the service. He said that we did everything possible to round up the fire.

For the same sort of reasons we had those huge runs of fire in the Shoalhaven, 15 kilometres over four hours, something happened at The Deua fire which appears to be related to very unusual and extraordinary conditions which meant that it reignited. But as I said, we had had it on patrol status and we had been patrolling by aircraft for four days. It was the best that I think anyone could have done. It is also important to remember that there were two fires in Deua which eventually joined together. The second one in Oulla Creek, which was much closer to Moruya, did not start until 27 December. Regardless of the original Merricumbene fire, we still would have been faced with a very large fire because of its location from the second ignition.

**The Hon. JOHN TINGLE:** Dr Fleming, I would like to clarify a couple of things you said. You mentioned a figure of something like 20,000 or 22,000 hectares which had been subject to hazard reduction over the past four years. Did that refer to the whole directorate, the far South Coast region or the South Coast region?

**Dr FLEMING:** That was the directorate over the four-year period.

**The Hon. JOHN TINGLE:** How many hectares did the directorate have in total?



**Dr FLEMING:** In park estate, 1.6 million hectares.

**The Hon. JOHN TINGLE:** You will forgive a layman for saying that it does not sound like a very large area that has been subject to hazard reduction.

**Dr FLEMING:** We believe we have targeted the appropriate areas for that hazard reduction work. The 1.6 million hectares, the estate has increased during that period, and you will probably see a reflection in increased hazard reduction figures in future years and in fact in this year as the estate has increased in size. But strategic hazard reduction plans did not need to be necessarily over large areas to achieve their effect, and that is the approach we have taken. I can provide you with more detailed figures if that would be of interest.

**The Hon. JOHN TINGLE:** No. I just wanted clarification on what proportion. On page 17 of your submission it is suggested that hazard reduction burns "have negligible effect in restricting wildfires two years after the burn is done". Does that raise the suggestion that a strategic burn in that particular area should be done every two years?

**Dr FLEMING:** It does raise the issue about how frequently you should do burning. We monitor in the areas that we undertake burning or through the committee process are identified as high priority. We will monitor fuel loads. It really comes down to those fuel loads and when they are reaching sustainable levels in terms of the objectives for that area. Yes, the speed at which the hazard reduction burn becomes ineffective has an impact on how frequently we need to do those burns. Inevitably resources become an issue. You have to target your resources because you have limits on the resources you have in terms of money, people and people's time, and windows of opportunity, so you do not want to do burns more frequently than needed. But if an area requires burning frequently, then that is what we have to look at.

**The Hon. JOHN TINGLE:** You mentioned that some of the fire trails are locked with gates. Are any of them blocked by earth mounds?

**The Hon. TONY KELLY:** Would a locked gate stop a Rural Fire Service truck with a pair of bolt cutters in it?

**Ms GARROOD:** I would like to concentrate first on the frequency of hazard reduction burning and its effectiveness after two years. Because of limitations, particularly in extreme weather, it places the onus back on using a whole suite of tools for risk management. We are talking about risk management, not hazard management, so it really puts the onus back on hazard reduction burning as a strategic approach that the service accepts wholeheartedly. Other tools include strategic slashing of breaks and community awareness, that is, taking ownership of problems on private property, as well as input into the development control process and building control process. It is extremely important that we are not creating further risks within high hazard areas.

Whether it is the National Parks and Wildlife Service or another land owner, it is not appropriate to continue to place the onus of hazard management on the adjacent landowner. We need to be minimising the risk as we go through the development process. In terms of barriers, we would not put any barriers on a strategic trail—that is, a fire trail that has been identified as strategic—that would restrict access. The Yalwal trail to which I referred previously has been coronially endorsed as not being strategic or required, and was restored. It is no longer a trail and that is probably where the issue of the barriers and the rocks came from. I am more than happy to provide the findings of that coronial inquiry to the Committee. For fire trails that are identified as strategic trails in use we provide keys to all the Rural Fire Service units so that they have ready access. We have a common locking system both on and off park, so that regardless of whether a National Parks and Wildlife Service unit is the first response off park or not, we can get through area gates off park, or other units can get access on park.

**Mr TORBAY:** Dr Fleming, you made a couple of points about the importance of the agencies coming together and working together. Is that happening on a regular basis? Are there any areas where you feel that the processes could be improved upon? Were there any conflicts in respect of priorities and those sorts of things both before and after the major fire?

**Dr FLEMING:** That is interesting because I have to say that I am not aware of any within my directorate. I am not aware of circumstances in which the parks service has been in conflict with other agencies—for example, about whether a hazard reduction burn should occur. Inevitably you have discussions with the committees and, as I understand it, they work pretty much by consensus. When we really got into difficult situations such as the severe fires that we had on the occasion being discussed, the co-ordination and co-operation was extremely good. You saw the reference to the section 44 controller's report for Eurobodalla in which he identified it as working extremely well. I would say the same from my side. I know from discussions with Tim Shepherd and Diane Garrod that they believe that in relation to both fires the co-operation and co-ordination were very good.

I think we are getting beyond the stage of some of the earlier fires when people could not even communicate with each other over radios. I think we are moving past some of those issues. Having visited control rooms during the course of the fires, I can tell the Committee that the sense of affiliation among individuals working on the incident management team or out in the field is becoming less significant. The more significant point is the capacity they bring to bear for the fire, and it is managed in that way. There was actually a really good integration within the incident management team of all the agencies, and not just within our State. The capacity to bring in people from interstate and have them work productively and effectively within hours of their arrival is extraordinary.

**The Hon. RICK COLLESS:** Dr Fleming, I want to ask you a philosophical question about hazard reduction.

**CHAIR:** They are the worst sort.

**Dr FLEMING:** Absolutely.

**The Hon. RICK COLLESS:** It is not designed to be a trap, I assure you.

**Dr FLEMING:** No. That is all right.

**The Hon. RICK COLLESS:** One of the most effective means of hazard reduction, other than burning, surely must be grazing. Is grazing ever considered as a realistic option in some areas? I am not suggesting that it should be used in all parks, but certainly there are parts of some parks which could have grazing reintroduced on a casual but certainly not continual basis, purely as a hazard reduction tool.

**Dr FLEMING:** I will go through it in a few points. I guess the first is a point I made previously, namely, that we are looking to do hazard reduction in areas where it will achieve risk reduction. We are focused in those areas. The service's view in relation to grazing is that it can achieve effective hazard reduction in certain circumstances, for example, in pine plantations. I am not talking about the service's estate here, but in terms of the use of grazing as hazard reduction I would suggest that it could be used in some pine plantations and in certain grassland areas where it is needed. Grazing can be effective, but we do not believe that grazing is a very effective hazard reduction tool in forest areas. I do not believe we could have that.

**The Hon. RICK COLLESS:** State Forests would disagree with that perspective because they do use, and have used for many years, grazing as a hazard reduction tool in many State forests which are now national parks. I put it to you that grazing in those areas was a successful hazard reduction strategy—so successful that the biodiversity levels in some of those forests are now sufficient for them to be declared national parks.

**Dr FLEMING:** There are a number of elements to that and I guess the first element is that we take the view in the parks service that there are more effective ways of doing hazard reduction in forest areas where that is necessary. Secondary to that is, having identified alternative means of hazard reduction to achieve risk reduction, we also believe that grazing can have impacts on biodiversity which are detrimental to the natural values of those areas. The fact that an area is declared a national park does not mean that it is not in need of careful management to recover some of the natural values which existed in those areas. The declaration of an area as national park does not mean that that area is necessarily pristine and removed from any disturbance in the past. What it means is that those areas

contain significant natural values and a real capacity to recover those values. It also means that those areas have significant recreational values associated with the natural values for which it is declared.

We take the view that grazing can be effective in certain circumstances but that there are other more effective ways of hazard reduction in forest areas. Given that, for other reasons and for the protection of biodiversity, we believe that grazing is not appropriate in most of those areas. There are exceptions—for example, Throsby Park Historic Site, which is one of our historical heritage places. Grazing occurs in the place because it is considered to be an appropriate part of that cultural landscape: it is highly disturbed landscape pasture country. We do actually undertake grazing within the parks service under certain special circumstances where we believe that it either fits the cultural heritage of that place and where it is not compromising the biodiversity and conservation objectives, or on occasions it may be used as a measure in the short term or in the longer term to achieve biodiversity outcomes. We do not in all cases rule out the use of grazing, but it is very restricted and it is our view that it would be very rare that it will actually assist in achieving biodiversity objectives. However, it is known to occur and there are some occasions when it may be used for that reason or for cultural landscape reasons.

**The Hon. RICK COLLESS:** I sense a deep-seated paradox there. Mr Chairman, are we out of time?

**CHAIR:** We are very much out of time. Remember, though, that we have another bite of the cherry when the National Parks and Wildlife Service attends the Sydney hearings. Perhaps after we consolidate what we have done so far and get the answers that we have been promised, you may have a new brace of questions for the Sydney hearings.

**Mr E. T. PAGE:** What is your response to calls for greater firebreaks between national parks and built assets?

**Dr FLEMING:** We believe that you have got to look at the individual circumstances where you get that interface between bushland and national park estate. There are some areas where you need significant firebreaks and where a significant firebreak would be effective, and we support firebreaks in those circumstances. In other cases it is simply not going to be effective to do that. There are examples in parts of the areas covered by the fires currently being discussed, such as in the Hylands fire where a housing development backed onto wetlands, where there were physical limits to how much of a break we could maintain. We maintain the breaks and we will be looking in one or two cases at whether a break needs to be expanded. We see a role for firebreaks. We have firebreaks within parts of our estate and they tend to be in areas where you get that bushland and urban interface.

In those areas, there tends to be a complex mosaic of land tenures. For example, in the Huskisson area and Jervis Bay, about one-fifth of the urban-bushland interface is within national park and the majority of it consists of other forms of tenure. That just reinforces the fact that when developing firebreaks, which do exist there, we need to do that with the other agencies involved. We see a role for them. In some cases we see that those firebreaks need to be larger and in some cases it is okay if they are smaller. But in terms of the fires currently under discussion—I emphasise the point again—these fires were jumping breaks such as the Princes Highway; they were jumping major roads and were running across wetlands. The firebreaks were not the answer in relation to this fire in the Hylands area, unfortunately.

**Mr E. T. PAGE:** It was not the average fire.

**Dr FLEMING:** It was not the average fire and I guess my point is that in looking at the Committee's terms of reference, I would urge the Committee to recognise that and consider recommendations which will help us, not just in relation to extreme events but in relation to the events that we face every year.

**Mr R. H. L. SMITH:** My question was partly answered in response to a question asked by the Hon. Tony Kelly, but I think it is worth bringing out that you have had quite a massive increase in your estate over recent years.

**Dr FLEMING:** Yes.

**Mr R. H. L. SMITH:** I am interested to know whether you have sufficient resources available. Have your resources increased in proportion to the increase in national park estate, in terms of funding, personnel and equipment?

**Dr FLEMING:** Yes, they have. We have increased our estate by approximately 28 per cent. Our fire management budget has increased by significantly more than 28 per cent. It has increased more towards 40 per cent or 50 per cent, or even higher. I can provide you with some figures, if you are interested.

**The Hon. TONY KELLY:** If you could do that, that would assist us.

**Dr FLEMING:** That will be fine.

**CHAIR:** I thank the witnesses, whose evidence has been very enlightening for the Committee.

**(The witnesses withdrew)**

**(Short adjournment)**

**PETER ROSS HUDSON**, Company Director, 77B Neringilla Road, Bendalong, for the Bendalong and Districts Environmental Association,

**SALLY GJEDSTED**, Jervis Bay Regional Alliance, 26 Beech Street, Vincentia,

**TERENCE STUART BARRATT**, 16 Bunberra Street, Bomaderry, for the Nature Conservation Council of New South Wales, 362 Kent Street, Sydney, affirmed and examined:

**CHAIR:** I am advised that you have been issued with a copy of the Committee's terms of reference and also a copy of the Legislative Assembly's standing orders 332, 333 and 334, which relate to the examination of witnesses. Is that correct?

**ALL WITNESSES:** Yes.

**CHAIR:** Could you please state your occupation and the capacity in which you appear before the Committee.

**Ms GJEDSTED:** I am an elected representative in local government on Shoalhaven City Council. I am appearing as an interested community member on behalf of the organisation called the Jervis Bay Regional Alliance.

**Mr HUDSON:** I conduct a native flower industry business in the Bendalong area. I am the President of the Bendalong and Districts Environmental Association, which is an affiliate member of the Nature Conservation Council of New South Wales.

