

REPORT OF PROCEEDINGS BEFORE

GENERAL PURPOSE STANDING COMMITTEE No. 5

INQUIRY INTO FERAL ANIMALS

¾¾¾

At Sydney on Monday, 25 March 2002

¾¾¾

The Committee met at 9.30 a.m.

¾¾¾

PRESENT

The Hon. Richard Jones (Chair)

The Hon. Rick Colless
The Hon. John Jobling
The Hon. Malcolm Jones
The Hon. Janelle Saffin

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GEOFFREY CHARLES FILE, Executive Director, Regulatory Services, New South Wales Agriculture, Kite Street, Orange, and

ERIC OWEN DAVIS, Program Leader, Vertebrate Pest Management, New South Wales Agriculture, Carrington Avenue, Dubbo, sworn and examined:

CHAIR: Are you conversant with the terms of reference of the inquiry?

Mr FILE: Yes.

Mr DAVIS: Yes, I am.

CHAIR: If you should consider at any stage during your evidence that in the public interest certain evidence or documents you may wish to present should be seen or heard only by the Committee, the Committee would be willing to accede to your request but advise you that the Legislative Council may vote to overturn that decision. Would you like to make an opening statement?

Mr FILE: Thank you for the invitation to appear. I will take this opportunity to provide an overview of some of the feral animal issues and highlight the important role of New South Wales Agriculture. Then I will introduce Eric, who is the program leader for our Vertebrate Pest Management, and he will cover three pest animal management issues which we think are probably the key three issues for us.

Enormous agricultural damage caused by feral animals and the devastation of native wildlife through competition and predation makes feral animal management a key long-term agricultural and environmental sustainability issue for New South Wales. There are some 25 species of mammals, as well as many birds and fish, that have established wild or feral animal populations. However, the main pest animals for New South Wales are rabbits, pigs, foxes, dogs, mice, goats, cats, horses and deer, and some species of bird.

The climate in which pest animals are controlled reflects real and often irreconcilable differences in community perceptions and values regarding the damage caused by pest animals, justification for their control, the scale and cost of programs, animal welfare and public safety issues. New South Wales Agriculture plays a key role on behalf of the community in addressing some of these issues and in managing these animals. So our interest is broader than simply reducing feral animal numbers. It also includes managing the impacts of the pests in a sustainable way.

To put this in context, pest animals threaten agriculture through stock losses, animal welfare impacts caused by predation, damage to crops and infrastructure, competition for pasture and, most importantly, their role in disease spread, notably exotic diseases of which foot and mouth disease represents the most serious threat. The distribution of feral pigs, combined with their ability to amplify the foot and mouth disease virus, is of particular concern. Feral goats and deer also represent a problem in this regard.

An example of New South Wales Agriculture's broad focus is the current statewide survey of key pest animals to enhance emergency animal disease preparedness. This work is also supported by our efforts to help establish an Australian wildlife health network. New South Wales Agriculture has a strong focus on environmental sustainability and agricultural protection through its research, extension, education and regulatory programs. This

includes the provision of research, training and technical advice to pest managers, industry groups and other New South Wales agencies involved in conservation, resource and land management.

Expenditure on these pest animal management activities by New South Wales Agriculture through its vertebrate pest subprogram in 2000-01 was \$2.24 million. This includes \$530,000 received as external funding for research. New South Wales Agriculture boasts one of Australia's pre-eminent vertebrate pest research groups, which collaborates extensively with national and international agencies and research institutions, including the CSIRO and the Pest Animal Control Co-operative Research Centre. Our research programs reflect the need to regularly appraise existing and emerging animal control techniques used in pest management for effectiveness and possible unintended effects. Animal welfare is also an important area, and further research is needed on non-lethal control methods, recognising that new non-lethal approaches such as immunocontraception seem many years from providing practical options. As long as lethal control methods continue to be needed, there will be an ongoing obligation on practitioners to maintain their competence, ensuring that animals are despatched quickly and humanely. Our pest management training includes the delivery of accredited training courses, which emphasise pest animal biology, ecology, safe use of chemicals, and effective, strategic control programs.

Pest animal control provisions in the rural lands protection legislation now also require public land-holders to control pests, whereas earlier legislation only covered private land. These provisions address widespread concerns by private land-holders that pest control on public lands has been inadequate. They will face considerable additional demands for resources on public land managers in New South Wales.

Most of the frontline work to control pest animals on agricultural land is undertaken and funded by land-holders with assistance from rural lands protection boards. Private land-holders are required to do this under the rural lands protection legislation. But the main motivation for controlling pest animals is to prevent the damage they cause. This results in a reactive climate in which the level of pest control waxes and wanes in line with perceived damage. A more strategic approach is required to deliver better pest animal control and in turn prevent the long-term agricultural and environmental impacts of pest animals.

The need for a regional approach to planning, co-ordination and implementation of pest animal management programs has been recognised by the New South Wales Pest Animal Council. The council is an ad hoc committee with a wide membership providing advice on pest animal management to the Minister for Agriculture. The Pest Animal Council's overarching policy framework is attached to New South Wales Agriculture's submission as appendix one. Existing legislative arrangements have created difficulties in developing effective control strategies for some pest species, and the department hopes that provisions in the new rural lands protection legislation will resolve some of these problems particularly with respect to feral deer.

As the Committee can appreciate, pest animal management is becoming increasingly complex and more highly regulated. In future there will need to be even greater emphasis on strategic programs on a regional scale if we are to provide cost-effective protection for agriculture and environment. Pest animal control practitioners need a wide range of competencies and a sound understanding of the issues. Training, including accredited training relevant to the practitioner's requirements, needs to be an integral part of the State's response to pest animals.

For these reasons, demands on the resources of New South Wales Agriculture to deliver necessary research, training and co-ordination of control programs will continue to grow. These increasing demands will also apply to other government agencies and private land-holders. In return, I believe we can expect improvements in our ability to prepare for, and respond to, exotic animal diseases and, more generally, in the success of our pest animal management programs.

I would now like to introduce Mr Eric Davis, Program Leader, Vertebrate Pest Management, who will focus on three key areas of importance regarding future management of feral animals.

Mr DAVIS: I also thank the Committee for the invitation to address its terms of reference. I would like to begin by commending New South Wales Agriculture's feral animals submission to this Committee. Briefly, it attempts to provide the Committee with a broad appreciation of some of the technical and practical aspects of pest animal management. Specifically, it covers legislation relating to pest animal control. Here I would emphasise that the Rural Lands Protection Act 1998 has commenced since that submission was written. I would also point out that the current Federal legislation is the Environmental Protection and Biodiversity Conservation Act. So there are a couple of slight changes since the submission was written.

The submission also covers the New South Wales Pest Animal Council, the role of New South Wales Agriculture, the role of rural lands protection boards, the role of land-holders and public land managers, exotic diseases risks and pest animal surveillance, and the main pest animal species, which Geoff has covered briefly. It also covers pest animal management issues, including the conflict between eradication versus management, control versus commercialisation, preventing the establishment of new pest species, animal welfare issues and some of the future directions which we see as important. The submission also includes a comprehensive bibliography, to make your research team's job a little easier, and it also contains some resource material from the Bureau of Rural Science in Canberra, plus an appendix on the use of 1080 in New South Wales.

I wish to draw a couple of points from that submission. It is important to note that it is not technically possible to eradicate most species of feral animals, so management programs need to be ongoing. Many people are also unaware that pest animal control and sustainable harvesting activities are antagonistic, since profitable harvesting requires populations to be maintained at levels that cause unacceptable damage. This conflict exists in any situation where a sustainable yield of an animal is required. Horses, pigs and foxes are all examples of animals for which harvesting has failed to prevent unacceptable levels of damage, whether it be environmental or agricultural. As Geoff has already indicated, control techniques are subject to increasingly complex environmental pesticide and other regulations, and those regulations increase the complexity of the pest animal control plus the expense.

I would now like to cover three important pest animal management issues which New South Wales faces. The first is that any significant improvement over our current level of pest animal control will require adoption of strategic control at a regional level. If I can use feral pigs as an example—and Geoff has already alluded to this—the regulatory approach creates a reactive pest control climate. This results in decreased control during tough seasons when numbers are low and land-holders' time and resources are concentrated elsewhere—things like drought feeding, agistment, and so on—yet this is precisely the time when it is often easiest to control pigs and when the extra control would significantly lengthen the period needed for pigs to build up and return to high populations once good seasons return.

An ability to implement strategic and regionally focused control at these times would see a significant improvement in feral pig control. The situation differs for each pest species involved and also between areas where pest species occur, but the same considerations apply. So a strategic approach is not new, and there are plenty of examples of strategic approaches being applied, but it needs to be better developed. It would involve planning and implementing management programs at a land system level across land tenures. It would need government agencies and rural lands protection boards and land-holders to work together. It needs good co-ordination and constant valuation. It would need adequate resources and funding, and for the planning and implementation to be more directly linked to funding. At the moment that is not the case. There also needs to be flexibility to take into account seasonal and climatic opportunities. I have used the example of pigs but similar issues apply to other species. This strategic approach is routinely used to address a broad range of problems at regional and catchment levels—these programs are not new—but it is especially important that this approach is applied to mobile species such as pigs, foxes, wild dogs and feral deer.

The second issue is that current pest animal control programs reflect years of research and field experience with ongoing research and reappraisal. They do represent the best options given current technology and resources and the lack of, as yet, non-lethal alternative control methods. Nevertheless, they seem to be under continual threat from some groups that are philosophically opposed to the destruction of animals as well as some Green groups and sections of the media. This may reflect a lack of understanding about current pest animal control techniques, the situations in which they are used or their importance in protecting agriculture and environment. As indicated, there are also groups that are philosophically opposed to the destruction of animals. Many control techniques and management programs are caught up in the resulting debate that follows. It is often polarised on philosophical grounds.

New South Wales Agriculture is concerned that the debate often overlooks the fact that pest animal control is conducted as humanely as we can given current technology and resources and that control programs comply with any relevant environmental assessments. There is also considerable investment in research to improve animal welfare outcomes, including the prospect of non-lethal controls. It is vitally important that the community understand these issues. To that extent the community's interest is particularly welcome. It is hoped that this inquiry can assist in developing a broader understanding of and support for these issues at a political level.

I would also like to touch on 1080 in the context of this discussion. The Committee would be aware that 1080 is a very important component of the current suite of pest animal control measures—and it is only one of the current suite of control measures. The National Registration Authority is reviewing its use. There is a great deal of

concern from rural communities about the National Registration Authority review since there is no alternative to 1080 for the purpose on the horizon. New South Wales Agriculture is concerned that the process used by the National Registration Authority is based on technical considerations and does not routinely take account of broader economic and social issues. Debate regarding 1080 tends to concentrate on issues associated with its chemical properties such as humaneness and those sorts of issues that are specific to 1080, as well as its potential, and occasionally actual, non-target impacts.

Research to date indicates that there is no concrete evidence that 1080 causes pain in rabbits and suggests that the symptoms of central nervous system stimulation by fluoroacetate poisoning in dogs and foxes are unlikely to be associated with pain. Despite this, community concerns persist, mainly because the effect of 1080 on the central nervous system gives animals the appearance of being unnecessarily distressed—and we are not arguing with that. Nevertheless, New South Wales Agriculture acknowledges that current technology cannot yet provide the additional information required to dispel these concerns one way or the other. So there are some areas there. While there is no single procedure which guarantees that 1080 will always be totally target-specific, the combination of correct dose rate, correct bait type and placement strategy greatly enhances target specificity and reduces the risk to non-target animals. It is also important to understand that similar or perhaps higher non-target risks would exist if another pesticide were used instead of 1080. For example, foxes and dogs are much more sensitive to 1080 than native animals. So use of an alternative pesticide that did not have that difference in sensitivity would increase the non-target risks to other native carnivores. New non-lethal and fertility-based control is, at best, many years away. So the issue is whether society is able to understand and appreciate the issues regarding 1080 use and balance these against the enormous damage that pest animals have caused to agriculture and the environment without 1080.

The third issue I want to touch on concerns exotic disease preparedness and response. As Geoff alluded to, the recent outbreak of foot and mouth disease [FMD] in the United Kingdom highlights Australia's vulnerability to exotic diseases and the potential role of pest animals, including all species of cloven-hoofed animals, but particularly pigs, the main amplifying host for foot and mouth disease. Recent analysis indicates that the relative economic and social costs associated with an outbreak of FMD in Australia would exceed those for other countries, given our high reliance on export markets. For example, foot and mouth would directly threaten Australia's \$5 billion-plus meat and livestock export trade. Nevertheless—this is a key point—the presence of pest animals does not automatically imply significant risks. The risks depend on the disease susceptibility, population density, contact rates between animals and other factors such as environmental conditions. It is important to maintain the expertise and systems required to recognise and understand these risks and the ability to implement a timely and competent response. For example, one important component of current knowledge is our knowledge about distribution and density of the main pest animal species with potential to spread or act as reservoirs for exotic animal diseases. Geoff has indicated that New South Wales Agriculture is undertaking a statewide survey of feral pigs, goats, deer, sheep, cattle and foxes to ensure that our knowledge is up to date and to enable us to mount a competent response in the event of an exotic disease outbreak.

I conclude by bringing in my comments and some of Geoff's, and tying those with current pest animal problems. While species such as rabbits and foxes continue to cause problems, I will concentrate on wild dogs and pigs because wild dogs and pigs have been particularly problematic over the last couple of years. The specifics are different for both species but it may help to put pest animal management into perspective if I point out some general issues that are common and some that differ. Firstly, it is not possible to eradicate either species with current technology; nor, would I add, is it desirable in the case of remnant pure bred dingo populations that society wants to conserve. Both are highly mobile species for which effective control requires a strategic co-ordinated approach across all land tenures at a landscape level. While control techniques available for both species are constrained by the need to prevent or manage environmental impacts, the constraints are particularly significant for wild dogs on public land. In many cases alternative control techniques are even less effective or more expensive.

There is currently no process for either species that links planning to ordination and implementation of management programs with funding at a regional level and across land systems. For both species there is some degree of conflict between the objectives of control and sustainable population yield. In the case of feral pigs, the conflict is between control and commercialisation. In the case of wild dogs it is between control and conservation of remaining pure bred dingo populations. In both cases maintaining those individual populations at viable levels comes at the price of significantly higher control costs than would occur if those populations were managed more strategically and more completely. I again thank the Committee for the opportunity to speak. Geoff and I would both welcome your questions.

CHAIR: The main complaint brought by farmers to the Committee is about damage caused by feral animals that live on public land. Has New South Wales Agriculture done any analysis of the estimated costs of feral animals

living on publicly controlled land, the consequential cost to the New South Wales economy and the potential benefit of additional control measures by government agencies?

Mr DAVIS: The short answer is no. Estimates are available of the cost to agricultural industries of pest animals, a component of which is certainly those from public land. I do not have those estimates at hand.

CHAIR: It is stated in your submission and is apparent from evidence that the Committee has received that for feral animal control to be effective it not only must be targeted to address specific problems but also co-ordinated across all affected land tenures. It is also noted in your submission that there is presently considerable disparity between agencies in terms of pest control priorities and the resources committed to implementing pest animal control programs relating to the amount of land each manages. How are animal control programs co-ordinated across various government agencies and does New South Wales Agriculture have any role in assisting land-holders who are troubled by feral animals on state-controlled land? Further, what is New South Wales Agriculture's involvement in integrated pest management?

Mr DAVIS: Pest Animal Council has broad representation and includes all the public land managers plus other community and interested groups. It has an overarching role in setting pest animal policy for New South Wales, and to try to get some consistency. Below Pest Animal Council there are regional committees, interagency committees if you like, involving the various public land managers, rural lands protection boards, and those committees attempt to, within the scope of resources and funding available, co-ordinate as best they can some of the programs that occur at a regional level. At a local level you also have interaction between rural lands protection boards on behalf of their land-holders and some local public land managers. So you also have some locally specific programs. Foxes would be a useful example. The agricultural program is Outfox the Fox, a strategic program of twice yearly fox control. That links in with some of the fox control activities on public land—specifically national parks. You would have heard about their fox threat abatement plan and some of the issues involved. Those sorts of co-ordinations occur at a local level.

CHAIR: Do these local subgroups then report back to the pest animal control group and is there some integration of all those programs?

Mr DAVIS: Not as specifically as you have asked. New South Wales Agriculture has agricultural protection officers whose job it is to provide technical input and to assist rural lands protection boards. They each have a number of boards under their care. Those agricultural protection officers feed back into New South Wales Agriculture. The rural lands protection boards, through their State council, feed back into Pest Animal Council through that route. So there are a couple of routes back into Pest Animal Council. Similarly with the public land managers, operational issues or issues that they confront go up to Pest Animal Council through those respective agencies as well.

The Hon. JANELLE SAFFIN: Could you provide the Committee with a diagram showing how all those groups co-ordinate and link?

Mr DAVIS: We would be happy to take that on notice. You mentioned funding issues and some of the differences in funding allocated to agencies relative to the area of land that they own. I am not in a position to comment on the specific funding received by each of the agencies. I guess they can comment on that themselves. But there are some differences that are worth pointing out. State Forests has integrated forest operation agreements, which are the overarching structures that govern their land management approach. They have a commercial focus. So pest animal management is not the focus of those sorts of agreements. In terms of the ability to participate in programs, I cannot comment on the funds attached to each of the agencies. All I can say is that the various agencies have different abilities to participate in pest animal management programs according to differences in the funding that they receive.

CHAIR: It seems that more co-ordination is needed, does it not?

Mr DAVIS: The short answer is yes.

The Hon. JOHN JOBLING: Mr Davies, you said that some agencies are better funded than others and therefore able to deliver better resources and results. Which agencies would you say are underfunded and could deliver a better result with more funding?

Mr DAVIS: If I could just answer a slightly different question, I apologise—

The Hon. JOHN JOBLING: Fear not—I can always come back to the original question.

Mr DAVIS:—because I would not like to make the comment that agencies are underfunded. That is really a matter for government and those departments. Certainly, the Department of Land and Water Conservation has very little funds available for pest animal control. State Forests has a commercial focus so the amount of funds that it has to allocate for pest animal control—I will put it this way: I am certain it would like more funds to control pest animals. The National Parks and Wildlife Service is rather better funded and in the case of some specific programs like the fox threat abatement plan they are very well funded.

The Hon. JOHN JOBLING: So when you referred specifically to the first two, land and water and forests, what sort of dollars are we talking about in your estimate? I will not hold you to the exact dollar but if you were to offer an estimate to the Committee what would you say?

Mr DAVIS: Just tossing balls in the air, I would say a couple of million dollars. The problem with answering that question is that some of the dedicated regional planning which would identify those costs, we have never had the opportunity to undertake those sorts of processes so I would not like to be specific.

The Hon. JOHN JOBLING: You have answered the question unknowingly by indicating that because the planning and research is not there the costs cannot be estimated, so in actual fact it is still a black hole.

Mr DAVIS: We have never had a system that linked funding and resourcing directly with that regional approach. We have never had the opportunity to sit down at a table and say, "Let us do the regional plan. Let us make the strategy. We know there is dollars here independent of agencies. We know that there is dollars to target the problem."

The Hon. JOHN JOBLING: A simple question: Why not?

Mr DAVIS: It is a good question. I am sorry but I cannot answer it.

CHAIR: Do you think there needs to be an integrated regional program for each species or for all species? You have maps in the back of your submission which show the distribution of different species. Would it be appropriate to work with all of the agencies together on one species at a time and develop an integrated pest management program species by species?

Mr DAVIS: It certainly would be, recognising that there are synergies available by looking across a pest species as well.

CHAIR: Like foxes and rabbits, for example.

Mr DAVIS: You would need to take account of fox and rabbit control in context, but predator management would be a more useful way of approaching perhaps foxes and wild dog control than just looking at both species separately because there are areas where you cannot control dogs until you have taken the foxes out. So you are doing two things already. There are synergies available but I would agree that you need to look at programs for each of the species.

CHAIR: Working in co-ordination with other agencies, obviously.

Mr DAVIS: Absolutely.

Mr FILE: I just add that there is an interesting parallel with weed control.

CHAIR: Yes. What about funding then?

Mr FILE: There is always asking for more but there is something like \$6 million now allocated to local government, which is matched by local government, for weed control across the State and they are progressively developing weed councils which co-ordinate weed control within catchment areas.

CHAIR: Would that model work for feral animals?

Mr FILE: It is probably a model you could look at.

CHAIR: That might be an idea. It seems to be very ad hoc at the moment. Different agencies are doing different things. Someone is putting in \$30 million; someone is putting in \$2 million. There seems to be inadequate co-ordination between one agency and another, even when their land is contiguous, for example.

Mr DAVIS: I may have given slightly the wrong impression. There is perhaps more co-ordination than would be apparent just looking at it on that basis. But I would agree that that co-ordination could and should improve. That would get over some of the differences in policies and approaches and other things that also currently exist.

CHAIR: One area does one thing; another area does something quite different at the moment.

Mr DAVIS: Yes, and there are differences between regions as to how things happen.

The Hon. MALCOLM JONES: Mr Davis, you said that it is "not technically possible to eradicate" when you talk about certain species of feral pest. We have come across this attitude from various land managers. I put it to you that that is not correct because certainly regionally — perhaps not statewide or nationally but regionally — it is possible to eradicate certain pests and that by adopting an attitude of it not being technically possible to eradicate, that tends to change the attitude of the eradicator from one of simply management to a campaign against a species of animal in a specific region.

Mr DAVIS: It is not quite as clear cut as the way you have described it in the question.

The Hon. MALCOLM JONES: I could give you some examples.

Mr DAVIS: I will just say a few words and then if you want further clarification I will do that. Nothing is impossible so I agree with you that nothing is impossible if—

The Hon. MALCOLM JONES: You said this was not possible.

Mr DAVIS: Yes, if you apply sufficient resources, funds, et cetera. What I am saying is that given the current technology available to control pest animals, and let us leave it at that because this really applies to every species that we talk about at the moment. The level of resources that would be required with current technology would basically be an impossible amount of resources. I will use a species like foxes. You would have to get every last breeding vixen and every last breeding male. To get that last animal—they are a cryptic species; they are not easy to find—would require an absolutely enormous amount of effort to make sure that you have got those last animals. At a very small scale, it is certainly possible but as you increase the scale, and once you get to a regional scale I think you are beyond what you are talking about. The bigger the scale, the more difficult it becomes, and the more difficult it becomes to justify the extra resources required because as your population declines the resources required to get the next animal and then the next animal increase significantly.

The Hon. MALCOLM JONES: Does it surely become the responsibility of huge resources co-ordinated with government services? For example, if you take the area by Abercrombie River—I am going back about 15 years ago—there was quite a significant area there where there were no pigs because they were hunted out in that region. Are not things like hunting pigs dependent on the land manager's attitude to the pig hunters by either encouragement or discouragement, rather than big brother coming along and pumping in resources?

