

REPORT ON PROCEEDINGS BEFORE

**PORTFOLIO COMMITTEE NO. 7 - PLANNING AND
ENVIRONMENT**

KOALA POPULATIONS AND HABITAT IN NEW SOUTH WALES

CORRECTED

At Ballina on Friday 18 October 2019

The Committee met at 9:30.

PRESENT

Ms Cate Faehrmann (Chair)

The Hon. Mark Buttigieg

The Hon. Catherine Cusack

The Hon. Ben Franklin

The Hon. Emma Hurst

The Hon. Penny Sharpe

The CHAIR: Welcome everyone to the second hearing of the Portfolio Committee No. 7 inquiry into koala populations and habitat in New South Wales. The inquiry is examining the current status of koala populations and their habitat and focusing on the impacts and effectiveness of existing policies relating to land management reform, forestry and the environment. Before I commence I acknowledge the Bundjalung people, who are the traditional custodians of this land. I pay my respects to the Elders past and present of the Bundjalung nation and extend that respect to other Aboriginal people present. Today is the second of several hearings we plan to hold for this inquiry.

We will hear today from koala experts such as Dr Stephen Phillips of Biolink, Mr David Milledge, Ms Sue Higginson and Ms Maria Matthes, as well as local councils and key environmental organisations, such as the North Coast Environment Council, North East Forest Alliance, Friends of the Koala, Bangalow Koalas, the Australian Koala Foundation and Friends of Cudgen Nature Reserve. Before we commence I will make some brief comments about the procedures for today's hearing.

In accordance with the broadcasting guidelines, while members of the media may film or record Committee members and witnesses, people in the public gallery should not be the primary focus of any filming or photography. I remind media representatives that you must take responsibility for what you publish about the Committee's proceedings. It is important to remember that parliamentary privilege does not apply to what witnesses may say outside of their evidence at the hearing, so I urge witnesses to be careful about any comments you may make to the media or to others after you complete your evidence as such comments would not be protected by parliamentary privilege if another person decided to take an action for defamation. The guidelines for the broadcast of proceedings are available from the secretariat.

All witnesses in committee hearings have a right to procedural fairness according to the procedural fairness resolution adopted by the House in 2018. There may be some questions that a witness could only answer if they had more time or with certain documents to hand. In these circumstances, witnesses are advised that they can take a question on notice and provide an answer within 21 days. I remind everyone here today that committee hearings are not intended to provide a forum for people to make adverse reflections about others under the protection of parliamentary privilege. I therefore request that witnesses focus on the issues raised by the inquiry terms of reference and avoid naming individuals unnecessarily.

Witnesses are advised that any messages should be delivered to Committee members through the Committee staff. To aid the audibility of this hearing I remind both Committee members and witnesses to speak into the microphones. The room is fitted with induction loops compatible with hearing aid systems that have telecoil receivers. In addition, several seats have been reserved near the loudspeakers for persons in the public gallery who have hearing difficulties. Could everyone please turn their mobile phones to silent for the duration of the hearing.

STEPHEN PHILLIPS, Managing Director/Principal Research Scientist, Biolink, affirmed and examined

DAVID MILLEDGE, Ecologist, affirmed and examined

The CHAIR: Would either of you care to make a short opening statement?

Mr MILLEDGE: I am a wildlife ecologist. I have worked in the forests of eastern Australia for 50 years. For the last three decades I have specialised in threatened species. The focus of my research has essentially been the large forest owls and the long-nosed potoroo, but, nevertheless, I have carried out a large number of surveys of koalas and I continually encounter koalas in my day-to-day field work. In this context I have observed the loss of koala habitat and the decline in koala populations across a fairly large area of northern New South Wales, from the Pilliga forests through the Tweed, Byron, Ballina shires and the State Forests of northern New South Wales. I consider that this loss and degradation of koala habitat is primarily due to urbanisation and the associated infrastructure and intensive forestry and, of course, there is the overarching effect, which is really kicking in now, of climate change; in my opinion, that is the koala in the room, if you like.

I do not consider that government is yet serious about koala conservation. We have got legislation that is opposed to koala conservation and we are seeing a continual erosion of legislation that has been designed to protect koalas. We see economic and social issues continually overriding biodiversity conservation issues and probably, again, in my opinion, the most detrimental recent change to legislation has been in the change of the Threatened Species Conservation Act to the Biodiversity Conservation Act and the removal of protection of endangered populations, and that is the point I really want to stress today: this lack of conservation, lack of protection of local populations, because loss of local populations equals extinction. That concludes my view.

The CHAIR: Dr Phillips, do you have an opening statement?

Dr PHILLIPS: Like Mr Milledge, I have spent a long time working with koalas. I am a specialist koala ecologist. I have probably spent more than 40 years, nearly as long as Mr Milledge has, working specifically on koala issues. My PhD is in science, on koala ecology. I am a former member of the NSW Koala Recovery Team. I was a member of the Federal Government's Expert Working Group on Koala Distribution and Abundance leading up to the 2012 listing. I have prepared koala plans of management or koala habitat population assessments pretty well in every east coast local government area [LGA] and some of the western ones as well.

It has been an honour, as an ecologist, to work with an animal like this for most of my professional career. It is something I am still focused on. Obviously you have a copy of my deposition where I have raised three primary issues and a fourth issue which is a bit peripheral. Those issues revolve around the failure of legislation at all levels to effectively accommodate this animal's needs and result in its effective conservation. The unsustainable harvesting, of native hardwood forests and the impact that has on resident koala populations, standards of assessment and the way that the processes of government go about assessing impact on this animal have invariably resulted in the loss of populations when quite easily some of those impacts could have been avoided.

For most of my professional career I have focused specifically on koala conservation issues, trying to provide the answers to questions that government and planners ask. Where are those animals in the landscape? What is important to them? Where is their habitat located? How many are there? What is the total population size? What has happened to them overtime? I decided to succinctly go to some of those themes by tabling some documents today. They are on the public record. I have just extracted some short elements of them. The first thing I will table is 10 copies of an executive summary from the Port Macquarie-Hastings koala and population assessment, which was done at the bequest of Port Macquarie-Hastings council.

The reason I am tabling that document is because it goes to many of the things I have been talking about: How many are there? Where are they? How do you use the records? The processes for informing koala conservation are well known and established and yet we still cannot gain traction with effective koala population size let alone recovery. The second document I am going to table is from another study done in 2009. That is a time that is relevant here. This is from some work that was done in Kempsey. I am going to talk a bit later on the impacts of overharvesting on forests and what happens to stem size, presuming I am asked to elaborate on any of the points that I have put in my deposition. I guess succinctly, I realise you have not had time to read the hand-outs but I encourage you to do so.

Nothing is working. This animal is declining. We have lost the Pilliga koalas, the largest population that once existed in New South Wales was known to be many thousands strong as recently as 20 years ago. In 2014 we were aware of the fact that there had been an 80 per cent population decline and we had some discussions with

OEH and others about what needed to be done to secure the remaining populations, protect them from threatening processes and fire break the population cells. In 2019, this year, at the request of the Office of Environment and Heritage [OEH] we did 107 field sites across the southern parts of the Pilliga, through the Warrumbungles and into the northern parts of Gilgandra shire, and did not find one scat. They are gone. How can we let that happen?

The CHAIR: Thank you, Dr Phillips, for your incredible work in this area over decades. I was going to ask you as the very first question how did you feel after working for 40 years trying to protect the koala in terms of the losses we are seeing. I think you have indicated to the Committee already how depressing that is.

Dr PHILLIPS: Yes, depressing. I promised myself this morning I would not get upset. The loss of the Pilliga koalas is spectacular. That we could let it happen when we knew it was happening is even more alarming, I guess. When we look around and we see the little actions, like the section 10 Pacific Highway upgrade, and we see how that road did not move one metre despite the fact we told them exactly where the populations were located. On the east coast of Australia now we are seeing spectacular impacts from climate change. We are seeing eucalypt dieback on an unprecedented scale.

I guess when you spend a lot of your time, it could be me bleating but I hope not, a large intent of my pure research, applied research and consultancy work has been to inform these processes that Government sets up—SEPPs, Biodiversity Conservation Act, Threatened Species Conservation Act—and informing on how to make them work. When you see the information that goes into them and you see the way that Government responds by effectively diminishing the worth of the information they have been given and not adopting plans, then you see populations start to disappear. Sometimes your objectiveness goes to a bit of anger and a massive sense of frustration. While it may be section 10 here and the Pilliga's loss of several thousands koalas, this is happening on a statewide scale everywhere. We are just not watching it and we are treating it with disrespect. It can be alarming and it is alarming.

The CHAIR: Given the devastating collapse of the Pilliga population I understand the numbers that the Government has been relying on in its koala strategy and in some of the evidence before this Committee has been based on numbers ascertained before that collapse. Those numbers are not recognised. One of the submissions for today has mentioned that even the numbers that the Government is relying on are potentially over estimated. Would you both like to comment on what you believe are koala numbers based on your work?

Mr MILLEDGE: I am not really familiar with the current situation, madam chair. I was out in the Pilliga forest doing surveys in 2001 and there were a large number of koalas, particularly in the western Pilliga and aligned along the drainage lines there. I went back 10 years later and did another set of surveys along some of the major drainage lines where forest red gums were concentrated on Bohena Creek, for example, and I think, as my colleague has said, I only found one scat in 2011. There had been a healthy koala population concentrated along that particular creek line. I would suspect that the figures the Government is using currently are outdated in that respect.

Dr PHILLIPS: I am always cautious about the numbers game. One, because there is always a bit of uncertainty with it. But what is more important than the numbers are the trends. We now have methods and particular techniques for looking at changes in distribution and indeed abundance. When we look at that on a statewide basis in New South Wales or we look at it from a national perspective and we look at the robust size of that data the trend is down. What we tend to measure change in is two parameters. One is called the extent of occurrence which is a broad range parameter connecting the outermost dots of distribution. We already know that the extent of occurrence of koalas in New South Wales has contracted by at least 30 per cent, maybe more.

The next range metric is called the area of occupancy. That is how much of the area within that polygon is being utilised. That is the more alarming metric because what data is telling us is that number is rapidly approaching a 50 per cent to 60 per cent reduction as opposed to the 30 per cent reduction by contraction in range. That measure, 50 per cent to 60 per cent, puts this animal as imminently in danger. Its decline is so fast and happening so quickly now that it does not matter whether you have 5,000, 10,000 or 50,000 the declines are happening that quickly that the rate of change warrants recognition of this animal as endangered at a State level already.

The thing that I always think about is that we sit here and we think: Oh, the legislation will save it. The legislation will not save it. If we were to stop everything that was impacting on koala populations today it would take another 15 years to 20 years for that to turn around and result in a recovery trend. As I think about koala conservation status and I look at the impacts on the species, I am looking at that time frame. I already know this animal will become endangered before we recover it. When I see lassitude and apathy and people going: Oh yeah. This is not someone else's problem, this is our problem. We need to act now to stop what is going to be a very

dangerous situation in another 10 years to 15 years and we have lost this animal from probably 70 per cent of its range, and the numbers just do not matter. The trends are very clear.

The Hon. PENNY SHARPE: Very depressing news that you bring, but something that we need to be paying close attention to. I have four questions that go partly to the material that you have provided, Dr Phillips, but also to you, Mr Milledge. The first question is that the change from the threatened species legislation to the biodiversity conservation laws, made on the basis that the biodiversity outcomes under the threatened species laws were not working too well either. Do you wish to comment and provide advice to the Committee about what is the disconnect between the laws that exist and the action on the ground and if we are going to recommend to government what it needs to do about that, what you would suggest?

Dr PHILLIPS: The disconnect is something that always seems to just—it is like a wall, a lot of the time. The best example that I can draw is a local example which is the section 10 Pacific Highway upgrade, Woolgoolga to Ballina. That road alignment was picked 15 years ago, 20 years ago. It is one of the issues that I have raised about the quality of ecological assessment. It was a cursory assessment. It said: No big issues, run your road through here. The community, Friends of the Koala, others, were mindful of the fact that was a pretty cursory assessment and objected to it then. Nothing changed.

Even when we went through a very complex process assessing that population with the population viability, we did demographic profiling, genetic profiling, disease profiling. I worked on those projects. We got to the stage where all the data said this population is already in trouble: It is already in trouble. When we put all that information to government, we fully expected—it is problematic when you become naïve—I fully expected the Government to say: Oh, what can we do? But instead, it said: Oh well, the population is bugged. It won't matter what we do. Let's just keep going. So they did.

There were two population cells on that alignment that are now gone because of that action. So there is that disconnect between what the objectives of the legislation are, in terms of threatened species management, threatened species conservation, the overriding need as it is perceived to be for public infrastructure, roads and transport, reducing accidents, and I have no problems with any of that. But, your capacity and the capacity of good knowledge—and it was good knowledge we had there—to influence that outcome in the end amounted to nought, and the road went exactly where they wanted it to go. What do you do?

The Hon. MARK BUTTIGIEG: Can I explore that as a follow up? This is a theme that seems to be emerging. Is that a by-product of different agencies administering different pieces of legislation and the Department of Roads, or whatever they call themselves, RMS now, has a greater political imperative to do that sort of thing regardless of what the other agencies are saying? Or is the agency itself responsible for implementing that environmental protection not really manifesting in what is in the legislation, if you know what I am trying to say?

Dr PHILLIPS: I would say the agencies would not back up the results of the science. So, there was a tendency to go: Well, okay, we are not going to raise our hands about something is wrong here. We argued, we have got good experience re-homing animals out of situations like this with 100 per cent success and we begged to get those animals out of that road alignment, and that was refused. Not only that, the measures that were then put in place, tree collaring, so the animals lost their food resource, really? That is pretty archaic and very unethical. But that was the way they dealt with the problem.

The CHAIR: Dr Phillips, could you explain what tree collaring is for the Committee?

Dr PHILLIPS: In any area of forested habitat there are trees that koalas prefer over all others. It is what keeps them alive, it is what determines their home range size, all this sort of stuff. Along the section 10 alignment there were red gums and tallowwoods that individual animals owned. They know where these trees are located. They trek to them unerringly. What the tree collaring was, they wanted the animals, in some mistaken concept, that if they stop them getting access to their food trees, that they would just disperse. They put up steel collars around their food trees so the animals could not climb them any more and expected them to disperse, but they did not. And many of them died. That was after the Federal environment Minister at the time said there will be zero mortalities with this road upgrade. Really? So, the tree collaring is what I would call an insidious, morally, ethically bad way to disperse koalas.

The CHAIR: Just one more question about tree collars, just to confirm for Hansard. Can you confirm—I have heard from people—is it true that koalas are actually found dead at the base of trees with tree collars?

Dr PHILLIPS: That was correct, yes.

The CHAIR: Order! I will make a quick statement to the public gallery. While I absolutely love your enthusiasm for the statements and what we are discussing today, the general rule is that the public gallery really does sit in silence while we conduct this proceeding. If that is okay, as much as you can, try to hold the applause. Thank you.

The Hon. BEN FRANKLIN: I have a follow-up question on the issue of tree collaring. You say that you have seen, or you know of evidence of koalas that have been found dead at the bottom.

Dr PHILLIPS: Yes.

The Hon. BEN FRANKLIN: To me it seems obvious that one of our recommendations should be to ban that practice. Can you give us an idea of the quantum of numbers of koalas that you have seen so that the evidence—you understand what I am trying to ask.

Dr PHILLIPS: Yes. The evidence that I am aware of relates specifically to section 10. I am not party to the advice that has been provided and measures that have been applied elsewhere in terms of the Pacific Highway upgrades. It is highly likely it has occurred elsewhere because of the practice that was brought down here and put into place. I hear rumours, which I tend to try to weigh up objectively. I am personally aware of what happened in section 10, that is why I am mentioning it. As a practice, it is something that needs to be banned, full stop.

The Hon. BEN FRANKLIN: Is it fair to say that you know of a significant number of fatalities that have been caused by this practice?

Dr PHILLIPS: Yes.

The Hon. PENNY SHARPE: The current way in which the New South Wales Government is dealing with koalas is through the Koala Strategy, which is a very big departure from the old koala recovery plans. I know that both of you had some involvement with them in the past. Are you able to provide information to the Committee about the difference between the approach, and I think I know the answer to this, and whether you think we need to go back to that more holistic, full recovery plan, rather than just a broad strategy?

Mr MILLEDGE: I think the strategy is a good start, but the problem is it is a long-term strategy. I do not think we have got time for that, as Dr Phillips was saying. The need to do something about koala populations is now. It is really urgent. Also, there are other aspects of the strategy that are not really targeted to getting immediate action either. The procedure of paying people to conserve koalas on their land is an ad hoc process. Instead of identifying the land that really needs protection in this manner, the process is that landholders apply to have their land protected in this manner. Whether or not it is good quality koala habitat does not seem to be terribly important. Recently I have had a look at four properties that the Government is looking at acquiring, paying the landowners to look after koalas on these properties.

The Hon. PENNY SHARPE: Is that through the Biodiversity Conservation Trust?

Mr MILLEDGE: That is right. I would say that only one of those properties is high-quality koala habitat. It is ad hoc and it is long term. If perhaps I could just go back to the section 10 issue—the East Ballina koala population issue—I think the initial route selection study by Roads and Maritime Services [RMS] was fatally flawed. The road should never have gone where it was placed. It is another example—what I have talked about before—of economic and social issues overriding biodiversity. I found that the process was quite duplicitous because although RMS said that it was avoiding and minimising impact, what in fact they were doing to biodiversity was increasing it. The selection process was highly skewed towards economic issues.

The Hon. PENNY SHARPE: Just to be clear, that was the saving of the cane farmers versus—

Mr MILLEDGE: It was not really the saving of the cane farmers; it was access to the toes of the hills to the west of the existing highway for the fill. I think that that was a spurious argument—the cane farm issue—because in many other places—

The Hon. CATHERINE CUSACK: I am really sorry, I could not hear the answer to the question. You said it was not really the saving of the cane farms. Can you repeat what you said?

Mr MILLEDGE: If you have a look at other sections of the highway—the Woolgoolga to Ballina upgrade—it goes through cane land. They build viaducts and they have accommodated the issues of cane farmers and they could have done exactly the same thing at East Ballina but they chose not to. My understanding is that they needed that fill that they got—the cut and fill going through those hills—because they needed to raise the

road up above the flood level. That was the major problem there. RMS actually suppressed the biodiversity data that it was given in that route selection process. It was quite seriously flawed, the route selection process there.

The Hon. CATHERINE CUSACK: You are saying that a major factor driving that option that they selected was to access material for road fill.

Mr MILLEDGE: Yes, cut and fill. Even with the selection of the route, where it was selected, they did not really put much effort into mitigating the impact there either. They could have put a lot of that road on viaducts to allow free passage under the roadway but instead they cut costs by putting a number of underpasses in. We know that koalas will use underpasses but the problem with this is that there is no evidence that long-term sustaining of koala populations can be maintained by this type of approach.

The Hon. EMMA HURST: Dr Phillips, you mentioned a little bit about the problem of mapping to identify the existence of koala populations and to work out numbers. Could you identify what the problems with those systems are just so we could understand when we are putting everything together why those numbers might not necessarily reflect reality?