**Mr BARRATT:** I am an environmental scientist. I am a member of the Australian Conservation Foundation, Shoalhaven branch, which is an affiliate member of the Nature Conservation Council. I appear on behalf of the Nature Conservation Council.

**CHAIR:** Did you receive a summons issued under my hand to attend before the Committee?

**ALL WITNESSES:** Yes.

**CHAIR:** Mr Hudson, would you care to make an opening statement?

**Mr HUDSON:** The presentation this afternoon is in three parts. With your permission, would it be possible for all three parts to be presented before questions are asked of the group?

**CHAIR:** I do not think there is any objection to that.

**Mr HUDSON:** There is a detailed paper supplied by the Nature Conservation Council of New South Wales. Our aim this afternoon is to talk in local point to the paper, knowing that at a later stage of this inquiry you will have representation of that paper by the Nature Conservation Council of New South Wales. I would also like to make the point that I think all three presentations this afternoon will centre primarily on the first three terms of reference, that is, hazard reduction, an environmental impact, and land use decisions and development planning, although I will make some reference to aircraft firefighting in my part of the presentation.

If I could give you a little bit more of my background, which may help members understand the position that I hold on some of the issues on which I will elaborate shortly. I have been a landowner in this area now for seven years full-time and 15 years part-time. When I moved down here nine years ago the subdivision, of which I have 40 acres and on which I grow native plants for the sclerophyll industry, was a breakdown of eight lots. I mention this in passing because none of those lots could be defended by ground-based Rural Fire Service people during the recent fires, because of the geography and because of the fact there is only one road in and one road out. Therefore we were dependent entirely on our own resources or on those given to us by aircraft.

For the residents of this particular valley, the fires lasted for 14 days. Out of those 14 days there were only two days on which we could make a decision to leave our properties and not come

back—that is, once you went through either the police or RFS barriers you knew that you would not be able to return to your property. In my particular case, through the fire I lost some five acres, which was wet sclerophyll rainforest area to the south. That originally came about through the start of a back-burn which went somewhat awry.

I mentioned earlier in my introduction that I have been President of the Bendalong and Districts Environmental Association for some six years. That association has some 600 members. Very recently we were successful in having the Conjola National Park gazetted, on 1 January 2001, transferring its ownership and management from State Forests to National Parks. That is an accomplishment that our 600 members hold near and dear to their hearts, in the realisation that they are living in a unique part of New South Wales, albeit one prone to fire. We were saddened to see that 87 per cent of our most magnificent national park was burnt after lightning struck a tree at the back of Wandandian on Crown land and subsequently spread from there, as you have already heard this morning.

The association also conducted an information meeting for its members and during Easter, at which one of the major topics was bushfire management. For the benefit of those attending today, there has been considerable media hype and hysteria about the need for buffer zones around villages, and buffer zones perhaps between State forests, national parks and other urban and/or rural areas. It is interesting to note that at that meeting none of our members supported the concept of buffer zones, as they were described at that meeting, going all the way around their villages. In fact, some of them showed this to be a rather opposite way in which to preserve what they regard as a pristine part of the coast and, more importantly, to maintain a habitat and a relationship with the environment which they have enjoyed thus far.

In terms of council development planning, I would state here, as I have already cited in my own case, that I live on a property that cannot be defended by the Rural Fire Service coming into the property. I respect—I truly respect—that decision. If I were in command of a major unit with five or six people on board and knew there was only one way in and one way out, I too would not put those people at risk. What this does cite for us all, and for rural property owners in particular, is the need for greater vigilance and greater responsibility in preventing and being able to manage fire situations. But we must bear in mind that the decisions to make that subdivision were made less than seven years ago.

If I could go further. Just recently the association defended a group of people at the back of Milton in an area where a new zoning by Shoalhaven council called 1C—Rural Lifestyle Zoning was introduced, which increases lot density from anywhere between one to four lots per 10 hectares. The arguments against such a rezoning centred on one of the major issues of bushfire management. Clearly, if you saw what this fire regime did, a number of small lots owners having small dams capable of holding nothing more than about 20,000 230,000 litres—that is, a swimming pool size—may be capable of defending their own House. However, in this last fire regime that we saw over 14 days, I can comfortably cite the fact that it was larger rural property owners with very large dams who supplied helicopters such as the Ericsson—or, as it is more locally known, Elvis—with its 9,000 litres every 45 seconds, to be dumped on hot spots in and around their property.

Therefore, the concept of rural development lifestyle, and aiming to present to the public possible ways of living which suggest you can have your house, a small dam and survive fires, to me represents an enormous risk to the public, and perhaps council needs to become more diligent in making sure, as it does in the case of floods for instance, that potential property owners are aware of the great risk that they have in protecting their properties against fire.

One further example I would like to bring to the notice of the inquiry is that the local environment plan for coastal villages often requires the separation of those villagers by substantial green belts. The reason this has been brought about—and wisely so, ironically enough—is to make sure those villages keep and maintain their amenity. In other words, you try to prevent the villages overflowing from one to the other, so that there is no visible discrete difference between one hamlet and another. If, as is proposed by the media and many people whom we consider to be hysterical, we have buffer zones of 120 metres to 150 metres—and some, I might say, are advocating 500 metres—around our villages, such separation zones will no longer exist. We believe that ultimately the destruction of those separation areas could result in further unwanted development. Therefore you do end up with one larger town, rather than a number of discrete villages. So, along with the various

other forms of legislation, I would think that various council acts and responsibilities need to be examined by this inquiry as well.

A little bit more about fire. Dr Fleming put it very well this morning when he talked, in his very gentle way, about the change in vegetation style after various forms of burning. One of the major things that was exciting about creating a national park, the Conjola National Park, was to find that after five or six years of study that park was pristine in a number of ways. It was weed free and in many respects large parts of the proposal had not been subjected to severe fire regimes, although some had to the north, as you saw on those earlier maps. This has led to a most unusual environment and one which we would hasten and hope to protect over the longer period of time.

I raise the point about weed infestation for a very particular reason. Adjacent to some of the villages that we have, including Bendalong, North Bendalong, Manyana, Cunjurong Point and Berrinjer Lake. There are several large areas of Crown land which are regularly burnt to protect those villages. It is clear to anybody who is able to observe nature that the substance of that vegetation has changed substantially over the period of time where the frequency of burning has caused a substantial loss of native vegetation and given rise to more exotic forms of vegetation. I suggest to this inquiry that those exotic forms of vegetation are as flammable as alleged for some of our native vegetation.

What we are concerned about is if we keep pursuing this concept of large barriers to be maintained what final impact that will have on national parks, on areas which have been deemed to have qualities which deserve their preservation in the future. We think that those sorts of things should be put into a balance along with the obvious requirement to protect people and, if possible, property. Finally in my part of the presentation I would like to make some observations about fire management. Around my particular property we saw a number of back-burns undertaken and in two cases I would have to say that both went wrong. This was not the fault of the regional fire service. It was probably right in undertaking those back-burns to try to protect a very steep ridge line on which my own property or part of my own property and residence exists.

In the case of one back-burn it went sadly wrong and had to be extinguished from the air and then rekindled the next day because winds had swung once more and the back-burn had not gone sufficiently deep enough to warrant any form of protection whatsoever. In the case of the southern back-burn, here we have an interesting concept. The back-burn was unfortunately started late in the day, 10 o'clock in the morning in fact. As you have seen from the previous presentations, you could guarantee that the wind would start at 2 o'clock. You could almost set your watch by it—at 2 o'clock in would come the winds and over would come the helicopters.

The back-burn itself could have been a success except the RFS had other priorities and was drawn away—and rightly again—to those because suddenly a fire which had been deliberately lit at Berrinjer Lake had suddenly gone awry with the increased weather conditions, sweeping very swiftly west along the southern side of Bendalong or Red Head Road, crossing Red Head Road and then coming towards the three properties, of which mine is one. This particular fire shield had hit the back-burn as well and there were many, many aircraft sorties over the three properties to try to prevent those properties from being lost.

It is interesting to note that that deliberately lit back-burn by a property owner at Berrinjer Lake still has not seen that person prosecuted. If it had not been for helicopter support I suggest that I would have perhaps lost all of my residence, depending on how well I could have managed my own fire management scheme. This brings me to the last point of my part of the presentation, which is the need for property owners such as myself to take a much greater responsibility for the management of their properties. One of the things which hurt more than anything else during these 14 days was not being afraid of being burnt, was not seeing my property lost but being harassed by police and in some cases regional fire service groups, not local, and intending and meaning well to try to remove the property owners from their properties. In particular I would have to cite the police who in some cases were prepared to almost arrest the property owner and take him away.

A property owner cannot put up with the strain of protecting his property and have this sort of harassment. It seems to me an incredible waste of very important resources such as policing and the RFS services that they should have to attend, find owners on their properties and try to encourage them away from them. There has to be a better way. There has to be a better way for those folk to

focus their service on where it is truly required and that can happen if property owners take a greater responsibility in managing their fire management program. I would be advocating to this group that some form of registration of property occur whereby a property owner such as myself can produce a fire management plan, can show that there are sufficient water resources regardless of the weather conditions, has sufficient infrastructure, both fixed and mobile—that is, both pumps and sprinklers—to protect whatever property that owner selects to protect and also has some form of evacuation plan. In our case that evacuation plan would have to be an evacuation on the property because there is nowhere else to go if firestorms like we had recently were ever to generate or be repeated.

This form of registration would then allow perhaps council to put on a property owner's mailbox or front fence some sort of certificate that says to the RFS people or to police, "Don't bother wasting your time coming here. They are well managed and well resourced. Get on and do other things." I make the point again that I am not saying that these people were not doing their jobs. In most cases because of the length of the fires it was police who were not local to the area and it was those folk in the Rural Fire Service who came from outside the area who gave property owners a very difficult time in trying to give them encouragement to stay rather than encouragement to leave. I would like to conclude my part of the presentation and Sally Gjedsted could follow on, if that is acceptable.

**CHAIR:** Yes.

**Ms GJEDSTED:** As I said previously, I am a resident of Beach Street in Vincentia. I am an occupant in the third line of houses from the interface of the urban area and the bush. I estimate that to be a couple of hundred metres. I am, as previously stated, an Independent councillor on Shoalhaven City Council. I am representing the Jervis Bay Regional Alliance here today, and I am providing a local perspective in support of the Nature Conservation Council's submission. In being here today I seek to address the Committee's terms of reference relating to environmental impacts, causal factors and development planning. By development planning, I mean historical planning and future planning. Prior to addressing the detail of my submission, I would like to briefly refer to some on-the-ground observations of the Christmas Day bushfires.

First of all, as we have heard today, the weather conditions were as bad as they could possibly be, and I regret to say that householders were not prepared. A number of houses were unoccupied because of Christmas day, with residents away visiting, and holiday homes were unoccupied. A number of holiday homes had no hoses and no water available as owners had turned the water off. Some households at the interface had increased fuel loads by dumping of green waste, including a number of tyres in one instance. As I said, conditions on the day were extremely frightening. Regrettably, that fear has resulted in a response to the fires which has led to extremes. I have one example which I would like to pass around. It is a visual reference of land clearing not in the Jervis Bay area but in Sussex Inlet, which was also impacted on by the fires.

In addressing the Committee's terms of reference by local examples, it is noted that the high environmental values in the region are well documented and acknowledged in the establishment of Jervis Bay National Park by the State Government, in the establishment of Booderee National Park by the Federal Government and in the preparation of the Jervis Bay regional environmental plan, which was a co-operative document produced between the State Government and local government. We also have to remember that Jervis Bay has recently been declared a marine park, and we need to give consideration to the cumulative effects of land use and land management within the catchment of Jervis Bay that may have the potential to affect the water quality within the bay. I now refer to a couple of local examples and I have some maps. I will leave them with the Committee but they are not in a format to assist with presentation overall.

The first is an example in Duncan Street, Vincentia, where two homes were lost. To the best of my knowledge, both were unattended. Houses in Duncan Street south of Montague Street back on to a council soil easement or face a council road which adjoins national park. The area of park is perennial wetland surrounded by heath, including an area of surface water and wetland plants such as reeds. I have an example of that again, just to give you an indication. A freshwater creek discharges into the wetland which is tidal in its lower reaches where it joins Jervis Bay at Moona Creek. The second example of historical planning that I would like to refer to is Callala Street in Huskisson where



four homes were lost. In Callala Street private property does adjoin the national park. There is a history of fire management of this area. However, any management is constrained by wetland.