Mr DAVIS: You have emphasised my point beautifully. At a local level—and what you are talking about is a very local level—you can easily take out a population of animals. As you have indicated, as soon as that control effort stops, the animals reappear.

The Hon. MALCOLM JONES: It does not have to be a control effort. It is simply an attitude of the authorities to pig hunters. Pig hunters are not popular in the community.

Mr DAVIS: I appreciate that but what you are saying would require the backing of significant funding and resources, even if those were the resources of private individuals hunting, to use your example, because that has to occur over such a large scale and to such a significant level because these species breed so quickly and they are highly mobile they repopulate areas. To get the same effect as you have observed retrospectively at the Abercrombie

River 15 years ago as a whole system level would require that same hunting pressure in that case or control pressure more generally to be applied right across the board. That level of resourcing and funding is just not available.

The Hon. MALCOLM JONES: If it is coming from volunteers, I suggest that it is.

Mr FILE: Can I just give an indication, maybe it is not a good parallel but two successful eradication programs we have had, one successful and one in progress at the moment, is a single outbreak of papaya fly in Cairns three years ago. We eradicated it and that has cost us \$55 million for one single outbreak.

CHAIR: What area are we talking about?

Mr FILE: Cairns and the immediate surrounding area.

CHAIR: About 40 square kilometres?

Mr FILE: Yes. At the moment we have a red fire ant invasion on the water at the Brisbane docks, which is a circle of about 20 kilometres. The budget to eradicate that—and we are halfway through—is \$144 million. That may be not a good parallel but it just gives you some feel for what it costs once you go for an eradication program.

CHAIR: In paragraph 9 on page 11 of the your submission you say that some deliberate movements and release of feral pigs still occurs to start new colonies or to repopulate areas following successful pig control programs.

Mr DAVIS: That is true.

CHAIR: Further, you said that the distribution of feral pigs is spreading as some unscrupulous hunters release pigs into new areas or previously controlled areas. So when you do eliminate you have the problem of people who want to hunt pigs going in and putting the pigs back.

Mr DAVIS: Yes.

The Hon. MALCOLM JONES: Is there any evidence of that?

CHAIR: It is in the submission.

The Hon. MALCOLM JONES: Is there any evidence or is it hearsay or rumour?

Mr DAVIS: There is an example in the Bathurst-Oberon area where the National Parks and Wildlife Service conducted a very successful pig control program, took out the pigs, and then very shortly thereafter some different feral pigs were introduced. It is clear that they are different feral pigs because they are a domestic strain of pigs reintroduced to that environment.

CHAIR: It does happen apparently.

Mr DAVIS: It does happen.

CHAIR: If you have any more evidence and the author of your submission, Dr Fogarty, would be able to supply the Committee with other evidence on that, because that is one of the arguments that has been raised. Also, on the question of control of feral pigs, in paragraph 9.1.5 you say that ground shooting is rarely effective in reducing pig populations. You also have this conflict between commercialisation of pigs, recreational hunting of pigs and control of pigs, and you say that there is a conflict, as you pointed out both in your submission here today and in your written submission.

Mr DAVIS: I will address the ground shooting first. Ground shooting can control pigs. If the intensity of hunting is significant enough at a local level that can work. The problem you have with feral pigs is that they breed very quickly and they are highly mobile. If your ground approach is an ad hoc approach, which is normally the way it is, especially in the extensive areas—I am talking about some areas to the west on the major river systems—then just taking out a couple of animals or even animals from a couple of properties makes no difference to the long-term population. So they are very effective at reducing the individual population at a very local level but at a population

level overall they have no effect because the pigs breed so quickly and they are highly mobile. Given the right seasonal conditions, they just breed and reinvade. So you have breeding and migration to contend with.

CHAIR: This is why you need this integrated pest management between various agencies to do the whole thing properly, rather than do ad hoc bits and pieces.

Mr DAVIS: Absolutely and shooting is only one method of controlling pigs. There is also poisoning and trapping, and there are specific roles for each.

CHAIR: In your submission you say that they are useful in following up methods of ground control in the eastern highlands. So shooting is useful in conjunction with searcher dogs at the end of a control program.

Mr DAVIS: Certainly, and there is no doubt that hunters can find and take pigs that we cannot get through other mechanisms. There is no doubt that that can happen.

The Hon. MALCOLM JONES: Mr File, you identified horses and you also say especially deer. Do horses and deer pose any threat to agriculture?

Mr FILE: Just take deer to start with, deer are certainly a host for foot and mouth disease. In the United Kingdom they do not exactly know what role the deer played because you cannot fence them so they wander across properties. If you put quarantine lines up for foot and mouth disease control, there is no doubt deer can get foot and mouth. It is not absolutely proven whether they spread it back to livestock because they usually do not come in close contact with domestic animals so the opportunity for the disease to spread from deer back to domestic livestock is probably less. There is no doubt if you are looking at an eradication program, and you know you have wild deer with foot and mouth disease, you have to be able to get rid of them before you can declare yourself free of the disease. It is a major problem from that perspective alone. Perhaps Mr Davis could answer your question about horses in New South Wales better than I.

Mr DAVIS: Horses are not a particular risk to agriculture in New South Wales, nor are there significant populations of feral horses on agricultural land. If I could just add to Mr File's comments, feral deer can also act as vectors for cattle tick. Up in the north of the State that is an issue that they are grappling with at the moment, as well as both cattle and sheep John's disease. There are a number of issues there.

CHAIR: It is not illegal to let deer loose, is it?

Mr DAVIS: Not as we speak, no.

Mr FILE: That has certainly been a problem. As the market for deer dropped off, there is certainly some evidence that domestic deer were released.

CHAIR: Like goats were at one time.

The Hon. MALCOLM JONES: What about dealing with poisons?

Mr DAVIS: There are no registered poisons for deer in Australia.

The Hon. MALCOLM JONES: They have to be shot?

Mr DAVIS: At the moment they have to be shot. In New Zealand they very successfully use 1080 for deer, but that is an issue we would have to think very carefully about. We would have to do our own research in terms of non-target susceptibilities and all those sorts of things. We would not be in a position to go ahead with an approach like that right now. In fact, the department is looking at some research into those sorts of issues, what might be available and what might be possible, but we are at the front of the process. The point is that deer are an emerging pest, and we are getting serious about having to do something with them.

CHAIR: Do we need a program to eradicate or reduce deer populations to a greater extent?

Mr DAVIS: There certainly needs to be some deer control. Deer have agricultural impacts. They are herbivores. They can target all sorts of crops, olives, goodness knows. The males are very aggressive during the rut and they can knock around other domestic stock. They are also a hazard on roads—situations that does not

necessarily apply to other stock—because deer are so good at getting across fences and so on. There have been some issues with deer on roads and some public safety issues as well.

CHAIR: Does the legal status of deer need to be changed, and if so how?

Mr DAVIS: There is a possibility under the Rural Lands Protection Act to have deer listed as a pest species. The department produced a draft pest control for deer, but it has not yet gone to public consultation, so there are still a couple of steps to go there. There is an issue also with the Impounding Act. I will put the positive side first. The Impounding Act is designed to take account of the rights of people who own stock. If I own some livestock and they get out, I should not suffer the consequences that they are shot or destroyed just because a flood washed the fence out or something. The Impounding Act takes care of that.

The problem is that it also catches deer, but deer are not domestic stock. Basically they are farmed wild animals. They are not really domesticated stock. Once deer get out and about they cannot be mustered like domestic stock. You need specific expertise and special systems. It is quite expensive to muster deer. Getting an escaped deer back is not an option, yet the Impounding Act still applies. We are hoping that the rural lands protection order, a pest control order for deer when it comes through, if that comes through, will take care of that. If not, we will have to ask for the Impounding Act to be amended with respect to deer.

The Hon. MALCOLM JONES: The Rural Lands Protection Act imposes responsibility on public landowners to control pests, the same as it does for private landowners.

Mr DAVIS: It is not the same, but similar.

The Hon. MALCOLM JONES: When you are referring to deer, would that be done by regulation?

Mr DAVIS: No, it is done by an order made by the Minister under part 11 of that Act.

CHAIR: Under the new Game Bill they would have to consult with the Game Council before that became issued by the Minister.

Mr DAVIS: They would, that is correct.

CHAIR: If the Game Council were to refuse that, what then?

Mr DAVIS: We do not get an order, I presume. I do not know. The Minister would make a political decision. I may have given the impression that the Game Bill overrides the Rural Lands Protection Act. I did not intend to give that impression.

CHAIR: They just have to consult?

Mr DAVIS: They just have to consult. If there is conflicting advice from the Game Council I presume the Minister then has to make a political decision.

CHAIR: We gather that.

The Hon. MALCOLM JONES: You spoke about constraints on public land for pure-bred dingoes. Do you think that the problem of wild dogs is now so out of hand that we have to put considerations about dingoes to one side in our campaign to assist agriculture to protect itself from the ravages of wild dogs?

Mr DAVIS: That is a really good question. The short answer is no, but I want to elaborate. The threatening process for dingoes is hybridisation with domestic strains of dog.

The Hon. MALCOLM JONES: Why is it threatening?

Mr DAVIS: Because ultimately you will breed the dingoes out. I hasten to add, because I want to come back to the point, that we could probably never eradicate the dingo gene pool from Australia. It just ultimately would not be represented in individual pure-bred animals.

The Hon. MALCOLM JONES: Is that not going to happen any way?

Mr DAVIS: Perhaps, but in the long term. I am talking a century or centuries, perhaps. But getting back to your point, and this point is often overlooked, good dog control, good wild-dog control, can do both because if you establish an area between livestock populations and pure-breed dingo populations of a couple of home ranges—there are spaces for animals to settle between those two populations so there is no intermixing—then you can stop, or minimise, further hybridisation. In other words you stop the egress of wild dogs from those core areas of breeding areas, you stop the ingress of domestic dogs, pig dogs, et cetera to breed back with those populations.

The Hon. MALCOLM JONES: That is a pipe dream.

Mr DAVIS: I guess it is a case of what is realistic at the moment. With the sort of regional approach, the sort of funding linkages that we have identified, I do not think that is unachievable. I think that is certainly quite achievable. I am not saying that wild dog problems have not got worse in some areas, but there are other areas where wild dog impacts are very well managed, and everyone is quite comfortable.

CHAIR: That is a difference. Why in some areas are they well managed and in other areas not well managed?

Mr DAVIS: There are number of differences. In some situations it is funding. Public land managers have responsibility for different bits of land. In some situations it is access to techniques, such as aerial baiting. As you are aware, aerial baiting can be a risk to core populations. There are some areas where environmental impact assessments are required to authorise those programs but it says no, you cannot bait quolls. Those things occur under the Environmental Planning and Assessment Act. We are basically constrained by that. There are differences from land systems to land systems —regions—in terms of what approaches we can take and what funding is available.

CHAIR: You talk about the effectiveness of trapping and say that only two or three trappers are now left, with one or two in training. Would it be a good idea to have a TAFE course and for the Department of Agriculture to get involved in training more trappers now that they are using these soft-jaw traps, which appear to be quite effective?

Mr DAVIS: It is. But, again, trapping is only one of the suite of control measures and it is an individual—

CHAIR: How important is it in the hierarchy of control?

Mr DAVIS: It is very important for individual problem dogs. Once you get a dog out there in amongst the sheep and it is killing, baiting is not generally a useful approach. It is often almost impossible to find the dog to shoot the dog. Trapping can be a very important method in those situations. There are odd dogs that cannot be shot or cannot be poisoned, even if those things would otherwise be possible for another dog. It is very important. But to come back to your point, the old trappers are getting older. New South Wales Agriculture has recognised that. We participate in the South-East Wild Dog project. Part of the objective of the project is to train new trappers. We are currently on our third trapper. But we do not put new trappers with old ones, we try to do it a bit better than that. We actually give them some training in pest animal management technology—

CHAIR: Informal training or formal training?

Mr DAVIS: Formal training.

CHAIR: Is there a certificate as a result of that?

Mr DAVIS: There is. It is a little more complex than that. When the first two trappers went through we did not have those training programs mapped against competency standards. That has happened now. There is little bit of recognition of prior learning and a few other things before the other two get their certificates, but eventually they will have a certificate as a dog trap. It is a much broader training and more technically in-depth training than simply sending new trappers out with old trappers.

CHAIR: Is that a TAFE course?

Mr DAVIS: It is not a TAFE course.

CHAIR: Could it become a TAFE course? There has to be some kind of future for people who train as trappers.

Mr DAVIS: If it is accredited it could become a TAFE course.

The Hon. RICK COLLESS: I have not seen a TAFE certificate trapper dog yet.

CHAIR: If people want a career path, and this is a career path and a very valuable career in some areas, surely they want to be able to recognise that they have these skills, apart from the old guys who have been doing it for 30 and 40 years.

Mr DAVIS: I agree. It is the experience and skills that catch the dog. It is having the whole suite of information behind you as to when to trap, when to poison, all those sorts of things, and some understanding of dog behaviours and things like that. We do not just put trappers out with a single old trapper. The new ones go out with a whole heap of different old trappers. We try to give them broad experience.

CHAIR: There is no career path for them.

Mr DAVIS: There is not, really. There is not really a huge demand numerically for trappers. There will never be a career path for 200 trappers in New South Wales, and there will never be—

CHAIR: Except for training other trappers.

The Hon. RICK COLLESS: Your statement and the department statement refer to public land-holders being required to control pests. What is New South Wales Agriculture priority focus in relation to dog control? Is more focus put on the protection of agricultural industries or conservation of wildlife?

Mr FILE: From the perspective of New South Wales Agriculture?

The Hon. RICK COLLESS: From their perspective, yes.

Mr FILE: Clearly, the representations that we get from producers are the major issue, and protection of agricultural land, agricultural livestock.

Mr DAVIS: I agree. The programs I am involved with and my staff below me, we do not have any conservation objective ourselves. Our job is to minimise agricultural impacts. That is what we are aiming to do. National Parks has its own programs and other agencies for conservation. We are about control.

The Hon. RICK COLLESS: Your role is, essentially, the protection of agricultural livestock?

Mr DAVIS: Yes.

The Hon. RICK COLLESS: There has been a lot of debate about aerial baiting. Is aerial baiting one of the most effective methods of controlling dogs in relation to sheep, in particular?

Mr FILE: Certainly in country where you cannot get other access to it other than aerially, there is little alternative.

Mr DAVIS: I agree. It is worth making the point that even in some areas where there are alternative access it is often useful to have a co-ordinated program that does everything all at once, which aerial baiting allows. That is the first point. The second point is the alternative methods, such as ground baiting, are very much more expensive.

Mr FILE: The other thing that is important to note with aerial baiting is the GPS that is certainly a lot more precise in the delivery of the bait. Whereas before, from fixed-wing aircraft in particular, it was reasonably haphazard. Now they have to put in a GPS track where they are going to put it before they can get their permit. That means that all the neighbourhood is notified precisely of where the debate is going. The problems that we once had with domesticated dogs et cetera getting access to baits has been overcome because everyone is now notified, and the baits are precisely located.

Mr DAVIS: We get a GPS print-out of where the helicopters fly. There is a lot greater accountability involved in that now. In relation to aerial baiting as a preference over some areas and in many of those situations the conservation details are not entirely clear about the potential to take out quolls. Some possible features are competition with other predators, dog and foxes in particular. With predation from these other animals there are also issues like the quality of the habitat available to the quolls and the return of habitats to quolls. I just wanted to make sure the committee is aware that these issues are being addressed directly by New South Wales Agriculture. In many of these situations the data collected by New South Wales Agriculture is not entirely clear but the National Parks and Wildlife Service has been doing some work which indicates that the quoll population may not be as susceptible to 1080 as previously imagined. It has always been a logical tenet, if you like, that it is not whether you kill an individual quoll under a control program but it is what happens to the populations of quolls through that controlled program that is important. There is some work going on now and there is more about to start in the southern Kosciuszko area to try to get a better handle on some of these issues about quoll populations and the factors that regulate those populations.

The Hon. RICK COLLESS: In relation to that when you go into an area to control a feral animal, for example, dogs as soon as the baiting or the control mechanism stops the dogs will reinvade the area. Does that phenomena also apply to native animals? Will a native animal reinvade an area?

Mr DAVIS: Certainly, but the rate at which that happens varies from species to species as does the rate of population increase. I guess it is worth making the point that with dogs, in particular, it is not just a continuous stream, you have young animals going through and then eventually they get displaced from that social structure and things like that and older animals are displaced—

The Hon. RICK COLLESS: Certainly dogs and pigs have a greater capacity to breed up?

Mr DAVIS: Foxes and rabbits too.

The Hon. RICK COLLESS: What do you consider would be the greatest threat to quolls? Is it the impact of the competition and predation of dogs and foxes or is there a greater threat from loss of quolls through an aerial dog baiting program?

Mr DAVIS: I am not trying to dodge the question but it is impossible to give a general answer to that. I am certain there are some areas where 1080 baiting does represent a risk to quolls. Be that as it may, there is also good anecdotal evidence that in some of the areas where there has been very intense aerial baiting over the years there is very healthy vibrant quoll populations. In fact—and this is only an assumption—in those areas it might be tempting to assume that the competition and predation by foxes and dogs has been a key component in keeping down quoll populations by reducing those factors, competition and predation, and the population has been allowed to come back. I would hasten to add that those are anecdotal observations to date. They have not yet been backed up with good science.

The Hon. RICK COLLESS: What about the feeding range of dogs compared with quolls?

Mr DAVIS: Much greater.

The Hon. RICK COLLESS: Do dogs travel further?

Mr DAVIS: Certainly.

The Hon. RICK COLLESS: By a factor of how much?

Mr DAVIS: Many, many times. Dogs can travel a long way. Quolls can travel, certainly, but we are not talking about the same sort of ballpark.

The Hon. RICK COLLESS: Would it be possible to use aerial baiting on a banding basis so that dogs would move through the banded area, pick up the baits whereas the quolls would not travel that far? I am referring obviously to perimeter baiting in the national parks.

Mr DAVIS: Yes. The logic is fine, and I am not trying to argue with that, but I want to point out that it is not always necessary to put in place a band. It is really a matter—and this is where a local planning focus is really important—of working out where the problems are. Where are the dogs coming out? Many of these landscapes are

very rugged and there are only some ridges or valleys out of which dogs can travel. It is not really a matter of putting in place in all situations perimeters and all those sorts of doughnuts, it is really a case of where is the control necessary? Where do we need to target this program to stop these dogs moving, not just these dogs moving out but if some big dogs happened to have got out loose somewhere, to stop moving them back in as well.

The Hon. RICK COLLESS: Is that sort of information readily available through most of the Rural Lands Protection Boards?

Mr DAVIS: At this stage that is really local information. To put this into perspective our planning process for wild dogs involves local land-holders through their wild dog control associations, the boards, New South Wales Farmers representatives if they want to come along, the public land manager representatives as well to actually sit down and get this local knowledge into the plan. This is the sort of knowledge that is borne out of experience: it is not the sort of knowledge that is written up in a text book somewhere or to which we can refer in a file.

The Hon. RICK COLLESS: It may be that a blanket ban on aerial baiting is most inappropriate?

Mr DAVIS: A blanket ban on aerial baiting would have severe consequences for dog control.

The Hon. RICK COLLESS: You mentioned that there seems to be a resistance to 1080 by a lot of native fauna species. Is it true that sodium fluoroacetate actually exists in native flora?

Mr DAVIS: Yes. I hope I did not indicate the term "resistance". I hope I indicated there was a difference in sensitivity.

The Hon. RICK COLLESS: That is my word.

Mr DAVIS: Yes, there are about 40-odd species of native plant that contain fluoroacetate.

The Hon. RICK COLLESS: In New South Wales?

Mr DAVIS: No, not all in New South Wales, in fact, mostly in Western Australia. In fact, the plant containing the relatively highest concentrations of 1080 is a plant called *Gastrolobium* which occurs in south-west Western Australia. The difference in sensitivity between native species and introduced species is greatest in those areas where there are high concentrations of those plants. In Western Australia some of the native animals are much less sensitive—I do not want to say resistant because if you put enough 1080 in there you will still kill them, but they are much less sensitive.

The Hon. RICK COLLESS: Is the reason why native animals are less sensitive in New South Wales because plants have sodium fluoroacetate?

Mr DAVIS: No, because the only plant of which I am aware, and it is not terribly well represented in New South Wales, does not have that big a selection pressure on most of the animals that you see. I cannot explain that. I would presume it is only an assumption that you are looking at some sort of population effect and selection. So you have selection in one area, migration of those species and intermingling and gradual differentials. I have not explained that very well but you have got population selection in one area and then potential intermingling across other populations so that the effect sort of diffuses a bit. But I am not aware of any specific selection that happens in New South Wales. Mind you, nor am I probably the person to be asked this question because I am not an expert on most native species.

The Hon. RICK COLLESS: In your submission you state that between 1982-85 about 15,500 sheep were killed each year by wild dogs. How many were killed recently, say, in 2001?

Mr DAVIS: I do not have the figures with me, but I could take that on notice. I would have figures for 2001. We normally get them retrospectively so we get the year's figures at the end. They will have been coming through in the last month or so.

The Hon. RICK COLLESS: Would the State council of the Rural Lands Protection Board would probably have those figures?

Mr DAVIS: Yes, except they come through us. This process is actually occurring at the moment. I have not chased this up in the past couple of weeks.

The Hon. RICK COLLESS: What is your idea of the average price per head per sheep at the moment for, say, an 18 micron sheep? I want to try to put a value on the impact of wild dogs on the land-holder and the rural community?

Mr FILE: It would be \$55 to \$65.

Mr DAVIS: Yes, pretty close. I did not read the *Land* last week.

The Hon. RICK COLLESS: What is the value of the wool cut?

Mr DAVIS: For an 18 micron probably pretty similar.

The Hon. JOHN JOBLING: I refer to your opening comments, Mr File, in relation to feral pig population and the question of an outbreak of foot and mouth disease from the point of view of New South Wales Agriculture. There are significant concerns in relation to the feral pig population. What plans are in place to control the feral pig population in the unfortunate event of a foot and mouth disease outbreak?

Mr FILE: From the start, New South Wales Agriculture has a fairly good knowledge of where our feral pig populations are. We have recently been remapping New South Wales for feral pigs and other feral animals so that we know where the populations are and the density of those populations.

The Hon. JOHN JOBLING: When will it be completed?

Mr DAVIS: Probably July.