Dr PHILLIPS: I think—I do not think I know—the way the process works is that a consulting company will be approached by RMS and say, "We are thinking about doing road upgrades. Can you give us a bit of a review about biodiversity issues, threatened species issues?" The classical approach to that is that they go to something like the New South Wales wildlife atlas or the Atlas of Living Australia and they will pull in records. They then look at those records and they say, "There is some here, there is some here and there is some here." Records are invariably very observer-biased when you come to use them.

It does not necessarily tell you what is going on on the ground. What is going on on the ground invariably requires quite a detailed assessment to occur. The first cut, if you like, is a very coarse process that lacks robustness. It is generally "A few records here and a few records there". In lowly populated areas—lowly populated areas: Is that English?—in areas of low human population or of low density of people, those records reflect that.

It tends to create a false picture of where the animals actually are in the landscape and indeed how they are moving through that landscape. We have done some review work for RMS over the years. We have reviewed the sequential Pacific Highway upgrades from Chinderah all the way down to Byron Bay and we looked at that process. One of our key findings was that the initial assessment process is flawed: You are missing key localities, key location areas and key populations. Every upgrade has had its problem finding koala populations after approval. Sometimes on ridges that were about to be demolished for fill had populations on them.

The Hon. EMMA HURST: In regard to the mapping issue, I am thinking about the Northern Rivers flood plain where there has been significant land clearing and agriculture uses and so there is quite a fragmented habitat. Would the mapping be specifically affected in that area?

Dr PHILLIPS: Not necessarily. We have done some work for Lismore Council, which is on the Richmond River flood plain. That has a really robust koala population in there. There are a lot of records in there mostly through work of Friends of the Koala but it is a fragmented flood plain, which is sustaining quite high densities and good numbers of koalas. The thing that you learn about koalas when you work with them in the field is that they are not uniformly distributed across that landscape; they are patchy. I guess they have very strong social things that drive their population structure. What is missing in the assessment process is finding those key population cells and then working around them, or at least assessing what the impact is, rather than saying, "There is a few records here—not an issue, let's move on."

The Hon. EMMA HURST: I have another question for both of you. I wonder if you are able to discuss the impact of the recent fires in New South Wales on the koala populations and whether that should impact the management of koalas going forward specifically.

Mr MILLEDGE: Well, definitely.

The Hon. EMMA HURST: And how it should be?

Mr MILLEDGE: Sure. Just to take an example, I have been assisting the North East Forest Alliance [NEFA] in undertaking some of its audits for State Forests and the logging regime, logging operations in those State Forests. NEFA have identified three State Forests in the north of the State as being particularly important for koala conservation: Royal Camp, Carwong and Braemar State Forests. They were devastated in the recent fires although there has not been canopy kill in all of those State Forests.

The Hon. EMMA HURST: Sorry, what do you mean by canopy kill?

Mr MILLEDGE: The trees still have live leaves in the canopy. The wildfire that went through was mostly destructive of the understory layer, the ground layers. There have probably been quite a few losses of hollow-bearing trees, which have collapsed from being burnt. I have not personally been back in the area since the fires but of concern to me here—these trees are in State Forests because of their extremely high value for koala conservation and they have been proposed by NEFA for national park status. You may have seen that proposal. What concerns me now is that because they have been burnt, the State Forest authority might consider doing a salvage logging operation in those State Forests. I think that there will be koalas left in those State Forests; they would not all have been killed. I think a salvage operation, for example, could be highly detrimental that could finish off those important koala populations. There should be a moratorium on those State Forests that have been burnt in those fires.

The CHAIR: Can I pick up on that? You can confirm as an ecologist, Mr Milledge, that some of the trees, say, in Braemar State Forest still have—

Mr MILLEDGE: They are still alive.

The CHAIR: —life beats, that they are still alive and there could be koalas in there?

Mr MILLEDGE: Yes.

The CHAIR: Okay, thank you.

Dr PHILLIPS: I will endorse what Mr Milledge said and I will probably embellish it a little bit. In that handout that I have given you, if you can look at the second page on the Kempsey resource document you will see that I have a graph there. I have taken some liberties of circling two bits of data. I have circled those two bits of data to highlight the importance of the large trees in the landscape for koalas. You will see the small group of trees that I have highlighted down on the bottom left of that graph. What we know from this data—and we have a lot of it for a lot of different trees that occur on these low-nutrient landscapes that occur in Braemar, Royal Camp and the like—is that once a preferred koala food tree on that landscape gets below 300 millimetres DBH, specifically a tallowwood or a grey gum, it becomes unpalatable to koalas.

The CHAIR: Could you explain "DBH"?

Dr PHILLIPS: Diameter at breast height. The standard botanical measurement. It is how we measure the trees. As you would be aware, the current prescriptive approach that was going to be applied to the logging of Braemar State Forest was to enable the retention of trees with a DBH of 200 millimetres. Everything else above that was potentially going to go. With every sequential cutting cycle in state forests the bigger trees are removed progressively. In the end you end up with this sort of sea of sticks for want of a better word, all of which on low-nutrient soils are unpalatable to koalas. In this circumstance, in Braemar, Carwong, Royal Camp, we know from other studies that probably 60 per cent to 70 per cent of the breeding population has been lost, just turned to toast by the fire—60 per cent to 70 per cent.

That is a well-established number. It comes from the Port Stephens 1994 fires and any other big fire that we have had a chance to monitor. In those forests now is 30 per cent to 40 per cent of the remaining population. Its survival is reliant on the retention of those trees greater than 300 millimetres DBH for their nutritional wellbeing. The immediate impacts of the fire have resulted in canopy scorch, so that food resource is already compromised. This is an area that does not need salvage logging. It needs a detailed assessment and the remaining populations need to be located, identified and protected with the greatest vigour.

The CHAIR: Thank you, Dr Phillips. We will see if the Committee can have a discussion about that afterwards in terms of what we can do immediately. Forestry Corp advised this Committee. We had one hearing earlier on 16 August and they presented to that. They were asked a range of questions about their logging practices and I think it would be good to get your opinion on their responses. I asked a question:

Do you wait for the koalas to move out of that logging coupe or do you say koalas are there, we need to move on. This area has significant koala population and possibly should not be logged.

You are aware of Dr Law's song meter research as well, both of you? So when I say "Dr Law", I mean that research. They said:

I think what we do is identify that koalas are actually in almost all of our coupes along the coast. The work that Dr Law did showed that koalas occupy 70 per cent of the sites and we have got thousands and thousands of records that we have collected over the last 20 years of doing these surveys. What we recognise is that the koalas are out there. If there is koala habitat there, then the koalas are there. What we want to do is put the protections in place that mean koalas will continue to occupy those forests after harvesting. That is again the work that Dr Law has done, shows that to be the case, that there was no difference in koala occupancy regardless of that recent harvesting history. We go, we are expecting to find koalas, we do find koala scats. We retain koala browse trees. We

put in koala habitat corridors. Our expectation is that we have got lots and lots of koalas out there, so we need to put those protections in place. It is not unusual, it is the norm.

What is your response to Forestry Corp's statement?

Dr PHILLIPS: Crikey. I am sorry. I have been a reasonably strident critic of this approach for a number of different reasons. I have alluded to them in my deposition. It is a mischievous piece of work, as I have said. It has quite deliberately neglected some key scientific literature. I will probably unpack that a bit if I can. So the first thing—

The Hon. CATHERINE CUSACK: Are we referring to the law research?

Dr PHILLIPS: Yes.

The Hon. CATHERINE CUSACK: Thank you.

Dr PHILLIPS: I have had conversations with Dr Law about this as well. He is aware of my concerns. There are several issues here. The first is about how the word "occupancy" is used. It is an International Union for Conservation of Nature term and it usually relates to the presence of resident populations. That makes perfect sense. That is what occupancy is about. Koalas live in a very complex society to which long-term fidelity of the home range areas is maintained. They know exactly where every one of their food trees is located. Dr Law's study, with all due respect, is not a study about koala occupancy. It is a study about male koalas only. What it does is record bellows. We know that in koala society probably about a 75 per cent of the male koalas wander aimlessly around the landscape looking for female koalas and trying to set up territories. In the process of that they call.

We also know from science, which was not reported in Dr Law's paper, that male koala calls differ in their frequency and their resonance. There is a thing in koala society called an alpha male. These are the big boys who maintain big home ranges. I am trying to think how I can play on that in a disrespectful way—anyway. They are big animals. I have had the honour of working with some of them, following them for three years and looking at how they function in this landscape. They are big boys, they are like 11 kilograms. They are big males. Your average male is around seven kilograms to eight kilograms. Dr Bill Ellis at the University of Queensland did a number of studies looking at the resonance of male calls and he found that these alpha males have a different call. It is deeper and louder.

The females are attracted to that call and they go to it. That is what evolution is about; it is about selection of the fittest. Dr Law's work does not partition these calls into deeply resonant male calls, which come from the breeding males, and those of adult males and the younger males who are moving across the landscape. It presents a false picture of occupancy. It is about male koalas only. It is about habitat use, not occupancy. That is why it differs so much. To see that information falsely represented I find disturbing in the koala management context. We know enough about koalas in these forests to know that if you start to take a few trees out of their individual home range areas then you impose nutritional stress on the animals, you imply social stress, they lose their food resource, they get sick, they have disease, the impact is too great and down they go.

These claims about retaining koala food trees—I think the current prescription for Carwong, Braemar and Royal Camp is trees that are 200 millimetres. They are not even food trees for these animals. When the big trees are gone, the populations will be gone. I have no faith in the Song Meter study as a means of estimating koala occupancy and use of the forest. It is a false, mischievous representation around what is going on. The other thing—sorry, my apologies—in the first handout that I tabled to you, you will see a table on the third or fourth page which comes out of our work in Port Macquarie. Our survey design, because of the rigours of what is expected of us, is totally unbiased. We do not say, "There is a patch of koala habitats, let's do a site there." We throw a grid across the landscape, we go to those points and we sample them. Our data is very unbiased.

You can see in that table, when I have split those field sites into the tenure, State forest, national park, private lands, you can see what is going on in state forest. In the Port Macquarie-Hastings LGA there were significantly reduced activity levels and the lowest number of sites returning evidence of koalas. This is because of a long history of over harvesting and unsustainable forestry management. Populations that we knew about in the 1970s and 1980s are now no longer there because of those practices. We put up a presentation at the recent Australian Mammal Society conference in Sydney. We showed a bit of data from Taree where the Kiwarrak State Forest, which has long been thought to be a koala stronghold, is virtually devoid of koala activity. All the koala occupancy is now occurring on the private lands to the west. A chronic, long history of over exploitation and unsustainable management.

The Hon. PENNY SHARPE: Directly—

The CHAIR: The Hon. Penny Sharpe and then the Hon. Ben Franklin.

The Hon. CATHERINE CUSACK: We have a lot of questions too and we only have 10 minutes left.

The CHAIR: Just a follow-up question.

The Hon. PENNY SHARPE: The question is direct because we have evidence directly that there are plenty of koalas in State forests, but you are saying, from what you just said there, that basically they are moving onto private land because the forests are degraded and they can no longer live there. Is that what you are saying?

Dr PHILLIPS: The habitat is no longer suitable. It is no longer capable of sustaining populations at higher densities that it would have had historically.

The Hon. CATHERINE CUSACK: Again I echo the comments of other members—thank you very much for your work and your passion on this issue. I was engaged in the selection of that route—I did not select the route; I opposed the route, as a member of the Government. The evidence you are giving further dismays me. I asked if we could come up to Ballina for this hearing because I really want to get to the bottom of that decision-making process. If you do not mind me asking you—and I say this as a person who is a member of the Government who tried to stop it and I do not, to this moment, understand how that decision could have gone ahead, with all that we know and the things that you are saying.

I am going to ask you some really specific questions, if you do not mind. In terms of koala expert information, could you just paint a picture of that for the Committee? Because RMS seems to have its panel of experts. You seem to be going through this incredibly frustrating process of presenting the facts and the information and then you say the Government takes it in and then they are getting these people to rebut it. Can you explain your world of koala experts, how that works and what the Government should be doing in terms of how it is accessing that advice for good decisions?

Dr PHILLIPS: It is a really good question and it is an immense source of frustration when you have huge data sets and very detailed and comprehensive ground assessments that provide all the answers they need and then someone comes along and says, "No, I don't agree with that."

The Hon. CATHERINE CUSACK: I read both of your reports on the koalas in the Blackall Range. I am sorry to interrupt you. Please continue.

Dr PHILLIPS: It is just immeasurably frustrating. Again you find big data sets that are scientifically robust and that have been collected in an objective and unbiased way simply repudiated or rebutted by someone's idea of what the answer is.

The Hon. CATHERINE CUSACK: Do you have an association of scientists who understand koalas or is there some network? How does it operate?

Dr PHILLIPS: No. There is a koala research network which is of academics who are working on koala conservation. There is an informal network of scientists who talk—and not just necessarily scientists but people involved in koala conservation. It is very frustrating.

The Hon. CATHERINE CUSACK: Maybe I can ask it differently. If I say to the Minister or RES, "Here is all of this information about that route option," and they come back and wave other research, how can I say, "No, that is not credible"? Is there some—

Dr PHILLIPS: I have always maintained, I have always said one of my statements is, "Show me the data." If someone has an alternative view, I am happy to listen to it, but I want to see the framework around it and how it has been collected and how robust it is. I am becoming increasingly weary of anecdote and a lack of robustness in information.

The Hon. CATHERINE CUSACK: Yes. Okay—

Dr PHILLIPS: Sorry to over talk there, but I have thought, "How can this be resolved?" Koalas are a global species and Australia has a global responsibility to manage them sustainably in terms of intergenerational equity. And yet we have people out there making decisions about koala conservation who really are not qualified to do so. They are driven either by bureaucratic demand or employer demand. We have people out there doing assessments who do not know what they are doing. They just think, "Oh, yeah. We read a bit in the literature." I personally found the NSW Chief Scientist & Engineer's report appalling.

The Hon. CATHERINE CUSACK: Oh, really?

Dr PHILLIPS: And it drives the New South Wales koala conservation strategy, yet if I was a university lecturer—and I taught at university for seven or eight years—and that came across my desk as an undergraduate project, I would barely have been able to pass it.

The Hon. CATHERINE CUSACK: Can you suggest a peer review process that perhaps the Government should be looking at—

Dr PHILLIPS: Well, I agree with—

[Interruption from gallery]

The CHAIR: Order! It is difficult for us to hear the conversation. We must be cognisant of Hansard needing to record everything too, please.

Mr MILLEDGE: The real problem here is that the process is not independent. That is the really key factor. The agency that is promoting this development goes and hires consultants of its choice who it knows will give it the answers it wants. That is the real problem with this type of approach.

The Hon. CATHERINE CUSACK: I suppose there is a similar issue with all development as well, isn't there?

Mr MILLEDGE: Yes.

Dr PHILLIPS: It is all development. What I was going to say was that with a species as important as this—and I know a lot of people get caught up the emotion of koalas but this is a species of global interest and Australia has a global responsibility—I think it behoves us to have technical advice and scientific advice going to government that is the best advice that they can possibly get and it needs people who know what they are talking about. It needs its own sort of advisory committee so that the Government can say, "Is this a good idea? Is this prescription going to work? What about this road?" And it needs to be independent of government. I cannot endorse that strongly enough.

The Hon. CATHERINE CUSACK: In relation to accessing the resource for road fill, I just want to follow that up. Is it fair to say that the landscape that RMS likes to build its roads on coincides with the landscape that koala trees like to grow on as opposed to swampland, just looking at that route and also the Woolgoolga to Ballina one? There is a lot of swampland, if I can put it like that, that needs to be avoided. But the terrain on which the koala trees are located tends to be drier.

Dr PHILLIPS: The koalas were on the upland areas as well. One of the population cells that was lost was actually on that elevated site that was identified specifically for road fill.

The Hon. CATHERINE CUSACK: Can you explain that loss and how that occurred?

Dr PHILLIPS: My information is the same as Mr Milledge's. The first thing I was trying to figure out what was the motivation behind that alignment. I was told the same thing: It was about fill. And I was thinking, "That just cannot be right. Why would you trash koala habitat for fill?" The carrying capacity of the landscapes that that road traversed differs—there is the coastal plain, which is the swamp mahogany, your red gum woodland areas that can carry high densities of koala. Once you get on the hills, if it makes sense, I think they are metamorphics in that instance. The swamp mahoganies and the forest red gums will be around the edges but up on the slopes it will be tallwoods and other trees that come in. They carry koalas at lower density, so there are different carrying capacities. When we did that work for RMS on section 10 we very clearly identified a population right on that hill. It was unambiguous. We had the lines on the map, very high resolution. We said, "They're in there."

Mr MILLEDGE: I think you have identified the issue there that the flood plain ecosystems are very sensitive and they have all been identified as threatened ecological communities because they have all been cleared, fragmented and degraded from past human settlement and agricultural activity and now they are being impacted even more by urbanisation. So they are very sensitive areas. You cannot avoid putting a road through them most of the time because a road is already there and you want to parallel it to a certain extent. But the environments have to be treated really, really carefully. There is always this economic consideration which I mentioned before where RMS would prefer to put in a few underpasses rather than a viaduct.

The Hon. CATHERINE CUSACK: I guess my point is that there seems to be this tragic—that you can have an area of land but the best trees will be located on the same land that is best drained or whatever for building or for putting a road in or whatever, so within that landscape, from a helicopter point of view, the koalas

and the roads are almost unfortunately, RMS is almost always going to be picking those routes. It just seems to me—it was really the last significant koala colony in the Ballina Shire, as I understand it.

Dr PHILLIPS: It is less significant now and much more likely to go to extinction because of that action.

The Hon. BEN FRANKLIN: I have got three questions. You will probably be able to take most of them on notice to provide substantial answers, if you wish. I want to go back to Ms Cusack's questioning about actually having some sort of independent body that can make appropriate recommendations about impact on koala habitat. Is it fair to say that you would support a recommendation by this Committee of the establishment of an independent panel with appropriate scientific expertise to assess the impacts on koala populations of any development?

Dr PHILLIPS: In short, yes.

The Hon. BEN FRANKLIN: Could you perhaps take on notice how such a panel might be selected and constituted in order to ensure it has both appropriate scientific expertise and the confidence of the community?

The CHAIR: The Committee will notify you of the exact things you take on notice so there is no need to—

The Hon. BEN FRANKLIN: We will give you these specific questions. Is that okay?

Dr PHILLIPS: Yes, that is fine.

The Hon. BEN FRANKLIN: Secondly, you made some fairly strongly worded comments about the Chief Scientist's report. I was wondering if you perhaps could take on notice as well giving some elaboration to what those concerns are and why? I think that would be very useful for the Committee.

Dr PHILLIPS: I can certainly answer the question now, if you like. I am happy to take it on notice as well, depending on how we are going for time.

The CHAIR: Yes, just very quickly. Actually, if you could take it on notice, because we are at the morning tea break.

Dr PHILLIPS: Okay, I will take it on notice.

The Hon. BEN FRANKLIN: I just did not want to limit you as you might have very specific concerns.

Dr PHILLIPS: Yes, I do.