For instance—and I am referring to information that I received from the local office of the National Parks and Wildlife Service—due to the swampy nature of Jervis Bay National Park adjacent to Huskisson, fire suppression is extremely difficult. Vehicular access is limited. During the fire of August 2001 suppression was assisted by helicopters water bombing. It was also noted by firefighters during this fire that although the ground was inundated with water the standing vegetation carried a fire. I draw it to your attention that the area of park adjoining Callala Street is a SEPP 14 wetland of significance and any clearing for a buffer would be subject to an environmental impact statement.

Putting environmental impacts aside, buffers are identified as a fire risk management strategy. There are a number of issues arising out of buffers as fire risk management. In the worst set of conditions, such as Christmas Day, in a specific area what width of buffer zone would offer what level of protection? Can residents adjacent to bushland ever be offered 100 per cent protection? For example, in the worst fire, if 80 per cent of houses on the perimeter of the urban area survive without a buffer, should the risk-cost benefit relationship be considered in buffer selection? Also, what are the capital costs, including environmental costs, of clearing and disposing of vegetation in locations where important features of vegetation and critical habitats are destroyed?

What would be the cost for maintaining buffer zones, and who would bear those costs? What are the responsibilities of property owners and developers in developments encroaching on bushland? The local examples to which I have just referred are the result of past planning. I would now like to look at future planning. Future strategic plans for this area include two examples where fire risk management, if buffer zones were employed, has not been properly considered. I will pass round a map. The first example is a proposal to rezone and develop land within the heritage estates. Development of this land was subject to a commission of inquiry in June 1999. The commission identified the important fauna habitat and wildlife corridor values of the heritage estates and recommended that these be protected by limiting any future residential development on the land. The commission recommended a limit of up to 730 houses over a three-stage development, depending on further environmental assessments. I advise the Committee that the estate comprises 1,100 landowners with approximately 1,100 lots.

Fire risk and management were not matters for consideration by the commission. As bushfire management has not yet been considered, when it is, the community are concerned that the landowners will not accept a reduction in development potential and will want areas identified for wildlife corridors to be cleared for bushfire protection. Further incursions of buffer zones will mean that the State and Federal environmental issues and the investment made by the State and Federal Governments in the establishment of national parks are at risk. These corridors are important connections for the maintenance of biodiversity within the park system. Another example that is identified on the map that is being passed round is the crossroads site proposed for commercial and residential development of a greenfield site to the west of Vincentia. The land has been rezoned for urban development and, again, fire risk and management have not been considered.

The risks inherent in the creation of buffer zones are obvious from the map. Because not everyone has the map, I will explain that to the west of the existing urban area of Vincentia there is a narrow corridor which has been declared as national park and it was subsequently gazetted as national park. To the west of that corridor we have a parcel of land which has been rezoned for development. In looking at that, if we are to consider inclusion of the buffer to the west of the existing area—knowing that a buffer has not been considered in the proposed area—there is the potential to pinch out that corridor, therefore making it less viable. The same situation applies within the heritage estates because to the south of that we have the Booderee National Park, which is a federal park.

In this way the corridor is protecting both the existing and proposed development, which would otherwise reduce or decimate important habitat corridors, for the maintenance of biodiversity. Another strategic document is council's settlement strategy for Jervis Bay which was exhibited from August to October 2001. This is a draft document of a strategic framework to primarily manage residential and rural growth in the region for the next 15 to 20 years. To date, this document does not consider bushfire risk and management. The evidence is that bushfire risk is ignored in local government planning strategies and the documents give the community no warning of the possibility

of risk. Purchasers of land can apply to council for a section 149 certificate which identifies any constraints that are specific to a parcel of land—for example, if the land is flood prone. I believe that the section 149 certificates could identify bushfire risk.

This information is identified in council's bushfire risk management plan. By doing this, we then provide purchasers with a choice as to the risk. The responsibility to take appropriate precautions would be clear and they would better understand that risk is exactly that, and that the property owner has a responsibility to manage that risk. There would be an understanding that there is not 100 per cent certainty either way. I believe that a comprehensive education program informing landowners of the precautions that can and should be taken needs to be devised and disseminated by councils in the fire-prone areas. Having said that, I draw my comments to a conclusion and now introduce Terry Barrett.

**CHAIR:** Mr Barrett, I am quite happy to have your submission, but we have taken 35 minutes with the lengthy submissions which almost eliminates question time. I am not asking you to compromise your submission; I am suggesting it may be difficult to fit in time for extensive questioning. Please go ahead.

**Mr BARRATT:** I hope that we have at most 10 minutes available.

**CHAIR:** You have got whatever time you need. I am saying that the time for questions will be restricted because of the length of time taken up by the submissions.

**Mr BARRATT:** I will be brief. My background is that I have had 25 years professional service with the New South Wales National Parks and Wildlife Service, including experience in all aspects of fire management and on-ground fire suppression through to senior levels of fire control, plus fire research work, fire management and planning, and responsibility related to administration and implementation of risk reduction measures. I have lived in the Shoalhaven district for 22 years. During that time for 10 years I was the National Parks and Wildlife Service manager and responsible for the then Nowra district as well as a large area of the South Coast and the southern tablelands. For 10 years I was an environmental scientist for Sydney Water in the Illawarra region. I have represented environmental community groups and the Nature Conservation Council of New South Wales on many committees, working groups and forums within the local area. I am a strong proponent of community participation in decisions relating to the management of the natural environment, and this of course includes fire management.

I believe that we cannot minimise the impact of fire on both the bush and its neighbours without close co-operation and action between the community and public authorities. I come from Bomaderry, which is just across the Shoalhaven from here. The recent bushfires did not extend as far north as Nowra and Bomaderry and I did not experience the threat and impact that others did. There was however a strong possibility at the time that the fires would threaten us. Had they done so, the residents both north and south of the river could have been embroiled in the same drama as those further south; after all, the same circumstances exist—urban and rural properties interfacing with bushland. Although I cannot relate my comments to first-hand experience with the recent fires, I can use a local example of how fire prevention measures can be implemented while avoiding serious implications for impacts on biodiversity and other values of the natural environment. The following comments address aspects of matters (a), (b) and (c) that are required to be addressed under the terms of reference of this joint select committee and also provide a practical example of many of the issues raised in the Nature Conservation Council's submission to the Committee.

#### *Bomaderry Creek Example*

The Bomaderry Creek bushland is a 230 hectare area of scenic, diverse and natural landscapes including rainforest and numerous threatened plant and animal species. It is also a popular recreation area. This bushland is sandwiched between the suburbs of North Nowra and Bomaderry on the north side of the Shoalhaven River. There are legitimate concerns regarding fire risks for neighbouring residents. However, the significant nature conservation values and high recreation use of the bushland have led to growing concern that traditional burning off practices to reduce fuel levels may compromise these values and the community's enjoyment of the bushland. This concern was heightened by an 18-month period of deliberate ignitions throughout the bushland that related to the

burning of 60 per cent of its area and considerable work and frustration for the local rural fire brigade. The community has a legal right to expect protection from bushfires for life and property. At the same time people have the right to expect that this will not compromise the values of the bushland.

During 1998, on the initiative of members of the Shoalhaven branch of the Australian Conservation Foundation [ACF] and the Bomaderry Creek Landcare group, of which I am the current chairperson, a fire management strategy was developed for the bushland with the intention of meeting all the community's needs and a program was established to achieve a strategy. Development of the bushfire management plan entailed a number of steps. In early 1998 ACF and Landcare group members organised an inspection of the bushland with members of the community, representatives of the Shoalhaven City Council, local bushfire brigades, the National Parks and Wildlife Service, the Department of Land and Water Conservation, Integral Energy and the fire control officer. The inspection focused on those sections of the urban bushland interface that we regarded as being at the greatest risk from fires emanating from the bushland. Discussion ranged across a wide range of options for minimising the fires entering and leaving the bushland.

The outcome of this very successful event was the formation of a working group of representatives and stakeholders who had an interest in the bushland and who had expertise in fire management. Their task was to prepare a fire management plan for the bushland. I was a member of the group as a community representative and because of my extensive fire management experience and detailed knowledge of bushland, which includes postgraduate research on many aspects of the fire threat to bushland, in the plan we determined our objectives, documented the values of the bushland, identified the fire threat to both the bushland and the community, formulated a fire management strategy, identified areas for specific actions to achieve the strategy and established performance indicators to help measure the success of the plan's implementation. This plan is the outcome of the exercise. This is my only copy. The council has copies and it is the council's plan. If the Committee would like a copy, I suggest that the Committee obtain a copy from the council. I would rather not let go of my one, treasured copy.

**CHAIR:** That can be arranged.

**Mr BARRATT:** Thank you. I cannot go into the details of the plan here, but I recommend that the Committee obtain a copy of the plan. I will restrict myself to a few important points. The management objectives were to minimise unscheduled fire outbreaks, reduce the bushfire threat to life and property, maintain species and community biodiversity, protect features of scientific and cultural value, and maintain recreational and educational opportunities. The objectives are written down in the plan. Let me also list those matters that were addressed in the section on fire management strategies generally in order of priority: first, community involvement; second, establishment of effective fire protection measures at the urban-bushland interface; third, the introduction of an education program; fourth, encouragement of research and monitoring of fire and its effects on bushland; fifth, fuel reduction burns; sixth, banning of picnic fires and prosecution; seventh, fire suppression practices; and, eighth, identification of fire management units, that is, units of land where specific fire management strategies can be employed.

Let me also identify those matters that were considered to be most significant. First and foremost it was recognised that the neighbours to the bushland need to become involved in protecting themselves and that the best protection for lives and property are measures that can be taken on the properties themselves and at the immediate urban-bushland interface. Formation of community fire brigade groups were proposed for strategic locations to focus attention on the fire threats to those particular neighbourhoods and to bring resources to bear on actions to do with the problems. Of almost equal importance is an education program which was proposed to provide information on fire risks to the community and natural systems and the consequences of irresponsible use of fire in the bush. The second and most important task was to establish effective fire protection measures at the urban-bushland interface. This involved the provision of relatively narrow cleared breaks between the bush and the backyard fences to lessen fire intensity, disrupt the progress of fires and permit access for firefighters.

This plan was to be implemented in conjunction with neighbours ensuring that they did not stockpile combustible vegetation on their properties but maintained cleared areas around buildings, and ensuring that they did not encroach with backyard activities or dump rubbish on the cleared

breaks. It is important to note that fuel reduction burning was relegated to fifth on the list of strategies, that it was to be limited to strip burning along the boundaries of residential areas and that an extensive burning program was not justified for the five-year period of the plan. It is fully explained in the plan as to why that was the case. The other more important measures were outcomes of long years of experience. A lot of my experience has been at the urban-bushland interface. I was responsible for the management of national parks, the Ku-ring-gai Chase National park, the Sydney Harbour National Park, around the Botany Bay area, and many urban and semiurban areas within the Shoalhaven.

In the circumstances detailed in the plan, it was not seen that fuel reduction burning was a major factor that would effectively, for the first five years of the plan, reduce the risk to the community or risk to the biodiversity of the fires within bushland. The plan was placed on public display from August to October 1998. It received no adverse comment, and was subsequently adopted by council later that year. So it is a council document that is fully endorsed by council and is currently being implemented.

Measures have been taken over the last four years. We are in the fourth year now of the implementation of that plan. As far as implementation is concerned, some achievements to date include clearing of breaks along the most strategic boundaries, cleaning up of rubbish within backyards, burning of patches of bush within private property, some publicity regarding appropriate activities along the urban-bushland interface, and the banning of fires in the main picnic area. For all of the good intentions of this worthwhile undertaking, the implementation of the plan and the commitment of resources to achieve this have been less than desirable. Like every plan, all the good intentions in the world will see little come to fruition unless there is strong commitment to it. I am not being terribly critical because the plan. It is there and it is a most progressive document, probably more progressive than those in many other areas of the State that I have seen in that the biodiversity of the area was well known, the incidence of fires was well recorded, and the plan showed detailed fire history, going back many years. So we know exactly where fires have burnt, and when. To a greater or lesser extent, we know the intensity of those fires, whether they threatened properties, and whether any subsequent hazard reduction burns have been effective in stopping fires from moving into and out of the bushland.

While the co-operative undertaking of this plan provides a good model for further effective ways of maximising the protection of the community from fires, it will mean little if there is not the commitment and the allocation of resources to make things happen on the ground. I believe that we must understand the nature of the issue that we are dealing with. This applies to any community undertakings. Something as serious as this requires involvement of all of the community. It needs to be properly and well planned, with a knowledge of the resources, and a knowledge of the behaviour of fire. That plan documents the likely behaviour of fires within bushland. It identifies what plant communities are at most risk from fire and, more importantly, it clearly identifies what neighbours of bushland are most at risk, that is, which areas and neighbourhoods are at most risk of fire.

