CORRECTED

REPORT OF PROCEEDINGS BEFORE

GENERAL PURPOSE STANDING COMMITTEE No. 5

INQUIRY INTO FERAL ANIMALS

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At Sydney on Tuesday, 26 March 2002

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The Committee met at 9.30 a.m.

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PRESENT

The Hon. Richard Jones (Chair)

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

CHAIR: The Committee has previously resolved to authorise the media to broadcast sound and video excerpts of its public proceedings. Copies of guidelines governing the broadcast of proceedings are available from the table by the door. I point out that, in accordance with Legislative Council guidelines for the broadcast of proceedings, a member of the Committee and witnesses may be filmed or recorded. People in the public gallery should not be the primary focus of any filming or photographs. In reporting the proceedings of this Committee the media must take responsibility for what they publish or what interpretation is placed on anything that is said before the Committee.

Witnesses, members and their staff are advised that any messages should be delivered through the attendant on duty or through the Committee clerks.

I advise that, under Standing Order 252 of the Legislative Council, evidence given before the Committee and any documents presented to the Committee that have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any member of such Committee or by any other person.

STEPHEN JONATHAN ORR, Chief Executive Officer, State Council, Rural Lands Protection Boards, Locked Bag 21, Orange;

KEITH WILLIAM ALLISON, Elected State Councillor, Rural Lands Protection Boards, Broken Hill;

CHRISTOPHER JOHN LANE, Pest Animal and Insect Manager, State Council, Rural Lands Protection Boards, 161 Kite Street, Orange, and

HELEN MARGUERITE READING CATHLES, Grazier and Elected State Councillor, State Council, Rural Lands Protection Boards, Cookmundoon, Wee Jasper, sworn and examined:

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

Mr ORR: I am.

Mr ALLISON: I am.

Mr LANE: Yes.

Ms CATHLES: 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 or seen only by the Committee, the Committee would be willing to accede to your request, but that may be overturned by a vote of Legislative Council. Do you wish to make an opening statement?

Mr ORR: Yes. Firstly, Mr Chairman, thanks very much for the opportunity to appear before your Committee today. We are all going to make a short presentation.

By way of background, I would like to tell you a little about the Rural Lands Protection Boards' system in New South Wales. There are 48 boards across New South Wales covering the entire State. Each board is funded solely by the ratepayers within that board's district and the ratepayers within that board's district elect directors to run and manage the board. Generally there are eight directors within the board. A ratepayer is generally someone who owns or occupies 10 hectares or more within that board district area. I should say that the boards' core functions, of which there are three, relate to pest animal and insect management, animal health and travelling stock reserves.

State Council, of which I am the chief executive officer, is the peak body for the board system. We have statutory powers over boards and we came into being with the commencement of the Rural Lands Protection Act 1998. Just on the new Act, it fundamentally changed some of the major relationships which we had been used to and comfortable with in the board system for many years. Firstly, it established State Council, the State Council being a statutory body, as I mentioned, with nine elected State councillors. State councillors are elected by eight regions. All regions have one State councillor except the western division, which has two.

The other major change which it brought about was that boards are now responsible for the supervision of all their staff. Previously New South Wales Agriculture had responsibility for supervising the board animal health staff and New South Wales Agriculture now no longer has the power to direct boards in terms of their function. In relation to pest animal management and insect management, it introduced a system of pest control orders which was fundamentally different from the previous 1989 Act. That system has seen the issuing of three pest control orders to date in relation to wild dogs, feral pigs and wild rabbits and those pest control orders in terms of pest animals have been in operation since 28 September of last year.

Just before I hand over to my colleagues I would like to make a couple of points in general: Firstly, that the board system is funded by land holders and ratepayers, we do not receive funding from the New South Wales Government, and we estimate that the board system investment in feral animal control is roughly around $6 million. As I said, we do not receive any funding from the New South Wales Government. Conversely, when it comes to pest plants or weed control there is a statutory body in relation to weed control and the New South Wales Government expends roughly $7 million per annum in relation to providing funding for weed control activities across the State, so there is, in our opinion, some inequity between pest animal control and pest plant control and we would certainly strongly support the establishment of New South Wales Government funding for pest animal control programs.

The second point I would like to make is that there is a degree of uncertainty as to the standing of our legislation and pest control orders. It is not exactly clear to us as to how our legislation relates to things such as the Native Vegetation Conservation Act. Indeed there have been some recent examples whereby regional planning processes in relation to the vegetation legislation have caused some confusion as to the relationship between the rural lands protection legislation and the native vegetation legislation when it comes to pest animal control. We believe that that confusion certainly needs to be cleared up and cleared up fairly quickly.

I will not say any more, Mr Chairman, in terms of my opening apart from that the board system, in our opinion, provides a very important service in terms of pest animal control across New South Wales. We believe that service is vital in terms of agricultural interest and environmental interest and we believe that we have good resources in place, we employ some 350 staff of which we believe about 70 work full-time on pest animal control, and that we are well-placed to continue doing the important job that we do in relation to pest animal control across the State.

With that, Mr Chairman, I will hand over to Chris Lane who will go into a little bit more detail about how we go about pest animal control in this State.

Mr LANE: I would just like to briefly mention a bit about pest management in the board system. As you are aware, the New South Wales Pest Animal Council is a committee that is made up of State-wide pest and feral animal stakeholders for which the Rural Lands Protection Boards have representation. It is the committee that provides overarching State policy framework and direction for New South Wales on vertebrate pest management.

State Council has recently formed its own pest animal and insect committee through the change in the new Act. This committee is the representative body for State Council in terms of pest animal planning and management. It also directs the policy and procedures in line with the rural lands protection legislation in consultation with boards and, of course, it does take into account the advice from the pest animal council. The representation and integration of the committee works well because the committee structure incorporates on-ground practical field staff; it involves owners of agricultural enterprises and has the bureaucratic management of State Council and of New South Wales Agriculture members at the decision making level. It should be noted that some of the members of the committee sit on the pest animal council as well which ensures consistency and balanced interpretation of State-wide management and policy issues. I might add at this point that the State Council committee also has State-wide representation in its members. For instance, it includes members from Broken Hill in the western division; the Yass and Cooma districts of the board system; Singleton in the Hunter and coastal region; Condobolin and Dubbo in the central west and Warialda and Goondiwindi in the northern part of the State. There is a wide range of representation. It is fair to say that the members of this State Council committee are across the breadth and width of all pest animal issues on a regional basis and are in constant contact with boards and land holders of that region. The committee meets at least four times a year.

One of the first tasks of the committee and boards under the new Act was to implement and formalise the adoption of yearly pest animal and insect management plans and that was for each board district. Pest animal management planning is not a new concept in the board system by any means, but it was more a formal recognition of the minimum planning structure required for all boards and with input from all boards. Planning in the board system was recognised and aimed at being able to identify and clarify what was to be accomplished in pest management in a particular timeframe and outlining how it was to be achieved. It is also to work towards a more proactive pest management. It is there to increase board and staff accountability to each other and to the ratepayers (as you know, we

are ratepayer funded); to improve staff resource efficiencies; to demonstrate the boards' understanding of other legislation that impacts on pest animal management and, over time, to facilitate the progression to pest animal planning on a regional basis.

It should also be noted that this process that the boards have been going through is not stagnant, it is actually ongoing, it is reviewed and there is consultation with land holders as well as board rangers and directors are out in the field just about every day talking and dealing with land holders and government organisations and so on.

I would like to submit to the inquiry a succinct document that outlines the process that all boards have adopted in the formal preparation of pest animal and management plans. I would also like to submit an example of a draft plan that has come through from one of the boards and any further information on management planning that you require.

[Documents tabled]

With that, I would like to pass now to Keith who will talk further on this.

Mr ALLISON: Chairman, in relation to our submission I believe there have been several updating factors that have occurred in relation to broadly more recent events. I do not know whether the Committee are aware of the Wild Dog Summit that was held in Wodonga just recently. I believe that was very appropriate in relation to the inquiry in that we were able to have the managers of wild dog problems and manager of dog fencing, et cetera, from four different States come to one point and express their views.

It was very interesting in relation to Dr Laurie Corbett and his explanations of the future and their scientific belief in relation to the hybridisation of the dingo, et cetera, and he believes the ability to stop hybridisation, unless someone takes it on their hands to try and maintain the pure dingo gene, that there are only one or two sites left in Australia where that may be applicable. However, we have seen the change of policy and the new acts that have been introduced in relation to threatened species and management and National Parks and Wildlife responsibilities, which not only has made differences in relation to the management and attitude of landholders and their ability to be able to stay viable and maintain their enterprises, especially in the western division where we see a core breeding area developed, in the far northwestern corner in Sturt National Park, which was developed from pastoral country some 30 years ago, when there were no dogs, and it is deemed now that it has to be a core breeding area, yet there is no recognition by New South Wales under its legislation that there are hundreds of thousands of dingos on the other side of the dog fence in Queensland and in South Australia. I find it very very strange that in 42 per cent of this State the leaseholders in the western division who submit up to $800,000 a year out of their own enterprises to support the maintenance of a dog fence, without policy of Government, without any knowledge and having no original dingo population there in the first place, have changed their attitude and threatened the people out there by creating a core breeding area adjacent to the fence, where the landholders in the western division pay $800,000 to maintain it, to keep dingos out. It is a slap in the face in relation to the past productivity and concerns, natural resource revegetation land care projects, the lot.

Our faith is lost in relation to trying to maintain and respect decisions by departments without any consultation, and it has been formed with a threat by the Threatened Species Committee, who would not even have community consultation or meet with any organisation in relation to their decision. That is one point that was highlighted in relation to our meeting at Wodonga, and it must be that if we are going to have pest animal control and recognition of threatened species throughout Australia, there must be some relationship on a Commonwealth basis and not individual States. I believe it is far more economic and cost effective if they are recognised Commonwealth-wide, as in the case of Sturt they have to now, with a baiting perimeter, and employ extra staff in order to do that, whereas in the past that was not necessary and the community worked together. It is putting a fork in between the community, and with the National Parks' current purchasing of properties, the relationship of not paying Wild Dog Destruction Board levies because they are exempt, and they do pay Rural Lands Protection Board rates in the western division, but the increase of land purchased by National Parks and Government is then turning the responsibility of maintaining those essential services back onto the landholder again.

Where is it going to stop? We have no money in relation to our efforts. I will give you one example: The use of 1080 in the State; they have just allocated a huge amount of money to the fox threat abatement plan. I will guarantee you that the landholders out there in their fox control efforts would use twice as much 1080 on a yearly basis as what they will ever think of using under the fox threat abatement plan, but we do it for management practices and conservation reasons, because they are third generation people out there. Surely we must be given some credit and some help. I will give you the southwest rabbit control project on a dollar for dollar basis. There would be a million bucks gone into that southwest control program, some two million rabbit warrens ripped, all on the innovation of landholders on a conservation basis.

We can't produce money off trees, and up until recently our economic base stopped a lot of that program. We need assistance, and likewise, as has been suggested by the previous speakers, some consideration must be given to pest animal control with EPA requirements, the workplace practices, et cetera, and those other constraints that were taken for granted in the past and allowed us to have an economic control. We are being put into a corner where we are not going to be able to effectively control pest animals.

An example more recently is the attitude and the interpretation of the Firearms Registration Act. I do not know whether you are conversant with this, but the policy of the registration department at present in the interpretation of that act has changed. The D class licence holders in the past, at the beginning of that legislation, were issued with licences. Currently, they are being denied those licences, but it is deemed that a campaign is being conducted, and the interpretation by the licensing officers of a campaign is different now than it was in the past. That immediately, because a licence has to be current, stops possession of that rifle and stops the necessity of those people who have got them in controlling feral animals. I do not know if you have ever been in the situation of walking into a lignum swamp or creek, et cetera, and only having a single shot rifle or a repeating rifle -

CHAIR: And a pig coming at you.

Mr ALLISON: - and have a pig come at you. You take your life in your own hands or you do not feel like keeping your legs because he will take it as he walks past; it is an essential. Likewise, if you have got a wild dog problem which sets you in the sights of a dog, with a semi-automatic you can get three bullets off before you get one off with a repeating rifle. So in certain circumstances they are required. In the west, the Broken Hill board and the boards associated with the dog fence have a campaign on a twelve months basis, reporting in relation to the requirement of baiting, et cetera, and co-ordination of all the Rangers in that area. It is done on a monthly basis. So we have to have a 12 month campaign. Dogs do not come at a given date. They arrive whenever they feel like it and they do the damage whenever they feel like like it, and you have to be aware of that situation 365 days a year. So we are very very disappointed that the D class licensing situation has arisen, and again without any consultation whatsoever. So we have spoken to the Minister and we hope that we can get a return to the original interpretation.

Mr Chairman, another very big point that is of concern to us is that 1080 currently is very important to pest animal control in so many fields. It is due for re-registration nationally this year, and the review will be carried out shortly. We would ask the Senate committees to support the continued use under the control methods that may be applicable, but I believe if we lose 1080 use in this State, then pest animal control will become negligible and the problem will get out of control. For the sake of an exotic disease outbreak, et cetera, that poison is essential and we must retain it. We have no other take-home poisons. There is a current take-home poison of CSSP for pigs. I believe that will come up for review, but we do not believe that that will be renewed. Fortunately, Queensland have the use of 1080 to meat bait the pigs. That system or that method of control is not licensed in New South Wales. Currently the only take-home poison we have for pigs is 1080 on vegetable matter or CSSP. If we lose them, then there is no other method except aerials or shooting left in relation to pigs. With the threat of a foot and mouth disease outbreak, et cetera, it makes the job impossible. So currently with the acts, we are going into corners where we cannot practically control pests.

A prime example again is the cane toad. The Pest Animal Council argued in relation to the control of cane toads that because of the poisonous glands and because of the cruelty, et cetera, it was deemed that the method was to put a rubber glove on, get a bucket, put them in the bucket, put them in a bag, put them in a fridge to go to sleep and then put them in the freezer to euthanase them. It was brought up that a spray can with a bit of Dettol was a very very quick cure and quite commonly used, but we cannot advertise that fact because we cannot get agreement because it might be painful or the reaction, but it is a method where there is no hands on, no chance of getting poisoned by the glands or whatever, but we cannot use it and we cannot publicise it. The cane toad has gone from the east coast and it is going to get into Kakadu. It is being completely impractical. People talk about golf clubs, spears and that sort of stuff. There are methods of control, but because of the bureaucratic control and the practicalities we have not been able to get there.

The Hon. JOHN JOBLING: Mr Chairman, could I just interrupt for a second. I do not believe the Committee has heard from various expert witnesses opinion expressed as to why somebody would claim that 1080 should not be used if it is the only effective poison out there, which I understand is the fact. Would it be possible perhaps for a representative of the board to explain to us what the case for not using 1080 might be?

CHAIR: Shall we leave that until you finish your presentation. We have only got half an hour left for questions. Have you finished?

Ms CATHLES: Well, virtually yes. For effective feral animal control a co-operative approach is essential. However, every region of the State of New South Wales should be considered individually because each region is very different. It is like the city of Sydney; the south is very different to the north and the east is very different to the west, and it is exactly the same in the rural areas. Regional agencies do have common goals. However, you cannot necessarily achieve these goals through the same procedures State-wide. We need a cultural change in the way feral animals are controlled. It is not just about killing animals and we need a clear definition of impact to be recognised.

In southeast New South Wales and the ACT, this is an example of what we have in the past got going, the Yass board instigated back in 1996 a co-operative approach to the wild dog program. We drew together 13 agencies, five Rural Lands Protection Boards, Gundagai, Braidwood, Cooma, Bombala and Yass, the National Parks and Wildlife Service at Queanbeyan and Tumut, State Forests Hardwood and Softwood at Tumut, the ACT Government, the ACT Lessees Association, New South Wales Agriculture, Australian Hydatid Control and Epidemiology, the Molecular Biological Unit of the University of New South Wales and the Department of Land and Water Conservation. The project to establish integrated management of wild dogs gained additional funding from the Bureau of Research Science under the National Heritage Trust Feral Animal Control Program. Without these additional dollars, this program would not have taken place. Without the additional dollars, feral animal control in the south-east would not have progressed as far as it already has.

As well as developing a generic integrated management plan, it has collected hundreds of DNA samples for testing to establish genotype by Dr Alan Wilton; it has had radio collared dogs for tracking; it has collected data on wild dog activity and, most importantly, it has established a traineeship. We already have two graduates of that traineeship and we have a third being trained at the moment.

I would like to table, with your permission, two documents. One is a report that the current trainee wrote. It is just to give you an insight into what he is doing, what he is learning, the range of activities that trainees undertake. It is very extensive. Also the last report, six monthly report, from the project itself which, once again, gives you an idea of the type of work that is being done.

[Documents tabled]

Under the pest control orders we now have cooperative wild dog management plans. These are a huge step forward and I think at Cooma you were given a presentation to recognise the cooperative wild dogs project. That is a very good example of how land tenure where the board boundaries are was dropped, the problem was solved or addressed and then the dollars were allocated and the payments made, and that was an integrated approach.

We just really cannot stress enough how important strategic planning is in feral animal control and one of the things that has come to light during the course of this inquiry is a communication problem down in the south of the State to which I think there were many references yesterday. Just to give you an update on that, on 18 March there was a meeting held at the south coast and it included New South Wales Agriculture, New South Wales farmers from the north and the south end of the south coast, two zones of Forestry, three zones of National Parks and Wildlife Service and the Rural Lands Protection Board of the south coast. Those people formed a consultative committee to review vertebrate pest animal management plans as they are being formed. The arrangement between all these agencies is that if there are any complaints or any reports of dog activities given to one agency rather than to the board itself, that agency will directly refer that back to the board so that the board can do the follow-up work. They feel that this method will solve the problems that have been highlighted and they will review the procedure in six months' time.

One of the questions that was asked yesterday that there was not an answer to was the increased dog activity currently. It is the mating season at this time of year, so that could be one of the reasons.

The State Council would like to highlight the fact that if there are no changes in feral animal control and we do the same today as we did yesterday, if nothing changes, nothing will change. We will have exactly the same results.

The Hon. MALCOLM JONES: Will it get worse? Will it not deteriorate?

Ms CATHLES: I don't know. You would have to wait and see. It could deteriorate.

The Hon. MALCOLM JONES: You just said if nothing changes, nothing changes.

Ms CATHLES: That is correct.

The Hon. MALCOLM JONES: But I asked will it deteriorate and you said you don't know.

Ms CATHLES: At best it would remain static.

The State Council, Mr Chairman, would like your Committee to give consideration to the following: To endorsing the use of 1080 and to endorsing the D class licence for land holders because control is an ongoing day to day business, it is not something that you do on the diary, I'll do it this week or I'll do it the month after next, it is ongoing, it is day to day. There are approximately 500 licences held in the State at the moment, but in the last six months no land holder licences, to my knowledge, have been renewed. That is a chronic situation.

We would also like a pest order for deer to be endorsed. Over 50 per cent of the boards have identified deer as an existing or imminent pest problem. That is a very big area.

We would like to see a national approach to dingo conservation because a State by State approach is not as effective as a national approach would be.

We would like the endorsement of the establishment of common policy and procedures across State borders as we have currently between New South Wales and the ACT. The wild dog summit highlighted that it was needed between New South Wales and Victoria, New South Wales and Queensland and New South Wales and South Australia.

We would like to see the Pest Animal Council become a statutory body, you implied yesterday, with a separate allocation from Treasury for on-ground control. This council could oversee some great projects. It has representation from all stakeholders on it and the potential is enormous. There could be programs such as an integrated data recording and mapping system between agencies. You could achieve so much if that was in place.

We need more dollars to be allocated from Treasury. A dollar for dollar grant to Rural Lands Protection Boards for the money that they already spend on feral animal control would be a great help and with public land managers, the dollars that they currently spend, I wonder, when they do their competitive funding when people apply to them for dollars to be spent in different areas and they can see that, with the dollars they have, what they produce is very good, if all the worthwhile projects that come through are actually funded or if there are some worthwhile projects that there are not enough dollars to cover.

We would like to see the endorsement of the principle of practical ground cooperation across all land tenures with agreed management plans and continued research. It is really very important. Highlighted at the wild dog summit was the problem of aerial baiting in the south. If you had aerial baiting trials with monitoring of wild dog mortality and movement, native animal and livestock attacks, if that trial was actually done it would be extremely helpful. There is research into lethal poison bait tags on traps. That would be helpful and there must be many, many more that research could cover.

We also would like to see a training program. The trainees under the project have been extremely helpful, two are now employed and everybody is saying: Why don't we have more?

(Short adjournment)

CHAIR: Perhaps you would like to answer the question about 1080 which the Honourable John Jobling asked to reaffirm your support for that and why.

Mr ORR: Chairman, questions in relation to 1080 and our views on and support of 1080 I will hand over to Chris Lane.

Mr LANE: I suppose 1080 has been the most cost effective tool that was introduced back in the 1950s. In New South Wales it is probably the most target specific pesticide used under tight regulations controlling the rate or the amount of 1080 applied to the specific bait substrate. You have free feeding techniques whereby you can free feed a population to make sure that you are only getting the target species. Before the poison is applied you dye the bait a certain colour, blue in colour, to match in with the environment and reduce non-targets finding the bait, and bait placement strategies also help.

The Hon. MALCOLM JONES: Why is only 1080 on vegetable matter available for pigs and not on meat?

Mr LANE: I suppose the amount of poison required to bait a feral pig is a bit more than, say, a fox or dog which are at the top of the tree of susceptibility to 1080 and when it is placed on a meat bait it is more open to non-target species taking that bait as well.

The Hon. MALCOLM JONES: But surely there are more animals in the bush which are herbaceous than carnivorous.

Mr LANE: And that is where you come down to baiting strategies and how you stop non-targets. For instance, if you are baiting feral pigs with grain or something like that, you use a bait station that does not allow access for natives to get in, only feral pigs, and it requires free feeding as well.

The Hon. MALCOLM JONES: A pig is a big animal.

Mr LANE: Yes, and they will push through and under fences and that sort of thing, but the issue is also free feeding where you can place grain out for feral pigs in these bait stations and you can check to make sure that only feral pigs are getting the bait.

The Hon. RICHARD COLLESS: What would it take, is it six milligrams for a dog?

Mr LANE: That is how much is applied to a bait.

The Hon. RICHARD COLLESS: And how much does it take to kill a pig?

Mr LANE: I am unsure exactly how much it is.

The Hon. RICHARD COLLESS: Is it more than six?

Mr LANE: It is more than six, yes. It depends on the size and the weight and the age of the species as well.

The Hon. RICHARD COLLESS: The problem with baiting meat for pigs is that you have a much stronger bait--

Mr LANE: Stronger bait, that is right.

The Hon. RICHARD COLLESS: --which is going to kill other animals.

Mr LANE: Yes.

Mr ALLISON: The amount used in Queensland is 60-plus milligrams to a meat bait for a pig, but you determine when you free feed your population roughly what weight is in the animal and you apply the 1080 according to the weight of the animal. It works on live weight, per kilo of live weight, but usually about 60 milligrams to a pig--

The Hon. RICHARD COLLESS: 60 milligrams to kill a pig as opposed to six milligrams for a dog.

Mr ALLISON: --as against six milligrams to a dog.

CHAIR: Can I go on to your submission. You indicate that the animal most boards say has a high impact on agriculture and the environment is the fox. You also say that the main problem with fox control is that it is voluntary. Why do you not then advocate compulsory obligation on landholders to control foxes? Does not your argument that it is difficult to enforce control of foxes also to apply to wild dogs? On page 15 of your submission you mention that.

Mr LANE: I was just going to say that foxes are highly mobile and cover a wide range of areas and it is hard to actually pinpoint where a fox lives I suppose, and to enforce control on one person that might have foxes, where the home range of the fox might be further than just that person's holding, is a bit hard to regulate. Keith, do you want to add anything further?

Mr ALLISON: It is very hard because of its mobility. It is exactly the same as pest control of dogs, but with foxes they are not as damaging as a dog in relation to kill ratios of stock, but they do kill, and with education from the boards we have improved and increased productivity for the control of both pigs and dogs in relation to lambing ewes and cattle, et cetera. We have been able to achieve, without legislation or regulation, a far greater use of control of foxes,

and we would much prefer to do that - people understand the benefits for their efforts when the money is outlaid in relation to fox control - than to try and force someone to go and do something and expend money that he does not want to do and not realise the benefits he is getting.

CHAIR: You note the need for far better co-operation between boards, National Parks and landholders in relation to fox control. How can this co-operation be brought about? What is the role of the boards in promoting co-operation? What are the barriers to greater co-operation? And you deliberately make no mention of State Forests and Department of Land and Water Conservation among the bodies which need to co-operate.

Ms CATHLES: Mr Chairman, throughout the board system's co-operative fox programs that cover large land tenure are put together, rangers actually get landholders to work together and if there are adjoining public land managers, they now also are brought in on those fox baiting programs, and just as the fox abatement plan runs twice a year, they have started to do that now in rural areas.

Mr LANE: If I could add to that, Mr Chairman, an example of co-operative fox baiting is the large fox project that started in the central west and is actually moving south to the border, whereby there are I think 11 Rural Lands Protection Boards in conjunction with Government agencies and private landholders all strategically baiting at certain times of the year, namely March and September. It depends on the area, but they are strategically baiting so that more people receive the benefits of baiting as a group rather than as an individual, baiting by themselves.

The Hon. MALCOM JONES: You mentioned that you had a problem with the clarity of the Native Vegetation Act vis a vis pest animal control. You allude to that. Would you expand on that please?

Mr ORR: Yes, I will answer that. In relation to the Native Vegetation Act, as you will probably be aware, it establishes a regional vegetation planning process and there are a number of regional vegetation committees which have been established around the State to look at the development of regional vegetation plans. Those committees, as I understand it, develop plans which are statutory plans, and the question which has been posed is by those committees, when they come to consider issues in relation to pest animal control where there is a cross-over between pest animal control and native vegetation management, where does the Rural Lands Protection Act and the controls within it in relation to pest animals stand in relation to the Native Vegetation Act? And it is not clear from our point of view.

For example, the case whereby there is rabbit harbour under timber and someone is obliged under the Rural Lands Protection Act to control those rabbits under that timber, yet under the Native Vegetation Act there are controls placed on that individual in terms of what they can and cannot do in relation to that native vegetation. So there is potential for conflict between the two acts.

The Hon. MALCOLM JONES: Has the Minister offered any qualifying explanation?

Mr ORR: We have been seeking some explanation from the Department of Land and Water Conservation and to date we have not satisfactorily resolved the matter.

The Hon. MALCOLM JONES: In your opening address, so I understand what your obligations are, you said you had a responsibility for travelling stock reserves?

Mr ORR: That is right.

The Hon. MALCOLM JONES: What does that mean?

Mr ORR: TSRs are tracts of land throughout the State. They amount to 600,000 hectares.

The Hon. MALCOLM JONES: Stock routes?

Mr ORR: Yes, stock routes.

The Hon. MALCOLM JONES: Ms Cathles, you mentioned that landowners' licences had not been renewed.