The Hon. BEN FRANKLIN: The third and final question that I had: Dr Phillips, you talked about the fact that you prepared koala management plans for a number of coastal LGAs. Again, if you could take it on notice, could you let us know which councils, or if there are practices which are done very well in some councils that you suggest perhaps could be replicated across all councils and potentially that because they are done better—I presume they are done better in some councils than others—and that Government could potentially look at either legislating best practice or alternatively utilising them itself in order to make sure those practices are appropriately followed?

Dr PHILLIPS: I can take that on notice—and answer it, too—but I will take it on notice.

The CHAIR: Please.

Dr PHILLIPS: It does give me an opportunity to—I am mindful that you are going to Campbelltown the week after next.

The CHAIR: Next week.

Dr PHILLIPS: Campbelltown has been very proactive as a council. It is one of the more proactive councils I have had the pleasure of working with. It prepared a comprehensive koala plan of management over a year ago. That plan has been sitting in Government and nothing has been enacted about it. It has not been adopted, it has not been approved. It is a well informed and a very good comprehensive koala plan of management. Even subsequent to that the council has continued to monitor the populations. It has done connectivity studies. Now, you will probably hear that we are engaged in a rear action trying to stop a very poorly informed road upgrade, which is the Appin Road upgrade, where there has been advice from Government saying, "You do not need to do anything here". What! There are koalas being killed hand over fist on that road and the advice from Government is, "Not important. The koala has got no future in western parts of Campbelltown so we do not need to do anything".

Then you have got major developments occurring in that area—it is part of the Greater Macarthur Priority Growth Area. Again, the whole issues of landscape connectivity, previously identified linkages for koalas have all been disregarded. I am sure you will be lobbied quite heavily about it. But again, we are now finding ourselves and I am finding myself in a position where I am having to do a rearguard action to try and get at least some measures in place for probably the most significant koala population in the Sydney Basin. It is the only one we know is in full recovery mode down there and it is about to be severely compromised by ineptitude and very poor advice.

The CHAIR: As you indicated, the Committee is going to investigate and actually go to that site on Friday of next week. We are over time. I understand some members have additional questions, but we can put in supplementary questions to witnesses if that is okay. Thank you both for attending the hearing today. I know you are both very busy and the work that you do. Thank you again for the work you have done for many decades for koalas and other threatened species. The Committee has resolved that answers to questions taken on notice be returned within 21 days. The secretariat will contact you in relation to the questions you have taken on notice. As I have indicated, our Committee members may have further questions. Thank you both.

(Short adjournment)

JIM MORRISON, President, North Coast Environment Council, affirmed and examined

DAILAN PUGH, President, North East Forest Alliance, affirmed and examined

SUE HIGGINSON, Environmental Lawyer, affirmed and examined

The CHAIR: I now welcome our next witnesses. Would any of you like to make a short opening statement?

Mr MORRISON: Yes. I have been involved in native vegetation management for more than 20 years on statutory committees, and particularly in private native forestry over the last 20 years, and also native vegetation communities. Through that experience, I have seen a persistent watering down of existing legislation to protect threatened species, including koalas. A couple of examples might be the Threatened Species Conservation Act that was recently thrown out and the Native Vegetation Act, which did go some way in protecting remnant vegetation—that has been thrown out. I know the Private Native Forestry Code of Practice has been watered down since its inception, through the Natural Resources Advisory Council committee I was on.

The protected lands legislation—some of it was introduced in 1934, which protected steep land and riparian areas—has been thrown out. These actions have mostly been the result, I believe, of logging by the timber industry and some members of the NSW Farmers. The timber industry, in particular, has been in trouble with supply of timber, both public and private. An assessment many years ago by Southern Cross University identified that the last remaining decent stands of timber were on land that had been protected through the 1934 Soil Conservation Act—that is, land over 18 degrees and also land within riparian areas, which was a 20-metre buffer on streams.

I was told by somebody in the timber industry that, when you do a logging operation, those small logs are all well and good but unless you can get a couple of big ones on the truck, it is not worth doing the operation. The legislative requirements that protected those areas were thrown out specifically to get access to large trees. I live on the Richmond range and I have a private native forest logging operation currently underway across the road from me. The area is steep land, once again protected since 1934. The previous landholder had been there for 30 years, like myself, and was a conservationist and he sold the property. I might add, any property that comes on the market usually has someone rock up from the timber industry with them to assess the timber value of the property. Anyway, this property was bought and the next thing we knew there was logging, very intensive logging, going on in very steep country.

When I rang the department and said there were koalas and other threatened species on the land, he said that because they were not listed in the Wildlife Atlas, there was no requirement for their protection. I informed him I had been there 35 years and I had listed species on my property, the same property vegetation as across the road. He said if it had been listed on the Wildlife Atlas, it would have only required the retention of five feed trees per hectare, in any case. Talking to him further—this was a fellow in Grafton—he actually sympathised with me, agreed with what I said, but the legislation was inadequate to protect koalas and other endangered species. He went on to say his hands were tied because he could only deal with the legislation. In other words, the compliance officer was agreeing that the legislation was inadequate to do what it was intended to do, which is to protect those animals.

There is a history of this. In our submission we talk about Coffs Harbour council back in the late 1990s doing a comprehensive koala plan of management. It identified large areas of private land under State Environment Planning Policy [SEPP] 44, supposedly. I was on the private native forestry committee at the same time and a thing came through about dual consent, where at that stage consent was required by both the local government and the State Government to do developments. The timber industry lobbied to get rid of that dual consent. The State Government overrode anything that Coffs Harbour council tried to do to protect that habitat. There is currently nearly 2,000 hectares of private land, which was identified as high-quality koala habitat, now under private native forestry logging. The 15-year approvals are given, and if any new evidence comes to light during those 15 years, I am fairly certain it is not considered because they are pretty tight contracts and they cannot be got out of.

The CHAIR: Thank you, Mr Morrison. Does either of the other two witnesses have an opening statement, because I know there are going to be a lot of questions? Mr Morrison, do you have much more to say now?

Mr MORRISON: I am happy to leave it at that.

Mr PUGH: I have a number of documents I would like to table. They are being handed around at the moment. I have done a detailed submission, which deals with the main issues.

The CHAIR: You did, thank you.

Mr PUGH: It is not my intent to reiterate the issues at this point in time and I am happy to take any questions on them. What I would like to bring to your attention is developments. The documents are being circulated. One relates to the proposed Sandy Creek National Park, a koala park. This is an area that has been demonstrated, over the last seven years, to have exceptional populations of koalas. You have heard the previous experts testify to the fact that there are exceptional populations of koalas. I will not go into detail on that, except to highlight that the previous logging rules required the protection of koala high-use areas. For the last 20 years there has been the requirement on public land to identify and protect koala high-use areas. The concept is a good concept, in that you are at least picking out those bits of the landscape that you are important for koalas, where there are lots of koalas, and at least the intent is to protect those areas.

In 2012 we found Forestry Corporation logging a koala high-use area and about to log four others. We managed to get that stopped. In 2013, in the Royal Camp State Forest, they tried to go back into another bit of the State forest, saying there are no koalas there. We went in and we found more koalas high-use areas. We managed to get the logging stopped. The assessment showed that Royal Camp State Forest and the nearby Carwong State Forest, as identified by us, had exceptional State significant populations of koalas in them. More recently, earlier this year, in July, we went back into an area they are proposing to log in Braemar State Forest and we found the same exceptional populations of koalas. Koalas scats were everywhere we looked and on our first inspection we found three hectares that qualified as koala high-use area. Our subsequent inspections have shown there are probably more like 100 hectares, or more than half of this area proposed for logging in Braemar State Forest, that are koala high-use area.

Under the old logging rules, they were required to be protected. They meet the criteria. We wrote to the Premier asking her to intervene, because our experience is that Forestry will not voluntarily look for these areas, as shown by Royal Camp earlier. We wanted a proper assessment done and these areas to be identified to be protected from logging. The reaction was, "No, we are not going to log under the then proposed harvesting plan", which was the 2017 harvesting plan. They had already marked up the forest for logging. Their reaction was, "No, we are not going to log under that plan anymore; we are going to use a new plan under the new rules, which do not protect koala high-use areas anymore". In this case, only because there was a record of a koala, they need to protect five koala feed trees per hectare. These have to be greater than 20 centimetres in diameter, which, as you heard from Dr Phillips, is below the optimum size for koala feed trees.

I include a table from the Environment Protection Authority [EPA] that shows the relationship between tree size—that is this one here—and detection of koala scats. This is from the EPA's assessment of Royal Camp and Carwong. Basically, you have this linear relationship: the bigger the tree is the more use of it is made by koalas. Once you get down to 20 centimetres diameter about one in five are being used, according to these figures. This is from Royal Camp and Carwong. If you are retaining five trees per hectare at 20 centimetres and only one of them is being used you are not doing much good for koalas at all. And that might be very limited use at that. They may even just be using it for sitting in and resting.

Assessments have been done all around Braemar State Forest and the nearby Ellangowan State Forest. We were obviously extremely disappointed but we now believe that we have enough evidence to show that koalas

are depleted but they are widespread throughout that forest. So we have no doubt that this area is exceptionally important for koalas. These whole three or four state forests—if you include Ellangowan—are of the utmost importance of for the long-term survival of the koalas.

What was really distressing was that Tuesday, over a week ago, the Busbys Flat fire went through. I have a map at the end of that report that shows the area that the fire burnt. You can see that the koala records are all in the burnt area. When I heard the news I was distressed—we were not allowed to go in the area—but I thought it might have been crown fires. It went through on Tuesday evening when the wind changed—whoosh, straight through the whole area, all of those state forests all at one time. I went in there on Sunday and I have been back there since then, even though we are not meant to go in there, to try to assess what the damage was. The fires has burnt the understorey. It is totally incinerated. There is no understorey left at all but the tree crowns have survived.

But what happened was that it was cooked. I can show you these leaves. This is the koala feed in that area now. It did not get burnt. I think the survival of the koalas is probably better than what Dr Phillips identified because it was not a crown fire, but they are in there starving at the moment, and we cannot get anyone to go in there and look. It is like, they have nothing to eat and they are going to die but the Government says, "It's not our problem. The RFS controls fire grounds. We are not going to have anyone in there to have a look because it is too unsafe." I just find that outrageous. Why are we condemning those koalas to die because we cannot be bothered having a look? To me it highlights this issue of wildfires. They are becoming more frequent in the landscape and more intense. We have degraded koala habitat. One this is very obvious there—the big trees that are remaining is where the koalas get refuge from the fires because they do not have so much of an understorey, they are more isolated and they do not get burnt so easily.

Obviously those big trees are really important. So they go, "We want to take out the big trees." They want to go in there and log as soon as they can. They are targeting all the remaining big trees. But in the interim, why aren't we in there doing something for koalas. Why aren't we assessing where they are? What is very clear to me is that you will not find them if you search on the ground too easily. I did offer to take a scat detection dog in there and that was refused. I wrote to the Minister and to Forestry because it is an RFS area it was a closed area. Another way would be with a drone or even a helicopter doing infrared detection.

We could probably see koalas out in the trees. They actually have helicopters up there at the moment spotting fires—smouldering stuff. I do not know why you could not also extend that to koalas. The key issue is to find where the koalas are and then deliver some aid to them. Sometimes they might be taken into care. Others might be provided with water and maybe browse. One thing I would hope would come out of this inquiry is an emergency response to our wildlife, particularly when we know there are important areas there, after fires. It is such a shame that it is not occurring.

The second document I presented is a comparison of koala modelling. The bottom map is the map that our current forestry regulations are based upon. That is the Law model. You heard about Dr Law's work. He came up with this koala model—the bottom one. The top one is the one model that was just released—I think it was a few weeks ago—by the Department of Planning Industry and Environment. It is their current koala model. If you look at the two there is no correlation whatsoever. The red indicates the high-quality koala habitat, of course. This is the proposal Sandy Creek koala park. You can see under Dr Law's model it is all low-quality or medium-quality to low-quality to no habitat value. But under the new modelling it is all very high. Our work on the ground shows that it is very high koala habitat value but all our forest regulation is based on this shoddy model down here, which the independent expert review, done in 2016 for the EPA, said was inadequate for the purpose of forest regulation. They were advised not to use it.

I personally told them, "Look, it is not picking up these high areas," that they themselves had identified as being important koala habitat. It is not picking them up. They did not care because they wanted to go down this model path for whatever political reasons. I think it is largely because Forestry did not want to search for koalas before they logged. It was just easier to adopt the model, irrespective of the outcome. So I would just like to show you how grossly inadequate the very basis of our current regulation is, not to mention the whole thing of removing the need to protect koala high-use areas.

I include here some maps which I have printed out from that new koala model that has been released. It is on the OEH website. I include those to show you. Look at the red areas on these maps. This model will have problems. These are the areas that were important for koalas. A lot of them have been degraded since. They are not necessarily important but these are the areas that we should be focusing on. It is one example of the areas that we should be focusing on if we want to save koalas. My key question for you is, "What are you going to do to protect these red areas on this map?" Unless you do something to protect these areas across all tenures—across national parks, state forests—then koalas are going to go extinct. This is your challenge. You work out what you

are going to do to protect these areas from further degradation to encourage rehabilitation of these areas and give koalas a chance of survival.

I point out that, when you get to the third map down here, all of these state forests, which are outlined in black over the red—that is what the New South Wales Government has identified for intensive logging zone. They are introducing an alternative coupe clear felling regime in the north-east based on these models, and what it is targeting is the best koala habitat identified in Law's model but also in this model in north-east New South Wales. How can that happen? They knew this before the identified it as an intensive logging zone and they have gone ahead with it anyway. When Stephen Phillips was talking about the Port Macquarie State Forest in here, it used to be exceptional koala habitat. He is saying there is now bugger all there. Well, that is because they have been logging the shit out of it, really. I would just like to bring that to your attention and say that that is your challenge. What are you going to do to protect those areas?

The CHAIR: Thank you, Mr Pugh.

Ms HIGGINSON: As an environmental law expert who has been practising environmental law for over 20 years now, and who has provided advice to tens of thousands of members of our New South Wales community all across New South Wales on how best to use our environmental laws to protect the environment and animals like our iconic koalas, I am going to give you the grave news but provide you the wonderful solution, as Dailan is asking you, as lawmakers, to make.

The grave news is that our laws are not fit for purpose. It is that straightforward. Our laws are supposed to protect our native fauna and they are not doing that. As an environmental lawyer, obviously my trade and expertise is evidence. Evidence is what we look at and evidence is what mobilises us and drives us. It ought to be the very thing that you, as lawmakers, base the way you make your laws and your decisions. The evidence is overwhelming. It could not get more clear on the predicament that we are in when it comes to koalas. The species is declining rapidly and the prediction is that the koala will be extinct by 2050. That is something that we really need to take on board. It is not a joke. It is not fanciful. It is where we are heading.

Really, you are lawmakers. That is what you do—you make laws. The one thing that can actually turn the plight of koalas around right now are laws that are fit for purpose. We have seen them in the past; we know what they look like. They provide the words, because that is what laws are: black words on white paper that have effect on the ground and provide real operation to what happens in our landscape. That is what environmental laws are: the intersection of laws and science. And we only use the science; we cannot abrogate our responsibilities as lawmakers, as decision-makers, to scientists. Their role is to inform you about best-practice laws.

We know what those laws look like and we know the words they have—"this decision-maker, the Minister, shall protect viable populations of koalas in the landscape"; not the Minister "may" protect viable populations of koalas in the landscape, "if" he or she takes into consideration A, B, C or D. Those are called discretions. Yes, they are important in regards to certain factors in certain laws. What we have witnessed the past 10 years in particular are discretions that have been informed and exercised through a balancing exercise based on ideology and—I make no apologies for saying this—"fairytales of eternal economic growth". We know who recently said that in front of the United Nations: young Greta Thunberg, who is crying out for lawmakers to get the picture on what it is we have to do. We make laws that actually provide mandatory obligations and responsibilities for our decision-makers; not discretions, not considerations. We do this really simply—you do it, it is your job as lawmakers.

We know there are several areas of laws that apply directly to koalas: State Environmental Planning Policy [SEPP] 44. Really well-intended; application and commitment, woeful. Negligent, really; absolutely negligent. It was the key instrument to protect koalas in the development system and scheme that we have. It is woeful. It is unbelievably woeful what we have done with that fabulous bit of State policy from many years ago. Our biodiversity offsets program that we have at the moment—frankly, when we look at the peril and the plight of koalas, they should be excluded from that. Right now you can offset a different animal for the destruction of koalas, through their habitat. It is kind of absurd. When you use your lawmaking first order principles and you dig down to how these laws are actually applying to these animals and look at the evidence on the ground, it is fairly absurd.

One simple thing that we could be doing—or that you could be doing, as lawmakers—right now, is protecting your own Crown land estate, that land tenure which we share together but that you manage on our behalf and make laws for on our behalf. There is a plethora of evidence that koalas are seeking refuge into those areas from private land and that is a tenure that you have 100 per cent control over: It is yours. There are not problems of how to compensate private landholders, how to acquire land—those wicked problems that we have

in our land tenure system. This is our tenure. This is where koalas are. It is time to stop taking down koala habitat. It is very simple: we end native forest logging on our public forest estates. That is my opening. I am terribly sorry because I did not get a submission in early enough. I have some very brief first order principles in my submission, which I will table now. I am happy to take any questions.

The Hon. PENNY SHARPE: Thank you very much for your submissions and your ongoing work—decades of work. It must be very frustrating to see the outcomes that we are seeing. If you could provide information to the Committee in relation to the interaction between SEPP 44 and the private native forestry. In particular, recently we received answers to questions that we took at budget estimates from the department around private native forestry, where they suggested that yes, they do look for koalas around the private native forestry but that seems to me to be incorrect. I have two questions: Firstly, take us through the process that private native forestry has to go through in terms of looking for koalas—is it anything beyond what is in the atlas? Secondly, explain or unpack a little bit for the Committee the difference between and the interaction between the code around private native forestry and SEPP 44, even though SEPP 44 obviously has some problems.

Mr PUGH: I will start. I agree with Ms Higginson that SEPP 44 was good in principle. It has been around since 1995—you think it would have done something by now. Coffs Harbour was the first to do a comprehensive koala plan of management and identify core koala habitat. That was in 1999 or 2000. They actually went through the process and identified core koala habitat. I think since then the only local government area [LGA] that has comprehensively done it is Ballina, which I think was last year. In the interim Bellingen and has done part of their LGA, identifying core koala habitat and there has been a tiny little bit identified in Clarence and a tiny little bit identified in Kempsey. In 24 years that is a pretty abysmal record. A Coalition government introduced SEPP 44—great concept—and it has just not been implemented. The idea is to do assessments of the whole LGA, identify core koala habitats and then, under our subsequent legislation, that area is exempt from logging and land clearing. Which is fantastic but they will just not identify it. I saw the government agency's response to your question this morning—how SEPP 44 saves all this stuff, but it does not because it does not apply.

The Hon. PENNY SHARPE: The clear thing here is that SEPP 44 probably does not need to change, it just needs to be implemented.

Mr PUGH: Indeed. You could improve it, do not get me wrong. But the concept behind it is sound.