The final point I would like to make with emphasis is that there needs to be community commitment. That includes members of the community, agencies, councils, utility organisations such as those for electricity, water and so on, with a commitment to make the plan mean something when it comes into effect. It is no good putting pen to paper and fingers to the keyboards to produce a document if it is to be filed away on the shelf. I urge that this type of approach be taken in those areas where it has not been taken. I urge in this particular case, and in all other cases where such planning takes place, that there be a strong commitment by all elements of the community to the implementation of such a plan.

**CHAIR:** As a point of clarification, might I note that the Government has already announced that it intends introducing a State environmental planning policy to require local councils to consult the Rural Fire Service on development proposals in bushfire-prone areas and on a number of other issues which may well go some way to addressing the problem.

**The Hon. TONY KELLY:** The Planning for Bushfire Protection document that came out from Planning New South Wales went to councils in December, and that will be the basis of the State environmental planning policy that you spoke about, Mr Chairman. Mr Barratt, do you acknowledge that there have been significant improvements in bushfire management planning, and in particular in risk management planning?

**Mr BARRATT:** Yes, I think there have. Most of that sort of planning is dealt with by the agencies. This morning the Committee heard evidence of how well the National Parks and Wildlife Service has worked in that area. It is a few years since I was directly involved in the actual operations of bushfire management activities, but I was pleased to hear from the Regional Director, Southern, of the Rural Fire Service that they are much more on the ball than they were when I was district manager here some 10 or 12 years ago. I am also pleased to see the level of co-operation in assessing the risks and that management approaches have improved quite considerably since I was integrally involved in those sorts of matters. So I believe things have improved, and I think the lessons learned from these bushfire incidents will lead to even greater improvements.

**The Hon. TONY KELLY:** Are you aware of the Government's announcement regarding the streamlining of the hazard reduction approval process? Do you support that approval process?

**Mr BARRATT:** I do not know the details of the streamlining and what it means. If it means cart blanche hazard reduction, I do not think that would be appropriate. We need to have measured and proper consideration, and there is adequate legislation to ensure that we get the most effective type of hazard reduction in the most appropriate areas.

**The Hon. TONY KELLY:** Part of it was to give the Rural Fire Service power to enter upon lands to carry out hazard reduction operations not carried out but required by the local bushfire management committee, which is made up of all players in the community—that is, not carried out under a bushfire plan.

**Mr BARRATT:** I see what you mean. I do remember something to that effect. My thoughts on that are that I do not think it will be necessary for the Rural Fire Service to enter on State Forests and National Parks land to carry out programs written into hazard reduction plans. I think it would be a matter, if anybody thought they were bit tardy, of drawing their attention to it. I think where that power is relevant is where it is necessary to enter on private lands to reduce hazards. There are many cases where that is appropriate because the property owners are not prepared to undertake those sorts of measures themselves—if it is quite clearly identified through the bushfire committees that that is a strategic and very much necessary course of action. So I would support in general terms that sort of strengthening of the powers of the Rural Fire Service.

**Mr HUDSON:** I would add an anecdotal message to that which Terry has just given. It seems to me there is an interpretation factor involved here. My personal experience here was that an interstate RFS captain made the decision to undertake fuel reduction on the north-eastern slope of my property. It was really the interception of that proposal by the local group captain that that was prevented. I can only say that the interpretation, if it had become fact, would have left me with no property at all with the way that the winds were at that stage. So, when this is done, and how it is measured, and who it is done by, seem to me to be important things to be considered before someone marches onto somebody's property and says, "I am about to reduce fuel levels."

**The Hon. TONY KELLY:** That was not the question though. The question was: If the bushfire management committee has come up with a bushfire management plan agreed to by all players, and one of the groups—whether National Parks or private people—has not actually carried out the hazard reduction supposed to be done under that plan—not in the middle of the fire season but prior to it—would you support that? That was the question. It is not what you were suggesting.

**The Hon. RICK COLLESS:** The underlying message that I extracted from your submission is that broad-scale hazard reduction simply will not work. Do you agree with that broad conclusion?

**Mr HUDSON:** Yes.

**Mr BARRATT:** Could I add to that?

**The Hon. RICK COLLESS:** Certainly.

**Mr BARRATT:** I take a view similar to that of the National Parks and Wildlife Service: that you just cannot take a cart blanche approach to that. In the particular case of Bomaderry Creek—

which is only 200-odd hectares, and where the broad-scale hazard reduction concept probably does not apply because I understand broad-scale hazard reduction to involve the burning of maybe thousands of hectares, but certainly many hundreds of hectares, using aerial incendiary devices—60 per cent of that bushland area was burnt in 18 months through arson. That is one reason why in that case it was not seen as an appropriate technique. The place had been burnt out to blazes!

But there are many cases where, say, if you were burning 20 kilometres from Nowra with a view to protecting Nowra, broad-scale aerial incendiary approaches do not make a lot of sense. You need to come in a bit closer. You need to have your fire trails in the right position and do your hazard reduction in association with those fire trails so that you can safely use those fire trails in order to make your efforts to stop fires in those areas effective. In other words, you have strict burning in association with fire trails to make those fire trials even more effective. But, if at least initially you concentrate your attention on those high-risk areas, that is a strategic approach that uses limited resources in the most effective way. That is an area in which you can get community involvement, with people gaining some understanding and experience in fire management. One of the big problems is that people panic in the event of a fire, and in many cases become hopeless; they get in the way. I think you need to involve the community more, and bring them in where the major risks are. That, generally, is at the urban-bushland interface.

**The Hon. RICK COLLESS:** That has been a lot said about the fires last season going through areas that had been burnt as little as four months before the big fire. Did any of the fires start in those areas that had been recently burnt? If they did, were they able to be controlled more effectively before they got a go on? I can imagine, if a fire started in an area where there is 100 tonnes per hectare of fuel, and it got into the crown and started to race, it would go straight across an area that had been recently burnt. But, if a fire had started in one of those previously burnt areas, say in an area where there was only 10 tonnes per hectare of fuel, it would be much easier to bring it under control quickly.

**Mr BARRATT:** My prior experience with the National Parks and Wildlife Service tells me that once it is a crown fire—

**The Hon. RICK COLLESS:** But it will not get into the crown if there is no fuel on the ground.

**Mr BARRATT:** Fine. But I was just making a point. You cannot assume that it will not. My experience in the early eighties with the national parks and wildlife service in the Nowra district is a moot point. In the early eighties we had a wildfire go through an area of national park just west of Kangaroo Valley. That burnt out quite a sizeable area, mostly on north-west facing slopes, the most hazardous slopes in a fire situation, under very dry drought conditions. So, although it did not crown, it completely removed the understore. After the fire litter density been reduced to nothing. Within 18 months there was sufficient fuel for a fire that came through under quite horrific conditions—very similar to the recent fires but not as intensive, at the same time as the Ash Wednesday fires occurred in Victoria, in about 1983 I think it was— to burn through the same area and crown. It roared into the Kangaroo Valley.

**The Hon. RICK COLLESS:** Did it start in that area?

**Mr BARRATT:** No. It started on a property at Bundanoon. But it did not have a complete run; it jumped from ridgetop to lower slopes of the opposite valley. So it had to restart each time. It had to restart in these low-fuel areas. The conditions were so extreme that the updrafts, the cumulus-type updrafts that fires create in those circumstances, lifted it immediately into the treetops, and away it went. There was enough fuel there to keep it going. That was my first experience of that sort of phenomenon. It is not until this time with those same sort of experiences, even worse though—this last series of fire events over Christmas—that I have seen that happen. It is not a regular occurrence but when it does happen there is a situation—I understand Peter observed fires going through the same areas within a very short period of time. He may be able to comment on that. Wildfires under extreme conditions and additional wildfires.

**The Hon. RICK COLLESS:** You agree that broad-scale hazard reduction burning is not the answer, and you said that some of those areas, 20 or 25 kilometres west of Nowra, should not be

burnt. This morning the witness from the Rural Fire Service mentioned a figure of 100 tonnes per hectare of dry matter in those areas. What sort of biodiversity would survive in that environment? I have a vision of a tangled undergrowth of lantana and scrub and whatever it is in there perhaps four or five metres high. Would kangaroos and wallabies and so on live in that sort of environment?

**Mr BARRATT:** I have not said you should not do any hazard reduction in that area. You asked the question before—

**The Hon. RICK COLLESS:** No. I am asking you now about the kind of fuel loads.

**Mr BARRATT:** Your question was prefaced with that comment that implies that I have said there should be no hazard reduction. I do not agree with that. I am just saying that broad-acre hazard reduction is not necessarily the answer. I am not saying it is not appropriate. In some circumstances it might be appropriate but in those areas 20 to 25 kilometres to the west—I can show you on a map—there is an excellent fire trail system north to south with areas on ridge tops where fire is managed or hazard reduction burns have taken place, and it is a very good buffer to move into fires from wilderness areas into other adjacent forested areas. The picture you paint of dense undergrowth occurs throughout a lot of those areas and often on the moist slopes that do not tend to get burnt.

That is what I have found in hazard reduction burns, particularly with aerial incendiary management techniques where you tend to get the ridge tops and the north and western slopes burnt fairly regularly in those autumn periods when that is usually done and the more moist protected, shaded southern and eastern slopes do not tend to get that but they will burn in wildfires under these extreme conditions. Sometimes you have a tendency to emphasise those areas and protect those areas from fire by that technique if it is not strategically applied. And it is not strategically applied in the area; it is fairly carte blanche. It will burn where it can burn with those incendiary type approaches and you tend to protect those areas from fires when maybe they should burn and then you just cannot get into those areas. You cannot deal with fires in those areas.

**The Hon. RICK COLLESS:** Animals cannot get in there either?

**Mr BARRATT:** No, that is not true. You have painted the picture of lantana.

**The Hon. RICK COLLESS:** I was asking about the impact on animals.

**Mr BARRATT:** I hope there would be no lantana there. Lantana is a feature of many cases of the urban bushland interface because it is a weed. Nevertheless, wildlife can exist in lantana, but any dense shrubby environments are often very important for certain species. It protects them from predatory species. Regularly burnt areas are areas where you get less diversity of wildlife, partly because you do not have that biodiversity, you do not have that structural diversity and you do not get protection for a whole range of animals because raptors, predatory birds and other animals have a freer go there. So it is not true. Those dense bushland areas can be very rich in terms of biodiversity.

**The Hon. TONY KELLY:** I suggest that we put any other questions on notice.

**CHAIR:** Yes, I think so.

**The Hon. TONY KELLY:** Otherwise we will not get a chance to talk to the other people.

**CHAIR:** A lot of people have been very patient in waiting today and I think we have an obligation to try to maintain some sort of program.

#### QUESTIONS ON NOTICE

**The Hon. TONY KELLY:** You say in your submission that the recently revised guide "Planning for Bush Fire Protection" is not easily accessed or widely advertised. Are you aware that it has been distributed to local councils and that it is available on the Internet at the NSW Planning web site?

**Mr E. T. PAGE:** You state in your submission that the Nature Conservation Council has undertaken 28 bushfire workshops and three conferences in the past 10 years. Have these enjoyed some success in raising community awareness? You have been somewhat critical about the efforts of the Rural Fire Service to raise community awareness. Are you aware that since 1995 the RFS has established 520 community fireguard groups, other programs such as Fireguard for Kids, Fire Safe Farms, Fire Safe Towns and Bushfire Wise? Are you also aware that the RFS recently established community safety positions which will be located in regional New South Wales?

**(The witnesses withdrew)**



**BARRY GORDON RUSSELL**, Civil Engineer, Shoalhaven City Council, Post Office Box 42, Nowra, affirmed and examined:

**CHAIR:** In what capacity are you appearing before the Committee?

**Mr RUSSELL:** I am representing Shoalhaven City Council.

**CHAIR:** Did you receive a summons issued under my hand to appear before this Committee?

**Mr RUSSELL:** Yes I did.

**Mr E. T. PAGE:** Is a post office box an address legally?

**CHAIR:** We have used it in other committees.

**Mr E. T. PAGE:** You cannot in elections.

**CHAIR:** I am sure we can accept Shoalhaven City Council offices. Mr Russell, do you have a brief statement to make before questions?

**Mr RUSSELL:** Yes I do. Shoalhaven City Council made a submission by the deadline but after further review, and appreciating that I was away when that submission was made, I have taken the opportunity to recast that submission and I have that covered in a dot point presentation today.