Ms CATHLES: That is correct, the D class licence.

The Hon. MALCOLM JONES: The D class licence is for semi automatic weapons?

Ms CATHLES: Correct.

The Hon. MALCOLM JONES: Has there been any communication with the Minister for Police on this?

Ms CATHLES: Yes, there has.

Mr ALLISON: Yes.

The Hon. MALCOLM JONES: Did you get any responses.

Ms CATHLES: Yes, we did get a paper back.

Mr ORR: In terms of where we are up to with that one, we had a meeting with the Minister for Police some weeks ago and I guess the way in which it has come about -

The Hon. MALCOLM JONES: The new one or the old one?

Mr ORR: The new one, Mr Chairman. I guess where we are at is that we proposed some amendments to the Firearms Act whereby the issues surrounding D class licences would be freed up. I guess it has come down to a matter of interpretation in terms of the existing legislation, and, as I understand it, the firearms registry is applying a slightly different interpretation, based on a decision of the Administrative Appeals Tribunal, to the way in which they issue D class licences. The effect of that has been that no D class licences have been renewed for a number of months, and as Keith Allison outlined previously, there are concerns regarding that as to the landholders' capacity to control feral animals without D class firearms. The latest, Mr Chairman, is that the word we got back from the Police Ministry is they are looking at an administrative solution as opposed to changing the legislation. However, I cannot comment on what that administrative solution might be at this stage.

The Hon. MALCOLM JONES: Ms Cathles, you also made mention that deer needed to be classified as a pest.

Ms CATHLES: That is correct.

The Hon. MALCOLM JONES: How much deer activity is there, or damage or presence is there, outside of Crown land?

Ms CATHLES: To give you an accurate answer on that, I think we would have to take that on notice and get the board to actually specify.

The Hon. MALCOLM JONES: Is it a big problem or a little problem?

Ms CATHLES: Yes, it is a big problem. It is also the nature of the animals. They are very difficult to contain or control; they are very aggressive; they present really an occupational health and safety problem for both land managers, private and public. So it is an extremely big problem.

The Hon. MALCOLM JONES: They are aggressive?

Ms CATHLES: Very aggressive.

The Hon. MALCOLM JONES: So they will come at humans?

Ms CATHLES: That is correct.

The Hon. RICHARD COLLESS: Firstly, could I commend the State council on your submission. The way you have structured it, outlining the control techniques of the various animals and so on, is very well done and easy to understand. So congratulations for that.

The first question I would like you to address is the status of dogs as pest animals. Are wild dogs declared pest animals?

Mr ALLISON: Yes, they are control order. You have two control orders, a general control order and a control order 2 in relation to the protection of species of dingo in national parks.

The Hon. RICHARD COLLESS: So there are actually two separate orders relating to dogs, one for pure bred dingos -

Mr ALLISON: Yes.

The Hon. RICHARD COLLESS: - and one for wild dogs?

Mr LANE: There is one order but there are two schedules within it.

The Hon. RICHARD COLLESS: So the two are separated. That is the main point.

Mr ALLISON: And the areas identified for breeding, et cetera, are nominated in that second control order.

The Hon. RICHARD COLLESS: Right, for pure bred dingos.

Mr ALLISON: To try to maintain a dingo species.

The Hon. RICHARD COLLESS: So the order relating then to wild dogs, there is a requirement then to fully and continuously suppress and destroy?

Mr ALLISON: Yes.

The Hon. RICHARD COLLESS: Across all land tenures?

Mr ALLISON: Yes.

The Hon. RICHARD COLLESS: Including national parks?

Mr ALLISON: Yes. On those national parks that are not nominated in control order 2. They are not to continue to eradicate, et cetera. They are there to control wild dogs to the extent that they are not causing anybody any harm.

The Hon. RICHARD COLLESS: So there is a legal responsibility on all land managers, both public and private, to control dogs living on their land?

Mr ALLISON: Yes.

The Hon. RICHARD COLLESS: So they do not cause problems to neighbours and other persons?

Mr ALLISON: Yes.

Mr LANE: In time, and it has already started actually, the schedule 2 lands, Crown lands, have an obligation to put together a wild dog management plan for that area and take in stakeholders' issues as well in that, and that is a plan that will be agreed to between the occupier of the land and the board involved.

The Hon. RICHARD COLLESS: In relation to the wild dog numbers that you have in your submission, only 15 per cent of the responses said that numbers were significantly increasing, 36 per cent said both that they were increasing and stable. Can you give us some idea of how they were distributed on a regional basis? I would like to try and identify if there are particular areas of the State where dogs are more of a problem than in other parts of the State. If we were to look at the south-east area, around the Kosciuszko National Park, for example, what was the distribution of figures there?

Ms CATHLES: The actual numbers we would have to take on notice and get back to you. Traditionally the tablelands are high incidence areas and the western division, just an off-the-cuff answer, but the tablelands in particular.

Mr LANE: Would you like those?

The Hon. RICHARD COLLESS: Yes, I would like to see some regional distribution of those figures because I think they are important. The other thing is that, given that foxes were identified as basically the biggest issue I think in

terms of those graphs that you gave us, do you see that that is the case because foxes are more widespread across the State, more evenly distributed across the State perhaps?

Mr ALLISON: Yes, most definitely.

The Hon. RICHARD COLLESS: So in all agricultural areas foxes are a problem.

Mr ALLISON: Yes.

The Hon. RICHARD COLLESS: But not in all agricultural areas are dogs a problem.

Mr ALLISON: That is right. To give you an example, in the western division there are ten boards and the ratepayers of those boards contribute to the maintenance of 660 kilometres of dog-proof fence. With the methods and the materials we are using today in maintaining that fence, the incidence of dog scouts and dog attack further away from the fence is getting less. In the 1930s I think Hillston PP board paid for 31 scouts in one year. We are not getting that number. Wilcannia would not get that number in any year and that is only a couple of hundred miles away from the fence. The method of raising rates out there is on land area and those people with less carrying capacity in the biggest areas associated with the fence pay the biggest bill because they believe they get the greatest benefit of the fence. We have proven that we have been able to maintain our costs in relation to doing that by incorporating plastic coated netting, sandhills, and other, so we believe that the incidence of dingos out there and the cross-hybridisation of dogs is getting greater. That is our biggest worry: Hybridisation.

The Hon. RICHARD COLLESS: Mr Allison, you spoke about the dog fence and the Sturt National Park issue and so on. The dogs that live on the other side of the fence - what is the purity of them? Do you have any information in that regard?

Mr ALLISON: The ones in Sturt National Park come from the other side of the fence. They had to.

The Hon. RICHARD COLLESS: But what is the purity of those dogs?

Mr ALLISON: I have not had it confirmed, but the last report I had was that about 50 per cent of them could have been classed as dingos. The rest were all hybrids. You have got a huge tourist trade through there and they all have their pets with them.

The Hon. RICHARD COLLESS: Could I just go back to the comments you made about 1080? It is obviously an issue that the Committee is pretty concerned about, the potential deregistration of 1080, and we have heard from national parks people and many land holders and so on about the potential impacts if 1080 is deregistered. Can you give us a bit of an idea about what other control methods, legal or illegal, people will be forced to use if 1080 is removed?

Mr ALLISON: Well, in relation to dog control, et cetera, South Australia has the option of both 1080 and strychnine. Strychnine is a take-home poison in South Australia whereas 1080 is under control. There would be a source there if you could get it. New South Wales used to have that. I think it is limited now to use on traps and that is the only use.

The Hon. RICHARD COLLESS: Would you consider that strychnine is a more dangerous chemical than 1080 in terms of its environmental impacts and also its safety impacts?

Mr ALLISON: Strychnine is more dangerous in relation to taking other species. It affects your birds to a degree far greater than 1080 does. Birds can eat 1080 and it is like raspberries. If they eat strychnine they will get stomach pains and start vomiting very quickly. Then you have CSSP for pigs. If that goes, well, we do not know what poisons we are going to have then. Dips and stuff that used to be used in the past have gone, so the limit of take-home poisons, et cetera, or aids to control feral animals, we have very, very little avenues.

The Hon. RICHARD COLLESS: Would it be fair to say that the reason that most of those other chemicals or poisons have been deregistered is because of their potential impacts on the environment as well as their safety in handling issues and so on?

Mr ALLISON: I think with most of the chemicals that we used as aids for animal reduction, like dieldrin and Lucijet and stuff like that, it was because of the animal health situation, not the environment. It was for animal health mainly, their withdrawal off the market.

Mr LANE: On the second part of your question, the other control methods open, for instance, with wild dogs, would be shooting and trapping and, while they are good techniques, they are also labour intensive and expensive to run, so the deregistration of 1080 for those purposes would increase that I suppose, but, as you have alluded to, also increase the use of unregistered and illegal poisons.

Mr ORR: I guess the issue there is how effective would we be in the control of wild dogs in particular without 1080 when we are reliant solely on trapping and shooting. We would have to say that we would be very ineffective.

The Hon. RICHARD COLLESS: So it would be fair to say that removal of 1080 would be removing a very important component of an integrated pest management strategy?

Mr ORR: Very much so.

Mr ALLISON: Very much, yes.

Mr ORR: And you would see the problem escalate?

Mr ALLISON: You have rabbits, you have pigs, dogs - virtually every species of pest animal. 1080 is very, very good and it is specific in comparison to others. With birds and other, you have no effect.

CHAIR: Aren't recreational shooters an important part of feral animal control? That is what the Game Bill reckons.

Mr ORR: Are they an important part of feral animal control?

CHAIR: Yes.

Mr ORR: I think recreational shooters can certainly play a role. The question or the issue which has been made clear throughout our presentation is the need for coordinated and planned control campaigns and, in terms of feral animal control, I guess our view would be that they are important in terms of playing a role in controlled and planned campaigns.

CHAIR: But not on their own. The game council is outside the pest animal council and it concerns me, at least, that we have these two bodies separate from each other. It would seem more sensible to merge them into an integrated approach rather than separate approaches.

Mr ORR: The game council seems to be set up for a specific purpose in terms of regulating, to a degree, the hunting industry, if you want to put it in that way. In terms of having the two bodies side by side, or as one, you would wonder whether or not they could achieve their own individual objectives. From our point of view, it would come down to a local level whereby recreational shooters, if they wished, would have the opportunity to be involved in feral animal control programs coordinated by the local Rural Lands Protection Boards and I do not think we have any issue with that. The concern which has been raised in the past has been the impact of these people on such programs as they are taking place where they come into an area and start blasting away with their rifles and have an impact on a control program which is going on in that area, so that is of concern, but we would certainly hope that we could get greater coordination with recreational shooters in terms of what we do and in terms of coordinated feral animal control programs within our district.

CHAIR: In future, if the bill passes, as it may well, pest control orders have to be run by the game council first. The game council would virtually have to approve of pest control--

Mr ORR: That is not my understanding. My understanding is that the Minister has to consult with the game council. I guess one issue there is what level of consultation is required. For example, there is the potential for issues in relation to a pest control order in relation to deer within certain areas. The deer is an issue and we will give you some more information regarding the deer in certain board areas, but how much of an issue does it then become in a political sense of having a pest control order when, on the one hand, you are looking at a recreational issue and, on the other hand, you are looking at a pest control issue?

CHAIR: We have had evidence given to us by Agriculture and National Parks and Wildlife Service that recreational shooters have been introducing pigs for sporting purposes into areas where they had been removed. Have you had experience of that?

Mr ORR: It has certainly been suggested that that sort of activity does go on. How much strong evidence we can actually provide to you is probably questionable, but it certainly has been suggested by boards that those sorts of activities do go on whereby areas which were previously free of feral pigs, for example, are no longer free and the only conclusion they can reach is that pigs have been introduced into that area by recreational shooters for the purpose of recreation.

The Hon. JOHN JOBLING: In what I would describe as perhaps your wish list of about ten items or so, the reference to integrated data and mapping in relation to feral animals - is this done by the individual agencies and the board in any way now and, if it was to come into being, who are you suggesting should perhaps be the lead agency and how would you envisage it operating?

Ms CATHLES: As it operates at the moment, agencies do verbally work out and have management plans, that is our integration. There are excellent mapping programs that National Parks have, that Forests have, that have been presented to the pest animal council. The knowledge that sits around the pest animal council is huge. It also does include the game council. If you could get all that knowledge working together, the programs that you could have coming out of that - I suppose that it would have to come back to the pest animal council, Department of Agriculture or Rural Lands Protection Boards to amalgamate those because they are the agencies that are doing it all the time, and national parks are doing it all the time as well. It is very difficult. You would have to have a meeting of all the bodies to decide how best to do this and I guess the pest animal council would be the best avenue for running such a meeting.

The Hon. JOHN JOBLING: What in fact you have said to me then is that the evidence and knowledge is out there?

Ms CATHLES: Yes.

The Hon. JOHN JOBLING: Everyone has it in their own little bailiwick, but there is no master plan.

Ms CATHLES: That is right.

Mr ORR: It is not integrated.

Ms CATHLES: And what you could do if that was integrated is huge.

The Hon. JOHN JOBLING: Has anybody moved down those lines?

Ms CATHLES: The resources have not been available. Everybody has been busy taking care of what they have to take care of. That is an extra resource thing that needs to be funded.

Mr ORR: Chairman, if I could just add to that, as Chris Lane mentioned before, the boards now prepare an annual pest animal management plan. The question is how do we go about measuring our performance in a valid way, and sure you get a lot of anecdotal evidence in terms of what is going on and the like, but there is no clear scientific way of gathering that information across the State so that we can present a State-wide view as to what is happening. For instance, the number of wild dog attacks in relation to stock loss, the number of feral pigs in the State at the moment, we cannot do that with any degree of validity at the moment, and that is of concern, particularly when it comes to addressing inquiries such as this, and also in terms of measuring our performance as to how we are actually progressing with feral animal control across the State.

The Hon. JOHN JOBLING: Is it possible in the wild to keep a pure bred dingo or is it inevitable with cross breeding that we will finish up with just a collection of wild dogs, some with a high per centage of dingo?

Mr ALLISON: I believe the second, and the scientists who spoke at the summit the other day said they believed you have to make a fence compound to keep every other dog out to try and keep the gene, otherwise you will get hybridisation. The rate of hybridisation today is horrific.

The Hon. JOHN JOBLING: Which leads to your core area of breeding in Sturt National Park in doubt.

Mr ALLISON: I am quite sure it will not last. There will be not a pure dingo in Sturt. And it was not a breeding area before; it is not an actual breeding area. It was sheep country. There were no dogs on it 30 years ago and it is not a natural breeding area.

The Hon. MALCOLM JONES: That would make dingos on the islands off the coast that much more valuable then, because they are easy to contain.

Mr ALLISON: Fraser Island dingos started eating people because they had eaten themselves off the island.

The Hon. MALCOLM JONES: I agree absolutely, and then we started shooting them.

The Hon. JOHN JOBLING: Not quite.

Mr ALLISON: There was nothing there. You take a photo of a dingo on Fraser Island, it is on the beach looking for dead fish, because there is nothing on the island. I have been there.

CHAIR: Time is actually up there, so any more questions can go on notice.

Mr ORR: Can I make one last comment, Mr Chairman?

CHAIR: By all means.

Mr ORR: It is in relation to the use of 1080. The question was posed earlier on as to what are the arguments against the use of 1080 and I do not know if we actually addressed the question. There are arguments in terms of the impact on non-target species and certain welfare issues, and I should say that there are very detailed procedures in terms of how Rural Lands Protection Boards go about the use of 1080, and in terms of the arguments against the use of 1080, the question is: What is the scientific evidence associated with those purported arguments? What is the basis, what is the proof that supports those arguments? And at the end of the day, given those issues, and on balance, is it best to maintain 1080 or is it best to remove it and in removing it from use what are the outcomes? And the outcomes, from our point of view, are quite considerable when it comes to the control of pest animals across the State, and in our opinion we would be a lot worse off without 1080 and it is an absolute key cornerstone in any pest control plan currently.

The Hon. RICHARD COLLESS: Environmentally and agriculturally?

Mr ORR: We believe so.

(The witnesses withdrew)

JOANNE MARY BELL, Vice President of Animal Liberation (NSW), Locked Bag 18/202, Newtown, and

KATHERINE MARGARET ROGERS, Vice President, The NSW Animal Societies Federation, PO Box 211, Gladesville, affirmed and examined:

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

Ms BELL: I am.

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

Ms ROGERS: 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 heard or seen only by the Committee, the Committee would be willing to accede to your request, but it may be overturned by a vote of the Legislative Council. Do you wish to make an opening statement?

Ms BELL: Yes. How long have I got, three or four minutes?

CHAIR: Maybe ten minutes each, whatever you like. We will need time for questions. You have about an hour all together and we would like at least half an hour for questions.

Ms BELL: I will be briefer than that. Referring to the terms of reference, firstly about damage, I found, I must say, points 1, 2 and 3 of the terms of reference rather difficult and that would seem to be a basic assumption that feral animals were indeed a threat to our livelihood life and all that we hold dear, and, secondly, that any means of getting rid of them was acceptable. That seemed to underpin 1, 2 and 3, but nevertheless, I will stick to that, as those are the terms of reference.

Nevertheless, I would like to quote a Natural Heritage Trust survey undertaken for Birds Australia. It pinpointed six threats to birds in eastern Australia. Land clearing is the main threat. Because of land clearing, one in five of Australia's native bird species is going into extinction. Land clearing kills 7.5 million birds every year. For every 100 hectares of woodland cleared, up to 2000 birds permanently lose their habitat. Land clearing is therefore the main threat to birds' survival in Australia. I would once again say that is a Natural Heritage Trust survey done for Birds Australia. The next mostly deadly threat is over-grazing by sheep and cattle. In some areas of New South Wales where sheep and cattle graze extensively, 40 per cent of Australian native species have disappeared. The third threat is a change in fire patterns. The fourth is agricultural activities as they are practised now. The fifth is the growing loss of remnant vegetation in cleared areas, and right at the end, because it is right at the end that they come in, introduced predators.

The second term of reference of reference was: What threat in the future would the feral animals be? I would quote two things from the threat abatement plan. The two I am most familiar with are the cat and the goat. So the two quotes from the cat and the goat TAPS are as follows, this is directly from the Feral Cat TAP:

> The knowledge gap on the impact of feral cats on the environment precludes an accurate estimate of the costs imposed by the cats or the benefits to be gained by their control.

This is only one of many such statements throughout the Feral Cat TAP. I would say from the quality of the printing of these TAPs that they were pretty expensive to print, and that is just the printing, and no doubt a great deal of work by paid public servants went into their preparation. Therefore, a great deal of money was spent on just the Feral Cat TAP. When it says that the knowledge gaps on the impact of feral cats preclude an accurate estimate of the costs imposed by the cats, I would have thought that research would come first and then the spending of money on plans on how to deal with it. In this case it seems to have gone the other way.

With the feral goats, once again this is just one quote from the Feral Goat TAP:

> Feral goats do not appear to be a threat at all, other than in the presence of large numbers of herbivores, in other words sheep and cattle.

So it would seem that according to the TAPS put out by the Government that the threat in the future of feral animals to our way of life is pretty doubtful.

The adequacy of current practice is the third of the terms of reference, and my statement on that would be that for 100 to 150 years we have been using lethal means of getting rid of non-native wild animals and it simply has not worked. We are sitting round the table discussing whether there is something else we should do, and I agree there is definitely something else we should do. The termination of the lives of vast numbers of non-native animals, not only in this country but all over the world, is a disgrace to what would be termed a civilised community.

Then relevant matters - I am taking the fifth one as the fourth matter - relevant matters would seem to cover welfare, because it is not covered by that name in any of the other terms of reference. The methods used to kill feral animals are abominable. If we used them to kill domestic animals or pets we would be in gaol. You may remember last year a man, Luke somebody, was had up because he tortured and killed a kitten and he did not receive much in the way of a sentence. I think he got community service or something of that order. There was tremendous public outcry, and also from us, and as a consequence of that the DPP has put in an appeal. That is just one kitten, tortured for an hour by a person who is obviously psychiatrically troubled, but under the name of getting rid of feral animals because they are such a threat, we use myxomatosis, which I have read if it were now put forward for authorisation it would be refused, such is the appalling cruelty of it; calicivirus, which is said to be the quiet death but is not - the rabbits scream as they die; phosphate on pigs, which the gentleman who was giving evidence here before mentioned, which in fact burns the guts of the still living animal and they can take a great many days to die; 1080, which this gentleman also mentioned was used on just about everything, including I may say native Australian animals, in Tasmania in particular where it is used to kill wallabies. Every year the farmers are handed out 1080 by Parks and Wildlife in order to kill wallabies, and it is used to kill wallabies because although deer farmers fence their properties, and as a consequence do not have a problem with the wallabies, the cattle and sheep farmers refuse to do that. It is really much like a householder leaving their front door open and then demanding insurance. Not only do the wallabies come and eat because there is nothing to stop them, but the farmers also allow their cattle to graze in the forests, and the cattle of course eat exactly the same foliage that the wallabies would, if there was any left after the cattle had been there.

The Hon. RICHARD COLLESS: Maybe the cattle go into the forests because the wallabies have eaten all the grass out in the paddock.

Ms BELL: Well, the farmers put them in the forest, so I guess the farmers know what they are doing, but if the farm was fenced, of course, they would not have the wallabies in their paddocks, as the deer farmers, I understand, do not have wallabies in their paddocks. If you have property and you have animals, or anybody else really who shares the land, then clearly you have got to do something to protect it. That is only common sense. Any insurance company would say the same thing.

Then, of course, there is helicopter shooting. We have a recent thing, particularly very high profile, of the brumbies, and what a mess that was, and also one in which Animal Liberation was much involved the helicopter shooting of the goats on Lord Howe Island - also a great mess. We began that, we sued the pro hunt people in New Zealand and also the authorities on Lord Howe, but we are a small group, a voluntary group, with no funding, we only have the money that is given to us. We had to withdraw from that case, but it certainly was not because there was any lack of cruelty. Also I must say, there was a thorough search done by one of the members of Animal Liberation in ACT. She works as a public servant in the Department of the Environment. She managed to find three papers about any threat that the goats may be on Lord Howe Island. She found, in fact, that they were no threat to any endangered species of either animal or vegetation. One of the terms of reference in the TAPs is that before Federal funding is used there must be some known threat to threatened or endangered species. In this case there was none. There was no animal threatened. As far as the vegetation went there was very little damage. The damage that was noted was on a form of vegetation which was prolific in other parts of the island and which in any case was not in any way endangered. If anyone would like a copy of this paper, which is a very good search, then I am very happy to send it to them. This was a case where the animals were actually slaughtered, despite the protests of the people on the island and despite our protests, despite the complete lack of any evidence whatsoever that they were a threat to any endangered species. Despite all that, they were slaughtered and in the worst way possible.

Alternative solutions - that is number four but I am taking it as number five. Alternative solutions I would suggest would be the ones I said before of fencing by farmers. That would be one solution. I noticed an article which you probably all saw on the weekend about wild dogs. I am sure you saw it in the Weekend Magazine of the Sydney Morning Herald about the wild dogs and how they are bred with the dingos and how dangerous they are. I am perfectly happy to believe all that. One of the things that was said was that the animals could travel easily up to 50 kilometres a

night. If they came upon a farm that was adequately fenced with electric fencing, they went around it and moved on to the next farm. I think that speaks for itself.

The second alternative solution obviously would be to phase out sheep and cattle. I have also said in my earlier statement that 40 per cent of Australian native species have disappeared because of sheep and cattle. You might also have seen an article, also in the Sydney Morning Herald, in Spectrum a month or two back, this was the article, "A Load of Hot Air". In it they quote two people, a Dr Chris Dickman, who is a Sydney University zoologist and chairman of the New South Wales Scientific Committee that advises Government on which animal should be listed as threatened. He regards the sheep as an enormous threat to biodiversity. Earlier in the article he said, yes, number three, feral animals should be looked at, and the one that should be looked at hardest is the sheep. It also quotes a Dan Lunney, who is a scientist with the New South Wales National Parks and Wildlife Service. He has published a scientific paper which sheets home the blame for the extinction of 24 mammal species in the western division of New South Wales directly to sheep. Not of course that the sheep kill them, but that they remove their habitat in effect. It is partially removed, of course, by the farmers by the trees being removed. Then they set millions of sheep and cattle on it, the grazing animals who, as we all know, are devastating to the land and are mainly responsible for the rise of salt. The sheep come along, the cattle come along and then there is no habitat, so the animals die. So 24 mammal species in the western division of New South Wales, their demise is sheeted home directly to sheep. He also says:

> The impact of ever-increasing millions of sheep refuges on all frontages, through all refuges and across all the landscape in the mid-1880s is the primary cause of the greatest period of mammal extinction in Australia in modern times.

Not in fact the feral cat as we have been told, but in fact the sheep. Now, of course, Animal Liberation obviously is not in favour of slaughtering sheep, but we are very much in favour of ceasing to breed sheep, and as you would be aware, most sheep these days, if not all, are artificially bred and so it would not be a case of slaughtering sheep at all but merely of ceasing to breed them.

I think that would be all that I have to say in my initial statement. Thank you for listening.

CHAIR: Ms Rogers, do you have a statement?

Ms ROGERS: Yes, I would like to build on some of the points that Jo had to say.

Once again, looking at the terms of reference, we have got, "The damage caused by feral animals to the environment across all land tenures". I guess like Jo I would see the major damage done to the environment by animals is animals used in the commercial context. There was a news item just recently about the threat to native fish species caused by trout, yet there were hasty claims from the Government that it was not going to stop the stocking of trout in rivers. Quite clearly the commercial need appears to override environmental needs and I think this would be a much stronger negative effect on the environment than so-called feral animals.

What is the evidence in fact that feral animals do cause species loss? And this is what we are talking about here surely. We are talking about biodiversity. It seems to be a given, as it is in the terms of reference here, it is accepted. As Jo said, if you look through the threat abatement plan for feral cats, there are assumptions, statements saying there is no direct evidence that cats are a threat to biodiversity, and in fact if you look at the evidence, the evidence that is given is that cats do prey on other species, and of course they do, but before the cat we had the quolls, we had many more birds of prey and so on. Predation is a necessary and an important part of any ecosystem and without it we would find that the prey species would possibly develop disease and die out, because most prey animals are the sick, the weak and the diseased, and this evidence has been supported by National Parks officer Rick Natress in Queensland who had a shelter and said most of the animals brought to the shelter suffering from cat predation were already sick, diseased or injured.

Basically, the research does not look in any detailed way at modelling all the effects on the environment. It does not look in great detail at the effects of development and human inroads, and this is what is overlooked, and of course the cat is easy prey. As Jo said, there is huge evidence of the damage to our environment. In Saturday's paper there was an item talking about global warming and the effects of the melting ice and huge ice flows breaking off from Antarctica. I have got this here and I will pass it around later. So there is huge evidence of global warming, which is certainly already a threat to species in alpine areas and ecologists see this threat as increasing. So I guess if we are looking at feral animals and the focus on feral animals that is given by Government, we might see it as in fact not only useless from the environmental point of view, but dangerous, because there are only so many Government dollars that are going to go into the environment. The focus on feral animals is drawing attention away from the real issues affecting biodiversity, and indeed our very survival in the long-term, issues like global warming, salination, the desertification of so much of

Australia. So basically, yes, I think the focus on feral animals is not only useless as far as biodiversity is concerned but actually dangerous because it takes away important environmental effort from where it belongs, on issues of global warming, devegetation and so on.