Mr FILE: We specifically funded that and I guess that was to some extent stimulated by the outbreak in the United Kingdom because we are doing a lot of things at the moment to ensure that if we do get an outbreak that we are better prepared than we would have been. The foot and mouth disease potential has often been used as an argument for looking at eradicating feral pigs. Our experts, Eric has already said, that the cost of eradication is such that the cost effectiveness might not be there so you have got to look at alternatives. We have a fairly standard operating procedure in place in the event of a foot and mouth outbreak and that would depend on where the outbreak is, what the population of pigs is, what contact there is between domestic livestock and feral pigs. That control program would vary from poisoning, probably first, because the one thing you do not want to do in a foot and mouth outbreak is get straight in the air and shoot and disperse the population. We have got the option of electric fencing if you had to be sure to stop movement of pigs. A recent exercise in the Northern Territory of a foot and mouth disease simulation certainly looked at extensive electric fencing to stop movement of feral pigs in that particular situation. There is ground shooting and ultimately aerial shooting to mop up small numbers. But there certainly is a well defined plan in place should that event occur.

The Hon. JOHN JOBLING: Hopefully the plan will be available in July and you will be better prepared—

Mr FILE: No, that is the most recent mapping.

Mr DAVIS: Yes, that is the current location, density and distribution.

The Hon. JOHN JOBLING: Allowing a better prepared statement as a result of what happened in the United Kingdom, how confident are you of the effectiveness of your plan that you have now, or what it might be changed to?

Mr FILE: In relation to foot and mouth disease control or in relation to feral animal control?

The Hon. JOHN JOBLING: Both.

Mr FILE: I will do the first one and he can do the second one. There is no doubt that, since the United Kingdom outbreak, Australia as a whole has identified a number of deficiencies in terms of how well we would respond to an outbreak of foot and mouth disease [FMD]. That varies from little or no policy in terms of vaccination for foot and mouth disease; no zoning policy for a foot and mouth disease outbreak in Australia with

our trading partners—which means that if you have foot and mouth disease in Tasmania it would stop trade from all of Australia; and, probably until 18 months ago, what was a reasonably lax importation policy, in terms of checking people at the barriers. But, in the last six months the work that has been done and the new money invested, are believe is starting to close a lot of those loopholes. The comments from visiting Americans and Europeans a month ago were that Australia is probably better prepared than most countries to take on an outbreak of foot and mouth disease. So far as the question related to feral animal control, I will hand over to Eric

Mr DAVIS: The first thing is identifying whether or not there is a feral animal problem that needs to be taken care of or needs to be managed in association with an exotic disease response, using FMD for the example. There are a couple of things going on here. The first is that there is training for our epidemiologists. That is part of the program that Geoff identified. Part of that training looks at the possible involvement of feral animals—including pigs, especially—firstly whether or not they need to be controlled in conjunction with a control program in a particular location. Then, I guess, what the control options might be and I had just covered them pretty well: poisoning, aerial shooting, electric fencing would be the main ones, and ground shooting.

The Hon. JOHN JOBLING: You have used the word "managed" a lot in your various answers and in your presentation. From Agriculture's point of view, would either of you care to give me a reasonably simple definition of precisely what you mean by the word "managed"?

Mr DAVIS: It is quite simply to minimise the problems that the animal causes. If possible, that is done by minimising the number of animals, if that is appropriate. In many cases it simply is not practical to do that. We have not spoken about mice terribly much, but perhaps it is not a bad example to use. As an agricultural system we only have access to a part of the environment in which mice live and breed and we can only address mice impacts in those areas. We really do not have an option of doing too much with mice, other than managing, which is controlling populations at peak times and so on. It is really addressing the impacts.

The Hon. JOHN JOBLING: With that definition in mind, could I go back briefly to the question of controlling feral pigs. If I recall correctly, the indication was that the dry times or difficult agricultural seasons is the time when we should be attacking the problem. That right?

Mr DAVIS: Yes.

The Hon. JOHN JOBLING: Is that simply only because of a conflict of interest that the poor old landholder is struggling to try to keep himself alive and in other fields or is there some other reason why resources and funding have not been found to attract the problem then?

Mr DAVIS: It is a number of issues. Land-holders are not resourced externally to do the work so that when those opportunities arise their resources are directed elsewhere—keeping their stock alive, away on agistment or whatever. That is certainly the case, but I suppose the other issue is that these things cannot happen in an ad hoc way. By definition they have to be co-ordinated. That is not a period or seasonal opportunity where it is particularly easy to co-ordinate land-holders because they are off doing their various things.

The Hon. JOHN JOBLING: It is a problem that should really be addressed somehow, is it not?

Mr DAVIS: If we are going to improve the overall level, of the success of, feral pig control and minimise the impacts that feral pigs cause, yes.

Mr FILE: There is no doubt that some of the rural land protection boards do carry out that strategic control in dry times. There will be an opportunity tomorrow afternoon for the Committee to talk to them about this. They are certainly in a place to do some of that strategic control.

The Hon. JOHN JOBLING: I would agree that they seem to be the people on the ground to deal with it. My last question relates to the final paragraph on page 42 of your submission to the Committee. It states:

New South Wales Agriculture, along with other researchers and agencies like CSIRO, is working to improve understanding of the biology, behaviour and control of pest animals in Australian environments and farming systems.

The important part is:

Despite this, the difficulties in implementing long-term strategic control represent the main limitations to more successful control of pest animals.

The question I put to you and to Agriculture is: What are you specifically proposing in the next 12 months to improve the implementation? What is specifically not to be implemented?

CHAIR: You may take that question on notice and provide a follow-up submission if you like.

The Hon. JOHN JOBLING: They might like to answer it now.

CHAIR: Certainly, attempt to answer it now. However, you may choose to provide additional information in a follow-up submission

Mr DAVIS: I guess I would start by saying that our only option to do what you are suggesting is more of the same. I have 5½ agricultural protection officers co-ordinating with the rural lands protection boards across the State. Our research team is doing a wonderful job and we have a couple more projects going on there and which may provide some options that we did not have with respect to feral pigs. I deliberately use the word "may" because we are doing some environmental impact assessments for feral pig control in the future, over the next 12 months. But in terms of our ability to increase the success of that strategic approach, we do not really have an ability to do that, other than through changing practices. We do not have a direct ability to address the key limitations to that; we do not have an ability to tie the planning, implementation and monitoring of those programs with funding. New South Wales Agriculture is not funded for that and does not have a budget to do that.

The Hon. JOHN JOBLING: Perhaps you would take that question on notice and reply after you have had time to consider it. I think it is important to see what we may improve by implementation and what is not being done. It was a broad question but I believe it holds the key to a lot of the Committee's conclusions. I would be happy for you to take that question on notice.

Mr DAVIS: Yes.

CHAIR: Might I follow up with a question about the New South Wales Pest Animal Council, which is currently an ad hoc body. Would be appropriate to have the New South Wales Pest Animal Council legislated as a statutory body and to co-ordinate feral animal control in New South Wales through that body? I note that a number of bodies are represented on that council, for example, New South Wales Agriculture, the National Parks and Wildlife Service, State Forests, New South Wales Farmers, LandCare, the Department of Land and Water Conservation, the Nature Conservation Council, CSIRO, Rural Lands Protection Board, RSPCA, Environment Protection Authority and GameCon. It has representatives from all those who want effective feral animal control. Would that be the body to co-ordinate these activities? Could we have integrated pest management through the body? How can we progress this matter?

Mr DAVIS: That is the body that currently has the overarching pest animal policy for New South Wales, so far as its terms of reference are concerned. To use the weeds parallel that Jeff referred to earlier, that is the sort of system through which the weed funding is applied in New South Wales. But, you are correct. It is an ad hoc committee and not recognised in legislation. But were that system to be introduced for pest animal control, it might need to be.

CHAIR: The Game Bill is currently before the New South Wales Parliament. It deals with another ad hoc situation whereby recreational shooters want to be allowed to shoot feral animals. There seems to be no integration of that into the overall pest control program. GameCon is represented on the New South Wales Pest Animal Council. What concerns me is that we have one thing happening over here and another happening over there; one body doing this and one body doing that. We need to integrate their activities, if a program is to work effectively.

Mr FILE: Certainly New South Wales Agriculture's representation on the Game Council, which is one of the changes that has been made, would give that cross-linkage—which is why we asked for that representation.

CHAIR: Should their operations be integrated into the Pest Animal Council and into a pest control program, rather than having separate activity happening? Surely it would make more sense?

Mr FILE: It is difficult to comment on the Game Bill at this stage, because it is before the House and we do not know what it is going to look like. I would prefer to take that sort of question back to the Minister rather than deal with it here.

CHAIR: It seems to be an alternative pest animal council in a sense, does it not? It is like another body set out almost parallel to the New South Wales Pest Animal Council but addressing only one tiny aspect of recreational shooting, as opposed to baiting, aerial shooting and so on.

Mr FILE: I will agree there is some overlap. Clearly, that is why we wanted representation on it, to ensure that there was some co-ordination between the two groups.

CHAIR: If the New South Wales Pest Animal Council New South Wales Pest Animal Council were to be legislated, for example, would it be in a similar form to the way it is now? What amount of funding do you think it might need? Have you any idea?

Mr DAVIS: I think it would need to be in a similar form. It would need to look something like it looks now because you need to get those broader community interests represented in pest control policy, I believe. In regard to the funding issue, we would need an opportunity to go through some planning processes and more clearly identify funding, but you would be looking at a few million dollars, I would imagine, just shooting from the hip.

CHAIR: Can you give us a ballpark figure?

Mr DAVIS: It always worries me to give a data-free statement. This really would be a data-free statement. I do not know. A few million dollars.

CHAIR: Could that be the vehicle to help to integrate management of pest animal control in New South Wales? What you think?

Mr DAVIS: I think it would offer significant improvements over what we currently have and it would certainly provide a mechanism to link funding to planning, implementation and monitoring of pest animal control programs. It would certainly do that—independently of land system and land tenure, which would certainly be an improvement on what we have now.

Mr FILE: But you are certainly talking about new money to do it.

CHAIR: Indeed. It is a big problem.

Mr FILE: At the moment there is no way that New South Wales Agriculture could fund that. It would have to be new money.

CHAIR: Is the State's feral animal problem increasing or has it remained static?

Mr DAVIS: It is both ongoing because, as I said, under current technology we cannot eradicate the problem as yet. Certain species are increasing. With regard to feral pigs we have had some conducive environmental conditions over the past couple of years. It is starting to considerably dry off now. We saw a very large increase in feral pig population in the past couple of years. It is coming back now, as seasons contract. We have seen some increase in wild dog impacts in some areas, and that is associated with changes to control programs in certain areas.

CHAIR: Lately it has been increasing because of prevailing conditions, over the past 10 years has increased?

The Hon. RICK COLLESS: That is not what he said.

CHAIR: He did say that.

The Hon. RICK COLLESS: In relation to pigs. I want you do understand what he said in relation to dogs.

CHAIR: Of course.

Mr FILE: And, of course, in respect of rabbits is the opposite, particularly in the Western Division.

Mr DAVIS: We have had a significant reduction in the rabbit population on the back of the rabbit calicivirous [RCV], which has been fairly well sustained and supported in some areas through West 2000 and also through startup National Heritage Trust [NHT] funds in the south west to do you rabbit warren ripping. Something

like 200, 000 warrens ripped in association with that program. So rabbit numbers have done particularly well just lately.

Mr FILE: And some very nice environmental responses.

(The witnesses withdrew)

Short adjournment

JACQUELINE LOUISE KNOWLES, Senior Analyst, Conservation and Resource Management, New South Wales Farmers Association, 11/255 Elizabeth Street Sydney, sworn and examined:

CHAIR: Ms Knowles, in what capacity are you appearing before the Committee?

Ms KNOWLES: As an employee of the New South Wales Farmers Association.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Ms KNOWLES: I am.

CHAIR: If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard was seen only by the Committee, the Committee will be willing to accede to your request, but it may be overridden by a vote of the Legislative Council. Would you like to make an opening statement?

Ms KNOWLES: I would. I am here today representing the interests of the New South Wales Farmers Association, which represents approximately 13,000 farmers across New South Wales. Those farmers are representative of all sectors of agriculture. I would like to go through the key points of our formal submission to the inquiry.

Our primary concern in relation to feral animals is the protection of agricultural land and agricultural enterprise from damage resulting from feral animals. It is in that capacity that I will address the first of the terms of reference. I understand that the Committee has heard from a number of farmers individually about the sorts of impacts they suffer as a result of feral animals. By way of example, the Committee would have heard that approximately 65 farmers in the Cooma region lost more than 3,300 sheep in the last 12 months as a result of attacks by wild dogs. In addition, for example, one farmer in the Bega district lost 18 sheep in the last couple of months as a result of wild dog attacks.

But the losses are not confined to sheep. One farmer lost two calves just last week. And the wild dog problem is not isolated to the south-eastern region of the State. Wild dog attacks are rife across the Northern Tablelands of New South Wales and right down the north coast. It is also an issue in western New South Wales. A farmer near Tibooburra has lost 6,000 head of sheep in the last three years—an enormous loss to anyone's business! Nor is the issue isolated to wild dogs. For example, last spring one farmer near Barraba lost 400 lambs—or 25 per cent of his spring drop—as a result of wild pig attacks. That also is an enormous loss to anyone's business.

The second point that I would like to raise in relation to damage caused by feral animals to the agricultural and environment is the capacity of feral animals to spread exotic diseases. I have mentioned a number of those diseases in the formal submission, but I would like to focus today on foot and mouth disease, which is of grave concern to the agricultural community in New South Wales and across Australia. Committee members would know that in the United Kingdom foot and mouth disease has been estimated to have cost that Government \$4,333 million Australian, which is a huge expense for any country. If that position were to be replicated in Australia, it would be devastating, to say the least.

Committee members may know that feral pigs can be a major vector for foot and mouth disease. Our potential to control an outbreak of foot and mouth disease in Australia would be severely hampered by the feral pig population problem that we have at the moment. While feral pig control is the basis of a lot of pest animal programs, the resources being allocated at the moment to control particularly the feral pig problem are quite small. They need to be increased considerably. That leads me to the inadequacy of current practices and resources under the present system.

It is the opinion of our organisation that the level of funding currently provided to government agencies for feral animal control is just not enough. Our crude calculations from the National Parks and Wildlife Service, for example, approximate that less than \$17 a hectare is being allocated to pest animal, weed and fire control. That is simply just not enough. There have been indications that the Sydney Catchment Authority, for example, has transferred land to the National Parks and Wildlife Service with management payments in the order of \$70 a hectare for exactly the same activities. One can appreciate the considerable difference in \$70 a hectare and \$16 and \$17 a hectare.

The other major issue is considerable inequity in the funding between agencies. The National Parks and Wildlife Service, for example, is considered to be quite wealthy in terms of the budget it spends on weed and feral animal control, when compared to agencies like State Forests and the Department of Land and Water Conservation. These land management agencies have responsibilities related to the control of feral animals on their land, yet they are not being given by government the resources they need to be able to do that.

Further, funding to agencies is not flexible. Their funding is on an annual cycle. Public servants have a "use it or lose it" mentality: "If I do not use my budget this year, it won't be given to me next year." Certainly, the way that effective feral animal control programs work is that perhaps in the final couple of years of a five or six-year plan considerable resources may have to be expanded, with fewer resources being expended in the years preceding that. The critical factor might be climatic conditions and the population levels of feral animals—essentially, whether the time is right to do as control works. The funding cycle is a major drawback: currently, agencies do not have flexible, long-term funding arrangements.

In terms of current control techniques, there has been considerable public debate about the use of 1080 for example, particularly on whether the poison is or is not humane. A review by the National Registration Authority is currently under way. From research that our association has reviewed, 1080 seems to be the only currently available poison that is effective, cost effective and humane. That is something that we would like the Committee to note. In the long run, there needs to be an effective and cost effective means of controlling feral animals. Unless there is a suitable alternative available, we need to be very careful in reviewing of what we have at the moment.

The other major issue that I would like to draw to the Committee's attention is category D firearm licences. The Firearms Act permits the issue of a licence for a category D firearm to those primary producers who have a genuine reason, such as the control of feral animals while participating in an authorised campaign on behalf of a public agency or other public authority. Until recently, primary producers had been able to secure a declaration from the Rural Lands Protection Board that the landholder indeed had a genuine reason, and as such the landholder would be issued with a licence. In recent months the firearms registry has clamped down on this issue, and many farmers have been refused a licence on the basis that they do not have genuine reason. It is our association's understanding that the registry is looking to revise this system, with the implication that a primary producer can only be issued—

The Hon. MALCOLM JONES: I am sorry to interrupt. Are category D firearms semiautomatic weapons?

Ms KNOWLES: Yes, to my understanding. I can have that confirmed. It is our understanding that the registry is looking to revise this system. We are very keen to ensure that primary producers will still be able to obtain those sorts of licences, because in the event of the Rural Lands Protection Board developing a campaign in which primary producers can be involved it is essential that primary producers are able access these weapons and be licensed to use them year round, as opposed to just within the period of an actual campaign.

The Hon. JOHN JOBLING: Is it only for a period that they are licensing these firearms? What is the principal objection that the authority has that leads it to refuse a licence?

Ms KNOWLES: At the moment, a person must apply within the actual period of the authority's campaign, and unless there is a campaign taking place the licence is being refused. Of course, in a period when it is not conducting a campaign surely licences should still be available, first, in the event that there will be a campaign, and second, so that there will be enough primary producers who have the skills and licences to be able to participate in a campaign.

The Hon. JOHN JOBLING: It is difficult to organise feral animals to confine their activities to the period of a campaign, isn't it?

Ms KNOWLES: Yes. This brings me to possible solutions that our association sees at the moment. To recap, at the moment planning is being done on a landscape scale by landholders and different agencies. Agencies have various levels of funding and differing abilities to commit to time frames of funding for particular programs. As Committee members would well know, under the Rural Lands Protection Act, Crown land managers have an obligation to eradicate pests to the extent necessary to minimise damage to any land. Yet, as we can see, at the moment they are unable to discharge this obligation, primarily due to funding constraints. It is not just a question of funding dollars, but the way in which funding is allocated and the ways in which managers are able to spend that funding.

As an association, we propose that a pest animal control fund, similar to the noxious weeds fund that currently operates under the Noxious Weeds Act, be implemented and that that fund be administered by the Pest Animal Council, which is the primary policy advisory body to the Minister for Agriculture on pest animal control. We see this fund as a resource for land managers to use to implement the agreed plans of management that are currently being developed. We regard this as a mechanism for government to account for the money currently being spent and to be spent in the future, and we see it as a mechanism to break down the inequity between agencies and their levels of funding.

Secondly, we see a need for there to be clear record keeping about feral animal control programs including monitoring and compliance, and stock losses as a result of feral animal attacks. At the moment there is a relatively ad hoc situation in which some rural lands protection boards keep very good records about stock losses and others less so. We would like to seek a consistent approach to record keeping implemented across the State, and that is something that State council and New South Wales Agriculture are working on.

Our organisation would like to be able to secure access for funding for agencies but we need to be able to demonstrate what the problem is. Unless there are clear and verified records there will always be the ability for someone to say that there is not a problem in a certain area. Finally, our organisation can see that there is a need for research and development about feral animal control. Non-lethal controls, such as fertility control, are a long way from being implemented as part of an integrated pest animal control program. Additionally, a lot of science behind aerial baiting has been implemented on the basis of the proportional principal, yet very few studies have disproved aerial baiting as a viable option.

Anecdotal evidence on the northern tablelands, which is now becoming more formal evidence, is that areas that historically have been aerial baited are home to significant quoll populations. It is very difficult to base comprehensive arguments on anecdotal evidence. The organisation feels that the Government has a responsibility to make decisions on the basis of firm science.

CHAIR: It is apparent that to be effective, control of the damage caused by feral animals must be targeted and co-ordinated across all relevant land tenures. How can control programs be better co-ordinated with local regions? Are the rural lands protection boards' structures well suited to promote such co-ordination? What role—and in what structure—should the Pest Animal Council have in future?

Ms KNOWLES: It is the opinion of our organisation that pest animal control has to be done on a regional basis. Rural lands protection boards essentially are made up of land-holders and land-holders often feel that they can have an important role to play in the direction that boards take. The rural lands protection board system is an integral party in integrated pest animal control at a regional level. In addition, there needs to be another layer of planning above the rural lands protection board level. In the south-east of New South Wales we have seen a conglomeration of rural lands protection boards get together and draw up a preliminary plan about control on a broad regional scale, as opposed to just a broad scale.

That is the sort of area in which the Pest Animal Council has a fairly significant role to play. It is the overarching State body for policy, yet it has no capacity to identify areas for priority funding or for there to be some whole-of-government approach to pest animal control. At the moment agencies do not necessarily work in silos when they are planning, but their administrative capacity to deliver on-plan is that they have to work very much within the silos of their agencies. The Pest Animal Council has broad representation of government, rural land protection board and land-holder interests. We see it as playing an integral role in integrated test management.

CHAIR: Do you see a need to change the structure, or should it be left as it is? Or should it be legislated into a statutory body?

Ms KNOWLES: For it to become a spending body it needs some statutory underlying.

CHAIR: Is that what you recommend?

Ms KNOWLES: Yes.

The Hon. MALCOLM JONES: In your presentation you compared payments of \$16 per hectare to the rural lands protection boards with Sydney Water paying \$70 per hectare to the National Parks and Wildlife Service. Who paid the \$16 and to whom?

Ms KNOWLES: Those figures came from calculations in the National Parks and Wildlife Service annual report and its annual budget papers. The \$16 per hectare related to a crude calculation; a division of total land area and the amount of money actually expended on pest animal control.

The Hon. MALCOLM JONES: Who paid the \$16 and to whom?

Ms KNOWLES: That was the National Parks and Wildlife Service budget for that year.

The Hon. MALCOLM JONES: Who did they pay to? The rural lands protection boards?

Ms KNOWLES: The National Parks and Wildlife Service would be able to clarify that for you because there are different situations in different parts of the State. In some areas the National Parks and Wildlife Service contracts for rural lands protection boards to do work. But that is certainly not a rule across the State, as far as I am aware. I am sure that the boards and the Service would be able to clarify their funding arrangements. The other component to the equation is the \$70 per hectare. We are aware that there was a transfer of land from the Sydney Catchment Authority ownership to National Parks and Wildlife Service ownership, with an annual payment for management.

Again, using the same crude calculations, they divided the annual management payment for pest animal, weed and fire control by the land area, and that came to \$70 per hectare. We use that as an example, firstly, of discrepancy between agencies and the funding that they spend; and, secondly, that budgets obviously do not reflect the actual costs of carrying out the work that needs to be done.

CHAIR: Your submission highlights the need for the National Parks and Wildlife Service to spend more on feral animal control and makes little mention of the Department of Land and Water Conservation [DLWC], yet the department administers four million hectares and spends less than one-sixth per hectare less than the National Parks and Wildlife Service; and State Forests spends one-third of the National Parks and Wildlife expenditure on its 2.8 million hectares. Does land administered by the DLWC or State Forests cause similar or even greater problems than that administered by the Service? Why is the Service the focus of complaints about feral animal management when it spends considerably more per hectare than any other government agency?