**CHAIR:** Thank you.

**Mr RUSSELL:** Today's presentation focuses on the fact that Shoalhaven City Council recognised the magnificent effort by all agencies in regard to what we call the Hylands fire. The fact that it impacted on something like 23 per cent of the Shoalhaven geographical area and we experienced some of the most extreme fire behaviour ever registered within the Shoalhaven I think is significant. In this event we saw the integration of the Rural Fires Act where the Rural Fire Service was the combat agency, being fully supported by the State rescue and emergency management legislation where the emergency operations centre was activated and served in support of that event for something like 29 days. I think this is the first time we have seen those two pieces of legislation integrate together and come up with what I believe is an excellent outcome. The fact that there was no loss of life and no serious injury is a tribute to all those involved.

Our presentation looks to the future and comes up with a number of ideas and thoughts that we would like to put on the table. These include the fact that there should be a greater Rural Fire Service presence in country New South Wales in lieu of a corporate headquarters in Sydney. We see an opportunity for regional incident management team training, including all agencies, for both professionals and volunteers, to be delivered through what I would call centres of excellence for training. There is a need to seek integration with the Department of Defence for it to play a more significant role in bushfire management and other incidents in the emergency field.

There is a need for better management of the bush interface adjoining the built environment including the responsibilities of private property owners, and finally there is a need for a much better fire mapping resource management and predictive modelling tool to be developed and for that to be sitting on a modern platform. We believe that there is an opportunity for private contractors operating in the civil defence-aerospace industry department to work with the Rural Fire Service in that process.

Council believes that the present system whereby the Rural Fire Service is located at a district level aligned with local government boundaries could be improved. Presently the district administration brigade structure is controlled through regional offices and then by a central Rural Fire Service corporate headquarters in Sydney. Council believes that some of the corporate functions within the Rural Fire Service headquarters could be deployed to country New South Wales, leaving only a corporate presence in the metropolitan area, and even this could be located within a regional centre. Council proposes that a system of functional teams be established, located within country

areas. Some of the Rural Fire Service administrative staff could be located in central regional centres. Others deployed throughout the region through local district offices and during emergency situations could be pulled together into a regional team.

The regional model could then assemble, at a time of need, a team of incident managers who are familiar not only with emergency procedures but also with the local needs and geography of the particular geographic region. While expert teams brought in from outside the area can assist in expanding the manpower resource, sometimes they are unfamiliar with the local scenario and take time to develop local knowledge. The benefits we see there are as outlined and would bring greater staff experience within a region and would provide a pool of staff for the volunteer ranks and from volunteer ranks to the more highly skilled. It would also create the regional centres of excellence. They would include electronic networks or hubs for the receipt and transmission of data, communication networks, mapping synergies, particularly with local government liaison, a local knowledge, appreciating that local government has extensive knowledge in these areas.

The second issue I would like to focus on is that of incident management training. Based upon the regional concept, council feels that regional centres of excellence could be established. These regional Rural Fire Service teams would work with regional National Parks and Wildlife Service, the Department of Land and Water Conservation, State Forests and local government personnel to form regional incident management teams. This would enable a focus on incident management planning operations and communications and logistics functions. We also advocate that there should be specific regional training provided in these areas, say, two or three times a year for these personnel. The benefits are that it would develop local knowledge of regions, understand individual districts better and place those districts into the regional context, and provide a larger reservoir of personnel who could work together as a cohesive team during an emergency. We would have a team of people who have trained together and worked together and who are ready to respond for a five-day duty period to specific incidents wherever they may be within the region.

We also propose that there would be regional training centres, potentially linked to a semitrailer-type operational centre, replicating the expertise and hardware-software capability, to travel within the region. The establishment of a common training system for all incident management teams would then be filtered down from regional level through the district level to brigade level. It would also allow the upskilling of local personnel within the region. This would establish advanced management skills for those who form part of the regional incident management teams.

Council also believes that there is a benefit in that it creates community-based leadership training. We have previously sought funding from the Commonwealth Regional Solutions program to try to implement this model. However we did not gain Rural Fire Service support for it, and it failed. We also believe that these centres would make training more affordable in terms of time for the volunteers than the current training that is available. The practice of developing staff and volunteers from within the regions to assist with incident management teams is supported because of their knowledge and expertise in local conditions. When equipped with advanced incidence management training, they can be of superior benefit in a regional emergency rather than having expertise brought in from outside the area.

#### *Incident Management Training*

The skills and procedures acquired through regional training would be transferable from region to region upon standardisation of the advanced operational tools required for a modern emergency. The combination of both the training and a modern suite of tools is paramount. In major emergencies, as happened at the beginning of 2002, certain practical expertise from outside the region would be immediately transferable and useful to the local emergency if these modern available tools were implemented. I think our experience with the most recent incident was evidence that people were being actually moved through the incident control centre for training purposes and their value, particularly those who were in the centre for a day or a couple of days, was probably limited for the overall team. The most successful model we saw was where there were individuals who came together from various agencies and served for a five to seven day period, went off and had a break, and then came back and served a series of five-day shifts. There was also an expression of frustration from local volunteers regarding the passing through of the incident management training team.

### *Building Regional Expertise*

Council believes that in developing this expertise from within the region, incidence management teams can be achieved and developed by use of modern training techniques and operational regimes such as those used by the Department of Defence. That leads me to the third issue that we wanted to raise.

### *Utilisation of Australian Defence Force [ADF]*

The Australian Defence Force provided outstanding local support during the Shoalhaven fire. In fact they provided food and accommodation for approximately 500 evacuees from both Huskisson and Sussex Inlet and they provided food and accommodation on an ongoing basis for the out-of-area firefighters who attended the Shoalhaven from both interstate and overseas. They also provided excellent aerial support through the Royal Australian Navy [RAN] aircraft, provided fuelling facilities, and provided support for the civil aviation operations that were running from the air base. We believe that there is a greater role for the Australian Defence Force to play, particularly in the area of incident management and especially in the fields of logistics, communications, intelligence, conversion of military helicopters for water bombing, and personnel management.

Why do we say that? We say that because the world is changing. When we look at some of the recent Australian Defence Force deployments, you will see that the role of defence has changed quite significantly. We are really building up a model to say that the Australian Defence Force has a larger role to play because it has the expertise, logistics, communications and operational support that are needed.

### *Aerial Firefighting Capacity*

If you look at aerial firefighting capacity, we acknowledge that there was a fair bit of discussion about the pros and cons of using particular aircraft. However, there was a general conclusion that an aerial capability in firefighting was really an effective management tool. Nowra's naval air station was involved in the bushfire incident, as I mentioned previously, and probably that was rightly so because at some stage the base was actually under threat. The greater use of these military facilities—not only at Nowra but across the nation—could fulfil a need. Specially designed adapters could be made, for example, to fit existing aircraft, with trained crews, for easy deployment to incident scenes. We have included in our submission an extract from the March 2002 *Australian Aviation Magazine* which highlights that the Australian Defence Force has six Chinook-type helicopters, seven Sea Kings, 16 Sea Hawks and 36 Black Hawks. Sikorsky has an aircraft called the Fire Hawk which has a lifting capacity of approximately 3,800 litres and it is really a sister to both the Sea Hawk and the Black Hawk. I recommend that article for reading.

### *Advantages of Using the ADF*

Other advantages of using the Department of Defence would include practical training for military personnel. You would be using an in-house and in-country resource. You would be developing expertise for future incidents and I think when you look at the cost of the three-skycrane operation, there are potential financial benefits that need to be looked at. Also you would keep that resource and money within the country and it could be the foundation for what I call the national aerial bushfire operational plan, which is something we need for those fire-prone areas of New South Wales, Victoria, South Australia, et cetera.

### *Buffer Zones Around Urban Areas*

The fourth issue deals with bushfire buffers around urban areas. It is history that the Shoalhaven has 49 towns and villages and that most of those villages interface with bushland. In particular this fire impacted at Callala, Huskisson, Vincentia, St Georges Basin, Basin View, Tomerong, Wandandian, Sussex Inlet, Berrara, Cudmirrah, Fishermans Paradise, Conjola and Sassafra.

### *Urban Interface Management*

There was a lot of impact within that urban-bushland interface. There is major community concern within the Shoalhaven about the amount of fuel management that is being carried out. The Shoalhaven bushfire management committee has moved to implement strategic fire advantage zones at the urban-village interface. The risk management plan indicates and promotes the concept that general asset protection zones of up to 100 metres and strategic fire advantage zones [SFAZ] in the vicinity of 300 metres around all those towns and villages which have a western or north-western bushland interface. To date we have actually broken down models of these strategic fire advantage zones to something like 18 of the 40 areas that have been targeted by the bushfire management committee. We are however finding that this process is very resource heavy and compartments are being selected for fire exclusion, fire management and other fire management techniques and various regimes for the strategic fire advantage zones, and that is complex to deliver.

Once you come to looking at the implementation of those plans, there is also a concern that it is also particularly resource heavy as it requires co-ordination, pre-planning and notification. I suppose that there is a longer-term question of whether the resources will be available into the future to implement these plans within the various land management agencies which we have in this complex network of land ownership at our urban interfaces. I think there is a need for further work in this area. It is my view that we need to create a specific implementation team to work in these strategic fire advantage zones. There is the potential for using generic strategic fire advantage zones on the basis that they can provide both savings in time and resources when developed and implemented, but we need to also look at some of the environmental assessments and focus. I look forward to looking into the Government's future proposals in this area about making hazard reduction a little bit easier. However, this issue is one that will be looked at urgently by the bushfire management committee.

#### *Modern Management Techniques*

The fifth issue then comes back to modern management techniques in firefighting and fire mapping. Council has had contact with the defence corporate sector with regard to developing operational management systems to advance the capability of incident management in exercises such as that experienced in December 2001 and January 2002. We have spoken to several Nowra-based contractors who were on similar geographic information system [GIS] types of technology for the Department of Defence. They have integrated operational tools which go with computer-simulated training packages. The council believes that a similar opportunity exists within the area of incident management and strongly urges the Government to accelerate the process of establishing such a system. Within the defence support industries sector, there are many capable industries which would have expertise that could be adapted to create, develop and maintain such a system. We have put on the table a trial system which looks similar to that and which uses generally the deployment protocols that the Rural Fire Service has adapted to the mapping detail, but it goes further than that and actually records the assets and resources that have been deployed. It actually becomes a record by the hour of the fire and what resources are actually deployed on that fire.

This proposal has been put before the Rural Fire Service over the past couple of years and the aim of the system was to have a platform which was useful both in the field and at the highest level of management. It could also be based upon the existing data and facilities available through most local government organisations and through the State Government in New South Wales. The company involved in preparing this work was prepared to assist in the development of the package and also was prepared to get involved in development of training modules that would be necessary if this package or something similar was to be created. We believe that the technology is such that it can be implemented across brigades and at higher levels, and therefore would generate knowledge both the at the brigade and upper management levels, allowing people to move through the different expertise levels using the same system of incident management.

In fact, during the recent emergency, there was an offer of volunteer assistance from one of the companies to assist the Rural Fire Service [RFS] in reporting the incident. However, that offer was not taken up. As a result, the company's efforts in upgrading the model training package would most probably not have been accepted by the RFS and, if anything, the intellectual property was probably going to be put at risk. It was really a most disappointing outcome from several years of effort on behalf of the council, the previous council staff who are now with the Rural Fire Service and the company who worked together on this proposal. We are looking forward to the future to see what the

Rural Fire Service comes up within this area.

#### *There must be a Better Way*

The GIS electronic packages have been utilised. However, the recording of this data was being undertaken in a retrospective manner and the outputs were not readily understandable by those other than in the planning area. What we found was that when the data had gone out into the field, there was a problem with having it accepted by the field-based people who were dealing with the fire. This in fact meant that in some cases the electronic data was being recast into traditional forms so that it could better be used in the fields at the operational level. We believe as part of this approach that the GIS packages need to be upgraded with the transmission of live data from the fields to the planning and operational desks. The operational plans, when they are compiled and signed off, need to be transmitted quickly back out to the fields, both in colour and in a user-friendly format. We believe that there was a better system and we look upon interaction with the defence contractors to actually help to build those models.