Current and future threats of feral animals to native flora and fauna and so on - there certainly is concern about the amount of poison that is being poured into the environment. I think up to one tonne of 1080 a year is poured into the Australian environment, despite the fact that the inquiry into 1080 being conducted at the moment makes an admission that we do not know the long-term effects of 1080 on the environment. So from an environmental point of view, I think we have to have very serious concerns about the long-term effects that this amount of poisoning is going to have on the environment.

We might also be concerned about the diseases that have developed, such as the calicivirus, whose long-term effects once again we do not know, but certainly there was a government paper that came out last year about the threat of disease in wild animals which could impact on our trade and on human health and once we start developing new viruses to kill animals the possibility of these viruses leaping species is indeed very serious, as is pointed out in this paper, and I think it is something that we must consider, so we must consider the dangers of the mechanisms that we are using against feral animals.

One of the other things that we have not looked at is values and community values in relation to the methods we are using against feral animals. Quite often community concerns about the suffering of animals are brushed aside as unscientific, but everything we do is based on our values. It is a matter of whether we put our commercial values ahead of our values related to animal suffering and I think it is important that we consider these values.

I brought along a book - I do not know if any of you have seen it - by a very well-known writer, Louis de Bernieres, called Red Dog. It is a story of a real dog who was a community figure. The whole community thought this dog was an intelligent dog, they admired his spirit, he lived semi-wild and he was regarded as an important feature of the community. He died through eating strychnine and the whole community came out, tried to save his life, the vet tried to save his life, but he died in great agony from strychnine poisoning. Now this really highly regarded writer thought it worth his while to write a book about this and this book has sold well.

I raise that as an example that the community is concerned about what we are doing to our animals in the name of biodiversity. There is even a sentence in this book where one of the characters said "They are doing the same things to cats, just because they are not native." This represents an example of the level of community concern about the suffering of our animals, as does the community concern over the killing of the brumbies in Guy Fawkes National Park, an issue on which the RSPCA is pursuing National Parks and the case is proceeding at the moment, as is the issue of the deer in the Royal National Park at this point in time. There are numbers of people who are trying to stop the shooting of the deer largely because of the suffering and also because the evidence is lacking, as in so many of these cases, that the deer are in fact having an adverse impact on the environment. Research in 1981 sponsored by National Parks stated that the deer were not having a negative impact on native species, yet now we have the statement that the deer are in fact having a negative impact. The evidence is not forthcoming. The deer have been there for the better part of 100 years. If indeed they were going to have a negative impact, it is likely that those species negatively impacted on have long gone. A hundred years is a long time to determine whether you are having a bad impact on the environment. There is no strong evidence that that impact is happening. There are also concerns that the rifles used to kill deer are not the level of rifle which will bring about a quick death, the .22 for the does and fawns and the .22 magnum for stags. We have had advice that these are not the correct rifles to use on these animals, they cannot guarantee a quick kill, and this is from a forensic expert.

If we are looking at where we go in the future, if we do indeed decide that these animals are a threat to the environment, why do we always jump to the poisons and the shootings and the trapping? There are so many non-lethal means that we should be looking at and are not considering specifically. The Companion Animals Act specifically exempts farmers from having to register dogs, so there is no bonus to them for desexing. Most farm dogs are not desexed. Most farm cats are not desexed. This results in suffering of animals and the increase of hybridisation.

Finally, I would like to say we are killing dingos, we are killing foxes, we are killing cats. All these animals prey on other predators. The dingos could kill the foxes, could kill the cats. At no stage are we looking at the establishment of a natural balance here. At no stage are we attempting to find out what would happen if we had a hands-off attitude to see whether a natural state of balance could be established. I think this is something that we do need to look at from the point of view of research to see whether pouring poison into the environment, creating disease, is the way we really want to go.

CHAIR: The inquiry basically was started as a result of a number of complaints from the Snowy area of dog kills on sheep mainly. They say there has been a significant increase lately, and that is basically why the inquiry started. How would you advise those sheep farmers who are losing 50, 100, 200 sheep per year to deal with the problem?

Ms ROGERS: Well, there are obviously the Maremma guard dogs which are used in some areas and which are found to be very, very effective. They have been used overseas for a great number of years. There is also electric fencing. As Jo stated in her statement, the dogs are known to bypass areas where there is electric fencing. I mean it might be the case that, instead of pouring the money once again into poisons and trapping, that money could be spent on giving low interest loans to those farmers who could not afford it to enable them to provide electric fencing and maintain it.

Ms BELL: If I could add to that: In this article it is indicated quite clearly in several statements on the various farms concerned - this is the one about the wild dogs that I quoted that was in the Weekend magazine this weekend - that they are pretty much alongside national parks. Now if you set up a farm with what amounts to lunch wandering about and you have wild animals--

The Hon. RICHARD COLLESS: Could I just interrupt you there for a moment, please, because in most cases these people did not set up a farm next to a national park. In the vast majority of cases the national park set up a national park alongside the farm, so whose responsibility is it to do the fencing then?

Ms BELL: Well, the national park of course was set up - as National Parks and Wildlife Service is a government body - presumably by the will of the people. Parks and wildlife is set up, theoretically anyway, to look after our animals, so if that is by the will of the people, that's too bad. If a road needs to go through somewhere, the road goes through, despite the fact that houses may be sold. I do not wish to sound harsh, I am just saying that the reality is, if you set up lunch somewhere and wild animals are next door to it, the wild animals are not going to ignore lunch.

The Hon. RICHARD COLLESS: Lunch was not set up next to it.

Ms BELL: Sure, but they are now, that is the point made in the article, that they are right now. Hybridisation occurred, of course, because farmers allowed their dogs to go free, and also in the Snowy I understand - it was mentioned in the article - a lot of the people working on that over a number of years had their own dogs, and so hybridisation happened. One of the wives of one of the farmers is quoted as saying - she is an elderly lady - that 60 years ago there were plenty of dingos in the forest and she hardly ever saw one. They just stayed in there. It was only when the hybridisation occurred that the problem happened, and so it all goes back to what we did, and I guess what Katherine is saying and what I am saying is that we have to somehow drag ourselves past the point where we slaughter our mistakes. We do something about our mistakes, but we don't slaughter the victims.

Ms ROGERS: Also I think if we required farmers to desex their animals this would be a significant improvement, so that we do not get puppies wandering off into the bush to add to the hybridisation of dingos. Requiring this would have a significant impact.

The other thing we have done is I think we have taken their lunch and, as the gentleman from the Rural Lands Protection Board was saying, the dingos on Fraser Island are starving. Why are they starving? Not because they have eaten themselves out of house and home but because the wild horses that used to live on the island have been killed and taken away. They used to eat a significant amount of wild horses because the horses would roam on the sand and a number of them would die from taking in the sand and the dingos would eat those. Basically we have taken away their lunch and I think this could be happening also in the areas that we are speaking of. If we are making every attempt to kill feral cats, for example, which is certainly something that the dingos and the wild dogs eat, we might be destroying what could be a reasonable state of balance, so all those actions I think could contribute to make things better for the grazier.

The Hon. JOHN JOBLING: The two statements in relation to puppies wandering off and dingos eating horses are interesting. What scientific evidence are you basing this on or are you basing it on anecdotal evidence?

Ms ROGERS: Well, I am basing it on evidence I was provided by an officer of the wildlife council, a wildlife body in Queensland.

The Hon. JOHN JOBLING: For a statement like that to be verified, in reality, the author needs to be stated and the academic rigour that goes with it. At this stage I would put it to you that it is a general statement you have made but, without the background, the Committee really should be looking at it as anecdotal.

Ms ROGERS: Well, I would certainly be happy to supply you with that information.

The Hon. JOHN JOBLING: Without which it can only be treated as anecdotal, because where is the evidence that the puppies are wandering off? It is a broad statement. It may well be so and I am not questioning the veracity of it, what I am saying is that for the statement to stand you must be able to produce chapter and verse, an accredited organisation, an accredited author who has some scientific rigour and acknowledgment of their skills.

Ms ROGERS: I would certainly be happy to provide you with that information.

The Hon. JOHN JOBLING: I would be pleased if you could do that.

Ms ROGERS: As to individual puppies wandering off, I will not source it now, but I will send you the material. Certainly there is no doubt that farm dogs in general are not desexed and I do not think there would be any quarrel with that.

Ms BELL: Also, if I can put in a more homely one, which is certainly anecdotal, but there are an awful lot of anecdotes, one of my directors has a couple of dogs but did not have cats because there is a very busy highway outside her home, and she had a problem with mice. In a fortnight, with our humane trap, she caught 11 of them. Then, by various means - I think they were abandoned or something - a couple of cats came to her home, and that was about five years ago and she has not had a mouse there since. It just is the case that predators eat animals. That is the way the world is. Sixty per cent of Australian wildlife is a predator and I guess that would be much the same throughout other countries as well. We might not like it - as an animal liberationist, I do not much like the thought that a beautiful animal has to eat another beautiful animal in order to survive, but I am not fighting it. I am not God. We are animal liberationists, we want to stop the oppression of animals by us. We are not trying to change the system.

As Katherine says, we are entirely happy at the thought that dingos be brought back. The dingo has been here between 3,000 and 5,000 years. If that does not make them a native animal then we had all better go home I think. Looking about me, I see a lot of white faces. Absolutely none of us has the right to be here. Between 3,000 and 5,000 years - 8,000 from some sources - I believe the dingo has been here. Bring back the dingo. That would certainly reduce the number of feral cats and also the number of rabbits and, as you probably know, in previous years vast numbers of cats were released on farms deliberately by the farmers because they kept down the rabbits and there were studies, actual scientific studies - and once again I can send you that if you wish - to show that when the land was cleared of foxes and rabbits - what was the figure?

Ms ROGERS: Eight times. That was Newsome and Coman, but I think it is referred to in my paper.

The Hon. JOHN JOBLING: There is a reference in one of the papers.

Ms ROGERS: That is right. It increased eight times, so certainly, yes, these species that we think we must shoot may in fact be playing an important part in the Australia we have now.

I think we sometimes have an unrealistic view that we can turn back the clock and make the bush the way it was in 1788 and of course we cannot, and even then the cat, as we all know, was here at least 500 years before that, and that is generally recognised in a range of scientific papers which I will send you if you wish, but the environment is an ongoing living entity and if we try to say we are not going to have any introduced species here we are being absolutely unrealistic. I know at the bottom of my hill I see the National Parks officers pulling up the weeds and everything looks great for a few weeks, but up they spring again. How many resources are we going to put into trying to make the world the way it was 200 years ago? Are our resources better put into looking at the way the world is now and whether, if we leave the wild places alone, it will manage itself very nicely indeed? I think it is time we started to consider how we could look at doing that.

The Hon. RICHARD COLLESS: Why do you not include sheep and cattle in that?

Ms ROGERS: I do not include sheep and cattle in that because they are not the sort of creatures who live naturally in the wild, although I guess some cattle do wander off. I am not sure what you are actually saying to me.

The Hon. RICHARD COLLESS: What I am suggesting to you is that sheep and cattle are also part of the biodiversity system in Australia, and if you have a problem with the way they are managed, that is a different issue to them being there. Perhaps what you should be pursuing is the suggestion that we look at different ways of managing all animals, rather than just saying sheep and cattle should be removed out of the system.

Ms ROGERS: Well, I wouldn't talk about managing animals at all I am afraid. I think the environment will look after itself just fine if we let it. So I certainly wouldn't talk about managing animals.

The Hon. RICHARD COLLESS: Where does agriculture fit into your theory then? I am a bit concerned about this because if you look around this room, I will challenge you to find anything in this room that does not ultimately have as its original source either agriculture or mining. What I am suggesting is that agriculture and mining are the two industries which our whole society depends on for all of its wealth creation. Every single piece of wealth that exists in our community, the clothes you wear, the food you eat at night, the car you drive has as its original source agriculture or mining, and to have agriculture and mining we have to have land clearing to some extent. So are you suggesting that we remove all of our ability to create wealth that we survive on and go and live back in the bush? I am just a bit at odds to find where you are coming from.

Ms ROGERS: Okay. I am not perfectly sure what I have said which leads you to ask me that question and I don't know how relevant it is to this inquiry. If I could just clarify what I have been saying so that there is no misunderstanding. The places I am talking about are the places where we are looking at - okay - the places I am talking about where I think we don't need to do any management are the areas where we don't have mining and we don't have farming, what is left of our wilderness areas, if you like, the national parks and so on.

The Hon. RICHARD COLLESS: There are no sheep and cattle in national parks now.

Ms ROGERS: No, exactly. So from the point of view of this inquiry, I have answered questions as to how the concerns of the farmers can be addressed.

CHAIR: I don't think these philosophical questions - we haven't got very much time for that. I can understand -

Ms ROGERS: No, I can't see that -

The Hon. RICHARD COLLESS: We have got another 15 minutes yet.

CHAIR: Yes, but other people have questions as well.

The Hon. RICHARD COLLESS: I want to explore some of these issues. I believe they are important issues.

CHAIR: As long as it relates to feral animal control, that is fine.

Ms BELL: I would like to come in on an answer on that. It relates to feral animal control in the sense that the article that I quoted to you where this person, in fact two of them, a scientist at New South Wales National Parks and Wildlife and the other chap who is a Sydney University zoologist, both said that they would name the sheep at the top of the rank of feral animals - they are using the term rather loosely, but that's all right - as being therefore a danger to the land. The whole point of talking about the feral animals danger is that they are a danger to the land and our life and all the rest of it. He is saying, "No, the sheep is top of the list, so we better look at the sheep." For that reason I read that and perhaps that is where you are coming from.

If you persisted with your statement that sheep and cattle are simply great and the source of our wealth, I would say, Yes, for how long? They have already done this enormous damage. I have copies of articles, which I am happy to send you, about damage done to the land by sheep and cattle and by land clearance of the vegetation and the trees and rise of the salt. In the Murray Darling Basin 10 billion trees have been chopped down. Now, what has happened to our wildlife from that? It is not feral animals that chewed them up, that's for sure. They just didn't have anywhere to go, because their habitat has gone. So the point about the sheep and cattle, if you persisted with your statement that they are just great, you would find yourself up against every environment group in the country and every other country. They are not meant to be here, not because they are white, black, brindle or any other shade, or came from anywhere else; it is because their hooves are so bad for the land, and because they do not breed naturally, they are not part of the food chain. I have nothing against people eating animals if that is part of the food chain, as it would be say in Iceland where all they could eat was the seals. That's fine with me; you have got to live. But they are not part of the food chain; they are artificially bred. So enormous numbers of them create this enormous damage to the land unnecessarily. If people want to eat meat, that's fine, let them eat meat. I am talking about the land and the damage that the feral animals are supposed to have done to the land, when this man says, and I don't contradict him, that the worst of all is the sheep, and that is why we are on about sheep and cattle.

Ms ROGERS: The thing is what we need to be doing obviously is looking at other ways of gaining that wealth. If in fact our very land is being destroyed, what is the wealth of future generations? And those are the sorts of issues that obviously do need to be addressed but I think are outside the terms of this inquiry.

CHAIR: We have had evidence from National Parks and Wildlife Service talking about the number of endangered populations, for example wallabies. There was one wallaby colony which became extinct or was wiped out by foxes and they did fox control on another colony where the wallabies maintained their numbers. Do you not believe that it is possible for some endangered species to become extinct as a result of, for example, fox predation? What should we do about it? Should we allow them to become extinct or should we do something about it?

Ms ROGERS: The thing is I think what we do need to have is actually holistic research. I asked this question once of a researcher at a conference, because once again the emphasis is always on the one-to-one relationship, whereas one-to-one relationships are unrealistic. We live in a wide environment where there are multiple impacts. So we do need to look at the multiple impacts on endangered species and decide what the impacts are, what is causing the danger.

Predation has always been part of the Australian ecosystem. It is not as if it is anything new. All we have changed is the predators, because we have killed so many of the native predators. That is the only thing that we have changed, plus of course we have changed the environment and we have caused massive degradation. So if we are looking at the survival of species, once again I would say let's look at wilderness areas where these species can maintain themselves in an environment away from human development.

Certainly, Rick Natress in Queensland, a National Parks officer, said he saw many areas where native and introduced species lived in a state of balance, but the endangered species started disappearing when there was human development in the area, and he has seen many of examples of that. I know that is anecdotal, but until we get the holistic research to take account of the whole range of impacts of animals, that I think is an indicator of the way at least that we should be looking at our research.

The Hon. JOHN JOBLING: It is certainly not peculiar to Australia though, is it?

Ms ROGERS: No, unfortunately not.

The Hon. JOHN JOBLING: It has been happening for a long time and it is not something that has just suddenly arrived. Some of the comments made about the Murray Darling relate to activities that took place 50, 80 or 100 years ago when scientific knowledge was very different to what it is now.

Ms ROGERS: That is perfectly true.

Ms BELL: I have read in some of these studies I mentioned that a great deal of it has happened in fact in the past 20 years, and of course in the Murray Darling Basin it is not only the enormous clearance of the trees and the foliage, it is also the presence of the factory farms and the run-off which goes into the Murray Darling River and causes the blue green algae which crops up from time to time and is so deadly to cattle and to everything else.

The Hon. RICHARD COLLESS: It has done before Europeans came to Australia.

Ms BELL: And is exacerbated by the factory farms, that is a proven thing also, I can tell you, that's a fact.

The Hon. JOHN JOBLING: Again you are quoting a lot of research and again I caution that without seeing the documents and the accuracy of the scientists doing it, it is purely anecdotal.

Ms BELL: All right, I will send you this one on the Murray Darling Basin. I do have that.

The Hon. MALCOLM JONES: Do you know how many species of animals have become extinct on the Australian mainland?

Ms BELL: I think it is about 40, but I am not sure.

The Hon. MALCOLM JONES: Could you find out?

Ms BELL: All right.

The Hon. MALCOLM JONES: There are certain assumptions which are being bandied around and I would like to check if you have an idea of the numbers and in fact what the species are that have become extinct.

Ms BELL: I will try and find that for you but I do not see the relevance in terms of what we are saying. As I understand this inquiry, it is about methods of controlling feral animals. That is broadly it. So I do not think that numbers of extinction -

The Hon. MALCOLM JONES: What is also important is the regions from which these animals emanate, because I think you will find that the vast majority are animals which are really from arid regions and the animals which we have been talking about primarily during the course of this inquiry are feral animals as they relate to New South Wales, and a very small part of New South Wales could be described as arid. The vast majority of extinctions come from those arid regions and the extinctions which come from the non-arid regions are very very small, and I think your arguments are somewhat trite by talking about extinction as though it is in epidemic proportions, when in fact it is not.

Ms BELL: I haven't talked about extinctions at all I don't think, except to quote this chap in saying that the sheep is responsible for a great many.

The Hon. MALCOLM JONES: In evidence, even secondhand evidence to this hearing, it would, I would suggest, help your argument if you had a depth of research that you could call upon to justify the claims that you are making.

Ms BELL: I think that the claims that we are making are: (1) that termination of a great many lives will not stop other lives coming along. It just is a fact of nature that when you remove a large number of animals, any sort of animals at all, you create a space, you create a niche -

The Hon. MALCOLM JONES: What animals have been removed?

Ms BELL: I am talking about the termination of the lives of feral animals. What I am saying is that the method, that lethal means of control of feral animals does not work as a system, never mind the ethics of it or anything else at all, never mind the animal.

The Hon. MALCOLM JONES: Can you give us an example of what you are talking about backed up by scientific evidence, rather than making sweeping generalisations?

Ms BELL: This inquiry is about the threat of feral animals and what we can do. 100 years ago no doubt they were discussing the same thing. For 100 years we have been killing feral animals and what have we got - feral animals. It doesn't work. If a method doesn't work and you are using public money - if you are using your own money, you are a fool, but if you are using public money, then that is a responsibility. You just can't keep on using public money.

Now, one of the figures I have got was that last year Premier Bob Carr just on consultants, not on methods, just on consultants used nearly $42,000 on consultants about feral animal control, in one year in one State. You could do quite a lot with $42,000 I reckon that wouldn't be on a consultant to find out how to kill more feral animals, when killing feral animals does not work because it just grows up again. That is the case.

Ms ROGERS: One example of an animal, I am not sure whether it is extinct or almost extinct in New South Wales, is the quoll, and basically what happened to the quoll - and this information is in the Australian Book of Animals from the Australian Museum - the quoll basically was killed in large numbers by farmers fearful for their hens and so on, because it was a very very ferocious little hunter, but there was also disease that swept through the eastern quoll population in the early years of the 20th century, which, exacerbated by the killing, meant that it was virtually wiped out. So this is one example of an animal certainly on the eastern coast which was badly affected.

The Hon. MALCOLM JONES: What was the authority for that please?

Ms ROGERS: My authority for that is in the Australian Museum Book of Australian Mammals which gives that information.

The Hon. MALCOLM JONES: Who is the author?

CHAIR: This is ridiculous.

The Hon. MALCOLM JONES: Precisely, ridiculous.

Ms ROGERS: I can send you this. I think it was by a number of distinguished people. I can send you their names.

The Hon. JOHN JOBLING: Chairman, can I ask a simple straight forward question to the two witnesses. In a succinct statement to us, would you both care to tell the Committee what, if you had your way, you would do with feral animals in this State?

CHAIR: Species by species or just generally?

The Hon. JOHN JOBLING: Well, if need be, looking at it distinctly, wild dogs are of concern, deer is of concern, feral pigs are of concern. Just with those three alone, what would you say to the Committee we should be doing in a succinct answer?

Ms ROGERS: I would say we do need to have holistic research, look at what they prey on for a start. What do they prey on which might stop us having to prey on these same species? Look at what would happen if we did manage to remove these animals. To what extent are hunters in fact deliberately seeding these animals so that they will have something to hunt. To what extent is there human/species interaction, so that we can say, right, this is what they do, this is what they live off, this is what is eaten, they are or they are not in competition with native species, they are posing a threat. If in fact their numbers are posing a threat, I would look at ways of reducing their numbers, and I would start by looking at non-lethal ways. I would look at sterilisation as an issue. There is so much good work done on fertility control in the United States. The deer that are being killed now in the National Parks, fertility control of deer has been happening in the United States for at least ten years. So I would look at non-lethal means of doing it, which might be cheaper and much much better in the long-term interests of a safe environment.

The Hon. RICHARD COLLESS: Can I just -

CHAIR: Do you want to answer that question first, Ms Bell?

Ms BELL: All Katherine said, plus what I said before about the sheep - a planned reduction of sheep, and that doesn't mean that all sheep farmers go broke at all. They have almost gone broke at times because of the build-up of the wool from the sheep and the fact that sheep are regarded by them like share certificates, you have heaps and heaps in the good times and then when the bad comes, as they inevitably do, you are left with a whole lot of useless sheep, and that is not a good way to run a business by any standards.

I certainly would have the registration of sheep farmers, so the land they had was adequate for the numbers of sheep they had and then a planned reduction, with suitable compensation, that's fine. People have to have a living. There are plenty of other things you can do on a farm, as any farmers around here would know, that contribute greatly. There are plenty of things you can grow that contribute greatly. And we just don't need such an animal here. The sheep themselves lead a totally miserable lives. That would be the way that I would go first of all.

There also has been a suggestion by colleagues in ACT that pristine areas of national parks should be seen as a kind of museum of Australia, but if that were done, if say any non-native animals were removed, not lethally of course but by other means, then other things would have to be done, like all the non-native plants would have to be removed. The people would not be permitted to wander through and it would really have to be a museum, but then I don't know quite what you do about the breeding which would take place, because unless there were a great many native predators put back in, and I suppose that would be part of it, you are certainly going to have over-breeding. Dr Walmsley, whom you have all heard of, who recently went broke, tried it, but then he was in favour of, and is quoted as such, he said that, "If I breed native animals I have every right to sell them", and he had a ready made contact with a Japanese institution that was very willing to buy a couple of platypus at an enormous price. So once you have that kind of thing, which is no more than a large zoo, then of course you have the problem of over-breeding, unless as I say you go the whole hog and you have predators as well. That is a possibility, if we would like to do that, but largely I would have to agree with what Katherine said, there is no point being like King Canute trying to keep the waves back, change is inevitable. We all change. Our country has changed enormously from even ten years ago. We are now multi-cultural Australia, our population is going up and up. How can we possibly think with that enormous population - 19 million I believe it is now and growing, and the immigration rate is going to increase - that our land could be like it was 200 years ago? The whole idea is absurd, it is totally absurd. Let's away with the dream, it is a barmy dream anyway and is certainly a nightmare in terms of the methods used to kill feral animals.

(The witnesses withdrew)

ANTHONY JOHN PEACOCK, Chief Executive Officer, Cooperative Research Centre for the Biological Control of Pest Animals, PO Box 284, Canberra, affirmed and examined:

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

Dr PEACOCK: Just to provide scientific information and opinion.

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

Dr PEACOCK: 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 heard or seen only by the Committee, the Committee would be willing to accede to your request, but that may be overturned by a vote of the Legislative Council.

Dr PEACOCK: I understand.

CHAIR: Would you like to make an opening statement?

Dr PEACOCK: The purpose that I wanted to serve in coming before the Committee was simply to inform the Committee of some research that is going on in Australia. I was interested in some of the statements that I have just heard. Australia actually leads the world in fertility control research. There was the international symposium on fertility control of wildlife in South Africa last year and our cooperative research centre presented 11 of the 45 papers at that international conference, so there is no doubt that Australia is the leading country in the world in terms of research into the fertility of wildlife and in particular into the fertility of feral animals.

I run a research centre that has operated for 10 years, now under the cooperative research centre scheme of the Federal Government into immunocontraception or immunosterility of feral animals and this is a major research effort to try and find alternate means of controlling feral animals. Just to explain for a few moments, Chairman, where we are up to in that research, we search for means of blocking reproduction or stopping the reproductive cycle of feral animals. The research centres on proteins that coat the egg released from the ovary of the female called zona pellucida proteins and these are integral to the binding of the sperm with the egg to cause reproduction. What we do is immunise animals, that is with a vaccination against their own proteins, and cause reproduction to be blocked. It has a potential for use on all mammals. It is a humane method of control; it is also highly novel. It is also a long-term research goal, it is not around the corner.

We concentrate on three species: The mouse, the rabbit and the fox. A good mouse plague costs this country about $150 million in lost production and we get a good mouse plague about once every four years in Australia. They are mainly confined to eastern Australia, you do not see a mouse plague in the west too often. That work is largely funded by the Grains Research and Development Corporation and we would hope that that is our lead product and that we would be in field trials in 12 to 18 months' time, all going well.