Ms KNOWLES: It is the opinion of our organisation that feral animal control is an issue on public land, it is not isolated to the National Parks and Wildlife Service. In the past we have focused on the Service because a number of serious issues that we have dealt with in the control of wild dogs involve the National Parks and Wildlife Service. That is not to say that the problems are isolated to the Service. We feel that funding for pest animal control is an issue for all agencies and all public land managers and that a number of steps need to be taken to address the level of funding that is provided to those agencies and the inequities between agencies.

CHAIR: In your submission you stated that no more land should be declared as national park until there is better feral animal control in national parks. Surely if you transfer State Forest land, where less money is spent, into national parks, where more money is spent, it would be better to transfer State forests into national parks, would it not? The control is less on State forests and less on the DLWC land than on national parks. You say that no more national parks should be declared, but the land is still there and it still has feral animals whichever agency is in control of it. Is it not best to have an agency that spends more money rather than less money?

Ms KNOWLES: There is an issue as to the effectiveness of the way that money is spent. On the northern tablelands agencies such as State Forests are more willing to participate in programs such as aerial baiting than is the National Parks and Wildlife Service. In addition to the level of available funding, the way that the money is applied is important.

CHAIR: So you think that the control of feral animals on State Forests land and DLWC land is actually better than on land administered by the Service?

Ms KNOWLES: Certainly the message I am getting from our members who are affected by feral animal control issues is that it is a problem across all land tenures, but that the way they deal with State Forests and the Department of Land and Water Conservation is more favourable than that with the National Parks and Wildlife Service.

CHAIR: That is from evidence given by land-holders?

Ms KNOWLES: Yes.

CHAIR: Fewer feral animals come out of State Forests land and departmental land than come out of national parks?

Ms KNOWLES: Yes, that is the impression I get from our members who are land-holders.

The Hon. JANELLE SAFFIN: Is there any evidence about why that is so? Is it to do with the different natures of those reserves and the activities within them?

Ms KNOWLES: A number of land-holders have indicated that the active management in State Forest land is more conducive to feral animal control and it is a different activity from that within national park land. I am sure I could bring some other evidence before the Committee at a later stage.

The Hon. JANELLE SAFFIN: Yes, that would be useful, thank you.

The Hon. JOHN JOBLING: In your submission dealing with feral animal damage to the environment, specifically exotic disease, you refer to the cloven hoof animals such as goats, deer and pigs. You indicated that deer in particular have the potential to contract and spread diseases such as bovine Johne's disease [BJD]. You mentioned a problem with the control of feral deer and the inability of government agencies to effectively control feral deer herds, and you referred to the Rural Lands Protection Act. If I read your submission correctly, it suggests that the inclusion of deer as stock under that Act apparently greatly hinders their control. Would you expand on that and indicate the implications for deer farmers if deer are no longer deemed to be stock under the Act?

Ms KNOWLES: Those comments relate specifically to bovine Johne's disease on the far North Coast and the inability of land-holders to prove that they are protecting their land from bovine Johne's disease because they are unable to control feral deer. The problem with the Rural Lands Protection Act is, to my understanding, that deer classified as stock need to be yarded and a potential owner identified before the deer can be destroyed. As could be imagined, the ability to herd feral deer into a yard and identify the owner is difficult. They jump fences quite well.

The Hon. JOHN JOBLING: Deer become quite agitated when approached.

Ms KNOWLES: That has been an issue for people who want to protect their properties from bovine Johne's disease. I am not sure of the implications for deer herd owners.

The Hon. JOHN JOBLING: Could you suggest a solution to the problems for both parties?

Ms KNOWLES: I will take that question on notice.

The Hon. MALCOLM JONES: In your submission you referred to people in the Cooma area. Since this inquiry started the Committee visited Cooma and took evidence. I have received some alarming information that stock losses have increased very significantly in the past few weeks. Could your members confirm that?

Ms KNOWLES: Recently there have been quite severe stock losses in the Cooma region. There are a number of reasons for that, and partly it is because this time of the year is a heightened period for stock losses, historically. Another issue among members in the Cooma area is resources.

The Hon. MALCOLM JONES: Why is this time of year more significant?

Ms KNOWLES: I am not sure. I do not know whether or not it is something to do with the breeding cycle of the dogs. I am certainly not an expert in wild dog behaviour. Just listening to my members is, I guess, what I am an expert in. Other reasons that I have been given for heightened stock losses are resources that have been devoted to trappers. For example, there are a number of people who are concerned that trappers are not being given enough work at the moment to be able to deal with the demand.

CHAIR: Why is that?

Ms KNOWLES: I do not know why.

The Hon. MALCOLM JONES: You say that trappers are not been given enough work at the moment to deal with the demand?

Ms KNOWLES: They are not being allowed to work enough.

The Hon. MALCOLM JONES: And who is stopping that?

Ms KNOWLES: In a number of cases it is the National Parks and Wildlife Service and the Rural Lands Protection Board, to my knowledge.

CHAIR: Why is that? Why are they stopping that?

The Hon. RICK COLLESS: Because they work only 10 hours a week.

CHAIR: Is it a lack of money or is it a lack of will to allow them to work?

Ms KNOWLES: I think in a number of cases it is a lack of money and there are not resources dedicated to providing those people with longer-term employment options. They are employed on a contract basis.

CHAIR: How effective are they?

Ms KNOWLES: In terms of dealing with an immediate issue and alleviating an immediate pressure, very effective.

CHAIR: Better than baiting? Surely not.

Ms KNOWLES: I guess what comes to light, particularly in the wild dog issue, is the need for integrated control. Trappers are not the sole solution. They are certainly part of a solution but they are not the sole solution. Baiting programs, for example, are integral to that control program as well.

CHAIR: That is what we are after, integrated management, which seems to be lacking right now, does it not?

Ms KNOWLES: Integrated in terms of control methods utilised and integrated across all land tenures.

The Hon. MALCOLM JONES: Do you feel that various land managers appreciate the urgency of this crisis?

Ms KNOWLES: I certainly believe that agency land managers who are working in these communities believe that there is a crisis. I think there is a growing understanding within senior levels of agencies that there is a crisis. I think that was also indicated last year with the joint convening of the Cooma wild dog reference panel between our organisation and the Director-General of the National Parks and Wildlife Service. There is a growing understanding of the issue.

The Hon. MALCOLM JONES: But the problem is worsening so considerably.

Ms KNOWLES: There has been a trend, particularly in the wild dog issue, of there being a growing problem in relation to stock losses. That has been attributed by a number of people to phasing out of particular mechanisms of control towards the end of the 1990s. I guess it comes back down to an issue of funding and the ability to use certain control techniques as the reasons why there is a growing and escalating problem. Long-term strategic management control options were phased out and have been replaced with more reactive control programs, and that is certainly an issue that local communities and the Rural Lands Protection Board have identified—the need for strategic control programs—hence the regional planning process that communities are currently going through.

The Hon. RICK COLLESS: Miss Knowles, stock losses statewide—you spoke in terms of 3,300 sheep in the Cooma-Bombala border areas. Does your association have any figures on how many stock have been lost Statewide over the past 12 or 18 months?

Ms KNOWLES: Certainly the most comprehensive figures we have are the Cooma figures that were collected and collated by a group of 65 Cooma land-holders. As part of my submission, I included statistics that have been collated by the Rural Lands Protection Board and New South Wales Agriculture for the period up until the middle of 2001, I think. I think I have them here.

The Hon. RICK COLLESS: They are actually the figures in the submission.

Ms KNOWLES: They were in the order of 11,000 stock losses. Our association essentially questions the reliability of those figures on a number of bases. First, when we looked at the breakdown of the board, the concerns that we have received from members in particular areas were not reflected in the statistics that were given. We believe that that was an issue about the way that boards report, for example. We have had considerable concern from members and the Bega area, for example. The Bega board is requesting verified stock losses and by "verified" it means that a ranger will come out and identify dead sheep and will say, "Right, you have got 6 dead sheep", or, "You have got 12 dead sheep." Our members have an issue in ringing the board and saying, "I have had stock losses overnight. Can you come and verify it?" The board has said, "Sorry, we do not have time." The board is not going to verify them and so the board has been able to say, for example, that they have a smaller problem than actually exists.

The Hon. RICK COLLESS: So it would be the view of your members that the official figures of stock losses that have been quoted are far less than the actual stock losses that are occurring?

Ms KNOWLES: Yes, it is. Going back to the need for verified stock losses as opposed to individual land-holders nominating stock losses and the losses being collated by the board, there has been open acknowledgement by the community that integrated across-the-board control programs are needed. To go with that there needs to be across-the-board respect for agencies and for individual land-holders as well. Part of that is being able to respect land-holders' information that they are providing.

The Hon. RICK COLLESS: The other loss that land-holders are incurring at the moment besides the number of stock that they are losing is the land that they are unable to use. I am aware of some people in that Ingebyra area south of Jindabyne and one farmer in particular who can use only 150 hectares out of the 2,000 hectares on the farm.

Ms KNOWLES: Yes, that is right.

The Hon. RICK COLLESS: Is that a general principle that applies to a lot of people whose properties border national park areas or areas where dogs are residing?

Ms KNOWLES: Certainly, you are right in that it is the opportunity cost of not being able to stock land. That is a real issue, and the particular land-holder that you are talking about who is using 150 hectares of her land and who has to actually shepherd her stock into yards at night to protect them from wild dog attacks is a huge issue. That is reflected in the statistics that we presented as part of our regions evidence. I think it is something like 25,000 hectares of land that is being taken out of viable production in the Cooma-Monaro area.

The Hon. RICK COLLESS: What sort of economic impact is that having on local communities? Do you have any figures, for example, on the return per hectare of fine wool production that we could use as a guide?

Ms KNOWLES: I do. The summary of the figures of the Monaro wild dog survey that was carried out last year estimates \$1.75 million in losses and costs in the past three or four year period of the survey, which is quite significant for relatively small communities.

The Hon. RICK COLLESS: They would be losses to individual farmers, not losses in general for the economic activity in the community?

Ms KNOWLES: That is losses to individual farmers. When you look at statistics that show the proportion of money that the farming community has been spending in rural communities and the way that that shuffles around the community, it is a real issue.

The Hon. RICK COLLESS: Can you tell me if it is New South Wales Farmers Association policy that aerial baiting of wild dogs should continue?

Ms KNOWLES: Our association has policy relating to the effectiveness of control programs. Certainly we support the effective use of aerial baiting and the continued use of aerial baiting because at this stage that is a primary mechanism that we see as part of integrated control programs.

The Hon. RICK COLLESS: That would be the view of the majority of your members?

Ms KNOWLES: I would say yes, most definitely.

The Hon. RICK COLLESS: Just on the views of your membership—I would like to get a bit of a feeling for a couple of issues. Do your members have a legal responsibility to prevent their dogs from straying onto neighbours' land?

Ms KNOWLES: Certainly under the Rural Lands Protection Act private land-holders have a stronger obligation to control feral animals than do State land managers.

The Hon. RICK COLLESS: What about their working dogs—their own dogs? Do land-holders have a responsibility to control their own dogs to prevent them from going onto neighbours' land unaccompanied?

Ms KNOWLES: Certainly under my understanding of the Companion Animals Act, which is the piece of legislation that I am presuming you are referring to here, the owner of any domestic dog has responsibility to control that animal, yes.

The Hon. RICK COLLESS: If a farmer's dogs stray onto a property next door and they kill the neighbour's sheep, is the owner of the dogs liable for compensation for the losses incurred?

Ms KNOWLES: My understanding of the Companion Animals Act does that extend that far. I know for example that if a domestic dog strays and kills stock on another person's land, then the other land-holder can destroy the dog but as for compensation, I am not familiar. I am happy to inform the Committee at a later date.

The Hon. RICK COLLESS: Are you aware of the association's view on compensation for stock losses that have occurred as a result of dogs coming out of public land?

Ms KNOWLES: Yes, certainly. Our organisation supports our members' concerns—that damage as a result of feral animals, particularly wild dog attacks, should be compensated for.

The Hon. JOHN JOBLING: I would just like to confirm what you said earlier. It has been my anecdotal experience that many of your members throughout New South Wales are no longer notifying dog attacks to the various boards. You seem to indicate that that may well be correct.

Ms KNOWLES: It is not that they are not notifying; it is that they are calling boards saying, "We have had losses", and the boards are not prepared to verify them. It is not all boards, and I must make that clear, but there are some boards—one in particular—where it is an issue and boards are refusing to verify losses. As such, they are not being reported.

The Hon. JOHN JOBLING: What I am saying to you, though, is that there may well be a larger pool than you realise who, for paperwork and for other time-consuming reasons, have just given up reporting in some cases.

Ms KNOWLES: Yes, and for many years land-holders have been reporting stock losses and have been seeing no fruit for their efforts. That is something that our association has really been pushing our members about. There needs to be accurate reporting and for that to happen they need to be freely giving information, but it is very difficult when co-operation in some cases is not there.

The Hon. JOHN JOBLING: In the Monaro wild dogs survey, you have virtually answered the first part because the survey makes the statement that the explosion in wild dog numbers since aerial baiting ceased is very evident. I think you basically confirmed that as a view. If I have misunderstood, please correct me in a moment. The second part of the statement indicates that mound baiting has not had a great impact and that the cost per dog baited is very high. Would you care to comment on the second part?

Ms KNOWLES: Yes, certainly, and I will be happy to provide members with comparisons that a number of our members have made in relation to the costs of aerial baiting versus other mound baiting. I do not have them with me at the moment. I apologise for that, but I will get them to you.

CHAIR: And if you could look at the effectiveness of each, that would be helpful.

Ms KNOWLES: Yes. It comes down to cost effectiveness and utilisation of available resources. Evidence from the Cooma area, which is where a lot of this work has been done, is that stock losses as a result of not controlling wild dogs have been heightened since the period when aerial baiting ceased, and mound baiting programs have been introduced at a much greater cost.

The Hon. JOHN JOBLING: And anything you may also have in relation to the type of country and the regions against which this is comparable will make a big difference, I suspect.

Ms KNOWLES: That is right. There are a number of regions where the wild dog issue is primarily an issue in quite rugged country. The ability to access these areas even on horse or by walking is fairly remote. Effective control is about utilising the best means of control for a particular landscape in a number of cases, but at the moment the best method of control we have is aerial baiting and it is not being utilised.

CHAIR: This inquiry began before the commencement of provisions binding the Crown within the Rural Lands Protection Act. Do you consider that those new provisions have made a difference?

Ms KNOWLES: I certainly think that since the proclamation of the Rural Lands Protection Act, the planning processes that have been going on as a result of the need for public agencies to meet their obligations has been a very useful mechanism for engaging land-holders and other land managers in across-the-landscape planning. I certainly think there is a long way to go in terms of implementing the planning and the funding of that planning. However, it has come a long way in that public land managers now acknowledge that they have an obligation. Our organisation welcomed that when the Act was finally proclaimed.

CHAIR: About 40 per cent of rural land protection boards state that rabbits are having a high impact on agriculture and the State Council of Rural Lands Protection Boards says that rabbits are arguably the most serious feral animal problem in New South Wales. However, rabbits have a low profile in the submissions that the Committee has received from farmers. Do you think complacency regarding rabbit control may have set in following the introduction of the calicivirus? What do you think needs to be done to ensure that the full benefits of the calicivirus are realised?

Ms KNOWLES: From our organisation's perspective, since the introduction of rabbit calicivirus the emphasis that our members have placed on rabbit control has been much reduced. Rabbits are still an issue in some areas of the Western Division where warren ripping operations and those sorts of things continue. We are certainly not complacent about the impact that rabbits can have and the fact that in the longer term rabbits will become immune to rabbit calicivirus. We believe there is certainly a need for continued research and development into other options because there will be a time when rabbit calicivirus is no longer effective.

In terms of land-holders becoming complacent, I do not think that is entirely the case. When you compare the issue of feral pigs and wild dogs with rabbits, for most land-holders in New South Wales rabbits are not such a problem at present. However, they certainly acknowledge that we need to be vigilant otherwise the benefits that we have received from the calicivirus will be lost in the longer term.

CHAIR: The State Council of Rural Lands Protection Boards has said that there is not enough incentive for land-holders in the Western Division to control rabbits. Do you agree? What incentives, if any, do you believe would be appropriate?

Ms KNOWLES: The incentives for rabbit control programs and the West 2000 program have been welcomed by our association but there must be an ongoing commitment to those sorts of programs. That needs to become more evident.

CHAIR: Do you have any comments about the conflict between commercialisation versus the control of feral pigs? There is a conflict in that the commercial industry that exports game meat to Germany and other countries and recreational shooters want feral pigs to remain yet farmers and other land managers have a problem with feral pigs.

Ms KNOWLES: Yes. The issue for land-holders is the outcome, which is the control of feral animals. There are a number of tools that we can utilise to control those feral animals, and commercial pig shooting is one facet of that control program. However, most land-holders acknowledge that there is an interest in the commercial industry to sustain feral pig populations, and that is a concern to land-holders.

CHAIR: So the people who make money from shooting pigs or who derive recreational enjoyment from the practice will want to maintain pig populations. There is evidence in the submission from New South Wales Agriculture that some irresponsible hunters have spread pigs into areas where they were under control.

Ms KNOWLES: The reintroduction of pigs into areas is a major issue for land-holders. While commercial shooters, for example, can be utilised for feral animal control purposes, there must be a focus on the outcome for pest animal control—which, from our perspective, is reduced impact on agriculture and agricultural practices.

CHAIR: Do you think the commercial pig industry has a viable future or would you rather see it become extinct by reducing the number of feral pigs?

Ms KNOWLES: Our organisation does not have a set position on the commercial pig industry.

CHAIR: What about feral pigs?

Ms KNOWLES: We certainly do not have a formal position on that.

The Hon. MALCOLM JONES: Is there a feral pig industry?

CHAIR: Pigs are exported.

Ms KNOWLES: To the best of my knowledge, in a number of regions there are people who harvest feral pigs and export them. Therefore, there is an industry in that sense. However, I am not sure of the size of that industry.

The Hon. MALCOLM JONES: So it is so small that you cannot quantify it?

Ms KNOWLES: I am not sure that it cannot be quantified; I am simply saying that I cannot quantify it at the moment.

The Hon. MALCOLM JONES: Can you take that question on notice, please?

Ms KNOWLES: Certainly.

CHAIR: As far as you are concerned shooting should be continued only in order to control the feral pig population rather than in order to maintain the industry?

Ms KNOWLES: In relation to pest animal control, the objectives of our organisation's policy is the outcome. There needs to be integrated pest animal control, and in a number of cases commercial pig shooters may be considered suitable to that integrated control.

The Hon. MALCOLM JONES: What can be done about mice?

CHAIR: How about recreational shooting of mice?

Ms KNOWLES: I will take that question on notice. It is certainly not my area of expertise: I have been focusing on the larger vertebrate pests.

CHAIR: The submission from New South Wales State Forests says in relation to its resources for feral animal control that current practices and resources are adequate on the evidence available from feedback from neighbours and regulators to target priority areas. You have expressed a view about this. Do you agree with that general statement?

Ms KNOWLES: No. The feedback I receive from our members is that all Crown land managers need more resources to be able to implement effective control programs.

CHAIR: Your submission notes that meat cannot be used for baiting pigs. Are grain alternatives ineffective?

Ms KNOWLES: The anecdotal evidence that I have received from our members who use vegetable matter baiting for pigs—particularly evidence received from people with properties either side of the Queensland and New South Wales border, for example—is that meat baiting for pigs is much more effective.

The Hon. RICK COLLESS: What is the basis for that?

Ms KNOWLES: The basis for excluding meat baiting in New South Wales?

The Hon. RICK COLLESS: Yes.

Ms KNOWLES: I understand that raptors, for example, will take meat baits so vegetable baits are used to eliminate the non-target effects. However, I cannot see why there should be so much of a difference 20 kilometres either side of a border.

The Hon. MALCOLM JONES: Surely if you target herbivores as opposed to carnivores you will expand the non-target species? Far more native animals are herbivores than carnivores. Do you agree?

Ms KNOWLES: Yes.

The Hon. MALCOLM JONES: So if you use vegetable matter rather than meat you will expand the non-target species.

Ms KNOWLES: I agree. The feedback from our members in terms of feral pig control is that using meat baits is a more effective mechanism. Their anecdotal evidence is that raptors—including the birds they are supposedly trying to protect—do not take meat baits anyway.

CHAIR: What do you believe is the hierarchy of pest problems in New South Wales?

Ms KNOWLES: From the perspective of our organisation in terms of the impact of feral animals on agricultural enterprises, feral pigs are key to controlling any exotic disease outbreak—and, as such, are the key to any integrated pest animal control program and focus for funding by State and Commonwealth governments. Exotic disease outbreaks are a national issue. Following that, stock losses as a result of wild dogs are the next most serious issue facing farmers across New South Wales—the problem is not just isolated to the southern regions. Closely linked to the wild dog problem is the fox problem, and control programs for one seemed to be aligned with control programs for the other. So those two species are certainly interlinked. Moving down the list, rabbits and mice are an issue for the grain industry. Effective control of mice plagues is a serious issue for grain productivity.

CHAIR: What about deer, horses and goats?

Ms KNOWLES: Issues relating to feral deer tend to be isolated to particular regions at present, so on a statewide basis deer are probably further down the list. The implication of goats in terms of agricultural production relates mainly to damage to land and pastures and those sorts of things. However, I would rank them much further down the list. Wild horses tend not to be a problem in agricultural production, so they are certainly not a priority for our organisation. However, that is not to say that damage caused by horses is not an issue for other areas of land tenure.

CHAIR: To sum up, what is the best way to go forward from this point and improve feral animal control in New South Wales?

Ms KNOWLES: In the last few months New South Wales has taken a step in most areas towards integrated planning to control some feral animals, particularly wild dogs. I think that approach needs to be extended across other feral animals species, and regional planning should commence. In line with the regional planning concept and the concept of planning across a landscape as opposed to within tenure boundaries, there needs to be a realignment of existing government funding and additional government funding to implement those programs.

Three- and four-year programs have been drawn up in a couple of areas but government agencies have been able to commit to only 12 months funding. From the perspective of our organisation, there needs to be longer term thinking by government about integrated control programs and their funding. We feel that the Pest Animal Council could implement that sort of funding. It must be noted that the pest animal fund that we propose needs funds over and above those that are already out there.

CHAIR: Would that funding go to the Pest Animal Council?

Ms KNOWLES: Yes, we would certainly like to see the Pest Animal Council divide up government funding in relation to the integrated plans that are being developed.

The Hon. JOHN JOBLING: In your submission you refer to control methods, particularly aerial baiting, and you say that aerial baiting is being undertaken on Crown lands on the perimeter of forests and parks. You then comment that perimeter baiting requires heavier use of baiting. Is there any particular reason why baiting occurs only on the perimeter?