Ms HIGGINSON: There are a couple of really clear changes that need to be implemented for SEPP 44. For example, the one hectare trigger limit is arbitrary, no longer relevant and, in fact, quite a serious prohibition because we know, as Mr Pugh said—take the Richmond floodplain for example, where there is some serious core koala habitat in very fragmented condition—below one hectare is sometimes the core koala habitat in an area. So that is an arbitrary and no longer necessary trigger within SEPP 44. Also, we need to be looking at some of the definitions within SEPP 44, the "core" and "potential" koala habitat—we are still relying on some pretty old science. The evidence is there on how to do it. There have been some great submissions drafted by the Environmental Defenders Office NSW in relation to scientifically based and informed definitions. SEPP 44 definitely needs improving. It is currently under review and has been, I think, for two years. So we are wondering why—

Mr PUGH: They want to get rid of it.

Ms HIGGINSON: Basically, there is no commitment to SEPP 44 and the evidence is clear. The other small thing about SEPP 44 is the very perverse consequence of its existence at the development level—not the comprehensive koala plan and management. SEPP 44 sadly—and I know it was not intended—has been part of the perpetuation of the death by 1,000 cuts theory with development by development. So, local government accepting development applications with an isolated koala plan of management saying, "It is okay if I cut down all these koala trees, we are going to plant these over here", which satisfies the council's requirement.

I know of a few developments in the Richmond Valley local government area, where the obligation to replant koala trees was in fact never satisfied—well, it was satisfied to the extent that trees were planted, but they all died. Some years later a proponent wanting to expand their development went with a new development application, using the fact that this koala habitat that they were meant to have replaced did not survive—did not exist—and got consent to do that. There has also been a slightly perverse element in the way that SEPP 44 has been applied. That is purely because of the lack of commitment and will to do justice to that SEPP.

Mr PUGH: I add to that the necessity for the overarching assessment. That is where the strength of SEPP 44 lies—to do the whole LGA or the whole part of an LGA, rather than case-by-case assessment. We had the experience in Byron Shire with West Byron, where Dr Phillips identified an area of core koala habitat, within

the meaning of SEPP 44, within the development. So the developers went out and got another consultant, who came and said, "Oh, no, it is ambivalent: it may be core koala habitat, it may not." They still maintain that position today, years later, when the Office of Environment and Heritage at the time quite clearly identified that yes, it is core koala habitat—

The Hon. PENNY SHARPE: Can I just stop you there because that goes exactly to, I think, one of the more powerful pieces of evidence, which is this map that you have provided for us today. I just want to be clear. The map here at the top is the koala strategy from the koala habitat suitability model. Who did that model?

Mr PUGH: I think it was the old Office of Environment and Heritage which has now been subsumed into this mega department.

The Hon. PENNY SHARPE: I know all of that. What I am trying to say, and I have got to say this is the clearest demonstration I have seen of the problem, increasingly we are relying upon mapping and we are told that the mapping tells us where it is and it will guide all of the decision-making; yet we have two different departments and here is where all the koalas are, exactly the same part. This is actually very disturbing in relation to how we do that. It is part of the Koala Strategy, so presumably it has been funded under the Koala Strategy—the Government's own Koala Strategy has funded this mapping, supposed to have been using all the best science to show us where it is important for koalas, yet we have got a different department making it so tiny as to be almost irrelevant and you would think there are not koalas there.

Mr PUGH: One is Department of Primary Industries—Forestry and one is the old conservation, part of that department.

The Hon. PENNY SHARPE: I just wanted to clarify exactly where that came from because I am trying to show the differences that we have got within government.

Mr PUGH: It took me months to get hold of that mapping. It has been hard to download; I only got it a couple of days ago.

The Hon. PENNY SHARPE: I have got to say this is extraordinary. I just do not know how the Government with a straight face can say, "We have managed to resolve these issues", when it seems you cannot resolve these two.

Mr PUGH: As I said, the Environment Protection Authority were told in 2016 by their expert koala panel not to rely upon that modelling that they are relying upon. They were very clearly told, "What you have got to do is go in and look for koalas and find where they are and protect where they are, not rely upon this modelling, which is inaccurate"; it does not show where they are because the data layers underpinning it are not good enough and because koalas are now patchy in the landscape of where they could be because of a whole range of other threatening factors, and particularly forest disturbance, that have reduced their population.

Ms HIGGINSON: Can I just add as well to that, just for completing the picture? As to DPI-Forestry, I think that it is really important to remember that our own court of law, the Land and Environment Court, not too long ago made a legal finding that the Forestry Commission is guilty of systemic failures of forest management, gave a scathing report including she found significant evidence of a litany of mistakes, untrained staff, sloppy work records, that the evidence of their past convictions for environmental offences does not demonstrate that Forestry NSW has been a good corporate citizen with respect to environmental statutory compliance. This is the same agency.

The Hon. CATHERINE CUSACK: Can you just give us the reference for that?

Ms HIGGINSON: That is the Land and Environment Court proceedings, Justice Pepper, and the proceedings were *EPA v Forestry Corporation*.

The Hon. EMMA HURST: I have a quick question for Ms Higginson. Do you think the projects are being approved in circumstances where there has been insufficient consideration of the realities on the ground for koalas and their specific environmental needs? In particular I am referring to the impact of offsets or compensatory planting of koala feed trees in other locations, which allows the removal of koala feed trees from the development.

Ms HIGGINSON: From a best practice legal perspective in terms of allowing that practice, it is on the lowest end of the sort of application of laws that we would be doing if we had a proper, genuine and legal commitment to protecting koala habitat and therefore protecting koalas. I have seen firsthand, only last week, an enormous offset project in relation to a coalmine and the trees and the habitat that has been planted is failing.

I think that is something we also really need to face, as Mr Pugh has expressed, with the wildfires. The realities of just planting trees and them growing successfully, the new normal is that that is actually harder than it has ever been before. I can tell you firsthand I am one of those people blessed on the Richmond flood plain and I have koalas on my property and I can assure you that in the 15 years I have been trying to plant koala trees it is actually getting harder and harder and harder. I am waiting for the rain to come so I can plant my next 200 trees—it has not come in subsequent years that we have been able to do that.

Absolutely, the scheme that we are applying to compensatory habitat has not taken into account climate change and it has not taken account the new normal circumstances. Frankly, there is one very simple legal way to fix that and that is you do not allow compensatory habitat as a post-fact event. If somebody wants to develop and somebody wants to destroy koala habitat, they plant that habitat first, they wait until that habitat is established and useable and then they go ahead and have their development consent, and that is where we are at.

Mr PUGH: To add to that, you had evidence today that koalas prefer larger trees and that the larger the tree is the more they prefer it. So the idea of cutting down a 20-, 40-, 60-, 80-centimetre diameter tree that is really good habitat for koala and replacing it with a seedling that is only a foot tall is just absurd, and that is what I find most disgusting about this offset arranging.

The Hon. MARK BUTTIGIEG: Ms Higginson, you outlined to the Committee how the Land and Environment Court made that adverse finding. Can you just outline for us what the legal implications or enforceability is?

Ms HIGGINSON: Absolutely. That was in relation to a particular proceeding. The Forestry Corporation of NSW had breached the laws in relation to a logging operation and they were penalised \$35,000, that sort of thing. But remembering the way our system works and the separation of our powers between parliaments and our courts is our courts function and make decisions and they say things in their judgements for very good reason—they are messages to the community, they are messages to the offender, and mostly, I would suggest, they are messages to the lawmakers because they are actually interpreting and applying your laws. So it is really important that we take notice of what judges are declaring in their courts because they are doing it. That is even more in a way an easier way than lawmakers because they have an enormous body of evidence before them and they actually have advocates fighting these concepts out between them. When you actually get words like that spoken from a court, they are serious, and lawmakers need to take them into account. Those words are about our own Forestry Corporation.

The Hon. MARK BUTTIGIEG: Is that level of penalty in terms of financial disincentive enough?

Ms HIGGINSON: No. It is not commensurate to the offending whatsoever—not remotely close.

The Hon. CATHERINE CUSACK: The North Coast Environment Council submission refers to only three LGAs have koala management plans under the SEPP. Could you say which three they are?

Mr MORRISON: Coffs Harbour, Lismore, is it?

Ms HIGGINSON: No, Lismore has got park. I think Port Stephens, as we heard Dr Phillips was saying, it has not been finally approved. I think there are five at the moment.

Mr PUGH: Five or six, I think.

The Hon. CATHERINE CUSACK: I was not sure if it was just the North Coast, that was all. I just wanted to check. Maybe take that on notice.

Mr MORRISON: That is the whole of New South Wales. Only two cover the whole shire; the rest are only partially covered.

Mr PUGH: And all identify core koala habitat, which is the key requirement. So they are next to useless.

The Hon. CATHERINE CUSACK: We have been hearing in relation to Campbelltown—and we will talk to that council later—but in your opinion why are the koala management plans just not connecting with the planning laws? It is as if they are in there but they are just like not quite—

Mr MORRISON: I would say it was from developer lobbying.

Ms HIGGINSON: I can answer that directly. It is because at the end of the day a koala plan of management, whether it is at the development level or comprehensive shire-wide, it is just another consideration to take into account ultimately. There is not a mandatory legal requirement upon the decision-maker to act in accordance with the koala management plan.

The Hon. CATHERINE CUSACK: So where is it slotting into in the planning process?

Ms HIGGINSON: The Environmental Planning and Assessment Act under what was section 79C (1), which is now section 6.1.

The Hon. CATHERINE CUSACK: Your grasp is amazing.

Ms HIGGINSON: Basically it is the idea that when a decision is being made the decision maker must take into account all State environmental planning policies that apply to the land and the koala plans of management set under the SEPP. It becomes a mandatory consideration to take into account the SEPP koala plan of management. But then there is nothing that requires the decision maker to act in accordance with the plan of management and that is where the laws are failing.

Mr PUGH: Could I add to that? In terms of Byron shire we prepared a comprehensive koala plan of management for the coastal area in 2015. The government has refused to adopt it since. It identified core koala habitat and yet that is not being protected.

The CHAIR: Order! For Hansard's sake there is a fair bit of interruption and speaking over the top from both witnesses and members. Remember Hansard is making a mighty effort trying to capture everything.

The Hon. CATHERINE CUSACK: This is actually what I am trying to understand. The councils are preparing the management plans. I understood Ballina had done one. They give it to the State Government and that goes to planning. When you say not adopted, what does that mean? What is that step that needs to be undertaken for it to become part of it?

Mr PUGH: The Minister has to approve it on the department's advice. The Minister has responsibility for approving the plan or not and in the case of Byron and Tweed they decided not to approve the plan. They said they wanted more work done. It stopped that being implemented.

The Hon. CATHERINE CUSACK: Is that the Minister or is it at a bureaucratic level?

Mr PUGH: The Minister operates on advice from the bureaucrats. It is the Minister's decision to adopt or not. I am not privy to what advice the Minister was provided in regards to Byron.

The Hon. CATHERINE CUSACK: I wanted to ask in terms of the mapping—this has been quite a revelation—the picture you are painting of koala mapping around the State is that we are really in the dark about where the koalas are, basically. But, we are also in a situation where the evidence is that you need to take some urgent steps. What is the solution to that problem?

Mr PUGH: Good koala habitat mapping, number one. That is the first thing I would do. Byron shire, the North Coast councils generally have been through the process of trying to do good vegetation mapping for their local environmental plans.

The Hon. CATHERINE CUSACK: How would Parliament assure itself that that mapping was good? When you see things like this you lose confidence in everything you are looking at. What would be good mapping that we could say "that is good mapping"? What would that take? And do we have time to do good mapping all over the State, whatever that process is?

Mr PUGH: It is a matter of putting the resources in and time and you can get it done really quickly. What you can use is broad modelling to identify priority areas and say this is a priority area. Those red areas for example, let us focus our resources there and get the mapping done there first and in terms of assuring credibility of the mapping you need expert oversight. The reality is that with koalas they have been eliminated from many areas of potential or what used to be good habitat. You cannot get away from doing on ground assessments as well. That is what the concept of SEPP 44 is all about. You go out and do koala surveys and mapping. Here we have some clear priority areas let us put our resources into those priority areas now, straight away. Let us get a major mapping exercise done. Let us put the money in. Let us get it done and have expert oversight.

The Hon. CATHERINE CUSACK: There is a consensus pretty much about where those priority areas are in relation to offsets and the purchase of koala habitat.

The Hon. BEN FRANKLIN: I have one final question on the mapping. I am trying to get my head around this as well. Is it fair that the top map that you have provided, Mr Pugh, is where there is a probability that koala habitat is, whereas the bottom map is where koalas have actually been sighted?

Mr PUGH: Again, it is probability.

The Hon. BEN FRANKLIN: It is probability on both?

Mr PUGH: The probability based upon sightings of koalas. It is biased to where people see koalas. That is the biggest problem with the modelling that has been done. They are both based upon those sightings but you can see they have reached very different conclusions to do with how they have been modelled. As I said, it is using those to focus attention on where we need to do really good high quality mapping.

The Hon. BEN FRANKLIN: Understood.

The Hon. CATHERINE CUSACK: Your evidence, in a nutshell, is that you cannot offset koala habitat, is that correct?

Ms HIGGINSON: I accept that offsets have applied now in New South Wales for many years. When the offset scheme was first introduced it was based on significant principles of integrity around offsetting schemes that were internationally developed. I think we attempted to do the right thing in the way we introduced offsetting when we introduced the reforms, the Biodiversity Conservation Act and the Local Land Services Act. Basically, in my legal language that is when we did violence to our offsetting scheme. That is the term we use. We fundamentally abrogated all responsibilities in relation to what an offset scheme first conceptualised by the international body of experts around offsetting. What I would say is that under this current system absolutely we should not be offsetting koala habitat because we are not doing it right. We are not doing it in the way offsets were ever originally intended.

The Hon. CATHERINE CUSACK: I think that is really interesting that we have used the integrity of the system, meaning is it achieving its stated purpose?

Ms HIGGINSON: Absolutely.

The Hon. CATHERINE CUSACK: It is a matter of integrity?

Ms HIGGINSON: Absolutely. I would just use two simple principles in relation to that. The first one was a system of credibility with integrity had to be based on like for like. We flip that now. We have really allowed it somehow. It is on our watch. It is our watch. We are the people who have allowed this to happen. Now like for like is not the key underpinning principle and of course the other principle that we have wholly neglected is the principle proper of additionality. We have some version of additionality but it is not based on the principles that offsetting was originally proposed and conceptualised. Unfortunately we have slipped down a very slippery slope and I think in relation to koalas, given the evidence of their peril, we really are at a point that it is not wise.

The Hon. CATHERINE CUSACK: Are you aware of any reviews of the outcomes of this process or the requirement for offset outcomes to be reviewed and certified? If there are, have they been effective? Obviously not.

Ms HIGGINSON: I was the former chief executive officer and principal solicitor of the Environmental Defenders Office [EDO]. I spent 12½ years of my life there. I would suggest that recent work that EDO NSW has done with scientists, in terms of reviewing the application of the new offset scheme under the biodiversity laws, now there have been some case studies, has shown some fairly perverse consequences. I do not recall them being in particular in relation to koalas but in relation to biodiversity offsetting more generally. They highlight the flaws in the current underpinning absence of principle.

The Hon. MARK BUTTIGIEG: I have a question to follow-up on one from the Hon. Catherine Cusack. I want to make sure I have this right because I was struggling a bit with the process. There are a number of hurdles in terms of what we are up against here. Let us assume you get the mapping and the data right, the LGA or council then develop a plan and they submit that to the Department of Planning. The Department of Planning then recommend to the Minister that it either gets adopted or it does not. But, even then if all those hurdles are met the Minister is under no obligation because all he has to do is consider it. Is that an accurate characterisation of the system?

Ms HIGGINSON: Yes, that is my entire life's work in two seconds. You are right, at the end of the day fundamentally environmental law is one of those incredibly complex areas of law because it is a layer by layer by layer with different levels of Government and it is an instrument based legal field of law. It is this instrument with that one. It is not like the criminal law where you have one body of law and you break a law or you do not. There are layers upon layers. Fundamentally what has actually happened—and I would suggest and in my line of work perhaps quite controversially—is that lawmakers need to realise that what we have done is developed a body of law that has facilitated and is complicit in what we are facing, and that is the peril and we are heading on the trajectory of extinction for many of our threatened species.

It is our laws that are facilitating this very process. The beautiful irony now for all of us that we can embrace is, we can turn it around. We really can, again, by improving these laws so that they are fit for purpose, they achieve their objectives. We actually have all of the legal tools readily available to us, we just need the political will to mobilise them, implement them, write them on the piece of paper then send everyone out to implement them. We can do it.

The Hon. CATHERINE CUSACK: I am sorry to jump around, in terms of the purchase of habitat under the fund that has been established, we are hearing concerns that there were no koalas on some of the properties that have purportedly been purchased for that purpose. Can you verify that? What would a system of purchasing look like that had integrity that gave us assurances, taxpayers and legislators, that that fund was being used as intended?

Ms HIGGINSON: Can I note perhaps one controversial suggestion, I would suggest right now the most effective way in terms of acquisition is for the national parks to acquire the public State forest estate. That would be your best answer, it absolutely would. In terms of private land acquisitions, we have seen before the Government took over the Nature Conservation Trust, which was the first private conservation mechanism that was independent of government, that organisation ran incredibly effectively for the time that it existed. It had a revolving fund, which was remarkable. That was around about acquiring land, placing conservation covenants on it and then onselling it. It was the most fabulous, spectacular mechanism to achieving exactly the kind of objectives we would like, conservation on private land of a particular biodiversity goal. So that would be a koala habitat in this case. Unfortunately the Government has abolished the Nature Conservation Trust, took it on and has become the Biodiversity Conservation Trust [BCT], since the commencement of that trust

The Hon. CATHERINE CUSACK: I understand now.

Ms HIGGINSON: It was revolving properties somewhere in the order of 10 properties a year. Since the BCT I do not think they have acquired one or sold one. That is one mechanism that could be utilised very well that is failing, that would actually in certain circumstances work as a profit to government to reinvest in conservation mechanism. In terms of the other private land, this idea of reverse auctions is perverse and we are applying that in the private conservation scheme. We are doing this race to the bottom to price biodiversity. It is an absurdity. It is nonsense when you look at the priorities we are trying to achieve. At the end of the day, all of these options at the moment in relation to private conservation and acquiring land, if we just improved our regulatory system and our laws, what they are referred to in the legal world, is these are soft law options, very soft law. You cannot have soft law unless you have got the harder, proper law that these soft law options are complementing. The reason these soft law options are failing is because they are just random. There is no proper, strategic oversight about the way we are going with a plan to actually recover koalas in the wild.

Mr PUGH: I think that SEPP 44 gives the way forward about identifying core koala habitat. That was the intent. If we implemented that, then we would be protecting these core areas. Aside from that, if we are going to look at purchasing private land, we need a strategic overview. We need to implement the requirement of mapping koalas across landscape. Then you say: Look, we have this bit of public land here is koalas, this bit here, this bit in between is really important, it has got good koala habitat, that is our priority. At the moment, as Mr Milledge pointed out, it is an ad hoc process, a scattergun approach: That one, that one, that one. Because they are offering it up for sale. Rather than saying: These are the most important, these are the ones we should be purchasing.