The rabbit is more difficult. We have a major research milestone at the end of this calendar year we have set ourselves to see whether we go forward with research into the rabbit. However, we can cause infertility in 80 per cent of rabbits that we inject with these proteins. When that protein is carried by a virus, the myxoma virus that causes myxomatosis, we only get about 25 per cent infertility, so our research goal is to try and control populations. If we get anything from 60 to 80 per cent on reproductive loss we will control populations of animals, so if we could get up to the level that we get with an injectable, we potentially could control rabbit populations. The rabbit is a poorly studied species in terms of its reproduction, oddly enough, so that is what causes us some problems in the research phase.

The other main species we concentrate on is the fox and we have made some significant breakthroughs with the fox. We have major issues in terms of cross-over with dingos and domestic dogs, of course, with any control method that we come up with and so we only concentrate on a bait delivered infertility method there and we are probably four years away from field trial in novel methods of fox control.

One of the researchers mentioned by the last witness, Dr Chris Dickman, is a member of our CRC. Our CRC has seven partners, all public institutions: The CSIRO, Sustainable Ecosystems Division, is the largest partner; then we have the universities of Sydney, Adelaide, the Australian National University and the University of Western Australia and two land management groups, Conservation and Land Management in Western Australia and the Agricultural Protection

Board in Western Australia. We do work with researchers in the New South Wales parks and wildlife service and with New South Wales Agriculture, in particular on our fox programs.

The points I would like to make to the Committee are that, in contrast to the previous witness, I believe feral animal impacts are vastly under-estimated as a national environmental and agricultural issue. Feral animal research in Australia - and I point out that I am allowed to make these comments, Chairman, because I am only eight months into this job, so I am sort of in a honeymoon period. Another few months and I am part of this research effort. I came from an agricultural industry. It seems to me that feral animal research is particularly uncoordinated in Australia. You tend to have State departments of agriculture or conservation equivalents where it has gone down in importance or the general issue of funding research is not uncommon, so you find that there are one or two people beavering away on research, in quite isolated units, very often also given the task of feral animal control, so they tend to be part-time researchers, generally poorly resourced and poorly coordinated.

The other point I would make, though, is that I do not believe it is a hopeless task or something that we should simply give up on. If I can make a few points about the damage feral animals do, there are 20 mammal species that we have lost from Australia. Australia has the worst record of extinction of animals since La Naya started keeping records 400 years ago and the rest of the world had 200 years start on us in record keeping at least. That is largely because of development and things, but feral animals have definitely contributed to that. We believe there is very good evidence that of the 20 species that have become extinct in New South Wales there are only really about 10 where you know very much about the causes and, of those, we would implicate the fox in eight of those 10 extinctions. In Australia, I think the figure is 32 species that we have lost overall, 20 mammals, and that is about half the extinctions from the world in the last 400 years, so we do have a poor record, but that is because we came to an environment that was unique and all those things, I do not think it is something that could have been anticipated at the time Australia was settled. Now that we do have some control of environments to an extent, there are plenty of things that can and should be done.

We are very concerned about and have been involved in developing an eradication plan for the fox in Tasmania. For some reason which I cannot explain some people have introduced the fox into Tasmania over the last couple of years, secretly, and a small population appears to have become established in the north of that island. Tasmania has never been populated by the fox. In the 1860s and 1870s there were actually several attempts to establish the fox in Tasmania, but they were never successful and so it was never established. I think probably the best illustration of the effect of the fox is that Tasmania has only lost one mammal species, the thylacine, the Tasmanian tiger, where in New South Wales we have lost 20, and if we get the fox into Tasmania and it becomes established we would say that there are probably 16 species that are under threat of becoming extinct down there, so there is certainly very good evidence that feral animals have a very severe impact on the environment.

Another couple of examples: There used to be 11 penguin colonies on Phillip Island and there is one now, principally due to the fox, and that one penguin colony is worth $95 million in tourist dollars to the State of Victoria. In terms of cats, I would I guess classify that, in terms of environmental damage, by saying that the jury is out. There is some environmental impact of feral cats, but probably overestimated, particularly compared with the fox. They are not as effective a hunter of the species that we see. Basically any species that is above 35 grams to five and half kilos is in the range of predation of the fox and the fox is very effective at simply going in and grabbing a small wallaby. We have not had predators in Australia for that long in ecological terms. The dingo has not been here for that long. These animals have not evolved in an ecosystem where they were highly predated and, as I understand it, their mechanism against the dingo, which is effective, is to rush into the longest grass and stop, whereas a fox will just go in and grab them, so that is one of the reasons that the fox is such an effective hunter of small mammals.

Australia is the only country that has used biological control on vertebrates. It is an established and widely used technique of controlling animals in insect areas and other areas of agriculture to an extent, but 51 years ago in Australia the myxoma virus was introduced and an estimated 99 per cent - estimates vary, but somewhere in that region - of rabbits in the country in the post-war era were killed by myxomatosis. Over time it became less effective. And then the second successful attempt of bio control was calicivirus in Australia in the 1990s, and there have been other attempts in the world, Marion Island in South Africa for example, but no continental scale, and that is because of the unique nature of our settlement and those animals coming to Australia. The State of the Environment Report released by the Federal Environment Minister last week noted the environmental value that calicivirus has had on Australia, causing a large amount of revegetation, and I think those two biological controls, and we can argue about the welfare aspects of using a disease, but certainly have had a huge environmental impact on Australia.

Obviously, the human has a huge impact on the environment and things like that, but there are certainly very large impacts from feral animals and I do not think you can simply dismiss them, as I heard as I came into the room,

and say that there are bigger issues. Certainly there are bigger issues in terms of global warming and salination, but feral animals should be there on the radar screen of all environmentalists and agriculturalists in Australia.

That will do me for an opening statement, Chairman.

CHAIR: On the question of foxes in particular, is it possible do you think to develop an immuno contraceptive which can be broadcast to foxes or could just be done in specific areas maybe? If there is a problem with foxes and dogs and other canines actually picking up the bait and the immuno contraceptive, you cannot be fox specific you do not think?

Dr PEACOCK: I do not think in the next five to ten years we would have something that was highly fox specific. I believe we will have something that is canid specific and then your issue essentially becomes dingo and crossing over with the dingo. Obviously, if you are crossing over with wild dog, you would not be concerned, because if you drive their populations down that is acceptable, and I guess domestic dogs that are wandering around where they should not be, it does not really matter if they are desexed.

CHAIR: Is it permanent or is it a five year -

Dr PEACOCK: We would hope it is permanent, we would render them permanently infertile.

CHAIR: So if you were to render populations of hybridised dogs, hybridised dingo dogs I suppose, infertile and leave them in place, would that then lead to diminution of the population?

Dr PEACOCK: It would. There are some issues with dog packs that the dominant female tends to breed, so there are issues if you go in and take out certain dogs and all those sorts of things, and you have probably got better expertise than me on those issues, but if you could get a permanent infertility to them, all our modelling says that you can drive populations of dogs or foxes down.

CHAIR: So if you get to 80 per cent, as you were saying, that would then reduce the population?

Dr PEACOCK: Yes, over time. Obviously, a live fox or a live dog is out there eating and if they are on the edge of an agricultural group they would continue to cause an agricultural issue to the local farmer, but over time you would hope that you can drive those populations down.

CHAIR: Would this contraceptive be cheaper do you think than 1080 and could it be brought out fairly widely?

Dr PEACOCK: We are also developing, in fact we have just received a Federal Government grant for companion animals and we would hope that it would be very low cost eventually.

CHAIR: How much are we talking about per bait?

Dr PEACOCK: Essentially, it is the same technology as used in vaccination. You can produce vaccines at a very low cost, in the order of five to ten cents a shot. Then you have got to bait them.

The Hon. JOHN JOBLING: Your delivery charge?

Dr PEACOCK: Yes, your delivery charge. We have formed an alliance with the company that makes Fox Off bait now, the 1080 bait, and the guy who runs that company is a PhD from the Victorian Department of Agriculture originally, a researcher, very interested in replacing 1080 if there was a better alternative.

CHAIR: It would not affect quolls, because they are not canines?

Dr PEACOCK: No.

CHAIR: So you could actually do this and it would affect canids but it would not affect native wildlife?

Dr PEACOCK: That is the aim, that is the ultimate aim.

CHAIR: So there is real hope, how far down the track?

Dr PEACOCK: Four years I reckon we can be in field trials. You are talking about genetically modifying organisms effectively in producing the outcome, and so there is a very high level of regulatory scrutiny, and we do not object to that in any way. So you are talking a very slow process of going into approvals to do field trials and the like.

The Hon. JOHN JOBLING: What work are you doing in relation to the immunocontraceptives with specific reference to the bigger animals, the feral pigs, perhaps the deer or horses, but in particular feral pigs, is there anything being done there?

Dr PEACOCK: No. I came from the pig industry, so I am particularly interested in the area, and pigs, I am sure you have been told, cause all sorts of environmental damage but mainly from an agricultural point of view.

The Hon. JOHN JOBLING: They could potentially cause an outbreak of foot and mouth disease.

Dr PEACOCK: Yes. There are lots of diseases they harbour potentially. They do not at the moment. We are two years into this current seven year funding round and there was a decision taken to simply concentrate in this CRC on the three species where we were well funded, we had a decent chance of delivery, and then if we deliver on the mouse for example, we are quite confident that other people will come in and fund us to do additional work, but we did not want to spread too thin. Having said that, we have done two small trials on pigs and we are currently seeking an expansion of the CRC where we would take on the pig there, and Tony English, I am sure you know the name, another member of the CRC, is investigating dart technology for horses.

In reference to fertility control of species overseas, generally, that is done with an unregistered product that incorporates an adjuvant that is something that stimulates the immune system called Freune's complete adjuvant. I do not know of any animal ethics committees in Australia that would allow me to do research using that Freune's complete adjuvant. Certainly they do render seals, wolves, deer and mustangs in North America infertile and we have grave concerns about the use of Freune's adjuvant. It is unacceptable to me as an animal scientist, and my researchers as veterinarians, to use that technique, and it is just out of the question. It could be used in urban fringe areas of large cities like Vancouver or those sort of places where the deer are coming right into suburbs.

The Hon. MALCOLM JONES: What is the down side of -

Dr PEACOCK: It causes pain to the animal. Freune's adjuvant causes a huge site reaction, and so you get stories, and the researchers from the States tell you that the mares are going around with - they limp, they are living longer because having a foal every year shortens your life span considerably, but they have got large lesions and are often in pain, but they are very often being captured, had multiple injections.

It is just not suitable to a country like this. We simply could not afford to do that sort of work. It might be worth investigation on sensitive environmental areas such as Kosciusko or places like that where you wanted a limited population and you were happy to keep a small population of brumbies or something like that, and we are certainly looking at research that might proceed there, but we would not simply take what is available in the US at the moment.

CHAIR: Just one thing about the fox control, if we do manage to get this happening, control the fox population, what about the rabbit population, would the rabbit population explode? You would have to do both simultaneously, wouldn't you?

Dr PEACOCK: You would hope that you could do both simultaneously, but there is no evidence that foxes absolutely keep rabbit numbers down. It is not -

CHAIR: Not a great relationship?

Dr PEACOCK: No, nor do they automatically - foxes are incredibly adaptible. They will eat berries; they will eat all sorts of things. I was down in Tasmania two weeks ago and they took us out spotlighting. They apologised that there was not much wildlife around, and you could have pushed the wallabies over, you were surrounded by them at such levels, and bettongs and things we just do not see up here, and then we went to the property the next day and there were blackberries along the side and everything. It is no problem for a fox to survive in that sort of environment, even if they are a young fox that is not adept at hunting. They will survive off carrion, road kill. They are very adaptable animals.

CHAIR: So why were they unsuccessfully introducing them before then to Tasmania?

Dr PEACOCK: They have to meet up and it depends on them meeting up. They are quite solitary animals and if you can get the population down, they actually do not meet up to the extent. On your question about canid specificity, one of the issues we are looking is using at fox pheromones and you can potentially present baits in a way that is more attractive to a fox than a dingo for example. Similarly, in Tasmania we have just been going through - the conservation movement in Tasmania has accepted the use of 1080 because the issue is too grave not to - simply raising baits where foxes will get on a stump, where a devil will not and quolls will not get up very high, and there is some good evidence that New South Wales Parks and Wildlife Service have been doing recently that quolls probably are over-estimated in terms of their non-target issues that they do not appear to take a Fox Off bait to the extent that we all anticipated they would, and I know Paul Meek is going to talk to you later today and I am sure Paul is much more familiar with that research than I am.

The Hon. MALCOLM JONES: You made reference to the relatively recent introduction of dingos in the overall scheme of things. As a scientist is it reasonable, given the factors which are now being discussed, to try and protect the dingo gene pool?

Dr PEACOCK: I am fairly pragmatic, but I take the view that, I guess the way I put it is that if I have any influence, these things should not alter greatly on my watch, and I happen to head up the biggest research group on foxes and feral animals in the country. So that is the attitude we took for Tasmania, that we just did not want to see things change. There are ecologists within my group who say, "Oh, well, it is the nature of things and species go extinct all the time", but they do not go extinct at the rate they have in Australia in the last 200 years, and I take the view that you should preserve your heritage to the extent you can. Having said that, I fully agree with people's right to farm.

The Hon. MALCOLM JONES: With all these dogs, you can differentiate between them because of their genes, although they may physically look the same or very similar. So at what stage does the per centage of purity drop enough to declare the species perhaps extinct but there is no necessarily visible appearance of change?

Dr PEACOCK: I do not know the answer to that really, even as a scientist. You certainly have at this stage, as I understand it, plenty of dingos that are not interbred and groups of dingo populations that are pretty well intact from white settlement at least and so I do not think there is any question that the dingo is under threat of extinction. I am not quite understanding the question.

The Hon. RICHARD COLLESS: Even through hybridisation?

Dr PEACOCK: Well, my scientists say virtually south of Ayers Rock, Uluru, you will find very few pure herds of dingos and they regard them as wild dogs by and large, so there is a scientific debate as to whether those animals are dogs or dingos.

The Hon. MALCOLM JONES: We are primarily concerned with New South Wales. With a map of New South Wales, if we can identify where the gene pool in the dingos is rich enough to protect, could those dogs in other areas be treated as wild dogs from the point of view of extermination? What is the scientific view?

Dr PEACOCK: The guy who heads my fox program, who is the closest dingo expert I have, believes that all the ones in the south of the State, on the evidence he has, are wild dog ones, but I stress that we have not studied that and I would assume that there would be New South Wales authorities that would be better placed to make those sort of judgments than our research centre.

CHAIR: There is some evidence, is there not, that dingos keep down foxes and cats?

Dr PEACOCK: I am not sure again that that is right. Certainly foxes predate on cats to an extent, but not to the extent that they control populations, to my knowledge. We are primarily concerned with population control and we do not believe that they have an effect on population.

The Hon. RICHARD COLLESS: You mentioned that Chris Dickman was on the CRC with you. Has the issue of the listing of dingos ever been discussed with you, with the CRC?

Dr PEACOCK: No.

The Hon. RICHARD COLLESS: I would like you to expand a little on the way that the contraceptive works when you say that it is actually a genetic manipulation.

Dr PEACOCK: Yes.

The Hon. RICHARD COLLESS: So the dogs that actually pick up the vaccine still breed, but their offspring are then genetically sterile?

Dr PEACOCK: No, in a technical sense, our current research concentrates on the canine herpes virus and herpes virus in canines is much like humans, the old "love is fleeting but herpes is forever" type of thing, so it is a very persistent virus, it lives in the dogs for quite some time. It causes a variety of clinical signs but not huge clinical signs, skin lesions and things like that, so we seek to genetically engineer herpes virus to put in the proteins that I talked about, the zona pellucida proteins. If a dog picked that up it would actually, not through its gut, through its mouth pick up the virus and you have a live virus in that animal that replicates, so you need that very strong immune stimulus, otherwise you are talking about a booster vaccine. We are not interested in research like in the States where they are going to go and catch 100 deer and bring them in, that might be for a nature park or a zoo but it is not something you can do for feral animal control in Australia, so we have to have one shot that causes permanent infertility so that the virus then persists in the animal.

CHAIR: Can the virus affect another animal?

Dr PEACOCK: We have another line of research where there is a system called the tetracycline on-tetracycline off system where you can genetically have a switch that turns certain genes on and off. What we are seeking to do is to engineer that switch so that we have a small amount of tetracycline in the bait and so it renders that animal infertile, but that animal would not pass it on. That is our current thinking with foxes. With mice and rabbits we are using a different mechanism which is a replicating virus and in rabbits it is the myxoma virus that causes myxomatosis, so that you would release myxoma virus. It still kills 50 per cent of the rabbits in Australia and the ones that it does not kill it renders infertile, so that is our current thinking there.

The Hon. RICHARD COLLESS: If it is based on the canine herpes virus, what is the chance of it then getting into domestic dogs or breeding dogs?

Dr PEACOCK: If you are using a bait delivery system it would render the animal that picked it up infertile. Zona pellucida is associated with the egg, so we are only talking about rendering female animals infertile. If somebody was walking their dog in a national park or in an agricultural area that was signposted and they ended up with an infertile dog, I think that would be an acceptable thing that we could run past the public eventually.

The Hon. JOHN JOBLING: Not if it was a pet breeding dog. That is the problem we have.

Dr PEACOCK: You have the same problem now if you have 1080, except you kill the dog.

The Hon. RICHARD COLLESS: Is there any way that the dog that is infected with the contraceptive can pass it on to a breeding dog?

Dr PEACOCK: Well, the research is not at the point where we could definitely say it could not, but the aim of the research is that it could not. I do not believe that we would ever get our research into the field if that was the case. If it could pass it on, I do not think we would ever be successful in the research, so it is certainly one of the research aims.

The Hon. JOHN JOBLING: Dr Peacock, from your earlier statement I drew the conclusion that you were suggesting that research generally was not particularly well coordinated, there were lots of departments and organisations doing enthusiastic research. If that is correct, who would you suggest to the Committee ought to be responsible as the lead agency for coordinating feral animal research?

Dr PEACOCK: I came from running a national research program, I was the chief executive officer of the Pig Research and Development Corporation. Farmers paid us a levy and we essentially bought research off national organisations and international organisations if it was relevant. I have been very surprised since I came to this area of research by the lack of knowledge of agencies doing research, that they are State-based, so Conservation and Land Management in Western Australia does absolutely first-rate excellent work, but they do not get to talk to their colleagues, as far as I can see, to the extent that I would expect if I was king for a day managing the research. I do not think it is a managed process.

The national vertebrate pests conference, for example, is only held every three years and it is simply presentations. There was a Melbourne conference last year. There are no, as I see it, research planning sessions. The

National Standing Committee on Vertebrate Pests under Scarman - these have changed slightly now - has no resources to speak of, so it does not play a coordinating role, it plays a sort of information exchange role, but there is no executive officer of it, there is no real coordinating role. Having said that, there are plans. There is a threat abatement plan out of Environment Australia, a New South Wales plan, but in terms of a research plan, as far as I can see, there is no clear need.

On my first day on the job someone said to me that it was 50 years since myxoma was released and I asked whether we were going to recognise that and look at the next step in rabbit control, and across the board we ended up, as a research centre, facilitating or organising a national rabbit conference. Now I was surprised. If I was a new boy on the block in an agricultural industry like the pig industry I would have had my head kicked in for coming in and trying to organise the national research agenda, but in feral animals it is quite disjointed, and I did not sense any annoyance, we got congratulated a lot.

Similarly with Tasmania, we have been hearing since February last year press reports about the fox issue and we ended up ringing and saying, "Do you want some help", just off our own bat, and they said, "Thank God somebody is listening, yes", and within ten days we helped them to organise a national conference, get the proper expertise in there so that they could decide on the eradication steps.

The Hon. JOHN JOBLING: Coming back to New South Wales in particular, if we were to attempt to set up a State coordinating group, where would you look at placing the lead agency? Would you be looking at national parks, agriculture? Just from your personal experience across the field, where do you think we would get the best results?

Dr PEACOCK: I would not set up a State organisation. There are the same problems in every State virtually. I mean there are unique regional issues, but each State faces problems, and indeed New Zealand faces huge problems as well, and I would probably try to get a group like Land and Water Australia, which the old land and water resources R and D corporation - they are a federally funded R and D corporation that works very well with industry. They have just secured $20 million of Australian wool innovation money for coordinating research, so the wool industry has recognised them as good research leaders. I should add I do not get a cent from them, but I quite admire that group and that has worked very well. I think people have recognised that the grains R and D corporation, pigs, cotton, a number of the R and D corporations have been very successful - a number of them have not as well - but where you have a group that does not do any research, that is your problem in saying what agency would get it in New South Wales. You are almost always saying, tap you on the shoulder, New South Wales Agriculture, for example, if you are going to have the State budget for doing it. If there are also the researchers there is a natural inclination to keep your groups going and all that. I do not mean anything against any individual organisation, but that is the beauty of those R and D corporations that do not do any research themselves. If they actually get too involved in a project themselves they almost certainly become too close to it and that is where they get problems.

The Hon. JOHN JOBLING: Looking at the question of, say, research innovation and mapping of feral animal movements, et cetera, what information can you offer us in relation to what is being done perhaps in New South Wales in particular but generally in other States if need be?

Dr PEACOCK: I am not sufficiently aware. I actually asked one of our junior researchers to look and, if necessary, we would go in terms of feral animal maps of Australia. I think as a newcomer it is very hard to get a clear picture on how severe individual problems are. For example, there is a huge amount of publicity at the moment in terms of foxes in Victoria. The foxes in Victoria are causing an enormous amount of agricultural damage at the moment, but I know that Meat and Livestock Australia have put a consultant on to look at the issue and he says every bit of evidence he has looked at so far says there has not been a vast increase in fox numbers in recent times and it may be that the lambs are worth more this year than they have been and so you notice the losses. I do not know what the issue is, they are just investigating it at the moment, so I think it would certainly be of benefit running our group from the point of view of what are the national issues. That would be my starting point if I was running the national feral animal program. You have to look at not so much the animals, you have to look at the environmental and agricultural damage that they do. I do not think simply because they are feral, if it is a few deer in the national park or something like that, or in Tasmania they have become part of the ecosystem and they do not appear to cause an enormous amount of damage down there, so I am not anti-feral animal just because they were not here 210 years ago but are here now, I do not think you can take that attitude because you will be defeated anyway because you cannot get rid of these things, but I think you have to look at what is the damage that they do realistically and then go from there.

The Hon. MALCOLM JONES: I would just like to go back to when you were speaking about releasing a virus through rabbits and used the myxoma virus. My limited knowledge of myxomatosis is that it is akin to syphilis and when I have seen rabbits with myxomatosis they have been in terrible agony and yet before you qualified the non-use of

certain things as they are used in America on the basis of pain, so has the myxoma virus been improved in terms of what it does to the rabbits?

Dr PEACOCK: When myxoma was released it killed rabbits much more rapidly than it does now, by and large, so two things have happened: The rabbits became resistant to an extent, so there is genetic resistance to the virus, but the virus also modified itself in the strain in the field. They become attenuated, if you like. The lesions that you see on a myxoma rabbit, that is where the virus is spreading from via mosquitoes and fleas, and it is not in a virus's interest, if I can use such a term, to kill a rabbit very rapidly because the virus itself has less opportunity to spread, so it is just an evolutionary mechanism that a really highly virulent virus actually dies out in the field. The example I would use is ebola. Ebola does not spread across Africa, it dies out in the village or the hot-spot because it is so virulent, it kills everyone in the area and then just dies out as a virus, and that is similar with myxoma. calicivirus works in a different way and actually we have not, in the six years since calicivirus has been released, seen genetic resistance to calicivirus develop yet.

The point I would make, though, is that if you can have a successful strategy where you drive populations down then the net amount of suffering of animals is considerably less because you would not be seeing rabbits out there with myxoma, you would be able to drive the population down so that there would be a very limited number of rabbits out there, so it is a matter of accepting. We have Animals Australia and Glynis Eagie sits on our advisory committees. We consult very widely with welfare groups and Animals Australia I know accept the concept of net suffering of animals, that if you have got a million rabbits out there all suffering for ten days with calicivirus, at the end of the day it is better to drive that population down to a few hundred or a few thousand animals even if they still suffer a period of disease.

CHAIR: You say in your submission that rabbits are becoming resistant to 1080. Is that right?

Dr PEACOCK: Yes, there is evidence from Laurie Twigg who is a researcher within the CRC. The reason you can drop 1080 out of planes in Western Australia is that 1080 is a naturally occurring substance to a degree and it is in relatively high levels for some reason in plants in the south west corner of Western Australia, it is not over the whole State. So the animals that have been in that food chain tend to be quite resistant to 1080. So that gives you strong evidence that over time animals will become resistant to 1080. The issue then is to ensure they do not get sub-lethal doses. It is in no-one's interest for an animal, if you are using 1080 baiting, and the figures that were quoted to you before, I am sure you have got actual figures on the actual use but it is nothing like a tonne of 1080 in Australia, I think it is 17 kilograms in New South Wales or something yearly. It is probably less than a hundred kilos nationally used a year. It is in no-one's interest for an animal to be baited and then not die from that bait, so you want to always ensure that your bait is adequate. Dogs, canids tend to have a very high susceptibility to 1080, so foxes are relatively easily killed by 1080. They only require a quite low dose, and this is one of the issues in Tasmania where we are trying to ensure we do not poison devils for example, which for some reason have a higher lethal dose requirement, so you would hope the devils were not taking any baits, but if they did, one of the ways you can make it, I guess, acceptable to conservationists is to have a low dose.

CHAIR: They would eat the dead foxes?

Dr PEACOCK: Yes, there could be secondary poisoning from foxes. You have got a fox eating a two milligram bait.

CHAIR: It is spread out a bit?

Dr PEACOCK: So it is spread out, so it probably would not be a lethal occurrence, but the current thinking in Tasmania is to try and hone down to the few paddocks that you know there is a fox in and do very specific baiting, pick up the baits afterwards. There is a strong desire to recover the fox down there if we can.

(The witness withdrew)

(Luncheon adjournment)

MICHAEL JOHN BULLEN, Director, Environmental Management and Forest Practices Directorate, State Forests of New South Wales, 335A Crossmaglen Road, Crossmaglen;

JAMES MICHAEL SHIELDS, Wildlife Manager and Principal Ecologist, State Forests of New South Wales, Locked Bag 23, Pennant Hills, and

PAUL DOUGLAS MEEK, Regional Ecologist, State Forests of New South Wales, PO Box 535, Coffs Harbour, affirmed and examined:

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

Mr BULLEN: Yes, I am.

Dr SHIELDS: Yes, I am.

Mr MEEK: Yes.

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 or seen only by the Committee, the Committee would be willing to accede to your request but that may be overturned by a vote of the Legislative Council. Would you like to make an opening statement?