Ms KNOWLES: That statement stems from the fact that the National Parks and Wildlife Service and State Forests are implementing the concept of developing a buffer zone between private land and agency-managed land. The problem is that more baits are being laid. If you bait a perimeter as opposed to a dog conduit or dog highway through a State forest, for example, you will use more baits and potentially open it up to more non-target species. Our members concede that there are more effective paths to bait. Many people who are dealing with these issues have dealt with them for a number of years: they know where wild dogs travel and they know that baiting along a particular ridge line or creek is more effective.

The Hon. JOHN JOBLING: You make that point—validly, I suspect—when you say that these areas are not necessarily the places where dogs travel or feed and, as such, are only partially affected.

Ms KNOWLES: Perimeter baiting tends to be only within a few kilometres of the park boundary. For example, a few weeks ago a wild dog was trapped in the Snowy Plains region of Kosciusko National Park. It had travelled about 60 kilometres. So the perimeter baiting that is continuing at the moment is certainly not sufficient to cover the sorts of distances that wild dogs travel.

The Hon. JOHN JOBLING: Are you prepared to offer a view as to whether cost would be the major reason for perimeter baiting only or is there some other reason—other than the buffer zone?

Ms KNOWLES: According to our members, agencies are becoming more reluctant to undertake aerial baiting campaigns for issues other than just cost. Aerial baiting is shown to be the most cost-effective method of controlling dogs, but there are issues regarding perceptions about non-target species—perhaps that is the best way to put it.

The Hon. JOHN JOBLING: Has your association made any specific submissions relating to the need for aerial baiting other than on perimeter boundaries in national parks and forests?

Ms KNOWLES: Our organisation's position is that aerial baiting needs to occur in areas where it will be most effective. That comes down to a regional planning process: people who know their regions extraordinarily well and who have worked with pest animals in their regions for an extraordinarily long time know the most effective places to bait. In some cases that might be along perimeters but more often than not people identify areas along ridge lines and creeks—places where dogs travel—as being more effective. That is the position of our organisation regarding cost-effective, integrated planning designed to achieve an outcome. That is something local people should be responsible for at a local level.

(The witness withdrew)

(Luncheon adjournment)

BRIAN JOHN GILLIGAN, Director-General, National Parks and Wildlife Service, 43 Bridge Street, Hurstville, and

ANDREW ROSS LEYS, Pest Management Co-ordinator, National Parks and Wildlife Service, 43 Bridge Street, Hurstville, affirmed and examined:

ROBERT JAMES CONROY, Director, Central Directorate, 10 Valentine Avenue, Parramatta, and

TERRENCE JOHN KORN, Director, Western Directorate, 48 Wingewarra Street, Dubbo, sworn and examined:

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr GILLIGAN: Yes, I am.

Dr LEYS: Yes.

Mr CONROY: Yes, I am.

Mr KORN: Yes.

CHAIR: If you should consider at any stage that certain evidence or documents should be heard or seen only by the Committee, the Committee will be willing to accede to your request, but this may be overturned by a vote of the House.

Do you wish to make a presentation or an opening statement?

Mr GILLIGAN: Yes, thank you. I would like to run through a presentation which highlights key aspects of the submission that the Service has made to this inquiry, and then respond to your questions. First of all, can I run through a little by way of background. Feral animals and their control are a major priority for the National Parks and Wildlife Service because they represent a major threat to biodiversity and agriculture, and control programs are one of a shortlist of major management priorities for the Service. Feral animals are recognised as key threatening processes under the Threatened Species Conservation Act, and the threat abatement plan for foxes, for example, has been released just last week.

Currently, service funding for pests totals some \$15.7 million this financial year, covering both weeds and feral animals. In terms of the conservation areas for which the Service is responsible, we manage 5.4 million hectares in 611 reserves throughout the State. We have statutory responsibility to manage the reserves to conserve wildlife, and feral animal control programs are an essential part of protecting wildlife. These areas are wildlife conservation areas, and this places constraints on the management options available to us under some circumstances. The Environment Planning and Assessment Act requires an appropriate level of environmental impact assessment on the options that we might use in sensitive circumstances and environment.

Our management approach is based on the assumption that complete eradication is rarely possible, but our goal is to manage feral animal populations so as to reduce adverse impacts. We seek to apply best practice humane and cost-effective methods. We seek to strike a balance between the desire to use the most effective control techniques with the requirement to minimise the non-target effects and minimise any animal suffering. The integrated approach that we use involves a range of techniques to give the most long-term reduction in feral animal impacts. More than 70 per cent of the programs we undertake are collaborative programs with neighbours, with rural lands protection boards and other land managers. The service has experienced specialist staff in each of our regions throughout the State with specific responsibility for pest management.

Each region has a region-wide pest strategy which identifies reserves and the wildlife to be conserved within them, and the objectives, priorities and outlines of the overall management program and performance measures. The objectives of our programs are perhaps worth a focus for a moment. Primarily our goal is to conserve biodiversity and cultural heritage but, to achieve that, we recognise the importance of increasing community understanding of the impacts of feral animals, minimising the spread of pests out of and on to reserves. We must satisfy our legislative responsibilities. We are committed to supporting co-operative approaches with other stakeholders and we are committed to fostering community involvement and support for programs as they occur throughout the State.

Feral animals such as foxes and feral cats have been implicated in the extinction or decline of many species in the past 200 years. The involvement of feral animals in the extinction of native animals is reviewed in some detail in threat abatement plans such as the fox abatement plan that I have already mentioned. Impacts on Aboriginal and cultural heritage come from activities such as overgrazing by rabbits, and that has exacerbated soil erosion in places like Mungo National Park, where there are Aboriginal burial sites, for example. So, there is a significant link not only with nature conservation and biodiversity but also with our obligations to protect cultural heritage.

To increase community understanding of the impacts of feral animals it is important that we explain the impacts caused by and the need for the control of feral animals and that this is a major issue in their control. It is especially important in the Service's estate, particularly with animals such as horse and deer, to give the community a better understanding why we need to take the action we do. Public education and awareness was identified as a high priority in future directions for the pest animal programs in the New South Wales biodiversity strategy, and the Service is the lead agency in the implementation of that strategy. There are also some very good examples of community involvement in pest management. I guess some of them include things like the deer management plan for the Royal National Park and the plan being developed to manage horses in the alpine regions of Kosciuszko National Park, bearing in mind that not all of the pests we are dealing with are mammals. The cane toad awareness and education program that the Service conducted was another important one in engendering an appreciation across the community of the significance of the impact of pest animals. Many examples are detailed in pages 63 to 65 of the Service's submission to this inquiry.

We also have an objective of minimising the migration of pests. Some of the more mobile pests that cause us most anxiety are wild dogs and feral pigs. The fox threat abatement plan also identifies migration as the most important factor in limiting the effectiveness of fox control and highlighting the importance of it being a collaborative venture with other adjoining land-holders. We also must satisfy our legislative responsibilities. They include the National Parks and Wildlife Act, the Threatened Species Conservation Act, the Rural Lands Protection Act, the Prevention of Cruelty to Animals Act and the Noxious Weeds Act.

Just collaborating a little on our co-operative approach, wherever possible we support co-operative approaches to pest control. We are represented on the New South Wales Pest Animal Council. We are a member of all the regional pest animal committees, and many examples are given in the Service's submission to the inquiry detailing the collaborative and co-operative approaches we take. We also spend a lot of time and effort in media interviews to promote control programs in field days to explain the work programs, in providing community information and generating community support through the Service web site and also through our discovery ranger program. Feral perils was the feature of the discovery ranger program through 2001.

In the prioritisation of our programs and the allocation of our resources, I have already mentioned that eradication of feral animals is rarely if ever possible over large areas but that we must focus on managing populations to minimise their adverse impact. We seek to direct resources to areas where the benefits will be greatest. Probably the best example of that is the identification of priority areas for control, which is the cornerstone of the fox threat abatement plan and also of the wild dog management plans that are being developed.

I think it is worth registering that the resources of the Service available for land management activities have increased significantly in recent years and have increased along with the increase in the area of land that we are responsible for managing, which has gone up pretty dramatically, as illustrated there. I draw your attention to the figures at the bottom which are expressed in dollars per hectare of land, so taking account of the large increase in the area. There has still been a significant increase from about \$15.80 in 1994 through to \$33.50 per hectare at the moment. The total pest budget for the Service is \$15.7 million, as I have indicated already, covering weed and feral animal programs. That is made up of \$9.2 million in salaries, just under \$1 million in capital acquisitions of equipment and storage of chemicals, and all those works that need to be done. The operating budget for specific on-ground control programs amounts to \$5.3 million—\$2.43 million for feral animals in 2001-02, which is a 55 per cent increase on the year before. In terms of the targeting of that allocation of resources, obviously foxes, along with wild dogs and feral pigs, have been a significant target in this financial year.

In terms of staff involved in pest management, the Service has the equivalent of 164 staff involved in weed and feral animal control throughout the State. We have regional pest management officers, supported by the pest management co-ordination section, which Andrew heads up, and a vertebrate pest research group of scientists. A number of our pest management officers are former employees of rural lands protection boards. Most of them have gone through the New South Wales Agriculture's vertebrate pest management course. As I mentioned earlier, 70 per cent of the Service's feral animal control programs are undertaken in co-operation with other parties. Many

examples are described throughout the Service submission and are summarised on pages 18 and 19. The service is represented on the New South Wales Pest Animal Council and the regional feral animal committees. We work in collaboration with the rural lands protection boards, wild dog control associations, New South Wales Agriculture, State Forests of New South Wales, CSIRO and universities. In fact, a full list of co-operating parties is given on page 14 of our submission.

The service's submission outlines major programs for the control of foxes, wild dogs, rabbits, feral pigs, feral goats, feral cats, feral deer, feral horses and cane toads. More detail of the individual programs is given in attachment 2, which outlines the Service's pest animal management programs for 2001, a copy of which is available on the Service web site. The 55 per cent increase in the budget for feral animal control in 2001-02 allows for the implementation of the fox threat abatement plan and the wild dog management plans, to which we are committed. The threat abatement plan has been approved and has been revised to incorporate comments received following public exhibition of the draft document. The plan identifies a strategic approach across all land tenures. It targets the threatened species most at risk, identifies 34 of them and identifies also the localities where the benefits for those 34 threatened species will be greatest. There are 81 localities mentioned. It is very easy, obviously, to throw money at a problem such as this across the State and not be very effective.

We are specifically targeting the threatened species that are most at risk and the locations where we believe the benefits will be greatest. Best practice guidelines and methods to improve the effectiveness of fox control are outlined in the plan. A key part of it is to monitor in order to measure the response of the threatened species to fox control, because there are some complex interactions at population levels in some parts of the State. Focusing on a specific area for a moment—the Sydney north area—feral animal control in urban areas is more difficult often than in rural areas. The service has worked very closely with local councils—I think 11 local councils—as well as Taronga Park Zoo and the communities of northern Sydney in order to address the fox issue. We have undertaken an innovative program in collaboration with all of those other parties in Sydney suburbs in order to protect the habitat of the threatened southern brown bandicoot. We have done this by regional fox baiting within the key bushland reserves where the brown bandicoot is vulnerable. The program has very wide community support, and its effectiveness is monitored by regular fauna surveys.

Moving to dingoes and wild dogs for a moment, it is a very contentious and very difficult pest issue, as we are all aware, and there is a need to balance preventing stock losses in areas where dogs are attacking livestock with conserving dingoes in core areas of some parts. An approach to balance these objectives has been incorporated into the pest control order for wild dogs under the Rural Lands Protection Act. Wild dog plans with control and conservation objectives are being developed for 113 National Parks and Wildlife Service reserves. The service is undertaking the most intensive wild dog control program it has ever undertaken in New South Wales in the Kosciuszko National Park area. Continuous trapping and baiting programs in that area cover approximately 70,000 hectares of land. In some cases our work extends 25 kilometres inside the park. Large numbers of wild dogs have been poisoned and trapped. To further improve the effectiveness of the control program, a review panel has been established. The panel includes the New South Wales Farmers Association, New South Wales Agriculture, landholders, Cooma, Bombala and Yass rural lands protection boards and the National Parks and Wildlife Service. A number of new management and research actions will shortly begin. The service will be investing over \$700,000 on wild dog management in Kosciuszko National Park alone.

I would like to stress that we have a control program in place for Sturt National Park. The Wild Dog Destruction Act does not bind the Crown, but the Service has an ongoing control program involving approximately 340 kilometres of bait lines in a five to eight kilometre buffer zone along the southern and eastern boundaries of the park. Trapping and shooting are also employed, as well as baiting. Watering points have been closed down in an attempt to control the movements and distribution of the dogs. The program includes a standing offer to adjoining landholders that we will respond within 36 hours of any report of a dingo or dingoes attacking livestock. It is of significance, I believe, that only one report has been received in the last two or three years, which resulted in us delivering on a quick response and destroying two dingoes within the agreed timeframe.

The offer has been available for three years. The absence of other requests is evidence of the success of the program, we believe, although we occasionally still hear from more distant landholders who are attributing some of their problems to Sturt National Park. The dingo population in Sturt National Park is considered to have conservation significance. It is a small population of dingoes. It is the only conservation area in arid or semi-arid areas of western New South Wales that has a population of dingoes as the top order predator. Hence the inclusion of Sturt National Park in schedule 2 of the pest control order for wild dogs, which requires a management plan with both conservation and agricultural objectives. The presence of dingoes in Sturt National Park we believe significantly adds to its tourism potential.

Recently feral pig numbers have increased significantly in response to several good seasons. The service has many programs in place, which are outlined on pages 39 to 40 of the Service submission. For example, there are programs near Planchonella Hill nature reserve, which is featured in a video we provided with our submission. I would encourage you to look at that video. The absence of sustained regional control is the greatest obstacle to effective management of feral pigs because of the capacity for movement. In the southern Blue Mountains area helicopters and horses are used to implement a feral pig baiting program in very remote areas of the Blue Mountains and Kanangra-Boyd national parks. Last year more than 300 pigs were destroyed. Recent surveys indicate that pig numbers and the damage they cause have been significantly reduced. A feral pig management strategy for the southern Blue Mountains area has been prepared. It has been developed in conjunction with the Sydney Catchment Authority, rural lands protection boards and the Service. The plan covers 300,000 hectares and is considered essential for the long-term protection of water quality at Lake Burragarang, which is, of course, a major water supply for Sydney.

On the subject of feral horses, it is a very difficult issue because of the limited options available for control and the very strong attachment of the public to horses. The aerial culling operation in Guy Fawkes River National Park in October 2000 received a great deal of adverse media coverage. Aerial culling of feral horses has been banned in all park service reserves and new approaches are now being developed. Moving briefly to feral deer, numbers have increased substantially in recent years. It is a very emotive issue with strong views both for and against reducing the numbers. Independent research in Royal National Park has clearly documented significant biodiversity impacts, including removal of up to 70 per cent of the understorey of some of the rainforest areas. The social impacts on the community are also significant and growing, whether they are in terms of private property damage or car accidents. A Royal National Park deer working group was established in July 2000 to assist with the development of a plan, which was fully supported by the RSPCA and the New South Wales Animal Welfare League. Various public meetings were held to identify concerns that the local community might have with it. The plan was submitted to me in January and in February, after a period of consultation, the plan was adopted and is now being implemented.

Feral cats can have a significant impact on biodiversity. There are very few effective control options. A threat abatement plan for feral cats is in preparation under the provision of the Threatened Species Conservation Act. The key objectives of the threat abatement plan will be to identify the species most at risk, to identify the critical populations of these species that might be targeted for protection, to field test some cat specific toxin and baiting systems, which are currently under development, particularly with work going on in Victoria at the moment, to increase community understanding of the impacts and the need for control of feral cats and also, dare I say, for responsible pet ownership. The impacts of cane toads are summarised on page 29 of the Service submission. There are three main groups of native animals that are affected by cane toads.

First of all, there are predators, such as monitors or goannas and snakes and quolls that actually eat the toads and get into strife as a result of their poison glands. There are the prey species which get eaten by the cane toads, because they are pretty hungry so-and-sos. That includes threatened species of invertebrates, small reptiles and small mammals. Then there are the native frogs where there is more obvious competition for resources and habitats. The service ran a very successful cane toad awareness and education program in early 2000. The aims were to increase community awareness, to increase community involvement in reporting new infestations and to increase participation in control. We have actually had, believe it or not, what are called cane toad musters in some problem areas. We can invite you along to the next one if you happen to be in the Port Macquarie area.

The Hon. JANELLE SAFFIN: Is there anyone who wants to save the cane toads?

Mr GILLIGAN: I have not heard of anyone in recent times.

The Hon. JANELLE SAFFIN: It is not an emotive issue?

Mr GILLIGAN: No. Moving to fire ants, it is worth registering that whilst they have come to our full consciousness only in recent times, fire ants represent a threat to the environment, a threat to agriculture and tourism and, indeed, a threat to human health. The potential for them to spread throughout much of New South Wales is indeed worrying. There are a large number of nests that have been detected in south-east Queensland in early 2001. There is now a national consultative committee for exotic pests and diseases which is co-ordinating a national response to the fire ant infestations in south-east Queensland.

New South Wales Agriculture is the lead agency in New South Wales and has a hotline to receive information and provide advice to the public. There has been extensive monitoring which indicates that so far there

are no infestations in New South Wales. But the Service is working closely with New South Wales Agriculture and the Queensland Department of Primary Industry to identify and monitor high-risk areas because we see the Service on the front line in this particular battle. Key service staff have been trained in identification and reporting procedures, and both the New South Wales Agriculture and National Parks and Wildlife Service web sites have information on fire ants.

In summary, feral animal control is a high priority for the National Parks and Wildlife Service. There has been a 55 per cent increase in the feral animal budget in this financial year, which includes a 77 per cent increase in the budget for wild dog control. We have specialist staff who are tasked to anchor the core elements of that work. We undertake a strategic and integrated approach. We are committed to a regional approach and a collaborative approach, and we stress the need for continual public relations and public communications to increase community understanding and support for programs.

Without wanting to be self-indulgent on behalf of the Service, I think it is true to say that the fox threat abatement plan is an excellent example of the sort of collaborative, strategic approach to feral animal control that we aspire to. All of the actions that are documented in the fox threat abatement plan are fully funded and involve the expenditure of an additional amount in excess of half a million dollars this year. The service will adopt the process used to develop the Royal National Park deer management plan for other contentious feral animal programs. That highlights our commitment to consultation, research, and the involvement of animal welfare groups, to ensure that control is humane and that all animal welfare issues are thoroughly addressed in a thorough planning process before programs proceed to implementation.

CHAIR: There is widespread criticism that the National Parks and Wildlife Service does not have enough resources to adequately manage feral animals on its land, and as a consequence neighbours are suffering. How would you answer that criticism?

Mr GILLIGAN: I would answer it by highlighting the increases in resources allocated to the Service in recent years for management. I would also stress that, whilst we would always like to have more resources, what we are demonstrating, especially through programs such as the fox threat abatement plan, is that it is not the total quantum of dollars that is significant in so many of these areas, but it is the strategic targeting of the work that is undertaken, and also making sure that the work is collaborative, given that so many of the most troublesome species are so mobile. If you are slaving away and doing a great job but your neighbour is not doing such a great job, obviously things are not going to be effective. So, I think being strategic and being collaborative are the two key answers, and within that context I believe that the resources we have enable us to achieve a great deal.

CHAIR: How long will it take for the extra funding to translate into results on the ground? Is it expected that this increase will continue, or is much of it tied to one-off programs?

Mr GILLIGAN: The service is increasingly, internally within its budget allocations, seeking to focus on strategic allocations. With 5.4 million hectares of land to be managed, it would be very easy to spread the resources very simply and have them not effective anywhere. So what we have sought to do is to identify those areas where we can be most effective. However, I think it is worth remembering that the National Parks and Wildlife Service did not invent these feral animals, the weed problems and the other things that go with them. What we have inherited in so many of the areas that have come across to the Service for management is the accumulated history of 200 years of pest and weed problems that have accumulated in New South Wales as a result of human activity.

CHAIR: Is the feral animal problem worse in the lands that come from State Forests or the Department of Land and Water Conservation?

Mr GILLIGAN: I think it is true to say that no other agency has as clear a focus on the core responsibility of biodiversity protection than we have, and therefore we allocate more resources to that particular problem than do other agencies. But the point I would want to make is that if we are dealing with problems that have taken 200 years to develop, we are not going to solve them overnight. So we do have to expect that we are at times talking about decade-long campaigns to achieve significant gains.

CHAIR: New South Wales Farmers is saying that the feral animal populations are controlled better in State Forests and Department of Land and Water Conservation land than they are in National Parks land, and that we should not add any more land to the national parks estate because your control methods are worse. Do you agree with that?

Mr GILLIGAN: The short answer is no, I do not agree with it. If you look at the quantum of resource and the effort that we put into feral animal control, I think you will see that it is significant and it is strategic. But also, it highlights that what we have to do is make sure that whatever work we are doing is done collaboratively, and hence our focus on collaborative programs. It is not then so much a case of which agency is putting in which quantum, but that the collaborative effort is going to achieve some significant results. That is where something like the fox threat abatement plan is a co-ordinated approach.

CHAIR: Do you think the Pest Animal Council could be legislated in controlling feral animals? There are some proposals that it should be a statutory body that centralises the management programs for feral animal control.

Mr GILLIGAN: It is not something to which I have given detailed consideration and would be prepared to comment upon in any detail, other than to focus on the fact that the solutions to feral animal control in New South Wales lie at a regional level and the real challenge is to get the effective collaboration and co-ordination of resourcing at the regional level. I think the mechanisms are in place for that to happen. I think we continue to work to improve them, to refine them, and to enhance our involvement and collaboration there, but I think that is where the solutions are going to be found.

Dr LEYS: The Pest Animal Council is made up of representatives from a number of organisations, and it can play a crucial role in co-ordinating the actions across the State. But it is the responsibility of the individual agencies to develop the strategic approaches within their lands, doing it in a collaborative way. If we come back to who is going to organise feral animal control in New South Wales, obviously New South Wales Agriculture is the lead agency and plays a crucial role, and so does the Pest Animal Council because it brings all those groups together. It brings all the public land managers together, it brings the animal welfare people together, it brings the rural lands protection boards and New South Wales Farmers together. They then all go back to their own organisations to do their work, but it does play a crucial role in co-ordinating them.

CHAIR: Can the structure of the Pest Animal Council be improved, do you think?

Dr LEYS: I am not certain that there would be a need for any additional players on the Pest Animal Council. I think that was what New South Wales Agriculture indicated this morning. But I guess it could certainly always improve its output.

CHAIR: How do you think we could better integrate pest management programs in New South Wales across all land tenures?