The Hon. CATHERINE CUSACK: This is a topic I feel we need to address; the Biodiversity Conservation Act now looks at statewide populations, rather than local populations. Would you like to comment on that in terms of listing as endangered? There are no more local populations.

Mr PUGH: Basically because we have fragmented the landscape, and the koala population has been naturally fragmented, they occur in populations across the landscape, it is not one big koala population, there are a number of separate, individual populations and they are becoming more fragmented over time. They are becoming smaller and smaller. Really, if we want to save those populations we make sure that each of those is viable. Otherwise they reach the point where the numbers drop so much that they get wiped out in a bushfire or they get disease outbreak and there is no way to recolonise them.

We need to look at all animals, including koalas, on where they can interbreed and exchange genetic material between them, and they are our local populations. Unless we protect them, then you get this situation where there is a cascading effect where one population goes extinct and then another one, then another one. Eventually you end up with landscape scale extinction. It is really important that we identify the local populations

and their conservation status and treat them according, so if they are in danger of going extinct tomorrow, and we do think they are worth protecting, then we need to give them special attention.

The CHAIR: We are out of time.

The Hon. BEN FRANKLIN: I understand that. Mr Milledge said in his evidence that he believed that the key issue was the lack of protection for local populations. Would you agree with that?

Ms HIGGINSON: Yes.

Mr PUGH: Because you get this cascading effect, extinction is the loss of numerous local populations one at a time across the landscape. If you lose them, then you lose your overall population.

Ms HIGGINSON: Can I just add my final point on that? Remembering the Biodiversity Conservation Act lists our threatened species and the idea and the aim of lawmakers now is to get the animal out of that Act. That is our fundamental goal. We want it out of the Act. Of course, the protecting of local populations we are ultimately growing the animal out. Remembering, in 1995 when the Threatened Species Conservation Act was introduced there was a mandatory obligation placed on the Minister to create recovery plans to get those species out of that legislation. We dropped that mandatory obligation. We need to return back the mandatory obligation to recover these species from that status of threatened. That is our ultimate aim here.

The Hon. CATHERINE CUSACK: Working on the basis of local populations.

Ms HIGGINSON: Absolutely, and building out.

The CHAIR: Thank you, ending on that note, another great recommendation potentially for the Committee. Time is up. Thank you very much to all the witnesses.

Mr PUGH: Can I raise one issue that was raised before?

The CHAIR: Twenty seconds.

Mr PUGH: Relating to private forestry, it sidesteps 44. The other requirement is, there are prescriptions in there for koalas, there is no need to look before they log. Because there is no need to look before they log, those koalas are not being protected on private forestry at all, from my experience, unless they happen to be a record in that atlas, and there are not many records in the atlas. The koalas are not protected on private land.

The CHAIR: Can I also reassure you that the evidence that you have given in your very excellent submission is also going to be taken into consideration, including being able to quote from there for the report. Have no fear, if you were not able to give evidence of particular things now, your submission is fantastic. Did you take any questions on notice? No. We may have supplementary questions.

The Hon. CATHERINE CUSACK: I definitely will.

The CHAIR: Are you prepared to take some additional questions if we provide them to you?

Ms HIGGINSON: I am, absolutely.

The CHAIR: Thank you for attending today's hearing and for the work you do.

(The witnesses withdrew.)

ROSLYN IRWIN, President, Friends of the Koala, affirmed and examined

MARIA MATTHES, Ballina koalas expert, affirmed and examined

LINDA SPARROW, President, Bangalow Koalas, affirmed and examined

DEBORAH TABART, OAM, Chairman, Australian Koala Foundation, sworn and examined

RHONDA JAMES, Project Officer, Friends of Cudgen Nature Reserve, affirmed and examined

The CHAIR: Are any of you making an opening statement? Could you all please make it a couple of minutes only so we can ask questions.

Dr IRWIN: Friends of the Koala thanks the Committee, firstly, for this critical inquiry and for holding hearings in the regions, particularly here in the Northern Rivers where so much work has and continues to be done to hang on to our surviving koala populations. This region is very important for koalas. Nine of New South Wales's identified areas of regional koala significance [ARKS], totalling 867,044 hectares, around 8,700 square kilometres, are located in the various landscapes of the Northern Rivers. Put another way, around 80 per cent of our region is mapped as being of significance for koalas. Yet we are also one of the State's most densely populated rural areas in the nation's fastest growing locality. A lot of people want to live here; so do koalas.

In 2018-19 Friends of the Koala rescued 394 koalas and in the year before, 368. We understand that this is about 50 per cent of all koala admissions in New South Wales. Our volunteers operate on the frontline, dealing with the impact of human activities on koala health and welfare. Just over this past week we have been preoccupied with the fires in the region where we know there will have been koala deaths. For example, we rescued a mum and bub from Rappville thanks to the Richmond Valley Council ranger who organised a cherry-picker as they were far too high for us to flag. The ranger also said they had found and buried two dead koalas. These are the tip of an iceberg, I am sure, and it will be some time before we can find out the extent of the impact on koalas. It is little wonder we feel overwhelmed most of the time.

Our key message is that saving the species in our region is achievable, so is ensuring that most individual koalas live a healthy life into old age. Community capacity for koala stewardship has a long history here but we need political resolve and leadership as well. Major barriers to success are well known, so are some solutions. First and foremost, government must enact legislation that actually stops the trees from which koalas eat and take shelter from being chopped down and protects koalas from harm. We also need resourcing—long-term, regional investment in on-ground management programs to include world-class veterinary and hospital facilities and monitoring of the rehabilitated koalas we release. For wildlife and koalas in particular, as I have said to you in our other submission, we are their greatest enemy and their only hope. Thank you.

Mr MATTHES: Thank you for inviting me to have a talk today. I want to make a few points. If we are serious about conserving koalas in New South Wales, we need to understand that every koala is important. Every koala is an individual, as is every colony and population unique. Every landscape that they exist in is different and the threats that they face require individual, holistic and integrated management recommendations. We need to start treating them as such. I have some maps here to table to explain the landscape differences about open flood plain areas that Dr Steve Phillips and Dave Milledge were referring to. I have seen the direct and indirect effects of habitat loss and disturbance on sections eight, nine and 10 of the Pacific Highway and private native forestry as well as other places in our local area, as well as the catastrophic fire events, severe storms and heat waves on koalas in these areas and the impacts of wild and domestic dogs, disease and vehicle collisions.

Since the 2014 population study 94 koalas in Ballina Shire have died and 84 of those are within the population viability study area. That is not directly where the alignment is but within the population study area. I have concerns that the New South Wales policy and legislation is failing our koalas. While well intended, our politicians are failing our koalas. We are failing Ballina's koalas. Limited and misdirected funding is also failing our koalas. Providing adequate and sufficient funding to each population to recover them is necessary. We are facing so many unnecessary and avoidable deaths in each population. As Sue said, we need to implement recovery plans and direct our efforts to recovering species. Ballina's community have been developing a recovering Ballina's koala community action plan. I hope this inquiry is the beginning of the change in the thinking that is needed.

I do not want to see Ballina's koalas become the next Pilligas. We need to do what needs to be done. There are a couple of things I would like to clarify in relation to some comments that Dr Steve Phillips and Dave Milledge made. One koala was found dead at the base of a collared tree in the study area. I have the RMS *Phased*

Resource Reduction report that goes through the trees that were cleared and everything to table for you. It was a plastic collar that was put around the trees, not a steel one. Bob Higgins, the project manager at the time for RMS, confirmed at one of our community meetings that the route was selected for the shale. He gave a commitment that Ballina's koalas would be better off with the alignment and the funding and everything that they were putting in. That is not the case. I would like to see that addressed. Thank you.

The CHAIR: Ms Sparrow, do you have an opening statement?

Ms SPARROW: Yes. It is all from my head, though.

The CHAIR: Great.

Ms SPARROW: As president of Bangalow Koalas and also a trained rescuer with Friends of the Koalas, our two groups work very closely together. They are rescuing and rehabilitating and we are all about tree planting. We started up 3½ years ago. In that time, especially in the last 21 months, we have planted over 19,000 trees on 18 properties all within this corridor that we are trying to link from Byron Bay out towards Repentance Creek. That is now growing. We are going down south, we are going further out west, we have another 46 properties that wish to join this corridor and it is growing. We have this amazing community that comes from five different shires. You have been to one of our plantings. At that planting we had 180 people from four shires planting 2,600 trees in under an hour. The community wants to do something. The community is ready. We are there planting trees. You have three generations of families coming along.

You have organisations, community groups, everyone is coming together. They want action now. We do not want any more reports, committee meetings, all this sort of stuff. We need protection now. Our biggest thing that we are also finding is that in planning there is not enough protection for koala habitat. There are always loopholes where developers can remove trees. You are getting developments in the middle of a koala corridor, which happened in Bangalow. We need protection from that. We need to end this industrialised logging on public land. We need to save our trees. We are only one small group and we are planting trees. We can plant and plant and plant but if you continue to log and you continue to destroy their habitat and not protect them, then if we cannot save koalas we cannot save anything. Thank you.

Ms TABART: Thank you very much for the opportunity to speak to this hearing. I would like to ask if I could nationalise this a little and I would like to table the maps that I have put on the floor here. I know they are big. Ms Ismay said she has copied those out.

The CHAIR: Thank you.

Ms TABART: I have been in my job for 31 years. I do not believe there are many scientists in the country who have not had our funding or through partnerships with the Australian Research Council. Initially we were asked to just fund at universities and then it became clear to me, when Dr Phillips joined us, that you have to know where habitats are. We have now spent 25 years and \$15 million. Of the maps that we have tabled today that we have finished, the worst mapping in the country is from the New South Wales Government. We have been able to sew together the data that we have of our own. There are so many things that have galled me this morning. I believe everything that these people are saying is the truth. They told me that you might be robust with me. I am writing a book called the *Koala Manifesto*.

I would like you not to put me on notice. In that book in March next year you will see the corruption that I have seen. I would absolutely ask you to go to the Senate report of 2011. I sent it through to the Committee. In 2011 a report came out that said the States are incapable of protecting the koalas. That came out in October 2011. The koala was not protected until April 2012. In that time major coal mines were given controlled actions. Nothing can override the Regional Forest Agreements. What has galled me shockingly is that then the Minister of the day, Minister Burke, said I will write a koala recovery plan, which, had that happened by 2014, would mean we would not be in this room and thousands of koalas would still be alive. Then he handed it over to Minister Hunt. Minister Hunt has a very, very nasty—what is the right word?—nickname. He handed it over to Minister Frydenberg, then over to Minister Price and now Minister Ley.

I have had 31 years of receiving these letters. I have been pretty much to that whole area, 1.5 million square kilometres. People say I am a very good fundraiser. The Australian Koala Foundation is privately funded and there is not enough money in this country or the world to buy the koala habitat of Australia. We have repeatedly put suggestions and solutions to the governments of the day, 14 environment Ministers, 27 State environment Ministers, I cannot remember how many Prime Ministers but we know there is a lot. I just want you to know that the Australian Koala Foundation is absolutely against offsets and that you should all read the book *Game of Mates: How Favours Bleed the Nation* by Professor Cameron Murray from the University of Queensland

to understand how much corruption is going on. I ask all of you as members of Parliament to seek out that corruption. I really look forward to some very robust questions. Thank you.

Ms JAMES: Thank you for the opportunity to speak today as the representative of Friends of Cudgen Nature Reserve. I am also a representative on various vegetation and koala habitat committees with Tweed Shire Council and I have been a koala rescuer for a very long time, probably around about 30 years. I have personally witnessed the demise of koalas and their habitat in northern New South Wales. Habitat continues to be destroyed, fragmented and degraded. The coastal hinterland koala habitat from Tweed to Ballina has been impacted by residential estates, rural subdivisions and related infrastructure. The Pacific Motorway has severed koala habitat from Chinderah to Ballina. Private native forestry has operated without regulation. Further to the west the recent Coastal Integrated Forestry Operations Approval [Coastal IFOA] has weakened the previous rules for logging in State forests.

There is virtually no protection of koala habitat on land zoned rural, as the Local Land Services Amendment Act and the local environment plans [LEPs] do not prohibit clearing of koala feed trees and habitat. The Biodiversity Conservation Act has weakened the previous legislation to protect the koala. Tweed Byron was the last endangered koala population to be declared under the Threatened Species Conservation Act 1995 [TSC Act]. This means protection should be reinstated into the legislation. Regarding the Tweed Byron endangered population, a focus of our group's activity is in a precarious position to survive as it is adjacent to the large subdivisions on the east at Black Rocks, Seabreeze, Koala Beach and soon Kings Forest. This population was severed by the Chinderah to Ewingsdale motorway, a very scenario from quite a few years back similar to that of the recent activities with the Ballina motorway upgrade.

There has been a Koala Plan of Management prepared by our council. Once again, this has gone to the Minister, nothing has happened and so the council has adopted this plan as a policy and proceeded to implement it. The inadequacies of Private Native Forestry Codes of Practice were highlighted in the Limpinwood case in the Tweed where numerous complaints about serious breaches to the code were reported to the EPA and the Minister, which resulted in absolutely no disciplinary action. There are quite a lot of details on that case which have been submitted by a neighbour. What is required for most is legislation to prevent the removal, degradation and fragmentation of koala habitat, irrespective of tenure. Additional requirements are resources to restore degraded lands, revegetate corridors and gaps in habitat and to manage other impacts which contribute to the decline of the koala.

The Committee inquiry has the opportunity to put forward recommendations to reverse the decline of koala habitat in northern New South Wales. Recommendations alone will not succeed unless the current legislation is revised, strengthened and informed. I can only hope that we are not the generation that wipes out the koala. Thank you.

The Hon. EMMA HURST: I have a couple of questions for Dr Irwin. You say in your submission that the private native forestry plans are just another form of legalised habitat removal. What do you believe the Government should be doing to protect koalas living in these private forests that were not planted for habitat but for commercial logging, particularly given that these are now accidental refuges for these koalas?

Dr IRWIN: That is for others, probably, but what I would say is the very best solution would be for them to no longer be allowed to be harvested. They have been there for 20 years and the koalas have inhabited them, so there has been a change in what is actually going on and I think that needs to be recognised. At the very least, if you look at what happened in Victoria in the south-west of Victoria, where they planted Sydney blue gums and they were populated, of course, by koalas. Koalas will find it and they will populate it. And then when it came time to remove the trees the number of trees that were left in the plantation was inadequate so there was not enough for the koalas to survive on. That would be the least case. The best thing would be to prevent the removal of any more of those trees. If that means compensating the people who planted them then maybe that is what you need to do.

The Hon. EMMA HURST: Do you have something to add?

Ms JAMES: Yes. I would like to say something there. The case at Limpinwood really highlighted the inadequacies of the Private Native Forestry Code of Practice. It is up to the landowner to decide if there is koala habitat there, if there are koala trees. This code needs a total revision because it has shown that it is inadequate and that it is not identifying koala habitat. You are supposed to go out and if there are 20 pellets under a tree to say, "Yes, this is koala area." Are landowners really going to go out to do that? Have they got the expertise to do that? If you look at this case it will show you that that whole code of practice needs a review.

The Hon. EMMA HURST: Dr Irwin, you also reference climate change and how that is impacting koalas here on the North Coast. Can you talk a little more about this and what your concerns are?

Dr IRWIN: I think what has been happening recently is probably the clearest example of what we have seen. But what we have seen is we have increased the number of koalas that we are rescuing each year by about 25 per cent over the past. That is largely as a result of a number of things. It could easily be also that we have been educating the community and they are therefore reporting koalas more, but more likely than that is that in fact what is happening is the koalas are experiencing heats that they have not experienced for many, many years and that is affecting them. We know in the most recent example with the current fires there was a two-week period there where every koala that we rescued was simply sitting at the base of a tree absolutely unable to do anything else. They were taken to the vets. The vets assessed them and said that they were far too depleted and they had to all be euthanased.

That is probably one example but the other is that whereas we have not necessarily seen ourselves as being in a bushfire prone area across the region we clearly are now. The fires around Casino have indicated to us that we have got to actually pick up our practice and in fact we are talking more with the RFS and the National Parks and Wildlife Service to see how we can get in earlier to try to identify those koalas that are still alive and try to support them until such time as they can be rescued. That is what is happening. We know it is happening. We can see it happening. The research seems to me to be indicating that the koalas have actually lost their capacity to be able to sustain the kinds of temperatures that we are now having. We see this as just the future now.

The Hon. EMMA HURST: And I am assuming we will end up with a lot more of these dry leaves too.

Dr IRWIN: Yes. Indeed.

The Hon. EMMA HURST: The work that you do—and, in fact, that all of the organisations here on our panel now—is critical to the survival of the koala. What do you organisations need in terms of government support to help?

Ms SPARROW: I would say we need government to actually act—to not talk about what you are going to do; actually act. Protect the habitat now. I was down at a property in East Coraki last week. The owner planted 400 trees 20 years ago and he has so many koalas on there but they are overbrowsing and we have to get trees in the ground now to help him and to sustain that population, and there is a big population there. What I am finding in all the places I am going to—because I am constantly going out—is you can see what the loss of habitat is doing, you can see the stress that the koalas are under, and we need habitat protected. We need stronger planning laws. The State Environmental Planning Policy [SEPP] 44 is too weak. It needs to be stronger. As Ms James said, the mapping in the Byron Shire is rubbish and their koala plan of management which they signed off on four years ago still has not been signed off by the State Government—and that is four years ago. We need action, not words.

Dr IRWIN: I would add on to that and say that from my perspective, unless the legislation is changed to protect koala habitat, which of course is all wildlife habitat, then no matter what is done the situation is not going to change. That is critical. We absolutely have to have legislation that protects koalas' habitat. There are many other things that we need but I will leave it at that because underwriting all of the problems is that.

The Hon. EMMA HURST: That is the most urgent.

Dr IRWIN: That is the most urgent, yes.

Ms MATTHES: And you will see in the maps that I presented the area that Ms Sparrow is talking about, having a very broad landscape with hardly any trees. Ballina's koalas are slightly different and you will see that as well. They have contiguous habitat. There are large tracts of habitat and some large areas are protected. The highway certainly has had an impact but we need a holistic approach to managing it. We need to continue improving our understanding of each individual. We need to be getting rid of the weeds and controlling wild dogs, and to have funding there so that when something happens we can respond to that immediately and appropriately rather than having to find money or be told, "No, sorry. There isn't any."

We had a storm that completely took out a third of the habitat of available food trees. That was prior to the tree clearing for the highway. We then had a fire on top of that. There are things we can be doing to improve. That is why having a holistic plan for each population is the answer to managing them across the State even. But without that we are not going to. And on climate change, what we have noticed is that the koalas are having trouble. Usually after breeding season they are given a bit of a break and this leads to what Dr Irwin was saying about the numbers we are getting in.

We have had warmer winters. Breeding season has been so much shorter. So females are not getting that chance to recover before the next breeding season. Complicated with the temperatures, the quality of the food out there, the moisture in them, the nutrients in them, the digestibility—it is a huge issue that we have to address. It is not good enough just to say that it is an issue for our west koalas because it is affecting all our coastal ones as well. The sea level rise predictions from Victoria to south-east Queensland looks like a third of koala habitat could be underwater. We need to start looking at all of these things.