Mr BULLEN: The main purpose of how we have approached today is to try and get some practitioners here to present information to the Committee. That is why Paul Meek is here. He has responsibility for implementation of our feral program in north-east region and Dr Jim Shields has been involved in the establishment of a policy and approaches that were taken within State Forests for feral animal control.

I would also add that, in our experience, it is far better to have a proactive approach to dealing with feral animal control. If you have a reactive approach, quite often the problem is such an emotional issue that it is very hard to come up with a strategic plan forward. Therefore, what we have tended to focus on has been communication between ourselves and our neighbours, communication with Rural Lands Protection Boards and also communication with the National Parks and Wildlife Service.

It is also difficult and essential that we manage and marry the twin focuses of feral animal control. That is, firstly, operational implementation and effectiveness and, secondly, the conservation issues associated with management of threatened native fauna. In particular, management for critical weight range fauna and tiger quolls are particularly problematic and some of our strategies and approaches that Paul will detail and Jim will also detail highlight those.

I would also add as information for our submission that was tabled: Our approaches from a coordination perspective within State Forests are to develop ecologically sustainable forest management plans across all of the regions in New South Wales and within those ESFM plans is a particular requirement for the development of a feral and introduced predator control plan and that outlines a three to five year strategic program for a particular region and underneath that three to five year program there is an annual operating plan prepared. We also seek to try and control feral animals through gathering hard information on known occurrences and levels, ongoing identification and monitoring of animal numbers; seeking information and feedback from neighbours and determining target species priorities; seeking professional assistance in control work implementation such as with the Rural Lands Protection Boards and also, as highlighted, external experts such as David Jenkins in the program at Tumbarumba; liaison with RLP boards and the National Parks and Wildlife Service and the DLWC; targeting our limited funding to areas of known need and highest priority; liaison with the grazing lessees and occupation permit holders that are held on State forest and, as Paul said in preparing for today's report, if you are not monitoring, you are not managing, so we are trying to focus on a monitoring, continuous improvement and reporting approach.

If the Committee wishes, we have canvassed current issues from all of the regions around the State and I could run through some of those issues that are most relevant to particular regions by way of introduction.

Within the Macquarie region, which is Bathurst, Oberon and the central west, the primary issues that have been identified have been wild dogs in the interface between State forests and the Blue Mountains and Kanangra-Boyd National Parks and the difficulties in control that that brings. There are apparently increasing levels of pig activity within the Sydney water catchment areas and certainly within the State forest. Another issue in Macquarie, given its proximity

to Sydney, is that there is a large number of people seeking to hunt within the State forests out there and that has particular issues associated with safety and impacts like the potential impacts on threatened species. The fox abatement work within that region is slowly starting to be wound up and over the next year or so there should be a substantial increase in focus on that work.

Within Hume region, which is down around the Blowering and Tumbarumba area, there is an increasing requirement for fox control. The region has been working very closely with adjoining neighbours and the Rural Lands Protection Board to try and come up with a strategic and cooperative approach. The other issue in Hume is increased sightings of wild deer across that region.

For Hunter region the primary issue that is emerging is, as the population expands, the State forest urban interface creates particular difficulties with the pressure that is placed on State Forests for recreational and other opportunities and the difficulty that that creates for control programs. There is limited monitoring undertaken there and it is difficult because of the sheer number of people that are driving through those State forests. It is probably true to say that in Hunter it has probably been more a reactionary process rather than a proactive process.

Within mid-north coast, Port Macquarie and associated areas, the main areas are wild dogs and foxes. A particular issue that was identified was, as raised by Niangala and Barnard River Wild Dog Associations, the fact that Tugalow is listed on schedule 2 of the Rural Lands Protection Boards Act. That has been resolved through discussion and liaison with the wild dog associations. Because some of that State forest is leased, control programs are being run through the lessees and the Rural Land Protection Boards and starting to work through a plan of management for that Tugalow area.

The Hon. RICHARD COLLESS: Is that for dingos?

Mr BULLEN: Yes. There have been particular areas, in June 2000, of wild dog attacks between Taree and Kendall and there was a meeting held between the Rural Lands Protection Boards, State Forests and National Parks to address those concerns. The difficulty there is balancing the control program with maintenance of the tiger quoll populations within that area.

Within the northern tablelands or Walcha pine plantation area it is primarily a pig issue. The dog factors are controlled or managed through mid-north coast region rather than through Walcha, so it is mainly a pig problem.

The north-east region is probably best left to Paul to deal with in detail.

South coast and south-east is actually a very interesting area. Part of south coast and south-east is picked up by the Cooma Rural Lands Protection Board and there is some impression that it is an homogenous problem across that whole Rural Lands Protection Board issue, but our people who manage, in cooperation with the parks service, the Tallaganda, Badja, Queanbeyan end have had very good success in relation to wild dog control with the decrease in aerial baiting but a much greater activity on mound baiting. That has been very successful in both dog control and also increasing the populations of tiger quolls. A specific issue highlighted there was that we had a radio tracking program of tiger quolls going down there and a particular individual animal was killed by the indiscriminate placement of a bait, so the mound baiting program is very effective, while more costly than aerial baiting, and it is working very effectively down there.

Within the western area the predominant problems are feral pigs and that is more an ecological and ground disturbance issue than major stock losses, from the information I have been presented, and certainly within Pillaga State Forest rabbit control is essential for regeneration and so on to go forward.

I thought that it might also be appropriate if Dr Shields and Paul gave a short overview of their particular area, Jim to cover historical aspects of our approaches and how we have moved forward. Jim also has some proceedings to table where we held a predator control workshop in Taree in 1999 where we started to think through our overall approach to feral animal control and I would like to get Paul to run through how north-east region approaches actual control on the ground within the limited funding.

Dr SHIELDS: Thanks to the Committee and Michael. As I talk for a while you will realise that I was not born here. I have been here for the past 25 years and I am a citizen and have been working with State Forest for the past 22 years, as a wildlife researcher first and then as a wildlife manager for the past seven years. What I would like to speak to you briefly about is the history and development of pest management in the State forests in particular, and I would also

like to look at some of the innovations that we have tried to implement and take on board in our management of pests in the past and recent history.

I did sort of start at the beginning but they told me I should not do this, so I will just mention that pest control and predator control is not a new issue in New South Wales. In 1924 there were a series of quite complex regulations concerning pests, including the normal bounties on foxes, but also in particular our interest is that there was a complete open season on tiger quolls and eastern quolls and the reading indicates that you were encouraged to get rid of these pestilential beasts. Of course the eastern quoll is now extinct.

Moving from there in my detailed history to where we started really taking on pest control as a modern endeavour by State Forests, it was in the 1980s when State Forests began to have a more environmental focus for a variety of reasons. It became obvious that we needed to be pro-active and take on board the best possible technological and ecological and also practical methods for controlling pests on our tenure. In the first instance it was just really a continuation of what is considered best knowledge, that is aerial baiting as per usual, and we began to look seriously at how and why this was done, and that began what we look at as the research and development phase into pest control in State Forests. We largely used research done by other bodies, but we incorporated this into the management plans for pests and began to question the efficiency of open slather aerial baiting as a general policy and have since moved on to take advantage of the knowledge that has been accumulated.

I make a distinction between State Forests and the way we operate. We are an action and operational agency inherently and we also have a comparatively small staff to deal with the problem. By the early 1990s, one of the first things that we realised we needed to do was train our current staff appropriately, and the second thing we realised we needed to do was to recruit good state of the art practitioners in the art of pest control. In 1992 I started a program that would fit in with the rest of our wildlife management schools as we call them; pest control and critical weight range mammal management workshops, to train our on the ground staff, and the appropriate ways of doing that managing, the ways to use humane traps, also pest control options including shooting were necessary to deal with appropriate animals. It was at that stage I recruited Paul Meek to be a consultant instructor to train our staff, which was very effective, and we have more or less internalised the work of carrying out pest control as the requirement of someone who works for State Forests in the bush. The second problem was the recruiting of staff that could effectively carry out the requirements of pest control in the 1990s. Paul proved fairly effective as an instructor in the pest control school. Whilst giving a lecture on how to shoot foxes, he called one up and shot it in front of 20 people, and taking into account he had to go half a kilometre to get the gun to do it, I was fairly convinced that if we wanted to efficiently deal with foxes, he would be a good man to have on board and we recruited him from Christmas Island where he was working for Environment Australia to run some of our programs. You probably do, but may not know, we have many other ecologists around the State and we have recruited them on the basis of some ability to efficiently and humanely carry out pest control operations.

We have tried to work smarter rather than more complex ways of managing pests and one of the things that we tried to do is to communicate with other agencies and with the people on the ground, landholders and private citizens that have knowledge about pest control, and one of the best ways to do this was to anticipate actions or regulations that were going to come into effect. It was obvious to us once the Threatened Species Conservation Act was passed that foxes would become an official threatening process and that we should be part of this process in developing the fox threat abatement plan and also in straightening out our operations at the moment. Given that scenario, we held a workshop in Taree in September 1999 to deal with how we might go about meeting our obligations under various regulations and also to participate in the development of the fox threat abatement plan. With the Committee's permission I would table the proceedings of that workshop.

[Document tabled]

We invited as wide a range of participants and experts outside of the organisation as we could, including Dr Lees and Dr Mahon, who were participants, the RLPB, local landholders and our ecologists from around the State made presentations and discussed what was best practice at the time. You will note the date of when it was published, and there was a subsequent fox threat abatement plan in the final result. But solutions to regulatory requirements and real problems do not come out of nowhere and we have got to innovate and initiate the development of the plan in our activities. What we did was talk about what has been learned from attempts to control foxes in the past, what the requirements of the RLPB were, what particular issues with landholders were, and then to discuss them in a workshop situation and come up with some actual recommendations and plans that could be used to take action straight forwardly.

One of the results of this was a co-operative project with the National Parks and Wildlife Service at Banda Banda where an aerial baiting run has been replaced with a ground baiting run. This was controversial with the people who

were affected by the possible increased stock losses, but we made a point of communicating with them about exactly what was going on, what we were doing. We monitored the uptake of bait by quolls off the mounds, we monitored the uptake of baits by the intended target predators, and were generously funded in part by the parks service to carry this out, as well as using our own resources. The results of that trial program have done two things. One, it has provided input and data for the fox threat abatement plan and the other is they proved satisfactory to the landholders whose land was affected by the replacement of aerial baiting with ground baiting.

That is about all I have to tell you. You are welcome to ask questions.

Mr MEEK: What I would like to do is give you a bit of a perspective of how we have been trying to resolve the issue of managing pests animals at a regional level. As these guys have said, State Forests is broken up into divisions and regions. My area is from just north of Kempsey up onto the tablelands, through Ebor, to Glen Innes and then up to Queensland, so it is a big area. State Forests actually manages approximately 2.8 million hectares in the State, and the question that we were posing back in the late 90s and early 2000s was: How are we going to manage pests animals while satisfying social, legal and biodiversity demands with financial and resource limitations?

The sort of initiatives we have undertaken on the ground level are that we have been developing good collaborative relationships with public landowners and our neighbours. We have formed working groups. In my particular area we have formed a working group for our area that discusses on the ground regional pest issues and works towards multiple agency control programs. We have been trying to use a strategic approach towards pest management, as developed by the Bureau of Rural Sciences, of identifying areas of concern across our landscape, trying to identify which ones are the real issues and which ones are not so real or not so critical, and then trying to find, having identified those areas, how we can prioritise our efforts because we have a limited resource allocation.

The philosophy of our approach has really been we need to identify areas where we can effectively spend money and undertake control programs at the expense of other areas where we cannot spend money, because we cannot control pest animals over the entire State effectively. So what we did was started to think about how we could use a bit of science to identify these areas of importance and prioritise our efforts, and we started working through a method which we have called conservation kernels, and it is a contemporary process of using geographical information systems to map the known records of species that you identify as being at risk by predation, by foxes for example, with modelled habitat of those species and then where foxes occur, and you overlap them all and through this process you can map areas of conservation kernels or areas of high integrity. We have currently got that being submitted to a scientific journal as a method of planning.

CHAIR: Can we get some details after this delivery?

Mr MEEK: Sure, yes. Obviously, the next step from that is we have got to identify other areas apart from biodiversity ones, which are livestock impacts, and we have been working through the Pest Council and with our neighbours in the Rural Lands Protection Board, the Department of Agriculture and National Parks to identify areas of livestock impacts and try and improve the quality of the data that is coming to us so that we can use that to prioritise where we are going to undertake control programs.

The step down, after having worked out and prioritised, is to actually develop the action plans themselves so they are varied, and there are a number of issues that we have been throwing up, and you have probably heard them before, but I will just go through them, of course the most important one being that we need collaboration with adjoining neighbours and other agencies to make sure it is not just State Forests or National Parks undertaking programs. We design programs which are long term, because we know from evidence of current programs under way in the country that if you do not have a long term plan, you do not have a plan at all. We also ensure that we have measurable outcomes, that we set performance indicators in our plans, and in that way we are trying to currently work out the best and most effective way of doing that.

If I could also table these documents which provide a bit of an overview, so I do not bore you with it now, of how we consider issues of wild dog management in State Forests, and that relates to broader pest animal control management as well.

[Documents tabled]

The other issue we considered seriously is how are we going to effectively control the pest animals that we are targeting, what methods are we going to use, are we going to use an integrated approach, rather than just relying on one technique, and that may be looking at using baiting as well as trapping as well as hunting and shooting to have the

greatest collateral damage on the population that we are targeting. We also consider the seasonality of our control effort to make sure that we are controlling our animals at the right of time of year, and we are also addressing, in collaboration with National Parks, frequency of our efforts, so that we are trying to impact on the population of predators, and in the case of foxes, repetitively throughout the year, because we now know there is enough scientific evidence that if you control once, the population will come back within a month or so to where you were previously and you have had no or little impact.

The final thing that we are trying to develop in our regional plans is the idea of buffering areas of high integrity or these conservation kernels, and that is intrinsically related to collaboration with adjoining land owners so that we can set up areas of continuing control outside of these areas that we are going to identify across the region and the State as being of high value.

Our final aim is to develop a long term strategic, measurable, co-operative and adaptive pest control program across tenures and obviously that is cognizant of the requirements of the fox threat abatement plan, the issues associated with the Crown dingo reserves and also our obligations under the Rural Lands Protection Act.

CHAIR: Can I ask you perhaps Jim, and maybe Paul, with your years at State Forest, are there more or less feral animals in the State forests than there were 10 or 20 years ago and which species have gone up or down, any idea at all?

Dr SHIELDS: I have some idea. There are certainly more deer than there were 20 years ago. When I was doing my original PhD research in the beginning of 1981, we observed no deer whatsoever on 12 sites in southern New South Wales. When we re-sampled five years ago we observed deer on every one of them. That may have something to do with the local deer farmer opening the gate, but that is also a State-wide phenomena with the collapse of the venison industry in many areas. Other than that it is really difficult to say anything other than anecdotally. There are less rabbits, thanks to calicivirus I think I can say anecdotally, certainly in the areas that I am familiar with.

Mr BULLEN: I think a story that is quite relevant here is that about seven or eight years ago the then district forester at Tumbarumba attended a public meeting about Rural Lands Protection Board stuff and the issue was raised about controlling dogs that were coming out of the forest on to the adjoining neighbours and he said, yes, we will embark upon a program and so on, and about a week or so later he got a phone call congratulating him on the efforts that he had undertaken to control the animals, but it had not actually started. That is not to say that the complaints are not real and there are not particular issues, but it adds weight to Paul and Jim's point that you need to collect hard data to back up where the control programs need to be directed and, if you are trying to deal with perceptions rather than actual information, you get lost in trying to cover all bases.

CHAIR: Paul, do you have any comment on the increase or decrease in, for example, dogs? Do you have any information on how dogs have increased or decreased?

Mr MEEK: No, I could not answer that from a scientific perspective at all because there have not been any monitoring programs.

CHAIR: Anecdotally?

Mr MEEK: No, I think the reports are fairly consistent from my area. I have not been there 20 years, so I cannot provide a chronology or history of it, but we have records of livestock impacts coming in consistently throughout the year, but in terms of more or less I could not say.

CHAIR: What about this aerial baiting that you have now dropped. Why have you dropped it? Is it the impact on native wildlife? Is the mound baiting as effective as aerial baiting?

Mr BULLEN: What I would say is that, as a policy, State Forests do not now undertake aerial baiting. We still allow aerial baiting to occur on State forest where it is part of an integrated program with the Rural Lands Protection Boards, and some good examples of that are in the northern tablelands area where lessees are on the forest, and I think the best example about where the abandonment and replacement of aerial baiting has been effective is in the southern tablelands area and Jim is probably best qualified to talk about that in terms of tiger quolls.

Dr SHIELDS: Primarily the giving over of aerial baiting has been for more successful biodiversity management. There is a secondary factor that I think is overlooked in that aerial baiting is expensive. Hiring a helicopter is expensive and it is always put forward that it is the cheapest way to do it - and it can be - but when you put a helicopter in the air it

costs money, so there are two factors involved. Primarily it is biodiversity and primarily the tiger quoll, the spotted tail quoll, were the issues at hand.

On the south coast where we have good access to the forest on the roads and we can get in and carry out mound baiting programs, we did that in a very straightforward manner with the cooperation of the RLPB. The Bega RLPB has voluntarily eschewed aerial baiting and they have maintained good relationships with their land holders. It is because they have done it systematically, they have a good road system to work on and we have also formed a cooperative working group of doers, the people who actually dig the mounds, put the traps in and plan it out, get together and talk about how they are going to do it and they do it in a most efficient manner. In other words, we bait a fair bit of national parks, the parks guy does a fair bit of our stuff up on the tablelands and the RLPB does the areas that are practical for it to do around Bega. So we try to make it efficient and our basic promise is, if we cannot replace aerial baiting with something that is as efficient, we will consider continuing the aerial baiting program.

CHAIR: As far as you are concerned, is it as efficient?

Dr SHIELDS: I brought up the cost of aerial baiting.

CHAIR: Yes.

Dr SHIELDS: It is a costly exercise, but it is true that to replace an aerial baiting run with a mound baiting run usually costs more money than the aerial baiting.

The Hon. RICHARD COLLESS: To achieve the same result or just to put the same number of baits out?

Dr SHIELDS: To put the same number of baits out.

Mr MEEK: I think one of the other things we need to look at with aerial baiting is that there are areas where aerial baiting has advantages over ground baiting and that is where you cannot get access. However, getting back to our data issue again, we still do not really know - and a lot of rural lands people will say the same thing - how many baits actually hit the deck. A lot of baits dropped from a plane are hung up in trees. We still do not know how many baits are taken and we do not know what took them. We do not know how many animals are killed. All we can qualify it with is the reduction in livestock if they are measuring that to a high standard, so I think that is the area we need to focus on if we are going to continue down that avenue, we need to have more rigorous assessments of the real benefits of it because we know that ground baiting is effective, we can measure the benefits of what we have been undertaking by putting bait stations out.

The Hon. JOHN JOBLING: In view of that, how have you assessed the integrity of the two outcomes? In other words, what evidence have you got other than a few spots that one is more efficient or as efficient as the other? Have you undertaken any sort of scientific testing of that option?

Dr SHIELDS: We would very much like to, but it is a very difficult proposition.

Mr BULLEN: I think the difficulty with aerial baiting is that - and Paul has alluded to it and I think this is where your question is coming from - the dropping of baits is not controlled in the scientific methodology definition of the word "controlled", as in experimental control. I would contrast that with the question that you raised about effectiveness. With mound baiting and the use of sandpads it is very easy to monitor both the particular types of animals and the numbers of those animals prior to the placing of the poison baits, see where particular, for example, tiger quolls are present and then not place poison baits at that particular location, and then after your baiting program proceeds you then get very good information on your numbers and the effect on the particular animals you are targeting. So you are right in one sense that it is very hard to make those scientific comparisons, but that is as much a matter of the difficulty in rigorously monitoring the aerial baiting program versus the ease of being able to get hard data associated with mound baiting.

The Hon. JOHN JOBLING: You could say then that your conclusions are perhaps more judgmental than factual?

Mr BULLEN: Yes, that is true.

The Hon. JOHN JOBLING: Just like the comment on aerial baiting that perhaps a lot get hung up in the trees, has anybody done anything to test--

Dr SHIELDS: We have some information on it. We have some information on what happens when you drop baits on tiger quoll territories, which you can do when our researchers injected blank baits, baits without poison in them, with rhodamine dye. The dye goes through the animal's body and comes out in the whiskers, which is a fairly grotesque experimental procedure of catching tiger quolls and ripping the whiskers out of their snouts, but they definitely do eat baits dropped out of aeroplanes. We can determine that. As you can see, it is quite a difficult proposition to research things that you drop out of helicopters and things that you drop out of aeroplanes.

The Hon. MALCOLM JONES: On a day to day operational basis, it is reasonable to say that where you have access you would just man that and where access is limited because of the terrain you would consider using aircraft?

Dr SHIELDS: "Consider" being the operational word.

The Hon. MALCOLM JONES: Yes, I say "consider".

Dr SHIELDS: Yes.

CHAIR: Would you consider that State Forests managed its land as well as National Parks and Wildlife Service for feral animal control? How much do you spend per hectare?

Mr BULLEN: I think the answer to that is that where we conduct our programs in a controlled manner and monitor both the numbers of animals coming prior to baiting and the numbers afterwards we are able to get some good results and see that our programs are effective. The issue about whether funding is sufficient and so on is another matter.

CHAIR: It is not, is it, really?

The Hon. MALCOLM JONES: Just give us the figures then. How much do you spend on feral animals?

Mr BULLEN: I think last financial year it was in the order of $430,000.

The Hon. MALCOLM JONES: Does that include wages?

Mr BULLEN: That includes wages and plant hire.

CHAIR: It is in the submission.

Mr BULLEN: I think this financial year we are budgeted to spend about $550,000 on feral animal control. I think it is worthwhile placing that in context a little bit in that, firstly, the work that we undertake associated with threatened species activity has an indirect benefit in the gathering of information in feral animal control, so that where we are doing harvest surveys or strategic surveys for particular threatened species then that is not costed to our feral animal budget or feral animal costing code but is budgeted under a different area. I would also add that between 25 and 30 per cent of State forest is leased or grazed under occupation permits for which the responsibility for feral animal and weed control actually rests with the lessee or the grazing permit holder.

CHAIR: But not foxes?

Mr BULLEN: I think they have responsibility as well for foxes in the control of feral animals. I would also say that, distinguishing us from National Parks and Wildlife Service and the Department of Agriculture, we do not have a regulatory responsibility for the implementation of, for example, the fox threat abatement plan. There is a regulatory cost associated with implementation and coordination of that program which we do not have to wear that may be included in the park services figures.

CHAIR: Have you got your funding for the fox abatement plan yet?

Mr BULLEN: Particular activities within the fox threat abatement program we will fund out of our current budgetary allocations, and it was designed in that way. There are some activities in the threat abatement plan where we would, in conjunction with the park service, be seeking additional funding and that includes particular research programs on fragmentation and fox numbers and so on.

The Hon. RICHARD COLLESS: I was interested, Michael, in your comments on the control work you were doing with quolls. What results did you get from that in terms of the daily range of quolls in particular?

Dr SHIELDS: The quolls differ markedly between sexes. The females have relatively small home ranges that are quite exclusive and they vary between 10 and 50 hectares. The mothers tolerate daughters, it is a matriarchal society, and they have relatively small territories when compared with the males, which are quite large, maybe up to 70 square kilometres, and they overlap one another significantly. Basically the little ones avoid the big ones in terms of the males. The studies are made a bit easier by the quoll's social habits of communal defecation at latrine sites which you have probably heard about. That is how they communicate with one another, by leaving their calling cards, such as they are, and what you will find is that the small males avoid the big males when visiting the communal latrine and consequently it makes for a much larger territory.

CHAIR: How are the quolls faring at the moment, any idea?

Dr SHIELDS: It depends on what part of the State you are in. In the south they are much less common, in the west they are virtually extinct and in the north they are relatively common, to in some places an abundant animal.

The Hon. RICHARD COLLESS: They live in colonies, I presume. Are they individual animals or do they live in family units and how big an area would we be looking at to maintain an active colony of quolls?

Dr SHIELDS: "Colony" perhaps is not the right word in the sense of colonial animals like the yellow bellied glider or colonial birds. They have a matriarchial society in that many related females will live relatively close together but it is over a relatively a large area. The figures that I was giving for territories are from the south of the range where it is colder and life is tougher and they need a bigger area to survive in, but I think what you are getting at in your question is what size of an area would you require to have a viable population of quolls?

The Hon. RICHARD COLLESS: Absolutely, yes.

Dr SHIELDS: We have actually done calculations as part of our processes. The maximum figure would be somewhere around 250,000 hectares; the minimum figure that we came up with was somewhere around 50,000 hectares. As I say, that varies where you are in the landscape. Where conditions are harsher the area is greater. In the north of the State, life is pretty easy, it does not snow much, they do not have to run around too far to find another quoll to carry out reproduction with, and a smaller area would apply there and larger areas elsewhere. Kosciusko, for instance, and the surrounding forest areas would certainly contain enough area for a viable population of quolls.

The Hon. RICHARD COLLESS: In that case, in terms of the daily feeding range of the males, given that the females have a much smaller area, how far would they travel to feed outside their normal living quarters, if I can use that expression?

Dr SHIELDS: One demonstration of knowledge difference between what you call home range and home territory. Home territory is a smaller place that individuals have to actually defend, a home range is the area that they actually cover. In the south where, as I say, conditions are harsh, they may move up to 25 kilometres in the course of their life time. They quite often disappear off the radio range, are very hard to find, you have to use aeroplanes and so forth to pick them up. So 25 kilometres is not unusual. The largest that I think we have is 60 kilometres.

The Hon. RICHARD COLLESS: But that would not be on a daily basis?

Dr SHIELDS: No.

The Hon. RICHARD COLLESS: How far would they move from their territory to feed?

Dr SHIELDS: On a daily basis they move between two and ten kilometres.

CHAIR: You mentioned just now about hunting safety problems in one of the areas. Can you elaborate on that?

Mr BULLEN: The issue is that State Forests are obviously used by a variety of people for a variety of uses, and if hunting permits are issued they need to be issued on the proviso that care is taken where they are issued and the impact that that could have on other users of the State forests.

CHAIR: The new Game Bill will promote hunting in State forests and other areas. Will that be useful to control feral animals in your view?

Mr BULLEN: We are actually in the process of considering, if the new Game Bill is enacted, how we might respond to that. I think we are approaching it from, once again, the two angles: Firstly, the operational implications in terms of likely relationships with other forest users, and also the ecological impacts in terms of whether non-game species would be impacted. Probably Paul is best to deal with this one, but there may be potential for an integration of some targeted hunting into an overall control program, but once again, I preface that by saying it would be need to be in a particular State forest for particular problems.

CHAIR: How would it be controlled? How would it be integrated if it does happen?

Mr MEEK: It is another tool that we can use as part of a broader control program. As Mike said, there are provisos on that, and that is that we need to be forming, once again, collaborative groups with these people to make sure that the groups that are going to be participating with us have ownership over programs, that they are regulated, that they have codes of conduct which set out guidelines for their behaviour in the forest.