Mr GILLIGAN: I think, fundamentally, it is through a cascading of that co-ordination that we have been talking about. As Andrew has outlined, there are some key areas of consistency across the State, and co-ordination in policy, practical measures and sharing of expertise, that need to happen centrally. But, fundamentally, it needs to happen at a regional level, getting all the relevant players together. At the moment I think we are still working to make those regional arrangements work optimally. I think we have made some significant progress in recent times, I think there is still a little way to go, and I would tend to put the effort into trying to make those things work more effectively.

Mr KORN: I could add to that. The co-ordination aspect is critical, but I think the training of the staff in better pest management and the co-ordination role is critical. That is led by New South Wales Agriculture, with the vertebrate pest management course that they conduct. A big advantage of that course is that it includes participants from all the agencies, rural lands protection boards, State Forests, the National Parks and Wildlife Service, and the Department of Land and Water Conservation, and that provides a substantial network for these people to operate in a co-ordinated fashion. They should take that back and spread that network out in a co-operative sense on a regional basis. That establishes a good format for co-operative programs throughout the State.

Dr LEYS: May I add to that. The fox threat abatement plan is a co-ordinated plan across all land tenures in New South Wales for the protection of threatened species. There was widespread consultation in the development of that plan. I think that is one example where all of the organisations involved have consulted widely. This morning New South Wales Agriculture mentioned the development of the wild dog management plans. As Brian said, that requires the interaction between all the players at the local level and it needs to be signed off at that local level. So there are now some attempts to develop those local regional plans.

CHAIR: How does funding of weed control work?

Dr LEYS: Does the question relate to national parks or across the State?

CHAIR: The proposal has been put forward by the New South Wales Farmers Association.

Mr GILLIGAN: Andrew may be able to comment in some detail. There may well be some lessons that we can learn from the mechanisms that have been devised for weeds. It is a question that I would want to take on notice, but Andrew may be able to respond.

Dr LEYS: It was mentioned this morning. There is a fund that is distributed through the Noxious Weeds Advisory Committee, which is a parallel committee for weeds but, as was pointed out this morning, it is a statutory committee, whereas the Pest Animal Council is an ad hoc committee and it distributes government funds. But it only distributes funds to councils, which then at least match it; it does not distribute funds to government agencies. The government agencies themselves, except for a small amount of funding that goes to the Department of Land and Water Conservation, fund weed control through their own budgets. It funds regional co-ordination, and it does allow for things such as inspections and control on council-owned lands.

The Hon. MALCOLM JONES: The Committee received evidence this morning that an amount of \$16 per hectare is paid to external bodies such as rural lands protection boards as your contribution towards their work. Is that correct?

Mr GILLIGAN: That figure does not make any particular sense to me, but given that I was not here this morning perhaps Dr Leys might be able to clarify the matter that was raised this morning.

Dr LEYS: It was very unclear to me this morning what the statement was about. If the statement was about the fact that there had been an analysis of our budget and that we spend something like \$16 per hectare—which I sort of guessed at what they were trying to deliver this morning—that is obviously not the case, as you saw from the graph that was put up earlier. So, if that is what was being said this morning, the \$16 is incorrect.

The Hon. MALCOLM JONES: That is what is paid from National Parks to other agencies.

Dr LEYS: No, there is no such thing. It is incorrect.

The Hon. MALCOLM JONES: How much is paid to outside agencies in quantum if you are supporting rural lands protection—

Dr LEYS: Just in terms of regional fees?

The Hon. MALCOLM JONES: Right.

Mr GILLIGAN: Terry is the regional director. He can answer that.

Mr KORN: The only part of the State where the National Parks and Wildlife Service has a legal obligation to pay rural lands protection board fees is in the western division, and we pay whatever the rates are out there for the properties that we own. For instance, in the Milparinka Rural Lands Protection Board area we have Sturt National Park, which is over 300,000 hectares, and we pay somewhere between \$8,000 and \$9,000 annually as rural lands protection board rates. In addition, we are not required under the Act to pay any Wild Dog Destruction Board rates.

The Hon. MALCOLM JONES: Forget the legal obligations. We received evidence in the southern part of the region from various rural lands protection boards and—correct me if I am wrong—we understood or were given to understand that the National Parks and Wildlife Service helped to support them financially.

Mr GILLIGAN: Certainly, yes. Let me try to explain. As I mentioned when I was talking about resources, we have 164 staff who are working on feral animal control. Sometimes those staff are actually doing the work. Sometimes they are running a program which uses local contractors. Sometimes we contract a local rural lands protection board or an individual contractor, dog trapper or whatever in order to deliver the program. So it will happen at times, but across the State I could not give you a figure on it because it will be variable region to region and season to season depending on the particular program.

The Hon. MALCOLM JONES: Recently legislation went through the Parliament which gave you jurisdiction over lands which had been Sydney Water Catchment Authority lands. An amount of money was allocated for those lands which one would assume would cover feral animal and noxious weed and other services. Do you know the rate per hectare that that is?

Mr GILLIGAN: I think that Bob Conroy as the director, central could give you a more detailed response.

Mr CONROY: The total allocation by both agencies for the special areas is \$5.4 million. That translates into about \$17 per hectare, remembering that most of the lands within the special areas are wilderness areas, so not a lot of visitor management is required.

The Hon. MALCOLM JONES: Not a lot of management, I would say.

Mr CONROY: No, there are quite a number of programs under way using that \$5.4 million. Both agencies co-operate on joint pest management programs within the special areas. Recently the authority has provided funding of \$135,000 for remote feral pig programs. So, combined with the Service's in-kind contribution, it is about \$200,000 for remote feral pig control. Does that answer the question?

The Hon. MALCOLM JONES: Yes. You get about \$17 per hectare in the special areas.

Mr CONROY: In total, yes.

The Hon. MALCOLM JONES: You are spending \$15.7 million on feral animal control—

Mr GILLIGAN: And weed control.

The Hon. MALCOLM JONES:—and that includes staff. You have \$5.6 million hectares under your control. That averages out to about \$3 per hectare.

Mr GILLIGAN: Which highlights a point that I was making earlier, that if you simply spread the dollars out across the entire State you will not be effective. But if you target that expenditure in those areas where it can have the greatest benefit we believe you can achieve a great deal.

The Hon. MALCOLM JONES: On this expenditure of \$15 million on a total income of \$260 million—

Mr GILLIGAN: Yes, including capital.

The Hon. MALCOLM JONES: It works out at about 6 per cent.

Mr GILLIGAN: I have the figure. The \$15.7 million is in fact 8.7 per cent of the Service's recurrent budget, which is \$181 million. It is 6.9 per cent of the total service budget including the capital.

The Hon. MALCOLM JONES: You say that it is a major priority but would a major priority consume 6.9 per cent of the budget?

Mr GILLIGAN: Yes, it is. No one of our priorities—and others include fire management, threatened species management, cultural heritage management, infrastructure and maintenance—can be treated in isolation. I mentioned earlier the work that goes on in terms of cultural heritage protection, and it is obviously related to controlling rabbits in sensitive locations. Similarly, our other major program of threatened species work is linked to what we do in fire and pest management programs. So it is a case of making sure that all these things are co-ordinated into an effective overall allocation for the management of the Service estate.

CHAIR: The Department Land and Water Conservation has 4 million hectares under its control and is spending about \$300,000, which is about 7.5¢ a hectare. Do you think that kind of expenditure would be effective?

Mr GILLIGAN: It is not something that I would wish to comment on. I have not considered the circumstances of the Department Land and Water Conservation in recent times, nor its priorities. But we do work closely with them where the land for which we are responsible adjoins land that they are responsible for in State Forests.

The Hon. MALCOLM JONES: We have received substantial evidence in support of 1080 and in support of aerial baiting. There has been anecdotal evidence to say that aerial baiting does not necessarily have an adverse effect on the quoll populations and that aerial baiting has been withdrawn by your service as a tool. Will you consider its re-implementation and will you continued to support 1080?

Mr GILLIGAN: Starting with the 1080 issue, 1080 is central to the successful implementation of the fox threat abatement plan. Without 1080 we would have significant difficulty in effectively controlling foxes in the key locations that we are talking about in New South Wales. So we have a significant level of concern about any moves to remove 1080 from its use in that regard. In terms of aerial baiting, I think it is worth registering that aerial baiting for the control of wild dogs is used to a limited degree in parks service reserves. The limited use of this technique is because of the risk of poisoning other native animals, especially quolls. This issue is discussed in detail on pages 34 and 35 of the Service submission. In all cases, aerial baiting can be undertaken on national parks and reserves only after an environmental impact assessment has been completed. It is important to make the point that as the lead conservation agency in New South Wales for the protection of biodiversity the Service has a duty to ensure that its activities comply with the law and are environmentally sound. All our pest control activities that are proposed on land that we are responsible for managing requires an appropriate level of assessment of the environmental impacts, and we are committed to doing that. The level of assessment undertaken relates to the probable degree of impact and can range from an initial analysis to a review of environmental factors or to an environmental impact statement. To ensure the assessment of environmental impacts of aerial baiting for wild dogs complies with the requirements of part 5 of the EP and A Act the Service has decided that a full EIS is the level of assessment that is required. In association with the collaborative work that we are doing in the Snowy Mountains region of the State with the other agencies, we are looking at further research on that score and we are further developing those collaborative programs which involve significant amounts of research so that we can continually review the best available advice.

The Hon. MALCOLM JONES: You made the point that you have to comply with a whole number of Acts and environmental impact statements. If that compliance is creating roadblocks to effective control, particularly of wild dogs that are impacting on farms to the extent that they become unmanageable and cause great financial and personal suffering, this would be an opportunity for the Service to advise this Committee so that we can on report to Parliament that there are real problems that should be addressed such as I reducing the degree of compliance which you may have to put up with.

Mr GILLIGAN: That is not our view. We are of the view that the processes that are available to us and are in train can deal with this issue, and deal with it effectively.

The Hon. MALCOLM JONES: But it is not.

Mr GILLIGAN: A lot of debate is still going on and a lot of collaborative work is still going on. In part there has been a focus on aerial baiting—we could have a long debate about this—but what we have to remember is that ultimately it amounts to how many baits you get into an effective location on the ground to achieve dog control. In those areas where we are not undertaking aerial baiting, for sound reasons based on the environmental impact advice we have, we are conducting intensified programs of mound baiting and other control techniques. So we can still get the baits on the ground in the areas where it matters but to the extent to which those programs may be enhanced by a review of the aerial baiting issue we have a collaborative piece of work going on down in the Snowy area at the moment to look at just that. We will look at it. We do not have a closed view on it. But I think it is important that we do not overstate the level of constraint that it represents.

The Hon. MALCOLM JONES: At the moment the only area which is receiving aerial baiting is the Kosciuszko region, is that correct?

Mr GILLIGAN: No, it is not.

The Hon. MALCOLM JONES: Where else?

Mr GILLIGAN: New England and—

Dr LEYS: I think there are five reserves in northern New South Wales in which we undertake aerial baiting. A review of 1080 is being undertaken by the National Registration Authority and I think it would be prudent for us as the lead conservation agency in New South Wales to make certain that if we are going to aerial bait in our reserves—because it is important in some areas and is part of an integrated program off park—that we undertake an appropriate level of environmental impact assessment, because if we do not that will give more and more

ammunition to those who want 1080 banned. We have to use it carefully. We are looking at the environmental impacts and where it is crucial for it to be used, where the environmental impact assessment says that it can be used without risks then it can be considered.

The Hon. MALCOLM JONES: On behalf of all farmers that are suffering massive stock losses may I suggest to you that a little less prudence might be very much to their advantage?

Mr GILLIGAN: In response to that I would simply say that I believe that we have established a sound working relationship with the key farmers in recent times and that relationship is improving. I believe it will be an effective relationship in terms of grappling with this difficult problem. If you go to the individual land-holders who have been sitting down with us and grappling with this problem over the last little while, they acknowledge that we have been strongly committed to it and that we have been working damned hard to address the problem with them. It is a difficult problem and it will not be easily solved. But I believe there is a fundamental recognition that there is a shared commitment to address a difficult problem.

The Hon. RICK COLLESS: I would like to follow the same line of questioning. Over the last week I have had several phone calls from people with properties adjoining or located close to the Kosciuszko National Park area telling me that the dog attacks they are suffering at the moment are as severe as they have ever had. I had one lady ring me and tell me that she can use only 150 hectares out of the 2000 hectares on their farm. They are required to shepherd their sheep constantly, put them in the wool shed at night, basically lock them up to keep them away from the dogs that are coming in out of the park. If you are expending \$33.50 per hectare on feral animal control, and you made the statement that you have the most extensive wild dog control program ever, how can you explain the extent and severity of the wild dog attacks that happened last night and will happen again tonight and tomorrow night? Why is that happening? If you are spending more money than you have ever spent on the most extensive wild dog control program ever, why are these attacks increasing in severity and extent?

Mr GILLIGAN: I do not have an easy answer to the question, but I believe we have in place a mechanism for ensuring that the detail of the impacts that are occurring is collated regionally and that a co-ordinated response is taken to it. Can I also just correct one thing? The \$33.50 per hectare is in fact total management, not just feral pest management. So it is total management across the reserve. There is not an easy answer, and I do not have a short answer to your question. What I can say to you is that we have put in place, with all the other players down there, a supportive network in an attempt to identify those problem areas and immediately target them for a response. If you want to talk about \$3 per hectare or \$16 per hectare or \$33.50 per hectare, there are some areas where we have identified a problem where we are spending hundreds of dollars per hectare and we are going in there precisely to identify and address the problems that those land-holders are suffering and that is what we will continue to do.

That does not mean we are charging around haphazardly; we are doing it in a co-ordinated way and we are following the trails of movements of dogs so that at times we are tracking dog movements and baiting along movements trails 25 kilometres into a park in order to address precisely the problem you are talking about. We are very concerned about it. We have a great deal of sympathy and empathy for the people who are suffering the losses, and we are working damn hard with them and with the other agencies to try to address the problem.

The Hon. RICK COLLESS: In a report in the *Sun-Herald*—and I think this goes back to January—your southern region director, Tony Fleming, was quoted as saying that, "the dogs were a huge problem and they were looking at resuming aerial baiting in national parks. The irony is that baiting may actually increase the spread of wild dogs." Do you believe that the graziers who collectively on the southern tablelands lost 3,300 sheep last year will believe statements such as that?

Mr GILLIGAN: I do not believe everything I read in the newspaper.

The Hon. RICK COLLESS: I do not either. But if it is wrong, the record needs to be corrected.

Mr GILLIGAN: I am having trouble thinking how that particular twist might have been put on Tony's comments. Perhaps Terry or Andrew, who have been working closely with Tony on this particular problem, might be able to clarify it.

Mr KORN: The statement would have been taken, I am not sure what context was put into the press, but dingoes have a hierarchical system, a well-developed breeding system. I am not sure whether that is documented in our submission but they have an alpha male, an alpha female and it is a well-structured system. If you break that system up, then there is indiscriminate breeding until they establish themselves again in an order. While all that is

going on there social havoc is at play and therefore there is no control within the social system of the dingo set up and therefore predation is more likely to occur or it is probable that you will get more predation when that has happened.

Mr GILLIGAN: Because you have an unstable situation. I just make the point that the other thing that I think is another difficulty with all of this is that I think the people we have been working with locally down in the Byadbo area, for example, had acknowledged that the evidence is there that we have killed hundreds and hundreds of dogs but at the end of it all you have still got a problem. We cannot deny you still have a problem but what the people are acknowledging is that if you have got half a dozen dogs that are, as they call them, super dogs or however they want to describe them, you can in fact wipe out one hell of a lot of dogs and have a really effective, one would hope, program if you count effectiveness in terms of number of dogs taken out but your program may still not address those core areas of dramatic stock losses if you have three or four or half a dozen problem dogs and they are the smarter ones. They are harder to bait, they are harder to trap, they are certainly hard to shoot and they are the ones that are causing a lot of the problems we face. So if you put that into play with the sort of social dynamics that Terry is alluding to, taking some dogs out of an area may not be the simple answer. It will be very, very complex.

The Hon. RICK COLLESS: Given the social dynamics that Mr Korn spoke about, would that apply if you were looking at a once-only baiting program? How are these aerial baiting programs conducted? Are they once a year, once every two years or once every three months? The intensity of the baiting program will determine the level of control you achieve. I put it to you that perhaps baiting dogs once a year or individual events when they get bad is not sufficient to adequately control them, given that those sorts of events will occur and there needs to be follow-up work done, both on ground shooting, hunting, trapping, aerial baiting, whatever is appropriate for that particular area.

Mr GILLIGAN: I certainly agree with you that no one method or any single hit will solve the problem and that is why we work on the collaborative stuff and that is why we work on integrated programs where all the relevant land-holders are pulling together on it and you are looking at the appropriate control methods for the local situation. I am conscious for example that up in the New England area where we have the capacity and do undertake aerial baiting on a routine basis in some of our reserves, nonetheless when we have stock losses and significant dog attacks in those areas does not necessarily mean that we go in and aerially bait. You go in and use the techniques that will be most appropriate to address that problem. And most often, as I understand it but others more specialist in this than I can add to what I am saying, in fact we go in most of the time in response to those isolated dog attacks in New England and go in with an intensive mound baiting program and that is precisely of course what we have been doing over the past few years in the Snowys but Andrew may be able to add some specifics.

Dr LEYS: Could I just add to that? I mean, I think you have raised a very good point that the aerial baiting programs that are run, both in southern New South Wales and in northern New South Wales, are once-off drops of baits. It is just once a year. That is all it is. The ground baiting programs that we undertake, and you heard from Tony Fleming down in Cooma, is a buried baiting technique over a large area. It goes 25 kilometres into that area and it is a repeat bait period. So the baits are out there for a much longer time. So theoretically you would imagine that the ground baiting program should be more effective than aerial baiting program but, as Brian mentioned, not only is it a ground baiting program; it is a tracking program. They have taken shooters there to try to get those rogue dogs. But do not forget this is not our plan.

This is not our method for doing the wild dog control. We are working with those local groups and the program that Tony Fleming explained to you at Cooma was the program that the Cooma Rural Lands Protection Board and New South Wales Agriculture and ourselves and State Forests came up with as the best option excluding aerial baiting. Aerial baiting, as we just said, is a once-off drop of a toxic bait. The bait is not any more toxic when it is dropped from the air or whether it is buried in the ground. It is still the same six milligrams of 1080 in a dog bait. If there was a solution to this—there are working groups down there; there is the review panel—then surely they will come up with something. Perhaps there are dogs breeding off National Parks and Wildlife Service land.

The Hon. RICK COLLESS: There may well be. I am not disputing that at all. It just seems to be a little bit more than a coincidence that the people who have contacted me in the past few weeks are all neighbours of national parks.

Mr GILLIGAN: I think there are any number of comments I could offer on that but I am not particularly surprised.

The Hon. RICK COLLESS: On a few other issues that are sort of related to the line of questioning I have been putting up, this morning we heard the term "dog highways". I guess what is meant by that is that there are regular tracks that the dogs follow and so on. Are your rangers in a position at this point in time to be able to identify where those sorts of things are happening within the parks? Is that where your baiting is focused on?

Mr GILLIGAN: The short answer is yes and not just our rangers but also the other people who are involved from the other agencies and those things are the focus of the wild dog plan. There was an awful lot of myth around for a time that we would not undertake feral animal control in wilderness for example but we do. If you go and have a look, our people can show you the trail of 25 kilometres into the Byadbo wilderness of mound baiting along precisely what was identified as the dog highway. They are identified. They are targeted for the most appropriate control program in the integrated program and we will keep doing it but one of the comments that immediately comes to mind is that I wonder whether the troublesome super dogs use the highway or whether in fact part of our problem might be that they are using the back roads.

The Hon. RICK COLLESS: They want to be in a better condition than a lot of the New South Wales roads at the moment.

Mr GILLIGAN: I will refrain from going anywhere near a comment on that one.

The Hon. RICK COLLESS: Going back to the contractual arrangements with rural lands protection boards in particular for carrying out some of this work, are any of the board areas in the south east contracted to you as we speak?

Mr GILLIGAN: Where we are contracting?

The Hon. RICK COLLESS: Yes, you are contacting your services.

Mr GILLIGAN: We have them down on the south coast and we are using them in the Byadbo program.

Dr LEYS: I think, as Tony explained down in Cooma, there was Cooma board that was contracted, there is the South Coast board, there is Braidwood board, there is Bombala board and there is Moss Vale board. They are all contracted to undertake feral animal control.

The Hon. RICK COLLESS: Can you tell the Committee the quantum of those contracts, what size they are in terms of dollars?

Mr GILLIGAN: Off-hand I cannot.

The Hon. RICK COLLESS: Do you have any details?

Dr LEYS: The question was raised at Cooma and as I understood it there was a request for copies of those contracts and as I understand it that is what is being sent to you.

The Hon. RICK COLLESS: We have not seen them yet. Mr Leys, when you talked about the fox threat abatement program, and we had a very good overview of that at Nowra on that particular day. Obviously it has a high rate of success. Can you give the Committee some idea of what sort of priority is given to the fox threat abatement plans in particular in relation to the impact on agricultural livestock? You mentioned the impact on biodiversity, but what about native animals?

Dr LEYS: That is a very good question. This plan is a threat abatement plan to protect threatened species from fox predation. It is the requirement under the Threatened Species Conservation Act following the listing of fox predation as a key threatening process. So it is not about general biodiversity control, protecting general biodiversity. Nor is it a plan to protect agricultural areas from fox predation. However, that does not mean that what is in here conflicts with what would go on with the agricultural problems such as the Outfox the Fox program that New South Wales Agriculture is running and that we are involved with. I understand you will be hearing next week about the southern New England Landcare program involving some 500 farmers. We are involved in that as well. So this is a specific plan we are required to develop to protect threatened species. Not only is it plans to protect threatened species. You may remember that Paul Mahon went through the whole list of threatened species under

the Act. Through consultation and looking at literature and that sort of thing, he has been able to try to rank those species that are most at risk from predation.

The Hon. RICK COLLESS: In the submission you talk about the possible impact of rabies if ever it were to come into Australia. What sort of emergency plans are in place for dog control if rabies were to enter Australia?

Mr GILLIGAN: A very close collaboration with New South Wales Agriculture is the short answer, but Mr Korn has probably had more specific experience in the contingency planning for that sort of thing.

Mr KORN: New South Wales Agriculture is the lead agency, of course, in such an emergency. We are one of the participating organisations. We would operate within the guidelines of the rules under those circumstances. We would participate within the law according to the programs outlined by New South Wales Agriculture.

The Hon. RICK COLLESS: Is a plan in place for such an event? Obviously, a plan is in place for foot and mouth disease.

Mr KORN: New South Wales Agriculture has management plans in place for all the wildlife diseases.

Mr GILLIGAN: It is fundamentally activating the disaster emergency plans, and we then collaborate in the same way as we would. Obviously, pig control would become a significant issue if we are talking about foot and mouth.