#### *Finding a Simple Solution*

We are looking for a solution which is not too high-tech and that can be used in the field; log events, decisions and critical information; filter out other data; and that operators can grow to learn and to use such a system, a system that can be used in post-event analysis and also used as familiar information which is very common to everybody involved in incident management, particularly firefighting. I suppose the scenario that I have included in this submission talks about the fact that defence has simulation packages where they can locate a villain, deploy an aircraft to launch rockets, and monitor all that from something like 50 kilometres away. I think there is expertise that the Department of Defence has available among its contractors. I am really looking forward to seeing the implementation of both training and the modern state-of-art technology to manage such incidents. That would be consistent with council's desire to have the Rural Fire Service more focused on a regional basis.

#### *Shoalhaven Corporate Expertise*

Here we look at some of that corporate expertise that is available: Logistics, simulated training packages, aircraft operations, firefighting training, and thermal imaging. It has been recognised that in the January 1994 fires Shoalhaven council was the first to apply the thermal imaging technology for a fire at Bendalong, an application that was later extended across New South Wales by the Rural Fire Service. So there is a record of the expertise and its availability.

#### *Future for Incident Management*

Looking to the future, we believe there is an opportunity for a partnership between the Rural Fire Service, the council and industry in the area of incident management, operational systems, training and simulation—not only recording a fire but using simulation to predict where the fire will go under various scenarios. That training can be delivered at a regional level for both the Rural Fire Service and other emergency agencies, and it can extend right down to brigade unit leaders.

The information needs to use PC technology, it needs to be competency-based, there needs to be an integration of technology into all levels of management through the brigades, including community development, and it needs to recognise that there is a new-age volunteer. That is being sounded out by the Shoalhaven City Council with the Rural Fire Service and the SES in bringing year 11 and year 12 students under a school cadet program, giving them expertise in emergency management at both RFS and SES levels. I think that really is a model the future volunteers.

#### *Opportunities for Incident Management*

Opportunities also exist for the sale of that information and of those operational systems on an international level. There is the potential to sell that training. There are also benefits to the local industry from taking up some of the gaps and slack from time to time appearing in defence industry technology.

*Recommendation - Administrative*

We have probably been a little bit bold, Mr Chairman, but we have put together a series of recommendations that the Committee may like to think about. Obviously, we would like to see recognition in the administration area of the benefits of transferral of selected administrative functions into country New South Wales by the Rural Fire Service. We would like the Rural Fire Service, along with other agencies, to develop regional incident management teams and an incident management teams structure, with regular training together on a fairly frequent basis. We would also like to see the development of a land information service system, which can be created using local government in a statewide partnership, to establish and share access to local land data for incident management purposes.

*Recommendation – System*

A further recommendation in terms of that system is that we believe there is an opportunity to establish within the Rural Fire Service, in conjunction with industry and other agencies, a standard and complete computer-based incident management operational system deliverable across New South Wales. We would like a directive to the Rural Fire Service to immediately developed with industry such a training system and deliver it through regional training centres to staff and volunteers alike. We would recommend a timeframe of something like 12 months for that to be implemented.

*Recommendation - Defence*

In terms of the defence recommendation, we would like an approach to the Federal Government seeking endorsement of greater use of defence resources in civil or emergencies, particularly in the fields of logistics, communications, information management, and aerial operations. We would recommend particularly the establishment at HMAS *Albatross* of an aerial capability as part of a national firefighting strategy, covering South Australia, Victoria, New South Wales and south-east Queensland. That is a resource that could be deployed very rapidly in events similar to that which we experienced in Christmas 2001.

*Recommendation – Hazard Reduction*

In terms of hazard reduction, we look forward to the current review of management of hazard reduction work which the Government is proposing, and looking again at that issue of the urban interface between bushland and urban development in light of recent experiences and the development of a strategy for achieving a sustainable interface which satisfies community expectations. As I indicated before, community expectations in the Shoalhaven are currently quite high.

There may be a need for some legislative changes to achieve the strategic fire advantage zones using the existing resources available to the Rural Fire Service and responsible land management agencies. In future, we need to recognise the need for strategic fire advantage zones when government considers changes in the management of bushland in close proximity to villagers and town developments. There is general concern in the Shoalhaven about the declaration of national parks right up to urban boundaries. Finally, we thought it most opportune to take this picture of a sign. Generally, it is a thank you to the firefighters for saving our town, which is Tomerong, and the school. Mr Chairman, I will now pass on to asking questions.

**Mr E. T. PAGE:** Your submission states that the area under control of the National Parks and Wildlife Service has increased dramatically and that council is concerned that adequate resources have not been made available to the National Parks and Wildlife Service to manage the assets in such a way as to properly protect the built environment. Earlier we had submissions from the National Parks and Wildlife Service people, under oath, that the resources have increased far more significantly than the area managed. Can you correct the misguided concerns of your council?

**Mr RUSSELL:** No.

**Mr E. T. PAGE:** They cannot both be true. You know, if you are going to give a submission under oath, at least one of them should be right.

**Mr RUSSELL:** I recognise that point. I think there is a very strong perception that although the resources of National Parks have been increased, the issue that we are particularly focusing on is the urban interface issue. And whether or not those resources have actually been applied to that urban interface is the question that we are concerned about.

**Mr E. T. PAGE:** That is not the point I referred to though. That is not the point that was made.

**Mr RUSSELL:** I appreciate that.

**Mr R. H. L. SMITH:** Barry, could I compliment you on your positive contribution. I thought it was an excellent coverage. You spoke about zones of 100 and 300 metres around built areas. I think at one stage you said you had planned about 18 of 40. Have you had any public consultation with regard to that, or has that been in-house? I wonder what the community may have thought about having this interface with bushland.

**Mr RUSSELL:** The work primarily has been undertaken by the agencies, working under the umbrella of the Shoalhaven and Districts Bushfire Management Committee. The consultation generally has been between those key agencies of National Parks, council, water conservation and State Forests, so it has been a working team environment. The volunteers within the Rural Fire Service are involved in the bushfire management committee and have had an opportunity for input to that process. In addition to that, the bushfire risk management plan was subject to public exhibition. In terms of working with the community on the individual strategic fire advantage zones, there has not been strong community input at this stage. We are looking to get the process finished, and once we have that finished we will be seeking further community consultation on the process.

**Mr R. H. L. SMITH:** Can I make a statement more than ask a question? We are talking about helicopters, the air wing and so on. I would like a comment from you on my concern that the media, because it is very dramatic when a house is saved by a helicopter dumping a load of water, seems to focus too much on the use of helicopters and the benefits of using helicopters, and that we should really be giving a lot more credit to the volunteers who were involved. They were the ones who did all the groundwork, but the media concentrated very much on the helicopters dumping massive amounts of water to save property. This really was a fire that was suited to that type of operation.

**Mr RUSSELL:** I would agree. Unfortunately, the media did focus on the helicopters, which were seen to be the tool which basically saved a lot of property, as effectively they did. I think my previous comments are true: we saw it as a magnificent contribution from all agencies involved in the process, and in particular the volunteer members of the Rural Fire Service. Their effort in the Shoalhaven was truly magnificent.

#### **QUESTIONS ON NOTICE**

**Mr E. T. PAGE:** You have been somewhat critical of the lack of use of certain Defence Force assets, such as the Sea King helicopter. Are you aware of the mechanism by which the Rural Fire Service can secure the use of defence assets? The protocol is that all requests for resources have to be made through the State Emergency Operations Controller, who at the moment is Acting Police Commissioner Ken Moroney, who has to be satisfied that the State's resources will be exhausted before Commonwealth resources are requested.

Your submission refers to the establishment of "centres of excellence" for training. Could you elaborate on this proposal and tell us where these centres should be established?

I note that your council has already commenced a review of its policies regarding buffer zones and hazard reduction around town and village areas. Does the council also adopt a firm stance towards ensuring that adequate fire safety measures are incorporated into new developments?

**(The witness withdrew)**

**TERENCE WILLIAM HART**, Treasurer, Access for All, Locked Bag 10, Braidwood, New South Wales,

**JOHN CHARLES SNELL**, Secretary, Access for All, c/- Old Post Office Residence, Araluen, New South Wales, and

**CATHERINE MARGARET LAWLER**, Member, Access for All, Locked Bag 10, Braidwood, sworn and examined:

**CHAIR:** I understand you have been issued with a copy of the terms of reference of the Committee and also copies of the Legislative Assembly's standing orders 332,333 and 334, which relate to the examination of witnesses.

**ALL WITNESSES:** Yes.

**CHAIR:** In what capacity are you appearing before the Committee?

**Mr SNELL:** I appear as the Secretary of Access for All. I must tender the apology of our chairman, who did come here today in response to your summons, but unfortunately has taken ill and had to absent himself from the chamber.

**Mr HART:** My occupation is farmer and grazier, and I appear before the Committee as Treasurer of Access for All.

**Ms LAWLER:** I am a farmer and grazier, and I am a foundation member of Access for All.

**CHAIR:** Did you receive a summons issued under my hand to attend before the Committee?

**ALL WITNESSES:** I did.

**CHAIR:** Mr Snell, do you wish to make an opening statement?

**Mr SNELL:** A very short one. We have no lengthy presentation to make to you today. We have put all our effort into the submission which you already have. There are perhaps two items that I would like to remark on in elaboration for the Committee and also to point out that principally the delegation you see here before you is to provide better knowledge than perhaps I can give—and first-hand knowledge at that—of some of the incidents that were involved. The first point comes under the term of reference "hazard reduction issues". My first point relates to the hazard reduction figures cited by the National Parks and Wildlife Service. As a result of direct experience of some of our members, it pulls into question when some of them are claimed. Are they claimed on the basis of areas actually blacked out at the end of a hazard reduction cycle or a planned area? Frequently it can be planned. There may be 1,000 hectares which are targeted for bombing by aerial incendiaries. That is done on day one.

On day two the rain comes down, because typically we are doing it in that sort of season and the actual areas blacked out are a matter of metres around the incendiary drop. So that is one point I would ask the Committee to consider and perhaps seek some elaboration on. The other one is the National Parks and Wildlife Service detailed criteria for closing roads and tracks. It is a point on which, as you will note from our submission, we have issues with the National Parks and Wildlife Service. Certainly to us the detailed criteria are not explicit. Indeed, our group questions how they are applied and in what way community consultation is carried out.

If I may be so bold, I would remind the Committee members that the methods of public consultation are frequently through the so-called advisory committees. They are principally government appointees. In the case of the bushfire management committees, we must point out—and it is a point we return to in the 1994 fires—that some of those members are no longer local government employees but are now State Government employees and this may make some change to it. It is a point of contention and perhaps the matter of opinion that needs to be straightened out in the



business of what the criteria are for closing down, particularly in wilderness declared areas, roads and tracks that were previously open when those areas were State forests.

The other item we want to address is the adequacy of changes since the 1994 fires. Mr Hart can speak personally of some of the problems that may best be summarised as too many bosses in any particular thing. As we remark in our presentation, communications are now so good that the Premier himself could probably direct firefighting operations of a tanker down on the fire ground if he so chose.

**CHAIR:** I do not think we will answer that.

**Mr E. T. PAGE:** Is that a bad thing?

**Mr SNELL:** I submit that it is, and we explain why in our submission. We have a point about bushfire management committees. Again, we must consider that the changes that have been effected in that since the changeover in the Rural Fire Service have changed the complexion of those committees somewhat. Perhaps there is a need to look at the terms of reference or the way in which those committees are appointed. We have no specific recommendation other than that point as to review it because, as I said earlier, the fire control officers that were once local government employees are now employed by the State Government and obviously have a different vested interest at stake. That is all. We would be happy to take any questions that members may need in elaboration of our submission.

**Mr E. T. PAGE:** I thought the matter of fire tracks and so on was covered by the previous submission from the National Parks and Wildlife Service.

**The Hon. RICK COLLESS:** It is different though.

**Mr E. T. PAGE:** Where they telling us lies or were they not?

**Mr SNELL:** If I may respond, I take the member's point on that one. They are not necessarily telling us lies but they say that they close down tracks and trails on the basis of their strategic assessment. Those criteria are not explicit to organisations such as ours and many people in our organisation and among rural firefighters generally, volunteers—and I am one—would question it. I am not saying they are lying; I am saying that those matters of opinion are not necessarily exercised to the best way possible.

**The Hon. RICK COLLESS:** Just following on from that same line, in your submission you note that the CSIRO project on fire propagation is not complete as yet—

**Mr SNELL:** That is right.

**The Hon. RICK COLLESS:** —but it is clear from the statements of its chief researchers that hazard reduction during the cooler months is essential to reducing both the likelihood of fire outbreak and wildfire intensity. That is coming from a CSIRO official who is involved in fire research. That would appear to be at odds with what the National Parks and Wildlife Service has told us this morning. Would you like to comment on that?