Ms TABART: I would just like to say that I want a koala protection Act. It is written and ready to go. And I do hope that you ask me why I think it will work.

The CHAIR: We have a question from Ms Cusack and then we will go to Ms Sharpe.

The Hon. CATHERINE CUSACK: It really is just a quick follow-up question and it might sound silly but we need to get this evidence for the Committee. The North Coast local community, your organisations are very deeply embedded in the community. I know, for example, Friends of the Koala has many partners like Southern Cross University and successful projects—so I just wondered if you could talk about the fact that it is the overwhelming wish of the community that more action be taken.

In terms of partnership with government, building on what you have just said, that that expectation, because the Hon. Ben Franklin and I, this is the concern that we have—is government not fulfilling what the locals want and understanding and acting on that local knowledge? I am trying to get that evidence for our reports, specifically in relation to this community. I just wondered if I could ask you about those partnerships and the importance of Government being in step with local communities?

Dr IRWIN: Yes, the importance of it. What I would say is that we have a lot of partnerships with organisations like Bangalow Koalas, but with International Fund for Animal Welfare. We have got a memorandum of agreement with them. We are starting to receive some funding. Whilst I have not touched on it, the difficulty is that everything that is being done in terms of wildlife is being carried out by volunteers—many of them with my coloured hair. They are getting tired—

The Hon. CATHERINE CUSACK: This is what I wanted to talk about.

Ms SPARROW: Or it goes this colour of hair.

The Hon. CATHERINE CUSACK: Ms Sparrow, can I just say the volunteer work that you have spoken about in particular, that corridor for example: Is that going to be adequately protected by legislation after that work has been completed? I have seen Landcare volunteers go and do amazing work on creek sites; the property ownership changes; the new farmer pulls the fence up and all the animals go back into the creek again. I wanted to flag that, because it is so much volunteer work that needs to be valued and—

Ms TABART: Can we just imagine, seriously—

Ms JAMES: Can I—

Ms TABART: No, I have to say this. Can we just imagine if the damage was not done in the first place? You are all talking about band-aids. It is all band-aids. If science was being heard in this country, the Great Barrier Reef would be fine and so would the koalas. They have got millions of dollars worth of tourist strategies saying, "Come to our country". The koala is worth \$3 billion, 3,000 jobs. Why should the community—and that is what I am absolutely sick of: Seeing the community getting sick of opposing, having to become water experts, koala experts, road experts. It is time for legislation and the koala protection Act is that. It says, "You, Mr Proponent, have to prove your activity is benign, and until you do that it is a 'No'".

That will happen within the trees, lists of trees. I think we have got 180 trees on our list. The scientists can—Steve Phillips used to work for us; most of them came from him. State Environmental Planning Policy No. 44 I think has got 10; it should have 65 on it. If those trees are on the landscape, sorry, it is "No". The end. I am so sick of people thinking—I am a fundraiser, baby. I have raised millions of dollars. There is not enough money. Every single hospital now is in a decline curve. They are all going to extinction. None of them likes me saying it but it is the truth. They are doing a great job and they are protecting the gene pool, but it is the Government's responsibility and it should be at the Federal Government. All of you MLCs should be going straight to Minister Ley and saying, "Where is that recovery plan and where is the money for these good people?"

The Hon. CATHERINE CUSACK: In relation to that corridor, would it be nice for volunteers to know that their work was going to be protected?

Ms SPARROW: Absolutely. All of landholders that we work with—because I get approached by some landholders who I know just want me to do their gardening for them. However, I can detect those people from the other ones. They have to fit within the corridor. All those landholders are—

The Hon. CATHERINE CUSACK: Passionate, yes.

Ms SPARROW: Some will put that they are going to put on—they are within a family thing so it is going to be generational or passed down. Some are willing to put protection on that property. A lot of it is actually within the biodiversity thing so that nothing can happen to that—

The Hon. CATHERINE CUSACK: It will be protected. Good.

Ms SPARROW: Nothing can happen to that. It is protected. We have got people who are willing to put things on their title of the land that can never be removed. We are working also with Byron council. We are also collecting sightings across the Byron Shire. Council came to me and they wanted to know where breeding females were. We are supplying them with the information and they are mapping it. That means that those properties where they are sighted, that habitat becomes core koala habitat—then it is protected. If they sell up and someone else comes along and they want to remove the tree, that habitat is already seen as core koala habitat and they can take them to court. Our little group is trying to do that.

The Hon. CATHERINE CUSACK: Yes, I understand.

Ms SPARROW: We are getting all that in place. Since last year I have spent all my time writing grants. We have got grants from Saving our Species, we have got an environmental trust grant. We are getting all these other grants and stuff from all these different organisations and corporations. We have got a very good brains trust. There are ecologists, there are doctors, there are business owners. We know how to run this. We know how to make sure what we are doing actually makes a difference. We are committed, we are passionate and we are determined that we are going to do our very best to save the koalas. It is all about action. That is what we are all about. We are making sure where possible that that land, we are encouraging people if they want to put protection—one of our landholders is getting Greening Australia to also plant out. He is getting other trees—we are planting on his property as well. We are working with all these—

The CHAIR: Okay, can I—

The Hon. CATHERINE CUSACK: Yes, I appreciate that. Thank you.

The CHAIR: Sorry, there are a lot of issues and a lot of questions and a lot of witnesses. I am going to go to Ms Sharpe—

Ms JAMES: Can I make a quick comment on that?

The CHAIR: Very quick, Ms James. We want to cover a range of things.

Ms JAMES: I think as far as planting on private land, it is a farce. I work as a restoration ecologist. Over the years I have seen so many trees planted, trees die, trees neglected and then the property is sold on. There is absolutely nothing to secure these plantings.

The Hon. PENNY SHARPE: I am very interested in the koala Act, which I am familiar with the proposal in terms of what you want to put forward. What I am trying to understand is why you think that is going to be any different from the well-documented failings of the Environmental and Biodiversity Conservation Act 1999 [EPBC] and the well-documented failings of the State legislation. What makes your proposal, which essentially as I understand it would override all State and Territory planning laws—

Ms TABART: Correct.

The Hon. PENNY SHARPE: Do you want to take us through that, Ms Tabart?

The Hon. MARK BUTTIGIEG: Can I just supplement that, because I think the previous—I think it was Ms Higginson who pointed out the defects in the current process, whereby if you get the mapping right, if the council adopts it, if the Department of planning adopts that and then if they recommend that to the Minister, and then if the Minister decides to take notice of that—

Ms TABART: Yes, okay. Let me speak, because there is very little time.

The Hon. MARK BUTTIGIEG: So in theory, if the Minister said yes to all of that—

Ms TABART: I have thought about this for 31 years. I cannot encourage honest politicians in the Federal sphere that this legislation has to go to the Federal level. I can see a secretariat where there are committed people

doing their work properly instead of being manipulated and not allowed to say the truth. I see the money that—let's say it is a coalmine and let's say there is koala habitat on it: The coalmine has to then pay independent consultants by the Government to do it so that they can tell the truth. This model could work. When I was younger I used to think you could put all the biologists together and they would all agree and they would have a lovely group and everyone says, "I love koalas". That is just *Kumbaya*. This has to be legal.

Ms Higginson helped us write the koala protection Act. There were many lawyers who came to me and said, "This is too strong, Deborah". We went to the United States and looked at the Bald Eagle Act. In 1941 when Rachel Carson said, "The bald eagle is going to extinction from DDT" she got that law passed. But it was only when Pearl Harbor happened in 1942 that everyone said, "Shit, we'd better get this bloody bird protected". So it said, "You cannot touch the trees and you cannot do anything to this species". To this day you still have to reverentially pick up a bald eagle and take it to a repository.

The Hon. MARK BUTTIGIEG: To follow up on the essence of Ms Sharpe's question, why would a Federal Act work any better?

Ms TABART: Because you will not have corrupt companies being able to control what is actually put up to the Ministers.

The Hon. MARK BUTTIGIEG: So what you are saying is the conflict of interest inherent in the State system will be overridden by the Federal system?

Ms TABART: I am just absolutely appalled that within months of Mr Burke, knowing that Abbott was coming in, everyone started—Campbell Newman especially—saying, "Oh my God, the green tape here. We are going to do an memorandum of understanding [MOU]". So go back and find those MOUs. Make them public as part of this Committee. Those MOUs said water down the EPBC Act so this listing is neutered. Then it said, "We are not going to allow any green tape on any of the proposals". Then all your laws in New South Wales started getting watered down.

All these good people have not got a chance. When Cameron Murray wrote the book and brought it to me I said, "Someone's going to shoot you". But he did not get shot because, guess what, it is all legal. What I have watched since 1995—and I raised \$1 million in Port Stephens and in Japan and that money went to the first koala plan of management that Steve Phillips worked on when he worked for us. Is it now enshrined? We had Tweed, Campbelltown, whatever. I have just watched all these things never get done. I am for a koala protection Act. I do not need this Committee's support for that. What I have is global awareness that this country is abrogating its responsibility to this incredible species. If you cannot do this, you will not save anything.

The CHAIR: I am going to jump in with a question. I recently visited the Australian Koala Foundation—

Dr IRWIN: Friends of the Koala.

The CHAIR: I am looking at Dr Irwin and going, which one? Yes, Friends of the Koala. I saw some of the koalas you had rescued and was shown around your local area, Ms Matthes. I want to make sure that this Committee gets on the record a bit more evidence in relation to chlamydia and the rate of animals being euthanised. I remember speaking to Ms Matthes about some potential solutions and what the Government should be doing in New South Wales to try to get around this problem. Is there something more that the New South Wales Government could be doing in relation to the disease that is spreading through koala populations in this area?

Ms MATTHES: Yes, first stopping their habitat destruction, because we know that stress is a cause. That can be over time and it can be a temporary loss of habitat, such as storms and fires, or it can be permanent habitat loss. At Laws Point we lost, by October 2017, 210 koala habitat trees that 13 koalas used. By the end of June 2017 all the collars on the trees were there. We have slowly had every koala there except for two—three of them have disappeared; we do not know where they are—go. We have had one die at the base of a collared tree. We have had several that have had cystitis. This is a koala colony that has been there for thousands of years, according to the Aboriginal people, who also occupied that land for that period of time. We have seen the colony collapse in three to six months, up to two years, because we just lost one of the koalas I referred to in my submission, Jenna. She was euthanised last week. We are losing them because of disease.

There are several things that we can do. We know that the vaccination work that Peter Timms has been doing in Queensland is working. It is still under trial, but all evidence suggests that it is working. We do not want to vaccinate every koala, because we need to give them the opportunity to build their resistance to the disease as well in nature. The disease of chlamydia that they evolved with over thousands of years is not the one that is savagely attacking them at the moment.

The variety they have at the moment is the one that comes from cattle and sheep, so they do not have the natural resistance to it. They have not evolved over thousands of years to keep rejecting it when they come in contact with it. It is taking them down rapidly and we need to be giving them a bit of a buffer in certain circumstances. If it is a healthy, robust population, we do not need to be doing that. But if we had vaccinated those Laws Point koalas or translocated them to a suitable environment, rather than where they were going to starve, then I think we would have given them a chance.

Vaccination is one and there is another thing that we can do. We have to euthanise koalas when they have cysts. If they have a unilateral cyst, which is just on one of the ovaries, then Queensland uni and Australia Zoo are trialling to see if the females can still have a half hysterectomy and be put back into the wild. They are seeing if they can still carry a baby.

The CHAIR: Can I clarify something? When you say you have to euthanise animals with cysts, is that a regulatory requirement?

Ms MATTHES: It is my understanding that that is part of the code.

Dr IRWIN: I think it is changing a little bit.

The CHAIR: It is important to clarify that. What code are you talking about and what is that code of practice?

Dr IRWIN: We are talking about the Code of Practice for Injured, Sick and Orphaned Koalas. That is what we operate under as a licensed organisation. We need to have everything in accordance with the code. It is right that the previous code did specify that if a female had cysts, they were to be euthanised. It is not as clear in the recent one. I am not sure whether this is still—

The CHAIR: Can I ask for the views of people on the panel of that requirement? I can see different expressions on the panel.

Ms TABART: I would like to answer that. The Australian Koala Foundation began funding chlamydial research with Professor Timms. I was schooled by Dr John Woolcock, who was our research chairman until recently. I want everyone in this room to consider how we are going to vaccinate 100,000 koalas. Are we going to call them in? It is really important to make sure that we are realistic about what is actually involved. I do not think that there is any science at this time. There are plenty of subjective thoughts that say that koalas did not have this for lengthy periods of time, millions of years, and no question that when they are distressed, sick like this, they will display.

Ms James and I worked together on Koala Beach, which is where Arnie Schwarzenegger was with the koala that Dr Phillips was talking about, the alpha male. I remember distinctly a female had a cyst when we first captured her and the following year she did not have it. I have watched thousands of koalas in Queensland being euthanised or being moved, and now up to 80 per cent of them are dead. A koala protection Act would watch very closely anyone who wants to do anything to a koala, like in America.

I have had managers in Victoria tell me, "Ethics does not matter here, Deborah, we are managers". They made sure they did not get the Federal listing, because they need to protect their logging industries. I first met Mr Pugh back in 1992. Everything you have talked about today, I have heard ad nauseam. It is time for everyone to act, if you want to save the species—everyone in this room is doing their best. Our governments have to do their best. I have been reaching out to Minister Ley all day. Go straight to her; she is the one with the job right now.

The CHAIR: Thank you. This is obviously a State committee.

Ms TABART: Yes, but the Federal law should have control of this State.

The CHAIR: I still want to get an answer to my question, because it is important if there is a code that potentially some people suggest means more animals are euthanised than should be the case. That is something that this Committee needs to be aware of. Is there evidence that the Committee could look at in relation to this?

Ms MATTHES: Yes, there is.

The CHAIR: Maybe take the question on notice.

Ms MATTHES: Yes, I will take it on notice.

Ms TABART: I am happy to answer this. I have seen so many hospitals, particularly in Queensland, as the numbers escalated from 1995 and up to 3,000 animals were coming in. The Queensland Government said,

"Crikey Moses, we don't want to feed all these". Can you imagine the cost? Then in 2003 Steve Irwin said, "No worries, mum loved koalas. I will run a hospital". Those hospitals now are spending millions of dollars, which in my view should be from the Federal purse. In the old days, when I first started Port Macquarie and others, the carers took the babies home and looked after them, so there was less cost. I would say it is like corporatisation of the big hospitals, especially in large areas like south-east Queensland. That needs to be put firmly on Minister Ley's desk.

The Hon. BEN FRANKLIN: I have one question. I know two of you—Maria and Linda—very well. I think you are representative of so many people we are seeing here today, which is an indication that individuals can make such a difference in this space—whether it is personally seeking to help the welfare of koalas or overseeing extraordinary planting. I think it is fantastic. I want to make that very public and to thank you and, through you, all other advocates who are doing such a wonderful job in this space.

Second, in your submission, Maria, you talked of a range of things. Obviously we all know that habitat is the most important. That has become very clear today. You have spoken about disease too. That is also clear. I guess I just wanted to ask the experts here if you would like to comment on other issues like vehicle collisions or wild dog attacks and what potential recommendations we could make. There may well be other things that are impacting on koala populations that you think there should be recommendations from this committee regarding as well.

Ms MATTHES: I think it goes back to my initial comment and my comment on my big sheets of paper that talk about everything being individual. We need to target things to what they are. So Ballina's koalas have a lot of motor vehicle hits but the cost of remedying that is LGA-specific. It is about where are those points that need what mitigation? It is the same for Richmond Valley's koalas that are getting hit. For each female koala that we lose, which is three years old or more, that is five joeys that she does not get to have. Of those, there are another 2½ female joeys that do not get to produce another five. Those numbers start to escalate when you are looking at 40 female breeding koalas in five years disappearing.

The Hon. BEN FRANKLIN: Sorry, just let me interrupt. I am conscious of time. In terms of the practical outcome here, would you be in favour of something like, if there is a koala hit on a road, something clicks that the local council responsible must have a plan of action for that particular location in terms of how they are going to address it? Something like that? Is that fair?

Ms MATTHES: Yes. We already have substantial data on where these things occur. We just need to have resources to put into that. I am working on a plan with Richmond Valley Council at the moment to deal with all their road hits. Where is best to have signage? Where is best to have reduced speed reductions? That is the hardest thing to get any approval for. For eight years I have fought to get my road down to 80 kilometres per hour.

The Hon. BEN FRANKLIN: I have been on your road. I know.

Ms TABART: A national koala recovery plan would set that out and mandate to the local government authorities. There are 300 of them in this country that have koalas in them.

The Hon. BEN FRANKLIN: Understood. Unfortunately, we do not have auspices over that. Dr Irwin, did you want to say something?

The CHAIR: Can I just check? Ms Matthes, had you finished your sentence?

Ms MATTHES: I was just going to say that everything needs to be looked at in the local area—what those needs are for that area.

Dr IRWIN: What I would say, in terms of the koalas that we rescue across the six local government areas, the weight of those diseases is, far and away, the greatest cause of deaths of koalas. The second one is motorcars. We have been working with the councils in the region and we are currently looking at what to do in terms of signs, because it is now coming through very clearly that the signage that is being used does not work—certainly not long term. It simply does not work so there are a whole lot of issues that we are dealing with in terms of how you turn people's behaviour around so that they actually want to move towards driving more slowly.

The Hon. BEN FRANKLIN: I was going to ask about that. I have seen a significant rise in signage in the local area over the last couple of years. Is your evidence that that has not decreased fatalities?

Dr IRWIN: It does sometimes. It depends. The Tweed and Lismore have both put in place already one hot spot, which has painting signs on the road plus vehicle-activated signs as well. Just yesterday we were talking with Tweed and Lismore councils and know that there is an initial drop. For example, when the Wyrallah Road one was opened in Lismore they managed to monitor it for the two weeks before they activated it, and then two

weeks later. There was a 10 per cent drop—depending on which way it was going, because it was a bit different—but they also found that there were people there who had increased their speed. So it seems as though it does work, but short term. And signage is not the answer.

The Hon. CATHERINE CUSACK: Can I follow that up? On the road between Woodburn and Evans Head everybody is trying to stop the speed limit being dropped. It is the coastal emu, as well. This is the problem. You were saying that the crossings are pretty specific. I have heard of koalas being fixed up, put back and they cross the same road again—keep repeating. Is there some way that the signage and the speed control—if I can put it like that—could be improved so that driver behaviour would be better?

Ms SPARROW: I just looked at some research. I am getting your data—the Friends of Cudgen Nature Reserve data—and because I live in Bangalow I am doing rescues and I am picking up the dead koalas so I know where. We have flashing signage up—because we have a koala kill hot spot on Hinterland Way—in the breeding period when the juvenile males are going all over the place. We have fundraised and we have corflute signs. They look like road signs—people will contact us if they are worried about koalas—and we can move them around. They are fluoro; they are not the normal dull yellow with the koala that no-one pays attention to. I have just been looking at the data from this year for koala kills by cars and comparing it to last year. We have had extra signage and we are always telling people to slow down, so there is an awareness. You can put signs up but if you are not actually educating people—

The Hon. CATHERINE CUSACK: About the hot spots.