The Hon. JOHN JOBLING: To assist me and, hopefully, other members of the Committee I will read part of the submission we received from New South Wales Farmers, then the question will become more apparent. They said that despite the clear need for control the largest single manager of land in New South Wales, the Crown, is not given the resources to adequately manage the land under its control. The New South Wales National Parks and Wildlife Service, the agency responsible for managing nearly 7 per cent of New South Wales, is afforded just one staff member for 2,952 hectares of land and given just \$16.80 per hectare to carry out conservation management activities. I accept that you have referred to sums going up. I accept that you referred to \$33.50, which is a total management sum. Could you produce for the Committee a break down in relation to the various regions relating specifically to feral animals, the money spent over what sort of hectares, what is paid to contractors and with a specific reference to feral animals, allowing for the fact that in your threat abatement plan you did not refer to mice. Is it possible to produce a break down of that so that we could put in perspective the other evidence?

Mr GILLIGAN: The short answer is yes, we do have the figures outlined. I understand that Tony Fleming has outlined them for southern directorate in the hearing that was—

The Hon. JOHN JOBLING: Because we are running short of time, I do not want to sound rude, but I would appreciate it, as I am sure other members would appreciate. We need to balance the evidence that has been put before us and determine its veracity or otherwise.

Mr GILLIGAN: If we could take the question on notice, we will provide you with a response.

The Hon. JOHN JOBLING: I am perfectly happy with that. Looking at some of the other matters, and staying away from foxes, which you seem to have spent a lot on, you indicated that the Department of Agriculture is, in many cases, the lead agency for dealing with a number of matters that are before us, and they indicated that you are the wealthy, well-funded department. Are there too many departments involved in this picture? Who should be the lead agency? Are you getting together effectively and are we, in your opinion, getting the best value for our dollar?

Mr GILLIGAN: The issue is a generic one that we face on so many fronts, and governments face it all the time, of how to balance getting the expertise that gives either specialisation in a particular area but, as the same time, get the effective co-ordination so that resources are allocated in a cost-effective way. We are doing it on so many fronts. I am conscious that a little later in the year in this House we will discuss fire management, and that is another area where there is co-ordination at that district or regional level that it becomes the key. Ultimately, that is the test. The significant improvement that we have to continue look for is improvements in our implementation of those mechanisms that exist for co-ordination. We can reorganise things forever and a day but, ultimately, unless you get the key players around the table giving a commitment to achieve certain programs and contributing in some effective way to the delivery against some objects and outcomes, then you do not get what is happening. That is where we are putting in the effort to try to get the improvement. I am not aware of any problem with other agencies

in their area of responsibilities. The challenge is for us to make more and better use of the integration and co-ordination mechanisms that exist.

The Hon. JOHN JOBLING: Bearing in mind you said that the problem has been developing for more than 200 years, I would have thought you would have been much more positive. I rather suspect the answer you gave was doubt or, at the worst, no.

Mr GILLIGAN: It will take us time to solve these problems. You do not solve 200 years worth of accumulated problem, which is what we are dealing with, in a flash, and you do not—

The Hon. JOHN JOBLING: It is not as though we have just started to deal with it. We have had 200 years to consider it. Bearing in mind the time to get the questions to you, we have some other evidence about deer and their potential to spread disease, such as bovine Johne's disease and the problem that relates to control of feral deer herds. Looking at feral deer herds, I would be interested to know the view of National Parks regarding the status of deer as stock under the Rural Lands Protection Act. If they were no longer deemed to be stock under the Rural Lands Protection Act, the effect this may have on the department and on deer farmers.

Dr LEYS: This morning you heard from New South Wales Agriculture—

The Hon. JOHN JOBLING: But I am interested in your view, not their view at this stage, because it may not be the same.

Dr LEYS: This morning you heard from New South Wales Agriculture, which indicated it was developing a pest control order for wild deer statewide. We would certainly support that because, as you would appreciate, under the deer management plan that the director-general signed off on for the Royal National Park we saw deer as a major problem there. The deer are also a major problem in a number of other areas. We see deer as having much more of an impact in conservation areas and in agricultural areas, and that was pointed out this morning.

The Hon. JOHN JOBLING: You were present looking at the statement from New South Wales Agriculture and, again, just to quote from it so that you understand it, New South Wales Agriculture, along with other researchers and agencies such as CSIRO, is working to improve the understanding of the biology, behaviour and control of pest animals in Australian environments and farming systems. That is the general statement. I would be interested to hear your views on this statement, that despite this, the difficulties in implementing long-term strategic control represented the main limitation to a more successful control of pest animals. Do you concur with that view?

Mr GILLIGAN: I do not know. I would be interested to reflect on it and, perhaps, give you a considered response.

The Hon. JOHN JOBLING: I am happy for you to take that on notice.

Mr GILLIGAN: Mr Korn is happy to give you a response.

Mr KORN: There are lots of good things happening in the co-operative sense, and that has happened over the past 10 or 15 years. Before I worked for National Parks I worked for New South Wales Agriculture, and I was the statewide specialist in this area. I have seen the evolution of effective regional control programs for a variety of pest species developed over time, and also the establishment of the Pest Animal Council where there is now some statewide effective co-ordination between the agencies and other major players. There are a substantial number of very effective, regional co-operative programs. No doubt, as Agriculture might have mentioned this morning, they are always challenged to work effectively. They are challenged because the major players at the regional level change over time.

You need some people with some leadership and drive at a regional level to make those work effectively. If those people leave, the programs often collapse and you need someone else to pick that up and run with it. They are challenge, but would like to finish on a positive note. I would like to say that the rural land protection boards, in particular, and the other agencies are significant, really good examples of effective pest control programs operating statewide. I would not lose heart at all about feral animal control in the long term. It can still occur, but because of the changing political socioeconomic scene over time it will always remain a challenge. It is a manageable one, provided that people at the regional level remain committed.

The Hon. JOHN JOBLING: It opens up the obvious question, as a former statewide specialist, which you describe yourself as, would you now put to the Committee what is specifically not being implemented to ensure a more successful control of pest animals?

Mr KORN: Fox co-ordination is very good, tick control—

The Hon. JOHN JOBLING: Not successful, not the good ones. We did not ask you that.

Mr GILLIGAN: Perhaps we should use the good ones as the model to address the ones that we are still working on. Why not?

The Hon. MALCOLM JONES: What about voluntary shooters?

Mr KORN: That is one possibility, but feral pigs are mainly focused on our west. There are problems getting effective co-ordination in the Tablelands and the eastern part of the State. It identified one before, that is an emerging and will be a significant problem, and that is feral deer simply because of the areas they like to frequent— heavily timbered country where the terrain is rugged. It is an elusive species. Unfortunately, they are out there now in many areas and they are going to be a significant emerging problem for us to manage.

The Hon. JOHN JOBLING: You gave us an interesting presentation with the back-up of slides, information and details of what you were doing. I afford to the other information you will send us. With that in mind, why is it that when one goes around the countryside, so many groups put a simple view to and say that National Parks and Wildlife Service is not doing its job?

Mr GILLIGAN: The answer there lies in the scale of the task and diversity of the landscapes that we are responsible for managing around the State. If you are responsible for 5.4 million hectares of land in 611 management units, and have some other responsibilities as well then a number of things are happening. One is that we finish up with an awful lot of programs and an awful lot of interaction with our neighbours. We have just under 1,000 programs of some form or another this year on feral animal control. Some 70 per cent of those are interactive and collaborative programs. Take neighbours, for example. Recently, we checked and we have some 46,000 neighbours through the State. I am not sure which subset of our neighbours you might canvas in your travels around the State.

The Hon. JOHN JOBLING: A broad cross-section.

Mr GILLIGAN: But the issue is with 46,000 neighbours—and I must say in my experience of actually sitting down with some of those neighbours and talking through the specific issues that we obviously need to talk through, our relations with neighbours are overwhelmingly positive. But you only need a minute percentage of 46,000 to finish up with a few people who will be disgruntled and have something to say. It is also registering, by government decisions to put land into a protected area status of some form or another, that the current generation has dealt with this whole issue. The National Parks and Wildlife Service has only existed for just over 30 years. In another couple of generations there will be a different attitude to national parks and wildlife because of the total population will have grown up with an understanding of parks and what they are about.

I think we are in a transition period. I think we are dealing with something that is very much on a long-time frame. I have mentioned 200 years in the past. There have been a lot of changes over the past 200 years and if you throw the planning prospective 200 years out then I think you are going to have a community with a very strong commitment to so many of the landscapes for which we are responsible for managing and very much committed to being a part of that management. That, in itself, will provoke its own tensions because if you have a look at any of the plans of management that we have put on exhibition around the State in the past couple of years you will see that parks generate an enormous variety of views. Our challenge is to try to come up with a consolidated management regime that in fact manages those assets on behalf of the community off into the future. Obviously those things mean different things to different people. They are the subject of very strong views. I have to say that underpinning it all, I think the core value that I take heart from, and I am optimistic about, is that people in New South Wales very strongly identify with those landscapes that we manage and I think they do. I believe increasingly conservation and management of those landscapes will be a force for social cohesion rather than division.

CHAIR: New South Wales Agriculture gave evidence this morning that some hunters spread pigs into other areas where there has been successful animal control. Do you have that problem in national parks?

Mr GILLIGAN: Yes, we do unfortunately. There have been problems out in the Weddin Mountain area in the Central West that we have been worried about and I have heard at least some anecdotal evidence of the New England tablelands area where we have people willing to truck in trapped pigs, presumably to augment local populations for their own purposes.

CHAIR: Is that designed so that they can shoot them later?

Mr GILLIGAN: That is the assumption that we make which is rather disturbing.

CHAIR: Based on that, why will you not allow recreational shooters into national parks?

Mr GILLIGAN: Because I do not believe that it is an appropriate way to achieve feral animal control. If you have a look at the experience of, say, South Australian national parks, particularly in the Flinders Ranges and the Gannon Ranges where they close the parks for a period each year. I question whether they are getting effective value for money and effective control. The experience I have, even with some of our programs where we use contractors for goat control, for example, I think there is an almost irresistible temptation on the part of the contractor to leave enough there to make sure that there is a job next year. Similarly with some of the hunting activity and the recreational activity you would finish up with that temptation again, "We don't want to take them all out because we want to leave some for next time." That may be okay in some of the other land tenures in a broad sense but on a national park if we have targeted an area for a control program we want to get as effective a control in that area as we possibly can.

CHAIR: Recreational shooting of animals is perhaps inconsistent with feral animal control?

Mr GILLIGAN: I didn't say that, no, but I think it is inconsistent in terms of national parks and reserves because I think we need a higher level of commitment to actually achieve a conservation objective.

The Hon. MALCOLM JONES: Will the NPWS consider a scheme totally under its control to use registered volunteer shooters to extensively hunt pigs and deer?

Mr GILLIGAN: In national parks?

The Hon. MALCOLM JONES: Yes.

Mr GILLIGAN: No, for the reasons that I have just outlined.

(The witnesses withdrew)

(Short adjournment)

KEITH WILLIAM MUIR, Conservationist and Director, Colong Foundation for Wilderness, level 2, 362 Kent Street, Sydney, and

ANDREW COX, Executive Officer, National Parks Association of New South Wales, P.O. Box A96, Sydney South, 1235, and

ANNE ELIZABETH REEVES, Consultant, National Parks Association of New South Wales, P.O. Box A96, Sydney South, 1235 affirmed and examined:

CHAIR: In what capacity do you appear before this committee?

Mr MUIR: Director, Colong Foundation for Wilderness.

Mr COX: Executive Officer, National Parks Association of New South Wales.

Ms REEVES: As a member of the State Council of the National Parks Association of New South Wales.

CHAIR: Are you conversant with the terms of reference of this inquiry?

Mr MUIR: Yes.

Mr COX: Yes.

Ms REEVES: Yes.

CHAIR: If at any stage during your evidence you consider that in the public interest certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request but that decision may be overturned by a vote of the Legislative Council. Do you wish to make an opening statement?

Mr COX: Yes, I will make statement and that will be supported by both Anne and Keith. In that statement I will elaborate on and discuss some of the points made in our submission dated 31 August 2001, which I assume you have seen. I will talk about some general aspects to do with feral animal control and management; Keith Muir will talk about aspects related to the protection of the dingo; and Anne Reeves will talk about specific management of a number of species, which she will refer to later.

In general, we regard feral animals as a very important issue for the protection of biodiversity, and we regarded it as the second most important threat to biodiversity in Australia and New South Wales after habitat destruction, such as land clearing. From an environmental point of view, this issue demands a lot of our attention and that is the reason why we are here today. First of all, to clarify what we mean by "feral animals" we do not include the dingo as a feral animals.

The Hon. RICK COLLESS: What about wild dogs?

Mr COX: We regard them as feral animals—and any animal that is not native to the local area. If a native animal was in an unnatural place we would regard it as feral. We acknowledge that they cause a major impact on biodiversity and I am sure the Committee has heard a lot of evidence to help you to understand how severe those impacts are. We want to draw your attention to a lot of work that has already been done, at both State and national level, as part of the threatened species recovery planning processes and the listings that are in the relevant State and national legislation. We believe that the listing of key threatening processes under the legislation sets up a useful frame work for dealing with the impacts of feral animals.

It is a process whereby there is a lot of investigation initially about the impacts, and then collaboration by scientists and also the community to try to address those impacts; and then the development of a range of measures to reduce that threat in a strategic way. I am aware of the recent release by the New South Wales Government of the threat abatement plan for the fox. We believe that that is heading in the right direction; that it provides a good strategic frame work for addressing the problems of that particular threat of the fox. If we can extend those to the other major feral animals, and then also integrate amongst the programs, it will provide a good way of maximising the outcomes to the environment and limit the threat on biodiversity.

In our submission we referred to some of the threat abatement plans that are already in place. The important thing is that as you strategically identify how to reduce the threat to biodiversity you realise how big a job needs to be done. Our key recommendation is that additional resources need to be allocated to deal with this problem. Already the State Government is providing funding to a number of feral animal control programs, but we do not see that effort across all land tenures and we do not see the resources in the magnitude we are expecting. The commitment by some agencies is increasing and we certainly appreciate the Service's increased expenditure on feral animal control. We have given an estimate, on page four of our submission, of the need for an increase each year of the order of \$30 million to \$50 million in additional funding across all land tenures to control feral animals.

That is really to emphasise the scale of additional funding that is needed. We are concerned that some land management agencies—vacant Crown land, for instance and the Department of Land and Water Conservation—have minimal to no resources on their lands. Other lands, such as State Forests, while there are programs, they may need to meet their primary objectives to do with timber production so we think the allocation could be much greater. Also, we realise that the solution does not rely entirely on additional government funding, it also relies on a co-operative effort at all levels of government and in the community as well.

Landowners need to work closely with their neighbours, be they other landowners or land management agencies. We think it is in everyone's interest to remove feral animals. If we are all working together to maximise the limited resources we have, we will have more effective outcomes. I was going to highlight some particular areas relating to feral animals that various environment groups have been working on or have paid a lot of attention to over a number of years. I will pass over to Anne Reeves who is going to talk about a number of feral animal issues.

Ms REEVES: I will track through them as per the order in the report, because I think that will make it easier for Committee members to follow the sequence.

The Hon. MALCOLM JONES: Will you take questions as you go?

Ms REEVES: I am comfortable about doing that, yes.

CHAIR: It would be better to have the presentation first, unless it is a really important question.

Ms REEVES: I am happy for the procedure to be in accordance with the preference of the Committee.

CHAIR: I would rather you give your submission first and for members to make notes and ask questions afterwards. We will proceed that way.

Ms REEVES: Going from the submission to more specifics, beginning on page 5, I would make reference to aquatic feral animals. As the Committee well knows, nobody who has an eye in their head can avoid noticing the concern about carp as an introduced species, originally as a food species and sometimes also perhaps as an exotic aquarium trades species, and the problems that they have manifest through many of our waterways. More recent comment—which is also topical, because it was covered in the *Sydney Morning Herald* only at the weekend – was made on the issue of trout.

Trout again is a species that was introduced and quite deliberately released into waterways and which are very aggressively predatory and potentially will have a significant effect on some of the macro invertebrates in our waterways which are the foodstuff for some of our native species, so that there is a strong competition element. Trout, of course, also have strong appeal as a game fish, so there is a bit of a dilemma for some people in determining management. But this is an issue that must be looked at. As is briefly alluded to on page 5, at 3.4, there is need to recognise that there is responsibility currently with New South Wales Fisheries to deal with the impacts of released introduced species.

I go on to 3.5, the horse issue. One of the roles I have at the moment is as a member of the Advisory Committee for Kosciuszko National Park, along with other parks in that area in the Snowy Mountains Region, as a sometime member of the Wild Horse committee, which has been examining how to deal with the issue of feral horses in Kosciuszko National Park. As the Committee probably is well aware, the number of feral horses in that area has built up significantly over many years, and they are now making a very obvious impact and have also moved up into the alpine areas.

The National Parks and Wildlife Service has set up a working party, which includes members, like myself, of the advisory committee, as well as people from the area with a variety of interests, representatives from local government, representatives from the farming fraternity with an interest in horses specifically, a local veterinarian and so on. We are working towards the release of a preliminary strategy plan for public comment. This is an initiative of the National Parks and Wildlife Service, which is to be commended for addressing this issue.

This is not a matter that is easily resolved because, as we are all aware, the introduced horses have become a bit of an icon species. Nevertheless, these are, in the views of people like myself associated with national parks and protected area systems, places where feral animals really do not have a place and where the areas should be set aside for nature conservation. From that point of view, we are very concerned about how best to reduce the numbers—ideally to remove them altogether, but nevertheless reduce their number in a way that is compatible with cost efficiency and also the requirement for humane treatment.

I am glad to say that within the wild horse working party considerable areas of agreement have been reached on the removal of horses, particularly from the fragile alpine area. As soon as this preliminary report is released, it will be out in the public arena. I am sure that Committee members will be familiar with the "Feral Horses" report of the early 1990s produced under the aegis of the Federal Government of the day. In some ways the issues have moved forward, but the real problem about the status of horses in some people's eyes has led to government introducing a policy of no aerial shooting, even though most of the established views, and the views expressed in this "Feral Horses" report and in a more recent report by Dr Tony English have made it clear that shooting is probably the most cost efficient and humane way to reduce large numbers of horses in areas where they are a problem. That, I think, is something that we need to always remember and always evaluate when looking at what are the best methods of reducing feral horse numbers.

There are, as the Committee is probably aware, horses-culling programs interstate for horses and the relatives of the horse. One of the problems we face in dealing with this and some other issues related to feral animals is that some of them have a status that is not well understood. Many people do not fully appreciate that they are relatively recent introductions with a quite significant impact on the environment. If you pay attention to one of the other feral animals that is a big agricultural pest, the rabbit, you will doubtless have come across people who are so concerned about the cuddly status of the rabbit that they do not always want to acknowledge the importance of the need to reduce its impact on agricultural areas, quite apart from its impact on natural areas that have icon status as non-commercial benchmarks for what Australia's natural environment was. The National Parks Association has a clear policy that horses and protected areas are not generally compatible, and certainly that feral horses are not compatible with the objective of managing an area for its natural values and natural heritage values.

The Association would also note that there are issues related to domestic stock. I am not quite sure where we place deer, but they obviously are an upcoming threat. I arrived at these proceedings just in time to hear the National Parks and Wildlife Service also refer to that. Deer have been a particular problem due to their introduction for farming purposes and their subsequent release, deliberately or inadvertently. In a place like Royal National Park their numbers have built up to such an extent that they are a considerable threat to regeneration after fire. The National Parks Association and other environmental groups have supported appropriate removal of deer from such areas. They are also, of course, a problem for forestry in that they threaten the young recruiting plants, and they are potentially a threat in some agricultural areas.

Again, appropriate, humane on-ground shooting for deer is probably the most effective method of control. That is just now being begun in Royal National Park after similar work to that of the wild horse committee in Kosciuszko. The working party for that region has included, I believe, Dr Tony English as an appropriate qualified veterinarian. I understand that this is beginning to take effect. We would commend that effective application.

On page 7, at 3.8, we move on to dogs. Keith Muir will talk about the dingo issue towards the end. However, wild dogs are a serious problem area for many who farm adjacent to areas in which dogs have become entrenched as a wild animal. Obviously, these dogs have been released, again deliberately or inadvertently. Certainly in the Kosciuszko area, at least some are probably derived from the introduction of pig dogging by pig doggers. People who come in illegally to hunt pigs, another feral animal that obviously needs control, pose a significant problem.

There is also the potential problem of threat to life and limb of bushwalkers. There have been some very unfortunate interactions between people visiting national parks. They have felt seriously threatened and from time to time have had reason to request the National Parks and Wildlife Service to investigate court action. Pig dogs are, by definition, fairly aggressive hunting animals, and once they become established in the wild they can become quite threatening to species including humans. Because of their different habits, they do not necessarily have the same

timidity of some of the more domestic dogs. So we have no hesitation in supporting active removal of wild dogs as far as possible.

At an earlier phase, when I was President of the National Parks Association, after many years of inadequate resources for National Parks, and even some cutbacks, there was a small injection of funds for the improvement of neighbour relations by then Minister Chris Hartcher. That helped to develop a rapport, which has been ongoing since then, with neighbours. While there continue to be some problem areas, my understanding, from visits to places in the Kosciuszko area, is that the staff of the National Parks and Wildlife Service make every effort that they can to inspect land and report damage by wild dogs so that they can take appropriate and effective action. But, again, that does require experienced shooters with a knowledge of dog management and behaviour. So it is not a simple matter that can be dealt with by any person; it requires at all times appropriately qualified, trained and experienced people.

In recent times around Kosciuszko there has also been a drawing on the experience of some people who have been involved in this kind of dog control area for a very long time in order to help train young people as some of the more experienced people become less agile and able to take on some of the rough terrain. We must also recognise that in some areas where wild dogs particularly have been considered a threat, the terrain is particularly remote and rugged. So it is not a simple management issue.

We also need to recognise that rabbits are a problem. I would share with the Committee something I did on behalf of the National Parks Association a couple of weeks ago. I took part in a workshop conducted by the Vertebrate Pest CRC. From my reading of the program, I believe the Committee is hearing from that group tomorrow. The CRC, which involves the CSIRO—which is where the workshop was held—was looking at the feasibility of introducing, and parameters to be considered if introducing, an organism that might lead to autoimmune sterility of mice in order to reduce mice plagues. I am not quite sure whether the Committee considers mice to come under the category of feral animals, because for some people they are also tame.

CHAIR: They do.