**Mr SNELL:** Yes. I would sooner back the CSIRO official. After all, he has had to make a very careful, considered study and that has been his life's work. The National Parks and Wildlife Service has a very diverse bailiwick to look after and I think we need to get those views out and to thrash them out. I was hoping that this Committee would help us to resolve some of those difficulties, those differences of opinion.

**The Hon. RICK COLLESS:** Further to that, again on the line of hazard reduction, do you have any figures or estimations of the amount of fuel that is held in some of the forests in terms of tonnes per hectare?

**Mr SNELL:** I cannot answer that. Terry and Catherine might be able to help us in that regard in some spot areas but the difficulty is that we cannot get into some of the areas. Our chief problem is that it is very difficult for groups such as ours to monitor a lot of these areas.

**The Hon. RICK COLLESS:** Do you believe that there should be a regular and somewhat scientific assessment of fuel loads so that we might be able to see some pretty maps like we saw this morning of actual fuel loads prior to the bushfire season starting?

**Mr SNELL:** I would say yes and in that regard organisations such as ours would be pleased to help on a voluntary basis to do those very things if we are provided with properly supervised access to some of these areas, particularly wilderness. Some of us are not able to traipse through them and perhaps even choose not to. As I pointed out to my local Rural Fire Service captain, when they stopped paying me to camp out that is when I stopped doing it. If we are able to do that under controlled circumstances, organisations such as ours would welcome the opportunity to get little expeditions to monitor that on their behalf and provide the results to the National Parks and Wildlife Service.

**Mr R. H. L. SMITH:** Attached to your submission is the Outdoor Recreation Party submission. The pages are not numbered but at 1.1 the figures show the National Parks and Wildlife Service has 5.3 million hectares; hazard reduction, 19,000 hectares; and 700,000 hectares affected by bushfires. That is compared with State Forests, which has 2.8 million hectares, 100,000 hectares of hazard reduction burning and 2,000 hectares affected by wildfire. Do you know where those statistics came from?

**Mr SNELL:** I have no idea.

**Mr R. H. L. SMITH:** I notice that underneath the figures it states that the figures were verified by Ministers Debus and Yeadon. I am just wondering where they may have come from.

**Mr SNELL:** No, they were not quoted. I did not quote those figures in my submission.

**Mr R. H. L. SMITH:** No, it is added. It is on the back of another one.

**Mr SNELL:** In fact, one of the difficulties I had was being able to do adequate research for those sorts of things, except I think that those statistics tend to speak for themselves.

**Mr E. T. PAGE:** Going back to hazard reduction issues again, you said "based on the media reports during and immediately following the Christmas fires". That is hardly unbiased, objective evidence. It can only be concluded that lack of hazard reduction was a major contributor to both fire outbreak and wildlife management. We have had evidence here and figures to support it this morning. The submission from Phil Koperberg was that the weather conditions were such that fires were inevitable, and that the lack of hazard reduction was not the cause of the fire or a major problem as far as the fire was concerned. Do you accept that it was the unusual weather conditions that fanned the fires and maintained them?

**Mr SNELL:** I will take that again. I think the point you made about that was in claiming that the lack of hazard reduction contributed to fires. They contributed to the intensity. No-one has said that, and if you got that impression from my submission I am sorry. It was never my intention or the intention of any of our members to suggest that lack of hazard reduction was the cause. What we do claim is that the lack of hazard—

**Mr E. T. PAGE:** A major contributor. A contributor is a cause.

**Mr SNELL:** No, a contributor to the intensity, the extent, not necessarily to the cause. You have got to look at the dimensions of the fire.

**Mr E. T. PAGE:** Can I go back to the fire outbreak. Is not that the start, the cause? That is where it all gets off.

**Mr SNELL:** Could I also then suggest that the fire outbreak was due mainly to neglect or lack of urgent action on the part of the National Parks and Wildlife Service in the areas of Uralla and Burra wilderness. I reject that as trying to twist my words to justify a particular point and that is something to which I object.

**Mr E. T. PAGE:** I am quite happy to do that, yes.

**Mr TORBAY:** Under the heading "Adequacy of changes since the 1994 fires" there is a comment about the changes that have occurred and a comment about generally being positive. It then goes on to state:

However, in other aspects there appears to have been no improvement and even a deterioration in procedures, practices and policies.

Can you expand on that generally for us?

**Mr SNELL:** One of the problems I suppose—and it returns to the point that Mr Page made earlier—is that while there has been an improvement in communications, it has not necessarily been matched with a consistent and adequate improvement in what I term the command and control procedures. As I point out in the submission and we have pointed out here, one of the problems is that you get people further up the hierarchy second guessing the people at the coalface and even perhaps putting the brakes on them because they are not sure. They are not there and they do not know. This is one of the problems. It is not peculiar to this thing, as I have pointed out here. It has exercised the brains of people certainly in all the allied armies that I know of in the western alliance and our own defence force as to how you make that happen and how you curb the problem. It evidenced itself I think firstly in Vietnam when every platoon commander battling in the paddy had his battalion commander sitting on a helicopter above him, trying to tell him what to do. It did not always have the best outcomes. That is one, and I try to put that and then the suggestion after it to make that very positive criticism.

We need to practise their use and senior commanders need to be really trained and groomed in the idea of letting go, otherwise it has a very deleterious effect on the junior operators who are at the fire on-ground. That is really the major issue there, that it has not been accompanied by procedures. I think generally there have been tremendous advances and the communications work very well, except as we heard this morning that there are some black spots and they are unavoidable. Does that answer your question?

**Mr TORBAY:** Yes, it does. The points about people from outside the area coming in and issuing instructions, are you going to comment on that as well?

**Mr SNELL:** It was not so much people coming from outside the area, no. The point we had there was that there was certainly a perception on the part of people on the ground—and I did my stint as one as well, and many others had remarked to me about a similar thing—that the briefing in the northern end of the Deua area was conducted by a National Parks and Wildlife Service Officer, not a Rural Fire Service officer. The whole perception certainly was that the Rural Fire Service that was supposed to be the section 44 designated controller was somehow taking a back seat. As I say, that is a perception from somebody on the ground; it was not necessarily the case, and I thought I explained that. In relation to the brigades, the problem was that the brigades were brought in and they came from plains areas, yet here they were operating in quite close country, very steep. Some guys would come out in the daylight and face great trepidation because they had not seen where they had driven. When they saw it in daylight, they were horrified where they had been.

**The Hon. JOHN TINGLE:** Mr Snell, can I take it from the general tenor of what you are saying that you are very concerned about, shall we say, the too many bosses syndrome and that you feel that the National Parks and Wildlife Service people are getting too involved in areas which are rightly the expert province of the Rural Fire Service? I am just trying to get it clear in my mind. That seemed to be what you were saying.

**Mr SNELL:** That is a serious statement. I think that comes out particularly in the paragraph where our recommendation is that in relation to the section 44 incident, the National Parks and

Wildlife Service [NPWS] should be like many others and be advisers to the Rural Fire Service commander, not have an executive function.

**The Hon. JOHN TINGLE:** We raised that point with Peter Ryan this morning and he said, no, everyone works in their own areas, if my memory serves me correctly.

**Mr SNELL:** Again, it is a matter of perception and opinion, I think.

**The Hon. JOHN TINGLE:** But I take it that you are not very happy with the NPWS?

**Mr SNELL:** No.

**The Hon. JOHN TINGLE:** I thought so.

**The Hon. RICK COLLESS:** Mr Snell, in your submission you talk about the national park advisory committees.

**Mr SNELL:** Yes.

**The Hon. RICK COLLESS:** Are there any local, experienced, volunteer firefighters or bushfire management committee members on the national parks advisory committees?

**Mr SNELL:** I cannot think of one. The one that I have had some dealings with, the far South Coast one, I do not recall that there is. There may be one of the individual members who is trained as a Rural Fire Service person, but to my recollection there is no Rural Fire Service representation as such. But I think that is a question more properly aimed at the National Parks and Wildlife Service which appoints those committees.

**The Hon. RICK COLLESS:** Do you believe that it would be appropriate to have somebody highly experienced in bushfire management and bush fire fighting to be a part of those committees?

**Mr SNELL:** Very appropriate. The difficulty there I think, though, as we heard this morning, is that the National Parks and Wildlife Service believes that it has sufficient and highly relevant expertise in this area and would probably resist it. But, again, that is my opinion.

**Mr E. T. PAGE:** On page 5 under "Command and Control Procedures", in (d) you state:

Even during the fire, some experienced and senior local volunteers suggested that the fires could all have been under control and/or completed some three weeks before they finally were.

That is a pretty significant statement in view of the weather conditions that were around at that time. I will not ask you to identify the people, but could you get statements from these people that the Committee can have a look at to see what they suggest could have been done to have taken three weeks off the time span of this disaster, other than changing the weather?

**Mr SNELL:** I would be very pleased to try to do that on the Committee's behalf, Mr Chairman, given time for that to occur because I can identify the people and ask them.

**CHAIR:** We are asking for most of those types of answers to be available by the end of the month. Will that be sufficient time?

**Mr SNELL:** That is sufficient time, Mr Chairman.

**CHAIR:** There being no further questions, I thank the witnesses very much for their attendance, for their patience and for making a submission. The Committee looks forward to receiving their further advice in due course.

**(The witnesses withdrew)**

**WILLIAM SAMUEL GREEN**, Member, New South Wales Farmers Association—Bega Branch, Harrawanang, Bemboka, and

**NOEL VINCENT WATSON**, Member, New South Wales Farmers Association, 452 Snowy Mountains Highway via Bega, and

**ERIC GEORGE JOHNSTON**, Member, New South Wales Farmers Association, Frogs Hollow, Bega, sworn and examined:

**CHAIR:** I am advised that the delegation has been issued with a copy of the Committee's terms of reference and a copy of the Legislative Assembly's Standing Orders 332, 333 and 334 that relate to the examination of witnesses. Is that correct?

**Mr WATSON:** Yes.

**CHAIR:** Did you receive a summons issued under my hand to attend before this Committee?

**ALL WITNESSES:** Yes.

**Mr WATSON:** There are a couple of other points I wish to add, if I may, Mr Chairman.

**CHAIR:** Certainly.

**Mr WATSON:** I have spent all my life on the land as a grazier. I have been a member of the bushfire service committee for 42 years. I have been captain of the committee for the past 20 years and I still hold that position. I am also a member of the Bega Valley Bushfire Management Committee.

**CHAIR:** I assume that one of your number will be presenting a submission verbally at this time.

**Mr WATSON:** This is our submission to the Joint Select Committee on Bushfires from the New South Wales Farmers Association—Bega Branch. The background to the submission is that the zone of the Bega branch of the New South Wales Farmers Association covers the local government region of the Bega Valley Shire Council. Within this area there are significant forest areas under the management of New South Wales State Forests and the New South Wales National Parks and Wildlife Service. Historically, a large tract of land within the Bega Valley shire, which was traditionally under the control of State Forests for the past 10 years, has been transferred to the National Parks and Wildlife Service for management. During this time the national parks of Deua, Wadbilliga and South-east Forest have been created or expanded. As rural landowners, the majority of the members of our branch should also serve as brigade members in the New South Wales Rural Fire Service. Many of these members have extensive experience in rural firefighting and hazard reduction.

Geographically the South-east Forest, Wadbilliga and Deua National Parks lie to the west and north-west of Bega Valley. Significant loss of life and property has occurred in the past from fires started in these regions and fanned by intense north-westerly winds that are prevalent on extreme summer days. On behalf of the members I submit to the Committee the following points for consideration on the subject of hazard reduction and fire prevention measures. Although the area under the management of the NPWS has increased significantly, there has been no corresponding increase in resources available for the efficient fire management of the area. There has been a change in emphasis from strategic hazard reduction that protected all land-holders to a policy of only engaging in hazard reduction in areas of high asset values, such as coastal villages. Rural land-holders are not afforded any protection under this practice.

The overall area of hazard reduction carried out each season has decreased significantly in the past 15 to 20 years. This has resulted in a build-up of matter on the forest floor with obvious implications. This build-up has reached unmanageable proportions in many areas. This was evidenced in the fires of January 2002—for example, the fire in the Deua National Park was only finally

contained on all fronts when significant falls of rain occurred. Had conditions been less favourable, this fire could easily have burnt through into the Wadbilliga National Park and Bega Valley. The decrease in hazard reduction can be attributed to the increasing area of the NPWS-managed land, the policies and strategies used by the NPWS for hazard reduction in forestry management, the false belief that wildfire is the only fire regime that is natural in the Australian forest that can maintain biodiversity, the influence of environmental lobbyists on the various agencies involved to increase restrictions on prescribed burning, overregulation of prescribed burning, a change in the community with a large increase in small land-holdings often with absentee landowners, and the level of complacency built up in the community over the risk of bushfire.