Ms SPARROW: About the hot spots and whatever. This is only one year, so we cannot use this data, but in the same period from last year to this year we have five less koalas killed. We have only had one, whereas last year it was six. I am only using Bangalow and it is only early stages but, as you say, you have to look at every area individually because if you have a community that is really big and you are telling people to slow down and all that sort of stuff it can make a difference.

Ms MATTHES: One of the things with roads is that the majority of koalas get hit on crests and curves early in the morning or in foggy conditions when visibility is low—long grass on the side of the road. If we can minimise the risk of them crossing there—it may be just small sections of fencing on crests and corners that directs them to an open stretch—but we still have to have speed reduction because we know that, where it is an open stretch people speed up, which reduces their ability to stop if there is a koala. So it is looking at each area to get the best outcomes.

The CHAIR: Thank you very much. We are out of time again for question. Just quickly in terms of taking questions on notice. Dr Irwin, you mentioned before the code of practice for euthanising animals. You said that it was now a bit of a grey area. Could you please provide to the committee—on notice, because we have run out of time—details in relation to that as to why it is now a grey area.

Dr IRWIN: I will do that.

The CHAIR: Thank you very much. Questions were taken on notice.

Ms TABART: I have the code of practice here.

The CHAIR: You would like to table a document?

Ms TABART: It is the code of practice.

Document tabled.

The CHAIR: Thank you very much for attending and for all the incredible work that you have done over many years to protect our koalas. The Committee has resolved that answers to questions taken on notice be returned within 21 days. The secretariat will contact you in relation to those questions you have taken on notice.

(The witnesses withdrew.)

(Luncheon adjournment)

SCOTT HETHERINGTON, Senior Program Leader—Biodiversity, Tweed Shire Council, affirmed and examined

VIRGINIA SEYMOUR, Environmental Strategies Officer, Lismore City Council, affirmed and examined

MATTHEW WOOD, Director – Planning and Environmental Health, Ballina Shire Council, sworn and examined

The CHAIR: Welcome to our final session for today's Ballina hearing. Would anyone like to make a short opening statement?

Mr HETHERINGTON: Yes. Thank you for the opportunity to be involved in this inquiry. Tweed Shire Council actively represent the interests of our community to protect and recover koalas and their habitat and has responded directly and effectively to confirmation in 2011 of the severe decline of the coastal koala population. The response has included the design and implementation of recovery actions, restoration and provision of additional habitat, leading regional collaborations and developing and adopting relevant policy. Many of these actions, including in relation to fire management, road strike and development provisions, are now being considered and adopted by other local government agencies in our region and beyond. The absence of legislative protection for existing koala habitat is the most critical factor currently preventing the recovery and long-term survival of a wild population of koalas.

All issues and recommendations identified in council's submission to this inquiry link back to the need for more immediate protection of koala habitat. The absence of any protection for koala habitat in the NSW Koala Strategy is remarkable and significantly undermines its value. The conservation and recovery efforts of government at all levels and the community are also undermined by the absence of appropriate legislative protection for koala habitat. Recommendation 1 of the 2016 NSW Chief Scientist "Independent Review into the Decline of Koala Populations in Key Areas of NSW" is for a whole-of-government response to koala recovery. This included the requirement to review and align legislative and regulatory instruments to improve outcomes for koalas across tenures. This action is not evident within the strategy, nor in the current situation with inconsistencies between instruments such as the private national forestry code, State Environmental Planning Policy [SEPP] 44, the Biodiversity Conservation Act and the Local Land Services Act.

The matter of endangered populations and the Biodiversity Conservation Act is also a key issue for attention and resolution. Despite the rigorous nomination and determination process completed in April 2016 for the Tweed and Brunswick endangered population, as detailed in the submission to this inquiry by the scientific committee, all three current endangered populations of koala are set to be removed from the schedules of the Act. Local government agencies are generally highly competent and capable, taking a proactive role and making significant investments in koala conservation and recovery. In particular, when combined with regional scale collaboration, the ideal balance between local action, informed by landscape scale evidence and optimal efficiency in delivery, is able to occur. The simple and critical action that is required to ensure the survival of this iconic species is to prevent the loss of koala food trees and areas of habitat. The risk of extinction remains high despite any intent, strategy or on-ground actions, whilst legislation continues to allow for the removal of koala habitat. Thank you.

Mr WOOD: Thank you, as Mr Hetherington said thank you very much for the opportunity to address the inquiry. From the perspective of Ballina Shire Council, we are very fortunate in Ballina Shire to have the presence of a nationally significant population, recognised at the Federal Act level. That has been a great thing for the shire but it does come with the management and recognition of a number of threats. Those things will have no doubt been spoken about this morning but in our shire in particular habitat retention, dog attack and vehicle strike—those kind of things—are front of mind in terms of our planning framework and where council focuses its effort.

In particular, council's local planning is focused on habitat retention and on trying to look at koala management at a landscape scale, rather than a property-by-property scale or development-by-development scale; however, that is made quite difficult by the legislative framework. When trying to deal with those particular issues there is often a conflict around that; the landscape scale is just not recognised fully in the legislation. I conclude my opening statement by saying that the focus for us from a planning perspective is to ensure that science is aligned with the legislation and aligned with the planning tools, and to make sure that we look at koalas at a landscape scale because that seems to be the key to their long-term preservation and preservation of habitat overall.

Ms SEYMOUR: Thank you for the opportunity to be here. I decline to add further to our submission.

The Hon. BEN FRANKLIN: Thank you very much, Madam Chair. Earlier today there was some discussion—I am not sure if any of you had the opportunity to view any of the preceding witnesses—about interactions between koalas and vehicles and often the resulting awful injury and fatality. There has been some discussion about what council's responsibility might be around that. I was wondering what each of your councils do when you find that a koala has been hit by a vehicle in terms of that stretch of road—whether there is something that clicks into place and what responsibilities you take on. Also, if you have any recommendations about what you think should be done, if applicable at a statewide level. I will start with you, Mr Hetherington.

Mr HETHERINGTON: Sure. We have done a lot of work in this space. We have a number of situations on the Tweed coast within our endangered population, where we have some really wicked problems such as roads that wind through koala habitat. To look at any of those permanent exclusion solutions, such as fencing and overpasses, would require the removal of koala habitat to construct and maintain. We have done some innovative work looking at and reflecting on the science and some of the practice from Queensland that was done ahead of us and have come up with the concept of "koala zones".

It is based on the premise of the school zone, where you identify to drivers that there is a particular hazard in the area and you use a range of methods to do that. We have used variable message signing, pavement treatments and community education. We have measured the impact of those so that now we have baseline data looking at the average travel speed of drivers through that area before we implemented the works and continue that monitoring a couple of years in to doing that work and have been able to show about a 12 per cent increase in the percentage of drivers who are travelling at or below the road speed.

What is really clear about the measures that we have taken is that each individual section of road has its own characteristics that need to be taken into account. We have done another section of road that is a lower speed, so the existing speed limit is essentially the determining factor. We have had a really high level of success at another location where we have done similar work with about 95 per cent or 96 per cent of drivers travelling at or below the speed limit, but it was already a lower speed traffic environment. Those are the types of measures that we are taking and they are above and beyond what our roads section would normally do and it is because we have funding for the koala plan of management for this particular issue that we can work with our peers.

The Hon. PENNY SHARPE: Where is that funding from? Is that from the koala strategy?

Mr HETHERINGTON: No, it is council-funded money.

The Hon. PENNY SHARPE: Okay.

Mr HETHERINGTON: We have an annual budget to implement our koala plan of management.

The Hon. BEN FRANKLIN: That is great and I will come to that in a minute. What I was specifically trying to get at is, if there is a fatality in a particular area where there is no mitigation strategy in place, is there anything you do at that point?

Mr HETHERINGTON: We log those sightings and we use the record of those sightings to identify those areas that are highest priority and we maintain that data.

The Hon. BEN FRANKLIN: Okay, so then the other stuff starts kicking in.

Mr HETHERINGTON: Yes.

The Hon. BEN FRANKLIN: Ms Seymour?

Ms SEYMOUR: Similar to Mr Hetherington, in the Tweed Shire Council there is funding from the biodiversity management strategy—the special rate variation—to look at certain mitigation and management strategies that are within the koala plan of management and one of those is for traffic. However, in the last three years \$100,000 has funded not just roads, but across the whole management of koalas. When it comes to road impact or fatalities there is current research being done by Biolink, which is looking at the least-cost pathways so that we can be informed as to where those high road strike areas are so they can be included in management strategies.

In terms of putting in actual road structures or pavement treatments, Lismore council has implemented some of those in relation to reports on road strike incidences and the high fatality rate areas. Their research is similar to, as has been previously said here, different structures on the side of the road such as fencing may reduce this; however, in that same vein, a lot of the remaining connectivity corridors are in these road reserves. So you cannot apply the same mitigation measure across all problems, and some arterial roads are quite large and not simple—like two-lane carriageways scenarios. Speed variations on roads are not changed because of the presence

of wildlife or the identification of wildlife or incidences with traffic impacts. I am not sure if that helps in that situation.

The Hon. CATHERINE CUSACK: How is the speed limit being set? Does council not get to just change the speed limit if it wants? I was not aware of this fact.

Ms SEYMOUR: No.

The Hon. CATHERINE CUSACK: You need RMS?

Mr HETHERINGTON: There is a local traffic committee that includes representatives from RMS and NSW Police and the council—it is a multi-stakeholder committee that makes those decisions.

The Hon. CATHERINE CUSACK: And wildlife is not a factor.

The CHAIR: Not generally.

Mr WOOD: Just a general observation firstly in the sense that fencing can often seem a very obvious mitigation measure along a road, but, as Mr Hetherington alluded to, there can be issues there around the removal of habitat to facilitate such a thing, but also there is an issue there around retention of connectivity overall, both for koalas, because the reality is the habitat is fragmented, so they need to be able to move across the landscape, and that includes roads, and also for other species that might be using the area. So to find a solution for koalas alone can also have ramifications for other species. So that is where we have some difficulty with fencing, a mitigation measure in itself.

For our council, we are not quite as advanced as the other two in terms of managing the road situation. Our effort early on has been to focus on educating our road crews and road designers. When we are in areas of important or key koala habitat, our road designers are asked to consider that in the process and, in particular, our road crews have been asked to be observant and to be considerate of the koala habitat. So that goes to this question of when a road is designed that is fine, but when you actually are out onsite you discover some things that can be different and can influence the design. So we are trying to educate our road builders—that is our effort upfront—to be agile and to be able to respond to koala habitat onsite.

The Hon. BEN FRANKLIN: Just one more question to all three of you. We have had some evidence this morning about SEPP 44 and it is not being really implemented appropriately and that that is an easier protection for koalas, but because it is not being enforced there are challenges. Do any of you have comments to make about either that issue specifically or SEPP 44 more broadly?

Mr WOOD: I am happy to start. In relation to SEPP 44, I think SEPP 44, being a State policy, presents a very useful tool in terms of the planning framework to manage koalas. The problem I see with SEPP 44 and the problem we experience from a planning perspective is that the SEPP is very old, it does not reflect the contemporary science around koalas, and there are lots of parts of the SEPP then that are essentially outdated. So what we end up with is conflict in relation to things that are scientifically obvious to us now but that the legislation simply does not identify.

The Hon. BEN FRANKLIN: Can you give us some examples of that?

Mr WOOD: An example of that would be the schedule of tree species that relates to feed trees. Clearly, there is a number of additional trees that could be added to that schedule.

The Hon. BEN FRANKLIN: This morning we heard that there are 10 currently listed, but that something like 65 would be more appropriate.

Mr WOOD: That is our experience, yes. A similar thing in the sense that the SEPP does not recognise landscape-scale habitat; we are focused on science. That goes to things like the one-hectare limitation around where the SEPP applies. There are also questions then about how habitats are actually identified—how do we identify what core koala habitat is? Again, I would argue that the SEPP and its underpinning guidelines do not allow the current science to recognise what core koala habitat is; it is focused on an old system and an old way of doing things. So I think those are the limitations around the SEPP and they could be substantially improved.

Mr HETHERINGTON: I would like to support Mr Wood's comments. That is our experience of the SEPP as well and its current application.

The Hon. BEN FRANKLIN: Would you agree with that, Ms Seymour?

Ms SEYMOUR: Yes, I absolutely agree with that. The definition of core habitat I feel is restricted or too loose—I am not sure of the way you look at it; it does not identify core habitat. If a koala had not happened

to be there in the last six months and someone went and checked under the tree and there were no scats, therefore it is not core koala habitat, so that tree or group of trees is eliminated because it is not considered in the SEPP 44 as important.

The CHAIR: Just going on the SEPP question, in the submission from Tweed Shire Council you note that SEPP 44 has been under review since at least 2015 but you say that "with no specific information provided, meaningful consultation or engagement with stakeholders apparent, Tweed Shire Council made two submissions in 2016 alone from which there has been no response or action". Is that—

Mr HETHERINGTON: That remains the case, yes.

The CHAIR: Have you heard any reason from the local government's point of view as to why the SEPP 44 review has been stalled?

Mr HETHERINGTON: No, we have not had any information.

The Hon. PENNY SHARPE: The Hon. Ben Franklin asked my SEPP questions but I have other questions. I am interested in the tools that you, as local government practitioners are trying to operate with with the various levels of regulation, supposedly trying to save koalas. I am particularly interested in the impact of the environmental zones as a tool in the way that you use it to try and protect koalas. You talk about that obviously in the Tweed submission, but I am interested in all of your comments. What I am trying to get to is if you are going to make recommendations to the State Government about what would make it easier for you to be able to protect koalas through environmental zones, what needs to happen?

Mr HETHERINGTON: I suppose we are belatedly on the way. As you would be aware, we have been subject to the Far North Coast E Zone Review, and so have all the councils in the State.

The Hon. PENNY SHARPE: Which has been going for about four years, I think.

Mr HETHERINGTON: Which has been going for about the same time, and we are now in the process of working through the recommendations and the approach that has been put forward for us to be able to declare environmental zones for the Tweed coast. One of the limitations or one of the constraints that we are having to address is for there to be contemporary studies that were looking within five years. We need to redo vegetation mapping, we need to reapply that vegetation mapping to identify the different categories of koala habitat.

The Hon. PENNY SHARPE: Can I just stop you there for a minute? There is a lot of mapping going on. There seems to be a lot of different organisations that are doing mapping and it worries me that local government is having to fund your own mapping when, because of the new biodiversity laws that are supposed to be mapping through the Koala Strategy and some of our species. Is it the case that you just cannot pick that up and use that or why do you need to do your own mapping—leaving aside the issues of the competing outcomes of the mapping? It just seems to me crazy that the same area has been mapped five times to look at the same thing.

Mr HETHERINGTON: Part of it is the delays in the State mapping, the recategorisation of the vegetation classification system, the PCT method is still on the way.

The Hon. PENNY SHARPE: Can you expand "PCT"?

Mr HETHERINGTON: Plant community type has been delayed for some time and we need to keep on moving with our processes. It would be really advantageous and we are doing work at a regional level and trying to reduce those duplications because each council does have a slightly different approach to how it maps vegetation. It is a symptom of the approach that has been taken in New South Wales. Queensland has a regional ecosystem classification system that applies to the entire State and is set and determined and applied by the State Government and reduces that requirement for councils to have to do that work.

The Hon. PENNY SHARPE: Ms Seymour or Mr Wood, do you have any comments about that—the E Zones? I am interested in the mapping you have to get done that is separate from mapping that has already been done.

Ms SEYMOUR: I think mapping is a really big issue, particularly when it comes to the interaction of various Acts such as the Native Vegetation Act, the Local Land Services Act.

The Hon. PENNY SHARPE: Yes, still not finalised.

Ms SEYMOUR: The Biodiversity Conservation Act, the biodiversity values map. All these maps, the department uses council's mapping to inform them what is koala habitat in Lismore, except the definitions in the comprehensive koala plan of management in Lismore are worded slightly different to the SEPP. I do not know

why. However, when the mapping arrived in zip file in OEH they looked at the mapping and they looked at the criteria and they got rid of all that is termed in the comprehensive koala plan of management "secondary A" and "secondary B". It is deleted from the biodiversity values map.

The Hon. PENNY SHARPE: It is just not included, even though you have with done that work.

Ms SEYMOUR: Yes. That is across the native vegetation regulatory map and the biodiversity values map. As of 27 February this year more than 50 per cent of the koala habitat is removed from the biodiversity values map.

The Hon. PENNY SHARPE: There is nowhere for that to be arbitrated in terms of who decides what is in and what is out?

Ms SEYMOUR: I am reasonably new to the role I am in and I have been working to a solution or to find out actually how that did occur and that has very recently been resolved. How we revisit that and change it is to be determined. Certainly there was no consultation with us, with council. I have looked at the email thread and it was not said what the mapping file was to be used for. I think it is a communication in a language. To me I do not understand why those things are not harmonised in their language. It is a lot of words and it would have to be comprehensive but there is a problem with communication.

The Hon. MARK BUTTIGIEG: The mapping went from the council to the Department of Planning and was unilaterally filtered without any consultation?

Ms SEYMOUR: Yes. But I think that may have been a misinterpretation of how the categories were named in the GIS file.

The Hon. MARK BUTTIGIEG: Bit of a problem then.

Ms SEYMOUR: Yes.

The Hon. PENNY SHARPE: The issue raised in your submissions about the changes to the Biodiversity Conservation Act where you are having difficulty with listing your local populations, could you talk me through that and what you would like to see changed with that?

Mr HETHERINGTON: The three existing endangered populations in the State include the Tweed Brunswick population, which was determined by the scientific committee in April 2016. It became apparent during the preparation of the new legislation that these populations were going to be left out, which was an issue that we raised in our submissions and the resolution of that appeared to be that these three would be retained but there would be no further provision for additional populations. That was my understanding up until yesterday when I read through the submission to this inquiry from the scientific committee which stated that those three would be removed from the schedules.

The Hon. PENNY SHARPE: Is that the first time you have heard of that?

Mr HETHERINGTON: Yes.

The CHAIR: It was a submission from the scientific committee to this Committee?

Mr HETHERINGTON: Yes.

The Hon. PENNY SHARPE: I was interested about how yours were retained because my understanding was that they were not allowing any of them.

Mr HETHERINGTON: Yes. My understanding is that happened. There is the relationship back to a memorandum of understanding between the State and the Federal Government around the difference between populations and species. From our perspective the ability to have endangered populations is critical. As Mr Wood talked about earlier to be able to manage koalas and the koala recovery at the landscape scale it is about understanding how do those local populations function and what is going on there and how does that relate to the bigger picture? Our North Coast story is emerging to demonstrate that very well in that there are those coastal populations that are impacted at a different level to different threats.

As we now start to pick up a better understanding of what is happening in the broader landscape beyond the coastal strip we can get an understanding of how those two issues relate. The fact that population is identified as endangered and can be applied in terms of our local planning policies and our local decision-making, as well as the potential to use that in some of the decisions in relation to the new biodiversity conservation provisions around avoiding and minimising further impact and identifying species that cannot sustain further loss are some of the key decisions that we, as a council, are required to make. Having the ability to identify populations

endangered—particularly on the back of so much work, it was a couple of years of work to actually propose that nomination and have that nomination reviewed and revised and determined—it seems it is going to disappear some time shortly.