In terms of operational, I think the role of the hunting fraternity could be that they come in at various stages throughout a program to supplement the broader control programs that we have already undertaken. Another example may be - one of the issues in northern New South Wales, as Jim alluded to, is we are seeing more deer in some of our forests and we also have a few more pigs in a couple of places, which is seasonal. There is also the opportunity for the hunting groups to be involved in those sorts of programs where they are isolated and they can target those particular species, but obviously, once again, under controls from within State forest regions as well as their own organisation.

CHAIR: We have heard evidence from New South Wales Agriculture and National Parks and Wildlife Service of the reintroduction of pigs onto their lands. Have you had that same problem with State Forests, where the pigs have been cleared out, they have actually been re-introduced for hunting purposes? Is that a problem?

Mr BULLEN: I think from my time when I was at Orange and Bathurst, I know that there was anecdotally some information about people moving pigs from one location to another location. I think certainly the Hunter region identified that escapes from piggeries may be a particular issue in that particular location, although once again the ability to place hard numbers on it is difficult and quite often it may be a perception issue rather than a real issue. I do not know how you address that issue about hunters wishing to maintain an ongoing supply of animals to hunt, and certainly, if they are moving pigs from one location to another to maintain that activity, it is very hard to control, and it is illegal, but it is difficult to control.

Dr SHIELDS: One avenue we are interested in exploring is the European model of hunting using hunting clubs, where it is self-regulated, where we enter into contracts with specific organisations to carry out specific tasks to achieve specific objectives. It also has the advantage of being self-regulating in a sense, that the club to whom you let the contract has an interest in preventing other people from ruining their contract and their good standing. As I say, we are interested in developing this. That is one way of dealing with it.

Mr BULLEN: As Paul said, that would need to be integrated with your overall control programs and applied at particular locations for particular circumstances.

Mr MEEK: The other thing too is that with programs on mainland Australia we can never really aim for total eradication. All we can ever try and aim for is high level control of populations. A positive spin on that is that even if we do have remnant animals in State forest land, they are probably animals we would never have got to anyway, because control programs are never effective at wiping out 100 per cent of the population. So it is a matter of cost benefit, can you deal with and manage the remaining animals that are there and still achieve your goal, whatever that goal may be?

CHAIR: In your submission you said that State Forests is seeking additional funding for new initiatives. What would you expect to achieve with those initiatives and how much additional funding would be necessary?

Mr BULLEN: We pre-empted that you would ask that question, and what we thought we would do is place it into the context of what additional work we would undertake and then try and place a dollar figure on the end where we looked at particular activities. I will deal with sort of generic issues and then Paul can deal with State-wide feral animal issues that covers National Parks, DLWC and private landholders.

I think where we would put additional funding would be to supplement our existing programs in dog and pig control activities and as well extend it to wild dogs, pigs and deer control programs. I think also with additional resources we could carry out targetted baiting programs to enhance threatened species populations for conservation kernels, the approach that Paul was talking about, and enhance our buffering of State Forests.

I think that we would also like, if there was additional funding, to try and gather some more hard data and increase our monitoring of the effectiveness of programs. That would be worthwhile. There is a particular area of research identified in the fox threat abatement program about fragmentation, where we would put additional funding as well. I think generic activities would be the monitoring, the distribution and abundance of feral animals, implement follow-up baiting programs, research into alternate control and some liaison.

We have estimated that somewhere in the order of a million dollars a year for five years would enable a very sizeable additional program to be undertaken, and then after that initial five year period, it is likely that that amount of funding would drop because of hopefully successful outcomes, and we would then be able to put it on a more of a maintenance and lower level of activity.

I think Paul from his involvement in Pest Council has identified some State-wide issues.

Mr MEEK: It flows from that experience, but I think there are a number of areas where we need to spend some money and improve our knowledge, and one of those is to find a cost effective and repeatable measure for assessing control success. We are still grappling with how we actually measure, and this is in a biodiversity sense as well as a lifestock sense, what are we actually achieving and how can we measure it so that it doesn't take three weeks of trapping bandicoots to prove that moving foxes is a good outcome.

I think we also need to, as I alluded to previously, look at experimental studies to evaluate the effectiveness of aerial baiting achieving its goal. A big gap in our knowledge is that we really do not know very much about feral dog biology and ecology and how that differs from dingos, and therefore the functional roles of feral dogs as opposed to dingos and reproductive success and how that has implications for management.

We are keen to see an expansion of the program that National Parks are currently working towards of doing dingo DNA research to map the distribution of dingos to identify what is actually there and what habitats are required for management, and balance that against the demands of livestock protection.

The Hon. RICHARD COLLESS: Are you looking at the degree of hybridisation in those populations as well?

Mr MEEK: Yes, that is part of the whole tool, to look at what is a pure dingo and try to map what is dingo and what is feral or wild dog, yes. As I think Mike said, we worked very closely with National Parks on developing the fox threat abatement plan and there is a couple of projects in there that we are still hoping to get funding for. One interesting one is the role of new roading and road maintenance on the spread of foxes, which will be an interesting project to look at because that will tell us about rate of spread and the potential risks of different land management practices on critical weight range species.

One thing that I don't know has been raised previously is consideration of the management of companion animals and the role that they can play in contributing to feral animal populations, particularly feral cats and feral dogs on the urban fringes. We really still do not have an understanding of what role they have and do not have good comprehensive legislation to manage the issue effectively, and probably my final one is a greater focus on assessing and developing methods to control feral cats. National parks are currently developing a cat threat abatement plan which is in draft form and there has been a bit of work in Western Australia, but it is an area that we still do not fully understand and that is how do we manage feral cats and is there a need, is there an impact on critical weight range species.

The Hon. RICHARD COLLESS: How long is it since State Forests stopped aerial baiting as a normal practice?

Mr BULLEN: Between six and eight years.

The Hon. RICHARD COLLESS: We have had many representations from the south since the National Parks and Wildlife Service stopped or drastically reduced their aerial baiting - I think it was five years ago - that stock attacks, stock kills, have dramatically increased in that time. Have you had any reports from your neighbours along similar lines?

Mr BULLEN: That is why I raised at the start that southern area is not homogenous. State Forests holdings adjacent to the eastern part of Kosciuszko National Park are very small, it is fringed by a State forest which is between 5,000 and 8,000 hectares. We participate cooperatively with Rural Lands Protection Boards, et cetera, in that control program. Certainly there is some anecdotal evidence that stock losses may have increased adjacent to the Tallaganda-Badja end when we stopped the aerial baiting, but now that we have carried out a very effective mound baiting program and so on the numbers have actually started to come back and our controls are effective in controlling the dog numbers in those State forests.

The Hon. JOHN JOBLING: Given State Forests' comment in the submission that current practices and resources are, in general terms, adequate, would you like to tell me from State Forests' point of view which group of feral animals - dogs, goats, deer, perhaps pigs or horses - you feel your program of management is least successful with or which is your major problem and what needs to be done about it?

Mr BULLEN: I think dogs would rank very high up in the priority list. As alluded to in our submission, we have some radio tracking programs going on in Tumbarumba and we contacted the people doing that research in the last week or so and they have some very interesting results from animals that were trapped within State forest and then released. Obviously there is some sensitivity about trapping ones that may have been outside of State forest and then releasing them, but that is a liaison and research issue and those results are very interesting. Those dogs that were within State forest have remained solely within State forest, so they are not actually leaving State forest. That has some interesting implications around a buffering approach in terms of if you are able to do effective control on a buffer to neighbouring land holders then it is really a matter of getting an effective buffer and a maintenance program as dispersing juveniles move out from that central area, so that is one area, we would still focus on dogs, and there are some additional research questions there. I suppose that the second area would be pigs across the State that would be most problematic.

Dr SHIELDS: In terms of impact and actual damage caused, the other big problem that we cannot do much about is basically cats. That is the subject of the service and they address that question, but that is a problem in the sense that we do not have any tools to deal with it. Pigs are a real and known problem, and the dogs issue. An interesting result we got from analysing 800 dogs scats in Braidwood that were collected from within the forest was that none of them contained sheep.

The Hon. RICHARD COLLESS: What did they contain?

Dr SHIELDS: Swamp wallabies. They like to eat swamp wallabies. The other interesting thing was that when we compared it to data from 20 years ago the percentage of rabbits had dropped dramatically from about 20 per cent to about one per cent.

(The witnesses withdrew)

DONALD GREGORY MARTIN, Regional Director, Central West, Department of Land and Water Conservation, PO Box 53, Orange;

GEOFFREY ALAN WISE, Regional Director, Department of Land and Water Conservation, PO Box 1840, Dubbo, and

EDWARD JOSEPH CUMMINS, Senior Reserves Management Officer, Department of Land and Water Conservation, PO Box 2146, Orange, sworn and examined:

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

Mr MARTIN: Yes, I am.

Mr WISE: Yes.

Mr CUMMINS: Yes.

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 or seen only by the Committee, the Committee would be willing to accede to your request, although the request may be overturned by vote of the Legislative Council. Would you care to make an opening statement?

Mr MARTIN: Thank you, Mr Chairman, members of the Committee. My name is Don Martin, I am the regional director, central west region of the Department of Land and Water Conservation, and I am accompanied by Geoff Wise, who is the regional director of the far west region and is also the Western Lands Commissioner and chairman of the Wild Dog Destruction Board, and Joe Cummins. In this talk I will refer to the Department of Land and Water Conservation as "the department" or "DLWC".

The department made a written submission to the inquiry late last year. I will speak to this submission and Mr Wise will then address the pest animal issues specific to the western area of New South Wales.

The DLWC submission begins with an analysis of the extent of public land holdings in New South Wales. You will find that on page 2. This submission shows that about 53 per cent of New South Wales is Crown land administered by the Department of Land and Water Conservation under the Crown Lands Act 1989 or the Western Lands Act 1901. The bulk of this land is leased and the lease documents have a standard condition requiring leaseholders to eradicate pests on their land as required. The remaining part of the Crown land in New South Wales is made up of reserved lands. Many of these are managed by community or corporate trusts and they have care, control and management of land, including management of pest animals.

Land under the more active or direct control of DLWC includes reserves without trusts, some public roads, marine land and all vacant Crown land. A lot of these are scattered lots, they are on urban fringes and interface with other public lands. The DLWC also administers areas of State owned land, including 100,000 hectares of foreshore land, which is ministerial corporation land, which is around major water storages in New South Wales.

The legislative framework for management of feral pest animals is detailed on pages 3 to 7 of the DLWC submission. A principal requirement is that the Rural Lands Protection Act 1998 obliges all occupiers of public land to eradicate any pest on the land by lawful method to the extent necessary to minimise the pests causing damage on any land.

The submission covers the damage caused by feral animals to the environment. That is on pages 6 and 7. This is not an extensive coverage as this subject has been well documented by the lead agencies. DLWC defines lead agencies in the management of feral pests in New South Wales as New South Wales Agriculture, the Rural Lands Protection Boards and the National Parks and Wildlife Service.

Current DLWC programs and practices in feral pest management are covered on pages 7 and 8, followed by more specific programs for foxes, wild dogs and rabbits on pages 9 and 11. These programs include participation with the National Parks and Wildlife Service in New South Wales biodiversity strategies. On ground projects have been undertaking to protect threatened species of birds and animals to reduce the impact of introduced species on the environment. That is covered on pages 7 and 8. Ongoing pest management programs on research centres and the

foreshores land around major dams are covered on page 8. Preparation and implementation of plans of management on Crown reserves (page 8).

Specific pest species programs include participation with the RLPBs in "Outfox the Fox", a joint fox management program across wide areas of New South Wales with land holders and other public authorities. We detail that on page 9. DLWC is an active partner with authorities in the New South Wales fox threat abatement plan, which has already been documented by the National Parks and Wildlife Service. We cover that on pages 9 and 10. DLWC is contributing $30,000 per year to works on Crown land at 17 localities to protect the pied oyster catcher, little tern, beach stone curlew, hooded plover and brush-tailed rock wallaby. The department is an active collaborator in the current wild dog initiative of New South Wales Agriculture, National Parks and Wildlife Service and the Rural Lands Protection Board. That is on page 10. The Committee will know of the wild dog order gazetted under the Rural Lands Protection Act 1998 aimed at protecting core populations of dingos on public lands while at the same time allowing for management of wild dogs on the interface with private land. DLWC has two areas adjacent to Morton National Park near Nowra that is part of that program. DLWC is also an active contributor to an integrated wild dog management program which is carrying out valuable research into wild dog movements and management in the south-eastern part of New South Wales. Rabbit control programs are an important priority and vast areas have been treated in western New South Wales. Mr Wise will cover this and that is on pages 10 and 11.

In the eastern division of DLWC, obviously combined with Cooma RLPB, the Snowy Mountains Authority and landholders in programs to eradicate rabbits from Middlingbank Peninsular on Lake Eucumbene, that is on page 11. This is continuing on other Crown land in the area.

The submission deals with current practices and resources on page 12, in summary DLWC is contributing about $300,000 to various pest control programs in 2001-2002. All these programs are transparent, with funding being allocated to perceived high priority programs according to published guidelines. The department relies heavily on advice and methods of the lead agencies. DLWC does not favour unilateral action but prefers integrated co-operative programs with pest control authorities, other agencies and private landholders.

There are different opinions in society about pest animals and control methods, so the DLWC considers that if pest control management programs are to be successful, all methods of control which are legal and humane will be available. This includes trapping, poisoning, baiting, biological controls, ground and aerial shooting.

The terms of reference of the inquiry asked DLWC to comment on improvements for current practices and alternative solutions. This is dealt with on pages 13 and 14. Under (a) improved co-operation arrangements, (b) research surveys investigations and (c) innovative approaches. I have largely covered the need for co-operative approaches, but will mention the importance of the regional pest management committees which ensure that all stakeholders are involved in the design of programs. These committees will have a bigger role in the future. DLWC attends these forums and strongly supports them.

A list of research needs, on page 14, was determined in consultation with New South Wales Agriculture staff. The list there has current gaps in the knowledge of pest species and their impacts, along with the efficiency of cost control methods. I conclude with a brief reference to possible innovative approaches to pest management on page 14. These include improved poisoning and bait delivery methods, improved targeted specificity and more effective and humane physical methods. I am sure that these have been detailed by the lead agencies. Researchers are also working on reducing the fertility of pest species and introducing diseases. There is an opportunity to increase involvement of both public and private landholders in targeted integrated programs and DLWC will participate in these within the limits of its budget. There are great examples of the value of innovative balanced public awareness programs. DLWC supports these initiatives. They ensure that the community is aware of the aims of feral animal control programs and will contribute to their success.

The Committee may have questions or I will refer to Geoff Wise, who will speak about the western division.

Mr WISE: Thank you, Mr Chairman, members of the Committee. As already indicated, my name is Geoff Wise. I am the regional director for the Far West for the Department of Land and Water Conservation. I am also the Western Lands Commissioner, and by virtue of being the Western Lands Commissioner, I am therefore chairman of the Wild Dog Destruction Board. I am also chairman of the West 2000 Plus Management Board, which I might make reference to here as well. For what it is worth, Mr Chairman, in a past life I was a veterinarian involved in disease control of domestic and feral animals, including a multi million dollar control program involving feral cattle eradication. I am going to focus solely on the western division of New South Wales which is the western 42 per cent of the State.

In that area the land tenure and land management is basically under the control of the Western Lands Act. In fact, about 95 per cent of the western division is under the Western Lands Act in leases. Within each leaseholder's conditions of their lease, there is a clause which states that the leaseholder is to take within a proscribed time such steps and measures to destroy rabbits, dogs and other vermin as the commissioner shall from time to time direct and to keep the lease free from vermin during the currency of the lease to the satisfaction of the commissioner.

Mr Chairman, I have also indicated that there is a Wild Dog Destruction Act for which I am responsible. This act legislates for the control of wild dogs throughout the western division and the maintenance of the dog fence which is between New South Wales and South Australia and Queensland, which is 584 kilometres long, and that includes the funding of that fence. The Wild Dog Destruction Board was established under the Wild Dog Destruction Act to oversee these activities. As I indicated, I am the chairman of that board. Through the Department of Land and Water Conservation the New South Wales Government contributes $200,000 per annum towards the Wild Dog Destruction Board's activities. The board requires landholders with more than a thousand hectares to also pay an annual rate to support the activities of the board. The combined budget is in the order of $1 million per annum.

The dog fence between New South Wales and South Australia and Queensland borders was built to protect the grazing industries of New South Wales, particularly western New South Wales, particularly at the time that the sheep and cattle industries, and as things have evolved the goat industry, were commercialised. The Wild Dogs Destruction Act imposes a duty upon the owner or occupier of any land in the western division to destroy all wild dogs upon such land.

Mr Chairman, there are problems with other pest animals in the western division, such as rabbits, pigs and goats and I will just touch briefly on them. Although goats are feral animals and cause some damage to some native vegetation, they are also valued by some graziers as a supplementary source of income. I guess the same could be said for pigs, but different people see them in different light. It is well documented that rabbits have caused great destruction in the western division, competing for food and habitat with both stock and native animals, especially back in the late 1800s and the first half of the 20th century, prior to myxomatosis. Since the release of the calicivirus, up to 95 per cent of mortality has been recorded in rabbits in the western division. That use of that calicivirus, combined with co-ordinated successful integrated programs, in particular including ripping of rabbits, has led to a significant destruction of rabbits. A detailed report of these schemes is given on pages 10 and 11 of the DLWC document.

Just in summary I will touch on two main programs: Firstly, what is called the Southwest Rabbit Control Program in the bottom third of the western division. There has been in the order of a quarter of a million rabbit warrens ripped at a cost of $1.7 million over the last five years, half of that dollar cost contributed by landholders. The other half was contributed by State Government funding. That program has been extended for a further two years with additional funding under the NHT sources. The second major rabbit program has been funded by the West 2000 Rural Partnership Program, which is a joint Commonwealth and State funded program, and, as I said, I chair the management board for that group, and this basically is a similar program to what occurs in the southern part of the western division in the northern part. Through that program there has been $400,000 spent since 1998, about 50,000 rabbit warrrens have been ripped, and in that program the combined governments, Commonwealth and State have contributed two thirds of the cost and the landholders one third. In the New West 2000 Plus Program, which started up last year, there is further funding allocated for rabbit ripping, but on Commonwealth Government's insistence that can only be on a dollar for dollar basis, one dollar combined Government funding, one dollar landholder funding.

Mr Chairman, the inquiry asked about the adequacy of current practices and resources and suggested improvements. If I can speak on behalf of the Wild Dog Destruction Board, that board has seen very definite conflict of intent for the purposes of the Wild Dog Destruction Act and the Threatened Species Conservation Act of 1995. I should add the Wild Dog Destruction Act was enacted in 1921, so it was written a long time ago. That conflict of intent that I referred to relates to the status of wild dogs, which may be part or full blood dingo or even have no dingo at all, the status of any wild dogs living in the wild in the western division. I quoted earlier where the Wild Dog Destruction Act imposes an obligation on the owner or occupier of all land in the western division to destroy those wild dogs. The dog board's view is that a national perspective should be taken and that New South Wales does not necessarily need to have their own small population of wild dogs, which scientific evidence suggests are more likely than not cross bred, more likely than not inbred, when we know that there is a much bigger genetic pool of wild dogs immediately through the fence which we are maintaining through Government and community support.

Mr Chairman, just in summary of the presentation, and I guess in supporting what Don Martin has already stated, if I can just reiterate a couple of key points, that is that the Department of Land and Water Conservation does not see itself as a lead pest animal agency across all of New South Wales, other than our responsibilities directly under the Wild Dog Destruction Act. Conversely, DLWC collaborates with other agencies, particularly New South Wales Agriculture, Rural Lands Protection Board, National Parks and Wildlife and others, and follows best management practices

recommended by a co-ordinated approach to the issues. Certainly from experience in western New South Wales, I consider the pest animal control to be effective. The full suite of methods which are legal and humane must be used to combat feral animals. This includes the whole range of issues, which you have no doubt had much discussion on, whether that be fencing, trapping, poisoning, biological control, ground and aerial shooting or any other techniques and novel ideas that people can come up with.

Since feral animals do not recognise boundary fences, legislation should not distinguish between Crown land and other land tenures. Hence the Wild Dog Destruction Act should be amended like the Rural Lands Protection Act has been to bind the Crown. The Crown needs appropriate unambiguous and non-conflicting legislation, so whilst I said the intent of the legislation is in conflict, the literal legal interpretation, lawyers can easily tell us no, there is no conflict, but it is important for the wider community, if they are going to have an ownership of feral animal control, for them to see a simple view and see no conflict.

DLWC does not support the taking of unilateral action on feral animals, rather it supports the implementation of integrated, co-operative schemes which involve Commonwealth, State, local government agencies or local government and Government agencies, landholders and pest control authorities. Pest co-operation has been a key element for the successful rabbit control program in western New South Wales just as one example. In this regard, the regional pest animal committees have also become very good medians for the exchange of information and co-ordination of pest animal programs. DLWC is a member of these forums and participates in their forums within the constraints and within its budget.

Thank you very much, Mr Chairman, and we would be happy to take any questions.

(Short adjournment)

CHAIR: Geoff, you have the power to direct. Do you also monitor what goes on with the leaseholders to see how they do actually control and have you directed anyone to control foxes or any other animals?

Mr WISE: Under the Wild Dog Destruction Act, yes, and under the Western Lands Act I can direct people to do things. As I said previously, an integrated approach is the only successful way. Pulling out the big stick does not make a big impact, so the way we work, in particular with feral animal work, is through the Rural Lands Protection Boards knowing that New South Wales Agriculture is also working through the Rural Lands Protection Boards and developing that sort of integrated approach. As an example, only two or three weeks ago I organised a meeting with four Rural Lands Protection Board chairmen who subsequently organised a meeting with their four rangers to develop an integrated program. That one happened to be with wild dogs.

We have tended not to direct control of foxes or of wild cats and I guess that is based on the fact that the perception is that that is not the primary business from our point of view. We know that those cats and foxes have a huge impact on the native flora and fauna and we also know that foxes have a big impact on productivity and so there are a lot of neighbourhood coordinated programs anyway for fox control.

CHAIR: Is the $300,000 budgeted for feral animal control enough for 4 million hectares?

Mr MARTIN: You need to actually break down how all of that land is managed. The biggest chunk is the leased land which the Crown control and management has been vested to those land holders. Then you work down through trusts where you have both community trusts and corporate trusts who take the next jump. As you keep working down the land that DLWC actually has under its control, there is really only a small portion of reserves that do not have a trust, some vacant Crown land and the foreshore lands and research centres, so it is quite a small parcel of land, so in that context $300,000 is a reasonable sum of money. Yes, like anybody else, you can always do more if you have more, but from our agency's perspective I think that integrated approach means why is it necessary that DLWC has those moneys, as long as those moneys get delivered on the ground with integrated pest management.

CHAIR: Are you satisfied, though, that the control of feral animals on the land directly under your control is as good as State Forests and National Parks and Wildlife Service?

Mr MARTIN: I do not have any information to be able to compare between national parks and forests and ourselves. The issue I guess for us, and the easiest way to explain is if I look at my community, the central west, they have been through a process of developing catchment blueprints. It is about how to restore some of our natural resources back to a better condition given that 200 years of management decisions may not have aligned with our landscape and both catchments in my area, and I understand that it is similar around the State, have come up with

strategies about integrated pest management. They have not looked and said State Forests need to lift their game, national parks need to lift their game, land holders or DLWC. What they have said is that there is a dire need for integrated pest management.

CHAIR: On the question of the Pest Animal Council, do you share the views of others that it might be worthwhile making this a statutory body?

Mr CUMMINS: Yes, I represent the department on the Pest Animal Council and I have been sitting through the hearings, and I am also on the Noxious Weeds Advisory Committee, which is a statutory body, and it seems to me that it would give that committee perhaps a more formal role or status, I suppose. They have written a pest animal control policy for the Pest Animal Council, it might as well be a sort of statutory policy, and there was a discussion about possible funding for the Pest Animal Council to coordinate some activities, and I certainly think that would work, so yes, I think that if it was an option that the Committee is considering it would be good.

CHAIR: Would it change the way the council worked and, if so, how?

Mr CUMMINS: You mean the Pest Animal Council?

CHAIR: Yes.

Mr CUMMINS: Well, no, it is a pretty well-organised body. Somebody said there was a lot of expertise on the Pest Animal Council. I do not know in a practical sense that it would operate much differently. It might meet more often. We only meet twice a year; the Noxious Weeds Advisory Committee meets three or four times a year.

CHAIR: It may enhance the integration of a pest management program?

Mr CUMMINS: That would definitely be one of the principal achievements. I do believe that there is a lot of informal integration going on already.

The Hon. JANELLE SAFFIN: Who decides when you meet?

Mr CUMMINS: The chairperson.

The Hon. MALCOLM JONES: By only meeting once every six months it would seem to respond to things rather than be proactive with things.

Mr CUMMINS: If I look at the sort of things that the Pest Animal Council has spoken about, we do meet when there are issues and there is a full book of issues when we do meet, but if they had a more formal co-ordination role, there would be more business I am sure. There would be more programs.

Mr MARTIN: My casual observation of committees and how they operate is not about whether they are statutory or not but about their terms of reference. You get the terms of reference right and then I think you get a much better functioning committee.

CHAIR: Do you have any views on the terms of reference which may be revised for the Pest Animal Council and the whole community?

Mr MARTIN: No, I have not got views on it. What I am saying is what makes a successful committee is not about whether it is statutory or not, but it is about its terms of reference and how it is supported.

The Hon. JOHN JOBLING: Principally, the Committee has heard evidence from most of the bodies appearing before us on feral animals and their effect on the environment, dealing mostly with fox, pig, goat, deer and dog. What I note in your submission though, for the first time, the question of fish is raised, such as carp and the mosquito fish or Gambusia, and the effect on the ecology of wetlands, waterways and water quality and the native fish populations; and, secondly, you raised the question that has been mentioned in passing, cane toads, and the effect that they may have on the population. Would you just like to amplify a little bit, for me in particular, what you are doing in relation to the introduced fish species, particularly carp, what programs and what is happening there and what you have got in mind for cane toads, because so far we have had very little evidence on either of those?

Mr MARTIN: In terms of the carp, obviously New South Wales Fisheries have the expertise, so we work with them in terms of developing programs to get the balance back. I think the conclusion you need to come to is you are not going to get rid of carp. It is about how you actually manage them to reduce their number. The sort of evidence that has been presented to us is that restoring our natural ecology, our natural flows is one of the strategies in terms of getting the balance back. In other words, you get more native fish back and they actually can attack the carp eggs and the carp young and that sort of thing. So we have got a program of developing water sharing plans, which sorts out what water is for the environment first, is extractive use, and those flows into the environment are targeted to be more natural. Removing some of the barriers that are there, in terms of weirs and so on and their impediments to native fish; if you cannot remove them, put in fish ladders, those sorts of things. So it is about getting the balance back to try and get better competition between the native fish and the introduced species. That is where the strategies are at the moment.