There has been a lack of proper maintenance of the strategic fire trails which provide access to the remote areas of national parks. The National Parks and Wildlife Service has allowed existing fire trail infrastructure, which was created by State Forests, to deteriorate. This has significant implications as a large proportion of fires in the Bega Valley are started by lightning strikes. Rapid intervention by the Rural Fire Service to contain and extinguish fires in remote areas before unfavourable weather conditions can occur is possible only if fire trails are maintained. The role and function of the local bushfire management council in the Bega Valley shire has been positive. There is a satisfactory level of co-operation and contribution from all stakeholders.

The utilisation of improved equipment, such as helicopters, for firefighting has saved property and lives. The use of helicopters, however, is restricted by weather conditions and visibility. Those conditions limit their use on the days of extreme conditions when fires occur. Their use is most beneficial in integrated support of ground units in combating fires threatening concentrations of assets such as are found in suburbs and villages. Their impact in firefighting in rural areas would be less significant.

The use of such equipment has increased the budgetary requirements of the fire prevention agencies and has flagged a shift in resourcing from fire prevention to fire control. Fire prevention through prescribed burning is economically superior to the current alternative of doing little fuel management and then expending millions of dollars in capital equipment and manpower in attempting to control fires. This does not include the risk to human life posed by a regime of wildfire control compared to the much safer policy of forest fuel management and hazard reduction.

I have a few photographs that I would like to pass around for Committee members to look at. I have made a few notes, but no doubt Committee members will have heard some of these figures regarding the Sydney and Nowra fires. I believe 754,000 hectares were burnt, there were 3,000 insurance claims, \$30-odd million was spent on helicopters, 20,000 properties were threatened, 17,000 vehicles were involved, and 36,000 volunteers were involved. That is a huge cost. I believe those resources would have been a lot better spent on schools, highways, roads, et cetera.

It has been noted that areas burnt some two years ago still burnt in these fires. That is quite true. Why? The fuel load was too high. We have fires crowning from unburnt property and continuing on through the burnt areas. There were reports in the media, et cetera, that a lot of the fires here this time ranged from 60 tonnes to 80 tonnes of fuel per hectare. I was brought up to believe back in the old acre days, now the hectare days, that there were 4 ton to the acre, or 10 tonne to the hectare now. In the Bega Valley we are now looking at 10 tonne to 27 tonne per hectare, with even more in some places, depending on the type of timber making up those fuel loads.

The lack of fuel reduction burns in the past has been contributed to by the green movement, which thinks it knows best, and is jamming its views down our throats. The Carr Government, National Parks and some councils will not be told by older generations what will happen. I believe this summer was just the start of things to come. Fuel loads are out of control right across the State. If we want to save suburbs, houses and properties, let's start looking at some parks close to and around urban areas, with probably up to a 500-metre break so that you have not got the fires moving through trees and crowning.

There are in the Shoalhaven shy some people—I met one the other day for the first time—who have been saying loud and clear, "We would love to clear back, but we're not allowed to because of the greenies looking over our shoulders and council and government red tape." We have to plan for reduction burns, which take an awful lot of time. Submissions go into the Bushfire Council from the

agencies, then go through the paperwork processes, and they pick a day. Then it rains. It is then put on the shelf until 12 months later. We are just not catching up on what is being submitted because Mother Nature gives a very narrow window of opportunity.

There are a couple of points I would like to make in regard to the Sydney and Nowra fires and so forth. What about pollution from the wildfires? What about our water? What about the soil erosion? What about the smoke? It is also interesting to note that I did not hear a complaint about the smoke from people who suffer from asthma. I know what I am talking about here because I had a brother who suffered from asthma all his life. But we do hear about complaints when someone is trying to do a fuel reduction burn. The papers and the media are full of it, only using it as a lever for their naive thoughts.

All wildlife can't fly. All wildlife cannot escape wildfires. They can escape fuel reduction burns. There is timber destroyed that would have been available for future milling. We are led to believe that in the fires up north at Christmas time there was a whole koala colony wiped out. We know what they say about the poor timber industry when it is logging a tree when a koala may be around, but here we wipe out a whole colony in just one wildfire, but that does not matter.

I believe National Parks has far more land than ever but not enough money. They need to have a good look at what they are doing. Various things they say they are protecting for us they are in fact destroying. Some of the park guys are very commonsense, down-to-earth people, and I have met quite a few. But, unfortunately, the people at the top are not.

It is interesting to note that the Sydney and Nowra fires were started by lightning. I might have to rephrase that, because I am not sure about the Sydney fires. But definitely both of the Nowra fires were started by lightning, and the Nowra fires were put out by rain. All we could do was protect life and property. On that, I have members from my own brigade up here who saw it first-hand. Our fire control officer spent the whole of his days, from Christmas Day, until it was all over. The stories they tell of what happened are devastating of urban people, the people involved and everyone else. We believe a lot of these fires could be made less intensive. I am not saying that fuel reduction burns will stop all fires, but they will reduce the intensity of those fires. If the fuel load is low, the fire will not get into the crowns.

There was talk about the fires up here being hard to control and so forth. I am sure they were. The humidity was very low, less than 10 and 20 per cent et cetera. We had winds of 30 and 60 knots—65 knots was the highest I heard of—and most were around 30, 35 and 45. My observation on the helicopters is that they are of no value to us once winds are over 40, on account of the danger of controls. The other thing about these fires was their low temperatures. I return to a fire we had in the Bega Valley shire in 1952. We had temperatures in the low forties and winds in the high eighties and 100-plus degrees. I have no hesitation in saying that if those conditions had been present up here, thousands of houses would have been wiped out, and the same for personnel. The dear Lord must still love us after all, because the potential was there.

There is a little comment I have made here. Just remember one thing: Those who won't listen must be taught. Mother Nature is the best teacher I know.

**The Hon. RICK COLLESS:** Mr Watson, in your submissions you noted that a large tract of land within the Bega Valley shire that was traditionally under the control of State Forests has now been transferred to National Parks. Can you tell us how the fuel load was managed while that land was under State Forests control?

**Mr WATSON:** It was a lot better than it is today. Our brigade, in conjunction with Numbugga Bushfire Brigade, through New South Wales Forests, talked about a 4,000-hectare block in behind us. "When are you going to burn it?" We said, "Well, it's on plans, " and so forth. We said, "If it's any help to you, we will do it for you." They gave us permission to do that, and we did that with just vehicles and drip torches, burning off the ridges. There are some photographs there. They just trickled down the hill and destroyed nothing. It just climbs up the slope, and you save wildlife. In the wildfires happening now, it is just the opposite; nothing can get out.

**The Hon. RICK COLLESS:** So, when it was under State Forests control, how often did you do that burning?

**Mr WATSON:** It varied. Different portions were burnt at different times. It was anywhere from five to seven years, and some would go longer. Those photographs show you what is happening now since National Parks has taken over, which is just on eight years, and nothing has been done.

**The Hon. RICK COLLESS:** When it was under State Forests control, you mentioned figures of 60 to 80 tonnes per hectare of fuel, and I think you said a manageable level was about 10 tonnes per hectare.

**Mr WATSON:** Ten to 27. With 60 to 80, I am talking about the fires up here that we had to content with, and with the 10 to 27 I am talking about what we have got now in this particular area.

**The Hon. RICK COLLESS:** So, when you were burning those forestry areas, when would you decide to burn them? What level of fuel would they be at? Would it be around the 20 to 30 tonnes per hectare when you would burn it?

**Mr WATSON:** No, around the 10 tonnes, or maybe a bit more.

**The Hon. RICK COLLESS:** You would burn at 10 tonnes per hectare?

**Mr WATSON:** Yes, or sometimes a bit more. The interesting things with those burns that we did is, if the fuel was not there it would not burn anyway, because you light on the ridges and it has to "walk" backwards, unless you have the wind driving it. But we are picking the weather. When Mother Nature has a go, she picks the wrong weather.

**The Hon. RICK COLLESS:** So in respect of those areas that have been transferred to National Parks, what sort of fuel loads are they now carrying?

**Mr WATSON:** About 10 to 27 tonnes per hectare, and I checked at Christmas time. Also, on one tract they have moved in and cleaned up two trails since I have been in there, and they got bogged on the green saplings. The ground was very undulating. If you had a car in there, you could have travelled on that ground without being in a four-wheel-drive vehicle. That is the state it had got into.

**The Hon. RICK COLLESS:** Where did the figure of 60 to 80 tonnes per hectare come from? In what area was that?

**Mr WATSON:** The Nowra and Sydney fires.

**Mr R. H. L. SMITH:** In point 4 of your submission, Noel, you note, "The lack of proper maintenance of the strategic fire trails, which provide access to the remote areas of the National Parks." You go on to say, "The NPWS has allowed the existing fire trail infrastructure created by State Forests to deteriorate." Could you identify some of those areas where the trails have deteriorated? I did bring this up earlier this morning with National Parks, which indicated that some tracks had been closed and some had not been maintained, but that was for the reason that they were not strategic tracks as far as wildfires are concerned.

**Mr WATSON:** The area I am talking about is in the north-west of Bega, which is the Brogo fire trail, Tin Hut, Warrigal, Mistake, Bemboka Peak, Oorarook, Numbugga, Nelsons Trail. That is about all I have covered since Christmas.

**Mr R. H. L. SMITH:** In your submissions you make a point that I do not think has been brought up before, but I think it is very relevant. You say, in relation to the helicopters, "The use of such equipment has increased the budgetary requirements of the fire prevention agencies and has flagged a shift in resourcing from fire prevention to fire control." I presume you are indicating here not only a shift from hazard reduction to fighting the actual fire, but also a significant shift of resources from ground resources and ground equipment for the Rural Fire Service. I think it was mentioned that if you are going to spend \$30 million to have large helicopters doing the job, obviously there has to be a tremendous increase in the total resources, or else a shift of resources.



**Mr WATSON:** Here I was referring to the helicopter side of things and the cost of that being astronomical, as we all know. That, in turn, will reduce resources for our ground crews. I also state that the helicopters can't handle all fires because Mother Nature won't let them.

**CHAIR:** Do you find the current level of resources for the Rural Fire Service adequate, given that most machines have been changed over and new equipment has been progressively introduced over the past five years? How do you and your team find the level of preparedness and training now for fighting fires?

**Mr WATSON:** I would say quite satisfactory in the Bega valley shire area.

**CHAIR:** I was just wondering whether you had any deficiencies, any item that you were concerned may be inadequate.

**Mr JOHNSTON:** I believe the cost in putting out the fire has been pretty horrific. I believe that prevention is far better and I think a lot more expenditure should be happening now and should have happened over the past month or so in hazard reduction in threatening areas. This has not been happening, and it is just ludicrous, in my opinion, to wait until the fires get going and then spend massive amounts of money when small amounts of money could be spent in advance to reduce or rectify the problem.

**CHAIR:** I am certainly not ignoring hazard reduction as being a potential problem but my question was about the resourcing of the Rural Fire Service. Do you find that adequate for your current role? Mr Watson seems to think that it is not too bad. Do you share that view?

**Mr WATSON:** We are reasonably happy with what we have in Bega valley shire. I cannot speak for other areas.

**CHAIR:** I was concerned about your particular experience.

**Mr E. T. PAGE:** You say that more should be spent on prevention and control. What could have been spent on prevention to stop the lightning strikes and the horrendous weather, which were the paramount causes of the fires we are talking about?

**Mr WATSON:** You cannot stop the two things you mentioned but you can reduce the intensity of it.

**Mr E. T. PAGE:** The lightning strike?

**The Hon. RICK COLLESS:** No, the fire after the lightning strike.

**Mr E. T. PAGE:** No, the causes.

**Mr WATSON:** There are all sorts of causes. You cannot stop the causes. You have to be able to control what is there.

**Mr E. T. PAGE:** The point I am making is that a lot more money spent on prevention will not stop lightning strikes or the horrendous weather and winds we had during that period.

**Mr WATSON:** That is right. I would agree with you, and I would make one comment back to you. For years we have been going out and putting out lightning strikes in the summer, which I agree. But no-one is giving us permission to go back in the autumn and counteract it so that is where a lot of our big problems are coming. If you do not go back and do what mother nature was going to do for you, it just gets bigger and bigger and bigger.

**(The witnesses withdrew)**

**(The Committee adjourned at 4.20 p.m.)**