Mr WOOD: In relation to the environmental protection zones, if koala habitat retention or in fact habitat retention for any species is the primary goal you need a development consent trigger. A lot of the environmental protection zones do not regulate everything. Unless there is a consent trigger there is no work for the local authority or the consent authority to do. For example, things like private native forestry go around the environmental protection zone process. The other thing I would say there is the environmental protection zones, if you are to apply those and you are working through the development consent process, you need strong policy to support that. Each local government is doing its thing, not necessarily in a coordinated fashion, which could be another opportunity but it also needs strong State policy support.

That is where SEPP 44 can come in. It is tremendously difficult at times to manage the conflict between a landowner's expectation and the retention of even a single tree. The other thing I would say is in relation to the E Zone review that occurred here and the application of environmental protection zones in this part of the world, and it is unique to this part of the world, those criteria that councils are asked to apply do not have a direct identification or recognition of koala habitat as being an important thing that could be in an environmental protection zone. It is not the case that core koala habitat necessarily automatically slips into those zones if they were to be applied. It is possible but not guaranteed.

The Hon. PENNY SHARPE: Is it because you think that the expectation when you talk about environmental zones that rather than looking at one species you would be expecting if there is any environmental preservation conservation that you want koalas picked up there. Are you saying you think it would be advantageous to be more explicit around core koala habitat?

Mr WOOD: No, what I am really saying is that I think the E Zone criteria need to be broader to pick up a wider range of species and a wider range of circumstances. Again, I go back to it, pick up this concept of landscape scale. To identify endangered ecological communities only, for example, leaves a whole range of habitat in between that is potentially vulnerable to clearing and so forth without that consent trigger.

The CHAIR: In relation to koala plans of management, could you each provide comment. You are three councils that have koala plans of management in place and many do not. Their are strengths and weaknesses, if you like. Could you give an overview for the Committee in terms of how you find them working and how they could be improved? Are they the answer at the local government level? What more needs to happen?

Mr HETHERINGTON: I will start with our story. We have a koala plan of management, but it is not approved under SEPP 44. We developed that plan in collaboration, in accordance with the guidelines issued by the department with departmental representatives on our steering committee, our community committee. We developed an holistic, an integrated plan that included the development provisions and all of the aspects that are detailed in the guidelines. We consulted with the Department of Planning at all stages of that plan. But when it came to the actual approval an issue arose through the development of the Byron plan whereby the department asked us to separate our plan into statutory aspects and recovery, or strategic aspects. We declined.

We said we have just developed, we have just invested a lot of time and energy and community will into developing what we think is an excellent integrated plan, it is in accordance with your guidelines. What we did, we adopted it as a strategy of council. On that basis we have been applying it and we have had it tested in a couple of Land and Environment Court decisions. We are fortunate, we have a specific aim in our local environmental plan to protect the Tweed coast koalas, so that is our link back to the Environmental Planning and Assessment [EP&A] Act that we have relied on in those Land and Environment Court proceedings.

Part of the reason that we went down that route as well was because of the SEPP review. In 2015 was when we were going through this final stage of the process and we were informed that the SEPP was going to be under review. What we hoped was that that issue, which extended back to the definition of core koala habitat—there are actually two different definitions of core koala habitat in the SEPP, and it was essentially legal interpretation of those two definitions that generated this concern around what would a koala plan of management apply to.

The CHAIR: Could you explain to the Committee the separation of the statutory requirements and the strategic, what does that mean?

The Hon. BEN FRANKLIN: And why did they ask for that?

Mr HETHERINGTON: What they were looking at was an interpretation of the SEPP that said only in those areas that you identify as core koala habitat through this pathway shall these provisions apply. An example there is, as Mr Wood raised earlier—

The CHAIR: For example stopping development.

Mr HETHERINGTON: Yes, so the development provisions would only apply if you went through this particular pathway, which is reliant on a 20-year-old list of trees and this old interpretation of what is core koala habitat, which is that those particular trees, more than 15 per cent of the canopy. Whereas, as Mr Wood said earlier, our understanding of koalas and the habitat that they use has come a long, long way in 20 years. So, what we have identified is that we have got large areas of unoccupied habitat on the Tweed coast, which is to do with those threats that they are being impacted by.

The Hon. CATHERINE CUSACK: You mean unoccupied by koalas?

Mr HETHERINGTON: By koalas, yes. Even though there may not be koalas active in that particular patch at the moment, it is still critical to achieving the outcome, which is specified in the SEPP, of a free ranging population of koalas. That is where we saw those two things going together. We need those development provisions, we need them to apply, but we need to, as the guidelines say, have a whole range of other actions that support that, and that is what they asked us to separate and we said that we would not do that. The other thing in relation to the SEPP, as you would have noted from discussions today and through submissions, that there are only a small number of councils that have done it in the 20-odd years of its existence. Even in our situation we have only applied that to a small percentage of our shire where there was the strongest relationship between existing koala habitat and development pressure.

The Hon. CATHERINE CUSACK: When did that happen? When did the department ask you to do that and you said no?

Mr HETHERINGTON: Late 2014. We adopted it in 2015 as a strategy.

The Hon. CATHERINE CUSACK: Have you heard further from the Government since then?

Mr HETHERINGTON: No, the SEPP has been in review since then.

The CHAIR: Apparently.

Mr HETHERINGTON: Yes, apparently.

The CHAIR: Ballina or Lismore?

Ms SEYMOUR: Lismore has had a comprehensive koala plan of management. I think it was adopted in 2013. Ultimately, I see that it is underpinned by SEPP 44 which I believe is ultimately just for identification of what is core koala habitat. The Lismore comprehensive koala plan of management does not use a different set of koala trees, it does not make any different provisions with regard to that. It does identify different levels of what is core habitat or preferred koala habitat or preferred koala trees. It is applied to a small portion of the south-east of the Lismore government area, which encapsulates the urban population of koalas and those in the south-east, which abuts the Ballina Shire Council area. Where things fall through the net is that under one hectare, the provision there for that, and it does not necessarily allow for the landscape. I do not believe it is looking at parcels.

So when a development application comes in you are looking at a parcel of land and the vegetation on that parcel, or the koala habitat on that parcel and you are not necessarily—I do not believe that the comprehensive koala plan of management in that respect in Lismore is working, because I just see that there is a compensation strategy and that compensation strategy on a small scale development is for replacement of habitat and that replacement of habitat often occurs offsite and it is yet to be seen that those compensation efforts are being utilised by koalas. I think a part of the unknown at the moment is a resourcing issue, like being able to do those population studies in areas where a conservation effort has been made. Resourcing I would say is an issue.

Mr WOOD: Ballina shire has a koala management strategy, which includes a comprehensive koala plan of management. Similar to the Tweed experience, we were asked to split our plan into two components, one to deal with the statutory elements and one to deal with everything else the council wanted to address. Our plan was adopted by council in 2016 and ultimately by the Department of Planning about 16 months later. So there was a lag there, but nonetheless. What I would say about the plan of management and the overall strategy is that it has been a very good tool for council in terms of managing our local government responsibilities. That has been a very positive thing. We were supported in preparing our plan by the State, so there was funding provided and we thought that was a really important part of it because that actually gave council the ability to carry out the work.

A couple of disadvantages though around the plan, the key thing is to do with what is the subject of the statutory controls, and that goes back to the definitions in the State policy and how you define core koala habitat. So it is confined before you begin in terms of what you are able to address. Again, going back to the earlier statements, that does not seem to reflect contemporary science about how koalas live, how they are managed, how they might be best looked after in the long run. The other thing that the plan of management does not do, or the plans of management do not do, is that they do not necessarily talk across boundaries. The koalas do not just pull up at the boundary of Ballina shire and say they prefer our methods to Lismore, or vice versa. This goes back to that question of data and having regional mapping—

The Hon. CATHERINE CUSACK: And in Queensland.

Mr WOOD: Yes, that is right—and having a clear understanding of the whole habitat in a region where these populations might be interchanging or living. That is where I will leave that.

The Hon. EMMA HURST: This is more of a general question to all councils. I wonder what you think Government can do to better resource councils to protect koalas, particularly within fragmented habitats?

Mr HETHERINGTON: There is the primary aspect of actually having strong legislation that prevents the loss of further habitat. That is the key to it. Beyond that, we have had a really great success in some regional collaborations on projects where we are able to often get funding through the State Government. We recently delivered the Tweed Byron Koala Connections project where we collaborated with our neighbouring shire of Byron and were able to work on more than 100 sites, create 50 hectares of new koala habitat and deliver a whole range of other recovery actions.

Those large-scale, multi-year projects are the ones that we can deliver really efficiently and effectively. They appear to be something that has kind of dropped off in terms of the funding models. At the moment we are restricted to smaller grant funding through the Environmental Trust, a maximum of \$100,000. There is quite a significant administrative burden with that that makes them less appealing to us as councils than the larger projects. They are the kind of actions that while we can achieve really great outcomes, but at the same time there is all this habitat getting lost over here and we are not necessarily getting a net benefit.

The Hon. EMMA HURST: You are not really able to keep up on top of it. Ms Seymour, you mentioned in your submission about some funding to try to mitigate threats around vehicle incidents. Can you give us a bit more information about how you implemented that and how it has worked in practice?

Ms SEYMOUR: How we found funding to implement some traffic initiatives?

The Hon. EMMA HURST: Yes. I do not know how far along you are with that and whether it has been effective.

Ms SEYMOUR: Lismore City Council has a biodiversity management strategy. Lismore ratepayers pay a special rate variation. That biodiversity management strategy is not for just koalas, it is for biodiversity. A portion of that goes to the delivery of the management actions that are in the Comprehensive Koala Plan of Management. Some of those actions are with traffic management in the hotspot areas. Once the hotspot area is identified, ultimately it is funding-constrained. That funding that has gone to koalas—\$100,000—in those three years has not just got to traffic issues; it has gone to improvement and conservation of actual koala habitat, on ground works and other management strategies.

The Hon. EMMA HURST: But you feel it is such a small amount of funding.

Ms SEYMOUR: It is a small amount of funding. I guess one of the issues is that it is a multi-stakeholder issue when it comes to traffic. The roads outside of council's jurisdiction a lot of the time are the hotspot areas anyway. Being more rigorous around what the requirements are for new developments and road structures—

The Hon. MARK BUTTIGIEG: I have a quick follow-up on one of those earlier questions. I wonder if the experience of Ms Seymour with regard to that filtering process that you experienced, where they knocked out a lot of the mapping that you had done, has that been a similar experience in the other councils?

Mr WOOD: No, not for us. We certainly had to put a very strong case and some good scientific information as to why our mapping should stand but certainly we did not experience that case where information was taken out of the mapping without consultation.

The Hon. MARK BUTTIGIEG: Okay.

Mr HETHERINGTON: We have not seen that in Tweed yet.

The Hon. MARK BUTTIGIEG: Thanks.

The CHAIR: I have a quick question in relation to environmental consultants. Say if a small subdivision was being planned for any of your local government areas, is it the case that at this stage that you would have to be relying on the environmental consultants that the developer has engaged for that particular project? What issues do you see arising as a result of having to rely on that developer's environmental consultants?

Mr WOOD: That is not the case for us. We are very fortunate to have in-house resources to be able to peer-review and work through that process. Certainly there are limitations were any information, no matter how good it might be, goes unchecked in the consent process. We do not experience that issue because we have those in-house resources but it certainly can be a limitation for other councils where those resources are not available. I guess what it would say there—it leads on from a question that was asked earlier about what were the opportunities around funding and so forth—I think one of the key things councils and other entities involved in koala management would benefit from is expertise, not necessarily money—access to expertise, particularly through State agencies responsible for conservation—and being able to tap that resource more readily because having that consistency across, whether it is a koala strategy or the State subjectives or whatever they may be, and feeding them back into councils and consent authorities and decision-makers on a regular basis—that access is difficult and it would be better if we had that.

Mr HETHERINGTON: We have a similar experience to Ballina in that, yes, we do receive a wide range of varying quality assessments by consultants. We are blessed with some really good ones and we have some others who are more challenging. We have in-house resources for validation of that work. Our main challenge with that comes down to the operation of the State environmental planning policy and the actual interpretation of the reliance on the old tree list and the 15 per cent rule. That is really get into some issues with those reports.

The CHAIR: Ms Seymour, I think Lismore City Council's submission mentioned the environmental consultants being an issue sometimes for the council.

Ms SEYMOUR: Yes, I believe that that is my role at council. It is a part-time role of validating those environmental reports. Personally, my experience is that I find it problematic. It could be that, it just so happened that it is in part that, well, just because it is koala habitat does not mean there is a koala there today. I checked and there is not a koala there and when I came and checked there was, so what? This is a consistent issue I wonder about. The other thing I will say about that is that with koala habitat being on the biodiversity values map, if it is, it triggers a Biodiversity Development Assessment Report [BDAR].

The Hon. BEN FRANKLIN: Sorry, could you—

Ms SEYMOUR: It is a biodiversity offsets threshold or scheme. I wonder if the code of conduct that biodiversity assessment method [BAM] assessor must subscribe to, whether the subscription to that code of conduct is more rigorous and therefore I would expect the ecology reports to be more rigorous accordingly. I guess the other thing with the Lismore Comprehensive Koala Plan of Management being in place and applied to much smaller—yes, it is development-size-dependent sometimes. A lot of time is spent validating the reports because of its inconsistency with what evidence might be available to council.

The Hon. CATHERINE CUSACK: In terms of the report and the way forward, I wondered if I could ask you very briefly that, say, if you could change one thing, what would it be? Secondly, what is an example of success under your strategy?

Mr HETHERINGTON: If we could change one thing in Tweed, it would be that we had a strong law to back us up in preventing any further removal of koala habitat. The measure of success of that would be that over time, as we continue to do the monitoring that we do that we fund ourselves, we start to see an increase in koala activity across our shire.

The Hon. CATHERINE CUSACK: Do you have a success story in terms of koala habitat under your strategy?

Mr HETHERINGTON: We do, yes. One of the interesting ones for us was when we started doing large-scale habitat restoration we thought we might be looking at five or 10 years before animals were using these sites. Our most recent record is 15 months, so koalas are using these plantings.

The Hon. CATHERINE CUSACK: Where was that?

Mr HETHERINGTON: The new record was a couple of weekends ago.

The Hon. CATHERINE CUSACK: That is fantastic. I was just wondering where, though.

Mr HETHERINGTON: On the Tweed Coast in Cudgen Nature Reserve.

The Hon. CATHERINE CUSACK: Fantastic.

The CHAIR: You are saying that the trees are just 15 months old?

Mr HETHERINGTON: Yes, 15 months old and being used by koalas.

The CHAIR: Really?

The Hon. CATHERINE CUSACK: Was there was big a fire there a couple of years ago?

Mr HETHERINGTON: Yes. We had large-scale wildfires through the Cudgen Nature Reserve in 2004 and 2009. We have been fortunate since then to only have had low-intensity fires.

The Hon. CATHERINE CUSACK: Thank you and congratulations. Ms Seymour, do you have one thing you would love to see changed, for us to recommend, I guess?

Ms SEYMOUR: Yes, I believe that core habitat should be recognised in connected patches on a landscape scale and not parcel bound. This is how fragmentation occurs. It is a death by a thousand cuts. That is the one thing that needs to change.

The Hon. CATHERINE CUSACK: Can I just clarify, when you say "core habitat" it seems to be such a big thing about—

Ms SEYMOUR: Sorry, koala habitat. I should have just said koala.

The Hon. CATHERINE CUSACK: I know you mean koala habitat but, "Is there a koala there or isn't there one, I found a scatter or I didn't, there was one a few years ago." I mean, is it not just simpler to say that is core koala habitat? Whether you have—

Ms SEYMOUR: That is koala habitat.

The Hon. CATHERINE CUSACK: Yes, okay.

Ms SEYMOUR: Occupied or unoccupied, it is koala habitat.

The Hon. CATHERINE CUSACK: Okay, thank you. And a success story in Lismore? I know there are a few.

Ms SEYMOUR: Over the life of the Lismore Comprehensive Koala Plan of Management and recent research has shown that the koala population in Lismore is stable. In a sense, what the Comprehensive Koala Plan of Management has achieved is a sustained koala population density. It has shown that it has expanded across its range, so it is moving out. However, what it has not done is stopped habitat fragmentation, so koalas are persisting to go longer ways and that is when traffic incidences happen.

The Hon. CATHERINE CUSACK: That is evidence that a plan can work? I mean, there is more to do. I accept that.

Ms SEYMOUR: There is more to do. A plan can achieve that and it can monitor that.

The Hon. CATHERINE CUSACK: Thank you.

Mr WOOD: For me, coming from a planning perspective, it is simply having strong and coordinated State policy around the management of koalas, that that is applied by all consent authorities and that it is not deferred to one or another but is consistently applied across the State. If I had my wish list that policy would be science based, not necessarily just presence-absence based, and it would be landscape based to think about that particular species. The success story for Ballina I would say is by having carried out the plan of management process we discovered a population we did not know we had. We knew we had koalas in Ballina Shire but what we did not know is we have a nationally significant one. By covering that and having science behind that, that has led to a whole range of actions that we need to still work on, no doubt, but those actions might not have been taken without having done that science and without having carried out the plan process.

The CHAIR: I wonder if you have any comments about whether the resources are adequate in parks or State forests, so public lands in your local government areas [LGAs], in terms of managing those lands appropriately? I think there was potentially a comment in the Ballina submission in relation to ensuring that there

are corresponding resources to manage the public lands or the public reserve system. Do you think there are enough resources to manage the lands in your LGAs?

Mr HETHERINGTON: I cannot comment directly because it is not land that I manage. I suppose the indirect experience or the anecdotal situation from talking to peers who do work in that agency is that they have been suffering from a lack of resources. A recent situation that demonstrated that was when we made proposals around additional land for acquisition and then local national park staff were concerned about that. They did not want to take on more land because they were already stretched.

The CHAIR: Are there any areas that your councils have potentially identified as important to the local community or that people are calling for to be added to the park system that you know in terms of koala protection specifically?

Mr HETHERINGTON: Yes, we have a number of opportunities on the Tweed where we think that would be a really good use of that land. There are a number of sites that are highly constrained. They are not developable and they would be best added to the national parks estate.

The CHAIR: Are you able to take that on notice and provide them to the Committee?

Mr HETHERINGTON: Yes, sure.

Mr WOOD: I am not aware of any such proposals for addition to the national parks estate. That is not to say there are not any; I am just not aware of them. In terms of resourcing, part of the issue that we were trying to raise in our submission was around where land is acquired, whether it is under the Biodiversity Conservation Trust, the parks system or whether it is done through covenants over land or other sorts of different mechanisms, just ensuring that vegetation is protected longer term in terms of the legal status but also making sure that there is resource to look after it. It is not always the case that it is in a wonderful condition and will stay that way for perpetuity. So, more a general observation from our perspective around ensuring that it is just one part of the puzzle and it is the puzzle that should not be left until last, if you like.

The CHAIR: Excellent.

(The witnesses withdrew.)

The Committee adjourned at 14:49.