The Hon. JOHN JOBLING: What about an estimation of the damage to the environment and what sort of costing and funding you actually put into that and how have you tested your programs to see if they are in fact working?

Mr MARTIN: In terms of the carp, we are just working with New South Wales Fisheries. I would have to check with them about what sort of evidence they have got, what sort of costings. My intuition would be that nobody has actually costed out the impact. There is only that sort of casual observation people make that our rivers used to be in a better condition before carp than they are now. I do not think anybody has gone through and costed that impact out.

The Hon. JOHN JOBLING: As it came through in your submission, would it be possible for you to obtain that for us?

Mr MARTIN: Yes.

The Hon. JOHN JOBLING: And the other one on cane toads, we have had a reference to cane toads, the problems and the effect they have on small native animals and insects. What can you tell us in that regard?

Mr CUMMINS: The National Parks and Wildlife Service have taken the running with cane toads. They have the collection program and the observation program in different places, and we would be most concerned if we had cane toads on Crown land, because a lot of the Crown land is sort of swampy, inaccessible country. We would participate in any eradication program, particularly in new areas, but we would leave it to National Parks to work out how that should be done.

The Hon. JOHN JOBLING: You do not have any particular program in place for observing, finding, testing, identifying?

Mr CUMMINS: We have a number of inspection programs of Crown land, not necessarily for cane toads, but for all sorts of things, people go out and look at Crown land, and we would be most alarmed to find cane toads, particularly where there are not any, and certainly we would be working closely with National Parks.

The Hon. JOHN JOBLING: There are not supposed to be any, but if you find some where there are not any, you have done well.

Mr CUMMINS: They say that when the New South Wales/Queensland football matches are on there are more cane toads appearing.

The Hon. RICHARD COLLESS: Mr Wise, the issue of the dog fences in the north west corner, how do you see that that should be resolved?

Mr WISE: As I indicated in my presentation, the dog board has very much taken the view that we should look at a species such as the dingo from a national perspective and question whether we need to have our own in our own backyard, and the dog board's view very simply is that there is little justification to have any population of wild dogs in western New South Wales. From the science, there is a genuine view that the dogs that are there are inbred and impure, from a dingo species point of view. Therefore, the dog board's point of view is maintaining the status quo, knowing that the nearly 600 kilometres of fence that the New South Wales Wild Dog Destruction Board maintains is part of a continuum that starts in Queensland and finishes at the Great Australian Bite, in the order of 5,000 kilometres length, that it is only appropriate to continue exactly as we have for the last 80 years, and, as I say, I am speaking from the dog board's point of view, and, therefore, say there is the line in the sand, it is quite acceptable to have Australian wild dogs, irrespective of their breed, on the other side of that line in the sand and maintain freedom of wild dogs this side.

Alternative strategies that have been considered - if New South Wales wants to have some of their own dingos, whatever that means, knowing the impurity within the breeding, we should think laterally. Thinking laterally, there are two solutions, in answering your question. One is for New South Wales to acquire some dingos that are on the other side of the fence. The precedence there is that South Australia, in the late 1920s I think it was, recognised that they needed to secure a water supply. They acquired Lake Victoria in New South Wales. The South Australian Government owns land in New South Wales for the sake of securing the water. There is no reason why, if New South Wales wants its own dingos out there somewhere, to acquire some through the fence, which would have all the benefits of maintaining a much more pure breeding population. It would cost the Government virtually nothing, because they would immediately lease the land back for its current use, but they could say they are our dogs.

An alternative way of thinking laterally is for a part of Sturt National Park, however big that part is, to be fenced on the other side of the fence, change where the fence goes. At the moment it goes on the northern and western boundaries of the fence. Put part of it on the other side of the fence, and that would provide a tremendous opportunity for research in case controlled type studies, and not only on dogs, but also on kangaroos, the interaction between kangaroos and dogs, the interaction between the impacts that dogs may have on other threatened populations, such as the bustard, which is a ground dwelling scrub turkey, which dogs love eating their eggs and eating the young chicks. So there are opportunities there.

The fall-back position is there has been a short-term resolution, and I say short-term because it is very hard to predict the future, and that is the integrated approach that has taken place in the National Parks developing a management program, working with the neighbours, having perimeter baiting and controlling dogs.

I have to say that one of the problems that I face is the 1500 or so ratepayers who we send an annual account to, they write some pretty violent statements across their payments, some of which really are not fit for anyone to read, fundamentally saying, "Why should I pay these rates when the Government is allowing dogs to be on this side of the fence", especially when the clause specifically within the Wild Dog Destruction Act says it is an obligation for every owner or occupier of land to destroy all wild dogs.

The Hon. MALCOLM JONES: Therefore, there is a non-compliance with those regulations.

The Hon. RICHARD COLLESS: By the Crown.

Mr WISE: That is from the intent point of view, that is what everyone says, but if you are asked a legal angle, a legal expert, they simply say because in 1921 when the Wild Dog Destruction Act was written, it made no reference to whether the Crown is bound or not, therefore the Crown is not bound. That is the strict legal interpretation, and so because the Act is silent, therefore it is not bound, so therefore it is not recompensed. That is why I say the intent to the layman is very confusing.

The Hon. RICHARD COLLESS: In relation to that population in the Sturt National Park, obviously you would have a certain amount of discussions with the national park management people over that issue.

Mr WISE: A lot.

The Hon. RICHARD COLLESS: Do you feel that you are working towards a practical and pragmatic solution or is it getting bogged down in the opportune red tape?

Mr WISE: No, there is really no bureaucracy and red tape, because it is a practical issue and there is good co-operation. Whilst the anxiety is there from landholders, I can say short-term it is working satisfactorily. The longer term is that it is dependent on a single factor, and that is perimeter baiting, and so it is dependent I guess on two things. One is the ongoing co-operation by the management of the day of National Parks and of the surrounding neighbours, it is a two-way street, and, secondly, the ongoing availability of suitable baiting techniques. I am not confident of predicting into the long-term future that that will always be available, and the concern that the dog board has is that if for whatever reason a tool was not available for that perimeter baiting, it will then be too late to change strategies.

The Hon. RICHARD COLLESS: Do you feel that shifting the fence to the other side of the dogs, if I can use that expression, would be to the benefit of the population of dingos that are there already?

Mr WISE: It depends on which side of the fence they end up.

The Hon. RICHARD COLLESS: Assuming that we are fencing dingos into South Australia and Queensland and not New South Wales.

Mr WISE: The ones that get to the other side would be safe but, using my logic, the ones that are left this side--

The Hon. RICHARD COLLESS: They would need to be eradicated.

Mr WISE: --need to be eradicated.

The Hon. RICHARD COLLESS: That obviously would be the best outcome for the people in that area, the livestock producers in that area.

Mr WISE: I think it sends a much clearer message from a whole of government perspective, but the issue then is: Is it practical?

The Hon. RICHARD COLLESS: Do you believe it is practical?

Mr WISE: I personally believe it is.

CHAIR: Has there not only been one complaint in the last three years about dog attack and two dogs were killed?

Mr WISE: Yes, there have been reports of sheep attacks in that area, only odd reports, but I would have to say that some land holders adjoining the park have used as an excuse the fact that dogs are there and dogs attack their stock to change enterprises from sheep to cattle. Now it is very difficult to really substantiate to what extent it was a genuine and valid reason for them changing enterprises or whether there were any other factors that led to them changing enterprise, but there is no doubt very few of the properties that now adjoin Sturt National Park run any sheep at all.

CHAIR: Does the National Parks and Wildlife Service have a program for emergency action when there is a dog attack?

Mr WISE: Yes.

CHAIR: You know about that?

Mr WISE: Yes, very definitely, and they do have that and, whilst that is accepted, land holders are still saying: Why do we have to wait until our animals are attacked before we trigger the 24 hour response from National Parks? We have had an alternative strategy for the last 80 years which was based really on eradication. Why do we now have to wait until we report a dog attack or a dog finding before we trigger that?

CHAIR: Dogs have been there for about 25 or 26 years, have they not?

Mr WISE: My understanding is that they came into Sturt National Park after the 1974 flood.

CHAIR: Have you any information over the last 26 years of how many dog attacks there have been around that area?

Mr WISE: Not off-hand, no, I do not, sorry.

CHAIR: If it was a major problem I thought they would have contacted us or there would have been a bit of a furore, but there has not been.

Mr WISE: At the most recent meeting of the Wild Dog Destruction Board we were dealing with correspondence from a land holder in the area who quoted a number of statistics of how low his lamb making per centages are, how many dogs he has destroyed on his property or he is aware of in neighbouring areas, so we do get reports from time to time. Drawing conclusions from them we have to be very cautious.

CHAIR: Apart from that area there, taking a line down south or to Broken Hill, are there many other dogs within that area or are they virtually all gone now?

Mr WISE: We regularly get reports of isolated findings of dogs. Just as an example, the dog board does an inspection of the fence every twelve months. On our last inspection last year, when we got right down to the end of the section between New South Wales and South Australia we were talking to a land holder immediately adjacent to that area and he said three weeks earlier he had shot a dog. We then found evidence that the South Australian section of the fence, where the fence goes off through South Australia, was in a very poor state of repair and there is no doubt in the mind of the New South Wales Wild Dog Destruction Board that that dog would have migrated down through South Australia and then swung around into New South Wales. We get reports of dogs right down the Paroo River, right down to Wilcannia, and even sometimes further south, but it is invariably only the odd dog that becomes--

CHAIR: Not a lot.

Mr WISE: Not a lot, but what we get told at the Wild Dog Destruction Board is that you do not need very many. If they go on a hunting spree or a killing spree they can do an enormous amount of damage.

The Hon. MALCOLM JONES: The farmers out there, because of the remoteness - and it is extremely remote and they are on their isolated properties - have a sense of it's them versus the world, and government departments are not to be relied on, they only have to rely on themselves, which would induce a sense of non-reporting and self-reliance.

Mr WISE: They are certainly very resilient, very self-reliant, very practical, get on with the job, but, having said that, I believe in many ways there is closer communication than there is here in the middle of Sydney. Milparinka Rural Lands Protection Board, as an example, and there are probably other people in this room who know better than me, I think has about 30 ratepayers, or 40 ratepayers but some of them probably own more than one property. Let's say 40 ratepayers. Eight of those 40 are directors on the Rural Lands Protection Board, so it is a very high representation level and when they discuss feral animal control at a board meeting a high proportion of the population know about it, but yes, they are practical and they like getting on with the job rather than necessarily talking about it.

CHAIR: What are their main complaints; what do they complain about most about feral animals? Dogs, pigs, foxes?

Mr WISE: I suppose I would have to say dogs, but that is by virtue of my capacity as chairman of the Wild Dog Destruction Board. What they complain to Rural Lands Protection Boards about you would be much better to ask Rural Lands Protection Boards. Having said that, down in the southern part of the western division, rabbits are where they have concentrated their energy and there have been enormous gains made in rabbit control which have flowed on to improving our natural resource, flowed on to productivity. As a general statement, people have removed the number of mouths that are eating the grasses and not replaced the rabbits with domestic livestock, so people are much more resilient going into droughts, their resources are much better maintained, even as indicated by the fact that we rarely get dust storms generated from within New South Wales these days the way we used to decades ago.

CHAIR: Any further comments?

The Hon. JANELLE SAFFIN: I think you were talking about two Acts before, and I know you have added some clarification just recently, but you were talking about two Acts and saying there was some conflict. That seemed to be another issue.

Mr WISE: Conflict of intent. The Wild Dog Destruction Act, which specifically says that every land holder or land occupier must destroy all wild dogs, and I guess the Western Lands Act actually backs that up by a condition on people's lease saying they must destroy all dogs, and, on the other side, the Threatened Species Conservation Act which basically brings in that, if a dingo is a threatened species, therefore it has to be protected, so therefore the conflict. If there is a dingo in the western division, and in fact it is an offence for anyone under the Wild Dog Destruction Act to have a dingo in their possession in the western division--

The Hon. JANELLE SAFFIN: Does it classify a dingo as a wild dog for the purposes of the Wild Dog Destruction Act?

Mr WISE: The Wild Dog Destruction Act does not differentiate between any wild dogs and so it includes dingos and part-bred dingos and in fact the Wild Dog Destruction Act specifically says and makes reference to dingos, "Any person who without the written authority of the board", being the Wild Dog Destruction Board, "has in his possession any dingo or half-bred dingo is guilty of an offence and liable to conviction", and to a penalty, et cetera, so it

is an offence to have a dingo in your possession. That therefore means if someone lives in Broken Hill and has a dingo in their possession they are committing an offence under the Wild Dog Destruction Act if they do not have approval.

The Hon. JANELLE SAFFIN: But that is separate to the threatened species. You are saying that the conflict arises because of the killing.

Mr WISE: If the Threatened Species Act chooses to declare a dingo in some category within that Act, there is therefore conflict and, more importantly, the perception from the wider community is that there is definitely conflict.

Mr MARTIN: So the threatened species, if it is declared, then it is protected.

The Hon. RICHARD COLLESS: There are a lot of incidences like that in conflicting legislation, are there not?

Mr MARTIN: Yes.

The Hon. RICHARD COLLESS: The weeds Act and destruction of weeds in waterways, for example, is always in conflict.

Mr MARTIN: Yes. There are quite a few cases where we see solicitors at 40 paces while they work out where the hierarchy sits, yes.

The Hon. JANELLE SAFFIN: As a lawyer I do not have a problem with it, but I understand it is a perception there is a problem.

Mr WISE: Especially given that we are collecting money from people every year to support what is behind this Act. People are paying a compulsory rate every year.

Mr CUMMINS: We do have to keep in mind that the second wild dog order that has been approved, gazetted, designates areas of New South Wales where management plans are to be drawn up for the protection of colonies or potential places where dingos might be and DLWC participates in that process. We are involved in two sites there and there are a lot of other sites that we are not involved in.

CHAIR: One last question about the activities of the Department of Land and Water Conservation in relation to the pied oyster catcher, little tern, beach stone curlew, hooded plover and brush-tailed rock wallaby, what success are those programs having to protect those species?

Mr CUMMINS: Our submission details those programs in great depth. I will find that.

Mr WISE: Chairman, I heard you ask did we have anything else to say. Could I make a brief comment, I guess from where I live, which happens to be in Dubbo, and I am not really saying this in my official capacity, but I hope that your inquiry might consider whether birds come into the category of feral animals.

CHAIR: They do.

Mr WISE: The reason I say that is that the blackbird, which is an exotic species to Australia, is totally displacing the small native bird population, the finches, the honeysuckers and whatever, it is coming in and attacking the nests, it is literally killing--

CHAIR: The blackbird?

Mr WISE: The small blackbird.

CHAIR: The UK blackbird or European blackbird?

Mr WISE: It is one of them, non-Australian blackbird. It is something that is going on under people's eyes and I am not aware of anyone--

CHAIR: Have you identified a particular area?

Mr WISE: Well, I just sit at my kitchen window and watch them come in.

CHAIR: Not starlings?

Mr WISE: No, they look very similar to starlings.

The Hon. MALCOLM JONES: Not minor birds?

Mr WISE: No.

CHAIR: They are a feral species.

Mr WISE: Yes. It is not a DLWC responsibility, but I believe there are other species that we tend not to consider when we have these sorts of inquiries.

CHAIR: There are, you are right.

Mr CUMMINS: Our report on pages 7 and 8 of our submission indicates the sorts of programs we have supported under the New South Wales biodiversity funding which we received and a couple of points I would like to make are that one of the criteria of that funding was that there would be a measurable and noticeable improvement in the problem situations over the three years of that funding, so we targeted projects like the oyster catcher and little tern projects and the brush-tailed rock wallabies where we had cooperation with the Rural Lands Protection Boards and the national parks and there was actual monitoring and measuring that went on to determine what the situation was like now and what the situation was like after, say, baiting programs or fencing programs. Public education was a very important part of those tern and oyster catcher programs where the general public got on side, the four wheel drivers and people with their dogs on the beach, and the other very successful part of that was the involvement of the community, and thanks to the national parks, we have to give them full marks for organising a sort of roster of community volunteers to go and monitor the tern--

CHAIR: You worked hand in hand with National Parks on this?

Mr CUMMINS: Yes, we contributed funding.

CHAIR: I was there on the south coast and it was quite interesting.

Mr CUMMINS: Yes, and at the end of the day we had community volunteers there, hunting people away from the nesting areas and measuring the success rates of the hatchings.

The Hon. MALCOLM JONES: Which area is this?

Mr CUMMINS: The terns nested in various places.

The Hon. MALCOLM JONES: But where are you specifically referring to?

Mr CUMMINS: We are talking about Wallaga Lake, the ones you went and looked at at Nowra, and the oyster catchers, but the most obvious scheme is at South Ballina beach, at Tathra down the south coast. There are a number of sites and the terns fly in, and as you probably know, they land anywhere and so you cannot target an area until they have actually landed, then you have to go out and - we built electric fences and there were fox baiting programs and interpretive programs for the general public, and I think DLWC and National Parks and Rural Lands Protection Boards were involved in the baiting activities. It is a really good integrated program with measurable results. We could measure how many terns actually took off and went back to Siberia.

(The witnesses withdrew)

STEPHEN ROSS HURT, Committee Representative, Australian Deer Association New South Wales, PO Box 334, Blaxland, and

JOHN JULES MUMFORD, State Executive Member, Chairman, Game Management Council of New South Wales, PO Box 334, Blaxland, affirmed and examined:

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

Mr MUMFORD: Yes

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

Mr HURT: 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 heard or seen only by the Committee, the Committee would be willing to accede to your request, but that request may be overturned by a vote of the Legislative Council. Would you care to make an opening statement?

Mr HURT: I would like to thank the Committee for the opportunity to present our evidence on the position. My name is Stephen Hurt and I have been involved in the game management and feral animal control programs on both an informal and professional basis for over 20 years. I have been to many seminars on these and related subjects conducted by qualified and professional biologists, as well as visiting and participating in projects in the USA, New Zealand and many parts of Australia. With years of practical experience, primarily in trapping, shooting and habitat management, I have either run or participated in control programs for rabbits, foxes, pigs, goats and deer. While most of my contract work has been for private landholders, I have on occasions worked for public land agencies, ostensibly in goat eradication or control. In 1998 I was a founding member of the Australian Deer Association in New South Wales, its first secretary, and I have, with the exception of one short break, been involved in the management of this national association at either a branch, State or national level ever since.

You may have noted in my resume that I have not included poison baiting programs. My experience here is limited. However, limited as it might be, I have taken a personal decision never to be involved in poisoning campaigns again, having witnessed the effect of poisoning, predominantly with 1080 in rabbit control and fumigants for the same purpose. I can only consider this process as horrific and intolerably inhumane, regardless of effectiveness or cost efficiency. Poisoning is rarely, if ever, completely species specific, and it is in my view the most offensive method of population control. Even the published threat abatement plan for rabbits has been identified the current fumigants as inhumane and recommends that more humane methods be adopted, provided they are cost effective.

Having read the threat abatement plan for rabbits, foxes, wild dogs, goats, pigs and cats, it would appear there are some very common themes that are expressed throughout. Firstly, there appears to be a huge vacuum of real data and information establishing the relationship between introduced predators and/or competitors in any impirical way. To their credit, the authors of these reports have recognised this substantial deficit and have advised that this needs to be addressed.

Secondly, also there has been a qualitative assessment of the resources required alluded to. There is considerable doubt that the various State and national agencies have the qualified personnel, the financial resources or the time to have significance before loss of more species are incurred.

Thirdly, other than we need more resources, the typical response of most private and public bureaucracies, there has been little attempt to quantify either current resources and expenditure and compare that, which may be required, in any totally co-ordinated fashion.

Fourthly, outside the Government agencies there appears to be a complete dearth of social capital. Various farmers associations have little time for some Government agencies, in particular the National Parks and Wildlife Service, whose land harbours foxes, dogs and pigs which prey on valued stock, but whose priorities may lie elsewhere in the allocation of valuable limited resources in protection of critically endangered habitats or species. Farmers feel that their financial enterprises are subsidising the National Parks and Wildlife system by carrying either stock losses or increased pest control costs in the never ending battle with park boundaries.

In addition to the great many meritorious suggestions put forward in the numerous threat abatement plans, and assuming the aforementioned criticisms are addressed, the association proposes that the following steps be implemented to maximise efficiency in feral animal control in the near term.

Firstly, that we promote public utilisation of feral animals. Foxes were under the most pressure in the 1970s and 80s when their furs were worth between $35 and $40 a pelt. Now relatively worthless, fox numbers are extremely high. Another possibility might be the promotion of inspected feral animal meats to domestic and overseas markets, if only to the pet meat trade.

(2) Include all potential stakeholders, such as farmers and recreational hunters in applying pressure to feral animals on public land where appropriate. This is a hugely under-utilised resource. Despite the assertions of emotional individuals who oppose hunting for any reason on ideological grounds, man has been hunting on this planet without cessation for a very long time. Hunting is a natural part of the psyche of mankind. To deny this and alienate the majority of hunters who are not employed in Government feral animal control bureaucracies is to court misunderstanding, frustration, antagonism and subversion. To embrace this natural drive and resource would enable the planners to create a better level of co-operation, engender greater public education and support, provide immediate major resources to an otherwise slow and under-funded natural resource and heritage objective and provide a control mechanism for those in the community with a less responsible attitude towards these objectives.

(3) Prioritise the control of predators over competitive prey animals. For example, the recent build-up and subsequent flooring of rabbit numbers led to a substantial consequential build-up in the fox population. Depressed stock values only recently turned around, and continued depression of the fur trade in this country has led to a substantial relaxation of fox control programs on non-Government controlled land. Thus, population sinks have been created, allowing a continual bleed back into critically sensitive areas. Unless totally cocooned, no amount of activity will prevent re-infestation. At best such programs are only capable of providing very expensive and the most temporary of relief from these extremely migratory predators. In the threat abatement plan for foxes they have nominated a migratory range of each individual's home territory of up to 24 kilometre. Reducing the fox's natural prey, the rabbit, with calicivirus before the fox numbers were addressed, has led to hungry animals and to the inevitable prey switching, creating an even higher level of pressure on our already stressed and endangered natives. Even though we have derived some benefit through the increased pressure on rabbit control, we have got it wrong by putting the cart before the horse. This should not be allowed to happen again.

(4) The total resource application. Reading the threat abatement plan, it is clear that a wide range of methods of control are deemed appropriate to target feral animal species and habitats. These appear to be poisoning, including fumigation, trapping, shooting, biological control and habitat management. Whilst each of the processes have some merit and weaknesses, it would appear that the most effective approach to feral animal control often uses a combination of techniques, sometimes concurrently. This was explored in the threat abatement plan for feral cats. Indeed, no one process has ever been shown to be completely effective in the eradication of many feral species, except in some localised areas. So why do we cling to mono-systemic approaches? The association's view is that that is likely to have been brought about through limitations in scientific research, expertise and practical application, environmental variations, legislative restrictions, financial resources and social capital.

In conclusion, whilst it is not absolutely true that all feral animal species have a deleterious impact on the Australian environment, the statement is nonetheless substantially correct. When the threat abatement plans for the top six ferals are considered, it is clear, albeit anecdotally, that there are some feral species that cannot co-exist with some native animals. Further extinctions would appear inevitable unless all our effort is applied with the total of the community's available resources and support. For many species it is not possible to have both ferals and natives and the time has come for us to choose. It is the association's position that we should commit ourselves to the protection of our most unique biodiversity in a socially cohesive and determined fashion.

CHAIR: Would you like to make a statement?

Mr MUMFORD: Yes, I would. I am the chairman of the Game Management Council of New South Wales. We are part of Game Management Council of Australia, which incorporates GameCon Victoria. The total number of people represented in both States is just over 80,000. We have groups as diverse as the Spear Fishing Association of Victoria right through to fishing and four-wheel drive groups through to hunting groups in New South Wales. As a group, we were set up to promote what we believe to be the rich and cultural aspects of hunting. Hunting is one of mankind's oldest pastimes, in fact you could say that we were hunters before we were anything else, and it is on the basis of hunting as a conservation tool that I appear before you today.

One of the major concerns for GameCon is that many of the pest control programs that are conducted throughout Australia today are not coordinated. When I say they are not coordinated - and I refer to a comment Stephen made - the calicivirus in central Australia reduced rabbit populations by a significant amount. The CSIRO has published on its webpage numerous supports indicating reduction in the rabbit numbers simply led to foxes and cats in the area switching to predation on native animals. The other issue is that they will go out to an area with all good intention and they will attack the fox numbers in that area. The CSIRO has also found and has published on its webpage various articles to say that, as the fox numbers decrease, the cat numbers increase because the fox and the cat have a limiting factor on each other. GameCon is basically putting forward the assumption that when you move into an area to control feral animals it should be a broadbrush total hit on the feral animals that occur in that area, otherwise we are simply upsetting whatever balance they have managed to establish in the wild and increasing the impact on the native animals that are left in that area.

Another concern of GameCon is that, while National Parks and Wildlife Service seem to include everybody in their threat abatement plans, and in fact one of the threat abatement plans said various bodies such as National Parks and Wildlife Service, New South Wales Agriculture, Rural Lands Protection Boards, local government councils, regional pest committees, catchment management committees, CSIRO, universities, community groups such as LandCare, DuneCare and BushCare, volunteers, park neighbours or cross-border programs with other States were all involved to various degrees in their programs, I would argue that they have not to date made any attempt to incorporate the 180,000 hunters in this State in any of their pest control programs.

In conclusion, it is best practice in many countries around the world to use hunting as a conservation tool. One only has to have a look at the positive effect of Pittman Roberts Act in the United States in re-establishing the populations of the bison, the Rocky Mountain elk and the North American turkey, for example, the campfire programs that are currently under way in Africa which encourage local people into the management of their animals. In fact many of those programs have even been acknowledged by groups such as the World Conservation Foundation and I have seen mention in annual reports of Green Peace of these programs. Hunting is recognised around the world as a conservation tool and one that can have an immediate impact on the protection of the native animal and we would like to see hunting incorporated into the control processes and programs of pest animals within the State of New South Wales.

CHAIR: Is hunting not, to a certain extent, incompatible with pest control because surely hunters wish to have quarry to hunt; therefore you would not actually want to wipe out the deer and pigs and foxes, would you?

Mr MUMFORD: I do not think in fact government bodies would agree, or agree in all of the threat abatement plans that it is not possible to wipe out the feral animals. Now the argument that we in some way will manage the numbers to make sure that we always have hunting opportunity is not one that we subscribe to.

CHAIR: We have heard anecdotal evidence from a number of agencies that pigs have been reintroduced into areas by hunters where they have been cleared out of those areas.

Mr HURT: I would like to address that issue. The reality is that that is true, Mr Chairman. In any group anywhere, it does not matter what the social group or demarcation might be, there are always going to be some people who are not prepared to abide by the rules or the objectives, whatever they happen to be. We still get drink drivers, we still get people doing the wrong thing in a wide range of areas. The fact that people within the hunting community have done that and continue to do that is not questioned, there is too much evidence to substantiate that, but it is already happening and it has been happening for a long time and it will probably continue to happen regardless of the law unless the law is enforced and it is the position of the association that a structure be implemented to see that law enforced.