Ms REEVES: Mice are a serious agricultural pest. There was great consensus around the workshop table, which included scientists who had been researching this, representatives of the RSPCA, Animals Australia and myself. We all were of the view that it was desirable to reduce mouse plagues and we did not necessarily feel that use of a genetically manipulated virus would be counterproductive. But there are so many hurdles to jump before one could consider releases that made it very clear to me that the long-term objective of sterility as the best form of control for feral animals is still a long way off. Probably there are very few examples around Australia generally where that kind of technique can be said to deliver a short-term objective; certainly not for some of the larger, longer lived animals such as horses and deer. I am sure the Committee will explore a range of matters with Mr Peacock of the CRC about what is practical and what is not.

It is a question of whether we, through government decisions, are prepared to put sufficient funds into rectifying the damage that we have caused through the introduction, deliberate or inadvertent, of animals that are not native to Australia. It is a bit parallel to the weeds situation where some of the introductions are particularly damaging in an agricultural and economic sense, because they clearly target the agricultural areas. That is also the case with the mouse plague, which is not such a problem in the bush. However, many other animals inhabit and cause detriment to natural environments. If we are going to pass on a world, which we have inherited and cared for, in a suitable state for the next generation, it is very important to put in these resources now rather than wait for things to get worse. That is all I want to say at the moment.

Mr MUIR: I want to point out the relationship between wild dogs and the lack of protection for the dingo. The dingo is legally defined as a native animal and it is at risk of extinction. Pest management does not necessarily guarantee its protection. A conflict arises with the killing of wild dogs by either aerial baiting or land baiting, and it is a question of how to strategically eradicate the wild dog while at the same time protect the dingo. The primary threat to the survival of the dingo is hybridisation with other breeds of dogs. That is happening and, to some people's minds, it has been completed in certain areas. It is not generally understood how many dingoes remain in New South Wales.

It is my understanding that dingo populations are rapidly reducing in New South Wales and dingoes could disappear in 20 or so years. The way in which the problem has been addressed is through the Rural Lands Protection Act 1998 and Pest Control Order No. 2 made by the Minister for Agriculture on 2 October 2001. That order requires plans of management to be prepared for public lands according to a schedule of areas that are

attached to the order. Those lands include State forests and national parks, Crown lands and Sydney Catchment Authority lands. The problem with that approach is that the legislative framework upon which the order is based does not provide any protection for endangered animals.

Further, any plan of management that is developed under Pest Control Order No. 2 would have to be consistent with the Act and would have to ensure that pests are controlled. That may create a conflict with the conservation of the dingo. That was highlighted in the Regulation Review Committee Report No. 12 in October 2000. I have provided an extract to the Committee in relation to that concern. The problem is how to protect the dingo so pest control is not effected in a way that ensures the survival of threatened animals. Legally, apart from the dingo being a native animal and known to be at risk of extinction but not listed by the Threatened Species Act as an endangered animal, the problem then becomes how to net out the dingoes and protect them while at the same time eradicate wild dogs where they strategically cause problems to graziers in rural districts.

That process requires a change in tack and the National Parks and Wildlife Service must be involved in the preparation of plans of management for wild dog control and to ensure that in a more effective way they can influence the way in which the wild dog management plan is implemented. The service must undertake further measures to ensure the survival of that very endangered animal. That dingo was, for a while, nominated as an endangered species, but whoever the nominee was they withdrew that nomination and no subsequent nomination has been made under the Threatened Species Act to protect the dingo.

The best approach would be to identify core dingo habitat areas and to nominate threatened dingo populations under the Act so that the dingo's interests can be guaranteed while wild dogs are pursued. The focus of Pest Control Order No. 2 is on the immigration into rural districts of the wild dogs, be they dingoes or others, and killing them where they are causing a strategic problem. But there is no composite, complementary consideration of the immigration of wild dogs, be they pets or other feral dogs, wandering into national parks and other public lands that are core dingo habitat. There should be a strategic way of managing immigration into those areas.

In addition, it may be necessary to release dingoes into core dingo habitat areas to improve their chances of survival in their domain. Attempts have been made to define those areas, but none have been formally defined under Pest Control Order No. 2. We have a very serious conflict between the objectives of pest management and the protection of the endangered dingo. It is necessary to come to a resolution which is focused not only on the elimination of all dogs but somehow protects the endangered dingo and ensures its survival. At the moment no protection whatsoever is placed on the dingo despite various inquiries and despite efforts by the New South Wales Royal Zoological Society in an effective way to protect the dingo.

Mr COX: One of the other issues we want to touch on is the impact of European bees as a feral animal. I think that this matter has been raised before. I was hoping to have Professor Rob Whelan to present to you his new research that reinforces the view that bees cause significant impacts on biodiversity. I have attached the National Parks Association policy on honeybees to the back of our submission.

While talking about current threats and problems, I draw attention to the fact that we must look at future potential problems. Certainly, some good work has been done on the way that State and Federal governments dealt with the problem of the fire ant in Queensland.

That was a very good example of a large amount of resources being implemented very quickly to deal with a problem before it gets out of hand. Those resources will be a far greater saving now than trying to deal with something that may not be able to be eradicated in the future. We applaud that type of strategy and hope that the same strategy will be adopted for the fox that was deliberately introduced into Tasmania by some local people. As being prepared for those responses, the Committee may want to consider having available financial resources similar to disaster relief funding to quickly put into place a rapid response for new and emerging feral animals that can happen within weeks or months rather than years, as in the past. On pages eight and nine, I have highlighted some emerging issues because the issue of feral animals is a very complex one. Often it has an emotional side to it. I will not read out the points I have raised there.

Our submission was written before the Game Bill was introduced into Parliament. I wish to touch on some serious concerns we have about the Game Bill. We were expecting Fran Kelly from the Total Environment Centre to join us but she is unable to. We wish to place on the record our strong opposition to the bill. If you wish to explore our views about that, I am certainly willing to take questions.

At the outset I mention the need for a strategic approach, for additional resources and for government agencies across-the-board to focus on feral animals. I do not believe that the matter is as simple as blaming the National Parks and Wildlife Service for the problems that many people have discussed in relation feral animals. It is a complex problem and it is very easy to listen to the complaints of a small number of landowners and believe that the views represented are the full scale of the problem. I am not discrediting their claims, but I do not think their position applies across the State.

I want to correct a matter referred to by the Hon. Malcolm Jones at the Cooma meeting. There was a suggestion that the National Parks Association has submitted a claim for national parks for the whole of southern New South Wales. I place on the record that the association does not want the whole of southern New South Wales as national park and that I am not aware of any proposals the association has for that region.

CHAIR: I was coming to the Game Bill, which is quite controversial. The first objective of the Game Bill concerns feral or pest animal management, so why do you think it will not be effective in assisting with the feral animal problem?

Mr COX: We do not think that establishing recreational shooting will serve the objectives of feral animal control. We think that the drivers for recreational shooting will be issues such as the convenience of the shooters. We believe that the bill will be very difficult to police. We believe that the objectives of the land managers are to develop a strategic approach to controlling feral animals and that the hunters will not abide by it. We think it is too dangerous to think that you will be solving feral animal control problems by opening up the public lands of New South Wales to recreational hunting.

Mr MUIR: The motivations of hunters have to be considered as well. They wish kill a beast and carry home a trophy. If there are no suitable beasts, I think the motivation is to introduce them into areas. We have to look not only at the effect of the culling but also the effect of recruitment, the introduction of pest species where there are none and the stocking of them to a level that will enable hunters to pursue their activities.

The Hon. MALCOLM JONES: Point of order: The purpose of this meeting is to have a hearing into feral animals but what the witness is doing now is almost total speculation about what was in the minds of a group of other people prior to the bill even being enacted, which is quite outside the terms of reference and quite irrelevant to the subject at hand.

The Hon. RICK COLLESS: To the point of order: The other issue is that the Game Bill is not the subject of this inquiry. It is a bill that is currently before the House.

CHAIR: Not before our House, it is not.

The Hon. RICK COLLESS: I think it is improper to discuss that bill in this inquiry.

CHAIR: There is no point of order. For a start, the witness can say whatever he wants to say in response to questions. Second, the Game Bill is not before the upper House, but it is before the lower House, and it is not out of order to discuss it. Ostensibly the Game Bill is about feral animal control.

The Hon. MALCOLM JONES: In response to what questions?

CHAIR: Questions that you asked and questions that I asked.

The Hon. MALCOLM JONES: I am sorry, but we have not asked any questions.

CHAIR: I did ask a question. The witness was responding to my question.

Mr MUIR: As I was saying, the motivation of hunters is to hunt. If they do not have the feral animals they desire to hunt, then the motivation is to introduce them. This has been reported to me by various rangers as having occurred in the Blue Mountains and was reported to me when I was undertaking an observation of the Kowmung River to monitor and describe pig activity in that area. In doing that survey with a number of others, we discussed these matters with the rangers. One complaint they had was that after spending an awful lot of their money and the Sydney Catchment Authority's money on the eradication of pigs, the next thing was that pig doggers whom they knew but were unable to catch immediately reintroduced pigs into the area and all that money would be thrown away. That is the type of thing that I anticipate is involved in the activity of pig hunting and there are other

problems with pig hunters in relation to dingoes, such as the hybridisation of the hunting dogs and the dingoes. That will occur in core dingo habitat areas that are defined in a submission made in March 2000 by the joint land managers, the National Parks and Wildlife Service, State Forests, the Department of Land and Water Conservation, and the Sydney Catchment Authority. I believe that these are the sorts of things that will arise. They were also alluded to by Brian Gilligan, the Director-General of the National Parks and Wildlife Service when he referred to problems with feral animals in the Weddin Mountains and New England.

The Hon. MALCOLM JONES: Have you read the Game Bill?

Mr COX: I certainly have.

The Hon. MALCOLM JONES: Mr Muir makes certain allegations about the Game Bill.

Mr MUIR: The Game Bill is a very simple piece of legislation.

The Hon. MALCOLM JONES: Have you read it, yes or no?

Mr MUIR: Yes, I have read it.

The Hon. MALCOLM JONES: Can you therefore tell the Committee in your opinion what the difference is in status that the hunter will have, either now or after the Game Bill is passed? What extra rights will he have?

Mr MUIR: It is just a simple matter of self-regulation of hunters by hunters.

The Hon. MALCOLM JONES: May I suggest that there is no change of status whatsoever under the Game Bill.

Mr MUIR: What is the good of the bill then?

The Hon. MALCOLM JONES: The hunter will continue to enjoy the rights that he has right now and the Game Bill will not make any material difference to the rights of the hunter, so your prolonged speculation about what is in the mind of the hunter is totally irrelevant because there will be no change of status.

Mr MUIR: There are licences, fees charged, official recognition of the whole process of hunting and the legitimisation of hunting that was never there previously, with respect.

The Hon. MALCOLM JONES: The rights of the individual hunter do not change. He does not have any greater rights and he does have any lesser rights. The Game Bill is all about administration. It is not about the rights of the hunter on the ground, as you have tended to suggest in your rather philosophical dissertation.

Mr COX: I disagree with your suggestion that there is no change in the way that hunting is administered in the State by the bill.

The Hon. MALCOLM JONES: I did not say that.

Mr COX: You were talking about the changes of rights to the hunter.

The Hon. MALCOLM JONES: That is right.

Mr COX: There certainly is a change to the regime. It facilitates hunting on public lands whereas for some public lands, I believe there was no formal process for hunting before. Certainly there are existing means for recreational hunting in State forests that I do not believe apply to all public lands. But this bill will allow for hunting on all public lands, except for national parks. The bill also allows for recreational hunting of native species which currently is restricted to rice farming and certain ducks where there is a particular pest problem on private land. It also establishes a council whose role is to promote hunting. We have been asking the Department of Agriculture the number of hunters that it expects will result after the bill is in place, if it is passed. We have asked how many hunters we will see as a result of the bill and how many hunters we have now, but the department has refused to answer us. Based on what has happened in Victoria, we believe that once you have a mechanism and more hunting opportunities and have an expansion of hunting, as a result you will have more difficulty in managing feral animals

because it is not in the hunters' interests to hunt all the feral animals. You have serious safety issues and you will also have enforcement problems when enforcement is done by a council that is dominated by hunters.

The Hon. MALCOLM JONES: If you wish to see animals humanely disposed of, why would you not support the wild horse incarceration prevention [WHIP] program which does not seek to kill horses, but merely incarcerate them? It is similar to the salt licks program which was originally carried out in the Guy Fawkes River National Park. Why would you not support the non-killing and rounding up of animals in this way?

Ms REEVES: The WHIP program was suggested by elements within the Snowy Mountains shire. I mention that for the benefit of those who were not aware of it. It is a highly people-intensive activity but it effectively is using the national park as an agistment-type paddock to assist disadvantaged people in retraining. It would be far preferable to totally remove it from consideration as an activity that is related to feral animal control because it essentially has a minuscule effect in terms of the number of animals that would go through such a program. That has been shown in America as well. The number of horses is minuscule compared to the issues you need to address. From that point of view, it has been touted in a way that I think is totally misleading and effectively a bit of a furphy for this discussion.

The Hon. MALCOLM JONES: What about the use of salt licks up in the Guy Fawkes River National Park to muster horses rather than kill them?

Ms REEVES: The Guy Fawkes River National Park situation was related to a very large build up of animals in a valley where the obvious best way of getting them out was—

The Hon. MALCOLM JONES: Do you know what I am talking about?

Ms REEVES: The salt lick program that I know about is being proposed in Kosciuszko for the alpine area.

The Hon. MALCOLM JONES: Okay. May I advise you that in the Guy Fawkes River National Park area, prior to the aerial culling, mustering took place which was done by local horse people and there was also a program of using the salt licks on the ground to corral horses.

Mr COX: I think the English report into the Guy Fawkes River National Park killing did report about the success of that. I was led to believe that there was a lot of energy expended for very minimal numbers of horses taken.

The Hon. MALCOLM JONES: But is that not better than killing?

Mr COX: When you have the numbers continuing to increase, it was not achieving the purpose, which was to reduce horse numbers, so it was not effective at all.

The Hon. MALCOLM JONES: You also referred to professional trained horse musterers in your presentation. Can you tell me what a professional trained horse musterer is?

Ms REEVES: The people who are involved in taking animals from the wild—in Victoria where that still occurs, a lot of those horses go to the abattoir; in other words, they are going to be killed anyway—know both the terrain and how to deal with horses. That is very different from a person who is perhaps a passionate horse lover and a keen pony club member who nevertheless does not have that kind of knowledge and experience of dealing with animals. We would never contemplate proposing shooting unless it were undertaken by suitably accredited people who have demonstrated their skills and the same would be required for any kind of mustering. It is important to recognise that the mustering process also carries with it considerable stress and is possibly less humane and more people-risky than shooting, especially when there are large numbers of horses clustered together in tight valleys in areas such as Guy Fawkes River National Park.

The Hon. MALCOLM JONES: I suggest that virtually any horse is worth about \$400 or \$500—perhaps those destined for the abattoir are worth a little less, but not much. You suggested that people are releasing stallions into the wild, but I do not think people in those areas would be prepared to risk that sort of investment.

Ms REEVES: With respect, it is common pub talk that there are such releases. I have not sat in the pub myself but I have heard it second hand and I would not be at all surprised. It would occur in only some areas, of course. Also with respect, I do not think the value you attributed to horses is necessarily applicable. In fact, one of

the difficulties with any kind of mustering system is finding people who want to keep the horses alive—with few exceptions. Many horses in some of these areas have become inbred.

The Hon. RICK COLLESS: Do you think it is reasonable that the Committee should make decisions based on second-hand pub talk?

Ms REEVES: We were asked a particular question and that is my response. I do not think you should depend exclusively on pub talk in making decisions—absolutely not. However, in many instances—you will probably know this from the wild dog issue—it is very difficult to find witnesses to a particular episode that people prefer not to have witnessed. Therefore, there are great problems in some areas of appropriate management.

Mr COX: It would certainly be useful to hear the views and professional opinions of some rangers in that area regarding the sources of some of these horses.

The Hon. MALCOLM JONES: Can you identify other pub talk, please?

Ms REEVES: I referred to pub talk in response to a question from you.

The Hon. JANELLE SAFFIN: I remind members that when we heard evidence from other parties they referred to "anecdotal" evidence. They did not say where that evidence came from but it could have originated in the town hall, the post office or the pub. So I think it is okay for us to hear all sorts of evidence and decide how to evaluate it—which is a different issue.

The Hon. MALCOLM JONES: I do not disagree with you, but I would like it to be identified.

Ms REEVES: What further identification are you seeking?

The Hon. MALCOLM JONES: I am seeking clarification regarding other areas.

The Hon. RICK COLLESS: Mr Cox, your comments in your submission about 1080 would seem to be at odds with the position taken by the National Parks and Wildlife Service. Do you agree?

Mr COX: I think there are some differences. I have not seen the National Parks submission so until I read it I cannot tell you what those differences are. However, I believe that, while we oppose any use of 1080 in aerial baiting, there may be some examples when National Parks and Wildlife Service would use it.

The Hon. RICK COLLESS: It is my understanding that the National Parks and Wildlife Service intends to make a submission to the National Registration Authority for Agricultural and Veterinary Chemicals opposing the banning of 1080.

Mr COX: We have not said that we oppose the use of 1080, full stop. We refer to aerial baiting and the use of 1080 in aerial baiting.

Ms REEVES: A particular concern for us would be the implications for non-target species, and it would need to be evaluated in those circumstances.

The Hon. RICK COLLESS: I think everyone would agree that, whatever control method we use, we should avoid impacts on non-target species. Do you concede that banning 1080 would increase the number of foxes and feral dogs that prey on native fauna?

Mr COX: We have made the point that the indiscriminate application of 1080 is a serious problem. If you use 1080 inappropriately you will kill a lot of non-target species. Furthermore, if you withdraw 1080 and do not have an alternative, you will have some serious ecological problems. What you decide to do depends on what alternative strategies exist. We have not said that we support the banning of 1080.

The Hon. RICK COLLESS: Do you support the use of 1080?

Mr COX: If we can be clear that we are avoiding its indiscriminate use and the taking of non-target species—if that can be guaranteed—

The Hon. RICK COLLESS: No pest control program can guarantee that no non-target species will be taken.

Mr COX: At least to the best of your resources. I think there are situations when it would be appropriate to use 1080.

Ms REEVES: I think it would be particularly tricky to accept 1080—especially aerial-baited 1080—as being okay in areas where there are threatened species that might take bait because you would be working contrary to other aspects of the legislation.

The Hon. RICK COLLESS: We heard evidence earlier today about the impact of foxes and feral dogs on native species and the fact that there is a balance between the impact of dogs and foxes and the number of native species that might be killed inadvertently by baiting. Do you concede that question needs to be considered? If the impact of baiting using 1080 is less than the impact of foxes and feral dogs preying on native animals because there is no baiting, do you believe that is a justification for using 1080 in aerial baiting programs?

Mr COX: I think you should look at what alternatives are available.

The Hon. RICK COLLESS: Surely the end result is the net loss of native animals. If one program will improve the net result, is that not the preferred program?

Mr COX: It depends: you must look at each situation and what options are available.

Ms REEVES: There is a real risk in the 1080 debate—we see this in other situations also—that if you say you do not oppose it does that mean you support it? In some instances we face trade-offs that might deliver good environmental outcomes but also trade-offs that might deliver very bad environmental outcomes. It would be enormously concerning if, by saying yes to one instance, you opened the door wide to the damaging impact. This is a very serious problem. As you know, regulations are often not as fine-tuned as one would like.

Mr MUIR: The dingo is the best example that I can give of the complexities of aerial baiting. If you aerial bait a park containing dingoes you will knock down that population, and then invariably the hybridisation process will begin. Once you break down the family unit of the dingo pack it is prone to interbreeding and hybridisation with dogs, whereas before the social structure more or less prevents interbreeding.

The Hon. RICK COLLESS: I agree with you. Moving on from that point, if an enclave—if I may use that expression—of purebred dingoes were identified, would not the best way to ensure their survival be to prevent hybrid dogs from moving into the area?

Mr MUIR: Yes, that is right. The problem is that the focus of pest control order No. 2 is the reverse in that situation: dogs moving out into rural districts. However, both aspects must be addressed. The focus will be on the strategic problem. I suspect there may even be benefits in both. Without dogs you would not get the bastard breeds referred to in the "Good Weekend" supplement of the *Sydney Morning Herald*, which are an even bigger problem than the dingo. I support introducing purebred dingoes into core areas and boosting their numbers because I think that may benefit rural districts and help them to address their dog problems.

The Hon. RICK COLLESS: But it would be dangerous to do that while feral dogs were still in the vicinity.

Mr MUIR: You would have to do it in a strategically managed way. You would have to know what was in the park—whether they were dogs or dingoes—and then respond accordingly.

The Hon. RICK COLLESS: When is a dingo not a dingo? At what point of hybridisation is a dingo considered not to be a dingo?

Mr MUIR: I must defer to the experts on that question—perhaps 80 per cent or 60 per cent, I do not know. It depends on the over all gene pool. You can get a good indication from conducting DNA tests of dog scats in the area. This is a developing technology and you do not have to shoot the animal to study it. However, it is expensive and slow and the results are not immediate. The problem is that dingoes are becoming extinct right now so we need to respond using our current level of understanding to save the existing dingoes. That is why the recruitment of pure dingoes to an area may be one way of responding immediately.

The Hon. RICK COLLESS: If, as you say, the dingo is becoming extinct right now, why has the scientific committee not recommended that it be listed?

Mr MUIR: It needs a nomination. The previous nomination was withdrawn to seek more information and the nominee chose not to reintroduce it because the dingo was nominated as an endangered species, not as a particular population—particular populations of dingoes have yet to be defined. So there is a conundrum. I think I will make some suggestions to my colleagues about nominating various dingo populations around New South Wales.

The Hon. RICK COLLESS: Can I explore your thoughts on the dingo and its native status? The dingo is very different from the rest of Australia's native fauna—it is a litter-bearing animal, for a start. As I understand it, it is the only litter-bearing animal that is classified as a native, as opposed to marsupials that comprise the majority of our mammalian species.

Ms REEVES: And the rodents.

The Hon. RICK COLLESS: All the natives are marsupials, are they not?

Ms REEVES: There is a large group of native Australian rodents.

The Hon. RICK COLLESS: Are they litter bearing?

Ms REEVES: Yes.

Mr MUIR: We are getting into a very detailed area in relation to dingoes. The dingo has been around for about 3,000 or 4,000 years and it is classified in the legislation as a native animal—let us leave it at that.

The Hon. RICK COLLESS: On page 10 of your report you define exotic, feral, natural and domestic animals, but you do not define native animals. How do you define those animals?

Mr COX: We probably did not use the term in the policy so we did not need to define it.

The Hon. RICK COLLESS: It is used.

Mr COX: I used it in the submission. I have not scanned the policy. It is a policy on feral animals, so all other animals that are not exotic or feral are native.

(The witnesses withdrew)

(The Committee adjourned at 4.45 p.m.)