CHAIR: But there is no way surely of enforcing that, is there?

Mr HURT: Yes, there is.

CHAIR: I have seen your articles and have read the correspondence on your website about what you deem to be the cultural aspects of hunting. There are a lot of people, such as myself, who would question whether hunting per se is a cultural pursuit rather than a pleasurable pastime. You do need to have the quarry there and there is no way you are going to be able to control hunters from ensuring the quarry is there. For example, Col Allison, as I understand it, said that they did not want the deer in the Royal National Park shot out because they wanted them there to hunt. It is not an activity to reduce feral animal populations, that is the side-bar, the excuse. It is really the enjoyment of shooting animals or pig dogging, whatever.

Mr MUMFORD: As someone who has been involved in the program to save the deer in the Royal National Park, I can do nothing but disagree with the comment made by Col Allison. The Australian Deer Association, of which I am very proudly a member - I am the delegate on GameCon - has over the years expelled, and made famous in our publications and so forth, the people who have broken the law and in fact hunted in the Royal National Park. It is one of our great hopes with the Game Bill currently before the Parliament that when the game inspectors come in we will finally have given to us by the Government a statutory body with people who have the appropriate powers to help us enforce what we consider to be a rebel element within the hunting community and anyone - and I stress this - who releases any kind of feral animal or introduced animal into an area where it does not exist at the moment or has been cleared from, if anyone can bring evidence of that person to GameCon or any of our members locate a person doing that, we would be only too happy to cooperate in any way we can with the police to prosecute that person. That is not what we are about. We are about promoting hunting, and when I say "hunting", you can hunt with a bow and arrow, you can hunt with a rifle, you can hunt with a fishing rod and a hook.

CHAIR: Or dogs.

Mr MUMFORD: Or dogs. I consider there to be very little difference between those. In certain country areas the use of dogs to hunt pigs is about the only way that you can do it effectively because of the thickness of the bush and various other things, so yes, I agree with Stephen, there are people out there within the hunting community who do the wrong thing, but we do not consider them to be hunters. In fact within the hunting community we call those people dark-siders and we make every effort we possibly can to weed them out.

CHAIR: Every year I used to go to the duck hunting season from about 1987 onwards and every year we went down there to try to protect the ducks from the hunters and every year we picked up freckled ducks, swans, pelicans, ibises and turtles, just about everything. It seemed to me that the bulk of these duck shooters at least were not interested in what they shot, as long as they shot something, so how could you call that sort of thing responsible hunting?

The Hon. JANELLE SAFFIN: Could I just make a comment about hunting: There are certainly cultural aspects to hunting because people like to hunt and people will do it, but I suppose what I would like to hear you comment on is the ability of hunting to help the control of feral animals and things like that, and not say that hunting is exclusively for that but how hunting can be utilised for that.

CHAIR: What concerns me a lot - and I think it concerns National Parks and Wildlife Service, although I cannot speak for it obviously - is that hunters do not necessarily care what they shoot. I am not saying necessarily the bulk of them, but certainly the evidence was before my very eyes year after year and we laid out the pelicans, the ibises, the galahs, cockatoos and many freckled ducks every year outside here, I was there at the beginning of the duck season every year and they started before dawn, in the dark, just shooting things that flew and they said, "This is like Christmas for us, mate, you don't understand it". You have the ducks back in the Game Bill, I am not saying it is open season and in public places, but the hunting of ducks was not just ducks, it was everything, so if you cannot control those well-regulated duck hunters, how can you possibly hope to control people who like shooting anything just for the joy of killing it?

Mr HURT: I would like to address that in a number of ways. With some of the issues that arise there it is difficult to know where to start. I would contest the fact that hunting has in fact been well-regulated at any point in time, particularly in New South Wales. It has probably been the worst regulated State for hunting practice in Australia and Australia has probably got the worst regulation of hunting practice anywhere in the western world. From what I have seen overseas, I cannot think of any complimentary terms or even kind terms to look at the way hunting is regulated in this country, in particular in New South Wales.

That there are people out there who are prepared to shoot anything that moves, well, there is too much evidence to say that it does not happen, but it is outside my experience. I do not associate with people like that.

I can also demonstrate from practical experience, both from game management plans and also from pest eradication programs, that hunting has two enormous benefits, particularly when it is run in a syndicated or professional fashion. The first one is that I can sit here before you and honestly say that I have been directly and personally involved in the prosecution of people doing the wrong thing, both hunting and with firearms, and it is the cultural perspective and practice of our organisation to do so. A number of people have been prosecuted through the association for doing the wrong thing and that is hunters pursuing them to the end. They lost their firearms licence. That particular situation I have in mind is up for review, but it was an automatic loss of licence for seven years. We have great working relationships with property owners on a large scale. I will come back to the issue of deer later because I believe that deer should be held out separately from ferals generally.

Janelle, the way I have seen feral animal control work from a hunting perspective is primarily hunting alone. In fact, no techniques, either alone or in a concerted effort, will ever really achieve total eradication, but by heavens, you can really suppress the numbers. You will see classic examples, and it is easy to see when you cross the border from New South Wales into Victoria for instance, it is starkly obvious, goats, pigs, foxes are there for anyone to see on the New South Wales side of the border. The moment you cross into Victoria, where legal hunting is available on both State and private land, and in National Parks, I have yet to see my first goat, my first pig or first fox. Very very rarely, but occasionally, I have seen the odd rabbit. I predominantly go to hunt deer.

Now, to address your concern, Mr Chairman, about shooting at anything that moves, and how did you put it, the game had to be there and it had to be there in sufficient numbers to satisfy the hunters, there was one time slot where I hunted deer for 40 days straight without firing a shot and went home happy. There is a stark difference between people who take their hunting seriously, professionally, responsibly, to people who are literally out on their own, without any form of education, without any form of restriction, without any form of guidance. It is only to be expected that people will do whatever comes into their heads. To me deer hunting is the penultimate. It is hard work. I have known many very very capable hunters who have been hunting between eight and ten years who have yet to shoot their first deer. This is not a ten minute pastime or a slap happy, shoot everything that moves objective.

By the same token, feral animals do engender a high level of interest amongst the general hunting population, and it is my contention and belief that hunting alone is not sufficient to suppress say pig and goat populations, particularly in some specialised areas, in the mountain country in particular, but nor is any other technique. It is my belief that hunting in concert with these other techniques and in consultation with the other agencies will provide sufficient pressure to keep the numbers not only low but at a level which is acceptable to the Australian community, do less damage to the environment, less likely to recover and basically keep the knuckleheads out of the bush, for want of a better term, because if you are not seeing large numbers of animals running around everywhere and only light numbers occasionally, then even the most serious of hunters will take that very seriously.

The Hon. MALCOLM JONES: I would just like to agree with what you said. I met a man who called himself a deer hunter, and I was amazed that he had been a deer hunter for 20 years and he had only ever killed one deer.

Mr HURT: That is not uncommon, sir.

The Hon. Janelle SAFFIN: What do you do?

The Hon. MALCOLM JONES: Can I ask a question first? We are running out of time. I am conscious of that. Do you feel National Parks and Wildlife Service do not want to talk to you or they actually cannot talk to you because of perceived philosophical differences?

Mr MUMFORD: Both.

Mr HURT: To address that, I was involved - I do not want to name the individual, but I was involved in discussions with a senior parks representative and I brought with me at the time a visiting senior parks representative from New Zealand, just to see what it is we had in common and where we were different. The New South Wales representative seemed incapable of dropping the party line. I never really got to find out what he really thought.

CHAIR: What was the party line, Mr Hurt?

Mr HURT: The deer are feral introduced species, along with all other feral introduced species, and that because they were introduced, had to be removed, but when questioned further as to how those feral introduced species were to be managed, I was shocked to find out that when I questioned him on the position that for dogs, cats and foxes, particularly in the Royal National Park, that there was no eradication campaign running at that time, despite the fact it was a high pressure issue for them, and that should any cats or dogs be found in the park and actually captured, that they were then transported to the RSPCA for extermination. That was a very slow, cumbersome and expensive process. I do not know that that is the fact today, but it was the fact when I asked at the time.

CHAIR: You could not actually go shooting in the Royal National Park, could you?

Mr HURT: No, I am not proposing that we do.

Mr MUMFORD: In fact, sir, we have never proposed hunting within the confines of the Royal National Park. We are not proposing hunting in any area that has extremely high usage of visitors, although that is and has been quite compatible in many areas of the Victorian high country for many years.

The Hon. MALCOLM JONES: If, and I emphasise if, National Parks said, "Okay, we will try out a pig hunting pilot scheme", how would you proceed and what safeguards could you promote, and what arguments could you use to persuade them to do something like that?

Mr HURT: My proposal in that regard would be that the game council should have the equivalent of an OH and S policy and that access to any particular pilot program should vet both professionalism and the levels of understanding that any participant should have, and that organisations be given the opportunity to train them up under the equivalent of an OH and S policy and offer individuals from those clubs, under negotiations with the game council, to provide an opportunity to experiment in that area.

Mr MUMFORD: The other thing is that in the advent of a pilot scheme, if I were to run a pilot scheme or were working with National Parks and Wildlife to run that, the first thing that I would do is that I would attempt to locate an area of national park that had good access, in other words that is an area where the fire trails and so forth have not been allowed to degrade to the point where they are no longer able to be used, and I believe that is one of the reasons that bush fires got so much of them, but that is another story.

The Hon. MALCOLM JONES: That is a big call.

Mr MUMFORD: That is a big call. I would then approach the various members of GameCon to provide me with experienced hunters. I would also expect that those hunters have undergone some form of hunter education prior to going onto the area, and we would then pick a time of year in that national park that had the least amount of other public usage.

When I say that, I refer to a study done by the DNRE in Victoria many years back where they looked at the usage of a particular area of the Victorian high country and they found that in the winter months 66 per cent of everyone who went into that area of the national park were hunters, 32 per cent were fishermen and the rest were people who drove up to have a look at the snow and left again. That is the time of year that I would use to put the hunters in there.

The other thing is, and one thing that I have never been able to adequately communicate to National Parks and Wildlife Service, is most of the high use areas in, for argument's sake, a national park or a State forest, occur in the summer months. People like to go into the bush when it is fine, when it is sunny, when it is warm, and do their camping or fishing or whatever other activity. As hunters, that is the wrong weather for us. For me personally, I do not hunt in summer. Why? Because any animal that I shoot, the blow flies normally beat me to the meat.

To give some background in my hunting, I am also a deer hunter. The last calendar year by my hunting diary, I did 12 trips to Victoria alone hunting samba, I saw 53 grown deer and I shot none of them. They were too far away from camp to carry the meat back. That was the main reason I did not shoot them, and I refuse point blank to shoot any animal or take any animal's life if I cannot utilise the meat that comes from that animal. They are my personal ethics. They come back to the way that I was raised and the way that I was introduced to hunting. I went on my first hunting trip at the age of six. I come from Port Macquarie in the mid-north coast area, from a strong timber felling family. I know I am probably putting myself off-side with the Chairman here, but my whole life, hunting has been to me, and it has always been portrayed to me, as one other means of providing food for the table and that is the attitude that I take now. A bow and arrow, a pig dog, a gun or a fishing rod and a hook are simply tools to assist in that. They are my personal ethics; that is the way I hunt.

Coming back to the pig hunting issue, we would pick an area, preferably winter in the cooler months when we could make some utilisation of the meat that we took, and that is where we would do the trial, but also I would not limit or try not to limit the shooters or would argue against limiting the shooters to feral pigs, because there has been clear correlation, the CSIRO have proven this, that if you severely interrupt the population of one feral animal in a given area, something else will normally come through to take its place. For example, if you were to reduce the pig numbers too heavily, you may find that the goat numbers jump; if you reduce the fox numbers, the cat numbers jump. So any program that I would put in place there would be one that would target a broad band of species.

Coming back to the question you asked, Janelle, that is how I see hunting as a major tool to public land owners in New South Wales that is not being used. I take, for example, the draft threat abatement plan for foxes in New South Wales at the moment. They state in there, and they go through quite clearly, the processes that are involved in the use of

1080 poison in a given area, and they are reducing the scale of their poison to what they call 85 areas of high impact. It is also clearly identified in there that fox numbers are replenished through migration from other areas. So what is effectively happening, from what I can read, is that the National Parks and Wildlife Service are creating effectively predator traps. They are clearing the fox from a specific area and they are constantly having to redo that, again and again and again, because the foxes are coming back in. In one case in the threat abatement plan one of the bits of research said that that can happen in as short a time as a week. When you consider what parks and wildlife have to do to get that poison down, the first thing they have to do is they have to go along and set the bait traps and bury the baits. They then have got to identify the high use areas for foxes. That means a person or several people have got to spend quite a bit of time on the ground to establish where the foxes are in particular, what is there their high use area. They then go back and establish sometimes a free feeding station, where they encourage the fox to come in and take baits that are not poison, and then they hit them with a poison bait section.

Now, some of the issues there, and they have had very high kill rates, they have had up to 100 per cent in some areas with that, but the things that that does not address are bait shy individual foxes, which will then continue to predate on the native animals in that area, immigration from the native area and also the tendency of foxes when there is plenty of food around to cache food. So in the example that they pick up a 1080 bait which is buried the appropriate distance below the ground for example to stop a quoll taking it, they cache that behind a bush somewhere, and that has been identified in the threat abatement plan as one of the main reasons that quolls take feral baits.

What we are saying is by no means stop those programs, if they are deemed effective by the National Parks and Wildlife Service, but we need to address the other issues that are not covered. How do you get rid of the bait shy individuals? How do you stop the immigration from the other areas around that? Our argument is that if you introduce hunters as, for want of a better word, predators on the feral animals in that area, with 180,000 potential volunteers out there, who come self-equipped, self-trained, at their own expense, in other words they are free service for the public land owners of New South Wales, that while that will not eliminate the feral animals, it will go a significant way to complementing the existing programs that are in place.

We have high hopes for the Game Bill at the moment. I am one person who has been pushing for that kind of legislation in New South Wales for 13 years. That was when I first started working towards getting that up and running. It is no accident in there that one of the things we require for a game licence is a hunter education course. We want the hunter education course in there; we want the hunters drawn from approved hunting clubs; and the reason we do that is because of the comments made earlier by the Chairman, in an effort to make sure that the only people that go on that public land are people who have been vetted in some way by their peers, and let's face it, we are probably the best people to vet, a hunter is the best person to vet a hunter. In respect of the wildlife officers that will be appointed under the Game Bill, we are hoping that these people will be hunters. Those who best know how to deal with poor activity on behalf of hunters are the hunters themselves, somebody who has a real interest in making sure that the criminals and redneck elements are kicked out of what we do. Hunting is something that I have done all my life, it is the main pastime that I partake in, not only myself but also my family. I stand to lose that because of the activities of a minority and the quicker I can get that minority out of hunting the better. That is why we have had to agree with the chairman on some of the comments he has made, we accept that internally and we look forward to any help that the Government can give us in addressing that in respect of bills.

CHAIR: We had evidence from various agencies that recreational shooting of animals has very little impact, mostly it is baiting, trapping and aerial shooting. Maybe you have had a chance to listen to some of the arguments put, but in many of our submissions it says there is very little impact by actual shooting or individual shooting. They say it could be useful in mopping-up after trapping and after baiting.

Mr HURT: It is a complementary activity.

CHAIR: As part of an integrated pest management program.

Mr MUMFORD: Quite.

CHAIR: But not per se, because it would have no impact whatsoever.

Mr MUMFORD: I would argue that the reason anybody in New South Wales would make a comment like that, and they would have to make that comment for the simple reason that we have not, in my living memory, in New South Wales, integrated shooting in any widespread way, other than out of helicopters which is very cost-intensive, into the management of those programs and I would say that the best time to come back and review that would be at the end

of a trial period of incorporating hunters into controlled management programs and then we can make an honest appraisal.

CHAIR: But hunters do shoot currently on public lands, State forests and so on. You get licences to do that.

Mr HURT: No, near impossible, Mr Chairman.

Mr MUMFORD: It is quite difficult to do that. A particular hunting organisation has secured the rights to a couple of State forests. The problem that you have there is that when you go to apply for a licence to hunt on a State forest, the forest will often only issue you a licence for a weekend and they will often charge you a significant amount of money for it.

Mr HURT: If I can address that, Mr Chairman, in this report from the State Forests it declared - and I think it is from memory, I am just looking for it right now - that 14 hunting permits were issued last year in the State forests and they were all to bowhunters. We have no material to work with here in terms of what impact shooting has on feral animals in State forests because according to this it does not happen.

CHAIR: Why would they not issue permits?

Mr HURT: Primarily because the policy up to date has been one of liability and culture.

CHAIR: What about liability? What about insurance? In America they have a thousand casualties a year from hunting, as you know, you are involved in it, and not all deaths, but a thousand people are shot every year.

Mr MUMFORD: You also have roughly 8 million people out in a very compressed space of time.

CHAIR: We have a problem right now with public liability insurance. Let's say you get access to State forests and other lands. Who insures you or do you insure yourself?

Mr HURT: We are insured for our activities.

CHAIR: If, for example, I got in to a State forest and I got shot accidentally, who do I sue, if I can find the person?

Mr HURT: The individual and the organisation, which in our cases are both insured.

Mr MUMFORD: Hopefully you would sue the individual in his prison cell.

The Hon. MALCOLM JONES: You would sue everybody; you would sue State Forests because State Forests would know you were there.

CHAIR: You would have to sue the organisation.

Mr MUMFORD: It is interesting to note, Mr Chairman, that when we set about obtaining insurance for ourselves as hunters, the biggest single problem that we had with the insurance companies was them trying to assess the risk because hunting, as far as insurance companies are concerned or the last insurance broker I spoke to, they rate football as more dangerous than hunting because there are more fatalities and serious injuries in football in the course of an average year than there are in hunting. That surprised me too, but that is what our broker came back and effectively told us. It took us quite a long time and the insurance companies jumped through many, many hoops trying to come back and say exactly how dangerous was hunting, and many of them could not say.

Mr HURT: And your reference to the situation in America really cannot compare and it is predominantly because you have a landmass of a similar size, 8 million hunters in the field at any one time over a two week period in the US. Here in Australia there are no game seasons, except in some States for some game birds, and outside of that hunting is open year round. As a result, the number and the density of people in the bush just does not compare with the US, not in any way, shape or form. In any event, the insurance council has backed us as being one of the lowest risks of all the recreational activities and our insurance premiums actually reflect that.

CHAIR: It is interesting because even the Rylstone show did not take place this year because of the inability to get insurance.

Mr HURT: Primarily the incident rating against the participants in shooting and hunting is actually so low that they are having great difficulty in achieving statistical significance.

CHAIR: In the States, what do they do there? Do they insure there?

Mr HURT: It is a very different program. Clubs and individuals operate very differently. I have actually seen what they do over there. Hunting season in the States, depending on where you are, can be as short as one week. The longest one I know of is three months and the number of people - it is so different it is hard to describe. Schools, business, everything, shut down for a two week hunting period in the north. It is so different you cannot compare it.

Mr MUMFORD: Probably the clearest, and I do not want to use too many interstate ones, but probably the best example would be Victoria, deer hunters in Victoria. I think roughly 9,000 game licences are issued each year in Victoria to hunt the area which is deemed, I suppose, east of the Hume Highway and north of Princes Highway, the Victorian high country.

The Hon. MALCOLM JONES: East Gippsland.

Mr MUMFORD: Yes, the Gippsland area right through Wonnangatta Station up to Lake Dartmouth through to the Hume Highway. There are some times of the year when you can go in there and you can actually run into other hunter camps, but there are other times - and I am someone who has been known to hunt the Victorian high country 20-25 times in one year, and that is only in the winter months, that is every weekend driving to Victoria to hunt deer, and that is because that is what I do. Now I will go down there quite often and I very rarely run into other hunters in the bush, the reason being that when I go hunting the last thing that I want to stick to is a walking trail because that is not where the animals are. They do not run up and down a walking trail. You hunt where the animal has gone. You use the tracks as signs, whatever else, and you may find that you hunt for a whole week in a one square kilometre area because that is where the animal is and you may not even see it for the course of that week.

That is why hunting here in Australia is very, very different to what it is in the United States. That is the most highly used hunting area that I know of and in recent times there have been difficulties, predominantly because of the inaccuracy of the maps issued by the DNRE in Victoria which make it very difficult for folk to ascertain what is a hunting area and where that hunting area actually stops, and that is an issue that the DNRE are addressing in Victoria and, as I said, we do not have a history of high hunter usage in New South Wales of public land, so we do not have any anecdotal evidence or any other kind of evidence for this State, but we do have in Victoria, and they have been doing that since Henry Bolte, the Premier, introduced that in Victoria, and I believe they have had very few incidents over the course of that 30-odd years, and in fact that is where most of the statistics that our hunting insurance is based on were taken from, Victoria.

Mr HURT: Could I make two comments. Firstly, in relation to the issue of dogs, it is the association's view that dogs should only be used if they are not of an engaging type, in other words attack and pull down. Dogs should only be allowed for pointing, retrieving, identification, that kind of activity. We cannot support cruelty in the form of engagement. That just happens to be our particular position. I have not heard anybody else amongst the Committee, and John might have to redress me on that later if it is incorrect, but I am not aware of any organisation actually within our ranks that supports the engagement of dogs pulling down and killing other animals. The view that is expressed in that activity is not one that we personally can support.

Mr MUMFORD: You are speaking from the point of view of the Australian Deer Association as one member group there.

Mr HURT: Yes.

Mr MUMFORD: On the other side of the coin, to give you an idea, and I guess we have philosophical differences in our own organisations as well, GameCon does support the use of pig dogs, not because we in any way favour, support or promote animal cruelty - we do not - because we know that is a form of hunting. Men have used dogs to hunt for many thousands of years and will, we hope, continue to do so. It is a form of hunting, it is what people do. People go out to the bush. If you go out to Penrith you will find quite a lot of the tray-back four-wheel drives going around that have dog cages on the back. Those guys hunt weekends, they catch pigs, they sell the meat to the chillers, the meat is then sold overseas and it promotes the game meat industry. That industry is very alive in rural New South Wales and, let's face it, there is not a lot going in rural New South Wales in respect of that. Anything that puts money into rural communities is a good thing.

The only economic study that I have ever seen done on hunting was done on deer hunting and it was done by a chap called Myron Cause as part of a thesis for Griffith University. Deer hunters alone, and we make up probably one per cent of the general hunting community, if we are lucky, spend $74 million a year hunting deer.

The Hon. JANELLE SAFFIN: Is that nationally?

Mr MUMFORD: That is nationally. Most of that money is spent in rural areas because that is where we travel to in order to hunt.

Mr HURT: How long have you been hunting?

Mr MUMFORD: Since I was six.

Mr HURT: How old are you now?

Mr MUMFORD: Am I allowed to say that? Forty-one.

Mr HURT: How many deer have you shot?

Mr MUMFORD: I could probably count them on one hand. If I do not have room in the freezer, I do not shoot one.

Mr HURT: The point I am trying to make is that it is not a tally sport or a numbers game from a hunting perspective.

CHAIR: I just saw Col Allison's video the other day, hunters' video number 1 or 2 or something like that, and he showed a number of examples of hunting. I guess you have that or have seen that, right? It is an R-rated video.

Mr MUMFORD: To be honest, sir, I haven't seen it.

CHAIR: You should have a look, because that is the way he has promoted hunting and they have got the dogs picking up piglets in the their mouths, they have got dogs either side of the pig and this man stabbing the pig in the stomach.

Mr HURT: Sir, we believe that needs to be addressed.

CHAIR: Well, Col Allison is a major representative of hunters in the State.

Mr MUMFORD: He is a high profile hunter within the State.

CHAIR: You have got an image problem to say the least.

Mr MUMFORD: Mr Chairman, we do have an image problem and that is one of the reasons why we are attacked so vehemently by many people who are opposed to hunting.

CHAIR: Including me.

Mr MUMFORD: And you have a right to your opinion. We are not doubting that for a second.

Mr HURT: In relation to Col Allison, you put him up as an example. My question would be: Whom does he represent? Regardless of whom he claims to represent, whom does he represent? And I think the short answer to that is no-one.

The Hon. Janelle SAFFIN: Who is he?

CHAIR: He is from Australian Hunter.

The Hon. Janelle SAFFIN: I have never heard of him.

Mr MUMFORD: Just in conclusion, the last thing I would like to address is current or future practices. As someone involved as a youngster in shooting foxes for skins up in the New England ranges, just about everyone was doing that, at that point in time it was very very difficult to find a fox, the main reason being that any fox with a decent pelt was normally shot, either by the property owner or by other shooters, because he was worth money. Now, when we talk about integrated control programs, we have got to take the blinkers off. If we are going to talk about spending public money on feral animal abatement plans, I would suggest that a fairly low cost method would be a campaign to promote the wearing of fox skin coats, bearing in mind that it takes about 20 skins to make a coat, so there will be 20 foxes which will not be killing any more native animals in order for a woman to wear a fox skin coat. Unfortunately someone will probably throw blood on her in a street.

The other thing is that there are a number of processes, and a number of very well meaning individuals out there who are moving to ban or close a number of hunting processes, and the one in particular I would like to mention is the hunting of foxes with hounds. They are trying to ban it in the United Kingdom at the moment. I know that the Animal Welfare Advisory Council has put a submission to the Minister to do that. I have been in contact with these people. It is a regular organised activity. They kill roughly 280 foxes in the course of a year. My argument is that when that is banned, who is going to take up the mitigation work that they are currently doing for free. It will either be the farmer or someone -

CHAIR: In the United Kingdom?

Mr MUMFORD: In Australia, here in New South Wales.

CHAIR: 280 is a drop in the bucket.

Mr MUMFORD: 280, sir, is, I would argue, 280 on the right side of the ledger. The other thing is that they had an issue in Victoria many years ago which they called Fox Lotto. In other words, they caught a number of foxes, they tagged them and released them, and when the hunter handed that tag in they got a prize for it. If we really want to burn some money, why not catch five foxes, microchip them, because they all have an individual barcode, and let them go again and put a $10,000 reward for the microchip. How many foxes do you think are going to be shot with 180,000 shooters in Australia knowing that one of those foxes could have a $10,000 microchip in it?

They are the sort of programs I believe will encourage people to go out there and really make an impact on the fox population. We do not look at those sorts of things, we do not think outside the square and I think we really are fighting feral animals with one arm tied behind our back, because people like myself cost no-one any money at all when they go out to hunt. I am quite happy to pay my $40 a year for a game licence to hunt in Victoria and burn 30,000 kilometres going down there to do it. I would dearly love to be able to do the same thing in my own home State. The problem is that I cannot.

Thank you very much for hearing our point of view, sir.

(The witnesses withdrew)

(The Committee adjourned at 5 p.m.)